

# Sustainability report 2019



*Contribute to the harmony of life  
for a better world*

Grupo·epm

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Our  
Group

Grupo·epm



# Our Group





# About us

# Our Group

## About us

2019  
Our businesses

Grupo·epm



Grupo EPM  
jobs

14,046

6 countries  
7 businesses  
45 companies



Power generation



Power transmission



Power distribution



Natural gas



Water supply



Wastewater management



Solid waste management

### How we provide our services



Power generation

[See process ▶](#)



Power transmission, distribution, and commercialization

[See process ▶](#)



Natural gas

[See process ▶](#)



Water supply

[See process ▶](#)



Sewerage

[See process ▶](#)

### Some management indicators



Environmental management index

96%

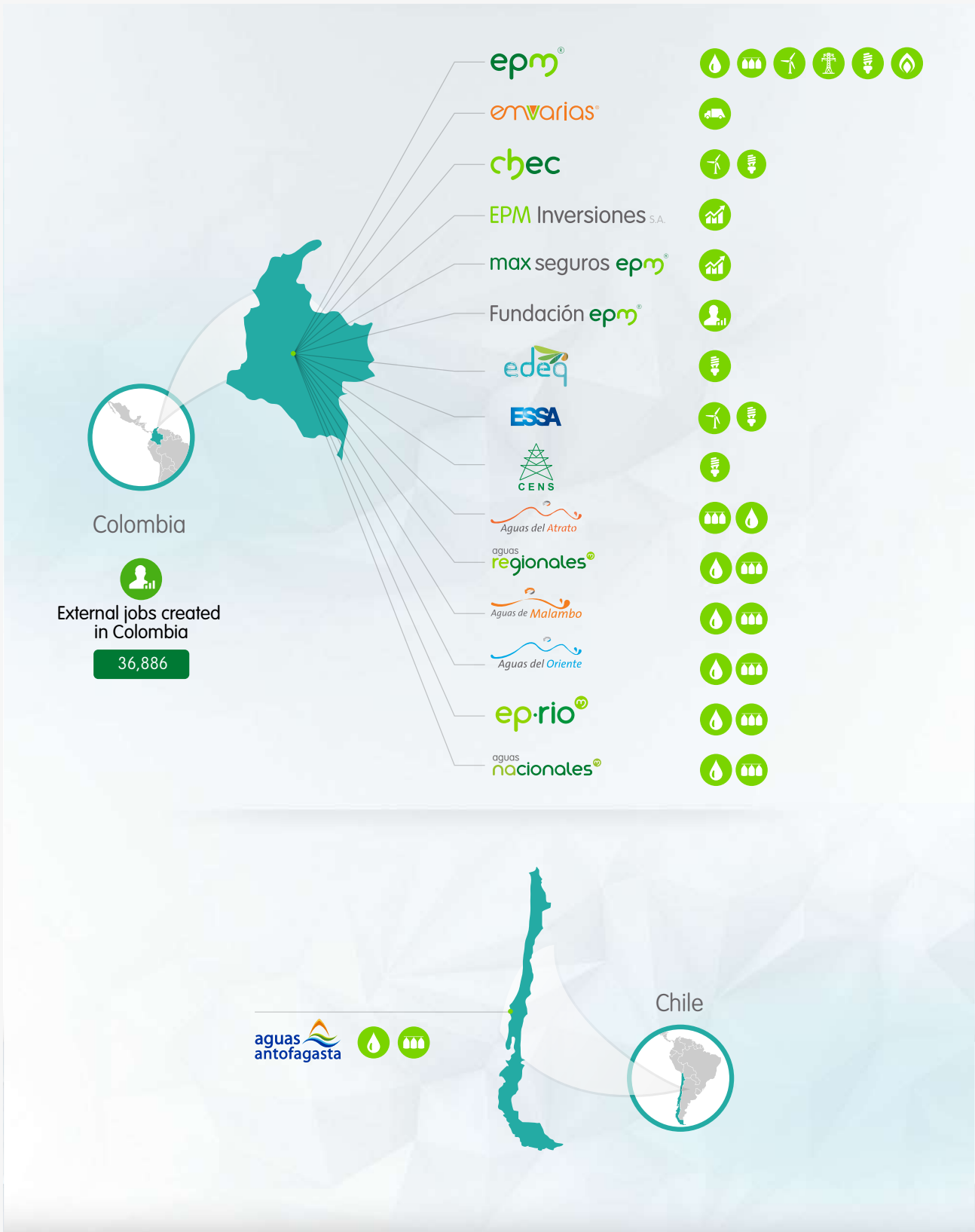


CSR evolution of Grupo EPM

79%

## Presence in Latin America

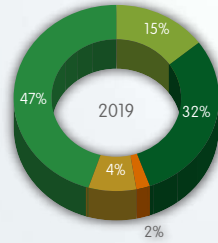




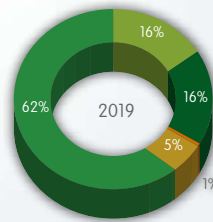
## Financial results of Grupo EPM in 2019

Figures in billion COP

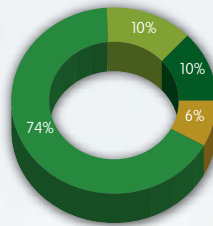
Revenue  
COP18,360



EBITDA  
COP6,006



Period result  
COP3,156

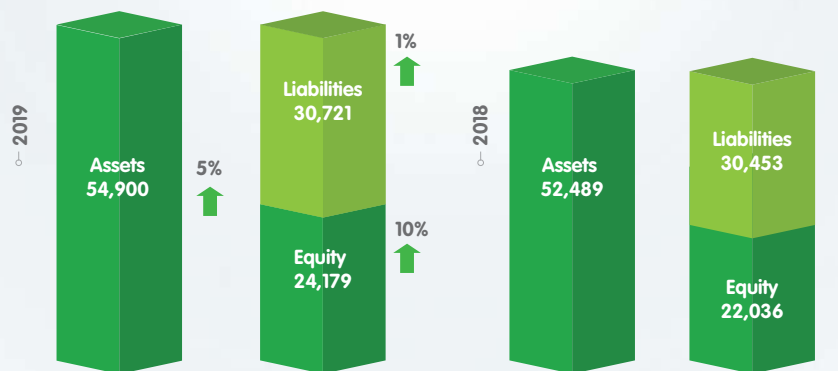


■ EPM ■ Energy affiliates in Colombia ■ Energy affiliates abroad ■ Water affiliates in Colombia ■ Water affiliates abroad

## Statement of financial position of Grupo EPM in 2019

Figures in billion COP

Grupo EPM



# Power

## Power generation efficiency indicator of Grupo EPM in 2019



EPM ESSA CHEC HET



### Thermal power efficiency

Actual availability / projected availability	96.12%	83.07%
Power penalized / power generated	1.30%	0.17%



### Hydraulic power efficiency

Actual availability / projected availability	100.24%	91.53%	101.44%
Small stations (<20MW)	99.06%	78.17%	52.66%
Power penalized / power generated	0.12%	Hydraulic power efficiency was obtained by average data and not by weighted availability.	



### Wind power efficiency

Actual availability / projected availability	
Small stations (<20MW)	101.02%

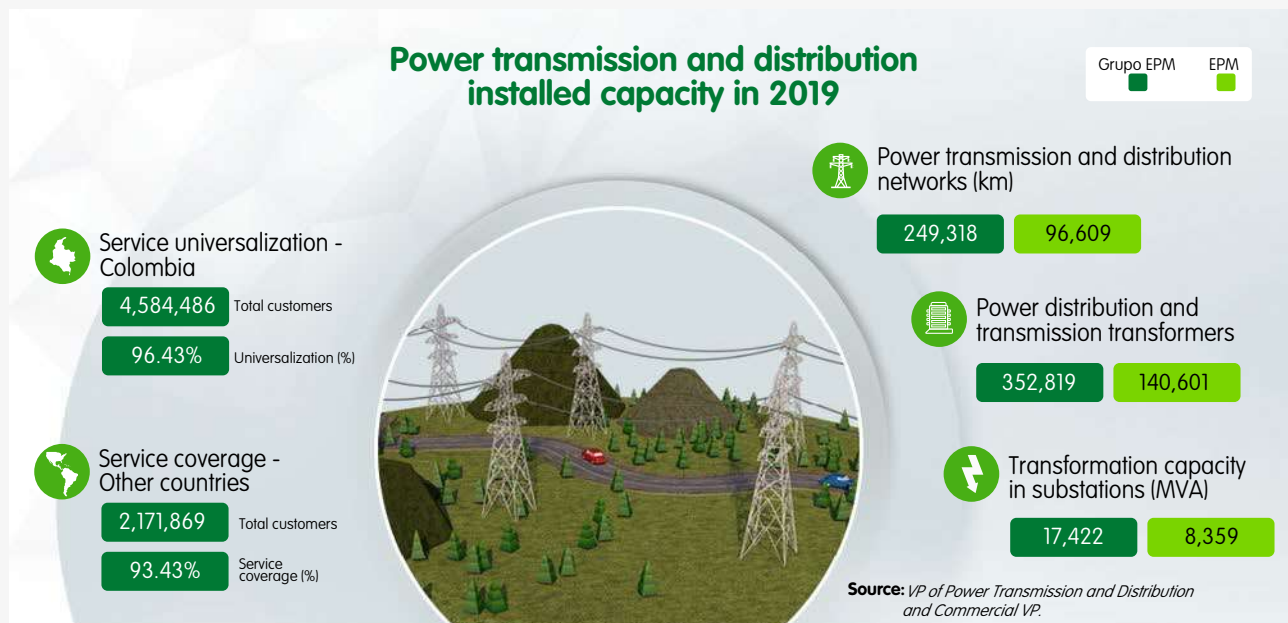
Source: Vice Presidency of Power Generation.

## Power generation mix

Type of source	Generation stations		Net production (GWh)		Net effective capacity (MW)				
	2019		2019		2019		2021 projection		
Wind	1	1	64	64	18	18	0	0	
Solar	0	0	0	0	0	0	109	109	
Solar self-generation	0	0	0	0	0	0	13	13	
Thermal*	2	1	161	160	397	353	496	445	
Hydraulic	Smaller than 10 MW	14	9	90	54	19	11	3,059	2,820
	Between 10 and 20	9	7	644	527	153	119		
	Larger than 20 MW	9	6	14,066	13,500	2,887	2,690		
	Total hydraulic	32	22	14,800	14,081	3,059	2,820		
<b>Total</b>	<b>35</b>	<b>24</b>	<b>15,026</b>	<b>14,305</b>	<b>3,475</b>	<b>3,192</b>	<b>3,677</b>	<b>3,387</b>	

\* Net effective capacity in liquid fuel.  
The fuel used for thermal power generation was:  
Natural gas and fuel oil (in Termosierra).  
Natural gas and diesel B2 (in Termodorada).

Grupo EPM EPM



Power transmission and distribution networks of Grupo EPM in 2019 (km)			
Voltage level	Overhead	Underground	Total
Ultra-high voltage transmission (voltage $\geq$ 220 kV)	1,315	3	1,318
High voltage transmission (57.5 kV $\leq$ voltage < 220 kV)	3,894	26	3,920
Medium voltage transmission (30 kV $\leq$ voltage < 57.5 kV)	5,773	72	5,845
Medium voltage transmission and distribution (1 kV $\leq$ voltage < 30 kV)	107,698	2,387	110,085
Low voltage distribution (voltage < 1 kV)	122,875	5,275	128,150
<b>Total km</b>	<b>241,554</b>	<b>7,764</b>	<b>249,318</b>

**Source:** Vice Presidency of Power Transmission and Distribution.

**Note:** Classification in accordance with international standards based on the NTC 1340 of the Technical Regulations for Electrical Installations (RETIE, as per its acronym in Spanish).

The length of the lines is determined according to the internally developed guide for cable measurement on site.

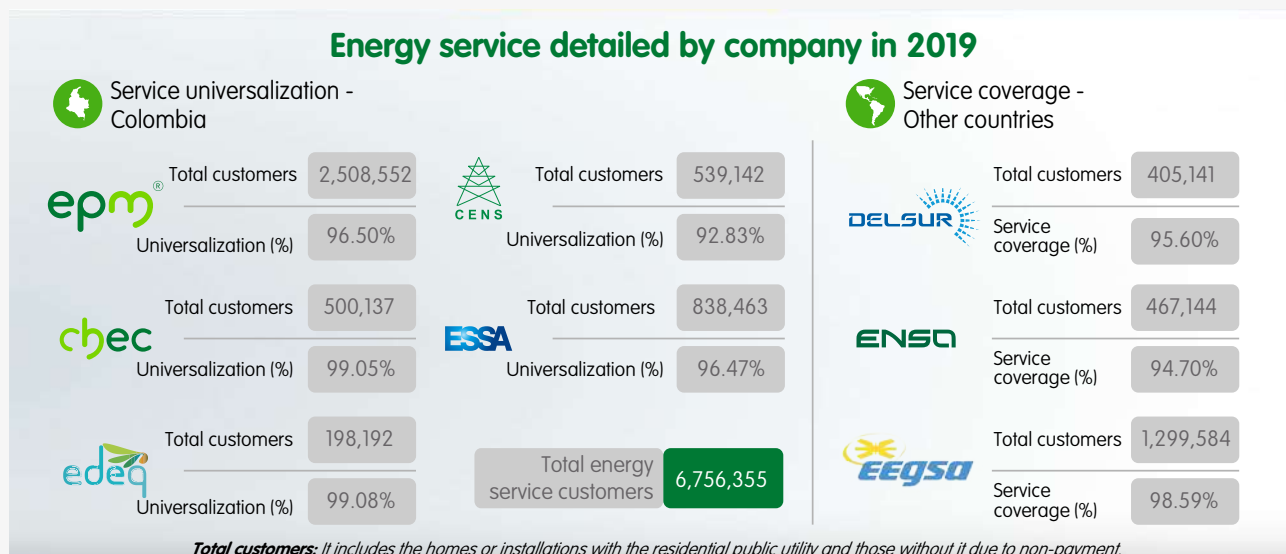
Power transmission and distribution networks of EPM in 2019 (km)			
Voltage level	Overhead	Underground	Total
National Transmission System (STN) (voltage $\geq$ 220 kV)	1,018	3	1,021
Level 4: Regional Transmission System (STR) (57.5 kV $\leq$ voltage < 220 kV)	1,680	0	1,680
Level 3: Local Distribution System (SDL) (30 kV $\leq$ voltage < 57.5 kV)	2,362	16	2,378
Level 2: Local Distribution System (SDL) (1 kV $\leq$ voltage < 30 kV)	48,224	923	49,147
Level 1: Local Distribution System (SDL) (voltage < 1 kV)	40,013	2,370	42,383
<b>Total km</b>	<b>93,297</b>	<b>3,312</b>	<b>96,609</b>

**Source:** Vice Presidency of Power Transmission and Distribution.

**Notes:** Classification in accordance with rulings CREG 025 of 1995 and CREG 097 of 2008 by the Energy and Gas Regulatory Commission.

Level 4 (STR) is remunerated in the distribution business along with levels 1, 2, and 3.

The length of the lines is determined according to the internally developed guide for cable measurement on site.





## Water supply and sanitation

### Water supply installed capacity indicators of Grupo EPM in 2019

Grupo EPM EPM



#### Installed capacity

Drinking water treatment plants	35	12
Drinking water treatment capacity (m <sup>3</sup> /s)	21.31	16.45

#### Water distribution

Primary distribution networks (km)	621	284
Secondary distribution networks (km)	5,898	3,641

#### Net drinking water production (thousands of m<sup>3</sup>)

390	294
-----	-----

### Sanitation installed capacity indicators of Grupo EPM in 2019

Grupo EPM EPM

#### Installed capacity

Wastewater treatment plants	18	1
Wastewater treatment capacity (m <sup>3</sup> /s)	13.31	1.80

#### Distribution

Collection and transportation networks (km)	832	394
Collection and transportation networks (secondary) (km)	5,784	4,299

#### Waste collection

Tonnes transported	699,597
Tonnes deposited in the La Pradera landfill for final disposal	1,177,566
Leachate treatment plants	1
Leachates treated (m <sup>3</sup> )	340,211

#### Water treated in wastewater treatment plants (thousands of m<sup>3</sup>)

169	46
-----	----



Source: Vice Presidency of Water and Sanitation.

### Water supply and sanitation service coverage in 2019

	Water supply 	Sewerage 	Waste collection 
 Total customers	1,266,504	1,233,212	NDA
Universalization (%)	97.24%	95.30%	NDA
 Total customers	5,602	5,708	NDA
Universalization (%)	100%	100%	NDA
 Total customers	91,886	72,593	NDA
Universalization (%)	91.75%	74.20%	NDA
 Total customers	34,397	31,059	NDA
Universalization (%)	97.00%	97.00%	NDA
 Total customers	22,638	20,098	NDA
Universalization (%)	91.23%	75.82%	NDA
 Total customers	NDA	NDA	868,335
Service coverage (%)	NDA	NDA	99.28%
 Total customers	179,198	178,203	NDA
Service coverage (%)	100%	99.86%	NDA
<b>Total customers</b>	<b>1,600,225</b>	<b>1,540,873</b>	<b>868,335</b>
<b>Universalization (%) in Colombia</b>	<b>96.75%</b>	<b>93.50%</b>	<b>99.28%</b>

Source: Vice Presidency of Water and Sanitation.

\* Total customers: It includes the homes or installations with the residential public utility and those without it due to non-payment.

\* TICSÁ has no direct customers, but it indirectly serves 1,298,319 customers through the operation of eight wastewater treatment plants.

# Natural gas

## Natural gas installed capacity of Grupo EPM in 2019

Grupo EPM



Measurement and regulation stations and pressure reducing stations

86



Compressor station (2,000 m<sup>3</sup>/h)

2



Polyethylene networks in Antioquia (km)

8,319



## EPM natural gas service coverage



Total customers

1,260,940



Service universalization (%)

85.84%

Source: Vice Presidency of Natural Gas.

Total customers: It includes the homes or installations with the residential public utility and those without it due to non-payment.

Grupo·epm

Colombia • Panama • El Salvador  
Guatemala • Mexico • Chile



# Our history

# Our history

**1955**

**Grupo EPM** has its origin in **EPM**,  
*a public company owned by  
the Municipality of Medellin.*



**1997** **EPM** becomes  
**a state-owned industrial  
and commercial company**

*pursuant to Act 142 of 1994.*



**1999** **The company Aguas  
del Oriente is born**

*to cover the water and sewerage demand  
of the municipality of El Retiro .*





2000

**EPM**  
becomes the *parent company*  
of a *business group*.

2002

*EPM Bogotá Aguas is created  
and then transformed into:*

aguas  
**nacionales**<sup>SM</sup>

2003

**EPM creates**  
*EPM Inversiones S.A. and purchases  
the affiliates CHEC, EDEQ, and HET.*

**chec**

*(Central Hidroeléctrica  
de Caldas)*

**edeq**

*(Empresa de Energía  
del Quindío)*



*(Hidroeléctrica del Teribe,  
Panamá)*

2005

*EPM adopts a new strategy  
and changes its organizational structure.*



**une**<sup>®</sup>

*UNE EPM Telecomunicaciones S.A. E.S.P. is created.*

2006

2006 - 2007

**EPM becomes partner  
of the regional companies**

*Aguas de Urabá and Aguas de Occidente.*

**Aguas de Urabá**

**Aguas de Occidente**

**2007**



The regional energy market  
in **Antioquia** is integrated.



**2009**

**EPM participates**

in the creation of *Empresas Públicas de Oriente*  
and **purchases** the affiliates **CENS** and **ESSA**.



(Centrales Eléctricas del Norte  
de Santander)



(Electrificadora  
de Santander S.A.)



**2010**

**EPM invests in Central  
American energy companies**

that are already positioned in the  
region and acquires the

**holding DECA II**  
and its affiliated companies.

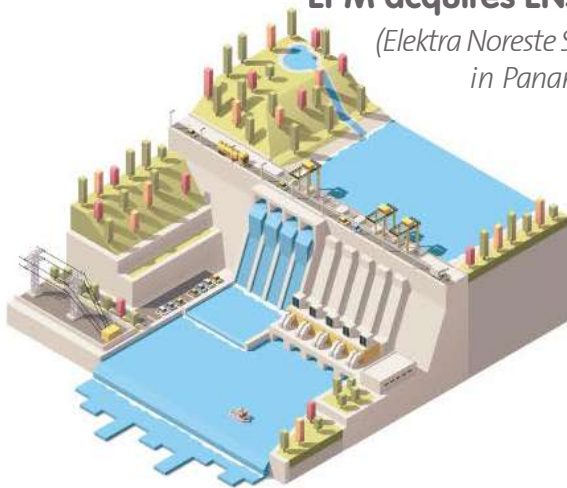
# 2011

**EPM acquires, through DECA II, the company El Salvador Holdings Ltd.**

*that, in turn, owns the companies Delsur (Electricidad Del Sur) in El Salvador.*

**By purchasing the company Panama Distribution Group S.A., EPM acquires ENSA**

*(Elektra Noreste S.A.) in Panama.*



**EPM formally assumes the financing, construction, maintenance, operation, and commercial exploitation of the Ituango hydroelectric project**

*that will be the largest power generation station in Colombia, with 2,400 megawatts of capacity.*

**EPM acquires 85% of the public company Aguas de Malambo S.A. E.S.P.**

epm<sup>®</sup>

Mexico



# 2012

**EPM Mexico is created as a platform for the different projects that may be developed in that country.**

*After the anticipated fulfillment of its big hairy audacious goal in 2011, the group defines a new strategic planning that sets its horizon for the year 2022 and it undertakes a transformation process.*

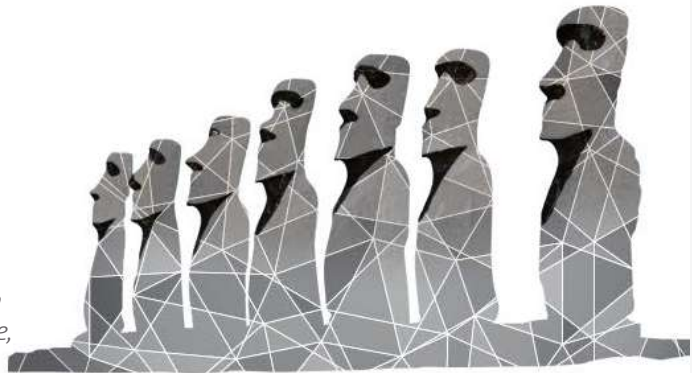


# 2013

## **EPM Chile is born as a holding**

*to boost the organization's growth plan in the south of the American continent.*

*Through it, Grupo EPM starts the construction of the Los Cururos 109.6-megawatt wind farm in the region of Coquimbo, northern Chile, through a turnkey contract signed with the Danish firm Vestas.*



# Ticsa

## **Grupo EPM transforms itself to fulfill its goals for 2022.**

*In Mexico, the group acquires a majority stake in Ticsa, holding engaged in the design, construction, operation, and setting in motion of wastewater treatment plants.*

## **Upon the acquisition of Emvarias,**

*Grupo EPM widens its portfolio by including the services of street cleaning and solid waste collection.*





# 2014

**Grupo EPM, through its affiliate EPM Chile, opens the Los Cururos 110-MW wind farm.**

**Grupo EPM consolidates its new administrative structure.**



**UNE and Millicom merge to create a new digital alternative in Colombia.**

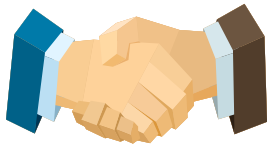
# 2015

**EPM strengthens its presence in Chile by purchasing Aguas de Antofagasta.**



2016

Regional de Occidente and Aguas de Urabá merge and become Aguas Regionales EPM.

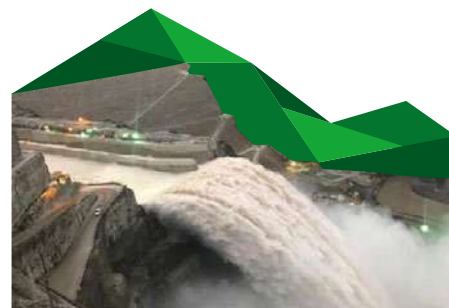


2017

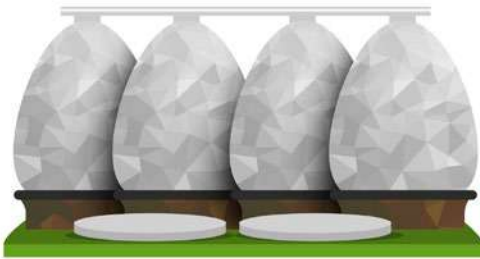
EPM acquires 100% of the EPRio shares. That is how Grupo EPM arrives to the municipality of Rionegro to provide the **water supply and sewerage** service.

2018

EPM is in front of the social, environmental, and technical issues arising as part of the contingency of the **Ituango hydroelectric project**, managing to reduce the risk for the communities downstream by making progress with the construction of the dam and completing the spillway works.



## 2019



**EPM continues with the works aimed at reducing the risk for the communities downstream of the Ituango hydroelectric project**, the initial recovery of the powerhouse, the commissioning of the spillway, and the completion of the dam, as well as the delivery to the Municipality of Ituango of the road on the dam.

**The Aguas Claras wastewater treatment plant**, in the north of Valle de Aburrá, becomes operational.

**The EPRio–EPM merger process is completed** and, thus, EPM becomes the provider of the water supply and sewerage service in the municipality of Rionegro.

# Grupo·epm



# Comprehensive risk management

## Comprehensive risk management

### Framework

As part of the control environment, Grupo EPM has implemented the comprehensive risk management (CRM) as a formal and cross-cutting practice in the organization.

The regulatory framework for risk management is based on the CRM policy, which is a formal statement of the organization's commitment to risk management and is described as follows:

*EPM manages the risks that impact its activity and environment, adopting better CRM practices and international standards, as a way to facilitate the fulfillment of the corporate purpose, strategy, objectives, and goals, whether statutory or legal.*

This policy becomes operational with the implementation of other management elements such as business guidelines and rules, the formal process called "Comprehensive Risk Management" and, in the organizational structure, with the Management of Comprehensive Risk Management that has three units to lead the matter. The risk management cycle is applied at the different management levels of the organization (group, businesses, companies, processes, projects, and contracts) and is divided into different reporting lines based on the criticality of the risks. In this way, it is possible to identify and mitigate diverse types of risks and, consequently, deal with them in a comprehensive way.

Other types of studies, such as specialized risk analysis for decision-making, risk inspections and, contingency, emergency, and disaster risk management plans are also conducted. As part of this comprehensive work, risk management is articulated with insurance management and compliance practices; the latter focused on the prevention of money laundering, financing of terrorism, fraud, and corruption, and on the protection of personal data, among others.

In order to analyze and assess the risks to which the organization is exposed, a formal methodology is applied, along with associated tools for the identification and qualitative and quantitative assessment of risks. EPM has defined the various elements that make up its risk profile and establishes its risk tolerance as the level of risk that the company is able to bear, in accordance with the limits defined in the risk assessment tables by impact object, prepared according to the types of potential effects in terms of damages to reputation, people, quality of service, project execution time, financial resources, information, or the environment.

Furthermore, the middle office structure was defined as an organizational function in EPM. It is focused on designing and implementing methodologies for the quantification, review, and monitoring of financial risks associated with the administration of excess liquidity and the definition of related regulations. Additionally, this function has a reporting line to the executive vice president of Corporate Finance and Risk and Investments Management and the vice president of Corporate Auditing.

The CRM is part of various reports that are delivered to the stakeholders and helps demonstrate responsibility and due diligence before the community and control authorities.

## Risk management and reporting mechanisms during 2019

During 2019 Grupo EPM updated the risk maps of its processes, businesses, and companies, which evidenced a commitment of all those involved in risk management, including senior management.

As a consequence of the event that caused the contingency in the Ituango hydroelectric project, a risk matrix was designed to address the risks derived from it, which could affect the sustainability of the organization in this new context. This proposal was presented in and validated by different committees, including the Core Committee, the Audit Committee, the Strategy and Investment Committee, and the Management Committee of the Board of Directors of EPM in 2018, which favored the formulation of different action plans that were defined immediately and led by each vice president in order to mitigate the risks presented during the year.

During 2019 the focus was on the detailed monitoring of the evolution of these risks and their action plans. For this follow-up, a monthly reporting mechanism was defined in the Core Committee and the Audit Committee, the latter composed of three independent members of the Board of Directors, the highest governance body of EPM. Through the Audit Committee, the board evaluates the effectiveness of risk management in the organization. This risk matrix includes the highest level and most critical risks for the organization based on a comprehensive perspective that includes social, economic, environmental, operational, and reputational issues, among others.

The risks of each business are validated by the corresponding vice presidency (Power Generation, Power Transmission and Distribution, Natural Gas, Water and Sanitation, and Commercial). The performance management units of each business are in charge of the periodic monitoring of these risks and their mitigation plans.

At the company level, each of the group’s national and international affiliates has risk matrices that are approved by the board of directors. As for the periodic monitoring, it is carried out by the Management Committee or the Audit Committee of each company.

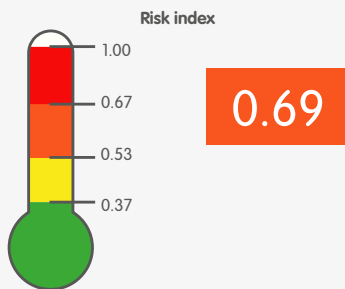
The risk matrices of projects, processes, and contracts are approved by the person in charge, who may be the head of the unit, the director and sponsors of the project, or the person requiring the contract. Based on the criticality of the risks, these matrices are presented to the vice presidency to which the process belongs: in the case of projects, to the executive vice presidency of Projects and Engineering and in the case of contracts, to the vice presidency of Supply and Shared Services or to the Contracting Committee.

Besides the risk exercises of the organizational management levels, specialized risk analyses are conducted aiming at supporting decision-making processes. Examples of these exercises include quantitative risk modeling, reputation alerts, and analysis of risks related to budget and new businesses.

### Risk matrix of the new business context – December 2019

		Consequence				
Likelihood		Insignificant	Minor	Moderate	Major	Critical
2019	Very high		14			
	High				1 7	2 13
	Medium				4 15 16	9 12 18
	Low			3	10	11
	Very low					

Risk level: ● Critical ● High ● Moderate ● Low  
 Risk acceptability zones



\*The risk index is a number that can take values between 0 and 1, with 0 being the lowest risk and 1 the highest risk, which represents the risk level of the matrix as a whole.



For December 2018 the risks of the new business context presented a risk index of 0.759, while for December 2019 the risk index decreased to 0.69 as a result of the implementation of various action plans in the last year, which have managed to mitigate the risks to which the organization is exposed.

## Top 10 risks of the new business context

Code	Name of the risk
1	Investigations or inquiries from control bodies.
2	Third-party claims.
7	Difficulty to comply with the assumptions of the business plans.
9	Unfavorable regulatory changes – Ituango hydroelectric project.
11	Unfavorable regulatory changes – Ituango hydroelectric project environmental aspects.
12	Contractual breaches.
13	Unsatisfactory or untimely delivery of projects to the operation – General projects.
18	Unsatisfactory or untimely delivery of projects to the operation – Ituango hydroelectric project.
4	Infrastructure insufficiency or unavailability.
16	Inappropriate engagement or communication with stakeholders.

## Emerging risks

During the assessment of risks of the new business context, the following emerging risks were identified. They are relatively new, have a high degree of uncertainty, and have a tendency to increase.

No.	Risks	Main potential impacts	Main improvement actions
2	Third-party claims.	<ul style="list-style-type: none"> <li>• Significant economic outlays.</li> <li>• Negative impact on the reputation of Grupo EPM.</li> <li>• Claims and complaints that exceed the response capacity of Grupo EPM.</li> </ul>	<ul style="list-style-type: none"> <li>• Contracts were signed with the community damaged and affected by the contingency situation of the Ituango hydroelectric project, in order to mitigate its effects.</li> <li>• Various demands derived from the contingency situation in the Ituango hydroelectric project were received.</li> <li>• The ordinary judicial proceeding was initiated.</li> </ul>

No.	Risks	Main potential impacts	Main improvement actions
14	Cyberattacks	<ul style="list-style-type: none"> <li>• Sabotage.</li> <li>• Data modification.</li> <li>• Data wiping.</li> <li>• Intellectual property infringement, plagiarism, and defamation.</li> <li>• Network disruption (denial of service).</li> <li>• Negative impact on reputation.</li> <li>• Ransomware (data kidnapping for ransom).</li> <li>• Economic losses.</li> <li>• Alteration of critical assets and cyber assets.</li> <li>• Discontinuity in the service (energy, water supply, and natural gas).</li> <li>• Negative impact on the integrity and welfare of individuals.</li> <li>• Environmental damages.</li> </ul>	<ul style="list-style-type: none"> <li>• Development of the Centinela (Sentinel) project that as the main milestones of 2019 presented the progress with the batches of computer security and cybersecurity management system, situational awareness, protection in operation and diagnosis and risk assessment, cyber defense and resilience in operation, and cyber intelligence in operation.</li> </ul>

**Sources:** Definition of emerging risk: Risk and Insurance Management Society, Inc. (RIMS). RIMS Executive Report – The Risk Perspective. Emerging Risks and Enterprise Risk Management, New York, NY 10018.

## Actions proposed to mitigate the risks of the new business context

Each risk identified in the risk matrix of the new business context is assigned to a vice presidency that is in charge of defining the improvement actions to mitigate the risk and engaging the relevant stakeholders in its management. Improvement actions were proposed for each risk and some are detailed below:

- Working group with the authorities as part of the National System for Disaster Risk Management to address the contingency in the Ituango hydroelectric project.
- Permanent update of the risk analyses associated with the Ituango hydroelectric project and the contingency management.

- Development of an engagement and communication plan with control entities and authorities to address the contingency requirements in the Ituango hydroelectric project.
- To mitigate cyberattacks, development of the Centinela project that as the main milestones of 2019 presented the progress with the batches of computer security and cybersecurity management system, situational awareness, protection in operation and diagnosis and risk assessment, cyber defense and resilience in operation, and cyber intelligence in operation.
- Definition of the legal defense structure for Grupo EPM.
- Identification of critical infrastructure for the water supply business and action plans.
- Development of the process for filing claims and requesting compensation before the insurance and reinsurance companies of the Ituango hydroelectric project.
- Financing with international banking to develop the investment plan of EPM.
- Continuation of an effective communication strategy with risk rating agencies and creditors, regarding the Ituango hydroelectric project.
- Monitoring of the commitments derived from legal stability.
- Reliability assessment with the community stakeholder group and tracking of reputation.

## Key comprehensive risk management milestones in 2019

- Continuation of the monitoring structure for the risks of the new business context and their mitigation actions.
- Advice and support to the Ituango hydroelectric project and risk analysis for the main milestones.
- Implementation of disaster risk management plans by business, pursuant to Decree 2157 of 2017 issued by the Presidency of the Republic of Colombia.
- Update of risk matrices of national companies: CENS, ESSA, CHEC, EDEQ, Aguas Regionales, Aguas de Malambo, Aguas de Oriente, and Aguas Nacionales.
- Update of risk matrices of international companies: Delsur, HET, DECA II, Ticsa, and EPM Inversiones.
- Risk updating for documented business processes.
- Risk analysis for 38 new projects and under monitoring.
- Special risk analyses (61).
- Risk control inspections: 19 in generation stations y 17 in power substations.
- Business impact assessment of the EPM businesses of water supply, wastewater management, natural gas, power generation, and power transmission and distribution of the companies CENS, CHEC, EDEQ, and ESSA.
- Risk analysis of all the contracting processes carried out during 2019 and relevant modifications for the contracts in execution.

- In 2019, the renewal of the insurance program of Grupo EPM reflected the impact on the cycles of the global reinsurance market, with strong increases in rates, especially for high claims policies, both worldwide and at the group level, with increases of up to 40%. However, the renewal of the insurance program of the entire Grupo EPM was achieved without deterioration in technical conditions and with economic market conditions.
- Maxseguros EPM maintained its retention in the directors and administrators policy and employee disloyalty and financial risks policy, while it increased its retention in the property damage and loss of profits policy. Moreover, it acted as a facilitator in the civil liability, errors and omissions, and cyber risk policies. The participation of Maxseguros in the transfer strategy was essential to achieve the renewal of the insurance program of Grupo EPM.

## Occurrences in 2019

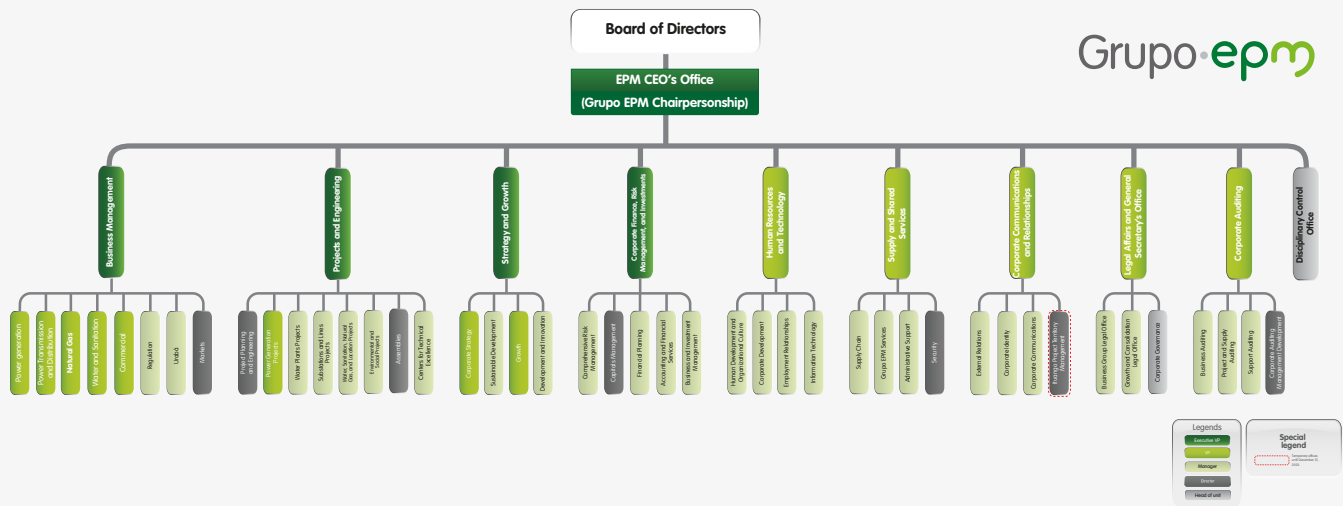
- The actions carried out in 2019 made it possible to obtain compensations derived from the event at the Playas power station for a value of nearly USD 6 million, out of a total of USD 35 million paid by the insurer. It is estimated that by 2020, the claim can be closed for an additional value of nearly USD 3 million.
- As for the compensation received during 2019 for claims under the other policies of the program, approximately COP 7 billion were received for EPM and COP 6,400 million for the national affiliates.
- For the Ituango hydroelectric project contingency, an advance payment was received in May for the claims of affected third parties under the non-contractual civil liability policy amounting to COP 6,168 million.
- With respect to the all-risk construction and assembly policy, on September 16, 2019, coverage was confirmed for damage to the works and equipment of the Ituango hydroelectric project. Therefore, on December 4, 2019, the insurance company Mapfre made a first advance payment of USD 150 million corresponding to *damnum emergens* in civil works.
- Directors and administrators policy: some research was conducted by the control bodies, which have involved the recognition of defense expenditure in favor of those insured by the policy.



# Our organization

# Our organization

## Administrative structure



[Click here](#) to download the administrative structure in PDF.

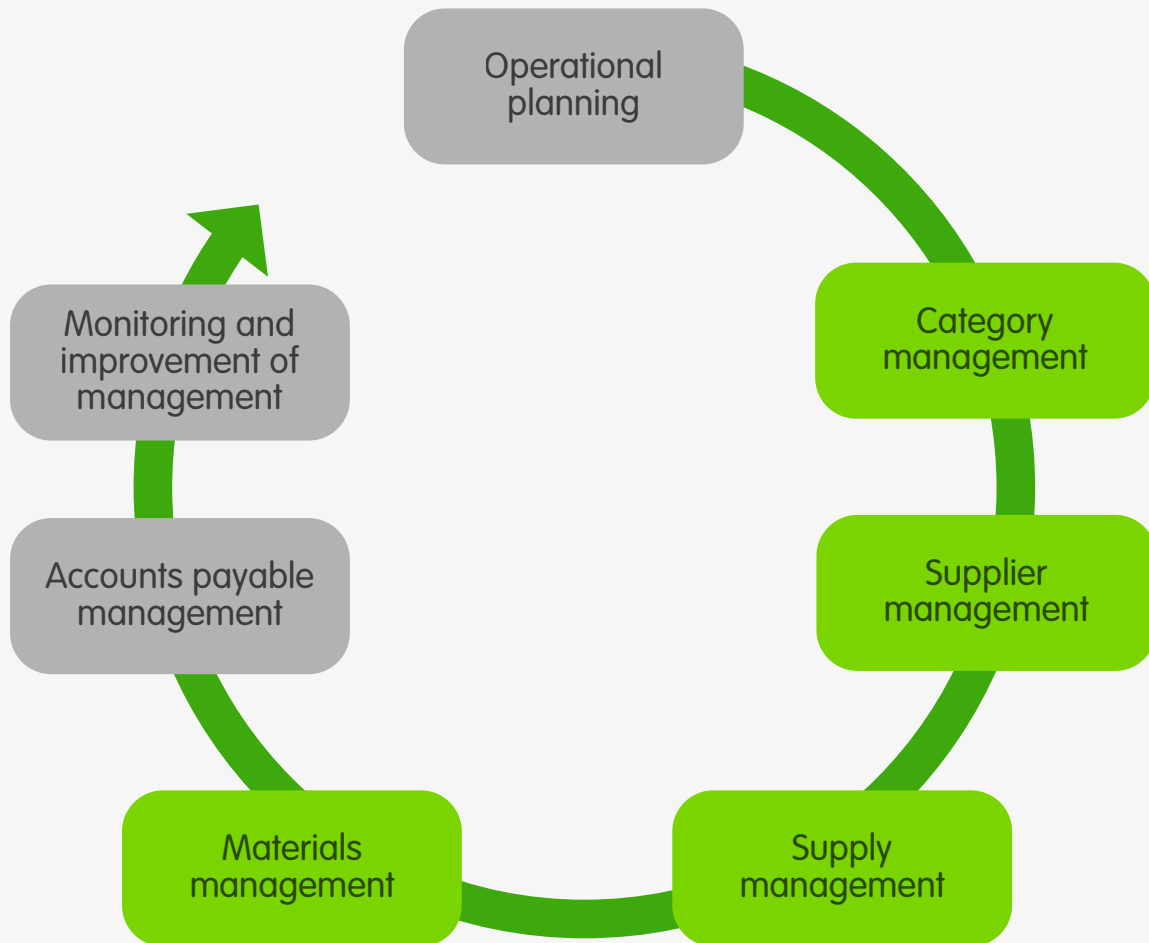


# Our supply chain cycle for goods and services



## Our supply chain cycle for goods and services

The objective is to supply the goods and/or services required by the organization in the most optimal conditions of quality, quantity, opportunity, and price, in order to achieve the consolidation of its businesses in the market and, thus, increase value for its stakeholders.



Process	Objective
Operational planning	Plan and schedule the roles, processes, and improvement actions, as well as the projects defined to achieve the goals, allocating human, technical, and financial resources and identifying the contractual requirements for their execution.
Category management	Identify opportunities to create synergies and optimize operating costs by means of specialized knowledge of the elements that make up the required goods and services.
Supplier management	Improve the performance and satisfaction of suppliers in terms of their engagement with Grupo EPM.
Supply management	Negotiate the acquisition of goods and services in order to meet the needs of the organization and ensure compliance with the subject of the contract.
Materials management	Manage the logistics, receive, re-stock, safeguard, and supply movable assets according to the needs of the users.
Accounts payable management	Comply with the payment mandate of the different administrative areas of EPM and its affiliated companies in an agile and safe manner, fully meeting financial obligations, ensuring proper management of resources, optimizing the economic benefit for EPM and the affiliate that orders the payment, and guaranteeing the satisfaction of suppliers and other stakeholders.
Monitoring and improvement of management	Keep track of the performance by monitoring management indicators, projects, plans, processes, and systems that favor the assessment of fulfillment of the strategic, tactical, and operational goals and objectives of the group, providing accurate, reliable, and systematic information to identify signs aiming at the formulation of corrective and preventive actions for verification, approval, and decision-making in different levels.

Learn more in the following sections of the social and environmental management report:

- [Responsible procurement for local development.](#)
- Purchasing and procurement.
- Engagement with suppliers and contractors.
- Strengthening and development of suppliers.



# 2019 Management Report

## Letter from the CEO

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Medellín, March 27, 2020

### Board of Directors of EPM

Grupo EPM is an organization that understands its daily mission as an opportunity to interact with the people, listen to the community, and work with much dedication and commitment in innovative solutions to favor development, equity, and social welfare.

In this 2020, upon taking on the responsibility to direct this dear company from Medellín, Antioquia, and Colombia, expanded with the same organizational values and principles into several countries of Latin America, I confirm the great skills of its people, the esteem they feel for what they do, and the constant learning process that gives meaning to the service—the core of this business group—in each activity, each project, and each decision made.



Consequently, in the introduction of this 2019 Management Report, I would like to first show my appreciation to those who, at this company, make possible the reality of reaching every day so many homes, companies, and businesses, offering the highest-quality public utilities intended to open spaces for growth and opportunities, which results in social dynamics such as education, employment, healthcare, and civic culture. In short, the goal is to build the present and the future.

As a result, EPM always shows in its reports that what all this corpus of figures and results mainly reflects is the work of the people, their effort to improve every day and create a very positive symbiosis with the communities, which favors the comprehensive development of the current world.

I thus highlight that large-scale and technically-complex works, such as the Ituango hydroelectric project and the Aguas Claras wastewater treatment plant are conceived not only as accomplishments in the field of infrastructure, but also as actual alternatives to improve and significantly contribute to the growth of the community in every sense.

In this sense, the idea that I have about EPM is that of an organization that transforms the lives of the people and that opens doors for change and the construction of progress.

Evidence of this is the transfers to the Municipality of Medellín, the regional autonomous corporations, and other municipalities where the company is developing projects; these life-changing contributions result in quality of life.

The year 2019 will go down in the history of EPM as the period in which the company firmly made progress with the Ituango hydroelectric project in order to essentially reduce the risks for the communities downstream. After the contingency that started in 2018, the organization has worked tirelessly to, first of all, protect the lives of the people and, secondly and thirdly, preserve the environment, and recover the project.

During this period, very important achievements took place, such as closing the gates to stop the flow of water through the powerhouse and, in this way, drain the liquid from it and start the necessary works in the caverns and tunnels affected. The commissioning of the spillway as a canal to dispel the energy of the water contained in the reservoir is also highlighted. At this moment, we started a new phase that, with the purpose of further reducing the risks for the communities, consists in making progress with the works at the powerhouse and commissioning, as soon as possible, the intermediate discharge tunnel.

Moreover, the work at the Aguas Claras wastewater treatment plant, opened in 2019, continues responsibly to eliminate the odor affecting the neighboring community.

Taking an innovative perspective, the company continued making progress with the businesses, which has yielded results in nonconventional renewable energies, the modernization and expansion of the water supply and sewerage systems in several sectors of Valle de Aburrá, the connection of more homes in Medellín and Antioquia to the natural gas utility, and the management of significant aspects in solid waste. All the above is supported by truly relevant programs such as Unidos por el Agua (United for Water), Electrificación Rural (Rural Electrification), and Alumbrado Navideño (Christmas lighting), as well as programs related to sustainable mobility and prepaid services and many others described below.

In Medellín, Urabá, Eastern Antioquia, and the cities of Colombia and Latin America where we are present, 2019 was a year of accomplishments with Grupo EPM.

This is a financially sound organization, with a liquidity level that allows it to ensure the provision of public utilities and the compliance with the obligations acquired. In addition, the group has long-term sources of financing at its disposal, with credits already negotiated that allow it to meet the investment plan and cover the needs created by the Ituango hydroelectric project contingency.

We have analyzed the urgent topics and we are also starting to lay out ideas that we should elaborate from now in the teams. Thus, we designed a metaplan, which is the road map for the following months and years.

We structured **seven focal points of Grupo EPM**, which are in line with the strategic planning, the strategic goals, and the strategic focal points that the company has been implementing. In these focal points, we can find elements related to the growth of the organization, the connection of the company and the city with the region, innovation, digital transformation, and the implementation of technology that will allow us to move forward as a more modern company.

### **Focal point 1: future services, smart cities, and fourth industrial revolution**

As part of the fourth industrial revolution and smart cities, we will aim at improving the engagement with customers, offering them a better service, and migrating from analog processes through a technology-mediated transformation. Topics as important as mobility and air quality are included in this focal point.

### **Focal point 2: city/region**

Our purpose is to align ourselves with a wider environment. We want that this company can be an increasingly integrating agent of the different regions of the country: Urabá, Eastern Antioquia, Lower Cauca, etc. The purpose of this focal point of Grupo EPM is that their contributions have optimal value.

### **Focal point 3: growth**

This focal point seeks to adjust the corporate purpose of the organization to the technological transformations and the new business models offering more opportunities to the business group.

**Focal point 4: socioeconomic benefits of public utilities**

We want that the EPM customers have increasingly a better quality of life. We will work in coverage, quality, and purchasability. Therefore, our goal is that the public utilities bill becomes increasingly lighter in the market basket. Solutions such as prepaid water and energy and programs such as Paga a Tu Medida (Pay According to Your Needs), Unidos por el Agua, and Unidos por el Gas (United for Natural Gas) are part of the dynamics of this strategic focal point of the group.

**Focal point 5: optimization of operations**

We have different initiatives and projects whose purpose is to make the businesses of the organization much more profitable, in such a way that they give room to better indicators in the financial statements of the group. This focal point includes projects such as operational safety, cybersecurity, loss management, document management, and different water and basic sanitation projects that will be essential throughout this year.

**Focal point 6: cultural evolution**

The idea of this focal point is to project change on the people of the group to face the different transformations that take place today in the social and corporate environments. Matters including ethics, conversation, diversity, and conscious leadership are foundations of a process integrating all the focal points of the organization through culture.

**Focal point 7: Ituango hydroelectric project**

What this focal point proposes is the challenge of successfully completing the project and commissioning the first generating unit in December 2021. This point takes into account the legal, financial, social, environmental, and technical aspects that must be overcome.

This report is doubtlessly a tribute to those who have made it possible: workers at EPM, the very community that strongly encourages this business management, and those like the former CEO, Jorge Londoño De la Cuesta, and the board of directors that supported his management, who did their best effort to make Grupo EPM move forward, taking on challenges with intelligence and attitude of service.

I express my gratitude to the current board of directors and the mayor of Medellín, Daniel Quintero Calle, for being here with us, holding decisively the compass that will lead us toward the accomplishments of our dreams.

This is a teamwork whose purpose is rather clear: contribute to the harmony of life for a better world.

This report meets the requirements of the Communication on Progress to respond to the EPM's commitment to the Global Compact of informing on the disclosure and application of the principles in its strategy and operations. It should be noted that it was in 2014 when EPM reaffirmed its willingness to join the United Nations Global Compact and its commitment to the ten principles on human rights, labor, environment, and anti-corruption.



**Álvaro Guillermo Rendón López**  
EPM's CEO



## Strategic planning

In 2019, the strategic planning components were adjusted to place the purpose as the core element and integrate the sustainability model as a fundamental basis to build each strategic planning component.

Including the sustainability model in the corporate strategic planning of Grupo EPM in an explicit way strengthens the vision of a business management model that understands that economic growth should respect the social and environmental limits. Furthermore, the sustainability vision of Grupo EPM conceives the protection of and value creation for companies and the society from the core business activities, distancing itself from the philanthropic or welfarist approaches and without replacing the state or any other actor in their responsibilities.



The strategic planning consists of four components: purpose, identity, action, and results, which are shown in the following chart:



The **purpose** becomes the core of our corporate action; answers the question of **why we exist**; and represents the highest sense of contribution that Grupo EPM expects to give. It was defined with the participation of all the business group companies, involving all the organizational levels, based on the Theory U by Otto Scharmer, and through conversations and workshops. The process allowed us to go from an egosystemic approach to an ecosystemic approach, which implies a wider vision of the impacts and relationships of the organization.

The **purpose** of Grupo EPM is to **contribute to the harmony of life for a better world**. It is an invitation to live in harmony with oneself and with internal and external interactions and to recognize that we are one part that, along with others, contributes to a whole that is built on differences.

The **identity** refers to **what we decided to be** and covers the elements that describe our corporate philosophy. It includes the code of ethics of the group, which, in turn, comprises the principles of action and values.

The **five principles of action** that guide the group are to fulfill our commitments, have the society as our main interest, give a fair treatment, care for the environment and resources, and serve.

The **values** are responsibility, transparency, and warmth.



The **action** defines **what and how we decide** to accomplish our purpose in line with our identity. This component encompasses the corporate strategy, the competitive strategy, and the support strategies.

The **corporate strategy** is defined as the optimization of operations and growth following corporate social responsibility criteria.

The essential statement of the **competitive strategy** is “businesses creating value for their stakeholders” and it is expressed in each business as described below:

- Power generation: make the business profitable through safe operations and incorporate nonconventional renewable energies through strategic alliances.
- Power transmission: make the business profitable through safe operations.
- Power distribution: make the business profitable through safe operations, grow organically in the current markets, and incorporate solutions of energy distributed and for new uses, through strategic alliances.
- Natural gas: make the business profitable through safe operations and grow organically in the current markets.
- Water supply and wastewater management: make the business profitable through safe operations and grow organically in the current markets.
- Solid waste management: make the business profitable through safe operations, grow organically in the current markets, and incorporate new lines of business through strategic alliances.

The **support strategies** correspond to the actions developed in each functional area of the organization to provide the businesses with competitive power according to the business models and plans of each of them.

The **results** guide us to **where we decided to get**. They are the achievements expected regarding the Sustainable Development Goals (SDGs); the big hairy audacious goal (BHAG) in social, environmental, and financial terms; and the strategic goals.

## Services to our customers and users

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### Engagement with our customers and users

#### — Improvement of the customer and user experience

We set the following challenges that ensure a better experience: strengthen the customer experience model that we have implemented since 2014, create initiatives to *minimize customer effort* in the interactions through the customer service channels, and, finally, get closer to the customers and communities to get to know them, understand them, and teach them the *good use and benefit of public utilities*.

#### — Strengthening of the customer and user experience model

Considering the average of customer experience results in companies, negative critical incidents should not exceed 22%. In the last assessment conducted in 2019, EPM obtained 21.3% negative experiences.

Through the company Ipsos Napoleón Franco, EPM conducted five assessments by applying 20 thousand surveys. It is worth highlighting that the recommendation index reached by EPM in 2019 is 54.4, above the reference of 50 in the market. Likewise, 21.3% of customers and users (one point below the reference) expressed that they experienced one negative critical incident with any of the transactions assessed. Due to this, their dissatisfactions were managed with the areas involved.

With the purpose of boosting the actions that create value to the customers and redesigning the moments that negatively impact their experience to transform them into pleasant moments, the processes and formalities for the connection to the energy and water supply services were simplified, eliminating 40% of the requirements; the connection to the natural gas service was standardized; and the options to simplify the demonstration of the connection to the property were increased from two to 10. In addition, an agreement was entered into with the National Registrar's Office of Civil Status to perform biometric validation (eliminating copy of identification document requirements) and share information online. Finally, tests with customers were conducted to perceive their experience with the new initiatives before launching them to the market, and support and orientation concerning the improvement of the experience were provided through different service channels.

## — Initiatives oriented to reduce customer and user effort

During the year, EPM received around six million transactions nationwide through all the channels, of which 4% were through digital media and self-service modules, such as online requests, complaints, and claims; the EPM application; and the Ema chatbot.

Aiming to migrate commercial operations to a digital management by leveraging technology, in order to improve performance and customer experience, during 2019, progress was made with the following:

Development of the electronic form for construction companies: five water supply transactions are in process of stabilization.

Improvement of the website functions: with the purpose of improving the customer interaction with the website, some functionalities were improved, so that customers can send their requests, complaints, and claims and query formalities and services.

Commissioning of an artificial intelligence system (EMA chatbot): the chatbot provides online service to customers and users in three transactions, namely query of amounts payable, request of bill copies, and query of formalities. In total, 101,000 interactions were processed.

Creation of the robotic process automation (RPA) experience center for Grupo EPM: by leveraging technology, the center increases the efficiency of some commercial activities, through the standardization of repetitive and numerous tasks, to simplify and speed up the customer request processes.

Addition of new functionalities to the mobile application: they include the request of turns in office lines, the query of office locations, and the information on the requirements for the most frequent transactions. The application has been downloaded to 28,000 devices.

Development of the interactive bill (QR code scanning) and submission of the bill through WhatsApp and the Factura Web platform: 317,000 customers and users are subscribed to online billing.

Execution of the developments to reduce waiting times: they include solutions such as thermal printing, electronic signature, fingerprint biometrics, e-mail submission of assisted-customer certificates, online document storage, and document encryption.

Standardization of the commercial customer-service system at the four national energy affiliates: this ensures the regulatory compliance with the due process, the income stream of the companies, and the minimization of penalty risks, overcoming technological obsolescence and reinforcing the standardization of processes among affiliates.

Installation of eight Puntos Fáciles (Easy Points) in the metropolitan area of Valle de Aburrá: this allows customers and users to address queries, complete formalities, and make payments at the closest point. The points were installed at the EPM offices in the Miguel de Aguinaga building (downtown Medellín) and in the municipalities of Bello and Envigado; at the Parque de Berrío metro station; at the Más Cerca (service offices) of the Belén and Castilla neighborhoods; at Parque de los Deseos, and at the Pablo Tobón Uribe Hospital.

### — Customer and community training

As Grupo EPM at the national level, during 2019, we interacted with more than **526,000** people from all the regions of the country where we are present, of which **255,000** correspond to EPM. We carried out 160,000 training activities nationwide, 125,000 corresponding to EPM, and we got closer to the community by means of different engagement programs such as Cercanía (Closeness) and Por Ti, Estamos Ahí (We Are There for You), the creation of a network of community leaders, the work with the educational community and the Cuidamundos (World's Protector) program, the visits to the power plants, and, in general, the development of workshops, working groups, roundtables, and home visits

The engagement with customers and the community is achieved thanks to educational communication at levels of awareness-raising, information, and training on basic aspects of the provision and safe and efficient use of residential public utilities.

Through the **Por Ti, Estamos Ahí** program, 71 institutional events were held, benefiting 99,750 people nationwide. These activities (home visits, conversations, roundtables, workshops, and other educational engagement events) allowed us to talk with the communities about different topics associated with the provision of residential public utilities.



With the purpose of contributing to a better understanding of the bill, the fees, the process of meter reading, among others, we had conversations with 147,000 people nationwide, contacted through the **Lectura a Tu Medida** (Reading at Your Measure) program.

Through the **Cuidamundos** program, EPM and the national affiliates interacted with 72,460 children, young people, and adults of the educational sector in 830 activities, fostering the care for the environment, the prevention of electrical hazards, and the appropriate use of the natural services and resources. As for the work associated with education on **safe use**, we carried out several activities with the participation of 30,000 people in Antioquia. Of them, we emphasize the drawing contest on prevention of electrical hazards that took place in 33 territories and the development of the second version of Especialidad Scout (Scout Specialty), in which 54 groups and around 3,000 scouts designed and implemented, with their distinctive enthusiasm and commitment, communication strategies to promote the safe use of energy and the prevention of electrical hazards.

As part of these educational activities, we made progress with the **social and educational management plan of the Unidos por el Agua (United for Water) program**; during the year, we interacted with 74,000 people from the neighborhoods benefited from the program to generate reliable relationships with the leaders and communities from the territories, facilitate the technical development of the works, empower the community to use, care for, and respect the new infrastructure, and commit them to efficiently use the resource and timely pay the bill.



**Líderes Amigos de EPM (Friend Leaders of EPM)** also stands out as a strategy that favors conversation groups as a basis to create strong reliable relationships. This has allowed the national companies of the group to hold permanent meetings with the community representatives. In total, during the year, 10,000 people participated in these meetings among leaders and representatives of the communities.

With the aim of recovering the trust of the communities downstream the Ituango hydroelectric project, multiple engagement and group strategies, including discussion sessions, workshops, and home visits, were developed, through which we were able to establish close dialogs with 43,000 inhabitants of the area of influence of this work.

Likewise, programs such as **government seminars, business approach sessions, and visits to EPM power plants** were developed with employees and executives of the companies and institutions belonging to the segments of the government, companies, and large customers, to which EPM provides with its services and with which it consolidated a strategic relationship as an ally. With these activities, we reached 7,600 public servants and employees of companies and large customers of Grupo EPM.

## — Somos program

The Somos program covers 891,500 customers and users, of which 246,300 have active credits, for a total of COP 132,800 million financed.

Thanks to the 5% growth in the number of customers and users with credits, compared to the previous year, the Somos program has benefited **246,300 families**, of which 88% belong to strata 1, 2, and 3. Sales amounted to **COP 132,700 million** as a result of the commercial operations and the different activities carried out with strategic allies of the program (Éxito, Jumbo, Haceb, Pisende, Samsung, among others) and the more than 260 commercial allies in Antioquia that have around 500 points of sale.

The program contributed resources amounting to COP 7,500 million to the company's sustainability. The company will continue strengthening the program with the national expansion plan and will implement the standardization of the product in the energy affiliates as of 2020.

## Universalization of public utilities

At the national level, Grupo EPM has provided the access and availability of public utilities through commercial and infrastructure solutions. It reached 1,421,027 customers and users in water supply in Colombia; 1,362,670 in wastewater management in Colombia; 868,335 in solid waste management in Medellín; 4,584,486 in energy in Colombia; and 1,260,940 in natural gas in Antioquia.

These results show that, in Colombia, Grupo EPM accomplished a universalization of public utilities of 96.75% in water supply, 93.5% in wastewater management, 99.28% in solid waste management, 96.43% in energy, and 85.84% in natural gas.

In 2019, EPM connected **38,874** customers and users to the water supply service and **40,338** to the wastewater management service, for a total of 1,266,504 and 1,233,212 customers and users, respectively; this reflects a 3% annual growth in both services. This growth is the result of the business natural increase and the Unidos por el Agua (United for Water) program actions.

The company attracted **95,511** customers and users to the energy service, for a total of 2,508,552 customers and users, which shows a 3% annual growth, leveraging the Habitación Viviendas (Habitable Homes), Electrificación Rural (Rural Electrification), and Energía Prepago (Prepaid Energy) programs. This figure also includes the connection of 4,157 homes located in places with technical or legal limitations for the service provision.



Prepaid energy

The company connected **67,040** customers and users to the natural gas service in Antioquia, for a total of 1,260,940, which shows a 5% annual growth. In 2019, EPM created the Unidos por el Gas (United for Natural Gas) program, whose purpose was to apply for a subsidy granted by the Municipality of Medellín for the charges of connecting homes belonging to strata 1, 2, and 3 to the natural gas network. 12,004 homes were connected, exceeding the goal of 624.

The expansion outside of Valle de Aburrá stands out. During the four years, other 19 towns of Antioquia were connected to the service: Belmira, San José de la Montaña, Toledo, El Valle (small town in Toledo), Dabeiba, San Vicente, Concepción, La Clarita (small town in Amagá), La Mina (small town in Amagá), Angelópolis, La Estación (small town in Angelópolis), San Roque, Santo Domingo, Versalles (small town in Santo Domingo), Caracolí, Maceo, Remedios, Palermo (small town in Támesis), and Nueva Colonia (small town in the Urabá region). In addition, EPM made an effort to accomplish the connection of 3,333 homes in areas enabled by the Municipality of Medellín, which improves the quality of life of these communities.

*Note: the total of customers and users is the homes that have the residential public utilities available for their enjoyment.*

## — Unserved population

In 2019, we connected 37,171 customers and users to the energy, natural gas, water supply, and wastewater services in populations settled down in places with technical or legal limitations for providing the service, such as those located in high-risk areas or outside of the perimeters of the land use plans. It is 47% more than the previous year, increase that leveraged mainly the connections accomplished through the Unidos por el Agua (United for Water) program.

We emphasize the communication and collaborative and coordinated work between the different EPM teams with the administrations and other municipal institutions to enable and obtain licenses in difficult-clearance areas, including places with invasions, high risk, and law and order problems.

In the Unidos por el Agua program, we highlight the collaborative work with the inhabitants of the territories impacted and the community leaders, so that they can be active actors in the development of the intervention, feel the infrastructure installed as their own and, thus contribute to its sustainability.

In the water supply service, in 2016, EPM began to identify and quantify the population of Medellín that did not enjoy the public utilities of water supply and sewerage. Therefore, the company decided to conduct a characterization to find solution alternatives, which were grouped in the Unidos por el Agua program. This process was completed in 2019, accomplishing 103% of the goal, which was 40,200 homes with the service.

In the energy connections, we highlight the strategic contribution of discussing with the municipal administrations the problems of each sector, which evidenced the electrical and earthmoving hazards. Some provisional interventions were proposed to minimize the risks for these communities.

Similarly, in the natural gas connections, a collaborative and coordinated work was developed between the Medellín Mayor's Office and the areas of Connection to Natural Gas and Marketing and Sales of EPM to promptly provide technical and commercial solutions to difficult-clearance areas.

### — Unidos por el Agua (United for Water)

Unidos por el Agua is a program developed in collaboration with the Municipality of Medellín, the Social Institute for Housing and Habitat of Medellín (Isvimed), and Empresa de Desarrollo Urbano (EDU); it aims to improve the quality of life of 40,200 families located in Medellín by improving the water supply and sewerage coverage, providing the service with high-quality standards, encouraging the development of the communities, building a water care culture, and mitigating the geological risk in some areas.

In 2019, EPM connected 18,323 homes to the water supply and/or sewerage services, for a cumulative total, since 2016, of 41,391, which exceeds the goal set of 40,200. The sectors benefited include La Honda, La Cruz, Versalles II, Bello Oriente, Brisas del Jardín, Brisas del Edén, San José la Cima, Unión de Cristo, Esfuerzos de Paz 1, Esfuerzos de Paz 2, La Luz del Mundo, Altavista, Santo Domingo Savio (La Torre), Nuevos Conquistadores, La Salle, Colinas de Enciso, El Salado, El Socorro, La Loma, and Brisas del Jardín, among others.

This program helped to boost the development of the communities by generating more than 1,096 jobs per year, of which 51% correspond to people from the previously defined areas of influence. In addition, the construction of 8 km of sewerage networks in the city of Medellín helped to reduce wastewater discharges to more than 10 streams.



Unidos por el Agua

## — Program of water supply in rural areas

Wayúu Painwajirawaa Aasaawuin, the first association of indigenous users, was created for the operation of the public standpipe supply system in the municipality of Manaure, La Guajira.

The following advances stand out for 2019:

- Completion of the Manaure project infrastructure (osmosis plant, public standpipes, and waterless sanitary units) and the corresponding delivery to the municipality of Manaure, in the department of La Guajira.
- Delivery of one 10-cubic-meter tank car, one 150-cubic-centimeter motorcycle, 3,600 five-gallon containers, and resources for the public standpipes to the municipality of Manaure. These goods are part of the pilot project developed in the rural area of the municipality of Manaure.
- Completion of the Puerto Caicedo project. The construction of 600 toilet units was completed, benefiting 3,000 inhabitants of the scattered rural area.
- Contracting and completion of the Zetaquirá project. The construction of 40 toilet units was completed, benefiting 160 inhabitants of seven rural settlements.
- Reformulation and negotiation process with the auditor contractor of the Sabanalarga project, which allowed for the resumption of the works in November and their completion in January, 2020.

## — Unidos por el Gas (United for Natural Gas)

This program, defined through an inter-administrative agreement signed with the Municipality of Medellín, allowed for the provision of subsidies corresponding to 100% of the natural gas connection charges to homes in strata 1, 2, and 3, located in the city of Medellín. It started on June 20, 2019, and its total resources amount to COP 7,300 million; as of December, COP 7,210 million had been invested. The connection percentage was 15% in stratum 1; 40% in stratum 2; and 45% in stratum 3.

As of December 2019, the subsidy had benefited 12,004 families, mainly in the areas of Robledo, Buenos Aires, San Javier, Manrique, Belén, Villa Hermosa, Doce de Octubre, Castilla, Aranjuez, Popular, San Antonio de Prado, Santa Cruz, Guayabal, La Candelaria, La América, Laureles Estadio, and El Poblado.

## — Electrificación rural (Rural Electrification)

The different programs and projects of rural electrification that are being implemented by the energy companies of Grupo EPM are one of the most significant examples of social innovation that contribute to improving the quality of life of the community and increase the opportunities for inclusion and equity.

The importance of the program in each company is reflected on the investment in infrastructure that has meant an amount of COP 34,704 million for EPM in 2019.



Rural electrification

The work of ESSA stands out, since it invested COP 17,254 million in infrastructure in 2019 with the Iluminemos Santander (Let's Light Up Santander) program, which began in 2015. This is how the most isolated rural communities have had access to the electrical energy to thrive. The program is implemented in CHEC under the name of CHEC Ilumina el Campo (CHEC Illuminates the Countryside).

For all its national affiliates, Grupo EPM obtained in 2018 the approval by the Mining and Energy Planning Unit (abbreviated UPME as per its acronym in Spanish) for the execution in 2019 of the Coverage Expansion Plan of the Network Operator (abbreviated PECOR as per its acronym in Spanish). EPM presented a plan for 4,030 homes and it was approved for 3,184, which became the goal of the Electrificación Rural program for 2019. The plan for the remaining 846 should be executed with isolated solutions that become the goal for the EPM coverage project, with photovoltaic energy solutions that, as a result, will lead to make progress with regulatory and technical management.

Two of the international affiliates of Grupo EPM made progress with the rural electrification initiative. Delsur stands out with 590 homes electrified and an investment in infrastructure of COP 1,383 million.

<b>Rural electrification - National companies of Grupo EPM</b>	
	<b>Year 2019</b>
<b>EPM</b>	
Homes electrified	6,074
People benefited	18,829
<b>CHEC</b>	
Homes electrified	80
People benefited	248
<b>ESSA</b>	
Homes electrified	5,116
People benefited	15,860
<b>CENS</b>	
Homes electrified	121
People benefited	375
<b>Total homes electrified</b>	<b>11,391</b>
<b>Total people benefited</b>	<b>35,312</b>

Rural electrification - International companies of Grupo EPM	
	Year 2019
<b>Delsur</b>	
Homes electrified	590
People benefited	2,360
<b>Eegsa</b>	
Homes electrified	181
People benefited	815
<b>Total homes electrified</b>	<b>771</b>
<b>Total people benefited</b>	<b>3,175</b>

*Source: Vice Presidency of Power Transmission and Distribution.*

*Figures as of December 2019. The people benefited correspond to the estimation of people per home electrified.*

## — Servicios Prepago y Paga a tu medida (Pay According to Your Needs)

Regarding the options and solutions available for customers and users to maintain the possibility of consuming the residential public utilities of EPM and, thus, the company can satisfy their tastes, preferences, and needs, in agreement with its capabilities and willingness, in 2019, Grupo EPM attracted 69,878 customers and users in Colombia to the offers of prepaid services and Paga a Tu Medida, of which 52,931 correspond to customers of EPM.

Specifically, 2,834 customers and users were connected to prepaid water supply. Since the beginning of the offer, the group has managed to attract 25,211 customers and users. As for prepaid energy, 17,527 customers and users were attracted by EPM; 3,885, by CENS; and 5,335, by ESSA. Since the beginning of the offer, the group has managed to attract 317,618 customers and users.

Paga a Tu Medida attracted 32,570 customers and users in EPM, 1,347 in CENS, and 6,380 in ESSA. Since the beginning of the offer, the group has managed to attract 209,437 customers and users.



The company has maintained and provided the enjoyment of the **prepaid water supply** service in the 10 municipalities of the metropolitan area of Valle de Aburrá, with a monthly average consumption of 8 m<sup>3</sup>, in accordance with the needs and abilities to pay of the customers that are connected to this modality. Likewise, with the purpose of benefiting more users, the expansion of the target market (to users with suspended services) was approved and it will begin in 2020.

As for **prepaid energy**, adjustments to the offer were made to enable customers and users from new target markets and include other connection statuses, as well as to strengthen the offer intervention in below-average areas throughout the regions. This allows for the improvement and simplification of the management of the nontechnical losses caused by illegal connections to the distribution networks. In addition, some channels for top-ups were strengthened including Gana and UNE pay phones, in which the customers can top up COP 2,000 on credit using their cell phones or make micro top-ups on credit using UNE pay phones and pay in the next top-up at Gana points. In average, users top up COP 6,000 six times a month, for a consumption per installation of 114 kWh/month.



Prepaid energy

## — Aguas del Atrato (Atrato Waters)

We offer 24-hour continuity to all the customers and users connected to the water supply service in Quibdó, the capital of the department of Chocó.

We continued the agreement for the operation of the services in Quibdó, which has allowed us to improve the quality and process control, keeping the water quality risk index (WQRI) below the maximum limits allowed.

At the request of the Colombian government, Grupo EPM is operating the water supply, sewerage, and waste collection services in the urban area of Quibdó, through the affiliated company Aguas Nacionales. To that end, an inter-administrative collaboration agreement was entered into between EPM and Empresas Públicas de Quibdó E.S.P., under liquidation, from 2008 to 2015, which has been extended by the parties through mutual agreement.

The following achievements took place during 2019:

- Average 24-hour daily continuity for all users connected to the water supply service.
- Collection of COP 5,040 million in 2019, 17% more than in 2018 when COP 4,319 million was collected.
- Water quality assurance with a WQRI of 0.59%, which meets the risk level defined by the Ministry of Health and Social Protection through Decree 1575 of 2007. We highlight that, in 2018, the WQRI was 1.16%, which represents a 49% reduction.
- No positive administrative silences during 2019.



## — In Urabá

Considering the economic strengthening brought by the port and road-infrastructure development, its strategic location, the sound public and private integration process that leads nowadays the effort for territorial transformation, the accelerated population growth, and that it is a point of convergence between Antioquia and the Caribbean, the Urabá region is today a priority of the regional development set by Grupo EPM. With the development of the infrastructure plans, Urabá will experience an increase of up to 100 basic points in the economic growth rate. The commercial projection of EPM for 2019-2028 shows that the energy, water supply, sewerage, and natural gas services will have increases of 10%, 12.7%, 23.3%, and 19%, respectively, which is more than what is planned today.

Since 2017, upon the creation of the regional management and the commissioning of the Model of Territorial Integration (abbreviated MIT as per its acronym in Spanish), EPM consolidated a strong and leadership-based institutional presence in Urabá.

### Investments

The road map is defined in the MIT to ensure the provision of public utilities in the municipalities covered. In the short term, the affiliated company Aguas Regionales EPM built a well in Apartadó and in the small town El Reposo to offset the supply in summer seasons. In the long term, with the outcome of the new source of supply in the León River, near Bocas de Chigorodó, the contracting process for the feasibility study will start with resources amounting to COP 5,000 million provided by EPM. As for the sanitation roadmap, five plots have been acquired and three designs are ready for the wastewater treatment plants of Turbo, Apartadó, and Carepa; the treatment plants of Chigorodó and Mutatá will be designed in 2020. These projects will be submitted to the Colombian Ministry of Housing to request resources amounting to COP 82,031 million.

This year, COP 41,221 million was invested in energy, natural gas, water supply, and sanitation in Urabá.

A total of COP 19,832 million was invested in the **energy** service to support the growing and future demand, foreseeing the charges of development as a result of the port operation, which is added to infrastructure and operational investments to increase reliability in the region. We strengthened the quality and reliability in the region by commissioning the expansion of capacity of the Urabá 220/110/44 kV substation, the standardization of the Carepa 44/13.2 kV substation, and the expansion of capacity of the Arboletes 44/13.2 kV substation. In addition, the most relevant project that will support this port and business development is the 110-kV line that will connect the substations located in Turbo, Nueva Colonia, and Apartadó; its progress is 40.95%. Thanks to the negotiation from the MIT, the municipalities of Turbo and Apartadó and the banana industry granted the licenses allowing the installation of the power line that will be operational in 2021.

An amount of COP 1,821 million was invested in the **natural gas** service to increase customers in the nine municipalities of the region; the impact focused on Apartadó (33%), Turbo (23%), and Chigorodó (17%). The resources were invested in the connection of new residential complexes to natural gas, specifically, in Nueva Colonia—small town in Turbo—and allowed the delivery of this service to 355 families as of December. Moreover, we connected the Colombian National Navy facilities in Turbo to natural gas and negotiations are in progress to install the service in the small town Zungo Embarcadero, the Unibán industrial area, and the Frubatec-Banacol project in Nueva Colonia. Likewise, negotiations are taking place to expand the portfolio in the ports and the free zone of the region. As for the commercial sector, 97 business establishments, such as restaurants, hotels, and stores, were connected to the natural gas service.

Furthermore, in the **water and sanitation** service, we prioritized the design of projects for the management of resources contributed under condition, to close the gap and increase the continuity and coverage without affecting the fees, important aspect when more than 77% of users belong to strata 1 and 2. The own amount of COP 19,567 million was invested; additionally, there are three projects under implementation through the Obras por Impuestos (Works instead of Taxes) modality, with resources from EPM, Aguas Regionales, and EDEQ: construction of La Lucila II storage tank of the water supply system for the sectors 1 and 2 in Turbo, whose progress is 14.6%; expansion of the sewerage networks of Barrio Obrero in Turbo, whose progress is 48%; and optimization of the Apartadó water supply system, whose progress is 46.41%. These investments do not affect the fee for users. Likewise, the commissioning of the overhead water supply was complemented with the installation of more than 6 km of overhead networks and 700 m of footpaths in Turbo. This favored the connection of more than 500 users in a sector including the Colombian National Army and the districts Pescador 1, Pescador 2, and El Progreso, with an investment of more than COP 4,000 million.

The contribution of EPM for COP 5,000 million to finance the feasibility stage of the Nueva Fuente project is emphasized. This project will enable the provision of services in the Carepa-Apartadó-Turbo corridor as an alternative in the long term planning to offer water resources and cover the needs of the region.

### **Investments with contribution under condition in water supply and sewerage**

A total of 77% of users from the five municipalities and two small towns of the Urabá region where the company provides the water supply and sanitation services belong to strata 1 and 2. Due to the tax and socioeconomic conditions of these municipal administrations, the subsidies granted are fewer than in other municipalities of the country, which complicates the investment of own resources, since this would affect the fees that families with complex conditions pay. Therefore, the Aguas Regionales project formulation team was created since 2016 to consolidate a process to identify sources to obtain resources, including Obras por Impuestos.

Thanks to the management of resources from contributions under condition, the company completed important works in 2019, including the optimization of 52 km of water supply networks in the municipality of Turbo, which favors the conditions to improve the quality of life of 1,580 families and positively impacts the continuity and coverage indicators of Aguas Regionales EPM.

As for the sanitation service, we emphasize the project benefiting 256 families in district Juan XXIII in the municipality of Turbo.

In 2019, the company continued executing projects negotiated with resources from contributions under condition and started the three Obras por Impuestos projects. These investments under execution amount to COP 52,760 million, of which COP 28,488 million comes from Obras por Impuestos resources and is intended to replace water supply networks in Apartadó and build the La Lucilla II tank and develop the sewerage works in Barrio Obrero in Turbo. The projects are financed with taxes from EPM, EDEQ, and Aguas Regionales EPM.

The management of resources from contributions under condition has provided the investments to build a well for water supply in Apartadó. This project—with resources from the nation—was executed and made operational in 2019, ensuring that the service was not interrupted due to shortage during the dry season or to damages in the water intake during the flood of the Apartadó River.

Furthermore, COP 2,605 million provided by OCAD PAZ (institution whose purpose is to approve investment projects concerning the implementation of the final agreement to end the conflict) was made viable for the construction of water supply and sewerage networks in the sector of Nuevo Horizonte in Mutatá; likewise, COP 6,063 million (still pending for allocation) was made viable for the third stage of the wastewater collector in Carepa.

Finally, three projects amounting to COP 82,031 million to be developed at the wastewater treatment plants were filed and are pending for viability and allocation of resources.

### Coverage

The efforts focused on activities to attract customers, such as public utilities committees, actions on the power loss management process, natural gas customer retention, educational campaigns, sanitation gap reduction, and delivery of community sewerage systems.

In 2019, EPM succeeded in solving the water supply problem of a community that, for more than 30 years, was always told that having access to this service was not possible because it was located on unstable ground, namely a mangrove area. The company proved that it was possible with overhead water supply and benefited 500 families in the districts Pescador 1, Pescador 2, and El Progreso in Turbo. As a result, the Inter-American Development Bank described it as one of the three most innovative initiatives in Latin America and the Caribbean

Regarding the energy service, the company maintained the urban coverage at 100% and the rural coverage at 96%, which positively impacts reliability. As for loss management, integrated with the Urabá EPM Management, 1,294 installations were legalized in 2019, which is equivalent to recovering 665,300 KWh, namely COP 347 million (at full price), thanks to the management with the Turbo, Apartadó, Carepa, and Chigorodó mayor's offices.

In the natural gas service, the penetration indicator went from 75% in 2018 to 80% in 2019, mainly impacting Arboletes with a 12% increase (from 68% to 80%) and San Pedro de Urabá with a 7% increase (from 73% to 80%). The most important actions in which we made progress took place in San Pedro de Urabá, with the network expansion and the total connection of homes in the district Urabá; in Apartadó, with the planning licenses and the consolidation of commercial efforts to connect 10 residential complexes; in Arboletes, with the connection of the districts San Lorenzo and La Inmaculada; in Turbo, with the connection to natural gas of the Colombian National Navy project stage I and, in the small town Cururlao, the districts Buguita and Villa del Carmen and the connection of the small town Nueva Colonia to natural gas through a pressure reducing station, alternative selected considering the limitations to access the distribution network.

In the areas where the company provides the water supply service, the most representative growth occurred in Turbo, with a 19% increase (from 68% to 87%), upon the commissioning of the project on optimization and expansion of secondary distribution networks, the overhead water supply, and other projects to expand networks by sections. As for the sewerage service, Turbo also had a significant coverage increase of 10% (from 34% to 44%).

The water is potable and meets the regulatory parameters and the water quality risk index.

### Model of Territorial Integration

Colciencias, fundamental actor and leader of public policies for science, technology, innovation, and entrepreneurship (STIE), ratified the Urabá University-Industry-Government-Society Committee (abbreviated CUEES Urabá as per its acronym in Spanish) as a reference for the department and the country.

During the Grupo EPM chairpersonship, the achievements include the construction of reliability, the STIE Plan for 2032 (innovative region), the consolidation of the Network of Strategic Allies (abbreviated RAE as per its acronym in Spanish) for the territory-focused development plan (TFDP), the allocation of resources from the Colombian Presidential Agency of International Cooperation, and the strengthening of the citizenship with different academic and sectoral events for the engagement with stakeholders.

The notable accomplishments in the most significant scenarios for the MIT implementation include:

CUEES Urabá, where Grupo EPM holds the chairpersonship and which consolidates itself as an agency that thinks, connects, and transforms the Urabá region. The committee has led diverse initiatives such as the STIE Plan for 2032 and has built valuable regional integration actions, which makes the CUEES Urabá a model for the country. Moreover, the RAE, space that gains strength thanks to the CUEES Urabá activities, made important contributions for the construction of the TFDP. In 2019, considering the efforts for the decentralization after seven years of existence (of which EPM has held the chairpersonship for two), the CUEES Urabá has held meetings in places other than Apartadó, with excellent outcomes and favorable reception of the calls in the municipalities of Carepa, Arboletes, Chigorodó, and Necoclí. Likewise, the company played an essential role during the election period by holding six forums with candidates to the mayor's offices of the Urabá region municipalities and the Antioquia Governor's Office.

Environmental working group with the Corporation for the Sustainable Development of Urabá (Corpourabá). The accomplishments include the approval of offset rulings pending since 2015, promptitude with environmental licenses, information on projects in the area, and monitoring of the Sanitation and Wastewater Management Plan.

Working groups with Puerto Antioquia, Puerto Pisisí, and Darién International Port, key ports to plan how to respond to the demand of the future port activity.

Working Group for Development, Habitat, and Residential Public Utilities of Apartadó with the municipal administration, Camacol Antioquia, Corpourabá, the Colombian Association of Banana Producers, constructors, and developers to synchronize the challenge proposed by the 19 partial plans approved in this municipality of the Urabá region facing the public utilities demand. The working group consolidated the information of the different sectors and studied the models of other cities of the country to integrate this important challenge that will be the reference for other working groups in the municipalities of the region.

## — In Eastern Antioquia

For the National Planning Department, Medellín-Rionegro will be one of the 10 hubs of leading cities in the economic development of the country. The municipality of Rionegro aims to create an exporting revolution, leveraging its competitive advantage of being close to the José María Córdova airport, by favoring the possibility of new companies establishing in the region and by strengthening the existing industrial area.



Therefore, Grupo EPM seeks to participate in the sustainable and competitive development of Eastern Antioquia; develop infrastructure projects to comprehensively offer solutions for energy, water supply, natural gas, and other services in its organic and inorganic growth; and provide an action system that enables and harmonizes the financial, social, and environmental results.

### Empresa de Aguas del Oriente Antioqueño

The company aims to have an investment plan of COP 18 billion for the next 10 years considering the fee adjustments of 28% in 2018 and of 43% in 2019, which will serve the current service provision area.

- Updating of the fee after 20 years of incorporation of the company.
- Capitalization for COP 2,161 million by the partners in 2019.

### Empresas Públicas de Rionegro

- Contracting and execution of the Water Supply and Sewerage Master Plan for COP 4,382 million.
- Reduction of risks due to environmental contingencies.
- Standardization and preparation of the affiliate for the merging with EPM.



## Environmental management

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### Integrated water resources and biodiversity management strategy

The purpose of this strategy is to contribute to the sustainability of Grupo EPM and the territories where it operates, through joint activities with different stakeholders and taking into account the land use plan, the characteristics of the territories, the conservation of ecosystems, the supply and demand, and the risks related to water and biodiversity. Our focus is **water and biodiversity for life and sustainability**.

#### — Water protection

Grupo EPM contributes to this management strategy directly or in alliance with other stakeholders through initiatives such as the support to public and private protected areas, erosion control, environmental sanitation, environmental management of reservoirs, forest management, restoration, and environmental awareness-raising and monitoring.

These strategies take place in the following hydrographic basins: Porce (including watersheds of the Grande, Aburrá, and Porce-Alto Nechí rivers); Nare (including watersheds of La Fe and the Negro-Nare River); Cauca (including areas of influence of the Ituango hydroelectric project); Chinchiná and other basins in areas of influence of CHEC; some basins supplying Aguas Regionales in Urabá; and other basins in areas of influence of EPM and the transmission and distribution affiliates CENS, ESSA, CHEC, and EDEQ.

During 2019, Grupo EPM supported the protection of 19,618 ha for a cumulative total of 76,505 ha since 2016, contributing directly to the fulfillment of the following Sustainable Development Goals (SDGs): SDG 6, clean water and sanitation; SDG 15, life of terrestrial ecosystems; and SDG 17, partnerships to achieve the goals. Indirectly, this also contributes to other SDGs.

To fulfill the water protection goal, Grupo EPM develops different strategies for water resource protection. The following strategies stand out:

- **Forest conservation** (including support to public and private protected areas and programs of payment for environmental services): in 2019, the contribution covered 1,022 ha for a cumulative total in the 2016-2019 period of 19,945 ha.
- **Restoration and reforestation:** in 2019, the contribution covered 13,800 ha for a cumulative total in the 2016-2019 period of 30,510 ha.
- **Sustainable practices and uses** (including silvopastoral and agroforestry systems, living fences and barriers, good agro-environmental practices, erosion control, and rural basic sanitation systems): in 2019, the contribution covered 1,758 ha for a cumulative total in the 2016-2019 period of 6,972 ha.
- **Environmental offset and new protected areas** (including purchase of lands for offset and new areas for the protection of reservoirs): in 2019, the contribution covered 3,038 ha for a cumulative total in the 2016-2019 period of 16,834 ha.
- In addition, the group has implemented strategies of forest conservation and payment for environmental services in other basins of interest for a cumulative total in the 2016-2019 period of 2,244 ha.

The most relevant programs and initiatives include:

- Forestry development program of EPM, through which over 5 million seedlings were produced in the 2015-2019 period to be provided to the communities and owners of properties located in the watersheds supplying the organization's reservoirs. This plant material is used in the protection of riverbanks, living fences, and restoration and improvement of forests.



Forestry development

- Strategy implemented of payment for environmental services to 1,032 rural families to protect more than 12,000 ha of forest in hydrographic basins of interest to EPM, the affiliated company Aguas Regionales, and the power transmission and distribution affiliated companies of the business group.
- Alliances and agreements of EPM with other actors such as the Regional Autonomous Corporation of Central Antioquia (Corantioquia), Regional Autonomous Corporation of the Negro and Nare Rivers Basins (Cornare), Corporation for the Sustainable Development of Urabá (Corpourabá), Cuenca Verde Corporation, United Nations Development Programme, Antioquia Governor's Office, municipalities, and universities to develop actions for conservation, restoration, reforestation, sustainable land use and practices, payment for environmental services, and contribution to the declaration of protected areas of interest to the companies.

Moreover, Grupo EPM owns more than 64,000 ha of forest in protected areas of its systems and reservoirs (56,910 ha of forest and natural ecosystems and 7,130 ha of forest plantations). The operating facilities owned by Grupo EPM are in different ecosystems that contribute to the conservation of biodiversity, provide ecosystem services, generate regional biological corridors, and provide shelter for flora and fauna species that are considered threatened, mainly due to the loss or alteration of their habitats, pollution of the environment, or overexploitation.

### — Aburrá-Medellín River Sanitation and Wastewater Management Plan

For 50 years, EPM has been committed to finding solutions to depollute the Medellín River and its tributary streams, with the purpose of contributing to improve the status of this natural resource, through an effective and efficient sewerage service that benefits significantly the metropolitan area of Valle de Aburrá.

- The company has an accumulated investment since 2016 amounting to COP 594,273 million for the projects included in the Sanitation and Wastewater Management Plan (SWMP), such as the Aguas Claras wastewater treatment plant (WWTP), the modernization of the San Fernando WWTP, Centro Parrilla (replacement and modernization of networks in Medellín downtown), Cuencas La Iguaná-La García (La Iguaná-La García Basins), Interceptor Sur (South Interceptor), the renewal of collectors, Otras Cuencas (Other Basins), and Cuencas Rodas, Piedras Blancas y El Salado (Rodas Piedras Blancas, and El Salado Basins).
  - The company collects 207 wastewater discharges.
- The water supply and sewerage networks and the Centro Parrilla express collector become operational.
- The modernization and expansion projects of the San Fernando WWTP become operational.

### Main progress actions and achievements of the four-year period

- An accumulated investment of COP 594,273 million for the 2016-2019 period, allocated to the projects of the SWMP. During 2019, the investments amounted to COP 45,897 million.
- Collection of 207 wastewater discharges divided in the following projects: Otras Cuencas (76), Centro Parrilla (107), Cuencas La Iguaná-La García (60), and Cuencas Rodas, Piedras Blancas y El Salado (27). Of the total discharges, 24 correspond to the year 2019.
- Commissioning of the water supply and sewerage networks and the Centro Parrilla express collector.
- Commissioning of the modernization and expansion projects of the San Fernando WWTP. Among other benefits, this improved the reliability indexes and contributed to the reduction of operating costs.
- Stabilization, in 2019, and operation of the Aguas Claras WWTP, ensuring the quality of the effluents, in accordance with the regulatory parameters, after achieving the stabilization of the biological processes in the following years.



## Climate strategy of Grupo EPM

The climate strategy objective of Grupo EPM is to achieve resilient and carbon-efficient businesses as of 2025, by managing greenhouse gas (GHG) emissions, analyzing and managing risks associated with climate variables, and comprehensively managing water resources and biodiversity.

All the efforts made by Grupo EPM as part of its climate strategy are proof of materialization of concrete actions that it has taken towards the accomplishment of the sustainable development goal 13, action for the climate, whose purpose is to adopt urgent measures to combat climate change and its impacts.

## — Strategy management

Seeking a carbon neutral operation as of 2025, Grupo EPM contributes to the commitment of Colombia in the 2015 Paris Agreement to reducing 20% of its greenhouse gas (GHG) emissions by 2030.

With the purpose of achieving a **carbon neutral operation as of 2025**, the carbon footprint or GHG emissions inventory (scopes 1 and 2)<sup>1</sup> is estimated in accordance with *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*, known as the GHG Protocol. The 2019 inventory will be available as of April, since the calculations take place during the first four months of the following year.

As part of the 2012-2018 climate change strategy, EPM committed to keeping its emission factor below the factor of the National Interconnected System, which has been achieved from 2016 to 2018.

Currently, EPM verifies the emission reduction obtained by the operation of the previous year, as a result of the emission reduction projects registered before different international standards, in order to make them available for the different offset or commercialization purposes in the national or international markets. In 2019, the company conducted the first five-year verification of the Reducing Emissions from Deforestation and Forest Degradation (REDD+) project, after its registration in 2013, and accomplished the renewal of the third and last credit period of the Jepírachi wind park and the La Vuelta and La Herradura small power stations.

<sup>1</sup> *Scope 1 emissions (direct emissions). They include the emissions from the sources owned or controlled by the company, as well as the emissions from vehicles of the company's fleet, the emissions from steam or boilers, and the fugitive emissions from the company's air conditioners, ducts, or systems.*

*Scope 2 emissions (indirect emissions). They include the emissions from the electrical consumption and those from heat, steam, and refrigeration sources that are acquired externally.*

The carbon neutral operation of Grupo EPM can be achieved through generation projects that meet the registry standards, through the purchase of third-party certificates, through certified emission reductions of other initiatives such as sustainable mobility, through power generation from nonconventional renewable sources, or through energy efficiency programs, among others.

EPM has opportunities to commercialize, with other companies of the country, the carbon credits currently available. In August 2019, it held an auction for the 550,000 emission reduction certificates, available as a result of the operation at the La Vuelta and La Herradura small power stations from 2010 to 2017, which generated revenue for COP 8,415 million.

As of 2019, a total of 2,467,480 green energy certificates or renewable energy certificates from Jepírachi, La Vuelta, La Herradura, and Porce III have been issued, of which 2,370,806 have been redeemed; this represents an approximate revenue of COP 4,204 million, which will be reinvested for the development of new projects.

### — Climate change mitigation: energy efficiency

As part of its climate strategy, Grupo EPM seeks to develop and implement practices and operations that favor the optimization of use and demand of the different types of energy that the organization requires for its operations and businesses.

In this way, EPM resumed the analysis of the energy efficiency business that it has with Veolia and adopted the decisions to i) continue participating in the energy efficiency business as a non-controlling shareholder, through VE Servicios de Eficiencia Energética S.A.S. and ii) allocate more resources of the company to this partnership, with views to the development of new energy efficiency solutions. Through this business, the company has reached more than 165 customers—namely factories, buildings (such as hospitals, shopping centers, offices), and district heating and cooling systems—in different regions of the country.

The power transmission and distribution companies implemented initiatives oriented to reduce energy losses from the power lines and leaks of sulfur hexafluoride, an artificial gas widely used in high voltage equipment thanks to its excellent electrical insulation properties.

EPM started implementing the regulation of sustainable construction in the projects, considering climate variables for the design of offices and facilities. The company made progress with actions of power consumption savings in administrative and operative areas (sensors, efficient lighting, and low-consumption air conditioners, among others) and replaced refrigerant gases of air conditioning, refrigerators, and other cooling systems for other less polluting gases. Likewise, it made progress with the formulation of plans for the efficient use of energy.

### — Climate change mitigation: renewable energies

Grupo EPM has a portfolio of expansion projects for conventional and nonconventional renewable energy generation options, based on hydroelectric, photovoltaic, wind, and geothermal sources.

With the purpose of generating strategic value and ensuring more synergies exceeding the efforts accomplished individually, EPM maintained its strategic alliance with Invenergy to invest, develop, build, operate, and maintain power generation parks with wind or solar (including the possibility of rooftops) technologies in Colombia.

Furthermore, taking advantage of the solar resource, some companies of the group—such as ENSA, Delsur, Aguas de Malambo, EPM, and CHEC—are making progress with the development of initiatives to generate their own power in their offices or facilities.

Progress was also made with:

- Tailored offers by EPM for homes, residential complexes, universities, state entities, SMEs, companies, and business establishments that intend to replace part of their consumption with solar energy.
- Analysis by CENS for the implementation of renewable energy source systems at residential and commercial scales. The feasibility studies for the connection of photovoltaic solar energy (80 MW) projects to the system are already approved by the Mining and Energy Planning Unit.

The affiliated company Eegsa made progress with the process before Guatemala's National Electrical Energy Commission to contract the purchase of renewable energy supply for 15 years.

EPM and CHEC are making progress with the studies and licenses to develop the geothermal energy project in central-western Colombia, as well as with the financial model for its feasibility.



For its part, EPM continues to reclaim biogas at the San Fernando wastewater treatment plant (WWTP), which generates, on average, close to 40% of the plant's energy requirements. Moreover, it has conducted analysis to define the best use of biogas generated at the La Pradera landfill and the San Fernando WWTP, as a result of a new regulation that authorizes its purification and injection to the network.

### — Climate change mitigation: sustainable mobility

EPM leads eight electric mobility projects that were part of the 2016-2019 development plan: regulation of Agreement 44 of 2015 and Decree 1221 of 2016 that creates the strategy for the promotion and mass use of electric mobility in the municipality of Medellín, Mobility Week event, signature of memorandum of understanding with companies of the ecosystem, pilot project implementation of electric taxis in Medellín, acquisition of electric buses in agreement with Área Metropolitana del Valle de Aburrá and Metro de Medellín, implementation of electric vehicles with third parties, and adjustment of public and private charging stations.

EPM makes progress with the consolidation of alliances that favor the implementation of measures and the strengthening of the electric mobility and vehicular natural gas (VNG) plans as clean transportation alternatives in the air quality programs. In this sense, EPM developed the **Calidad del Aire (Air Quality)** program with the **sustainable mobility** strategy and with initiatives that include **VNG**, slow internal charging, and public charging **stations for electric vehicles**, contributing to the reduction of CO<sub>2</sub> emissions, promoting a more rational use of energy, and opening new spaces to diversify and optimize the clean energy mix of Colombia.

As promoters of **electrical mobility** in Valle de Aburrá, the main achievements in 2019 include:

- Adjustment of a green public charging station, for a total of 20 in Valle de Aburrá and more than 600 users. At the end of the year, there were 613 new electric vehicles on the roads of Valle de Aburrá, for a total of 1,143.
- As for the public transportation fleet, commissioning of 64 electric buses corresponding to Metroplús vehicles, for a total of 66 on the roads. In addition, EPM put together the project of electric taxis, which has seven electric taxis on the roads, and acted as advisor in the drafting of national bills and municipal agreements that establish benefits for the users of this technology.



- Establishing of the offer to finance bicycles and electric motorcycles for holders of the Somos card (EPM loyalty program).
- Signing of the agreement between EPM and the EPM employee's fund to finance electric vehicles for employees of the company.
- Construction of five internal charging points for EPM customers, for a total of 50.
- Structuring, in collaboration with Renting Colombia, of the first Colombian project to rent electric vehicles.
- Opening by ESSA and EDEQ of public fast- and slow-charging stations for users of this technology in Colombia.

As for natural gas, the company made progress during the year with the following:

- The task of EPM in some conversion workshops is to promote the financing of the VNG equipment installation through the Somos program; EPM financed more than COP 2,800 million. Currently, the natural gas chain (producer, carrier, distributor—EPM) delivers a “bond” amounting to COP 1,254,000 per vehicle. Approximately 3,800 bonds were delivered in 2019 to install VNG equipment, to which EPM contributed an approximate value of COP 1,400 million.

- A total of 411 buses of the mass transit system and four Emvarias garbage compactor vehicles, which are still 63 in total, started operating with natural gas. In 2019, three drinking water tank cars became part of EPM, for a total of 66 trucks, including Emvarias' and EPM's fleet, operating with natural gas. In total, 503 natural gas vehicles, namely buses, trucks, dump trucks, and taxis, are on the roads of Valle de Aburrá as of December 2019.
- There are currently 17 VNG stations: 15 in Valle de Aburrá, one in Apartadó, and one in Rionegro. Of the 15 stations in Valle de Aburrá, one is exclusive to the Metroplús mass transit system and another to the Emvarias garbage compactor trucks.

As for the EPM's fleet, by the end of the period, the company has the following natural gas fleet, whose main environmental benefit is its low emission of particulate matter, source of the air quality problem in the territory; compared with diesel engines, reductions can amount to 99%:

- Three tank cars with the capacity to transport 10 m<sup>3</sup> of drinking water.
- One dump truck of the wastewater treatment plant.
- One repowered Vactor truck, with new VNG engines for diesel-engine units. Original engine.
- One bus to transport EPM's public servants on the EPM building-EPM Belén offices route in Medellín.

EPM estimates that, with the use of natural gas, particulate matter has been reduced by 91.87%; volatile organic compounds, by 45.54%; and carbon dioxide, by 21.14%. These percentages are obtained by comparing the emission reduction with natural gas as an Euro IV diesel substitute; with electric vehicles, this reduction is by 100%.

Additionally, EPM implements the **Corporate Sustainable Mobility Plan** (abbreviated PEMS as per its acronym in Spanish), through which the following was accomplished:

- A total of 136 executives and 324 public servants work from home, of which 56 started in 2019.
- Workdays were kept flexible with five staggered work schedules: from 6:00 a.m. to 4:00 p.m. (1,315 people), from 6:30 a.m. to 4:30 p.m. (1,032 people), from 7:00 a.m. to 5:00 p.m. (3,298 people), from 7:30 p.m. to 5:30 p.m. (935 people), and from 8:00 a.m. to 6:00 p.m. (201 people).
- In the En Bici al Trabajo (Bike-Riding to Work) program, 180 people registered in 2019, for a total of 705. In addition, the company maintained the 221 bike parking spaces at the EPM building, 24 at the Calle 30 offices, and 40 at the Colombia substation in the city of Medellín.



- The EnBici mobile application was enabled and now it has 471 users.
- To facilitate commute, 24 positions were enabled in 2019 at offices south of the metropolitan area for people living nearby.

### — Climate change adaptation

Seeking proper articulation with the corporate tools to manage this adaptation, the company made progress in 2019 with:

- Formulation of a climate module based on the corporate risk framework, with the purpose of addressing, analyzing, and constantly managing climate risks as appropriate in the levels of group, business, company, project, or process.
- Completion of stage II of the study on climate scenarios as of the year 2100 in the areas of greater interest to the water and energy businesses located in Antioquia. The forecast includes temperature rises, storms, and dry periods, which will impact power generation and distribution and water supply.
- Installation of two servers at EPM, which will enable the group of professionals expert in the water and energy businesses to operate a specialized climate model and provide the relevant indications during decision making. The climate adaptation plan of the group will be updated and complemented based on the main measures provided by this study.

## Project development

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### Vision 2025 growth projects

Based on analyses carried out by EPM regarding worldwide transformations that have been occurring in the public utility sector and their implications for the future of its businesses, a consulting process was developed in 2017, which produced a series of recommendations on the new businesses and the lines that should be integrated, as well as the action routes in the medium and long terms to maximize the value of Grupo EPM by 2025.

#### — Nonconventional renewable energies (NCREs)

In order to increase the energy portfolio of EPM through NCRE solutions (solar parks, wind farms, and power self-generation plants) with a strategic ally and gain the key capacities to develop this type of businesses, during 2019, the company selected Invenergy as its strategic partner, negotiated the knowledge transfer plan clauses, and signed a collaboration framework agreement in November. This initiative is expected to generate an EBITDA of COP 178.2 billion by 2025.

#### — Small hydroelectric power stations (SHPSs)

This project aims to strengthen EPM competitiveness in terms of planning, construction, and operation of SHPSs through the design and implementation of improvements applied to processes that lead to the execution of new SHPS projects. Its scope includes the application of improvements and the formalization of a partnership for the development of the Santo Domingo project (two 20-MW SHPSs). The main achievements are:

- Structuring of the Santo Domingo project with two SHPSs. Successful modification procedure of license, which is to be obtained.
- Recommendation about five potential allies that continue in the process to competitively develop the Santo Domingo project.
- Registration of the environmental impact assessment of the Guacaica SHPS.
- Exemption from environmental diagnosis of alternatives for the PGU6 projects.

This initiative is expected to generate an EBITDA of COP 49.3 billion by 2025.



- In the reclamation line, the pilot program for the extended producer responsibility was structured with Emvarias, Kaptar, and TriCiclos. Moreover, support was provided to reclamation of organic waste, classification and reclamation stations, and Puntos Naranja (Orange Points) of Emvarias.
- Reciclados Industriales de Colombia was selected for the reclamation of CDW.

This initiative is expected to generate an EBITDA of COP 53.7 billion by 2025.

## — Financing

The project seeks to strengthen the commercial and operational capabilities of EPM and the national affiliates to enable Grupo EPM to reach better national market penetration. During 2019, the following was accomplished:

- Approval of the business case with each affiliate company: CENS, ESSA, CHEC, and EDEQ.
- Creation of the interaction agreement with affiliates.
- Completion of the financial and accounting model of the project.
- Definition of the commercial offer manual and the image manual, which includes the products to be financed and the financing conditions.
- Definition of operating procedures (customer attraction, credit analysis, payment to commercial allies and suppliers, billing, collection, document management, etc.).
- Definition and introduction of the information system implementation plans.
- Introduction of the granting policy standardization.

This initiative is expected to generate an EBITDA of COP 81,000 million by 2025 and to quadruple the number of attracted customers in the Somos program.

## — B2B B2C

This project favors the definition and implementation of an added-value service portfolio to offer comprehensive solutions regarding public utilities for homes and micro and small enterprises, namely energy equipment: installation, repair, and maintenance. During 2019, the following was accomplished:

- Provision of maintenance services with Haceb. Nine services were provided.
- Commercial campaign and provision of maintenance services with Dismogas. A total of 172 services, of a goal of 50-200, were provided.

- Commercial campaign and provision of installation, maintenance, and repair services with Haceb and Dismogas. A total of 800 services, of a goal of 500, were provided.
- Strategy to sell memberships: 87 contacts and 21 sales, of a goal of 300 customers.
- Definition of the EPM a Tu Puerta (EPM at Your Door) brand strategy.
- Contracting of supplier Market Team to develop the pricing capacity.

This initiative is expected to generate an EBITDA of COP 28 billion by 2025.

### — Solar energy self-generation project

The goal of this project is to offer solutions to the market through the sale of solar energy for large power consumer customers with power purchase agreements (PPAs) and comprehensive photovoltaic solutions for small and medium-sized enterprises and homes with engineering, procurement, and construction (EPC) contracts. During 2019, EPM installed systems through PPAs at Plaza Mayor (convention and exhibition center of Medellín) and made progress with the signing of a PPA with Universidad Eafit. In addition, the company accumulated for PPAs 15 commercial proposals, three signed contracts, and 0.423 MWp installed. As for the EPC comprehensive solar solution, by the end of the year, there were four attracted customers, 45 interested customers, and 7.75 KWp installed, which is equivalent to 875 KWh/month. By the end of December, there were 720 PPA and EPC-contract requests. This initiative is expected to generate an EBITDA of COP 15.4 billion by 2025.





## Business development projects

During the period, progress was made with the execution of business transformation projects to improve Grupo EPM's governance, optimize processes and tools associated with the operation of businesses and with the support areas, develop the required capacities according to the defined strategy, and, in turn, benefit the customers and users and other stakeholders of EPM.

The accomplishments are listed below.

### — Business transformation: strategic projects

The **Supply Chain** project stands out for obtaining benefits amounting to COP 272,220 million during the period, associated mainly with joint procurement, materials and warehouse management, and implementation of the Ariba tool for purchase management at EPM and the affiliated companies of the group.

The **Grupo EPM sin Fronteras (Grupo EPM without Borders)** projects include the **Field Productivity** project. Its purpose is to optimize the on-site procedures and resources of the natural gas, wastewater management, solid waste management, and power transmission and distribution businesses; this improves the coordination between businesses, creates synergies, efficiencies, and reduces the impact of costs on the fee. The project has increased the prompt closing of work orders, the crew's efficiency, and the hours of effective work and has reduced the failed visits, the overtime consumption, and the hours of travelling. It should be noted that the project methodology is also adopted by the international affiliated companies. The benefits obtained during 2019 amounted to COP 62,893 million.

An **asset management** system was designed and implemented following the ISO 55001 standard and seeking to ensure the creation of value in a sustainable manner and according to the corporate plan. The project minimizes the cost of valves maintenance thanks to improvements in the specifications and makes progress in the incorporation of asset management business rules in the maintenance processes of the sewerage system. In the generation business, the application of the different asset management tools made it possible to keep improving the readiness level. It is worth highlighting the reliability, serviceability, and availability analyses conducted in the Guatapé power plant, as well as the asset health indexes. In 2019, the project was closed and the capture of benefits amounted to COP 57,355 million.

The **Digital Connection** project was implemented aiming at an evolution in the enterprise architecture that would favor interaction between people and information, in addition to the provision of secure services to the different stakeholders of Grupo EPM. Throughout the year, security issues in storage were resolved and delivered to the SOC provider; the VPN (virtual private network) was also set in motion; and private ExpressRoute vs. VPN performance tests were carried out. The project concluded in December 2019 with the following achievements:

- Consolidation of data centers. During the third semester, 13 servers were consolidated.
- Monitoring tuning. Progress was made in the implementation of "Operation Management Service" practices, whose name changed to "Log Analytics". An availability analysis transaction of the external EPM portal was implemented.
- Updating of the Service tag. Application of the objects of the Azure's productive subscription.
- Publication of the mechanism for assigning values when creating a service in the application.
- Creation of the EPM's multcloud management platform document based on Gartner and other documents from the main suppliers of the Magic Quadrant.

With the purpose of effectively supplying the goods and services required for the proper operation of Grupo EPM, the **Supply Chain** project was implemented through a management model, which obtained benefits for COP 272,220 million, thanks mainly to the reduction in joint procurement and contracting plans among the affiliate companies.

Leveraging the business strategy and evolution is also achieved through the transformation of the workspaces. For this reason, the **EPM Building Renovation** project was carried out in order to improve the communications service of basement 2, as well as floors 3, 4, 5, 6, 7, 8, 10, 11, and 12. During the year 2019, adaptations were made on floor 0 and renovation of floor 9 was started.

## — Efficiencies 2025 projects

The project for the **implementation of efficiencies in the power transmission and distribution business** stands out for being classified as a research project by Colciencias, which creates tax benefits to EPM for about COP 973 million.

The efficiency in the **Global Shared Services Center** project seeks to strengthen the growth of the Shared Services Center as a support and optimizer of common processes in the business group. It expects to generate an EBITDA of COP 23.8 billion by 2025. The main achievements are:

- Completion of the survey on the current status, both in EPM and its national affiliates, of the processes of cost management, accounting management, tax management, supply, accounts payable, compensation, and contributing insurances.
- Contracting of a consultant (Ernst and Young) who supports the redesign and implementation of the service center.
- Redesign, implementation, and go-live of the first service: contributing insurances.
- Redesign of the supply management service.

To achieve efficiencies in the gas service, the project for the **implementation of operational efficiencies in the gas business** was created. It seeks to reduce operating costs by analyzing and formulating initiatives in the processes of the Vice Presidency of Gas. The object of impact will be all the processes of the gas business, without including support processes. By 2025, it is expected to generate an EBITDA of COP 4.7 billion. Throughout the year, with the efficiencies identified, benefits close to COP 1,050 million above the established target have been captured. The “income insurance” efficiency is the initiative with the greatest positive impact.

In order to improve efficiencies in the generation business, the project for the **optimization of plant availability in EPM’s major hydraulic stations** was started aiming at increasing availability by managing the unavailability hours. By 2025, it is expected to generate an EBITDA of COP 2.9 billion.

The main achievements are:

- Construction of a model to determine the asset health index in generation.
- Construction of the block diagram for major hydraulic plants

- Functional modeling of the Reliability, Availability, and Serviceability (RAS) model—designed to manage all variables related to plant availability—for major hydraulic plants.
- Assessment of the health index of significant assets of all major hydraulic plants (stator, rotor, turbine, and transformer).
- Presentation of the guide that explains the scope of the different types of overhaul.
- Completion of the planned maintenance optimization (PMO) system in Porce III.
- Achievement of the availability goal with a value of 92.9%, taking into account that the goal was 92.68%.

The project for the **implementation of efficiencies in the power transmission and distribution business** seeks to identify opportunities to obtain short-term benefits, reduce costs, increase income, optimize cost-expense, and lower investment; thus capturing operating efficiencies in EPM and the national energy affiliates. By 2025, it is expected to generate an EBITDA of COP 37.7 billion.

The main achievements are:

- Installation of 20 macrometers to monitor consumption of large customers.
- Power recovery based on the data obtained from the macrometers installed. To date, it amounts to 142,000 kWh/month approximately.
- Replacement of 264 km of network in critical circuits.
- Installation of 250 reclosers.
- Installation of 9 automatic reclosing systems in the network.
- Development of analytics for real-time quality indicators.

## — Capacity-building initiatives 2025

Grupo EPM constantly executes projects with a high impact on society. For this reason, it works on strengthening this capacity through the **Project Management** project, which aims to achieve success rates of 80% or more in the development of infrastructure projects on time, within the cost estimate, meeting the initial objectives and business intention, exhibiting the expected quality and a high level of maturity in the materialization of benefits. All this, by strengthening internal capacities in EPM and improving capacities between EPM and its environment. This initiative is expected to generate an EBITDA of COP 3.7 billion by 2025.

The main achievements are:

- Implementation of 10 modules of the project management training plan.
- Progress in the construction of the portfolio management strategy at the territorial level.
- Preparation of specifications for PPM contracting (Primavera).
- Construction of BIM libraries.
- Start of the design reliability consultancy (Design to value).
- Implementation of action plans in the businesses to improve 2019 budget execution.

The **Digital Transformation** project aims to achieve a fundamental change in the way of operating and creating value for the different stakeholders, incorporating digital technology in all areas of the organization and digitizing processes and forms of interacting. This becomes evident as different and innovative solutions are delivered, a better relationship with customers is achieved by transforming traditional processes into customer-centric processes, data are optimally used, and greater analytics capabilities are developed to operate, invest, and explore new opportunities. By 2025, it is expected to generate an EBITDA of COP 16 billion. The main achievements are:

- Completion of the capacity assessment model.
- Start of the agile methodology and innovation courses for key teams in the organization.
- Seven start-ups in execution (digital transformation teams focused on solving business challenges) of four initially planned in 2019. Two of them with subteams to work on specific topics (technology and processes). The start-ups have created minimum viable products in advanced analytics, customer experience, and digital components.

## — Other strategic projects

In order to minimize the risks associated with information and business operations, it is worth highlighting the **Information Security Management System** project and the **Operational Safety** program. During the year, the former developed cyber intelligence services, facilitating the detection of external threats; while the latter was consolidated as a program to manage operational safety, developing comprehensive solutions to implement the pillars of operational safety under standards.

With the execution of these projects, safety practices and culture are being promoted, so that the probability of people, goods, and infrastructure being affected is reduced through the continuous process of risk identification and management.

Other project that is worth mentioning is the **water supply system with telemetry**. Its IoT technology allows it to be the first regional water supply system and automate and control plant instruments remotely.

In 2017, the implementation of **El Centinela**, an **information security management system** applicable to Grupo EPM, was started in order to preserve the confidentiality, integrity, availability, traceability, and non-repudiation of the information assets that support the processes for the achievement of the group's strategic objectives. It allows the group to display its services and information to its stakeholders, minimizing the risks that affect the reputation, image, finances, and continuity of the services and information it offers.

The following services are among the main achievements:

- Operational center for security and cybersecurity in operation.
- Monitoring and correlation of events: in order to have a better protection, the team is correlating more than 3,600 million monthly records, which favors visibility of possible attacks.
- Advanced internal analytics: internal atypical behaviors within the systems were analyzed.
- Cyber intelligence services: external threats that indicate possible attacks were preventively investigated and analyzed so that the group is able to react opportunely.
- Cyber defense services: the behavior of attackers was investigated.
- Implementation of systems to detect intruders in the control center.
- Implementation of solutions for processing confidential information through cloud tools that make it possible to control the sending and copying of sensitive information.
- Implementation of protection mechanisms to secure information residing on mobile devices (laptops, cell phones, and tablets).
- Reduction of the risk indicator for cyber attacks in areas and processes of the power business: 4.99% reduction in control centers, 5.7% reduction in substations, 0.17% reduction in telecommunications, and 13.54% reduction in generation.

- Attack containment: configuration changes (352), blocking of services published on the internet (52), malicious network traffic (213), information theft (172), phishing (84), unauthorized use of information (530), spam-pishing (5,908).
- Contracting of the vulnerability assessment and monitoring service (SOC) in the four energy affiliates in Colombia (CHEC, CENS, EDEQ, ESSA).
- Risk assessment in national affiliates and Emvarias.
- Progress in the development of a cybersecurity awareness program for employees and contractors, through the implementation of the course on digital security policy (65% effectiveness); the dissemination of the digital security culture in the internal communication media: Mi Canal (My Channel), Correo Unificado (Unified Mail), EPM al instante (EPM Right Away), EPM te Escucha (EPM Listens to you); and cybersecurity talks and workshops with 315 people in person and 1,160 people via streaming. The social media security week was also held with 6 conferences and 6 practical workshops.

Antivirus programs were installed in 30 machines of the Control Center. Despite the execution of these actions, the risks related to cyber attacks increased during the year and were classified within the three most relevant risks by the World Economic Forum (WEF) due to their strategic impact.

For its part, the **Red Trunking** project aims at implementing an operational communications system that guarantees current coverage, that is, that facilitates tasks such as project development, maintenance, operation, and emergency response in each of the business units (power generation, distribution, and transmission; water supply and sewerage, and gas); and that, in addition, favors the expansion needs of EPM and the affiliates that may require it. It includes the analysis, design, and implementation of the trunking network. Among the advances of this project, it is worth highlighting the delivery of the detail designs by the contractor, the submission of critical elements for the Ituango project, the entry into service of the control center on the first floor; the entry into operation of the La Caverna, El Salto, Nevado, La Yegua, Marconi, Boquerón, Tarazá, and La Cruzada repeat sites.

In order to incorporate the best management practices in the treasury processes, the **Comprehensive Treasury Management** project was executed. It mitigates the existing risks in the operations of debt, hedging, portfolio, bank reconciliation, financial risk, and liquidity management of the group to leverage the strategy of the action matrix. During 2019, the group acquired the necessary infrastructure to implement the debt and derivatives functionality; configured the development and testing environments; purchased the license and reviewed, along with the SAP firm, the quality and production environments before starting production; and adjusted the conditions to guarantee their good performance. Likewise, it started the transition to production on December 23, 2019; loaded the balances and master data; carried out the period closures; and validated the figures to be released into operation.

The **Operational Safety** program covers the design and implementation of operational safety practices—in accordance with the ICAO standard (document 9859)—in the generation, transmission, distribution, gas, water supply, and solid waste management businesses of the parent company, including the support processes that impact the operation of the businesses. The main achievements are:

- Adjustments were made in the management of snacks, starting with the transmission and distribution businesses, and in the management of shifts and the fire protection system in the generation business.
- Water and sanitation: disclosure and validation, with the people involved, of the operational safety baseline. With this material, the roadmap will be designed to address the safety goal for the business. Progress was made in the execution of the action plan, but it was not fully completed because some elements and actions required the attention of other areas and additional time for their execution.
- Gas: completion of the operational safety baseline for the business, which includes the diagnosis for the development of the actions to be undertaken through the execution of the roadmap. Additionally, execution of the actions corresponding to the short-term findings that meant a risk to operational safety.
- Transmission and distribution: completion of the operational safety baseline and its respective roadmap. Moreover, reduction of the risks that may affect operational safety, thanks to the execution of 99% of the proposed actions.
- Generation: completion of the actions of the 2019 roadmap for the business, updating of the energy operation process, identification of four critical positions, definition of strategic risks associated with operational safety, and establishment of the respective service plans and of various guidelines for the use of electronic devices that are not part of the production process, for access to plants, among others.

Based on the increasing amount of information generated in Grupo EPM and the number of IT tools available for different processes, an initiative was created for the **implementation of an enterprise resource planning (ERP) solution** in the group. It is still being formulated and its purpose is changing the ERP of Grupo EPM at the national level; therefore, it is necessary to select, acquire, and implement the best solution for managing enterprise resources, based on the current needs and characteristics of the group.



Another business development initiative that is in the formulation stage is the **Transactional Business Architecture** project, which is focused on the definition, acquisition, and implementation of a technological solution to cover the needs and reduce the risks of the traditional commercial process, also including the necessary adjustments in the dimensions of strategy, processes, people, structure, and information.

With the purpose of implementing a more convenient smart metering scheme that allows EPM and the national energy affiliates of the business group to comply with the regulatory guidelines, the market needs, and the technological and process trends, a project is developed for the **implementation of advanced metering infrastructure in the electrical energy service in the companies of Grupo EPM in Colombia**.

In order to ensure the availability and reliability of documentary information in EPM and thus optimize operations and mitigate the risks from the inadequate management of information, the **Consolidation of Document Management** project was developed and, throughout the year, released the customers and work histories record in EPM and the national affiliates; in addition, Enter Online was implemented in ESSA, Emvarias, Aguas Regionales, Aguas del Oriente, Aguas de Malambo, and EPRio. It is worth mentioning that the project advanced in the construction of the document retention schedules (TRD) and the institutional file plan (Pinar).

## — Innovation efficiencies

Grupo EPM seeks efficiencies or optimization in process, product, and offer in the current businesses. In order to define the project's initiatives, ideas were collected by means of the innovation agenda, a call for the Creando Ando (Creating) program—promoted by Human Development—and workshops with each of the business planning departments to validate the priorities, until reaching a consensus on the understanding of the problem and what is expected from D&I in the coming years.

The project for **injecting biomethane into the gas network** was approved in order to transform the biogas currently produced by the San Fernando wastewater treatment plant (WWTP) into biomethane that is subsequently injected into the natural gas network, which will represent a significant income stream for the gas and water businesses. This project, besides being necessary due to the technological obsolescence of the current motor generators, becomes the first circular economy project since it makes a more efficient use of biogas. Activities scheduled during the formulation stage were 100% fulfilled and, for this reason, the business case was approved in September 2019.



In its search for development options in new markets and businesses, Grupo EPM launched the **Floating Photovoltaic** project, which makes it possible to identify and validate whether floating solar panel technology can become a competitive technological option that creates conditions for commercial exploitation. During 2019, the contract was amended to certify both solar photovoltaic systems in RETIE (Technical Regulations for Electrical Installations). In the second quarter of the year, there was a damage in a cable coating, so the contractor is in the process of replacing the floating datalogger; situation that caused a delay in the operation and reception of the planned reports. Work was done to obtain and install equipment and materials that comply with the RETIE standard. The system is expected to be back in operation by January 2020, so that the delivery of operational reports is resumed.



In an attempt to incorporate new solutions into the water supply business by means of technological developments (grounding systems and telemetry), the **Water Supply System with Telemetry** was created, increasing the performance and productivity of the operations. The agreement was modified to extend the term and value with two purposes: include two new monitoring points near the below-average sector and expand the capacity of the control panel for including new operational signals (pressure and flow rate of the below-average sector).

This pilot becomes the first regional water supply system with IoT technology in Colombia, identifying so far multiple benefits that include:

- Online monitoring of the quality of the water supplied (pH, chlorine, and turbidity).
- Remote automation and control of the WWTP instrumentation.
- Contribution to decision making thanks to the information generated in real time.
- Opportune identification of faults in the pressure regulating station (PRS).
- Improvement in the quality of service (continuity, pressure, and physicochemical parameters of the water).

EPM has about 200,000 electrical energy installations in difficult-access areas; therefore, the provision of the service requires high physical and economic effort. This led to the creation of the project for the **operation in difficult-access areas** aiming at improving quality indicators and satisfaction in these places. The original goal is to develop and test a viable solution for Mandé, in Urrao, Antioquia, so that it can be scalable to other similar areas. In 2019, the best solution was selected for commercial operation in this location. During the year, the group worked on the definition of the scope for the pilot, the requirements, and the work plan; as well as on the management of resources and relationships for the development of the pilot and its implementation. The installation of meters was postponed until the last quarter of the year, since it was necessary to make some adjustments as a result of the risk analysis; however, due to law and order reasons, the installation of the pilot was interrupted and, to date, it has not been possible to access the area again to complete it.

## Infrastructure projects

### — Ituango hydroelectric project

The Ituango hydroelectric project is the biggest challenge that EPM has faced throughout its entire business history. It is a transcendental infrastructure work for Colombia because it represents the generation of 17% of the country's energy, with clean, reliable, safe, and low-cost technology. It is also a **regional development** initiative that directly benefits 12 municipalities and over 160,000 people in its area of influence.

On April 28, 2018, when the project was 84.3% complete, there was a sudden and unforeseeable blocking of the auxiliary diversion gallery (GAD), which, among other effects, led to the decision to enable the powerhouse as a canal for the discharge of the retained water, in order to give priority to the protection of human life and the environment.

In view of the contingency, EPM, as a member entity of the national system coordinated by NGRD, used all its capacity to take part in the **preparation phase** through support and training activities for the implementation of the contingency plan; in the **management phase**, by carrying out activities to meet the basic needs of the affected population; and in the **recovery phase**, by structuring a specific action plan for the recovery of the municipalities of Ituango, Valdivia, Tarazá, Cáceres, Caucasia, and Nechí—located downstream.

During the contingency, **5,626** families were evacuated from the municipalities of Valdivia, Tarazá, and Cáceres. The families from the municipalities of Tarazá and Cáceres returned to their homes between July and October 2018, while the families from Valdivia have gradually returned to their homes. As of December 31, **1,974** families have returned.

In order to guarantee the living conditions of the evacuated families and meet, in an efficient and timely manner, the needs of the communities evacuated and affected, an economic support line was defined; in consequence, resources amounting to **COP 29,239 million** were delivered. Likewise, **84,344** humanitarian aid packages were delivered in Valdivia, Tarazá, Cáceres, Caucasia, and Nechí.

As for the social and environmental component, in response to the impacts of the contingency, different actions were taken to ensure the protection, conservation, preservation, and restoration of the Cauca River. The budget execution for this component, as of December 31, 2019, is **COP 228,174 million**. Additionally, **COP 659,069 million** has been executed as part of the additional social investment agreed in the BOOMT contract and of the regular social and environmental management of the project, that is, aside from the contingency.

The physical progress of the project is 76.7% and its cost currently amounts to **COP 15,310,061 million**. This value was considered in the Investment Plan 2010-2023, which is under permanent review according to the progress of the project's recovery works.

For the recovery and commissioning of the Ituango hydroelectric project, some relevant premises have been defined, which include the lifting of the precautionary measure imposed by the ANLA pursuant to Ruling 0820 of 2018, obtaining the opinion of the Poyry company for the lifting of the precautionary measure, building and/or reinforcing the plugs of the auxiliary diversion gallery and the right diversion tunnel, and recovering the penstock and the generation works.

Some of the benefits of the project are:

- Lower energy costs for the 2021-2028 demand by **COP 34 trillion**.
- **CO<sub>2</sub> reduction by 4.4 million** tons per year; benefits to the economy by USD 110 million per year.
- Income tax for **COP 18 trillion (2021-2061)**.
- Remaining project investments for **COP 5 trillion (2019-2024)**, contributing to the GDP.
- Direct jobs in construction: On average, **5,535** formal jobs per year (2011-2024).
- Direct jobs in operation: **370**.

With the construction of the Ituango hydroelectric power plant, the needs of the market are met and stakeholders are offered energy stability and security, as well as a commitment to the long term and the appropriate use of resources.

## — Aguas Claras wastewater treatment plant park

The Aguas Claras wastewater treatment plant (WWTP) park is one of the works that make up the Medellín River Sanitation and Wastewater Management Plan (SWMP). This plant is designed to treat an average flow of 5 m<sup>3</sup>/s, with the capacity to remove 123 t/day of biochemical oxygen demand (BOD<sub>5</sub>), which will remove 80% of the water's pollution load. This secondary treatment plant that receives domestic, industrial, and commercial wastewater from Medellín and Bello is the largest and most modern in the country and one of the most advanced of its kind in Latin America. In October 2018, it began operating its first treatment line.



In the development of the project, construction technologies were implemented that reduce the environmental impact and execution time of the works, including microtunnelling with tunnel boring machines (TBM) for the construction of the North Interceptor, excavation of shield walls (precast retaining walls) at the Aguas Claras WWTP and the Thermal Biosolids Drying Plant (TDP), and use of automatic welding in the assembly of the digester tanks.

In operational terms, modern, efficient, and appropriate technologies were used, considering the wastewater quality in Valle de Aburrá, with emphasis on electrical energy generation with biogas from sludge stabilization and on biosolids drying with thermal energy recovery.

In 2019, the Thermal Biosolids Drying Plant came into operation and Aguas Nacionales received the Aguas Claras plant operation from Consorcio HHA (constructor and operator for one year).

As for the environmental and social management, awareness-raising campaigns on the sanitation of the Medellín River were conducted in 2019 with 684 people from the community in the area of influence of the project. Similarly, 62 guided visits were made to the WWTP, 725 school kits were delivered to seven educational institutions in the area of direct influence, and informative events were carried out with stakeholders during the plant's testing and stabilization stages.

### — Valle de San Nicolás

The aim of this project is to provide water supply services and, partially, sanitation services in the rural and suburban sectors of the center-western area of Valle de San Nicolás and the municipality of Envigado. The following infrastructure will be built to that end: Stage 1 - Water supply in Envigado, Stage 2 - Water supply in El Retiro, Stage 3 - Sanitation in Centro Poblado, Alto Palmas, and Retiro, and Stage 4 - Water supply in Rionegro.

In 2019, investments amounted to COP 42,782 million and, since the beginning of the project, COP 219,754 million has been invested. It is worth highlighting as the procedure of the year the obtaining of the environmental licenses for the execution of stage 4 and of the order to initiate the contracting process for the civil works of the La Fe, Tablazo, and Gualanday sections; the completion of the civil works of stage 2 (La Fe circuit, Los Salados section, and La Fe traffic circle); and the completion of the works for the expansion of the El Retiro WWTP and the beginning of the testing and stabilization process for its operation.

Within the social and environmental management, it is important mentioning the implementation of information, awareness, and community participation programs with the different stakeholders and the strengthening of community leaders' abilities, which makes it possible to establish and consolidate two-way communication and trust relationships for the viability and sustainability of the projects; as well as the social support for the constitution of easements and property management.

### — Water Provision Intervention Program (PIPA)

With the purpose of ensuring continuity of the water supply service in the short and the medium terms, the Water Provision Intervention Program (abbreviated PIPA as per its acronym in Spanish) was created by the end of 2017. This program integrates critical interventions and a series of projects that will improve the continuity of the water supply service.

This intervention plan consists of six projects located in the upper part of Western Medellín (Pajarito, San Cristóbal, San Javier, among other sectors), in the southern sector (San Antonio de Prado and the municipality of Itagüí), and in the northern area (municipality of Bello). Its purpose is guaranteeing the water supply service to more than 500,000 users in a reliable manner, considering the quick growth of Valle de Aburrá (expansion projects and natural increase) and the deterioration of water sources.

The total budget of the plan is COP 582,600 million, of which COP 45,622 million was invested during 2019. It is worth highlighting the coming into operation of the Aures I - Aures II headrace tunnel in Cadena de Occidente (Western Chain), in addition to the completion of civil works on the Buey - Piedras pumping station.

Within the social and environmental management, it is important mentioning the preparation of two studies on ecological connectivity; the implementation of information, awareness, and community participation programs with the different stakeholders; the strengthening of community leaders' abilities; and the social support for the constitution of easements and property management.

## — Projects of the Regional Transmission System - Urabá region

Since January 2017, four expansion projects of the Regional Transmission System (STR) are being executed in the Urabá region, with the aim of guaranteeing the energy supply and the reliability in the provision of the service for the connection of Puerto Antioquia and the current users of the system in Urabá (Antioquia), as well as those expected with the dynamism that the port brings, which in turn increases customers' and users' satisfaction with the service provided.

The project portfolio has an approximate investment of COP 75,089 million and, as of 2019, COP 33,426 million has been executed. The following are some milestones of the year:

- Entry into operation in October of the project to increase the capacity of the Urabá 220/110/44 kV substation, with a total investment of COP 12,717 million.
- Entry into operation in October of the project to standardize the Carepa 44/13.2 kV substation, with a total investment of COP 7,893 million.
- Entry into operation in March of the project to increase the capacity of the Arboletes 44/13.2 kV substation, with a total investment of COP 1,225 million.
- In the project for the connection of the Urabá - Nueva Colonia - Apartadó 110 kV substations, progress is being made with the civil works of Nueva Colonia, in the control detail designs, in the protection and automation of the substations, in the management of equipment and material contracting for Nueva Colonia and the transmission lines, and in the property management of the easements.



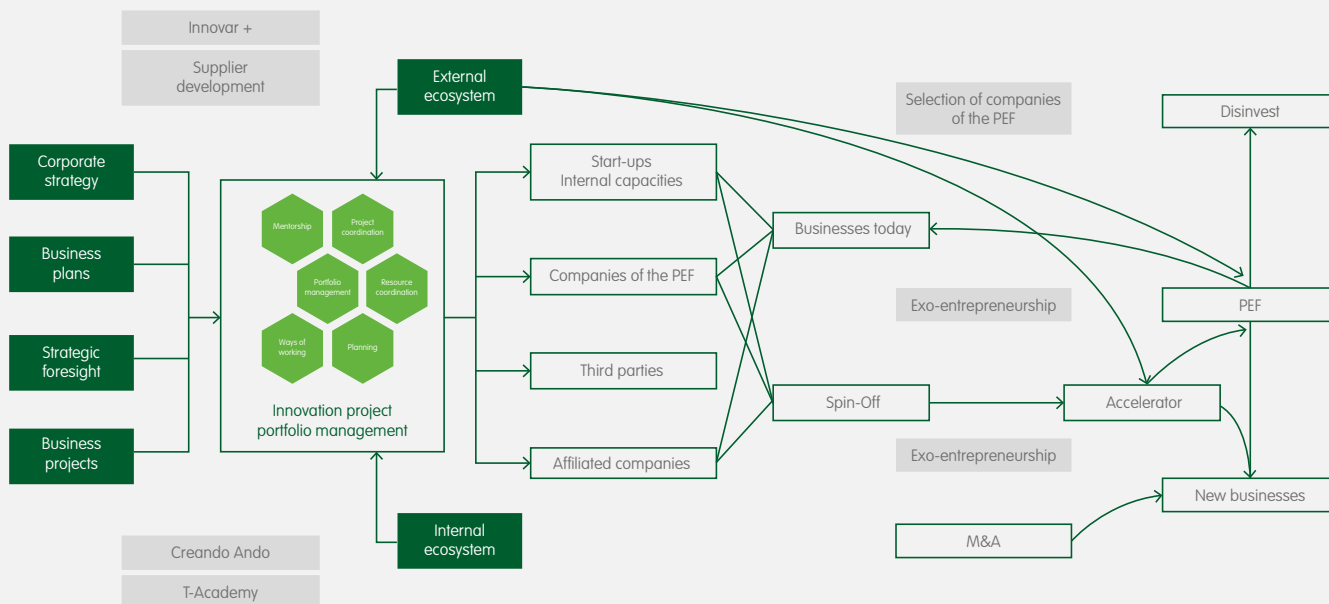
Regarding the social and environmental management, it is worth highlighting the preparation of the Environmental Management Plan for civil works and assemblies of the Nueva Colonia substation, as well as the agreement on the definitive route for the 110 kV transmission lines of the project for the connection of the Urabá - Nueva Colonia - Apartadó substations with the banana and plantain producers operating in the area that the line crosses. The line route was approved by most of the owners and the work continues, addressing specific cases. The Environmental Impact Assessment (EIA) was filed on October 15, 2019, before Corpourabá, while in November 2019 the Ministry of Environment and Sustainable Development issued the authorization to end the national closed season for the project. The sociopolitical environment is being analyzed in order to deliver the necessary instructions to the project; in addition, the environmental and social management is being articulated with the Model of Territorial Integration (abbreviated MIT as per its acronym in Spanish) in Urabá, leveraged by the Urabá EPM Management.



# Innovation management

Innovation in Grupo EPM is the ability to develop and implement new solutions, new sources of income, and new businesses that change lives, create economic, social, and environmental value, and effectively contribute to the growth and sustainability of the group, coordinating mechanisms and actors in the innovation and entrepreneurship ecosystem. It is understood to be open, focused on human talent, oriented towards achieving the SDG, and aimed to stakeholders.

The innovation system is aligned with the corporate and competitive strategy and integrates various forms of growth, including intra- and extra-entrepreneurship by means of initiative acceleration mechanisms and investment in highly innovative companies related to the group's business through the private equity fund (PEF). The system also includes programs such as Creando Ando (Creating) and T-Academy, which is an innovation and technology training school for the promotion of innovation and entrepreneurship among employees. Other important programs are Innovar+ (Innovate+), Feria CT+I (ST+I Fair), Innóvate (Innovate Yourself), and Circuito Solar (Solar Circuit), which aim at the integration and strengthening of innovation skills among the actors of the external ecosystem, such as universities, suppliers, customers, students, etc.



Over the last few years, efforts and synergies have been articulated through a single work plan called Agenda de Innovación (Innovation Agenda). Based on the innovation focuses by business agreed in 2018, some innovation challenges were identified for each business

and subsequently launched in a training and dissemination event called Innovar+, which had the participation of employees and suppliers of Grupo EPM and students from different universities. Additionally, Creando Ando, a call for innovation initiatives, was carried out in the group, which received and analyzed 76 initiatives and chose 12 to continue in a training and development process until the proof of concept and the pitch presentation.



### Nonconventional renewable energies (NCRE)

- Solar energy.
- Wind energy.
- Biomass.
- Biogas.
- Small hydraulic power stations.
- Geothermal energy.
- NCRE integration.
- Hydraulic and thermal power stations.



### Transmission and distribution

- Operational optimization and maximization of returns.
- Purchasability and digitization.
- Increase in service provision (growth and coverage).
- Environmental and social management.



### Water supply Wastewater management

- Sustainable management of water sources.
- Infrastructure optimization.
- Distributed solutions.
- Energy efficiency.
- Water treatment by-products.



### Natural gas

- Comprehensive solutions.
- Biogas.
- Vehicular natural gas.
- New gas applications



### Solid waste management

- Operational and infrastructure optimization of the waste collection service.
- Waste reclamation.
- Waste valorization.
- Efficient management of sanitary landfills.

During the 2016-2019 period, EPM was recognized as a highly innovative company and the Development and Innovation Management was distinguished as a R+D+i unit, through which six projects were executed and presented before Colciencias that were qualified as science, technology, and innovation projects and received certificates for around COP 33,000 million to apply tax deductions and discounts.

## Private equity fund

During 2019, Ventures EPM made progress in structuring the private equity fund II and selecting the management company, while executing the first business acceleration pilot by means of the agreement with Créame and Ruta N. In this process, the companies HOH and NEU are being accelerated and are currently conducting proofs of concept for some needs of the water supply and power distribution businesses, respectively.

Along with ERCO Energía S.A.S., the company signed a 10-year solar energy sales contract with the Plaza Mayor convention center in Medellín. In addition, it launched Oferta Solar Integral (Comprehensive Solar Offer), a product aimed at homes, and is currently designing solar roof projects for large EPM customers. The implementation of IoT pilots for managing rural water supply systems and business infrastructure was also achieved with the participation of Telemetrik in the successful pilot, which made it possible to monitor the telemetry system performance in 2019.

## Young public program (Jóvenes Innovadores)

The Jóvenes Innovadores (Young Innovators) program is a commitment of EPM to develop innovation skills in the new generations of Medellín and other municipalities of Antioquia with projects that create alternative solutions in five lines of interest: sustainable mobility, alternative sources of energy, water and life, solid waste management, and comprehensive solutions for agriculture. Innóvate and Circuito Solar, events in which there was important progress, are part of this program.

- **Innóvate EPM:** projects from 15 universities signed up and 11 universities are participating in the current phase. The five finalist teams received mentoring and the closing event with the finalists was held on November 15.
- **Circuito Solar EPM:** 180 teams from schools in Antioquia signed up for 94 projects. For the first time in the history of the program, there was a classifying system with regional qualifying races where participating teams were grouped into regions: Medellín, South, and North. Each region had a competition from which the 60 best teams were selected to compete in the final race. A total of 173 students and 40 teachers participated.

## Technological developments for the businesses

In 2019, the Acueducto Aéreo y Senderos de Vida (Overhead Water Supply System and Life Paths) project, developed by EPM and Aguas Regionales in Turbo, in Antioquia's Urabá region, ranked second in the social innovation category of the Ideas en Acción (Ideas in Action) awards, organized by the Inter-American Development Bank (IDB).



With the energy companies, Grupo EPM works in the search for solutions to achieve smart metering, increased efficiency, and reduced losses. That is why it has projects such as:

- Expansion of the telecommunications network (MPLS) to interconnect the networks of all national affiliated companies.
- Thermal barrier coatings and development of the “smart terminal board holder”.
- Analytical models to improve service quality indicators in the power transmission and distribution business.

In the water supply business, nontraditional solutions are being implemented. These are related to other forms of water catchment for human consumption, use of new water sources, use of new structures and materials, and application of different practices for the removal of microorganisms or pollutants, among others. During 2019, the following initiatives were developed:

- Pilot project for the construction of overhead water supply systems in the municipality of Turbo, Urabá.



- Evaluation of the pump-as-turbine (PAT) technology to regulate the pressure or relieve the excess energy from EPM's water supply network flow and, this way, use it for generating electrical energy.
- Along with Aguas Regionales, the company executes the telemetry project in the water supply system of Sucre, in the municipality of Olaya.

## Projects of new businesses

Grupo EPM is constantly looking for new and better solutions for its customers and users. That is why it seeks the incorporation of different lines of business derived from research, development, and innovation with the purpose of meeting the market demands that favor the evolution and transformation of the traditional businesses of the organization.

The projects implemented in 2019 aimed at producing savings and efficiencies: monitoring of the performance of the water supply system with telemetry in Sucre; operation in difficult-access areas with a pilot in Mandé, Urao; preparation of the business case for the project of injection of biomethane into the gas network; and delivery of the case for the project of renewal of dielectric oils, authorizing its continuity to the incubation phase. The latter initiative will be part of the solid waste management project of the Vision 2025.

## Operation of our businesses

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### Generation

The actual power generation of EPM at the national level during 2019 was 14,305 GWh, of which 14,081 GWh corresponded to hydraulic generation; 161 GWh, to thermal generation; and 64 GWh, to wind generation. Regarding thermal generation in December, 146 GWh were generated in merit and the rest corresponded to operational tests. Compared to 2018, hydraulic generation shows a reduction of 876 GWh (the national hydraulic generation in 2018 was 14,957 GWh). The difference lies in the fact that 2018 was a year with normal water inputs, while 2019 was affected by El Niño, leading to a decrease in water levels and reduced river flow rates, especially between August and December. In the last quarter, the average input was 71%, which led to a reduction in hydraulic generation in order to increase the reservoirs and face the summer of 2020 in optimum conditions.

The generation plants presented high availability indices and the lower units generated were due to reduced water inputs.

The behavior of the stock market price in 2019 was also impacted by the variations in water inputs. The average monthly price in 2019 was 231 COP/KWh, higher than the one recorded in 2018 (116 COP/KWh). Prices were high at the beginning and the end of the year, and low at midyear, during the rainy season in the eastern area of the country.

In 2019, plant availability results are generally positive for EPM. An important milestone is the definitive recovery of the Playas hydroelectric plant, which started operating normally in July with the delivery of 207 MW. In order to manage the availability of EPM's larger hydroelectric plants in a profitable and sustainable manner in the long term, the company is working on the availability optimization project, which seeks to maintain reliable and operational assets to leverage the business' commercial strategies.

At the end of the period, smaller power stations did not achieve the availability goal, mainly due to forced stoppages and unscheduled services. Wind power availability was above the goal, while cumulative thermal availability was below the expected rate, due to the extension of the maintenance of the unit 1 in the La Sierra thermal power station.

As for the national affiliates, the following events had a negative impact on the results: in ESSA, the works for the reconstruction of the skip in the Cascada power plant and the corrective maintenance tasks at the Palmas plant between January and July 2019; and, in CHEC, the damage to the Curazao headrace tunnel at the Ínsula plant, which affected the availability of the station and the generation in the entire chain (Ínsula, Esmeralda, and San Francisco power stations) between February and August 2019.

The Alianzas para el Desarrollo (Alliances for Development) strategy was strengthened, involving relevant actors in the territory, broadening the negotiation horizon, and focusing on actions with greater impact.

Among the main achievements, it is worth highlighting the nine alliances signed and implemented with a regional perspective, in environmental, economic, and social matters:

#### **In social matters:**

- 13,000 children and young people received training through the Recreando la Paz y la Convivencia (Recreating Peace and Coexistence) agreement with Universidad de Antioquia, with the purpose of strengthening life skills by means of educational, sports, cultural, and environmental processes for the transformation of communities towards peace, coexistence, and integral development. The project reached 277 rural settlements and 298 educational centers, leaving installed capacity for 405 teachers and 4,897 parents.
- 134 community organizations linked to processes for improving their capacities and skills.
- 245 social leaders and public servants certified in training processes through the courses in development and community and territorial leadership.
- 15 community and youth initiatives. COP 335 million was invested in social, environmental, and sustainable tourism initiatives as a community contribution and recognition in the regions.
- 12 local and 2 subregional development agendas aligned with the 2030 Sustainable Antioquia agenda, in the framework of the SDG and in articulation with the territorial planning processes.
- Rural education offered in El Tablón, through the collaborative model of rural higher education, in alliance with seven universities and educational institutions with coverage in the north and northeast of Antioquia, which made it possible to start the process of technical training in electrical networks for 24 scholarship holders.
- Presentation of the El Tablón educational model before Colciencias, as a project for the provision of four digital collaborative environments for science, technology, and innovation amounting to COP 8,298 million, with a contribution from the allied entities by COP 1,914 million. The results of the call will be available in 2020.



### In economic matters:

- 1,457 agricultural producer families from 19 municipalities, focused on sustainable production, commercialize their products through eight collection centers, eight revolving funds, and established markets. Some of them have managed to penetrate international markets with their own brands; it is the case of the commercialization of more than 150 tonnes of tomato from El Peñol to Martinique and more than 100 tonnes of coffee from the Porce River canyon exported to Belgium.
- Completion of the works corresponding to the first phase of the Guatapé pier, with new infrastructure at the service of the community and the region. Second phase of the project with the construction of the loading wharf, made viable for 2020.
- In the area of influence of the Jepírachi wind farm, 218 indigenous people from the Wayúu community were given access to drinking water and productive projects in fishing and craftwork, in addition to training processes in product innovation.

### In environmental matters:

- Contribution to the protection of 13,600 ha through different conservation strategies and improvement of the natural capital with programs such as payment for environmental services, development of good environmental practices in production processes, reforestation and restoration, declaration of protected areas, basic sanitation, sustainable tourism, and environmental education.
- Planting of more than 800,000 trees with a wide participation of community and institutional actors in this initiative called Sembratón.
- More than 700 families benefited from new rural basic sanitation systems and 74 families receiving payment for environmental services and developing community monitoring strategies in the biological corridor of the puma of Eastern Antioquia.

## Transmission and distribution

Regarding the **quality of service**, indicators have been improving thanks to EPM's efforts to strengthen the infrastructure of the distribution system (preventive and corrective maintenance of the local distribution system - SDL), but also thanks to expansion and replacement activities, implementation of suspensions, application of new loops automation, and installation and connection of new equipment that helps reduce power service restoration times.

It is worth highlighting the standardization of the monitoring of activities and processes associated with the quality of service in EPM and the national affiliates, as well as the development of an analysis tool for measuring and monitoring event management times, thus guaranteeing the restoration of services within the shortest possible time.

The results of the quality indicators for each of the companies are as follows:

SAIDI (hours/year)	
Company	2019
EPM	14.55
ESSA	23.15
CENS	27.33
CHEC	29.49
EDEQ	8.07
ENSA	12.43
Delsur	17.63
Eegsa	4.31

SAIFI (times/year)	
Company	2019
EPM	7.29
ESSA	15.13
CENS	8.96
CHEC	27.88
EDEQ	6.54
ENSA	6.56
Delsur	9.14
Eegsa	2.70

**Source:** Vice Presidency of Power Transmission and Distribution.

Figures as of December 31, 2019. The difference in values between companies is due to the geographic area, the network topology, the amount of customers served, and the analysis of events recorded. The difference in values between national and international companies is due to the particularities of the regulations in each country

With respect to the **management and control of energy losses** in Grupo EPM, the nontechnical losses indicator for the network operator has been at excellent levels since the beginning of the program, both for EPM and for the national affiliates of the group. The results speak of a comprehensive and sustainable labor in the group in Colombia, which has reduced the loss rate of the regulatory network operator (LRRNO), going from 9.44% in 2015 to 8.72% in a period of four years.

This has been possible thanks to the following actions conducted during the year:

- Standardization of tactical, technical, and operational procedures for energy recovery programs.
- Standardization in Grupo EPM of technical regulations and specifications for the equipment and materials of the project.
- Availability of planning software that allows for greater effectiveness when planning inspections. The system will issue an alert for those areas that present energy losses.
- Unification of technical specifications for hiring labor in the group.
- Standardization of the Uniform Conditions Agreement, which ensures equal conditions for the provision of the service to the group's customers.

Loss rate of the network operator (%)	
Company	2019
EPM	7.57
ESSA	11.84
CENS	11.91
CHEC	7.51
EDEQ	7.77
ENSA	11.47
Delsur	8.90
Eegsa	4.48
Filiales nacionales	8.72
Filiales internacionales	9.12
Grupo EPM	8.88

**Source:** Vice Presidency of Power Transmission and Distribution.

Figures as of December 31, 2019.

## Water and sanitation

In general, the water supply companies presented high rates of **continuity in the water supply service**. In Aguas de Malambo, several pumping devices and the electric plant were put into operation, achieving an average continuity of 56.56% (in 2018 it was 38.77%). In Turbo, 24-hour continuity was achieved for 33% of users.

Since the second semester of 2017, the provisions of the New Pricing Framework for Water Supply and Sewerage (Ruling CRA 688 of 2014, amended by Ruling CRA 735 of 2015) were implemented in all the group's companies with more than 5,000 users (EPM, Aguas de Malambo, Aguas Regionales, and Empresas Públicas de Rionegro), regarding the continuity of the water supply service. Particularly in EPM, for the evaluation of the two semesters of 2019, required by the regulation, the continuity indicator was met (compared to a goal of 98.36%) and it was not necessary to generate discounts to users for noncompliance with the goal.



The results of the continuity indicator for each of the companies are as follows:

Continuity	
Company	2019
EPM	99.81%
Aguas del Oriente	99.9%
Aguas Regionales	92.1%
Aguas de Malambo	56.56%
EPRio	99.73%

*Source: Vice Presidency of Water and Sanitation.*

In relation to **water quality**, working groups were established with health and environmental authorities for the quality of the water withdrawn, quality variables were characterized in the water purification process, and the distribution network was systematically monitored. In addition, the modernization and expansion of the secondary treatment area was carried out in the San Fernando plant and in the tertiary treatment and disinfection areas of the El Retiro plant. It should be noted that, during 2019, all the group's water companies supplied water suitable for human consumption. The results of the water quality risk index (WQRI) are as follows:

Water quality risk index	
Company	2019
EPM	0.56%
Aguas del Oriente	0.48%
Aguas Regionales	0.05%
Aguas de Malambo	0.01%
EPRio	1.82%

*Source: Vice Presidency of Water and Sanitation.*

*The WQRI is calculated in accordance with the provisions of Decree 1575 and Ruling 2115 of 2007 by the Colombian Ministry of Social Protection. 5% is the maximum value allowed; therefore, values below 5% are considered safe. The Ministry states that control and monitoring activities must be performed within this range of values to ensure that water is suitable for human consumption. Figures as of December 31, 2019.*

As for **loss management**, the companies of the business took actions aimed at the early detection of leaks and their respective repair, the control of pressure according to the needs and growth of the system, the replacement of networks and the rearrangement of the system,

the renewal of the customer's meter park, the detection and elimination of fraud, and the formulation of alternatives for disconnected customers. In EPM, it is important mentioning a:

- 3% increase in the volume of losses of the system, which went from 86.8 million m<sup>3</sup>/year in 2018 to 89.5 million m<sup>3</sup>/year in 2019.
- In relation to the previous year, the loss rate per billed user (LRBU) remained at 6.05 m<sup>3</sup>/user/month until December 2019. The non-revenue water index (NRWI) as of December 2019 was 30.58%.

As of December 31, 2019, the results of the LRBU and the NRWI for each of the companies of the business are as follows:

LRBU (m <sup>3</sup> /user billed)	
Company	2019
EPM	6.05
Aguas del Oriente	2.61
Aguas Regionales	9.95
Aguas de Malambo	17.98
EPRio	2.95

NRWI	
Company	2019
EPM	30.58%
Aguas del Oriente	20.3%
Aguas Regionales	43.8%
Aguas de Malambo	58.3%
EPRio	19.9%

**Source:** Vice Presidency of Water and Sanitation.

Figures as of December 31, 2019.

The year's management also included the **Cierre de Brechas (Gap Closure) program**, which contributes to the decontamination of streams that flow into the Medellín River (with high benefits for the community located in the ten municipalities of Valle de Aburrá) and to ensuring greater coverage for the collection, transportation, and treatment of wastewater. All this in compliance with Ruling CRA 688 of 2014, which establishes in Article 9, as one of the goals of the efficiency standards, "the reduction of the difference among water supply and sewage customers". The main achievements of this program during the year were as follows:

- Award and execution of the contracts for "Diagnosis of connections and design of networks to link customers to the sewerage service in the northern and southern areas". The contract started in August 2019.
- Progress in the preparation of proposals for the construction of networks and connections to link customers to the sewerage service.
- As of December 31, 2019, the gap between water supply and sewerage service users is 20,532.

In **Aguas de Malambo**, it is worth highlighting the fulfilment of the 2019 investment plan, with an execution close to COP 20 billion. Fondo Fuente de Vida Malambo (Malambo Source of Life Fund) is an agreement between PepsiCo, Waterteth, Postobón, and Fundación EPM that benefited more than 5,660 families through the installation of micrometers (with subsidies of 66%).

**Emvarias** achieved the incorporation of 32,000 new users to the billing system, the approval of the fee modification for the leachate treatment, and the authorization of offset measures for the La Pradera landfill.

**Ticsa** closed the investment agreement, integrated and consolidated its corporate identity and communication (Ticsa Plantas and Ticsa Colombia), and implemented the self-construction model in Mexico.



**Adasa** (Chile) emphasizes the progress of 90% in the first desalination plant of Tocopilla (75 l/s), the agreement of the nonrecognized investments by Econssa, and the improvement in the relationships with the indigenous communities close to the catchment areas.

## Natural gas

In natural gas commercialization and distribution, 768 million m<sup>3</sup> was sold during the year. The highest consumption was in the regulated market with 37%, followed by the nonregulated market with 34%. The business has been analyzing different options for offering natural gas to companies that can use it in their productive processes, such as in food drying and dehydration. Other options are also being explored in poultry and pig farming, as well as in the plastics industry. In this way, a customer from the dried fruit sector was connected to the service in Apartadó, as well as 43 coffee growers with dryers and a pig farm. During the year, conversations were held with Pascual Bravo, a higher education institution, to set up a commercial offer aimed at the plastics industry (at the end of the year a proposal was defined to create a pilot that is expected to be developed during 2020).

In terms of **quality of service**, the gas of EPM has had a compliance of 100%, as required by the regulations, in all the quality indicators (pressure index in individual pipeline, odorization index, and equivalent length of service interruption index).

In **loss management**, there is a regulatory level that is remunerated by CREG. This distribution companies work so that their levels of losses are within this range (<3.3). EPM obtained an indicator of 4.3% in 2019. This year, improvements were also made in the process of information gathering for calculating the indicator, mainly through the resolution of errors in the billing information and the control of facilities with significant frauds. Some of the actions taken during the year include verification of the meters' precision due to damage or termination of the service life, progress in programs and controls for those users who consume gas without having concluded the connection process, implementation of programs and actions to control fraud and gas theft, and control of leaks due to damage to the network or operational activities.

## Income from new businesses

In the search for new sources of income, commercial relationships with relevant customers and users at the national level have been strengthened, consolidating important businesses and generating additional income for Grupo EPM. Likewise, the group has started selling new products, such as renewable energy certificates (REC), solar energy, and electric mobility, which are becoming an important item in the income derived from new related products.



During 2019, new income amounting to COP 98 billion was billed for the provision of energy, gas, water, and sewerage services. It is worth mentioning an annual billing of COP 16 billion derived from lighting infrastructure works in different municipalities of Antioquia and other locations at the national level. The entry of Grupo BIOS, whose contract was signed for a term of 19 years, recorded in 2019 an average energy consumption from the nonregulated market of 12 GWh/month (about COP 4,300 million per month). For its part, Cementos Argos in Nare recorded an average gas consumption from the nonregulated market of 1,600,000 m<sup>3</sup>/month (about COP 960 million per month). Similarly, representative income has been generated by the signing of new contracts with third parties (billing and collection) and by the strategy of recovering energy customers from the regulated market, thus achieving an annual billing of COP 2,301 million.

In renegotiation of energy contracts from the nonregulated market, 100% of the contracts that expired in 2019 (3.3 GWh/month) were closed and, as a shielding strategy, 60% of the energy that expires in 2020 and 2021 (32.4 GWh/month) was negotiated in advance.

Since the beginning of the new green energy, electric mobility, and solar energy offers, about COP 5 billion has been billed as of December 2019. Particularly, the RECs have generated income of more than COP 4,915 million. In this way, this offer is consolidated in the nonregulated energy market as an important and valuable attribute for customers, while making Colombia the third country in the world, after China and Brazil, that sells this product.



## Information technology

The digital transformation strategy was defined, which seeks a fundamental change in the way of operating and offering value to the stakeholders by incorporating digital technology into all areas of the organization.

The plan to transform the organization with technology and information was defined. The following are the main achievements in 2019:

### Transforming the relationship with the business

- Identification of the **comprehensive roadmap** for the power, water, commercial, and supply businesses. The IT roadmap was agreed with the transmission and distribution business. The shared services and supplies roadmap is 70% complete.
- Development of a **business intelligence** solution to control the SLAs and monitor the demand and projects. At the end of 2019, it is being tested.

### Enabling the future

- Performance of the AI (Artificial Intelligence) experiment and definition of the AI model for the identification of labels (objects) in the EPM bill, in order to determine if the histograms, dynamic images, and legal information are printed on the bill.
- In the robotics working group, implementation of the customer service chatbot, service desk, contact center, and inquiry of requirements of the Somos card.
- As for the information platform, progress has been made in the dissemination of the information management model, the assessment of the water business readiness in terms of information management, and the definition of the information management roadmap for asset management (CREG-Leving diagnosis).
- Regarding the capacities to operationalize RPA (robotic process automation) and BPMS (AuraPortal), to start automating business processes, progress was made in the delivery of the governance model to the IT Management and the demand for RPA is growing.

- Definition of the architecture design for the water autonomy application based on modern approaches. Implementation of the architecture for digital assistants with modern approaches (microservices, API management, and cloud).

## Operational excellence

- Execution of the work plan to bring the proactive monitoring solution to all the EPM IT services. Monitoring was implemented in the power generation, prepaid energy, and EPM portal services.
- Progress in the simplification of the architecture.
- Automation of IT infrastructure operation. The components (scripts) for automation were developed and delivered with the respective incorporation of the automations in the infrastructure operation contract.
- Aiming at implementing high availability (HA), the first billing cluster node is operating in the new data center; the hyper-converged solution was delivered.
- Advances in comprehensive testing processes: in OPEN, the first automated test is being applied, where the selected scenario was the billing of a product individually. In CRM, automated tests were implemented to validate the creation of a case and the integration with OPEN, Mercury, and Marco Polo.

Regarding the application of information management practices and the creation of value from data, during the year, progress was made in several initiatives that include: integration with Document Management, impact of CREG 080, articulation and support to the data science community (predictive analytics), support for responses to audits in data governance, data science training map, customer data desk, CSC information model, Genio Project (information management in the power generation business), conceptualization of “data monetization”, participation in MIPG (information components of the Digital Government policy), modeling of the Information dimension in the MEGA tool, support to the information management of physical assets (in EPM and in the affiliates of the business group), articulation around the ADN Digital capacity (through the digital transformation project; particularly, the characterization and assessment of the “Create value from data” attribute), and work with the enterprise architecture team from the perspective of the Information dimension.

## Suppliers and contractors

Throughout the year, the group strengthened the spaces for engagement and the local productive fabric. It also continued working on the initiatives for the development of suppliers and the continuous improvement of the processes related to the macroprocess of supply of goods and services, in order to leverage the strategic goals and the sustainable and competitive development of territories through contracting.

### Engagement with suppliers and contractors

Improvement in the performance of the different impact indicators with suppliers and contractors, mainly the one related to contractor loyalty, in which a result of 60.9% was obtained, resulting from the difference between promoting contractors minus the number of critical contractors, that is, the most loyal contractors, who are satisfied and who refer in positive terms to EPM (see table). This is a sample of the value perceived by this stakeholder group thanks to the EPM's effort to improve the processes, tools, and mechanisms of interaction, which reflects the organization's commitment to complying with its policy of engagement with suppliers and contractors.

It is worth mentioning activities such as specific workshops with suppliers and contractors of the water supply business, in order to identify opportunities for improvement that contribute to the goal of being more efficient in the execution of the challenges in projects and in the operation of infrastructure. Similarly, within the framework of the Innovar + meeting, the first recognition program was conducted with those suppliers and contractors that presented innovative initiatives to favor the sustainability of the group's businesses and, in general, of the territories where the organization is present.

In the second semester, the event was held with suppliers and contractors and EPM addressed various topics of interest that include progress in the supplier development initiatives through the Sustainable Ecosystem for Suppliers Development (ESDP), changes in the supplier registration process, internal evaluation of the requirements of the Occupational Health and Safety Management System (OHSMS), electronic billing, progress in the EPM supply chain, and tips on public risk.

An electronic billing workshop was also developed for suppliers and contractors. The community action boards (CABs) attended the event to create a space for conversation and to solve questions.

In November 2019, an event was held with suppliers and contractors for the presentation of the comprehensive plan for the prevention of public risk due to social violence. It received representatives of this stakeholder group from the areas of influence of EPM, such as Ituango, Nechí, and Porce. Twenty companies attended the event.

As a general balance of the engagement activities of Grupo EPM (EPM, energy affiliates, Emvarias, and some water affiliates) with suppliers and contractors during 2019, 43 events were held with about 3,330 participants. Several topics were discussed, such as contracting plans, contractual regulations, registration and contracting processes in the Ariba system, innovation, health and safety at work, supplier development, electronic billing, tips on safety and public risk, among others.

Indicator	2019
Contractor satisfaction	89.7
Contractor loyalty	60.9
Supplier and contractor reputation	867

*The impact of the steps taken in the engagement plan is measured by using the indicators in this table.*

- **Supplier and contractor satisfaction.** *It measures the satisfaction of the stakeholder group regarding the different transactions that they perform with EPM in the different goods and services supply processes.*
- **Contractor loyalty.** *It measures the degree of satisfaction with the relationship and, preferably, with EPM.*
- **Reputation.** *It measures the perception of this stakeholder group in relation to different attributes associated with the reputation of the organization. With the actions designed and prioritized in the plan, the group seeks to impact all of the indicators mentioned above.*

## Strengthening and development of suppliers

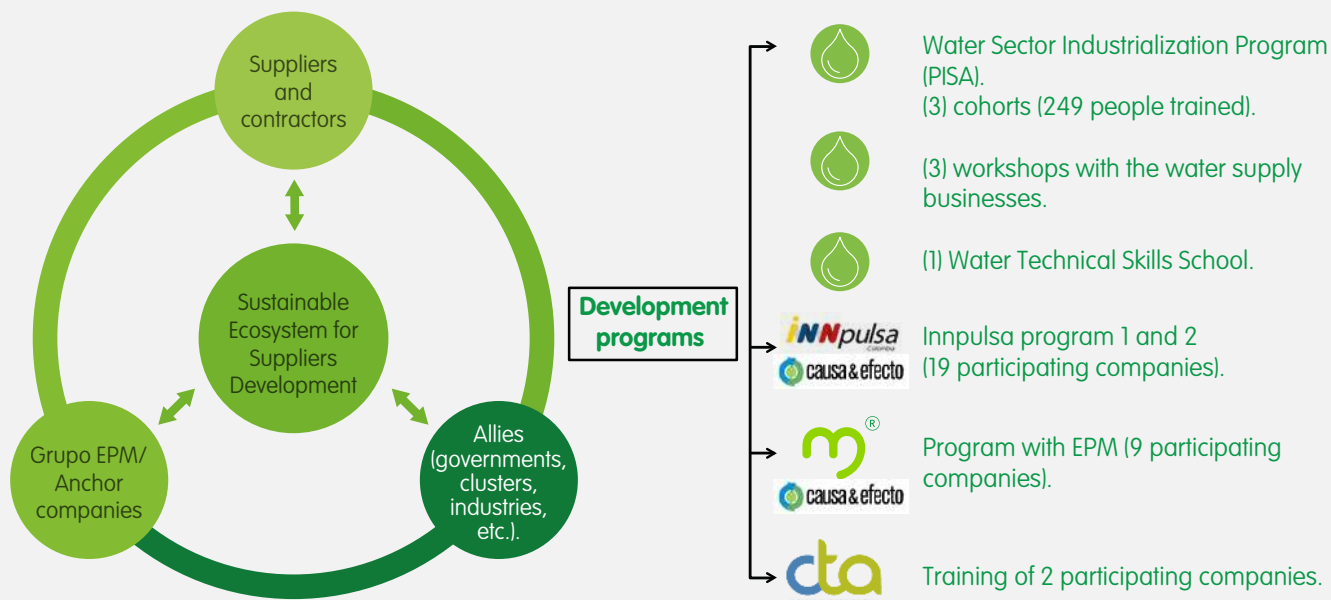
It is important highlighting the consolidation of the **Sustainable Ecosystem for Suppliers Development** and the collaborative work with other allies such as SENA, the energy cluster, and diverse local companies for the development of supplier and contractor capacities.

Throughout the year, the initiative reached more suppliers with a greater impact, thanks to the positioning of the development model called Sustainable Ecosystem for Suppliers Development.

This model seeks the articulation of the needs of Grupo EPM and the anchor companies with similar needs, as well as the development of capacities in suppliers and contractors through the engagement of local, regional, national, or international allies, strengthening the business fabric of the country by means of knowledge or economic contribution. In 2019, Grupo EPM implemented the following programs for strengthening and developing contractors:

- Development of suppliers under the Monozukuri methodology, in order to optimize the value chain processes, having Innpulsa Colombia and Causa y Efecto as partners. 18 and 8 companies participated, respectively.
- **Alliance with CTA:** support and training in development of solutions to improve productivity and competitiveness, as well as the engagement with suppliers at a level of maturity that makes it possible to solve problems. Two suppliers participated in this program.
- In 2019, the company undertook two initiatives of great impact for the water supply business and for society in general: **EDA—Escuela de Destrezas Aguas** (Water Technical Skills School)—in association with SENA, Causa y Efecto, and suppliers and contractors of the industry; and **PISA— Programa de Industrialización del Sector de Aguas** (Water Sector Industrialization Program), also in collaboration with SENA and suppliers and contractors of the sector, seek to improve the productivity and competitiveness of these companies and of the country, based on the integration and promotion of training programs for the human resource. Through this last program, 249 people (3 cohorts) were trained in electrofusion and thermofusion.

The following chart shows the operation model, the initiatives, and the suppliers impacted (numbers in parentheses).



## Contracting

Reduction in contracting times by 40% and structuring and implementation of special contracting procedures such as supply with selection of various suppliers, framework agreement of prices, and strategic ally to improve the contracting opportunity for the infrastructure businesses and projects.

Contracting information was published in the Tecuento and Secop platforms to meet the requirements of Colombia Compra Eficiente, seeking to maintain the transparency and reputation indices in the relationship with suppliers and contractors.

Type of contracts in Colombian companies of Grupo EPM 2019		
Type of contract	Number of contracts	Value of contracts (million COP)
Supply of goods and services	39,978	1,965,685
Construction contracts	143	621,575
Provision of services	1,539	1,025,709
Movables and small purchases	172	74,094
Consultancy	108	71,326
Advertising connections and agreements	40	65,193
Other	492	333,815
<b>Total</b>	<b>42,472</b>	<b>4,157,397</b>

The amount and values correspond to what was signed by companies of Grupo EPM located in Colombia.

Contracts by modality in Grupo EPM 2019		
Modality	Number of contracts	Value of contracts (million COP)
Public request for proposals	7,155	2,050,233
Private request for proposals	33,981	363,003
Single request for proposal	1,336	1,744,161
<b>Total</b>	<b>42,472</b>	<b>4,157,397</b>

The amount and values correspond to what was signed by companies of Grupo EPM located in Colombia.

## — Social contracting

In social contracting, one of the milestones in 2019 was the definition of the support and training topics for the community action boards, which we call the "curriculum".

During this year, we started structuring a "curriculum" or training program exclusive to social contracting, whose purpose is being more assertive in the processes of support and strengthening of the participating community organizations, as well as encouraging more allies to join this goal.



Social contracting		
Company	Number of contracts	Value (million COP)
EPM	116	37,662
Emvarias	28	2,018
ESSA	5	80
<b>Total</b>	<b>149</b>	<b>39,760</b>

The amount and values correspond to what was signed in 2019 by companies of Grupo EPM located in Colombia.

### — Local, regional, and national contracting

For Grupo EPM, a **local** supplier is the one located in the municipalities, small towns, and rural settlements of the metropolitan area of the company under evaluation. A **regional** supplier is understood as the one based in the same region that supplies, but outside the metropolitan area. The **national** supplier is the one located in several departments. The **foreign** supplier is the one outside of Colombia.

Authorization of the procedure, pursuant to guideline 26, for contracting through the single and private modalities, as a mechanism for sustainable and competitive development of the local and/or regional fabric, both for EPM and its national affiliates.

Grupo EPM continues promoting local contracting. During 2019, more than 36,000 contracts were signed with local suppliers, that is, 85.73% of all the contracts signed.

Local, national, and foreign contracts of Grupo EPM		
Origin of the contractors	Number of contracts	Value of contracts (million COP)
Local	36,414	1,653,036
Regional	1,605	288,047
National	4,414	2,166,515
Foreign	39	49,799
<b>Total</b>	<b>42,472</b>	<b>4,157,397</b>

The amount and values correspond to what was signed by companies of Grupo EPM located in Colombia (EPM, CENS, CHEC, Emvarias, EDEQ, and ESSA). It includes special contracting (EPM).

## Grupo EPM people

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Grupo EPM has 14,046 collaborators, of which 53.5% belong to EPM parent company and, of these, 3% are executives, 39% are professionals, 39% are technologists, technicians, and assistants, and 19% are part of the support curve.

Grupo EPM has a level of unionization close to 90%, with presence of 34 union organizations, including the respective sub-directorates at the national level. At the international level, there are 8 labor union organizations. In the business group, there is a total of 20 collective bargaining agreements in force.

## Staff and mobility

During the last four years, EPM has been ranked among the top 10 best companies to work for in Colombia, a measurement made among the 100 companies of the Merco Talento Colombia Ranking.

Between 2016 and 2019, the staff grew by 19.63%. During the last period, it increased by 5.05%, mainly due to the coverage of positions authorized by the Board of Directors to guarantee operational safety and execution of infrastructure and business projects, as well as the proper development of the businesses' operations and the contingency of the Ituango hydroelectric project.

In 2019, the plant presented an average internal mobility of 9.04%, compared to the annual occupied plant. This gave the staff the possibility to growth within the organization. The average admission rate was 6.81% per year, with respect to the total plant. It is worth mentioning that 570 people joined the organization, 78 people were promoted, and 236 people changed their position as a result of selection processes.

## Employee welfare and benefits

Grupo EPM promotes the quality of life of its employees and their families by opportunely delivering monetary benefits and implementing programs and activities that harmonize their family and work life. In this way, the company promotes spaces for assistance, recreation, sports, and social and cultural projection, in a dynamic that consolidates the sense of belonging and strengthens the corporate culture for the fulfillment of the organizational objectives.

92.49% of the employees of EPM used at least one of the benefits granted by the company. A total of 52,099 benefits amounting to COP 31,028 million were awarded, and 161 people benefited from housing loans amounting to COP 21,001 million. The welfare events were 100% executed during 2019.

In 2019, the EPM Contigo (EPM With You) program was designed and implemented in the company, aimed at those employees with high levels of debt. The company offered trainings and workshops on the proper management of home finances, individual and family support, and financial advice. This program, in which 361 people from the company participated, was a contribution to improving the quality of life of the employees and their families.

ESSA (Santander) fulfilled its welfare plan with the savings proposed by the company and through strategic alliances. For its part, Eegsa (Guatemala) held sports and cultural events that allowed colleagues from different areas to interact. Delsur and ENSA (El Salvador and Panama, respectively) conducted programs to improve the health condition and eating habits of the participants. With various strategies, EPRio (Rionegro, Antioquia) is executing a welfare plan its employees, among others.

EPM, EDEQ, CHEC, Delsur, and Emvarias have special programs aimed at workers in pre-retirement, in order to foster a positive attitude towards their retirement from these companies of Grupo EPM, and allow them to find new horizons of life after completing their active working life.

EPM, EDEQ, and CHEC expanded the possibilities for both sexes to qualify for extralegal maternity and paternity leaves, thus promoting childcare.

## Quality of life

The program for the quality of life is based on the identification, assessment, prevention, intervention, and ongoing monitoring of exposure of employees to psychosocial risk factors, both at and outside work. Health and safety at work transcend the traditional concepts and become an important aspect associated with productivity in modern organizations. Therefore, as a contribution to the welfare of the employees and their families, the assessment of psychosocial risks gives the group vital information to focus on the actions that foresee and prevent diseases caused by occupational stress.

The results of the quality of life and psychosocial risk assessment for EPM in 2019 show that 64.09% of the survey respondents is at low or no risk, which means a decrease of 0.13% in relation to the 2018 assessment.

Being above 50%, ranks EPM as a healthy company. In addition, the organization achieved this year the highest coverage with 6,246 responses, which means that it reached 86.07% of its population.



These figures are the result of a work focused on variables such as characteristics of leadership, participation and change management, performance feedback, role clarity, and recognition and compensation.

As for the affiliates of Grupo EPM, it is worth highlighting:

CHEC: all work teams have an action plan for managing organizational climate variables and, in a coordinated way, the dimensions of the psychosocial risk survey.

EDEQ: execution of the entire work plan defined to manage psychosocial risk, which made it possible to keep it at a low level.

CENS: recreational and educational activities aimed at strengthening and raising awareness of the importance of managing psychosocial risk and increasing the culture of self-care.

Delsur: nutritional program and psychological clinic available to collaborators.

Eegsa: beginning of the programs to improve the quality of life, including labor gymnastics, healthy eating, and stress awareness talks, with the participation of 790 workers.

Aguas Nacionales and Aguas Regionales: execution of their intervention plans for the improvement of the quality of life.

Emvarias: design and formulation of the intervention plan according to the results of the quality of life survey.

## Training and development

- EPM implemented, for the management of its development process, the organizational knowledge map. It helps identify the general, key, and critical knowledge of EPM and guides the learning actions to consolidate the knowledge that gives the company sustainable competitive advantages or competitive advantages to be explored.
- Curriculum maps were designed for the core processes of the businesses, projects, commercial processes, and fixed assets, with the purpose of ensuring the suitability of the people who participate in the processes once certified their curricular path.

- Relevance has been given to self-training and to the efforts to incorporate virtualization technologies, online learning, discussions, etc., which favor the progressive entry into the digital world of training and development.
- Special emphasis has been placed on leadership development and the conversational model associated with cultural transformation as a strategic goal of the organization.

EPM continued working on the implementation of the virtual campus of Universidad EPM, making improvements such as online access, management of face-to-face and virtual information, preservation of the educational records, and reporting. In addition, transfer of knowledge was performed with people with key skills and the “experts’ table” was started with the center for technical excellence.

In EPM, 7,394 people received training and 54,402 people attended events, with an average of 32 hours of training per employee. In 2019, a strategy of group and individual roundtables was implemented, aiming at strengthening the cultural transformation measures taken in the organization. Similarly, some specific groups of executives received training and the ABC program for executives was launched, in which managers of the work teams also participated.

The knowledge map was designed for 80% of the processes and projects of vision 2025, identifying the key, critical, and general knowledge of EPM, which make it possible to determine the content necessary in the training plans and the educational offer for Universidad EPM and to effectively perform the transfer of knowledge.

The leadership school of Universidad EPM coordinates events to develop leaders’ skills to support their teams, make decisions, and strengthen measures taken, within the framework of the EPM cultural evolution proposal.

Detailed curriculum maps were designed for the maintenance of the water supply and sewerage system and for the maintenance of the gas distribution system. These maps facilitate the specialized training of the people who conduct the processes and define the training routes for each of them. Additionally, the curriculum maps for customer service and project management were updated.

At the CHEC affiliate, it is worth mentioning the following trainings: Interactive training in power distribution networks, qualified by Colciencias as a technological development project; the investments made allow the company an estimated income deduction of COP 42,384 million. And in agreement with the National Training Service (abbreviated SENA as per its acronym in Spanish), progress was made in the construction of a learning environment called Network Training Camp for the training of linemen.

At CENS, 81% of the collaborators participated in the 68 events that took place from the Leadership School, strengthening of competencies, training in OHS, and environmental and laboratory standards.

At ESSA, 98% of the employees participated in the 183 events related to issues aimed at aligning competencies, behaviors, and skills with the organization's strategic plan, as well as at the professional and labor development of employees.

On the other hand, EDEQ carried out the Management Skills program and the Development of the Initial Innovation System program. Aguas Regionales was supported by EPM in training and learning activities in various areas related to know-how, in order to qualify the work performed. Malambo and Aguas Nacionales also fulfilled their training plans, and 52 employees in the operating area were certified in labor competency standards.

At the Eegsa affiliate (Guatemala), the entire management team participated in the Leadership School.



## Strengthening the Grupo EPM leader

EPM and its business group consider the role of the leader to be of vital importance. Therefore, during the year, the focus continued to be on this population group through the execution of individual and collective activities focused on the dimensions of the leadership model: self-management, management of others, and results management. Management orientation of closeness was reflected in the execution of the development plans of the Leadership School, in which strengthening strategies were defined to improve the organizational climate and trust between EPM's executives and Gente EPM stakeholder.

- Conversation circles with all levels of the organization aimed at strengthening cultural transformation.
  - Individual support through executive coaching strategies.
- Advanced training in people management, decision making, and business strategy.
  - Development of leadership and decision-making skills.
  - Specialized training in conscious leadership

The participation of 486 executives in the ABC Gestión Administrativa para Directivos program (ABC administrative management for executives) is noteworthy. Likewise, 110 executives were committed to participating in the advanced leadership training, 93 attended the program on electromagnetic wave impact on organizations, and 84 participated in spokesperson programs. Additionally, 220 executives and a total of 1,005 EPM's public servants participated in the 183 conversation circles programmed to discuss about uncertainty, ego, adaptability, and common purpose, in order to become aware of how to move, think, and operate as individuals and as an organization. It is worth noting that 656 team leaders participated in the activities of the Leadership School in events such as ABC and conversation circles.

The following are some of the development strategies implemented in the affiliates:

At **CHEC**, it is worth mentioning the interactive training in power distribution networks, qualified by Colciencias as a technological development project. In agreement with SENA, progress was made in the construction of the learning environment called Network Training Camp for the training of linemen.

At **CENS**, 81% of collaborators participated in the 68 events that took place from the Leadership School, strengthening of competencies, training in OHS, and environmental and laboratory standards.



At **ESSA**, 98% of the employees participated in the 183 events related to issues aimed at aligning competencies, behaviors, and skills with the organization's strategic plan, as well as topics related to professional and labor development of employees.

On its part, **EDEQ** carried out the Management skills program and the Development of the Initial Innovation System program.

**Aguas Regionales** was supported by EPM in training and learning activities in various areas related to know-how in order to qualify the work performed.

**Malambo and Aguas Nacionales** also fulfilled their training plans, and 52 employees in the operating area were certified in labor competency standards.

At **Eegsa** affiliate, the entire management team participated in the Leadership School.

All these strengthening strategies contributed to improving the organizational climate and trust between EPM's executives and Gente EPM stakeholder.

## Cultural evolution

Within the framework of cultural evolution, discussions are about the emerging future, the transitions from egosystem to ecosystem, resistance to adaptation with responsibility, common purpose, and inner place. More than 100 conversation circles have been organized with members of the board of directors, the management committee, executives, and other public servants under the scheme of pioneers and enablers who shall be multipliers of these practices within a process of systemic intervention.

In 2018 and 2019, the company encouraged to open mind, heart, and willingness to operate from the emerging future. EPM advances in understanding that cultural evolution is always an individual process of realizing, finding meaning, and taking charge of one's own contribution in the organization.

Prototypes have been made on relevant issues of the organization, which are reviewed and adjusted, fostering participation and feedback to obtain results with a high degree of adoption by public servants.

Within this framework, the measurement of conversational capital for EPM was carried out, which establishes the level of development of the conversational network within the organization.

Within the concept of diversity, a pilot program was launched, involving 28 people with various types of disabilities.



Likewise, progress was made in the search for synergies and points of connection in the 35 business development projects through articulation conversations between leaders and sponsors, while the Network of Agents of Change at EPM and at the affiliates of Grupo EPM was created.

## Corporate governance

Grupo EPM's corporate governance has consolidated in response to the challenges posed by the public nature of EPM, growth, and consolidation as a group. In 2019, EPM's Board of Directors approved the updating of the governance code of EPM and Grupo EPM, which compiles the practices applied in this area and, among other matters, defines corporate governance as "The system by which Grupo EPM's companies are run, managed, and controlled through a balance between ownership and management, in order to guarantee their sustainability and growth, the rights of their investors, transparency and ethics in their actions, and access to information for their stakeholders.

### Corporate Governance Plan

#### — Long-term initiatives

Long-term initiatives seek to maintain a constant evolution in terms of corporate governance.

For the year, it is worth highlighting the compilation and structuring of corporate governance practices in the updating of the governance code of EPM and Grupo EPM. This is a relevant milestone that allows for the consolidation of a systemic vision of corporate governance and the strengthening of its dissemination in Grupo EPM's companies.

- As a decentralized entity of the municipality of Medellín, EPM participated in the mayoral transition to provide information on fundamental aspects for sustainability (present and future of EPM and Grupo EPM) as well as to facilitate the mayor elect of Medellín to exercise his role as owner.
- The Guide for the nomination of EPM's board members was developed in response to a request from the commission appointed for the mayoral transition by the mayor elect for the period 2020-2023. This document compiled the existing definitions or guidelines for the formation of the board of directors.
- EPM's governance statute, which is incorporated into EPM and Grupo EPM's governance code, was updated. It was approved by the board of directors and a training plan was designed for its dissemination, in coordination with Universidad Grupo EPM, with the support of a supplier with experience in virtual training.

- The regulations for the boards of directors of the international companies ENSA, Ticsa, and HET were approved.
- For the affiliates of the water supply business, the interaction agreement for the adoption of guidelines for execution and management of minutes of the governance agreement was prepared. In addition, an online course was designed in coordination with Universidad Grupo EPM, in order to strengthen the dissemination of the governance agreement in Grupo EPM's companies.
- A training on risk management as a tool for decision making was conducted for the members of the Management Committee of EPM's Board of Directors.
- The strategic risk maps in the national energy companies (power transmission and distribution and power generation businesses) were updated and validated by the respective management committees.
- The assessment of EPM's internal control system was carried out through the Standard Form of Progress Report to Management (abbreviated FURAG as per its acronym in Spanish) established by the Administrative Department for Public Service (abbreviated DAFP as per its acronym in Spanish).

## — Practices implemented and framework for action of corporate governance

Corporate governance practices applied annually within the framework for action.

It is worth noting the commitment to compliance with corporate governance practices and the compliance with the principles and obligations of the Relations Framework Agreement signed between the Municipality of Medellín and EPM, which are monitored in the governance report published every year.

- As part of the plan for openness of information during the elections, information on corporate governance was provided with emphasis on the framework agreement that governs the owner-company relationship.
- In October 2019, in accordance with the electoral process, the results of the local elections of the Municipality of Medellín for the period 2020-2023 were announced. Daniel Quintero Calle was elected by popular vote as Mayor of Medellín, and in his capacity as representative of the Municipality of Medellín, he will exercise the role of owner of EPM during the aforementioned period. In the context of the mayoral transition, information was provided to the commissions designated by the incoming municipal administration, through the fulfillment of an exhaustive agenda that was held during 6 days, starting Monday, November 25, 2019, with the presence of the mayor elect.



The following subjects were addressed during the face-to-face sessions:

- Group context
- EPM context
- Visit and context of Ituango hydroelectric project
- Strategy and growth
- Power transmission and distribution business
- Water supply and sanitation business
- Power generation business
- Natural gas business
- Commercial management
- Human resource and technology management
- Legal Affairs and general secretary
- Financial management
- Investment portfolio management (ISA, Adasa, Electricaribe, UNE, among others)
- Corporate governance
- Infrastructure projects
- Communications and corporate relationships management
- Corporate auditing management
- Supply chain management and shared service center
- Innovation and development
- Vision 2025

The management reports of the manager and the board of directors for the 2016-2019 period were submitted, as well as the manager's report in compliance with the law.

- In the formation of the EPM's Board of Directors, there were two updates as of December 31, 2019, with the resignations of Carlos Raúl Yepes Jiménez and Claudia Jiménez Jaramillo. They were accepted by the Mayor of Medellín as of January 1, 2020 through Decree 2412 of December 2019.
- The management of the board of directors for the 2019 period is summarized in the annual corporate governance report, which includes a specific chapter for this purpose.
- As part of the corporate governance practices implemented, the annual assessment of the board of directors was carried out. For the 2019 period, the assessment was assisted by an external consultant.
- With regard to Grupo EPM's shareholding composition, EPM's Board of Directors approved in August 2019 the merger of the affiliate EP RÍO SAS E.S.P. This decision was formalized and registered on December 31, 2019. In September 2019, EPM Chile S.A., an affiliate of EPM in that southern country, agreed to sell its shares at its affiliates Parque Eólico Los Cururos SpA and EPM Transmisión Chile S.A. to AES Gener S.A. and its affiliate Norgener Renovables SpA. EPM completed the purchase on November 27, 2019.
- As for the management of the affiliates, in 2019, the following appointments were confirmed by the board of directors of each affiliate:
  - John Fredy Restrepo Sánchez, Manager of Aguas del Oriente Antioqueño S.A. E.S.P. He started in the position on May 27 to cover the vacancy created by resignation.
  - Juan Carlos Restrepo Perea, President of Tecnología Intercontinental SAPI de CV (Ticsa). Before his appointment, he had four years and eight months of experience at companies of Grupo EPM (his last position had been finance director at Ticsa). As of October 1st, he assumed the position to cover the vacancy created by the appointment of the previous president as vice president of EPM natural gas.
  - Mario Alberto Naranjo Echeverri, Manager of Empresa Eléctrica de Guatemala S.A. (Eegsa). Prior to his appointment, he had 22 years and 8 months of experience at companies of Grupo EPM. As of December 1, he assumed the position to cover the vacancy created by the retirement of the former manager at this affiliate of Grupo EPM. Furthermore, during the term, the administrative structure of the affiliate was reformed. The positions of CEO and deputy CEO were unified; it is worth noting the career of the leaders who held these positions, who, on average, had 22 years of service at the company.

## Fundación EPM

In 2019, Fundación EPM made an investment of COP 28,900 million to generate presence and closeness to the communities in the area of influence of Grupo EPM, through social and environmental management actions that improve the quality of life of communities. These initiatives benefited more than 4 million people in the departments of Antioquia, Atlántico, Cundinamarca, and Chocó.

In 2019, thanks to our work with communities and public and private entities, we were able to install 45 water purification solutions in rural education centers through our Agua para la Educación, Educación para el Agua (Water for Education, Education for Water) program, benefiting 4,988 children. Since 2011, the program has installed 722 water purification solutions in 5 departments in Colombia.



During the second half of the year, we implemented the Ambiente para la Vida (Environment for Life) project, whereby we provided socio-environmental support to the Ituango hydroelectric project through the implementation of social and educational actions in the communities downstream of the project, benefiting 42,840 people.

We supported EPM in its commitment to improve communication with the customers and users stakeholder through the Education to Customers and EPM Community project, as well as in the implementation of some programs of the Environmental Management Plan (abbreviated PMA as per its acronym in Spanish) and the Monitoring and Tracking Plan (abbreviated PMS as per its acronym in Spanish) of Nueva Esperanza and Sierra Cocorná projects.

We strengthened our purpose by working together with Emvarias affiliate to develop environmental education activities for the adequate integrated management of solid waste, as well as with Aguas de Malambo affiliate by standardizing the service for 3,530 users, thus promoting access to drinking water and contributing to a payment culture and legality.

We operate the following programs: Unidad de Vida Articulada (Articulated Life Unit—abbreviated UVA as per its acronym in Spanish), Water Museum, EPM Library, and Parque de los Deseos and Casa de la Música, offering educational, cultural, and recreational activities to promote social adoption of knowledge and care for natural resources.



Antioquia Higher Education Scholarship Fund program benefited 542 young people from Antioquia by awarding them a scholarship that covers the cost of tuition and maintenance for higher education studies (associates and bachelor's degrees). This program is developed in partnership with the Government of Antioquia and the Institute for the Development of Antioquia (abbreviated IDEA as per its acronym in Spanish).



Fundación EPM	
Program or project	2019
Agua para la Educación, Educación para el Agua	4,988
EPM Library	395,139
Education to customers and EPM community	157,773
Malambo Source of Life Fund	3,530
EPM Water Museum	97,517
Parque de los Deseos and Casa de la Música	1,800,195
UVA (14)*	1,774,118
Ambiente para la Vida	42,840
Cultura Ciudadana del Aseo (Civic Culture on Cleaning)	18,542
La Sierra Cocorná PMA and PMS	131
Puertas Abiertas (Open Doors)	2,013
Agua Hecha Raíces (Water Takes Root)	885
Antioquia Higher Education Scholarship Fund**	542
Library Network	N.A.
Basic sanitation	N.A.
ICT social adoption	N.A.
Medellín es Memoria Viva (Medellín is Living Memory)	N.A.

\* The figures of the Antioquia Higher Education Scholarship Fund correspond to the 2019 scholarship holders. In partnership with the Government of Antioquia and IDEA, the total number of students reached 11,617 in the entire department. Of this number, 1,993 receive support with resources provided by Fundación EPM to the Corporation for the Promotion of Higher Education.

\*\* The information corresponds to the education and culture component of Fundación EPM.

## Financial results

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### Macroeconomic behavior

Grupo EPM operates in Central and South America regions, which have been characterized by changing economic and political environments, as well as tax and regulatory reforms that have affected the financial results of companies.

In 2019, the Colombian economic activity registered a positive performance that consolidated it as one of the best performing economies in the region, reaching a growth of 3.3%, supported by a greater dynamism in domestic demand, mainly in the components of investment in machinery and equipment, favored by the Financing Act and by the high execution of civil works (4G Toll Road Program); as well as in the component of private consumption, driven by relatively low interest rates and a strong growth in remittances. In line with greater dynamism of the economy, the demand for electrical energy grew 4.02% compared to the year 2018. The expansion of GDP occurs in a context of rising unemployment rates, political tensions, widening current account and fiscal deficits as a percentage of GDP, moderation in the growth of the global economy due to the trade dispute between the United States, China, and Europe, and a slowdown in the growth of trading partners, due to idiosyncratic events in some economies of the region.

Regarding inflation, the Consumer Price Index (CPI) registered an annual variation of 3.80%, within the target range established by the Central Bank of Colombia (2%-4%). The increase in prices was mainly due to supply shocks, which affected food prices to a greater extent, as well as to moderate pressures on tradable goods, derived from depreciation of the Colombian peso and an increase in public utilities fees. On the other hand, fuel prices maintained a downward trend due to lower oil prices.

In terms of exchange rates, 2019 was marked by high levels of volatility in the financial markets, which led to the exchange rate of the Colombian peso against the US dollar at historically high levels as a result of the following events: i) external uncertainty associated with political and social conflicts, ii) search for safe haven assets due to the risks of a global economic slowdown in the face of trade tensions with China, iii) a marked current account deficit, iv) social protests in the last quarter, and to a lesser extent, due to the Brexit and the behavior of oil prices. In this way, the exchange rate of the Colombian peso closed the year at COP 3,277 per dollar and registered an annual depreciation of 0.84%.

With respect to the other countries where Grupo EPM operates, economic growth in Chile, Panama, and Mexico was strongly affected by political tensions during the last quarter, by less dynamic domestic demand resulting from the deterioration of business and consumer confidence, and by a contraction in investment, global trade, and the construction sector, particularly in Panama. Guatemala and El Salvador maintained a stable growth path. With regard to inflation, there was a significant drop in prices, mainly due to the slower pace of economic activity and the moderation in oil prices, which led to a reduction in interest rates by several central banks. The behavior of the currencies against the dollar was influenced, as in Colombia, by episodes of volatility in the international financial markets associated with political and social conflicts.

The following are the main macroeconomic indicators of the countries where Grupo EPM operates:

Concept	Colombia	México	Panama	Chile	El Salvador	Guatemala
CPI (annual variation )	3.80%	2.83%	0.06%	3.00%	-0.01%	3.41%
PPI/WPI (annual variation)	4.66%	0.84%	NA	6.12%	-0.12%	NA
Exchange rate (end of the year)	3,277.1 COP/USD	18.86 MXN/COP	NA	744.62 CLP/USD	NA	7.70 GTQ/USD
Devaluation/ revaluation (annual)	0.84%	-4.00%	NA	7.03%	NA	-0.49%

*CPI: Consumer Price Index.*

*PPI: Producer Price Index.*

*WPI: Wholesale Price Index.*

*NA: Not applicable.*

Under this external scenario and a different internal dynamic, Grupo EPM succeeded in maintaining an adequate financial performance as a result of actions that have made it possible to mitigate risks.

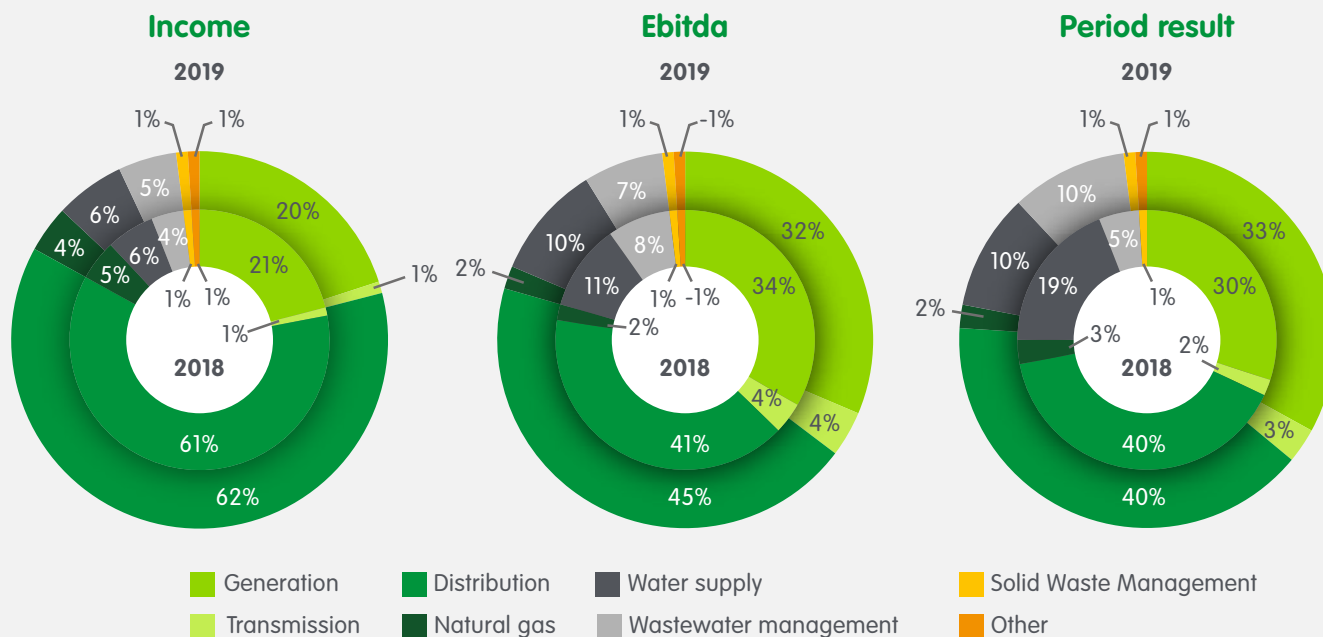
## Grupo EPM's results

Grupo EPM has assumed important challenges and has continued with the strategy of guaranteeing financial strength by optimizing sources of financing, prioritizing the sustainability of the core businesses, complying with the investment plan, covering the needs generated by the contingency of the Ituango project, and achieving operational efficiencies.

Grupo EPM obtained COP 18.4 trillion in income, with a 12% growth; COP 6.0 trillion in EBITDA, 17% higher than in 2018; and a period result of COP 3.2 trillion, which shows a 31% increase.

In relation to the approved budget for 2019, there was an overspending of 10% in income, 15% in EBITDA, and 51% in net income.

In addition, EPM parent company obtained COP 8.8 trillion in income, with an 8% growth as well as COP 3.8 trillion in EBITDA, which is 15% higher than in 2018, and COP 2.7 trillion in net profit, which represents a 15% increase.



Regarding income, the share structure by business is maintained. Power distribution contributes 62%, followed by power generation with 20%, water supply with 11%, and the remaining percentage includes natural gas, solid waste management, and other businesses. This same structure is maintained in EBITDA and in the period result.

It is important to note that EPM's results drive Grupo EPM's consolidated financial statements.

In 2019, **power generation segment** presented different dynamics in the hydrological contributions of sources. In the first half of the year, contributions were at 100% of the historical average and, consequently, made it possible to meet the estimated generation levels. Between August and December, mean contributions was 71% of the average, which caused a decrease in hydraulic generation, especially between September and December, as a preventive measure to increase the reserves of reservoirs and reach optimal conditions for the summer of 2020.

Under this scenario, at the end of 2019, power generation segment reported 102% fulfillment in income, which was higher by COP 61,149 million; costs and expenses reported 84% fulfillment, equivalent to COP 445,559 million less; EBITDA reached 114% fulfillment, COP 247,577 million more; and the result of the year fulfilled 152%, with COP 353,074 million of overspending.

Grupo EPM's power generation segment obtained an EBITDA of COP 1.9 trillion, with 9% growth compared to 2018. This is explained by the increase in income in view of the higher energy sales prices in Grupo EPM's companies, since last year, the market was operating under the effects of La Niña, while this year, it was under the effects of El Niño, in the first and fourth quarters. The other income was higher by COP 78,295 million due to the reversal of the asset retirement in 2018 corresponding to the Ituango project. On the other hand, actual costs and expenses decreased due to lower service provision costs, lower restriction payments due to higher stock market prices, availability of system networks that were interrupted in the previous period for the Atlantic Coast, and lower power transmission costs due to fewer units sold to the nonregulated market.

**Power distribution segment** shows the widest range of operations both nationally and internationally. For this reason, its results are affected by the market dynamics of each of the countries where it operates. It is important to note that the connection of new customers, the increase in prices, the application of the methodology of CREG Resolution 015 of 2018, and the effects of the macroeconomic scenario affected the results for 2019.

Regarding budget, income fulfilled 109%, higher by COP 1.0 trillion; costs and expenses fulfilled 110%, equivalent to COP 933,855 million more; EBITDA met 105%, which is COP 133,237 million more; and the result of the year fulfilled 103%, with an overspending equivalent to COP 39,983 million.

EBITDA in the power distribution segment stood at COP 2.8 trillion compared to the previous year, with a growth of 29% and a variation equivalent to COP 627,063 million, explained mainly by EPM and the affiliate ENSA; by EPM Distribution due to the increase in income from marketing as a result of higher units at a higher price, caused by the retroactive effect of Resolution 015 of 2018 and the recovery of EADE's litigation; and by ENSA due to the combined local effect that favors growth in gross profit, lower growth in operating expenses, and a higher exchange rate. In the other affiliates, the positive variations are mostly explained by the increase in energy demand and the application of Resolution 015 of 2018.

**Power transmission segment** reported 103% fulfillment in its income, which is higher by COP 8,724 million compared to the budget; costs and expenses showed 98% execution, equivalent to COP 2,425 million less; EBITDA fulfilled 103%, which is COP 7,081 million more; and the result of the year reported 131% of budget performance, with overspending equivalent to COP 24,601 million.

EBITDA in the power transmission segment grew by COP 37,263 million due to the effect of income growth at both EPM and Trelec. For EPM, income growth was the result of the higher PPI and the recognition by the Colombian Ministry of Mines and Energy of the remuneration of assets in the STN; while for Trelec, the increase over the previous year is the result of the exchange rate differential and the increase in the annual transmission fee due to automatic adjustment as well as royalty income, which began to be received in September 2019.

**Natural gas segment** reported a budget performance of 111%, which is higher by COP 90,868 million; costs and expenses showed an execution of 107%, with overspending equivalent to COP 49,182 million; EBITDA met 159%, which is COP 42,825 million higher; and the result of the year reported a budget performance of 178%, with overspending equivalent to COP 27,440 million.

In comparison with the previous year, EBITDA stood at COP 115,173 million, with a decrease of 5% and a variation equivalent to COP 6,108 million less. This is mainly explained by higher sales to the nonregulated market (NRM) and to the secondary market in 2018, due to the increase in demand for thermal energy in the Atlantic Coast, not only to thermal energy agents, but also to other marketers at higher prices, which resulted in a higher margin.

A relevant fact in the water business is the consideration of budget given the disinvestment of Adasa (Aguas de Antofagasta) that did not materialize due to the social environment in Chile, which largely explains the variations in its indicators.

**Water provision segment** achieved 169% fulfillment in income, representing COP 501,561 million more; costs and expenses met 160%, with overspending equivalent to COP 303,989 million; EBITDA fulfilled 197%, with COP 292,507 million more; and the result of the period showed 307% execution, with overspending equivalent to COP 207,335 million.

For the **water supply segment**, EBITDA increased 4% in relation to 2018, representing COP 22,413 million. This increase is explained by higher income of EPM derived from greater consumption and the application of the fee path, which also explains the behavior in the wastewater segment.

**Wastewater segment** reported higher implementation of income by COP 166,037 million, and EBITDA was higher than budget by COP 13,874 million. With respect to 2018, this segment obtained COP 10,247 million more in EBITDA, which is equivalent to a 3% growth.

**Solid waste management segment** records operations with Emvarias affiliate, which during 2019 reported a higher implementation of income by COP 13,831 million, mainly in the collection service due to the incorporation of 39,923 customers as part of the standardization of users with Grupo EPM's databases. Costs and expenses reported lower implementation by COP 6,875 million due to lower depletion costs due to the extension of the Altaír landfill cell service life. EBITDA shows a higher execution by COP 11,649 million, which is mainly explained by higher income. Period result presents a higher execution by COP 18,229 million due to higher EBITDA and lower financial expenses. Segment's EBITDA grew 85%, which is COP 33,069 million more as a result of higher income and lower costs.

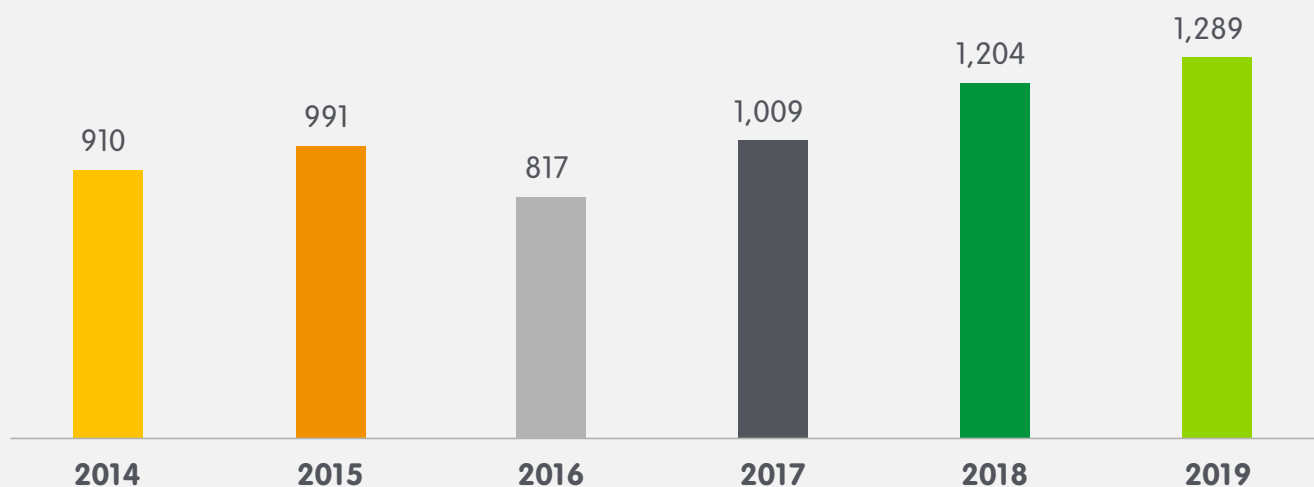
In the comprehensive income for the period, it is worth highlighting income from investments in affiliates and the efficiency in the recovery of income and wealth taxes. Affiliates contribute COP 2.3 trillion to EBITDA, of which international affiliates have a 55% share, and domestic affiliates a 45% share. The structure by business shows a contribution of 86% from energy companies and 14% from water supply companies.

Grupo EPM's net profit was COP 3.2 trillion, with 31% growth, equivalent to COP 738,438 million. This is mainly explained by the net effect of a positive variation in EBITDA by COP 895,115 million, higher non-effective results due to recoveries, lower expenses due to exchange difference, lower costs and expenses to respond to the Ituango contingency, higher income tax expenses, higher financial expenses, and expenses for regulatory assets in the affiliate of the distribution segment in Panama.

## — Transfers to the Municipality of Medellín

The transfers to the Municipality of Medellín in 2019 amounted to COP 1.3 trillion, of which COP 703,446 million corresponds to ordinary transfers and COP 586,205 million to extraordinary transfers. The variation with respect to the previous year in terms of ordinary and extraordinary transfers is 7%, which is equivalent to COP 85,000 million.

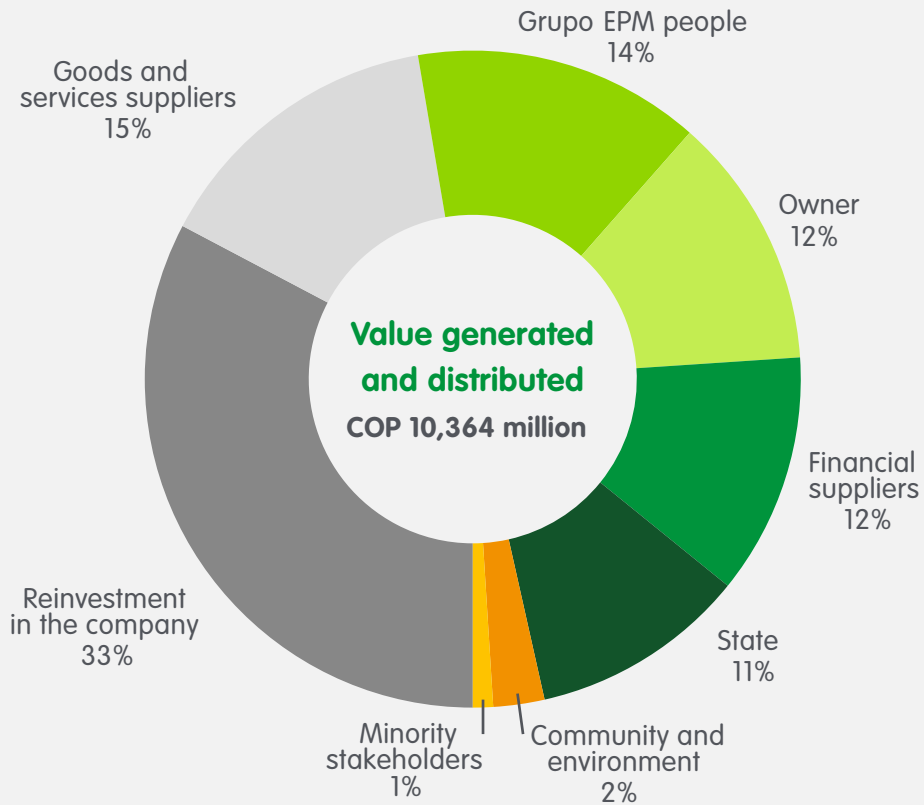
**Transfers to the municipality of Medellín**  
Figures in billion COP



## — Value generated and distributed

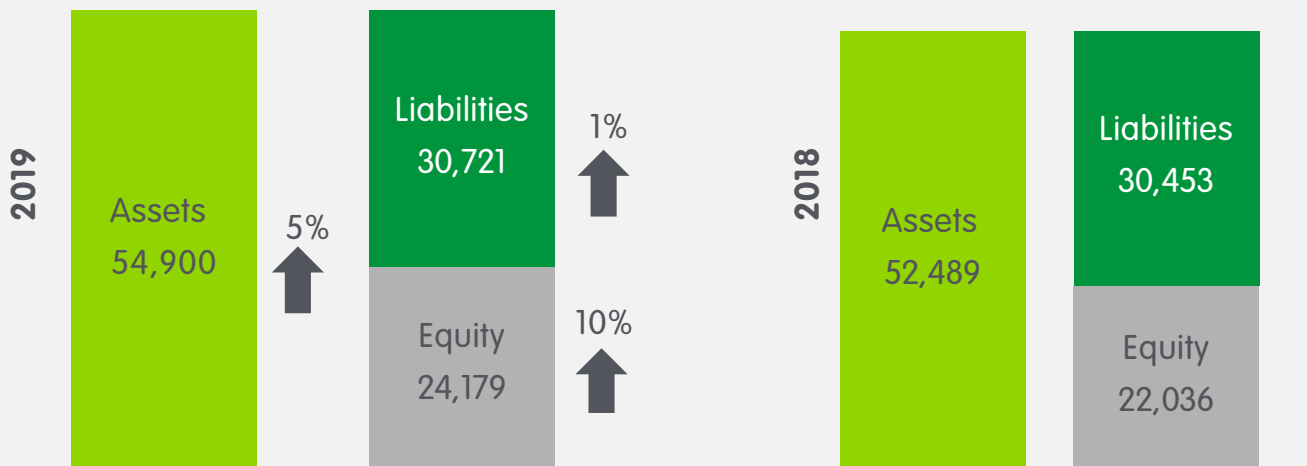
Grupo EPM generated COP 10.4 trillion in added value during the period, which means a contribution to the development of the territories in which it operates. It should be noted that suppliers of goods and services received COP 1.5 trillion, which is reflected in job creation and economic growth. Likewise, it is important to mention that COP 261,000 million was allocated to communities and to environmental improvement.





— Statement of financial position

Statement of financial position of Grupo EPM  
Figures in billion COP



Grupo EPM's assets grew by 5%, going from COP 52.5 trillion to COP 55 trillion; liabilities grew by 1%, going from COP 30.5 trillion to COP 30.7 trillion; and equity grew by 10%, going from COP 22 trillion to COP 24 trillion.

Grupo EPM's non-current assets grew by 4%, mainly due to EPM, which represents 92% of the total for this category. With respect to infrastructure projects, Grupo EPM invested a total of COP 3.2 trillion in 2019, of which EPM executed COP 2.2 trillion, national affiliates COP 514,568 million, and international affiliates COP 539,376 million. Ituango hydroelectric project continues to be Grupo EPM's main investment, followed by projects associated with compliance with the service and efficiency standards required by the regulatory authority in the water supply business and in the power transmission business.

With respect to the national energy affiliates, it is worth highlighting the investments that contribute to the improvement of quality and coverage of service, through the construction and modernization of substations and lines, and through the expansion and replacement plan of the system. Similarly, it is worth noting the investments that the affiliates have been making to increase coverage in rural areas.

Regarding the international energy affiliates, investments were oriented to the implementation of projects for substations and lines, loss reduction, coverage expansion, and quality improvement for new customers and users.

In line with established liquidity strategies, liability management, especially that associated with debt, became a key issue for Grupo EPM. It is worth highlighting that EPM successfully made its fifth venture into the international capital market with the placement of bonds equivalent to USD 1,382 million, including bonds for USD 1,000 million and Global COP bond for COP 1.2 trillion. With these resources, EPM prepaid an amount of USD 1,035 million in credit balances with international commercial banking, in addition to the advance repurchase of COP 1.1 trillion, corresponding to the international bond issue executed in January 2011 and maturing in 2021. This resulted in an improvement of debt profile by passing the average life of debt portfolio from 5.41 to 7.08 years.

Derived from the debt management operation, the early settlement of financial derivatives amounting to USD 535 million was carried out, which generated actual income of USD 38 million.

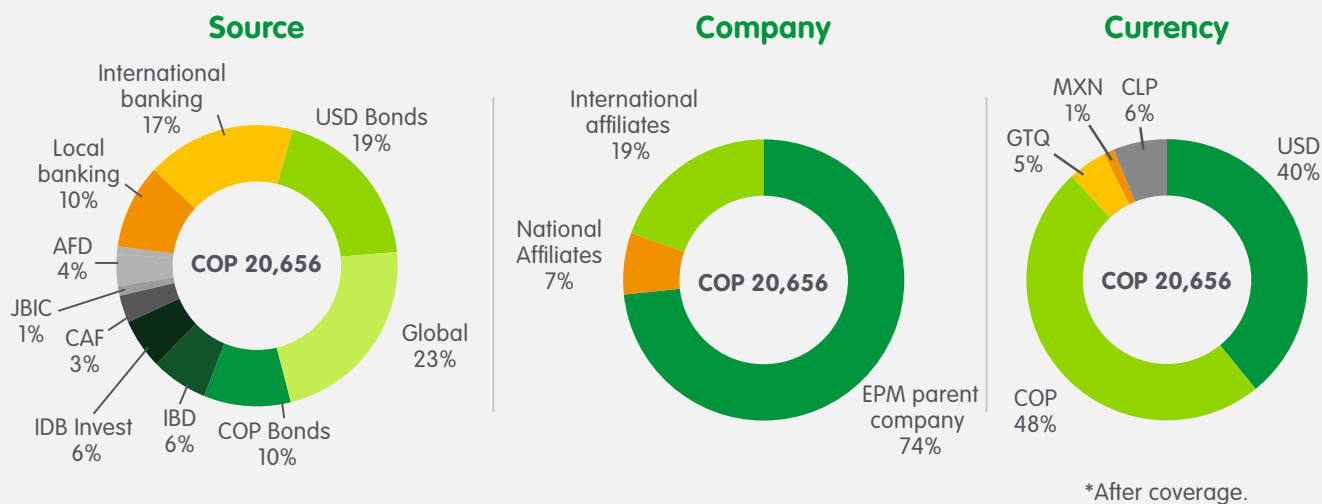
It is also worth noting the advance payment of the USD Bond maturing in July 2019 for USD 500 million, as well as the improvement in financial conditions, in some credits in force with local and international commercial banking.

Additionally, the financing requirements for Grupo EPM's affiliates were managed opportunely, especially the operation in Guatemala of Grupo Deca for USD 100 million and in local affiliates for COP 173,500 million.

Regarding credit risk rating agencies, in 2019, EPM continued with its practice of keeping them widely informed in order to provide them, in a transparent and comprehensive manner, with the elements that would allow them to develop their decision making in a clear way and thus keep their trust in the company. The international investment grade level was maintained by both rating agencies, Moody's at Baa3 with a negative outlook and Fitch Ratings at BBB international level and AAA national level, both on rating watch negative.

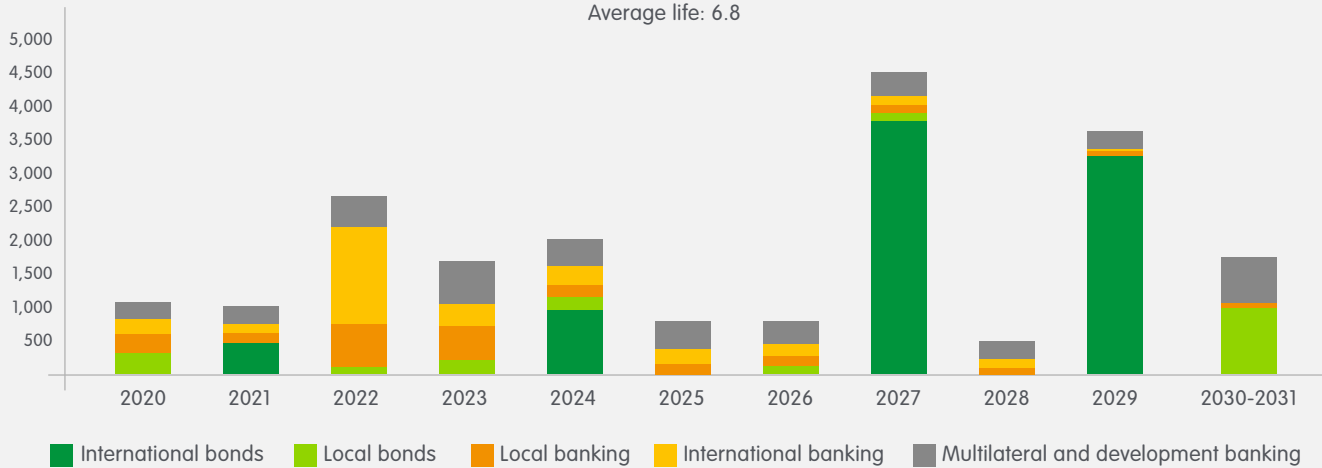
Local affiliates and Adasa performed positively as the ratings were maintained at AAA for the local energy affiliates, A for Aguas Regionales, and AA- for the local rating in Chile for Adasa. In addition, Emvarias rating was again obtained, reaching a level of AA+ with a stable outlook.

**Debt profile**



**Maturity profile**

Average life: 6.8



Grupo EPM's liabilities grew by 1%, with EPM representing 74%. By December 2019, EPM Business Group's Debt/EBITDA indicator rose to 3.49 and thus fell within the established limit of 3.5, improving on the value obtained in 2018 (3.86), since Grupo EPM's EBITDA exceeded COP 6 trillion, which is the highest figure in its history, with a growth of 17.5%. With this EBITDA, the company would take 3.5 years to pay its current financial debt, which is close to COP 21 trillion.

## — Financial indicators

Indicator	Previous	Implemented	Budget	Execution %	Var. %
<b>Liquidity</b>					
Current ratio	0.77	0.99	1.26	78	28
EBITDA	5,115,430	6,010,545	5,243,810	115	17
Covenant	3.86	3.49	3.53	99	-10
<b>Return</b>					
Return on equity	11.6%	14%	9%	151	24
EBITDA margin	31%	33%	31%	106	6
Operating surplus	3,593,899	4,969,746	3,881,950	128	38
Operating margin	22%	27%	23%	116	23
Net margin	15%	17%	13%	137	16
<b>Indebtedness</b>					
Indebtedness index	58%	56%	55%	101	-4
Financial indebtedness	41%	40%	38%	104	-3

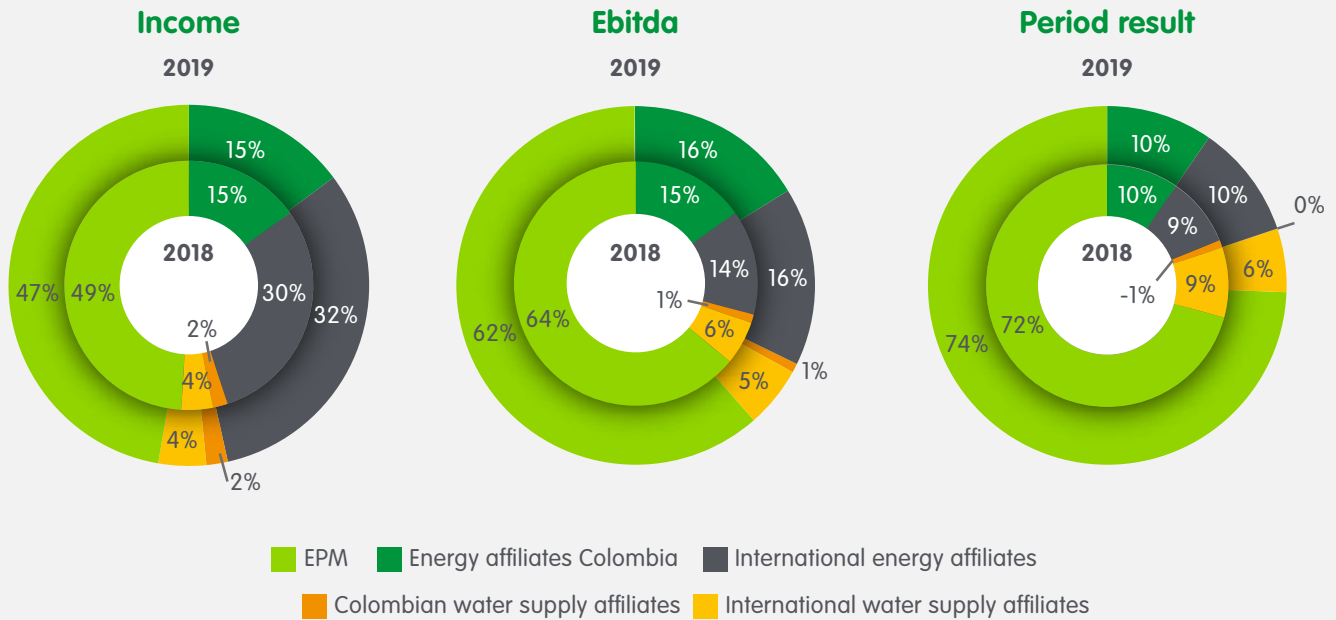
## — Performance and evolution of investments

EPM received resources amounting to COP 752,305 million from its affiliates and subsidiaries, of which controlled companies paid dividends worth COP 654,583 million and those non-controlled COP 97,722 million.

The carrying value of portfolio investments at controlled and non-controlled companies amounts to COP 11.8 trillion at the end of 2019.

During 2019, EPM capitalized HET by COP 178,469 million, EPM Mexico by COP 74,661 million, Aguas de Malambo by COP 12,000 million, and Aguas de Oriente by COP 1,211 million.

With regard to Grupo EPM's EBITDA, 62% is generated by EPM and 38% by Grupo EPM's national and international companies.



Grupo EPM continued to consolidate its core businesses and affiliates. The merger of EPRio by EPM stands out as a beneficial synergy strategy for the Eastern Antioquia market.

### — Taxes and contributions

For EPM, tax compliance is a minimum legal requirement. EPM understands that meeting mandatory commitments is the basis for acting in a socially responsible manner.

The following table presents EPM’s contribution to the nation, municipalities, departments, and monitoring and control entities, among others, with taxes and contributions, during the 2019 and 2018 periods:

Tax or contribution	2018	2019
Income and ancillary taxes (current and deferred)	605,235	174,292
Income tax for equity (CREE)	0	-25,936
Tax surcharge CREE	0	0
Equity tax	0	0
Wealth tax	0	0
Valuation	1,358	4,694
Industry and commerce tax	47,878	50,014
Tax on financial transactions	43,447	37,094
Control and auditing fee	18,504	17,923
Unified property tax	13,991	12,167
Motor vehicle tax	12	14
Contributions	21,504	20,809
Environment – Act 99 of 1993	89,328	81,325
Use of natural resources tax	4,081	3,662
Pollution of natural resources tax	8,482	9,442
Fund for the Electrification of Non-interconnected Areas (abbreviated Fazni as per its acronym in Spanish)	28,013	28,729
Fund for the Electrification of Interconnected Rural Areas (abbreviated Faer as per its acronym in Spanish)	0	0
Gas promotion fee	4,085	3,742
Ministry of Communications and/or Communications Fund	183	170
Stratification Committee - Act 505 of 1999	962	1,373
Motorway toll	437	433
Other taxes and contributions	13,706	10,286
<b>Total</b>	<b>901,205</b>	<b>430,234</b>

Adjustment and calculation of the provision for income for the taxable year 2019 was carried out in accordance with the tax legislation in force for that period.

The breakdown of the income tax provision, by current and deferred income tax, is COP 600,558 million and COP 4,678 million, respectively.

In this regard, among other aspects, this provision considers the following:

- The amendments introduced by the Financing Act, Act 1943 of 2018, which was in force during 2019.
- The Colombian holding company (CHC) regime, incorporated in the aforementioned Act 1943, which implies that dividends received from international affiliates shall be considered as exempt income.
- In 2018, the recovery of deferred tax due to the decrease in income rates in future years, determined in said Financing Law.
- Apply the tax benefits indicated in the tax statute for investments in science, technology and innovation, capitalization of water supply and sewerage companies in the region, as well as for power generation from nonconventional sources, which contributes to reducing the tax burden of the entity within the framework of the law.
- The particular conditions granted by the legal stability agreement for the activity of power generation in tax regulations in force for 2008-2028. One of the most significant of these conditions is the stability of the regulation that allows for the exceptional use of 40% of investments in fixed assets as a deduction in the income tax return, the income tax rate, and the equity tax, among others.
- Situations associated with the contingency of the Ituango hydroelectric project and its tax impact.

### — Engagement with investors

EPM maintained its practices of transparency before the international financial market. During the year, it provided updated information on the company.

Some of the most representative practices in this sense include: Quarterly teleconference for the presentation of financial results in two versions (Spanish and English), annual plenary meeting with local and international financial public, and continuous attention to the concerns of local and international investors. In addition, for the seventh consecutive year, the IR (Investor Relations) recognition was achieved for voluntarily adopting the best practices in disclosure and investor relations required by the Colombian Securities Exchange.

## Financial strength

EPM has sought to maintain its financial indicators at levels that will allow the company to maintain its strength. This principle has been preserved, even with the changing levels of risk that the company has been facing.



In 2018, EPM faced a different internal dynamic, derived from the contingency of the Ituango hydroelectric project, which changed the company's risk scenario and generated a perception of uncertainty in aspects associated with EPM's financial sustainability. This situation forced a rethinking of the established goals.

The strategic redefinition continues to focus on financial strength. A new road map was established to ensure sources of resources. For this purpose, a combination of sources was defined that incorporates credits, optimizations within Grupo EPM, and alienation of some of the assets acquired in the past in order to maintain adequate liquidity levels, so that the company can replace the postponement of the entry of income from the Ituango project, as well as cover the additional investment needs derived from it, the assistance to the affected population, and the fulfillment of financial obligations. In addition, these resources will be used to make the infrastructure investments required to ensure the continuity of business operations, control indebtedness indexes, and maintain the investment grade by the risk rating agencies.

### — Liquidity strategy

Grupo EPM's liquidity strategy focused on undertaking actions such as debt rescheduling, disinvestment of assets in Chile (Parque Eólico Los Cururos and EPM Transmisión Chile), claiming the Ituango policy, optimizing costs and expenses, and postponement of non-priority investments, in order to guarantee sources of resources that will enable the company to cover the needs arising from normal business operations and ensure the implementation of the infrastructure investment plan, with the aim of continuing to provide quality public utilities.

In 2019, Grupo EPM obtained an internal generation of funds (abbreviated GIF as per its acronym in Spanish) by COP 6.2 trillion and EPM by COP 3.9 trillion. These resources come from the dynamics of its operation and other sources that have allowed the financing of the investment plan and other obligations of Grupo EPM.

### Claim for policies

In 2019, the renewal of Grupo EPM's insurance program reflected the impact on the cycles of the global reinsurance market, with strong increases in rates, especially for high claims policies, both worldwide and in our own case, with strong increases of up to 40%. The actions carried out made it possible to obtain compensations derived from the event at Central Playas for a value of nearly USD 6 million, out of a total of USD 35 million paid by the insurer. It is estimated that by 2020, the claim can be closed for an additional value of nearly USD 3 million.

As for the compensation received during 2019 for claims under the other policies of the program, approximately COP 7,000 million were received for EPM and COP 6,400 million for the national affiliates.

For the Ituango project contingency, an advance payment was received in May for the claims of affected third parties under the noncontractual civil liability policy amounting to COP 6,168 million.

With respect to the all-risk construction and assembly policy, on September 16, 2019, coverage was confirmed for damage to the project's works and equipment. Therefore, on December 4, 2019, Mapfre insurance company made a first advance payment of USD 150 million corresponding to consequential damage in civil works.

### Disinvestments

At the request of EPM's Board of Directors, an analysis of EPM's investment portfolio (shareholdings) in Colombia and abroad was carried out to determine those disinvestments that should eventually be made and thus generate resources for EPM in the context of the contingency of the Ituango hydroelectric project.

EPM's Board of Directors authorized the initiation of the necessary procedures to alienate Grupo EPM's shareholdings in ISA, Adasa, Parque Eólico Los Cururos, EPM Transmisión Chile S.A., Río Aures, and other minority shareholdings such as Promioriente and Gasorienté.

Upon authorization by the board of directors, the procedure was carried out before the Council of Medellín for the alienation of EPM's shareholdings in Colombia, which concluded with its approval through Agreement 090 of 2018.

#### Disinvestment in Adasa:

Although binding offers were received in November 2019, the sale process was suspended.

#### Disinvestment in Parque Eólico Los Cururos SpA and EPM Transmisión Chile S.A.:

In 2019, the transaction was closed for USD 142.8 million, of which USD 138 million was received in November 2019 and USD 4.8 million in February 2020, derived from the price adjustment agreed with the buyer.

**Disinvestment in ISA:**

14,881,134 shares were sold, whereby EPM received a total amount of COP 233,633 million. The number of shares awarded is equivalent to 1.34% of ISA's shareholding.

**Disinvestment process of Aguas de Antofagasta – Adasa**

- During the first half of 2019, studies were carried out comprising due diligences (financial, accounting, tax, legal, technical, regulatory, and market), which provided inputs for the modeling and implementation of the disinvestment process.
- The most suitable non-binding offers submitted by interested investors were selected. They were given access to the data room in addition to a management presentation and site visit.
- Although binding offers were received in November 2019, the sale process was suspended.

**Disinvestment process of Parque Eólico Los Cururos and EPM Transmisión Chile.**

- In September 2019, after a competitive process, EPM Chile S.A. signed a promise to purchase agreement with Norgener Renovables SpA and AES Gener S.A. for the shares of Parque Eólico Los Cururos and EPM Transmisión Chile. At the end of November, the transaction was completed for an amount of USD 138 million (in February 2020, USD 4.8 million were received as a result of the price adjustment agreed with the buyer).

**Disinvestment process of ISA**

- During the first stage of the alienation process of EPM's shareholding in ISA, aimed at special conditions recipients, 14,881,134 shares (1.34% of ISA's shareholding) were sold, for which a total amount of COP 233,633 million was received.
- In the second stage, 8.66% of the shareholding in ISA was offered for sale and the pre-qualification conditions and the auction mechanism were established so that potential investors could submit their bids. However, the potential investors withdrew from the process due to the political and social uncertainty in certain countries where ISA operates, requiring a longer deadline than December 31, 2019, to carry out the necessary analysis and decide on the submission of a bid. Nevertheless, this was the maximum time frame provided for this disinvestment as established in Agreement 090 of 2018 of the Council of Medellin. For this reason, on December 31, 2019, EPM completed the program for the alienation of its shareholding in ISA.

### Disinvestment process of Gasoriente and Promioriente

- In accordance with the strategy defined for alienation, EPM acquired all of the shares that its affiliate Electricadora de Santander (ESSA) held in Gasoriente y Promioriente, and subsequently initiated the sale process in accordance with the provisions of Act 226.
- The first stage of the alienation of shares in Gasoriente began in June and ended in August. In this stage, 50,000 shares were sold, equivalent to COP 144.6 million. Subsequently, the auction corresponding to the second stage of the alienation program was held in November and all the shares offered were sold for approximately COP 35,000 million.
- Regarding Promioriente, the first stage of the alienation program began in October. A total of 50,000 shares were sold for COP 24.4 million. The market was informed of the program completion, taking into account that this stage ended on December 30 and that the deadline for executing the alienation program was December 31.

## Integrated Model of Planning and Management

2019 is the second year in which EPM makes progress in the process of closing the gaps identified in the self-assessment for the implementation of the Integrated Model of Planning and Management (MIPG for its acronym in Spanish). The gaps that obtained a rating of 60 points or less in the self-assessment received special management attention.

Additionally, during the first quarter of 2019, using the FURAG II<sup>2</sup> tool, the first measurement of progress in the implementation of MIPG based on 2018 was carried out. In this measurement, EPM stands out as a benchmark entity among the peers in its comparison group.

With a score of 77 in FURAG II, EPM is the benchmark company in the peer group to which it was compared. The following chart shows the FURAG II rating obtained by EPM as seen by the 7 dimensions of MIPG:

SIGEP code	4256		
Index	Score by entity	Peer group average	Peer group average
Institutional performance index	77	55.1	77
D1: Human resources			
D2: Strategic planning	72.6	52.5	72.6
D3: Result-oriented management with values	77.6	54.7	77.6
D4: Result assessment	72.1	52.3	72.1
D5: Information and communication	79	53.6	79
D6: Knowledge management	79.2	53.6	79.2
D7: Internal control	75	41.5	75

It is observed that EPM continues to be a benchmark among the peer group to which it was compared in the MIPG dimensional view. Dimension 1, Human Resources, was not assessed in FURAG because EPM does not apply the public office career. Despite the comparative results, EPM is aware that there are significant opportunities for improvement in some of its policies.

<sup>2</sup> FURAG: Standard Form of Progress Report to Management.

Some of the organization's progress on the MIPG are summarized below:

1. Harmonization of EPM code of ethics vs. MIPG code of integrity.
2. Structuring of the outline of defense lines at EPM.
3. Harmonization of the concepts of stakeholders and value groups of MIPG with EPM's stakeholders.
4. Analysis and proposal for the definition of digital government and document management policies at EPM.
5. Development of the survey for ITA<sup>3</sup> to EPM.
6. Completion of FURAG 2019.
7. Creation and activation of the Integrated and Coordinated Meeting (abbreviated RIC in Spanish) of MIPG, as a mechanism for the coordination and progress of MIPG work plan.
8. Development of the MIPG training plan by EPM's public servants.
9. Benchmarking presentation of the implementation of MIPG before the Management Committee (Institutional Committee for Management and Performance).
10. Structuring and implementation of MIPG communications plan with the business organization.
11. Clarification of the scope of MIPG with the Administrative Department for Public Services (abbreviated DAFP in Spanish).
12. MIPG in sessions, Management Committee (Institutional Committee for Management and Performance) and the Management Committee (Institutional Committee for Internal Control Coordination), roles and responsibilities regarding MIPG, definition of the scope of the Management Committee in document management.
13. Articulation of the integrated planning cycle to MIPG and harmonization of MIPG policies with the different instruments of the regulatory model equivalent for EPM.

**Improvement plans:** Avanza application has registered 12 plans with a self-assessment origin (MIPG). Four of these plans have been completed, which are related to audit planning for integrity strategies, attention to gaps in public disclosure (ATC), plan for closing gaps in human development activities and in information technologies and accountability. Furthermore, eight plans are being implemented in relation to:

- Procedure indicator, public offering (abbreviated OPA in Spanish), and services.
- Inventory of information components.
- Global audit opinions.
- Complete human resource training plan.
- Incomplete registration of information in SIGEP.
- Improve aspects related to organizational culture.

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<sup>3</sup> *Transparency and Access to Information Index.*

- Document retention schedules.
- Migration of the IP addressing scheme to IPv6, which is more scalable and extensive.

The following are the relevant results obtained for each of the dimensions:

## Human resource dimension

This dimension was not assessed under the FURAG II measurement. However, actions have been implemented based on the self-diagnosis and its overall rating was higher than 60 points out of 87.4. It comprises the following policies:

### — Policy of human resource strategic management

Points for improvement were identified in the planning and admission actions. During 2019, communication strategies have been carried out in the planning process about the responsibility in updating the information on the resumes in SIGEP. In 2019, for the admission process, progress was made in updating data on public servants in the HCM tool through self-service, in order to improve traceability in the work history.

According to the information registered in the HCM<sup>4</sup> tool, as of January 30, 2020:

- Active staff: 7,970
- Active apprentices and interns: 395
- Active public servants: 7,575
- Public servants with registered degrees: 5,215
- Percentage of public servants with registered degrees: 65%
- Public servants (2,360) and apprentices and interns (395) without registered degrees: 2,755
- Percentage of public servants (30%) and apprentices and interns (5%) without registered degrees: 35%
- Average number of registered degrees per public servant: 2

In the areas associated with **information management**, key staff indicators were defined for admissions, turnovers, promotions, transfers, assignments, secondments, study leaves, absenteeism, demographic data, pre-retirements, and reinstatements. There are employees responsible for these indicators and the periodicity of their measurement has been defined.

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<sup>4</sup> HCM: Human Capital Management.

The **training** plan included topics associated with citizen service (customer service), online governance (digital transformation), financial management, organizational culture, human rights, sustainability, information technology management, innovation, planning, and public procurement. Similarly, the training plan included the reorientation of public servants through the development of topics defined by mechanisms such as Naturalmente (Naturally) or El Valor de lo que Hacemos<sup>5</sup> (The Value of What We Do). In these spaces, public servants have been trained in matters related to the organization and its endeavor, as well as aspects related to the public servant.

In 2019, internal events were held that seek to incorporate public service into EPM culture through the design of the **plan for cultural transformation**, such as conversation circles for executives, pioneers, enablers, and other audiences, in which topics discussed include the public servant, the measurement of the conversational capital indicator, and the incorporation of innovation strategies through the Creando Ando (Creating) initiative, among others. Activities were also developed in relation to the Bilingualism Act (Act 1651 of 2013) and Estado Joven (Young State) program.

Finally, the structure of the exit interviews was defined, as well as the repository for preserving the information that has been documented in each one of them. By 2019, 48% of the population that has left the organization during this period has been reached.

### — Policy of integrity

No improvement actions were generated to be addressed by the organization. On the contrary, progress is being made in the action plan related to the internalization of the code stipulated at EPM.

## Strategic planning dimension

The result of this dimension through the FURAG II assessment was 72.6, while the self-diagnosis obtained a score of 96.3. This dimension is comprised of the planning policies and the anti-corruption plan; its results are detailed below:

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<sup>5</sup> Some of the topics addressed include updating the strategic planning components, which is being developed from each of the businesses around operational safety, the balance of the Ituango hydroelectric project during the first year under the defined dimensions, as well as other projects that the organization is currently developing under its future vision. In addition, online courses have been developed, including the "Integrated Model of Planning and Management (MIPG)" and "Work Inclusion" courses, which must be taken by all EPM's public servants.



## — Policy of planning

Between 2018 and 2019, the company worked on the review and adjustment of the corporate risk map and of the strategic planning as a result of the impacts generated by the contingency of the Ituango hydroelectric project. The purpose of this action was to ensure business continuity and sustainability of Grupo EPM. Both the risk map and the strategic planning will be continuously reviewed and adjusted according to the evolution of the situation and the business context.

As for the involvement of citizens and stakeholders in the diagnosis and formulation of plans, programs, or projects of the entity that are of interest to citizens, it is found that, due to the nature of the company subject to competition, an open exercise with citizens is not considered. However, it is applicable in the case of plans and projects related to the territorial integration model and public hearings for the development of projects.

## — Policy of the anti-corruption plan<sup>6</sup>

The score obtained in the application of the 2018 self-diagnosis was 94.3. Although FURAG II did not show results for it, EPM made progress in the following aspects in 2019:

- Presentation of the corruption risk map to the Audit Committee on February 22, 2019. An assessment of corruption risks is being carried out by the Vice Presidency of Corporate Auditing, which is included as a regular internal audit activity of the entity.
- Structuring and periodic monitoring of the Anti-corruption and Citizen Services Plan, as well as its publication. Management is carried out through the different control and attention mechanisms available for the detection of corruption events (Disciplinary Control Office, Corporate Audit, Work Coexistence Committee, Compliance Unit, and ethics hotline: Transparent Contact).

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<sup>6</sup> The Anti-Corruption and Citizen Services Plan (PAAC) (in compliance with Article 73 of Act 1474 of 2011).

## Result-oriented management with values dimension

The result obtained in FURAG II for this dimension was 77.6, and that of the self-diagnosis tool indicates a score of 89.8. This dimension includes policies related to: Organizational strengthening and process simplification, digital security, regulatory improvement, budget management, digital government, legal defense, citizen service, procedure rationalization, and citizen participation. The management carried out in 2019 is summarized below:

### — Policy of organizational strengthening and process simplification

A process model for EPM is currently available. The last update was approved on September 9, 2019 by the Corporate Core Committee, driven, among other aspects, by the requirement of control entities and the implementation of MIPG. For the design and management of processes, the methodology for the design and adjustment of processes has been applied, based on the international reference BPM<sup>7</sup>, whose purpose is to guide the management by processes to enable the achievement of the business strategy.

During this period, the functions manual by department and its approval by EPM's Board of Directors were documented.

Furthermore, adjustments were made to the organizational structure to respond to the contingency of the Ituango project, while the variation in the composition of the job structure and the dynamics of process management led to the need to design and/or adjust job descriptions. For instance, the creation of exclusive positions for the occupational medical reinstatement of public servants, the creation of a business advisor position, as well as positions for the implementation of the Work Inclusion within the Organization program.

### — Policy of budget management and efficiency of public expenditure

- The budget management carried out by EPM is consistent with the principles of efficiency and effectiveness of public expenditure, in line with the actual value of contracts and the corresponding budget, amounts, and deadlines.
- For a correct registration of economic facts, a training plan on the IFRS accounting standards is being developed, which applies to all the company's public servants.

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<sup>7</sup> BPM: Business Process Management.

- In order to comply with Article 14 of Act 1474 of 2011, the information associated with budget management process was updated on the Transparency section of the entity's website, with the publication of budget modifications made during 2019.

### — Policy of digital security

Some milestones stand out in the framework of the Centinela (Sentinel) project, which aims to manage information security and cybersecurity for Grupo EPM, in order to securely deliver services and information to its different stakeholders and to enable their integration and growth. These milestones include the definition and creation of the new process called Digital Security and Continuity of Technology Services, and the dimensioning of staff for the new process and its document structure. In terms of policies, it is worth noting the following progress in 2019:

### — Policy of digital government

Entity's procedures and other administrative procedures (OPAS) associated with the mission processes were refined.

In the management and planning of information components, the information components were conceptualized in line with the model and the road map of information management.

In the transition plan from IPv4 to IPv6 protocol, the diagnosis for the transition from Internet Protocol version 4 to Internet Protocol version 6 was made. Based on this, the IPv6 design proposal for the Demilitarized Zone (DMZ) was prepared, as well as the next steps for the implementation of dual stack.

### — Policy of legal defense

Sessions of the Conciliation Committee were held at least twice a month or whenever required during the year. The committee is comprised of public servants at the management level who are appointed for this purpose. The study and assessment of the legal proceedings against the entity was also carried out, identifying the causes of the conflicts and proposing corrective measures.

## — Policy of regulatory improvement

EPM's internal regulatory model was updated to limit it to the directives defined by the Corporate Core for Grupo EPM and, in turn, to determine the applicability scope of the business policies, guidelines, and rules.

## — Policy of citizen service

- Regarding disclosure of information to citizens, the information suggested by the MIPG was published in visible places and in formats other than the electronic one.
- Information was disclosed to citizens regarding offices and opening hours, defined hotlines, transactions over the web and phone, free issuance of certificates using the self-service modules, contact emails, links to access information on public accountability, current information about EPM, department responsible for addressing RCCs<sup>8</sup>, and schedule of activities in the services.
- Educational videos were shared regarding access to prepaid water and energy programs, use of EPM app and supported transactions, explanation of investments made in sanitation in the metropolitan area and their repercussions on rate variation, and key messages on bill changes. Moreover, a solution to doubts called **chatbot EMA**, was implemented in EPM's website. This solution is an automatic assistant that helps users with their procedures and addresses inquiries regarding values in bills and coupon for bill payment.
- Certification was obtained in Clear Language, a course taught by the DNP<sup>9</sup>, thus complying with the four-step procedure design, in accordance with the provisions of the DAFP<sup>10</sup>, and with the required structure to make them available on the website of procedures and services.

## — Policy of procedure rationalization

The company's formalities and other administrative procedures (OPAS as per its acronym in Spanish) associated with its mission processes were refined.

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<sup>8</sup> RCCs: Requests, complaints, and claims.

<sup>9</sup> DNP: National Planning Department.

<sup>10</sup> DAFP: Administrative Department for Public Service.

Through consultancy services, advice has been received for the interpretation and due application of CREG Resolution 080 of 2019, “by which general market behavior regulations are established” and the following behavior standards are defined: compliance with the purposes of said regulation, market transparency, prioritization of users’ interests, independence in decision-making, free access to essential commodities, competition in the market, and adequate provision of the service. The resulting information is being studied to be later implemented in the company’s processes and thus in all impacted procedures.

### — Policy of citizen participation

With respect to progress made in the implementation and maintenance of this policy, the diagnosis of citizen participation has been shared with those directly responsible for the engagement plans.

## Result assessment dimension

### — Policy of institutional performance monitoring and evaluation

Progress was made in the following activities:

- Through the development of the Alignment initiative, the company has been working on aligning EPM’s indicators from the operational to the strategic level.
- The percentage of compliance with the business objectives was calculated based on the BSC results.
- The efficiency and effectiveness of the business plan initiatives were evaluated.
- The strategy map and its indicators were reviewed and adjusted in accordance with the strategic planning defined as a consequence of the contingency that occurred in the Ituango hydroelectric project.

In response to the gaps, improvement actions were documented. These actions account for aspects to be improved which were defined based on accountability and each of the five phases established in the Single Accountability Manual (version No. 2 of February 2019) issued by the DAFP. Thanks to the actions taken, the following was achieved:

- The integral procedure for carrying out the accountability exercise was defined.
- The roles and those responsible for the comprehensive coordination of the accountability exercise (government) were established.
- The Review Guideline was adjusted by the Directorate of Systems Management at EPM.

As for the improvement plans, the indicators for each vice presidency related to plan effectiveness, deadline, delay, and reformulation were established, in order to raise more awareness among those responsible for the organization's continuous improvement.

## Information and communication dimension

Progress made in 2019 is mainly focused on document management. As part of the Document Management Consolidation project, a new version of the Pinar<sup>11</sup> was developed. This new version was adjusted to the technical and legal terms required by this document. Regarding policies, progress was made mainly in:

### — Policy of document management

The progress made regarding the planned actions is summarized below.

- EPM's document management policy was analyzed and a proposal was developed, in accordance with the guidelines set forth in the Integrated Model of Planning and Management.
- The updated Document Retention Schedules (TRD as per its acronym in Spanish) was submitted to the Departmental Council on Archives for its review.
- The Document Management Consolidation project was structured and started to be executed. Under this project, the necessary actions to close the identified gaps will be executed by adjusting the components of the business architecture from the following dimensions: processes, technology, information, organization, and people.
- The Vice Presidency of Corporate Auditing provided support, through consulting actions, in terms of risk assessment, control, and governance of the Document Management project, and the archival improvement plan, which was signed at the General Archive of the Nation, was monitored quarterly.

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<sup>11</sup> PINAR: *Institutional Archive Plan*

## — Policy of transparency and access to information

Currently, there is an institutional guideline for intercultural engagement and dialogue with ethnic communities. Such guideline was developed by the Sustainable Development Management within the framework of Corporate Social Responsibility (CSR) and Human Rights for the proper engagement of the companies of Grupo EPM with ethnic communities. It is currently being shared and validated. As a case example, EPM, through its affiliate Aguas Nacionales, is developing water supply projects; and in Manaure (La Guajira), for instance, there is a well water project, and a Wayúu indigenous was hired as a translator.



## Knowledge management dimension

Although a tool has not yet been developed for the self-assessment of the policy associated with this dimension (knowledge management policy), the benchmark score of 79.2 was obtained through the FURAG II evaluation.

## Internal control dimension

Progress made in this dimension includes:

- The assessment of the company's ethics management plan was established as a mandatory task for the Vice Presidency of Corporate Audit to be included in the annual audit plan. In their assessments, one of the reviewed topics corresponds to strategies to promote integrity in public servants (focus: training and awareness).
- From the Vice Presidency of Corporate Audit, the proposal for the issuance of global opinions was developed, by consolidating governance, risk, and control issues.
- In the results of the 2018 FURAG II evaluation, the need to strengthen the lines of defense within the organization was identified, in accordance with the scheme proposed by the MIPG. During 2019, the dependencies within the company acting as a second line of defense were identified, and based on this, a work plan will developed for the officialization of, socialization of, and culture awareness on this aspect.
- The 2019 Anti-corruption and Citizen Services Plan (PAAC as per its acronym in Spanish), which is part of the MIPG and proposes actions in coordination with the different EPM processes, was published. It aims to strengthen the results of the risk analysis and the integrated planning cycle, taking into account the analysis of the environment.
- The psychosocial risk at EPM was assessed.
- The company's ethical management plan and the role of public servants was constantly promoted through different communication, awareness and/or training strategies. These strategies are part of the Integrated Ethical Management Plan.
- Discussion panels, whose aim is to leverage cultural transformation by strengthening conversations among employees and, thus, achieve the development of organizational capacities, were held.
- The employee development plan was defined based on the "actions" that have been established within the organization.
- The corporate risk map and strategic planning was reviewed and adjusted as a result of the impacts caused by the contingency that occurred in the Ituango hydroelectric project.
- EPM's corruption risk map was updated and dully published on the website.
- The company's risks were monitored, and reports were prepared for the respective committees.
- Within the framework of the company's regulatory cycle, policies, guidelines, business rules and procedures were defined. Responsibilities regarding the application of controls were assigned.



- The company's transparent contact hotline was shared with external groups through the communication means defined at EPM.
- The annual workplan of the internal audit exercise at EPM was executed, where opportunities for improvement were identified, which will be addressed by those responsible for the organization's processes.
- The improvement plans that are being executed within the company and which emerged after different evaluation exercises were followed up.



## Awards and honors

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### EPM

- **Seals of Excellence in Digital Governance:** In 2019, the Colombian Ministry of Information and Communications Technologies awarded EPM five seals of excellence: three for open data related to energy, water, and gas rates that were made available for use by citizens; one for citizen participation thanks to the exercises carried out in digital media (open governance); and one for the e-bill service. With this honor, entities owned by the Colombian state certify the high quality of procedures, services, and products provided by digital means, as well as a public entity's skills in the management of information technologies.
- **Recognition in the Social Innovation category of the IDB's Ideas into Action Awards:** the Acueducto Aéreo y Senderos de Vida (Overhead Water Supply and Life Paths) project, developed by EPM and its affiliate Aguas Regionales in Turbo's Port District, in Antioquia's Urabá region, ranked second among the most innovative water and sanitation companies from Argentina, Brazil, Chile, Costa Rica, Mexico, Peru, and Paraguay, according to a call by the Inter-American Development Bank (IDB).
- **Colciencias (the Administrative Department for Science, Technology, and Innovation in Colombia)** granted 100 of 100 points to EPM's Consolidación de Centros de Control (Consolidation of Control Centers) project in the Innovation category. This initiative contributes to the development of the country and the achievement of the Sustainable Development Goals (SDGs).
- **Certification on compliance with the International Internal Auditing Standards and the Auditor's Code of Ethics:** after a thorough work that involved conducting interviews and surveys to EPM's executives, reviewing documents, and evaluating assurance and consultancy tasks, an external evaluator from the International Institute of Auditors (IIA) ratified, for the second time, the "Generally Conforms" rating for the company.

### CHEC

- **Third-level certification on the semantic interoperability framework for the information exchange service:** within the framework of the implementation of good practices regarding Digital Governance Policy, CHEC received recognition from the Colombian Ministry of Information Technologies and Communications (Min TIC) in the spheres of interoperability and clear language.
- **Lace of the Manizales Festival:** EPM's affiliate received this honor as a symbol of commitment and contribution to the development of the capital city of Caldas.

## EDEQ

- Recognition to the Restaurar los Bosques para Conservar la Vida (Restoring Forests to Preserve Life) program: the Corporación Quindío Competitivo (CQC) recognized EDEQ for its contribution to the program, through which 86 hectares have been reforested in the department.
- First recognition by the Superintendency of Residential Public Utilities (Superservicios) and Andesco on best user service practices: Superservicios, through the National Association of Public Utilities and Communication Companies (Andesco), granted EDEQ an award, in the “Operation of the Requests and Resources Offices” category (medium-sized company), on its practices in the provision of public utilities.
- 2019 ACIEM Award on Maintenance Engineering: the Colombian Association of Engineers (ACIEM) ranked EDEQ third for its “Armonía electro-vegetal” (Electro-vegetation harmony) initiative within the framework of the 21st International Congress of Maintenance and Asset Management.

## CENS

- Recognition on best user service practices: the Superintendency of Residential Public Utilities (Superservicios), through the National Association of Public Utilities and Communication Companies (Andesco), granted CENS this award, highlighting its strategies implemented in the operation of its requests and resources offices. A total of 80 public utilities companies applied in different categories, and the best ones were acknowledged by these two entities. This represents a great achievement for CENS, which has become a national benchmark in best user service practices.
- Business Merit Award: the Universidad Simón Bolívar recognized CENS’s work (among 181 companies from 12 departments of Colombia) in three categories. This is the highest recognition awarded to companies and entrepreneurs every year in Colombia.

The three categories include:

- Customer service at the national level: This category highlights what has been done in terms of customer service through strategies, such as strengthening of staff, improvement plans, management systems, and implementation of ICTs in services, which, day by day, strengthen customer satisfaction.
- Corporate social responsibility at the regional level: This category recognizes service vocation in the generation of favorable, dignified, and inclusive environments, and the care and protection of the environment.

- Entrepreneur of the year: recognition granted to José Miguel González Campo, CEO at CENS, for his career and permanent leadership in the development of projects that contribute to the development of the territory.

## ESSA

- Energy Hero Medal: award granted by the Colombian Ministry of Mines and Energy for participating in the 2019 Renewable Energy Auction. ESSA received this recognition on November 9, 2019, in the municipality of Barichara in the department of Santander, during the 41st Construyendo País (Building Country) workshop of the Presidency of the Republic of Colombia.
- People of Their Word recognition: award granted by the Corporación Festival de Cuenteros (Corfescu) to ESSA as a sign of gratitude for supporting the 24th International Word Festival held on October 25, 2019 in Bucaramanga.
- Recognition for participating in the Soñamos y Sonreímos por Santander (We Dream and Smile for Santander) calendar: award granted by the Volver a Sonreír (Smile Again) German and Colombian Foundation to ESSA, in December 2019, in Bucaramanga, for supporting various of their initiatives. This foundation is committed to working on the development of children, adolescents, and their families who live in vulnerable conditions, are subjected to a high social risk, and whose rights are threatened and/or violated.
- Centennial recognition, A la Vanguardia awards: the Vanguardia Liberal newspaper, in commemoration of its 100th anniversary, granted a special award to ESSA, on May 30, 2019, for its 128-year history, throughout which it has been characterized by its excellent provision of residential public utilities and its commitment reflected in its effort to achieve the highest indicators.

## Emvarias

- 2019 WasteExpo Award: recognition granted by the Colombian Association of Environmental Engineering (Acodal) to Emvarias for being a leading company in waste collection in the region and for promoting a comprehensive solid waste management. It was awarded in Medellín on November 14, 2019 within the framework of the International WasteExpo Seminar.

## External assurance

See the external assurance certificate for the 2019 Management Report figures that are part of the 2019 EPM Sustainability Report in: [Independent assurance report](#).

The following financial figures were audited by KPMG for external assurance, through the financial statements of EPM and Grupo EPM. The reports by the independent auditors are available in: [EPM certificates](#) and [Grupo EPM certificates](#).

Financial information	Chapter and subchapter of the CEO's 2019 management report	Data submitted for verification	Figure verified	Page
Financial results	Grupo EPM results	Grupo EPM revenue	Grupo EPM had a revenue of <b>COP 18.4 trillion</b> . Figures validated through substantive testing and matching the consolidated financial statements.	110
	Grupo EPM results	Grupo EPM period result	Grupo EPM obtained a period result of <b>COP 3.2 trillion</b> , which shows a 31% increase. Figures validated matching the financial statements.	110

Financial information	Chapter and subchapter of the CEO's 2019 management report	Data submitted for verification	Figure verified	Page
Financial results	Grupo EPM results	EPM revenue	The EPM parent company achieved a revenue of <b>COP 8.8 trillion</b> , for an 8% increase. Figures validated through substantive testing and matching the separate financial statements.	110
	Grupo EPM results	EPM period result	EPM achieved a net profit of <b>COP 2.7 trillion</b> , which means an increase of 15%. Figures validated through substantive testing and matching the financial statements.	110
	Grupo EPM results	Grupo EPM assets	The Grupo EPM assets grew by 5%, going from <b>COP 52.5 trillion to COP 55 trillion</b> . Figures validated through substantive testing and matching the consolidated financial statements.	116

Financial information	Chapter and subchapter of the CEO's 2019 management report	Data submitted for verification	Figure verified	Page
Financial results	Grupo EPM results	Grupo EPM liabilities	The liabilities grew by 1%, going from <b>COP 30.5 trillion to COP 30.7 trillion.</b> Figures validated through substantive testing and matching the consolidated financial statements.	116
	Grupo EPM results	Grupo EPM equity	The equity grew by 10%, going from <b>COP 22 trillion to COP 24 trillion.</b> Figures validated through substantive testing and matching the consolidated financial statements.	116
	Grupo EPM results	Capitalizations	During 2019, EPM capitalized HET by <b>COP 178,469 million</b> , EPM Mexico by <b>COP 74,661 million</b> , Aguas de Malambo by <b>COP 12 billion</b> , and Aguas de Oriente by <b>COP 1,211 million.</b> Figures validated through the consolidated financial statements.	119

The background of the page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, corporate governance, and business operations, such as lightbulbs, gears, recycling symbols, wind turbines, solar panels, and hands holding a globe. The icons are arranged in a dense, grid-like pattern across the entire page.

# Corporate governance report



## Presentation

In its role as parent company of Grupo EPM, EPM annually prepares a corporate governance report that is submitted, with the other year-end documents, to the Board of Directors of EPM, after review and favorable report from the Audit Committee.

**Código País 33.1, GRI 102-32**

Grupo EPM understands corporate governance as the system by which the companies are run, managed, and controlled through a balance between ownership and management, in order to guarantee their sustainability and growth, the rights of their investors, transparency and ethics in their actions, and access to information for their stakeholders. Corporate governance is relevant for Grupo EPM because it ensures a management in accordance with the corporate philosophy, boosts the achievement of strategic objectives, and creates good reputation in stakeholders and society.

This report accounts for the compliance with the main corporate governance practices and the progress and changes that took place during 2019; it is also a sign of the commitment of EPM to transparency and disclosure of information to its stakeholders. **Código País 33.2, 33.3**

## Code of Corporate Governance

Through Decree 472 dated September 24, 2019, the Board of Directors of EPM approved the update of the Code of Corporate Governance and its annexes.

The code compiles and discloses the corporate governance practices that are defined and implemented in EPM and are adopted by the affiliate companies according to their internal procedures, adapting them to the rules and particularities applicable to each company of the group.

EPM has focused its efforts on the implementation of the General Framework of Corporate Governance of Grupo EPM, which is the set of elements that interact to strengthen corporate governance, promoting unity of purpose and direction through the implementation of a model aligned with the strategic planning defined for the group.

This model is based on the governance bodies, the definition of its framework for action using governance practices, control mechanisms, and accountability. [\*See annex 1: General Framework of Corporate Governance of Grupo EPM.\*](#)

→ Corporate governance planning



Corporate governance verification

*General framework of corporate governance.*

— Compliance with the code:

Pursuant to what is defined in numeral 12.1. of the Code of Corporate Governance, which establishes, among other things, that the results of compliance "... will be communicated to the Audit Committee and the Board of Directors, and will also be included in the Annual Corporate Governance Report of Grupo EPM," this report accounts for the management during 2019.

*(See annex 2: Compliance with the code).*

In 2019 the compliance with the provisions of the Code of Corporate Governance of EPM and Grupo EPM was 100%.

## Ownership structure of EPM

EPM is an official residential public utilities entity established as a state-owned municipal industrial and commercial company subject to the legal system that regulates the provision of residential public utilities in Colombia, pursuant to Act 142 of 1994.

The Municipality of Medellín is, therefore, the sole owner of EPM.



La Alpujarra Administrative Center

The relationship with the Municipality of Medellín, in its role as owner, is regulated by the law, the autonomy provided by the administrative decentralization, and the internal regulations contained in the Relations Framework Agreement signed in 2007 by the Medellín Mayor's Office and EPM. The powers of the Council of Medellín concerning EPM are defined in the bylaws of the company and in the Colombian laws.

The mayor of Medellín, as representative of the owner, exercises the exclusive ownership through the Board of Directors of EPM, as chairman of the same, by virtue of the established in the Relations Framework Agreement. In accordance with the law and the bylaws of the company, the mayor of Medellín designates the CEO and appoints the members of the Board of Directors.

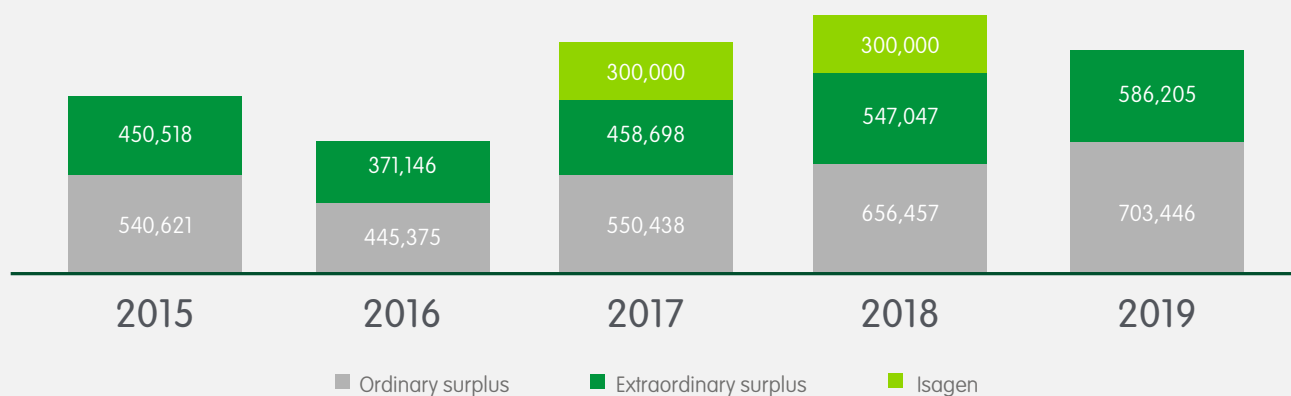
## — Transfers to the Municipality of Medellín

The Municipal Agreement 69 of 1997 of the Council of Medellín establishes that EPM shall ordinarily transfer up to 30% of its profits to the municipality every year. However, the Relations Framework Agreement allows additional transfers to be decreed, considering both the financial requirements of the municipality for specific investment programs and the financial sustainability of EPM. The additional transfers must be authorized by the Council of Medellín.

In 2019, EPM transferred to the municipality COP 1,289,652 million, of which COP 703,446 million was ordinary transfers corresponding to 30% of the profits for 2018; the company also delivered extraordinary transfers amounting to COP 586,205 million, corresponding to 25% of the profits.

The following figure shows the transfers during the last five years.

Transfers to the Municipality of Medellín



Ordinary and extraordinary transfers to the Municipality of Medellín from 2015 to 2019 (figures expressed in million COP).

**Note:** The Isagen transfers take place pursuant to the provisions of Agreement No. 032 of June 5, 2017 by the Council of Medellín, with regard to the transfer of an item of the assets of EPM, as a result of the disposal of EPM's shares in Isagén S.A. E.S.P., to the general budget of Medellín distributed in the 2017 and 2018 fiscal periods, amounting to COP 600 billion of the total received in the transaction, which amounted to COP 1.4 trillion.

The ordinary and extraordinary transfers to the Municipality of Medellín from 2015 to 2019 amounted to COP 5,909,952 million (COP 2,896,337 million as ordinary transfers and COP 3,013,614 million as extraordinary transfers).

## Relations Framework Agreement between EPM and the Municipality of Medellín

The Relations Framework Agreement signed by EPM and the Municipality of Medellín in 2007 serves to agree on the obligations of both parties through self-regulations that delimit the exercise of ownership and business management; it also reflects the common goal of the two entities to create conditions of business management in EPM that improve value creation for its stakeholders and that make the company viable as a growing and sustainable source of revenue for the city of Medellín.

This agreement determines the principles of the owner-company relationship. These principles go beyond the legal conditions that both entities must meet and become self-regulations that limit the exercise of ownership and business management. In this way, a system of counterbalances is created, which establishes responsibilities and self-limitations for each party.

This agreement clearly ratifies that corporate governance is a key factor in business competitiveness and sustainability, which contributes to the proper balance in the exercise of ownership, direction, and management.

*[\(See annex 3: Context on the Relations Framework Agreement\).](#)*

### — **Monitoring of compliance with the framework agreement**

During 2019, the Municipality of Medellín and EPM fully complied with the obligations stipulated in the framework agreement.

## — Obligations of EPM

	Key aspect	Compliance
Indicators of financial management	<p>Efficient and productive financial management based on technical criteria and reflected in minimum criteria of EBITDA, return on equity, and other financial indicators.</p> <p>The Board of Directors will annually define the indicators based on the strategic plans and budget for the time horizons agreed by the board.</p>	<p>It is included in the annual planning cycle and is an indicator of the balanced scorecard of the company.</p> <p>See the chapter on ownership structure of Grupo EPM in this report.</p>
Transfers to the municipality	<p>The transfers can only be higher than 30%, considering the municipal financial requirements for specific investment programs and financial needs of EPM so as not to jeopardize the business viability or its expansion. Additional transfers must be authorized by the council, prior justification by the mayor of their effects on the finances of EPM.</p>	<p>See the chapter on ownership structure of Grupo EPM in this report.</p> <p><a href="#">See financial report.</a></p>
Settlement of transfers	<p>The plan to make transfers must refer to the cash requirements of the municipality and to the availability of liquid resources of EPM. In this way, an adequate cash management in both entities can be conducted.</p>	<p>See the chapter on ownership structure of Grupo EPM in this report.</p> <p><a href="#">See financial report.</a></p>
Appropriate communication mechanisms	<p>For the decentralized owner-entity relationship, the channel is mayor - Board of Directors - Management of EPM; for the other relationships, private secretariat of the municipality and External Relations Management of EPM.</p>	<p>The formal communication channel in the owner-company relationship was mayor → Board of Directors → Management of EPM.</p> <p>The other relationships are exercised through the External Relations Management of EPM.</p>

	Key aspect	Compliance
Commitment to transparency with the community	<p>Contractual processes under the principles of transparency, impartiality, and objectivity, in an environment of free competition, applying the system of disqualifications and incompatibilities. Call for the submission of bids through the corporate information system.</p>	<p>1. <a href="#">Decree 362 of 2014</a> by the Board of Directors through which the general contracting regulations are issued.                  2. Policy for the supply of goods and services, approved by the Board of Directors in December 2014.                  3. Application of the public servants' transparency statement. See the chapter on compliance in this report.</p>
	<p>Public servants' profiles and competencies that will be strictly verified in the selection processes.</p>	<p>EPM has the manual of position descriptions defined. The manual is available on the intranet of the company and is the input for the selection processes which are strictly verified.</p>
	<p>Communication and dissemination mechanisms to inform citizens about contracting and selection processes.</p>	<p>EPM makes the contracting and selection processes public on its website, on the following links:</p> <p><a href="https://www.epm.com.co/site/home/nuestra-empresa/ofertas-de-empleo">https://www.epm.com.co/site/home/nuestra-empresa/ofertas-de-empleo</a></p> <p><a href="https://www.epm.com.co/site/proveedoresycontratistas/proveedores-y-contratistas/aplicaciones/te-cuento">https://www.epm.com.co/site/proveedoresycontratistas/proveedores-y-contratistas/aplicaciones/te-cuento</a></p>
Permanent external auditing	<p>Permanent external auditor hired according to guidelines of the Audit Committee.                  The auditor shall not provide other services within the company and the auditor's contract shall have a term of three years or less.                  There will be a conscious effort so that the external auditor be the same for all the companies that make up Grupo EPM.</p>	<p>See the chapter on accountability in this report.</p>

Key aspect		Compliance
Corporate social responsibility	<p>Formulation and development of corporate social responsibility (CSR) policies, especially with actions aimed at the most vulnerable population and considering the following criteria:</p> <ul style="list-style-type: none"> <li>• Activities delimited in the corporate purpose and aligned with its strategic objectives.</li> <li>• Actions that do not compromise the financial viability.</li> <li>• CSR model incorporated into the strategic framework, keeping the sustainability of the company as core objective and taking into account the Global Compact commitments.</li> </ul>	<p>The CSR policy was approved by the Board of Directors of EPM on September 1, 2009. The CSR model is included in the Strategic Planning of Grupo EPM approved by the Board of Directors.</p> <p>The CSR in EPM is based on an ethical conviction and is materialized in facts that add value to the stakeholders and the company.</p>
Provision of support services to the municipality with human resources of EPM.	Provision, under special circumstances, of support services to the municipality with public servants of EPM, formalized through agreements defining the resource, the time required, and the consideration.	The public servant Ana Cathalina Ochoa Yepes was on a service commission in the Municipality of Medellín as director of the Administrative Department for Planning, from August 28, 2017 to December 31, 2019.



## — Obligations of the Municipality of Medellín

Aspect		Compliance
Respect for the administrative autonomy of EPM.	Role of owner through the Board of Directors.	The mayor of Medellín exercised the municipality's role of owner through the Board of Directors. The attendance details are included in the chapter on the Board of Directors in this report.
	Not to influence or participate, directly or indirectly, in the process of selection and appointment of public servants of EPM, except when the mayor participates as chairman of the board.	EPM carries out its selection process based on the Colombian laws for public companies and, strictly, based on regulatory frameworks that are internally designed for that purpose (guidelines and business rules). These regulatory guidelines are mandatory and define the execution of the selection process at EPM.
	Not to influence or participate, directly or indirectly, in the contracting processes of EPM.	<a href="#">Policy for the supply of goods and services</a> , approved by the Board of Directors in December 2014.
	Criteria of experience, suitability, professionalism, honesty, and moral solvency when appointing the CEO.	In 2019, there was no appointment of CEO.
	Change of CEO based on objective reasons, considering results and assessment.	On December 29, 2019, Jorge Londoño De la Cuesta resigned from the position of CEO, which he held for four years.
Respect for the administrative autonomy of EPM.	The chairman of the Board of Directors promotes corporate governance practices.	The Board of Directors approved in September 2019 the new Code of Corporate Governance of Grupo EPM, as well as its application, disclosure, and monitoring. This document gathers all the good practices and the regulations in force applicable in this regard.
	Assurance of compliance with the corporate governance guidelines approved by the Board of Directors in the affiliated companies.	See the chapter on corporate governance plan in this report.

Aspect		Compliance
Obligations related to the Board of Directors (appointment)	Appointment and conservation of at least five independent members. For continuity of medium- and long-term strategic planning and policies and guidelines set by the Board of Directors.	See the chapter on the Board of Directors of EPM in this report. According to what is established in: 1. Bylaws of EPM. 2. Code of Governance of EPM. 3. Guidelines for the composition of the Board of Directors. 4. Relations Framework Agreement between EPM and the municipality of Medellín.
	Establishment of training and experience requirements.	
	Requirements for control members.	
	Lists of candidates drawn up by the stakeholders to ensure transparency in the appointment.	
	Periodic assessment of the Board of Directors and CEO. Base element to consider removal.	Assessment of the management and directorate was performed. See the chapter on management structure of EPM in this report.
	The chairman will strive for the implementation of the rules of procedure of the Board of Directors.	Rules of procedure of the board, adopted through Decree 376 of August 25, 2015.
Independence in managing financial resources.	Independence in the operational management of financial resources. The management of portfolio and EPM's own position responds to financial profitability criteria. The municipality will not influence decisions on the financial management of resources of EPM.	As part of the cash flow management process, EPM manages its financial resources autonomously, with criteria of transparency, security, liquidity, and profitability, maintaining an adequate control of the associated financial risks; the above is based on the investment system provided in the internal and external regulations applicable to the company, including the business rules for the administration of excess liquidity contained in Decree 2059 of 2015.
Approval of EPM budget	The municipal administration is committed to annually manage the powers delegated by the Municipal Council of Tax Policy (COMFIS as per its acronym in Spanish) at the Board of Directors for the budget approval.	Ruling 049 of March 3, 2018 through which the COMFIS delegates powers so that the Board of Directors of EPM will approve the budget for 2019.

	Aspect	Compliance
Participation of EPM in the design and execution of the Municipal Development Plan.	<p>The municipality will encourage the participation of EPM in the design of the plan, in order to ensure its consistency with the long-term projects of EPM. Transfers must be harmonized with the financial projections to meet the requirements of the owner without jeopardizing the viability, solvency, and financial strength, or the financial projections of the company.</p> <p>The commitments of EPM in the plan will be consistent with its strategic plans, and its participation will be determined based on technical, financial, economic, and market criteria, taking into account the compliance with the corporate purpose.</p>	<p>EPM participated in the discussion of the municipal agreement project for the 2016-2019 Medellín Cuenta con Vos Development Plan. The contribution of the company consisted mainly in the integration of the projects, services, and resources of EPM with the different strategic dimensions of the plan, so that there is consistency between the planning exercise of the municipal administration and that of EPM.</p> <p>Once the development plan has been approved, it becomes the route that determines the relationship between EPM and the Municipality of Medellín regarding the execution of city projects and programs.</p>

## Public accountability

Aware of the fact that the citizens of Medellín are ultimately the owners of EPM and as a practice of transparency and in compliance with the constitutional and legal provisions, EPM carries out annually its public accountability in order to inform the main achievements and challenges of the business management and its alignment with stakeholders.



Presentación of the 2018 Management Report.

The management topics of EPM addressed in this space were the following:

- Our group
- Regional presence
- Progress with the five management focal points (closeness, care for the environment, coverage, consolidation, and growth)
- Ituango hydroelectric project
- Financial results
- Liquidity front
- Awards and honors
- Challenges for 2019

The public accountability corresponding to the 2018 term was held on April 2, 2019; likewise, the public accountability corresponding to the 2019 term will be held in May 2020.

## Management structure of EPM

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### Ituango hydroelectric project contingency in the corporate governance framework **GRI 102-33 102-34**

The Ituango hydroelectric project contingency imposed huge challenges on the governance bodies to find ways that would allow the company to overcome the crisis in the best possible way, with all its social, environmental, technical, and financial implications, focusing on protecting the life of people at all times and, simultaneously, ensuring the normal operation of the company.

The chairman of the Board of Directors and the CEO presented a report on the first year of the contingency, on April 28, 2019. Likewise, the members of the Board of Directors and the senior management have been permanently available for everything that has been required. The flow of clear, timely, and transparent information between the management and the different stakeholders was one of the main challenges.

### Board of Directors of EPM

The Board of Directors is in charge of the direction of EPM pursuant to the provisions of the law and the bylaws of the company.

## Composition of the Board of Directors **Código País 33.3 – ii. a); GRI 102-18 102-22**



**Federico Gutiérrez Zuluaga**  
Chairman (non-independent)  
Profile: Mayor of Medellín  
Appointment: 01/01/2016  
Participation in other boards: 4



**Claudia Jiménez Jaramillo**  
Independent  
Profile: Public management  
Appointment: 01/21/2016\*\*  
Participation in other boards: 3



**Elena Rico Villegas**  
Control member (independent)  
Profile: Public utilities management  
Appointment: 01/26/2016  
Participation in other boards: 0



**Manuel Santiago Mejía Correa**  
Independent  
Profile: Business management  
Appointment: 04/30/2012  
Participation in other boards: 3



**Alberto Arroyave Lema**  
Control member (independent)  
Profile: Social participation and control  
Appointment: 02/22/2008  
Participation in other boards: 3



**Javier Genaro Gutiérrez Pemberthy**  
Independent  
Profile: Public utilities  
Appointment: 03/09/2016  
Participation in other boards: 1



**Gabriel Ricardo Maya Maya**  
Control member (independent)  
Profile: Legal  
Appointment: 08/17/2006\*  
Participation in other boards: 3



**Carlos Raúl Yepes Jiménez**  
Independent  
Profile: Financial and CSR  
Appointment: 07/06/2016  
Participation in other boards: 5



**Andrés Bernal Correa**  
Independent  
Profile: Business management  
and financial  
Appointment: 02/06/2012  
Participation in other boards: 3

\* Gabriel Ricardo Maya Maya was also a member of the Board of Directors from January 30, 2004 until January 16, 2006.

\*\* Claudia Jiménez Jaramillo was also a member of the Board of Directors from November 11, 2010 until February 5, 2012.

The structure of the Board of Directors of EPM meets the provisions of Act 142 of 1994, the bylaws, the Relations Framework Agreement, and the Code of Corporate Governance of EPM:

- The mayor of the city of Medellín is the chairman of the Board of Directors.
- Five people freely appointed by the mayor of Medellín act as independent members.
- Three people are selected by the mayor of Medellín among the control members registered by the development and social control committees of residential public utilities (Article 27.6 of Act 142 of 1994). **Código País 33.3 – ii. f); GRI 102-24**

Eight members (88% of the board) are independent, which exceeds the 25% required in Article 44 of Act 964 of 2005 for issuers of securities, and the 55.6% defined in the internal regulations.

The Code of Corporate Governance of EPM points out the following criteria to be considered by the mayor to appoint the members of the Board of Directors: **GRI 102-24**

- Professional academic training in matters related to the corporate purpose of EPM and to the duties proper to the Board of Directors.
- Business or work experience in the public utilities industry.
- Control members are required to submit proof of their time in the Development and Social Control Committee that selected them, description of their relationship with it, and evidence of the activities carried out in the development of their role.

The relationship of the Board of Directors with the users of residential public utilities is fulfilled through the participation of the control members in the deliberative body. In this way, the constitutional provision of citizen participation in the management and oversight of the company as an entity providing residential public utilities is materialized. Likewise, the control members of the Board of Directors represent the stakeholder groups of customers and users, community and, in some cases, suppliers and contractors.

**GRI 102-21 102-22**

The independent members of the board are considered as such since the date they start their role as members of the board, except for Claudia Jiménez Jaramillo, who became an independent member on January 26, 2017. Through Decree 472 dated September 24, 2019, issued by the Board of Directors of EPM, the company adopted a new Code of Corporate Governance establishing that the following persons are not considered independent members of the board:

- Employees or executives of the company or one of its affiliate, subsidiary, or controlling companies, including those persons who were employees of executives during the last five years immediately prior to the appointment, except in the case of reelection of an independent member. **Código País 33.3 – ii. d); GRI 102-22**
- Partners or employees of associations or companies that provide advisory or consultancy services to EPM or to the companies that belong to Grupo EPM, when the revenue for this concept represents 20% or more of its operating income.
- Employees or executives of foundations, associations, or companies that receive contributions of sponsorships from EPM.
- Persons who receive remuneration from EPM, except fees as members of the Board of Directors, the Audit Committee, or any other committee created by the board.
- Secretaries of the mayor's office, employees of the Municipality of Medellín, or employees of an entity that is or has been controlled, attached, or linked to the municipal administration for the past five years, before their appointment.
- Administrators of an entity where EPM acts as member of its Board of Directors.
- Persons who exclusively depend on an income received as fees for their participation in the Board of Directors of EPM.
- Family members of any person who is or has been an executive employee of EPM or any of its subsidiary companies in the last three years.
- Advisors or employees of a company that acts as consultant to EPM or any of its senior management members.
- Significant suppliers or customers of EPM.
- Persons who have personal service contracts in force with EPM or with an executive member of the company.
- Partners or employees of the external audit firm of EPM during the past three years.

The previous independence criteria follow the provisions of Act 964 of 2005 (Article 44), the Relations Framework Agreement, and the good practices of corporate governance.

The members of the Board of Directors are subject to the system of disqualifications and incompatibilities established by the law.

Regarding contracting, the Board of Directors is responsible for issuing the general rules and indicating the amounts within which the CEO can delegate the powers to award and enter into contracts. **GRI 102-19**



## — Profiles of the members and composition characteristics of the Board of Directors

The profiles and characteristics of the Board of Directors' members, in terms of education, experience, trajectory, perspectives, gender diversity, and participation in other boards are factors that contribute to the proper strategic decision-making of the group.

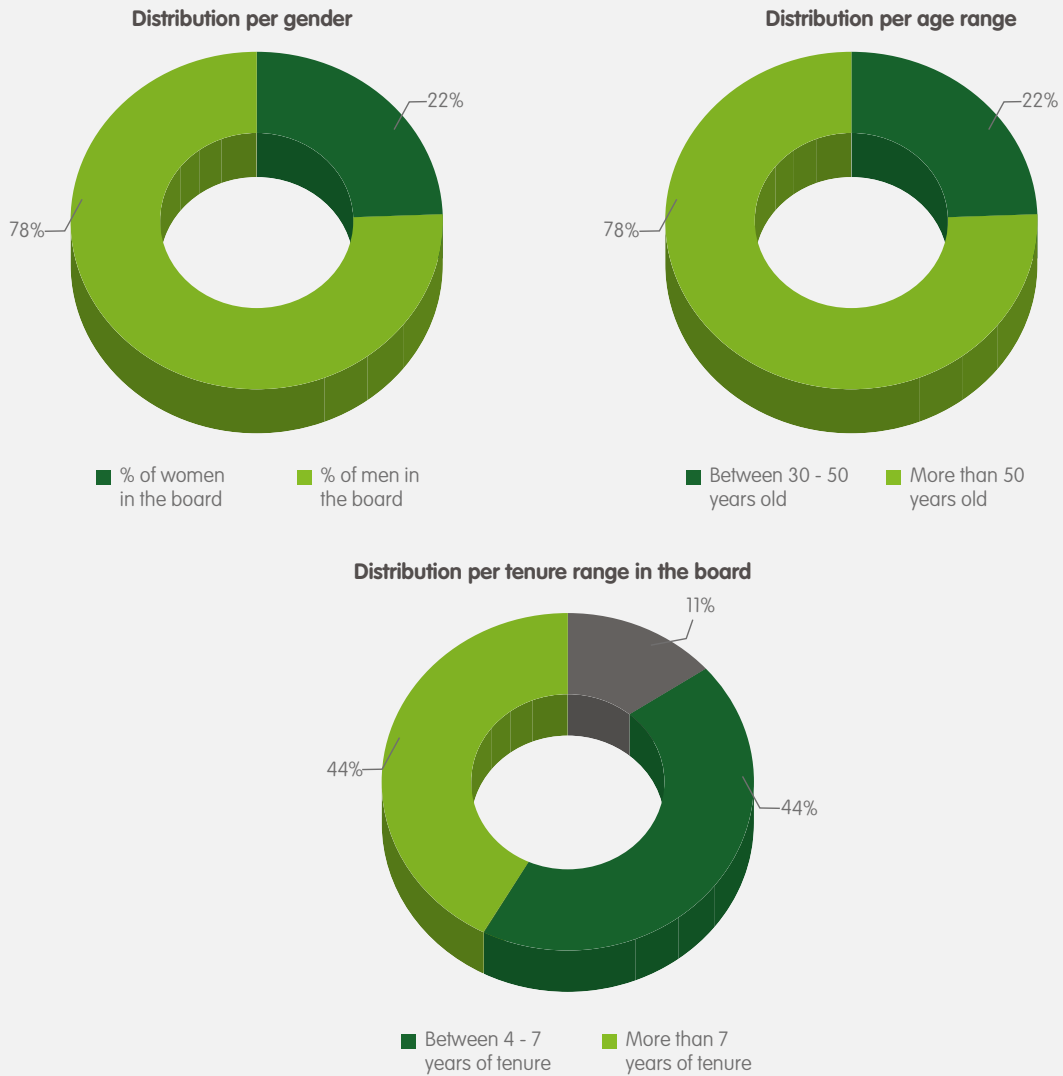
**Matrix of profiles of the members of the Board of Directors**

Education and experience / Board's member	Federico Gutiérrez Zuluaga	Andrés Bernal Correa	Claudia Jiménez Jaramillo	Javier Genaro Gutiérrez Pemberthy	Manuel Santiago Mejía Correa	Alberto Arroyave Lema	Elena Rico Villegas	Gabriel Ricardo Maya Maya	Carlos Raúl Yepes Jiménez
Business management with an emphasis on international business		x	x	x			x		x
Financial management		x	x	x	x		x		x
Management of residential public utilities or other EPM corporate sectors, including urban development	x		x	x		x	x	x	
Ethics, sustainability, and CSR	x	x	x	x	x				x
Public management or legal management	x		x	x	x	x	x	x	x

The "profile" concept is understood as the area of knowledge in which the member has training or experience.

The details of the résumé of each member of the Board of Directors are available at the end of this report. [\(See annex 4: Résumés of the members of the boards of directors\).](#)

**Código País 33.3 – ii. b); GRI 102-22**



With the participation of female members and members distributed in different age ranges, the Board of Directors of EPM is diverse.

Carlos Raúl Yepes Jiménez and Claudia Jiménez Jaramillo were members of the Board of Directors until December 30, 2019; both resigned as of December 31.

**Código País 33.3 – ii. c); GRI 102-28**

The average tenure of the members in the board, as of December 31, 2019, was seven years.

The average tenure of the members in the board is greater than the changes of municipal administration, which allows Grupo EPM to have continuity in the strategic planning, the policies and guidelines, and other strategic matters set by this governance body; this means that no negative effects are generated for the operation of the company as a consequence of changes of the ownership representative and that the level of knowledge and experience acquired by the members of the board is preserved.

### — Quorum of the Board of Directors **Código País 33.3 – ii. i)**

The deliberative quorum for the meetings of the Board of Directors is formed with the majority of its members.

The decision-making quorum corresponds to the majority of those present at the respective session. For decision-making purposes, each member of the board has a vote.

### — Management of the Board of Directors



**Board of Directors of EPM. Standing from left to right:** Javier Genaro Gutiérrez Pemberthy, Andrés Bernal Correa, Federico Gutiérrez Zuluaga (2016–2019 mayor of Medellín, chairman of the Board of Directors), Gabriel Ricardo Maya Maya, and Carlos Raúl Yepes Jiménez. **Sitting from left to right:** Alberto Arroyave Lema, Claudia Jiménez Jaramillo, Elena Rico Villegas, and Manuel Santiago Mejía Correa.

In accordance with the rules of procedure of the Board of Directors, the main duties of the chairman include: **GRI 102-26**

- Freely appoint and remove members of the Board of Directors.
- Make sure that the board efficiently sets and implements the strategic planning of the company.
- Coordinate and plan its functioning by means of an annual work plan.
- Ensure the execution of agreements, the exercise of responsibilities, and the participation of all the members of the Board of Directors.
- Lead the process of assessment of the board and its committees.
- Promote active coordination between the company and the issues of interest for the city of Medellín, in compliance with the provisions of the Relations Framework Agreement, and ensure compliance with the rules of the Board of Directors.

**Código País 33.3 – ii. k); GRI 102-23**

The secretary of the Board of Directors, who, according to the bylaws, is, in turn, the secretary-general of EPM, has the following duties:

- Call the meetings.
- Duly process the requests of the Board of Directors.
- Prepare its minutes and sign them jointly with the chairman.
- Ensure the preservation of documents of the Board of Directors and the legality of its actions.
- Define the procedure to effectively develop the meetings of the Board of Directors.

**Código País 33.3 – ii. l)**

Article 8 of the rules of the Board of Directors details the procedure that the areas of the organization should follow to submit to the board the issues within its competence; the following are among the main steps: **GRI 102-33**

- The Management Committee defines, during its meeting the week after the Board of Directors session, the topics that will be submitted to the Board of Directors in the next session, the person responsible for the presentation of each topic, and the time that the person will have for it.
- All the topics that will be submitted to the consideration of the Board of Directors will be previously analyzed by a strategic administration committee (Management Committee or Core Committee) and by a committee of the Board of Directors, in accordance with the respective rules of procedure.
- On the first business day of the week prior to the Board of Directors session, the documents, presentations, studies, and annexes that will support the presentation of the topics will be submitted to the Secretary-General's Office.

## — Important actions of the Board of Directors in 2019

### GRI 102-29 102-31

- Follow-up and control to the development of the necessary actions to overcome the Ituango project contingency.
- Participation in the 10<sup>th</sup> Meeting of Executives of Grupo EPM.
- Approval of the new strategic planning components and purpose (which is to contribute to the harmony of life for a better world) of Grupo EPM.
- Authorization of the first stage in the alienation process of EPM's shareholding in Interconexión Eléctrica S.A.
- Approval of the alienation programs of EPM's shareholding in Hidroeléctrica del Río Aures S.A. E.S.P. and Promioriente S.A. E.S.P.
- Authorization to EPM for the international bond issuance for 2019.
- Approval of modifications to the business plan, budget, and forecast budgets, in compliance with the provisions of Municipal Agreement 109 dated March 6, 2019, which regulates the preparation, composition, and execution of the budgets of the state-owned municipal industrial and commercial companies of Medellín.
- Approval of the operational safety policy, which is oriented to the implementation of a culture and good practices that guarantee safe and sustainable actions that minimize the materialization of operational risks affecting people, the environment, and infrastructure.

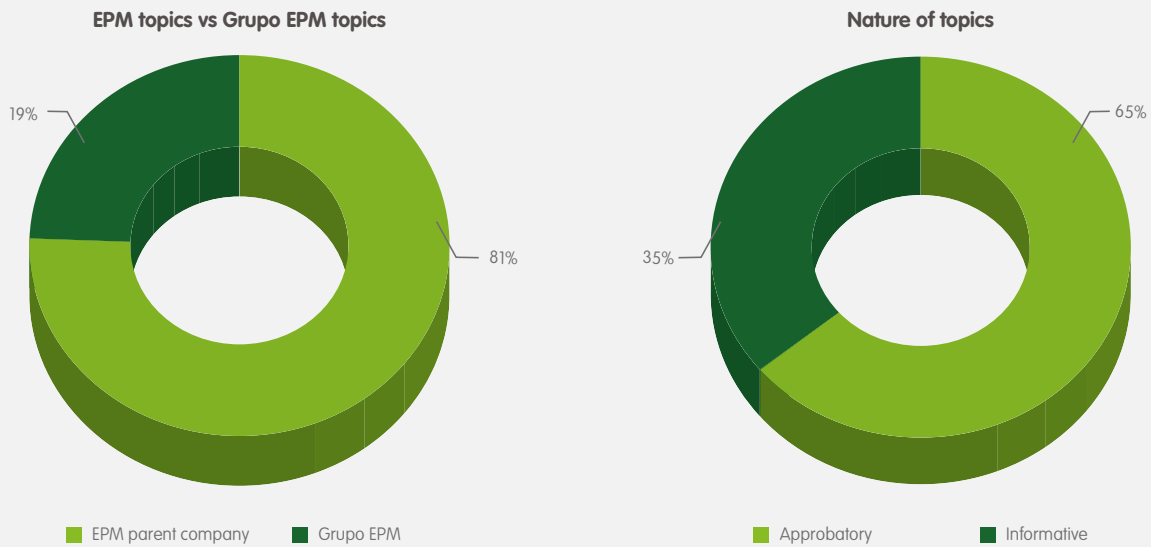
### Código País 33.3 – ii. e)

- Authorization of modification of the audit statute, incorporating the update of the International Professional Practices Framework (IPPF).
- Approval of merger by acquisition between EPRio S.A.S. E.S.P., as the acquired company, and Empresas Públicas de Medellín E.S.P. as the acquiring company.
- Approval of modification of the Code of Corporate Governance of EPM and Grupo EPM.
- Approval of modification of the rules of procedure of the Audit Committee of the Board of Directors of EPM.
- Approval of the 2020-2023 Infrastructure Investment Plan.
- Approval of the EPM budget for 2020.
- Monitoring and control to the development of the Aguas Claras Wastewater Treatment Plant. **GRI 102-34**
- Monitoring and support for the Unidos por el Agua (United for Water) program, and its structuring for its continuity after 2019.

Since August 2018, Luis Fernando Rico Pinzón has provided his consultancy services to the Board of Directors for matters related to the Ituango project contingency. During 2019, he attended 20 sessions of the Project Monitoring Committee (Ituango project chapter) and three sessions of the Board of Directors.

**Código País 33.3 – ii. n); GRI 102-27**

The following graphs show the distribution of the topics analyzed by the Board of Directors of EPM in 2019:



**Ordinary agenda and schedule of the Board of Directors** GRI 102-31

The ordinary agenda and the annual schedule of the Board of Directors of EPM are planning tools that allow the collegiate body to address the fundamental issues to which its contribution is greater, considering the provisions of the rules of procedure of the Board of Directors and in line with the recommendations of Código País.

The ordinary agenda defines the frequency and periodicity to address economic, environmental, and social issues during the year; the topics scheduled in the 2019 ordinary agenda include the following:

Aspect	Topic	Type
Formal matters	Quorum verification and agenda approval	Approbatory
	Previous minutes consideration and approval	Approbatory
	Monitoring of the Board of directors requests	Approbatory
	Miscellaneous (including topics of the members of the Board of Directors)	Informative
	Relevant information	Approbatory
Updating and follow-up	Reports by the committees of the Board of Directors.	Informative
	Report by the CEO (with emphasis on the five strategic planning focal points)	Informative
	Monitoring of the Ituango project	Informative
	Monitoring of the balanced scorecard (BSC) and strategic risks	Informative
	Monitoring of financial statements	Informative
	Monitoring of investment decisions	Informative
	Monitoring of legal contingencies at the group level	Informative
Strategy	Corporate strategic planning	Approbatory
	Vision 2025	Informative
	Innovation strategy at the group level	Informative
	Human resource and organizational management strategy at the group level	Informative
	Digital transformation strategy at the group level	Informative
	Information technology strategy at the group level	Informative
	Communication and engagement strategy at the group level	Informative
	Suppliers and contractors strategy	Informative
	2020-2023 Grupo EPM Business Plan, including financial forecast	Approbatory
	2020-2023 Infrastructure Investment Plan	Approbatory
	Budget for 2020	Approbatory

Aspect	Topic	Type
Monitoring of the Grupo EPM businesses' strategy	Power generation business at the group level	Informative
	Power transmission and distribution businesses at the group level	Informative
	Natural gas business	Informative
	Water supply and wastewater management businesses at the group level	Informative
	Solid waste management business	Informative
	Monitoring of the businesses from the customers and users' perspective, by: Control members of the Board of Directors - week 1 Management - week 2	Informative
Financial topics	EPM and Grupo EPM financial statements as of December 31, opinion by the external auditor, and management report by the Board of Directors	Approbatory
	Annual management report by the CEO	Approbatory
	Assessment of the CEO	Deliberative
Risk and audit topics	Audit plan	Approbatory
	Monitoring of the audit plan and presentation of the assessment performed by insurance providers	Informative
	Management report by the Compliance Unit, annual compliance and anti-corruption plan	Informative
Human development and ICT	Wage increase for public servants	Approbatory
	Cultural transformation	Informative
Corporate governance	Ordinary agenda and annual schedule of the Board of Director	Approbatory
	Assessment of the Board of Directors	Informative
	Corporate governance report	Approbatory
	Código País report	Informative
	Management report by the committees of the Board of Directors	Informative
Other	Recess	NDA
	Other topics	



## Management of the Board of Directors information **Código País 33.3 – ii. o)**

The management of the information related to the Board of Directors is subject to the information management policy approved by the board on December 2, 2014, with the purpose of ensuring its integrity, reliability, availability, and timeliness, and thus favor an adequate decision-making process that promotes corporate growth and sustainability.

ARCA is the online application that automatically manages the information of the Board of Directors and its committees. This application seeks to strengthen the attributes of integrity, security, timeliness, availability, traceability, and confidentiality of information.

During 2019, the application was stabilized and some of its functionalities were enhanced.



**Attendance for the Board of Directors meetings** **Código País 33.3 – ii. j)**

The Board of Directors held 24 meetings during the year: 13 ordinary and 11 extraordinary (seven in person and four remote).

The total average attendance of the members was 91%. The attendance by member is presented below.

Member of the board	% of attendance
Federico Gutiérrez Zuluaga	83%
Claudia Jiménez Jaramillo	88%
Elena Rico Villegas	96%
Alberto Arroyave Lema	96%
Andrés Bernal Correa	92%
Carlos Raúl Yepes Jiménez	88%
Gabriel Ricardo Maya Maya	100%
Javier Genaro Gutiérrez Pemberthy	100%
Manuel Santiago Mejía Correa	75%

**Management of the committees of the Board of Directors**

The four committees of the Board of Directors of EPM analyzed the topics under their responsibility in line with the recommendations of Código País and with the legal and statutory functions which concern them. The committees are spaces designed with the purpose of ensuring efficiency in decision-making, through a detailed analysis of the topics before each meeting of the board.

The external auditor of EPM is a permanent guest to the Audit Committee for his constant and periodic communication with the board. **Código País 33.3 – ii. m)**

The committees are fully formed and chaired by the independent members of the board, aligning the training and experience of its members with the definition and responsibility of each one of them. **Código País 33.3 – ii. p) GRI 102-18 102-26 102-30**

Committee	Activities	Composition
Audit	Supervision: internal audit, disclosure of financial information, external audit, internal control system, comprehensive risk management system, compliance, credit proposals, internal and external control entities, operations between related parties, intellectual property, and annual report on corporate governance.	<ul style="list-style-type: none"> <li>• Alberto Arroyave Lema</li> <li>• Andrés Bernal Correa</li> <li>• Javier Genaro Gutiérrez Pemberthy</li> </ul>
Management	Monitoring of business management, corporate reputation, intellectual capital, ethics, business image, administrative structure, business and commercial development projects, appointments and remuneration, conflicts of interest, assessment of the directorate and senior management, and corporate governance.	<ul style="list-style-type: none"> <li>• Claudia Jiménez Jaramillo</li> <li>• Gabriel Ricardo Maya Maya</li> <li>• Carlos Raúl Yepes Jiménez</li> </ul>
Strategy and investment	Strategy; unity of purpose and direction; business policies; investments and new businesses; research, development, and innovation projects; CSR; sustainability; environmental management; and engagement plans with stakeholders.	<ul style="list-style-type: none"> <li>• Elena Rico Villegas</li> <li>• Claudia Jiménez Jaramillo</li> <li>• Javier Genaro Gutiérrez Pemberthy</li> </ul>
Project monitoring	Monitoring of the design, execution, and evaluation of the projects prioritized by the board, as well as their corresponding risk maps, BSC, and other control instruments.	<ul style="list-style-type: none"> <li>• Manuel Santiago Mejía Correa</li> <li>• Elena Rico Villegas</li> <li>• Gabriel Ricardo Maya Maya</li> </ul>

In August 2018, the Board of Directors created, as part of the Project Monitoring Committee, the chapter to monitor the Ituango hydroelectric project, whose objective is to follow-up and analyze in detail the activities of recovery and continuity of the contingency. It is chaired by the member of the board Javier Genaro Gutiérrez Pemberthy and has the external advice of Luis Fernando Rico Pinzón. During 2019, the committee held 22 meetings. **GRI 102-34**

Besides the members of the Project Monitoring Committee, those regularly attending this committee include the representatives of the designers and the consultancy of the Ituango project (Integral), the constructors (CCC Consortium), the auditors (Ingetec), and Ana Catalina Ochoa Yepes, secretary of the Planning Office of the Municipality of Medellín; the EPM Expert Board for the Ituango project also attends when required. **GRI 102-27**

**Attendance for the committees of the Board of Directors **Código País 33.3 – ii. j)****

The average attendance for the committees of the Board of Directors is 90%, as follows:

Member	Audit	Strategy and Investment	Project Monitoring	Management
Claudia Jiménez J.		88%		77%
Elena Rico V.		94%	92%	
Alberto Arroyave L.	100%			
Andrés Bernal C.	75%			
Carlos Raúl Yepes J.				92%
Gabriel Ricardo Maya M.			92%	92%
Javier Genaro Gutiérrez	100%	100%	100%	
Manuel Santiago Mejía			68%	
<b>Total number of sessions</b>	14	17	25	13
<b>Total attendance (%)</b>	<b>92%</b>	<b>94%</b>	<b>88%</b>	<b>87%</b>

**Remuneration of the Board of Directors **Código País 33.3 – ii. h); GRI 102-36****

Through [Decree 1165 of August 12, 2009](#), the mayor of Medellín, as representative of the community and of the owner of EPM, establishes that the remuneration paid to the members of the Board of Directors of EPM is three Colombian monthly minimum wages for the attendance for each session of the board and the committees.

**Código País 33.3 – ii. g); GRI 102-35 102-37**

At EPM, the members of the board do not receive any kind of variable remuneration and the mayor of Medellín, as member of the board, receives no remuneration.

The following table shows the amount paid for fees to members of the board in 2019.

Concept	Amount paid in 2019
Board of Directors	COP439,729,596
Committees of the Board of Directors	COP380,105,244
<b>Total paid</b>	<b>COP819,834,840</b>

### Assessment of the Board of Directors **Código País 33.3 – ii. q); GRI 102-28**

The assessment is a mechanism to monitor the management of the Board of Directors and its committees. At EPM it is conducted annually as a good practice of corporate governance.

In 2019 it had to be conducted by an external entity, in accordance with the methodology defined by EPM. Thus, it was led by Governance Consultants S.A.

The results of the assessment highlight the EPM governability model, the profiles of the members of the board in the business, social, and political spheres, and the active and determined commitment of the collegiate body, among other relevant aspects regarding the composition and management of the Board of Directors of EPM. The results also suggest recommendations around three determining aspects of the board:

- Stability and multidisciplinary
- Commitment to effectiveness
- Corporate governance of a Latin American multinational, public, and multiservice business group.

Likewise, the results of the assessment show that the corporate governance in EPM is a solid base, which favors technical and business decisions, acts within the framework of a system of checks and balances between the owner, the Board of Directors, and senior management, and integrates the practices of sustainability and profitability in the long term.

The results of the self-assessment conducted by the members of the Board of Directors are shown per areas below:

**Perception on the fulfillment of duties:**

- Perspective of the members of the Board of Directors on the deliberative body performance (8.7).
- Self-assessment of the members of the Board of Directors on their performance (9.4).
- Perspective of the members of the Board of Directors on the fulfillment of its duties as collegiate body (8.9).

**Effectiveness and functioning of the Board of Directors**

- Perspective of the members of the Board of Directors on the operational aspects of the meetings (8.4).
- Role of the chairman of the Board of Directors (9.1).
- Role of the secretary of the Board of Directors (9.2).

**Committees of the Board of Directors**

- Contribution of the committees to the performance of the Board of Directors and the Management (8.9).

**Internal perspective on the effectiveness of the committees of the Board of Directors**

- Management Committee (9.6).
- Audit Committee (9.3).
- Strategy and Investment Committee (9.1).
- Project Monitoring Committee (9.0).

**Interaction between the Board of Directors and the Senior Management**

- Perspective of the members of the Board of Directors on the performance of the Senior Management (8.2).
- Relationship between the Board of Directors and the Senior Management (8.6).

## Senior Management GRI 102-20

The CEO is in charge of the management of EPM, its representation, and the management of its businesses; he has the powers to enter into or execute, without limitations other than those established in the bylaws, all the acts included in its purpose or that relate directly to its existence or functioning.

The CEO of EPM has a team of vice presidents who support him in his management. The high levels of experience, technical knowledge, and tenure in the exercise of the duties allowed the team to provide an efficient management to face the challenges of EPM during 2019.

The Senior Management in EPM is composed of nine executives who report directly to the CEO of EPM; they perform functions that impact the entire business group and are responsible for directing, planning, and verifying the fulfillment of the objectives, plans, and goals of EPM and the companies of the organization.



**Senior Management team. Sitting from left to right:** Jorge Andrés Tabares Ángel, EVP of Corporate Finance, Risk Management, and Investment; Maritza Alzate Buitrago, VP of Legal Affairs and general secretary; Jorge Londoño De la Cuesta, CEO of Grupo EPM; Luz Mercedes Mejía López, VP of Corporate Communications and Relationships; and Ricardo José Arango Restrepo, VP of Human Resources and Technology. **Standing from left to right:** Carlos Arturo Díaz Romero, EVP of Business Management; Gabriel Jaime Betancourt Mesa, EVP of Strategy and Growth; José Nicolás Ríos Correa, VP of Supply and Shared Services; Óscar Alberto Cano Castrillón, VP of Corporate Auditing; and John Alberto Maya Salazar, EVP of Projects and Engineering.

The team of vice presidents that supported the management of Jorge Londoño De la Cuesta during 2019 presented the following changes: on May 28, 2019 the Board of Directors of EPM approved the appointments of Luz Mercedes Mejía López as vice president of Corporate Communications and Relationships, José Nicolás Ríos Correa as vice president of Supply and Shared Services, John Alberto Maya Salazar as executive vice president of Projects and Engineering, and Carlos Arturo Díaz Romero as executive vice president of Business Management. These appointments were rigorously analyzed considering the future of the organization, which today faces significant challenges, and responded to the need to formalize the situation of some vice presidencies, whose executives were appointed as interim vice presidents.

In December 2019, Carlos Arturo Díaz Romero, executive vice president of Business Management, and John Alberto Maya Salazar, executive vice president of Projects and Engineering, resigned.

During 2019, the Senior Management strengthened the process of cultural transformation, a commitment to organizational innovation because it addresses the challenge from the deep reflection of each individual. The aim is to generate changes in behavior that foster useful and constructive conversations within the organization, with higher levels of openness, authenticity, reception, and collaboration. As part of the methodology, the company implemented “conversation circles” provided by an external consultant, with the participation of the CEO and his team. Likewise, among the many resulting prototypes, the Senior Management built and defined the **organizational purpose: contribute to the harmony of life for a better world.**

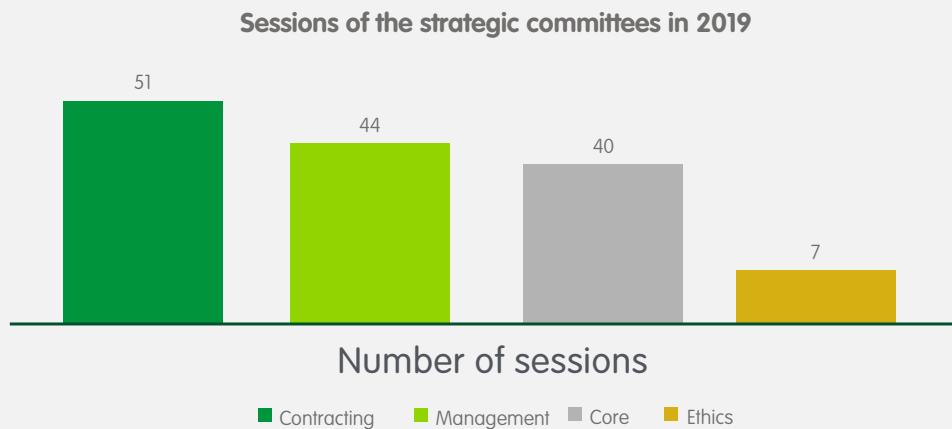




— Performance of Senior Management **GRI 102-26**

The strategic committees are the mechanisms that favor the interaction of Senior Management, with the purpose of addressing the relevant and strategic decisions or actions in an integrated and coherent way.

The following is the structure of the strategic committees and the number of sessions held during 2019.



Management

Objective

Integrate and control the management of the company, through the analysis, definition, approval, and follow-up of the appropriate matters, aiming to accomplish the strategy of EPM.

Composition

**Members:**

- CEO
- Head of the Corporate Governance Unit
- First level vice presidents

**Permanent guests:**

- VPs of businesses (one per week)

Core

Objective

Establish the unity of purpose and direction to be followed by all the companies of the group, through the analysis, definition, and monitoring of appropriate matters, aiming to achieve the objectives of the business group.

Conformación

**Composition:**

- CEO
- VP of Corporate Strategy
- First level vice presidents

**Permanent guests:**

- Head of the Corporate Governance Unit

### Contracting

#### Mission

Analyze and recommend on the contracting matters related to the company's process of acquisition of goods and services.

#### Composition

##### Members:

- CEO
- Head of Procurement Unit
- VP of Legal Affairs and General Secretary
- EVP of Corporate Finance, Risk Management, and Investments
- VP of Corporate Auditing
- VP of Supply and Shared Services

##### Permanent guests:

- EVP of Business Management
- EVP of Projects and Engineering

### Ethics

#### Mission

Promote and lead the implementation of the ethical management guided towards the strengthening of the exercise of public duty in terms of effectiveness, transparency, integrity, and service to citizens by all the public servants.

#### Composition

##### Members:

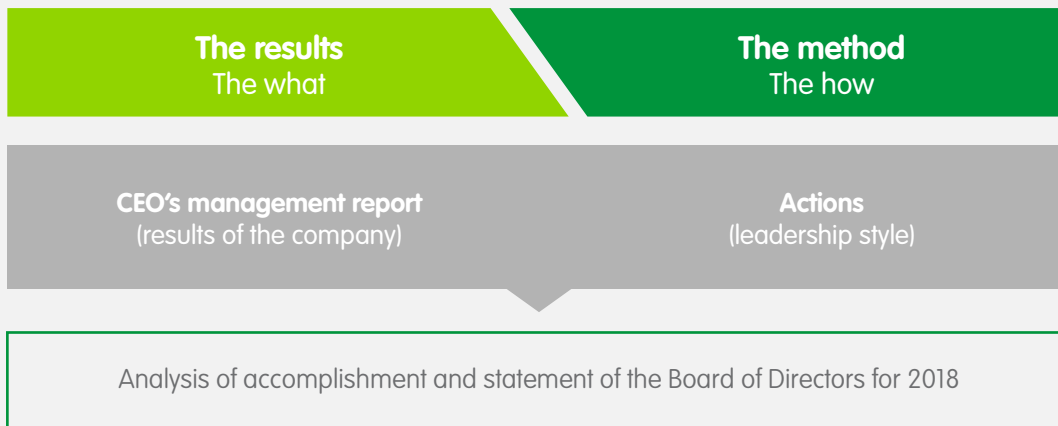
- VP of Human Resources and Technology
- EVP of Corporate Finance, Risk Management, and Investments
- VP of Corporate Communications and Relationships
- VP of Corporate Auditing
- External member (remunerated)
- Public servant appointed by the CEO

##### Permanent guests:

- Development and Organizational Culture mgr.
- Employment Relationships Management mgr.
- Comprehensive Risk Management mgr.
- Corporate Communications mgr.
- Support Auditing mgr.

## — Assessment of the CEO **Código País 33.3 – ii. q); GRI 102-28**

The Board of Directors of EPM performs a systemic process that shows the achievements and challenges of the CEO's performance in terms of results and methods for obtaining them (the what and the how).



The result of this assessment is reflected in the statement made by the Board of Directors in the public accountability.

[See annex 5: Statement by the Board of Directors of EPM on the performance of the CEO.](#)

## — Remuneration of Senior Management **Código País 33.3 – ii. h); GRI 102-36**

As part of the human resources management policy, approved by the Board of Directors on December 7, 2010, the Vice Presidency of Human Resources and Technology issued on November 26, 2018, the Guideline 36 that addresses three important issues related to the variable pay, the fixed pay, and the benefits for the employees of EPM. **GRI 102-35**

The total remuneration of the Senior Management in 2019 was as follows:

Remuneration of the Management of EPM		
Category	Position	Total payments made in 2019
CEO's Office	CEO	COP5,004,639,949
Executive vice presidencies	EVP of Strategy and Growth	
	EVP of Corporate Finance, Risk Management, and Investments	
	EVP of Business Management	
	EVP of Projects and Engineering	
First level vice presidencies	VP of Corporate Auditing	
	VP of Legal Affairs and General Secretary	
	VP of Corporate Communications and Relationships	
	VP of Supply and Shared Services	
	VP of Human Resources and Technology	

**Note:** Payments include vacation, bonuses, and benefits (including the vehicle benefit).

- Ratio of biannual total compensation for the highest-paid individual of the organization to the median of biannual total compensation for all employees, excluding the highest-paid individual: 9.17 **GRI 102-38**
- Ratio of percentage increase of the biannual total compensation for the highest-paid individual of the organization to the median of percentage increase of the biannual total compensation for all employees, excluding the highest-paid individual: 1 **GRI 102-39**

## Related party transactions

Since the implementation of the International Financial Reporting Standards (IFRS), in 2013, EPM adopted the definitions established by the IAS 24 regarding related parties and established specific financial policies and guidelines in agreement with the applicable financial regulations.

The Governance Agreement and the relationships arising therefrom, as well as the annual statement of transfer prices, are articulated with the information published in the financial statements under IFRS as elements that delimit the operations with the related parties of Grupo EPM.

The transactions of EPM with its related parties are executed under conditions equivalent to those that exist in transactions between independent parties, in terms of their purpose and conditions. The description of the operations with the most relevant related parties can be found in the financial report that is an integral part of the (annual) sustainability report of Grupo EPM. Additionally, the transactions between companies of the group are included each year in this report.

In 2019, the title "Transactions between related parties of Grupo EPM" was included in the update of the Code of Governance of EPM and Grupo EPM, which provides context on the practices implemented. In addition, the organization mapped out the draft about the related party regulations and obtained the financial assessment as part of the formulation of the project of Management and Disclosure of Transactions between Related Parties of Grupo EPM in accordance with the methodology established by the project bank, with the purpose of analyzing the implementation of internal measures to strengthen the management of operations with related parties.

## Conflicts of interest **Código País 33.3 - iii. c); GRI 102-25**

Annex 8 of the Code of Corporate Governance, "Manual of conflicts of interest and treatment of decisions of interest for the group," issued through Decree 390 of November 24, 2015, defines the procedure to manage conflicts of interest among the members of the Board of Directors. Additionally, it is indicated that when in doubt about the existence of a conflict of interest, the member of the board or committee is not exempted from avoiding his participation in the decision. When the conflict is of a permanent nature and prevents exercising duties independently, the member of the board must resign. **Código País 33.3 - iii. d); GRI 102-25**

This manual regulates the differences that may arise between the parent company of Grupo EPM and the subordinate companies, regarding the interest of the business group. The procedure refers to the Governance Agreement signed between the companies of Grupo EPM, the shareholders' agreements entered into, and the governance model defined for each of the subordinate companies. Moreover, it points out, in each case, the corresponding actions of the board of directors of the subordinate company, the Management Committee of the parent company, and the Board of Directors of EPM with its respective committees.

**Código País 33.3 – iii. a)**

During the first six months of 2019, the members of the Board of Directors had four conflicts of interest.

The following table shows the conflicts of interest presented.

No.	Date	No. of the minutes	Description of the conflict	Date reported to the Compliance Unit
1	March 1, 2019	1663	<p>Claudia Jiménez Jaramillo abstained from participating in the board session on March 1, 2019 because she considered that she could have a conflict of interest with the firm Integral S.A.</p> <p>In the session held on March 19, the board analyzed the issue and accepted the existence of the conflict, because Integral is a client of the firm Jiménez y Asociados, to which Claudia Jiménez belongs.</p>	April 22, 2019

No.	Date	No. of the minutes	Description of the conflict	Date reported to the Compliance Unit
2	March 19, 2019	1663	<p>Carlos Raúl Yepes Jiménez stated in the session held on March 19 that he could have a conflict of interest with the firm Postobón, an important water customer of EPM, since he is part of the Board of Directors of Postobón and it could be affected with the modification of the wastewater discharge fees.</p> <p>The board accepted the existence of the conflict and Carlos Raúl Yepes abstained from participating in the discussion on the modification of these fees.</p>	April 22, 2019
3	May 8, 2019	1665	<p>Andrés Bernal Correa stated in the session held on May 8, 2019 that he could have a conflict of interest with the firm Erco Energía S.A.S., since Grupo Orbis, the company in which he currently works, is preparing a contract with Erco Energía.</p> <p>The board accepted the existence of the conflict; therefore, he abstained from participating in the discussion and approval of the alliance with this firm.</p>	May 13, 2019

No.	Date	No. of the minutes	Description of the conflict	Date reported to the Compliance Unit
4	Dec 17, 2019	1679	Carlos Raúl Yepes Jiménez informs the Board of Directors of EPM that, since he is a member of the Board of Directors of Postobón, he considers that, in accordance with the provisions of the manual of conflicts of interest, he should withdraw from the discussion and decision on the Aguas de Malambo subject, because Postobón is a customer of Aguas de Malambo and aspects that have to do with Postobón's interests could be discussed in the presentation of the topic. The board accepted the existence of the conflict and Carlos Raúl Yepes abstained from participating in the discussion and decision on the Aguas de Malambo subject.	Dec 23, 2019

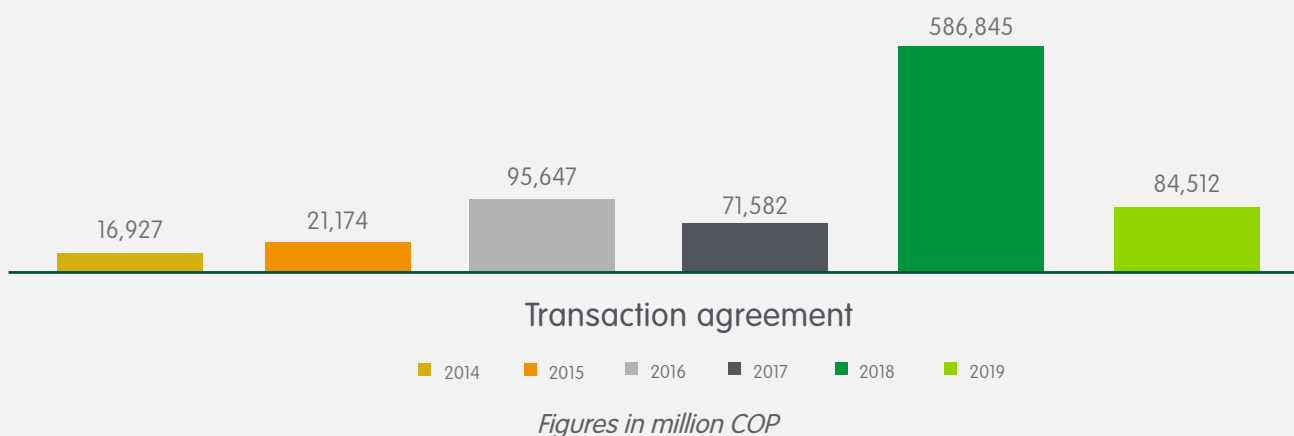
## Governance Agreement Código País 33.3 – iii. b)

The Governance Agreement is a document that formally defines and delimits the relationships between the companies that make up Grupo EPM; it has favored the signing of different agreements to achieve the corporate objectives and group synergies as part of the unity of purpose and direction.

### — General report of the agreements signed as part of the Governance Agreement

**Transaction relationships.** They are those established between the parties in order to supply goods and provide services (that do not correspond to the provision of residential public utilities), in order to amplify the competitive advantages, such as shared infrastructure and support, technical, and commercial services, among others.

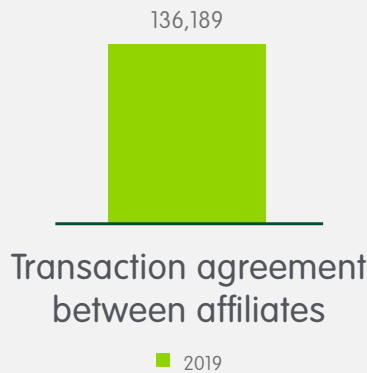




1. In 2014, the transaction agreements decreased by COP 20 million, since the database was refined and two contracts signed with the companies GESA and Eegsa that were not under the Governance Agreement consecutive number were withdrawn.
2. In 2015, the transaction agreements decreased by COP 19 million because a service provision agreement signed with Aguas de Malambo S.A. E.S.P. amounting to COP 15 million for the leasing of pressure-suction equipment was canceled. In addition, the database was refined and two contracts signed with the companies Delsur and PDG that were not recorded under the Governance Agreement consecutive number were withdrawn.
3. In 2017, an increase of COP 531 million is reflected due to modifications in 10 transaction agreements, among which the following stand out:
  - Agreement signed with Fundación EPM in order to “join forces between the Education to Customers and the Community Unit and Fundación EPM to reach the territories prioritized by EPM, approaching the stakeholders of customers and users and the community to communicate them content related to public utilities.” This agreement presented a higher value amounting to COP 1,082 million.
  - Agreement signed with Fundación EPM in order to “join forces to carry out actions and implement the environmental management plan and the monitoring and tracking plan in the operation stage of the power transmission and distribution projects.” It presented a higher value, due to adjustments in the modifications, amounting to COP 212 million, for a total value of modifications of COP 1,056 million.
  - Agreement signed with EPRio in order to “provide the services of engineering, formulation, structuring of technical specifications, and evaluation and management of environmental projects and activities to improve the provision of the water supply service.” It presented a smaller value corresponding to COP 969 million.

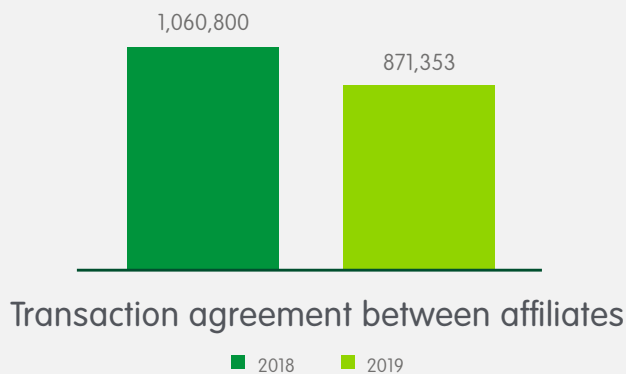
4. In 2018, an increase of COP 3,130 million is reflected due to modifications in 15 transaction agreements, among which the following stand out:
  - Agreement signed with Tecnología Intercontinental-Ticsa Colombia in order to “build works and supply, install, and commission the systems for the expansion of the San Fernando wastewater treatment plant.” This agreement presented a higher value amounting to COP 2,137 million.
  - Agreement signed with Empresas Públicas de Rionegro S.A.S. E.S.P. in order to “provide the services of engineering, diagnosis, consulting, design, and supervision and other services associated with the technical and operational activities required for the operation and maintenance of the existing water supply and sewerage system.” This agreement presented a higher value amounting to COP 745 million.
  - Agreement signed with Electrificadora de Santander S.A. E.S.P. in order to “provide the service of selection and provision of human resources, considering the profiles of positions defined to meet the needs of the business group.” This agreement presented a higher value amounting to COP 196 million.
  - Agreement signed with Centrales Eléctricas del Norte de Santander S.A. E.S.P. in order to “provide the service of selection and provision of human resources, considering the profiles of positions defined to meet the needs of the business group.” It presented a smaller value corresponding to COP 83 million.
  
5. In 2019, a total of 117 transaction agreements were signed, amounting to COP 84,512, among which the following stand out:
  - Agreement signed with Ticsa in order to “build the outlet structures associated with the modernization project of the La Ayurá drinking water production plant,” for an amount of COP 53,753 million.
  - Agreement signed with Fundación EPM in order to “design and implement strategies that are part of the Specific Action Plan for Recovery: Line of Recovery Plan of EPM, which comprises, among other aspects, the activities of education, relationship, social management, and gathering of information on the status of the residential public utilities in the municipalities of Ituango, Valdivia, Tarazá, Cáceres, Caucasia, Nechí, and others of interest for this plan,” for an amount of COP 5,093 million; it was renewed for COP 3,950 million.

This is the summary of the transaction agreements signed between the affiliated companies, in which EPM is not involved:



Figures in million COP

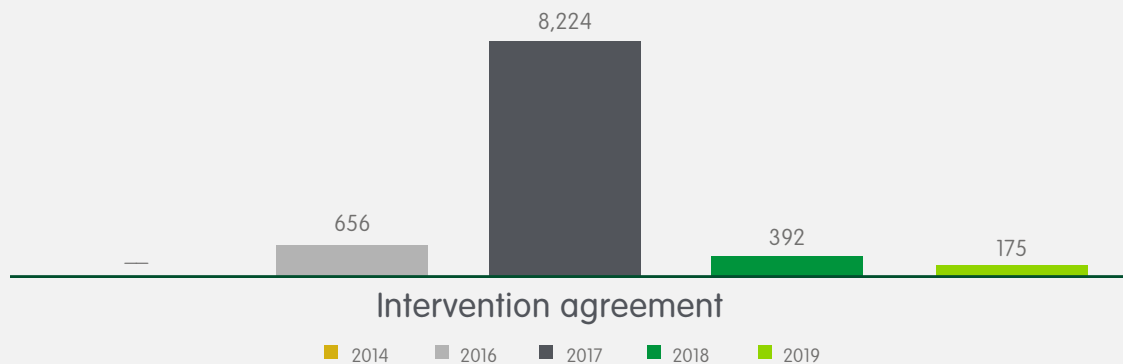
During 2019, six transaction agreements were signed, amounting to COP 136,189 million. This report highlights the agreement of COP 132,214 million signed between EPRio and the Colombian branch of Ticsa, whose purpose is the “detailed design and construction of civil works; design, manufacture, factory tests, supply, assembly, and field tests of electromechanical equipment; and commissioning and stabilization of the expansion and modernization of the Tranvía wastewater treatment plant.”



Figures in dollars

During 2018, two transaction agreements were signed, amounting to USD 1,060,800. This report highlights the agreement of USD 1,000,800 signed between Delsur and ENSA Servicios in order to provide SAP support. In addition, in 2019, six transaction agreements amounting to USD 871,353 were signed; this report highlights two of them: one signed between ENSA and ENSA Services in order to provide functional/technical support and maintenance for the SAP system, for a value of USD 487,296, and another signed between HET and ENSA in order to provide administrative, information, legal, and space rental services, for an amount of USD 250,149.

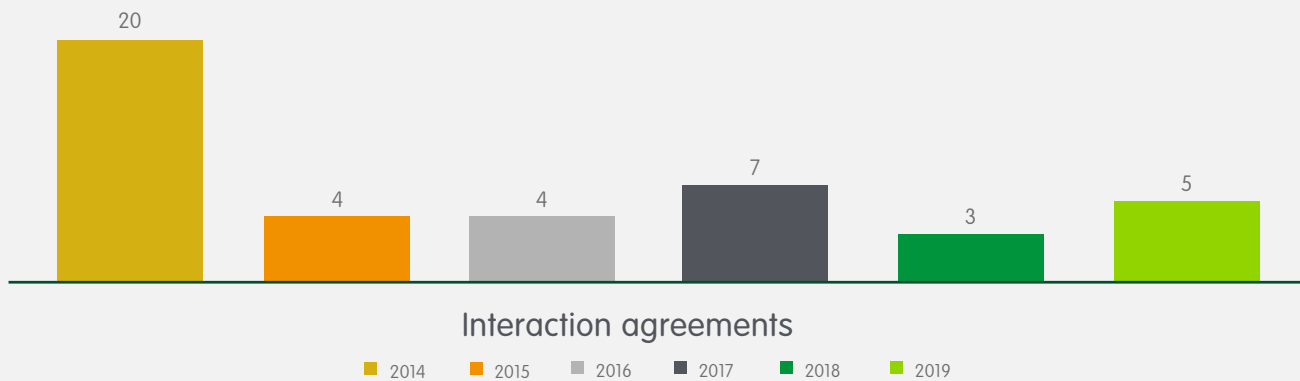
**Intervention relationships.** These relationships are established between EPM and other parties to execute a guideline of the Corporate Core that implies a certain transaction for the supply of goods and provision of services between a Grupo EPM company and a third party, derived from control and good governance actions such as contracts for tax auditing and information systems required by the Corporate Core for all the companies of the group.



*Figures in million COP*

There are no variations in relation to the historical data of the intervention agreements. In 2019, the EPM Service Center renewed an agreement with the affiliates Aguas Nacionales, Aguas Regionales, Aguas de Malambo, and Aguas de Oriente for the provision of financial services amounting to COP 170 million. In addition, the service center executed a modification to such renewal with Aguas Nacionales, for an amount of COP 5 million.

**Interaction relationships.** They arise in order to enable the unity of purpose and direction of Grupo EPM and favor, among other aspects, the optimization of processes and the adoption of integrated procedures defined by the Corporate Core for the benefit of the group.



During 2019, five interaction agreements were signed by EPM to:

- Standardize the digital security process, the information security management system and cybersecurity, the strategy and implementation controls of the Centinela (Sentinel) project in the national energy affiliates and Eegsa (Empresa Eléctrica de Guatemala S.A.).
- Establish the necessary aspects to define and implement the Center for Excellence of the Commercial Administration System (CESAC, as per its acronym in Spanish). Define the commercial-related procedures at the group level of the commercial administration system (SAC, as per its acronym in Spanish) application, concerning the power distribution business. Assign to the CESAC the task of keeping the SAC functional and unified for the Colombian power affiliated companies.
- Agree on the adoption of the EPM Somos program by the Colombian power affiliated companies.
- Adopt, through Fundación EPM, the methodological guide for evaluating the performance of contractors.

## Ownership structure of Grupo EPM

Grupo EPM, whose parent company is EPM, provides public utilities in seven business lines: Power generation, power transmission, power distribution, natural gas distribution, water supply, sanitation, and solid waste management. These services are provided in six countries of Latin America: Colombia, Chile, Panama, El Salvador, Guatemala, and Mexico.

At the end of 2019, the revenues of Grupo EPM amounted to COP 18,360 billion.

## Ownership capital and structure of Grupo EPM

**Código País 33.3 – i. a); GRI 102-10**

In 2019, the following changes took place in the ownership structure of the group:

- Capitalization of Aguas de Malambo S.A. E.S.P. EPM has now a 98.03% shareholding.
- The Chilean companies Parque Eólico Los Cururos and EPM Transmisión Chile withdraw from the group because of the sale of their shares.
- EPRio - Empresas Públicas de Rionegro S.A.S. E.S.P. withdraws because it merges with EPM on December 31, 2019.
- EPM modifies its shareholding in HET - Hidroecológica del Teribe S.A. from 99.18% to 99.68%.
- EPM modifies its shareholding in Aguas del Oriente Antioqueño S.A. E.S.P. from 56% to 56.01%.
- EPM modifies its shareholding in EPM Capital México from 39.36% to 51.28%.
- EPM Latam and EPM Capital México bought 100% of TICSA's shares, 11.42% and 88.58% respectively.

The ownership structure of Grupo EPM is shown in annex 6 of this report.

*(See annex 6: Shareholding structure of Grupo EPM).*

## Shareholders' agreements in Grupo EPM **Código País 33.3 i. f)**

The following table shows the shareholders' agreements signed by EPM and in force as of December 31, 2019.

Company	Parties involved	Signature date	Summary
UNE EPM Telecomunicaciones	<ul style="list-style-type: none"> <li>• EPM</li> <li>• Millicom Spain S.L.</li> <li>• Institute of Sports and Recreation of Medellín (INDER, as per its acronym in Spanish).</li> </ul>	October 1, 2013	Relationship and commitments between shareholders. It establishes the special majorities of the shareholders' meeting and the board of directors, gives EPM power to decide on issues of greater impact, and defines the right to leave.
Aguas Regionales EPM*	<ul style="list-style-type: none"> <li>• EPM</li> <li>• Antioquia Governor's Office</li> </ul>	December 1, 2006	Conditions and framework for action for their participation as shareholders, taking into account the background and special considerations for the management and development of the regional water supply system which constitutes the corporate purpose of the company.
	<ul style="list-style-type: none"> <li>• Municipality of Apartadó</li> <li>• Municipality of Chigorodó</li> <li>• Municipality of Mutatá</li> <li>• Municipality of Turbo</li> <li>• Municipality of Carepa</li> <li>• EPM</li> <li>• Antioquia Governor's Office</li> <li>• Municipality of Santa Fê de Antioquia</li> <li>• Municipality of Sopetrán</li> <li>• Municipality of San Jerónimo</li> </ul>	December 19, 2007	
	<ul style="list-style-type: none"> <li>• EPM</li> <li>• Antioquia Governor's Office</li> </ul>	December 2006 and December 27, 2007	
	<ul style="list-style-type: none"> <li>• EPM</li> <li>• Antioquia Governor's Office</li> </ul>	December 2006 and December 27, 2007	It ensures that the decisions taken in the organization represent the plural vote of EPM and the Antioquia Governor's Office.

Company	Parties involved	Signature date	Summary
Aguas de Malambo	<ul style="list-style-type: none"> <li>• EPM</li> <li>• Municipality of Malambo</li> <li>• Community action boards of Malambo</li> <li>• Municipal Institute of Sports</li> <li>• Hospital of Malambo</li> <li>• Institute of Culture of Malambo</li> </ul>	June 29, 2011	Conditions and framework for action for their participation as shareholders, taking into account the background and special considerations for the management and development of the regional water supply system which constitutes the corporate purpose of each of these companies.
EV Alianza Energética **	<ul style="list-style-type: none"> <li>• EPM Latam S.A.</li> <li>• Proactiva Colombia S.A.</li> </ul>	February 16, 2016	It establishes the number of members of each shareholder to vote in the highest shareholders' body and in the highest administration and management body of the company.
Hidroecológica del Teribe S.A. (HET S.A.)	<ul style="list-style-type: none"> <li>• EPM</li> <li>• Administradora Serviagro S.A.</li> <li>• Consultores Asociados de Ingeniería S.A.</li> <li>• MacEnergy (Cayman) Ltd.</li> </ul>	November 6, 2003	It determines the basic conditions that will govern their relationships within the company and establishes the agreements required to exercise and fulfill their rights and obligations to achieve the complete execution of the project.

\* Following the merger of Aguas de Urabá S.A. E.S.P. and Regional Occidente S.A. E.S.P. in 2015, the shareholders' agreements of each merged company are maintained.

\*\* Company under liquidation.



## — Shareholders' meetings and engagement with partners

During 2019, all the companies of Grupo EPM held ordinary shareholders' meetings, in which they presented the management reports by the Board of Directors and the CEO and the year-end financial results and in which they appointed the board of directors for the March 2019 - March 2020 period. These meetings are the meeting space par excellence with the different partners of Grupo EPM.

In order to strengthen the partners' trust, a site was created on the website of each affiliated company for this stakeholder group, and the website content of each company was updated, standardized, and adjusted. With these measures, the transparency of and access to information, as well as the communication channels, were strengthened.

### **Código País 33.3 – v. b) c)**

Every year the engagement plan with partners is defined and executed, which had a 100% accomplishment in 2019.

## Management structure of Grupo EPM

The management of Grupo EPM is exercised through its governance bodies: General shareholders' meeting, board of directors, and general manager of each affiliated company. These bodies must ensure the integration of each company and the vision of the group.

### Boards of directors of Grupo EPM

The composition of the boards of directors of the affiliated companies is in line with the engagement model established in the business group. Strategic factors, the specific situation of each company, the level of involvement of the affiliated company with EPM, and the knowledge of the executives of the company about the plans defined by the group for each line of business. **GRI 102-18**

The objective is to have administrative bodies that align the management of the company with the unity of purpose and direction, that favor the implementation of the strategy and the business plans defined by the parent company, and that implement a coordinated decision-making process with effective instruments to develop the principles of corporate governance that govern Grupo EPM, taking into account the purpose of generating value. Likewise, the mission of the boards of directors is to monitor the fulfillment of these ethical and financial standards and plans.

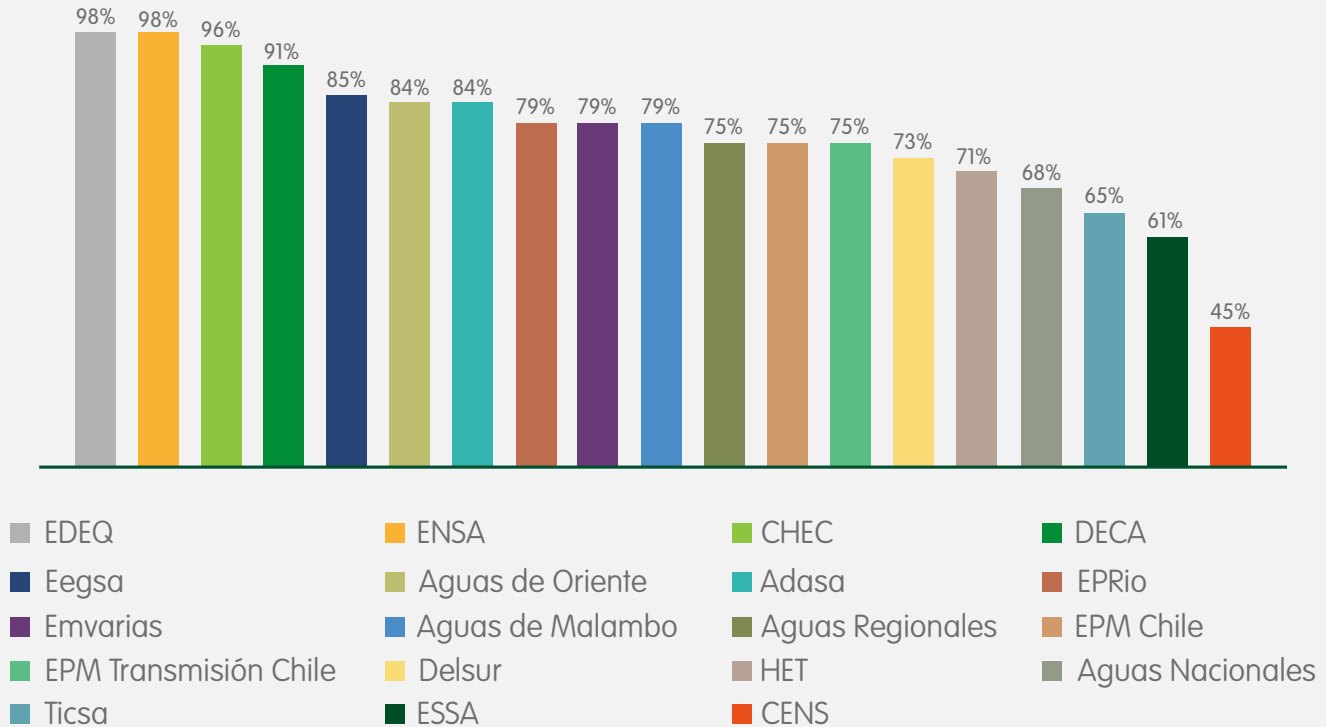
In this way, the boards of directors have internal members who are part of the management of EPM and do not receive additional remuneration for this role; they also have representatives of the partners that correspond mostly to territorial entities.

*[See annex 7: Structure of the boards of directors of Grupo EPM.](#)*

### — Attendance for the boards of directors of Grupo EPM

The average attendance of the members belonging to the main boards of the companies of Grupo EPM is shown below:

Average attendance for the boards of directors of the companies of Grupo EPM in 2019



— Ordinary agenda and schedule of the boards of directors of Grupo EPM

GRI 102-31

As a good practice of corporate governance and to promote the unity of purpose and direction of Grupo EPM, the Corporate Governance Unit prepares each year the integrated schedule of the ordinary sessions of the boards of directors and assemblies of the affiliated companies; likewise, it defines the ordinary agenda to be developed by the board of directors of each company during the year. At the joint session of boards of directors on December 6, 2018, these instruments were approved for 2019 and the respective follow-up was carried out during this year.

In 2019 the ordinary agenda of the Board of Directors of Grupo EPM had an average fulfillment of 87% for the Colombian companies (96% for energy affiliates and 77% for water supply affiliates) and 74% for the international companies (92% for energy affiliates and 55% for water supply affiliates).

## — Assessment of the boards of directors of Grupo EPM

Since 2014, Grupo EPM has a methodology of unified assessment of its boards of directors, in order to learn accurate information on the management of the boards, the degree of fulfillment of the commitments that each member has assumed, and the value that their performance adds to the company.

The survey used consisted of 33 questions grouped into six items, with a one-to-five response scale: one being the lowest level; five, the highest level; and NA, the questions that do not apply.

The items assessed were:

1. Relationship of the board of directors with the management of the company.
2. Performance and effectiveness of the board of directors as a deliberative body.
3. Roles of the chairperson and the secretary of the board.
4. Individual performance as a member of the board of directors.
5. Level of discussion and in-depth coverage of the topics addressed by the board of directors.
6. Interaction and relationship between the parent company and the affiliates.

Additionally and in order to strengthen the assessments of the boards of directors and to adopt best practices on this matter, since 2017, the assessment from the management perspective was implemented, with the purpose of assessing the degree of alignment and interaction between the directorate (board of directors) and the management (senior management).

The table below summarizes the results of the self-assessments by item and by group of companies.

Water supply, sanitation, and solid waste management companies

Items assessed		Oriente		Malambo		Regionales		Nacionales		Emvarias	
		2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
1	Relationship of the board of directors with the management of the company	88% 	78% 	88% 	91% 	84% 	91% 	88% 	90% 	81% 	90% 
2	Performance and effectiveness of the board of directors as a deliberative body	93% 	87% 	94% 	97% 	88% 	97% 	93% 	91% 	88% 	95% 
3	Roles of the chairperson and the secretary of the board	85% 	91% 	99% 	100% 	93% 	96% 	85% 	94% 	86% 	98% 
4	Individual performance as a member of the board of directors	93% 	96% 	93% 	98% 	95% 	99% 	93% 	98% 	95% 	95% 
5	Level of discussion and in-depth coverage of the topics addressed by the board of directors	76% 	83% 	94% 	91% 	85% 	88% 	72% 	84% 	80% 	88% 
6	Interaction and relationship between parent company and affiliated companies	87% 	91% 	89% 	100% 	83% 	98% 	87% 	90% 	97% 	100% 
<b>Total average</b>		<b>87%</b> 	<b>87%</b> 	<b>93%</b> 	<b>96%</b> 	<b>88%</b> 	<b>95%</b> 	<b>86%</b> 	<b>91%</b> 	<b>88%</b> 	<b>94%</b> 

Items assessed		Ticsa		Adasa	
		2018	2019	2018	2019
1	Relationship of the board of directors with the management of the company	91% ●	93% ●	90% ●	89% ●
2	Performance and effectiveness of the board of directors as a deliberative body	92% ●	93% ●	95% ●	95% ●
3	Roles of the chairperson and the secretary of the board	97% ●	100% ●	99% ●	93% ●
4	Individual performance as a member of the board of directors	98% ●	100% ●	98% ●	97% ●
5	Level of discussion and in-depth coverage of the topics addressed by the board of directors	72% ●	94% ●	76% ●	89% ●
6	Interaction and relationship between parent company and affiliated companies	93% ●	96% ●	97% ●	97% ●
<b>Total average</b>		<b>91%</b> ●	<b>96%</b> ●	<b>92%</b> ●	<b>93%</b> ●

### Approval levels

- Averages above 91%
- Averages between 84% and 91%
- Averages equal to or below 83%

Power generation, distribution, transmission, and commercialization companies

Items assessed		CHEC		EDEQ		CENS		ESSA	
		2018	2019	2018	2019	2018	2019	2018	2019
1	Relationship of the board of directors with the management of the company	96% ●	99% ●	96% ●	99% ●	94% ●	96% ●	96% ●	98% ●
2	Performance and effectiveness of the board of directors as a deliberative body	97% ●	95% ●	98% ●	98% ●	98% ●	99% ●	96% ●	100% ●
3	Roles of the chairperson and the secretary of the board	99% ●	99% ●	99% ●	99% ●	100% ●	100% ●	100% ●	100% ●
4	Individual performance as a member of the board of directors	97% ●	98% ●	98% ●	98% ●	99% ●	98% ●	99% ●	97% ●
5	Level of discussion and in-depth coverage of the topics addressed by the board of directors	81% ●	95% ●	72% ●	96% ●	86% ●	92% ●	94% ●	93% ●
6	Interaction and relationship between parent company and affiliated companies	100% ●	95% ●	98% ●	100% ●	93% ●	100% ●	87% ●	97% ●
<b>Total average</b>		<b>95%</b> ●	<b>97%</b> ●	<b>93%</b> ●	<b>98%</b> ●	<b>95%</b> ●	<b>97%</b> ●	<b>95%</b> ●	<b>97%</b> ●

	Items assessed	DECA II		DelSur		ENSA		HET	
		2018	2019	2018	2019	2018	2019	2018	2019
1	Relationship of the board of directors with the management of the company	79% ●	83% ●	83% ●	82% ●	92% ●	96% ●	83% ●	91% ●
2	Performance and effectiveness of the board of directors as a deliberative body	88% ●	91% ●	92% ●	92% ●	95% ●	99% ●	98% ●	96% ●
3	Roles of the chairperson and the secretary of the board	90% ●	89% ●	98% ●	96% ●	98% ●	100% ●	98% ●	98% ●
4	Individual performance as a member of the board of directors	93% ●	96% ●	98% ●	98% ●	98% ●	100% ●	97% ●	98% ●
5	Level of discussion and in-depth coverage of the topics addressed by the board of directors	75% ●	84% ●	88% ●	82% ●	93% ●	90% ●	99% ●	96% ●
6	Interaction and relationship between parent company and affiliated companies	85% ●	91% ●	86% ●	90% ●	84% ●	87% ●	93% ●	98% ●
<b>Total average</b>		<b>85%</b> ●	<b>89%</b> ●	<b>90%</b> ●	<b>90%</b> ●	<b>93%</b> ●	<b>95%</b> ●	<b>95%</b> ●	<b>96%</b> ●

### Approval levels

- Averages above 91%
- Averages between 84% and 91%
- Averages equal to or below 83%

### General conclusions

The results of the self-assessments of the boards of directors of the Grupo EPM companies show a very positive evolution in relation to previous years and reflect cohesion among the governance bodies, commitment as a collegiate body, and superior results with regard to the individual performance of members of the boards of directors. This report highlights their compliance with legal duties, confidential information protection, independence and objectiveness in decision-making, and compliance with the rules of procedure of the Board of Directors and the Code of Corporate Governance. Likewise, the functions of the chairperson and the secretary, the level and depth of the topics discussed in the sessions, the interaction and relationship between the parent company and the affiliated companies, among other aspects, were evaluated.



It is concluded that the behaviors assessed were those pertinent for the development of the functions of these governance bodies and that, in general, their management during 2019 was outstanding. A common comment by the boards of directors is the trouble with the allotted time for the meetings.

Regarding items 5 and 6, it is clarified that they were included in the assessment since 2018. They were not taken into account in the overall result average of that year because there was no traceability compared to previous years.

The results of these items were included in the overall average of 2019 and, in order to have a comparison, the average at the end of 2018 was recalculated.

### — Strengthening plan

The results of the assessment of each board of directors are the basis to establish a plan that strengthens the management of the boards.

With the intention of defining the strengthening plan, the board of directors session scheduled in the ordinary agenda for that purpose provides a space for dialogue between the members of the board and the management. This plan must be built and validated in this session and the secretary of the board will be responsible for monitoring its implementation.

The strengthening plan aims to:

- Encourage the board to find time for a systematic reflection on its own performance and that of the Management to establish comprehensive improvement plans.
- Align the performance of the Management with the expectations of the Board of Directors.
- Contribute to the collegiate body cohesion and the creation of trust among its members.

### — Remuneration of the boards of directors of the companies of Grupo EPM

**GRI 102-36**

Grupo EPM recognizes the attendance for the meetings of the Board of Directors and for the committees in the companies that have these spaces.

The public servants of EPM who act as members of the Board of Directors in the companies of Grupo EPM do not receive remuneration for this role. Furthermore, each shareholders' meeting defines annually the amount to be paid to the external members and some partners (when applicable), as follows: **GRI 102-35**

Company	Remuneration per attendance for each session	Currency
<b>Parent company</b>		
Empresas Públicas de Medellín	3 SMMLV	COP
<b>Water supply companies</b>		
Aguas de Oriente Antioqueño S.A. E.S.P.	1 SMMLV*	COP
Aguas de Malambo S.A. E.S.P.	1 SMMLV	COP
Aguas Nacionales EPM S.A. E.S.P.	1.5 SMMLV	COP
Aguas Regionales S.A. E.S.P.	1.5 SMMLV	COP
Emvarias	1.5 SMMLV	COP
Adasa	55	UF**
Ticsa	800	USD
<b>Energy companies</b>		
CHEC	2 SMMLV	COP
EDEQ	2 SMMLV	COP
ESSA	2 SMMLV	COP
CENS	2 SMMLV	COP
Delsur	1,600	USD
ENSA	2,000	USD
Eegsa, Comegsa y Trelec	2,000	USD

\*Current monthly minimum wage in Colombia.

\*\*Unidad de Fomento (unit of account used in Chile).

## Managers of Grupo EPM

### — Structure of executives of Grupo EPM

In 2019 the corresponding governing bodies of the group companies appointed the following executives:

- John Fredy Restrepo Sánchez, manager of Aguas del Oriente Antioqueño S.A. E.S.P. He started in the position on May 27 to cover the vacancy created by resignation.

- Juan Carlos Restrepo Perea was appointed president of Tecnología Intercontinental SAPI de CV (Ticsa) since October 1, 2019 to cover the vacancy created by the appointment of the previous president as vice president of Natural Gas of EPM. The new president of Ticsa held the position of finance director at that same affiliated company and had, when he was appointed president, four years and eight months of experience in Grupo EPM companies.
- Mario Alberto Naranjo Echeverri was appointed manager of Empresa Eléctrica de Guatemala S.A. (Eegsa). He worked as vice president of Planning and Markets at the affiliated company ENSA in Panama and has 22 years and eight months of experience in Grupo EPM companies. He was appointed to cover the vacancy created because of retirement. During 2019 the administrative structure of the affiliated company was modified by unifying the positions of general manager and deputy manager. This report highlights the career of the leaders who held these positions, who, on average, had 22 years of experience in the organization.

The following table shows the leaders who make up the team of Grupo EPM managers:

Company	Leader	Seniority in Grupo EPM (years)
EDEQ	Jorge Iván Grisales Salazar	30.7
CHEC	Jhon Jairo Granada Giraldo	14.2
ESSA	Mauricio Montoya Bozzi	4.8
CENS	José Miguel González Campo	4.3
Aguas de Oriente	John Fredy Restrepo Sánchez	0.8
Aguas de Malambo	Walther Darío Moreno Carmona	4.4
Aguas Regionales	Hernán Andrés Ramírez Ríos	2.7
Aguas Nacionales	Henry Parra Molina	10.3
Emvarias	Gustavo Alejandro Gallego Hernández	0.1
Hidrosur	Víctor Rodrigo Vélez Marulanda	10.7
Eegsa	Mario Alberto Naranjo Echeverri	23.0
Delsur	Carolina Alexandra Quintero Gil	6.4
ENSA	Esteban Barrientos Moreno	4.9
Adasa	Carlos Mario Méndez Gallo	28.4
Ticsa	Juan Carlos Restrepo Perea	8.7
Maxseguros	Óscar Armando Restrepo Posada	6.3
Fundación EPM	Claudia Elena Gómez Rodríguez	5.9
Promobiliaria	Mary Sol Velásquez García	16.2
EPM Inversiones	Carlos Mario Tobón Osorio	25.8

## — Meetings

Since 2014, the management team of Grupo EPM, made up of the vice presidents of EPM and the managers of the operating affiliated companies in Colombia and abroad, led by the CEO of EPM, has met periodically with two main objectives:

- Create a shared vision of the group.
- Empower the managers of the companies as leaders of the group.

In each meeting, a specific topic is addressed, which is aligned with the strategic moment of the group and which strengthens the unity of purpose and direction.

In 2019, two executive meetings were held:

- The first meeting was held on June 13 and 14. The main theme of this tenth version of the meeting was the collaborative creation of the Grupo EPM purpose. Some members of the Board of Directors of EPM also attended this meeting.
- The second meeting was held on December 4 and 5. In this eleventh version of the meeting, the executives committed personally to the Grupo EPM purpose and participated in introspection, openness, and gratitude activities.



**10th Executive meeting.** Team of managers of Grupo EPM, team of vice presidents of EPM, base team in charge of the Grupo EPM purpose, and members of the Board of Directors of EPM.

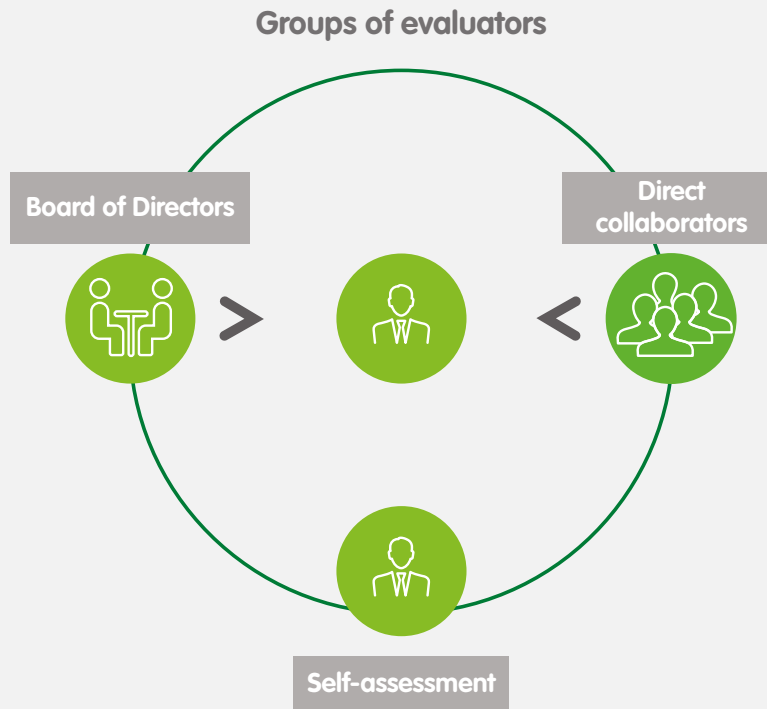


**11th Executive meeting.** Team of managers of Grupo EPM and team of vice presidents of EPM.

## — Assessment of the managers of Grupo EPM

Just as the CEO and leader of Grupo EPM is assessed, the managers of the companies of the group are also assessed based on the quantitative results of their management (the what) and the way in which said results were obtained (the how). The assessment considers the results obtained from the balanced scorecard, as well as the coherence of the management style of each manager with the behaviors and actions that Grupo EPM has defined for its leaders.

The organization has a unified methodology that consists of a multisource tool for assessing the descriptors associated with ten organizational actions defined for Grupo EPM. The actions are behaviors that show the presence of the cultural features of the group, defined to enable its strategic planning.



The following are the organizational actions defined by Grupo EPM to evaluate the exercise of leadership by the managers of the affiliates:

- |                           |                     |
|---------------------------|---------------------|
| Ethical management        | Service orientation |
| Strategic vision creation | Development         |
| Achievement of results    | Adaptability        |
| Impact and influence      | Innovation          |
| Cultural sensitivity      | Ability to learn    |

## — Strengthening plan

The assessment results are submitted to the boards of directors of each affiliate during the February sessions. According to the feedback, each collegiate body concludes whether the manager:

- Does not fulfill the actions.
- Fulfills the actions.
- Shows superior actions that allow him or her to be a role-model leader in the group.

This assessment is part of each manager's goals and is known as the management style indicator; in cases where the company applies variable pay, this represents a significant factor for the manager's annual bonus.

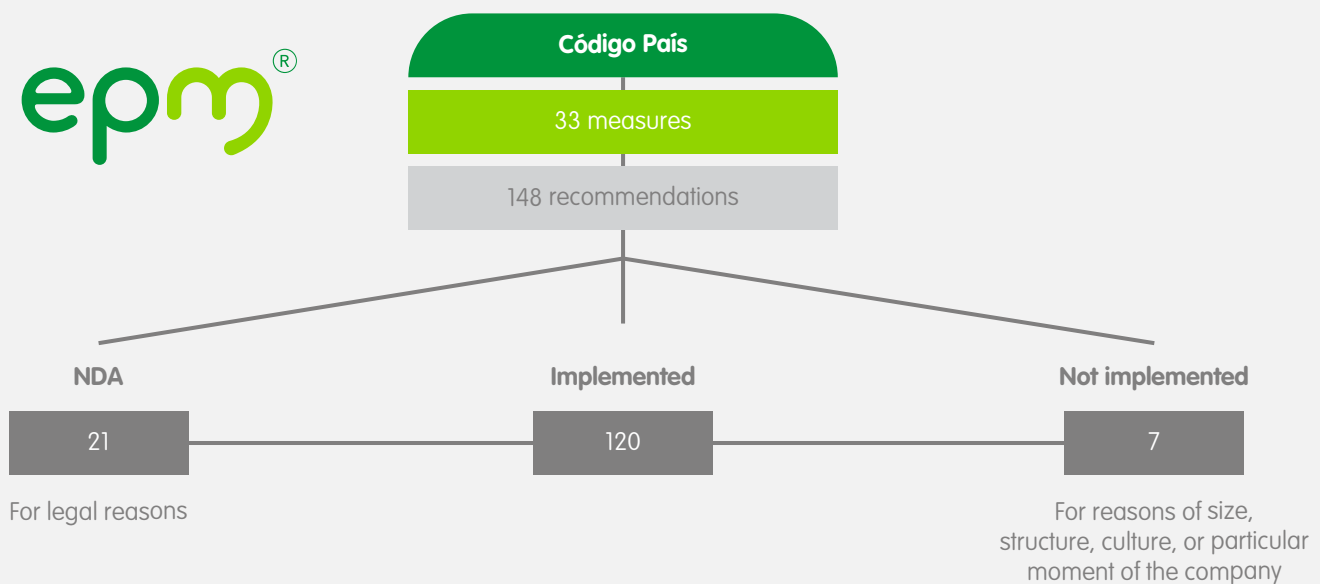
Based on this assessment exercise, a strengthening plan is defined for the manager as well as a public statement about his or her performance, which is part of the annual management report of the corresponding company.

## Corporate governance assessments

### — Código País

EPM submitted the Código País survey on January 30, 2019, within the term established by the Financial Superintendence of Colombia; the survey explains the corporate governance practices adopted and applied during the period between January 1 and December 31, 2018.

On May 17, 2019, EPM submitted again the Código País survey, covering this time recommendations 22.1 and 21.3, among others, which meant an increase in the number of measures implemented by the organization.



The report of this survey is published on the website of EPM.

### — Transparencia por Colombia (Transparency for Colombia)

For more than 10 years, EPM has participated voluntarily in the Business Transparency Assessment (MTE, as per its acronym in Spanish), public utilities chapter, promoted by Transparencia por Colombia Corporation.

The overall goal of the MTE is to improve transparency and anti-corruption standards. It is a tool that identifies institutional designs and practices that lead to corruption risks.



Specific goals:

- Monitor and evaluate transparency and anti-corruption mechanisms and policies.
- Generate particular recommendations on transparency and anti-corruption.
- Promote spaces for dialogue and exchange of good practices.

The current rating is 89.6 points on average, ranking EPM in a low level of corruption risk. This rating resulted from the assessment conducted in 2018.

This assessment identifies the extent to which policies and mechanisms have been improved to prevent this risk, facilitate access to information, and promote spaces for dialogue and participation with the different stakeholders.

It is conducted every two years and, therefore, the organization executed throughout 2019 an improvement plan intended to close gaps, meet the established goals, and improve the rating of the next assessment to be conducted in 2020.

## — Relevant information

EPM is considered an issuer, since it participates in the Colombian public securities market through the issuance of bonds and commercial papers. Therefore, it is subject to timely notification on the market concerning relevant information arising in the course of its activities.

Furthermore, since it is a business group, the Financial Superintendency of Colombia requires reporting relevant information from its affiliates. Therefore, Circular Letter 2018-CIR-1553 of October 10, 2018 was issued with detailed instructions and procedures, disclosed, and accepted by all the companies of Grupo EPM.

During 2019, the organization submitted 165 relevant information reports to the Financial Superintendency of Colombia.

Since 2013, EPM has received the IR Recognition<sup>1</sup> granted by the Colombian Securities Exchange (BVC, as per its acronym in Spanish), given the importance of sufficient and timely information for investment decisions by the markets. This recognition promotes the adoption of best practices among issuers in terms of disclosure of information and investor relations.

<sup>1</sup> [https://www.bvc.com.co/pps/tibco/portalbvc/Home/Empresas/IR/Empresas\\_IR?action=dummy](https://www.bvc.com.co/pps/tibco/portalbvc/Home/Empresas/IR/Empresas_IR?action=dummy)

## — Credit risk rating

In a proactive way, with the purpose of providing all the elements of objective judgment to risk rating agencies, and considering the concerns arising from the Ituango hydroelectric project contingency, EPM continued its traditional practice of keeping the risk rating firms, the investors, and the financial market in general timely informed on the different developments of the company and the project.

In 2019, EPM was able to maintain the international level of investment given by the two rating agencies: Baa3 level with negative outlook by Moody's and BBB international level and AAA local level, both with negative outlook, by Fitch Ratings.

In turn, the ratings granted definitively supported the 2018 financing strategy, which included loans of approximately USD 750 million with the international financial sector and COP 1 trillion with local banks. Thus, the liquidity risk was reduced.

Moreover, the energy affiliates in Colombia and Adasa in Chile had positive results by maintaining their AAA and AA- risk ratings, respectively.

This report highlights the importance of monitoring and providing timely measures within the company to meet the corporate objective of maintaining the level of investment in the two international risk ratings, in particular the progress of the divestment plan in a comprehensive manner and the reduction of the level of leverage.

## Corporate governance planning

Every year, the Board of Directors of EPM approves the Corporate Governance Plan. It consolidates the initiatives that will be developed on this matter in order to maintain a constant evolution. This action has been voluntarily implemented since 2006.





This plan includes activities to be carried out by different departments of EPM, whose common objective is to improve the relationship between the governance bodies of the company and the group and to strengthen the General Framework of Corporate Governance of Grupo EPM. *(See annex 1: General Framework of Corporate Governance of Grupo EPM).*

## Monitoring of the 2019 Corporate Governance Plan

During 2019, the organization periodically monitored the fulfillment of the proposed activities and implemented adjustments in the deliverables or in the deadlines of the initiatives to facilitate their fulfillment. Also, the Management Committee of the Board of Directors of EPM developed monitoring actions in July.

No.	Emphasis / Plan matters	Progress planned	Progress implemented and accomplished
2	Strengthening of Grupo EPM's governance bodies	94%	79%
3	Strengthening of the intra-group engagement	50%	83%
4	Strengthening of the framework for action of governance and its relations	90%	93%

### Conventions

	Percentage planned
	Accomplishment equal to or above 90%
	Accomplishment between 75% and below 90%
	Accomplishment below 75%

In 2019, the organization removed emphasis 1, strengthening of ownership management, from the plan, since the initiatives presented the following changes:

- Postponement of the majority shareholder statement.
- Execution of the engagement management during electoral cycle and mayoral transition:

The engagement during electoral cycle was led by the Vice Presidency of Corporate Communications and Relationships, as part of the openness of information strategy during the electoral period. The Corporate Governance Unit participated in the activities corresponding to the engagement with the Municipality of Medellín as owner of EPM.

As a decentralized entity of the Municipality of Medellín, EPM participated in the mayoral transition, for which the Vice Presidency of Corporate Strategy and the Corporate Governance Unit led the preparation of the work plan and the agenda for the development of different sessions to provide information on fundamental aspects for (present and future) sustainability of EPM and Grupo EPM.

### — Achievements and progress in EPM

- Update of the governability statute included in the Code of Corporate Governance of EPM and Grupo EPM. The information contained in this code was also updated, after approval by the Board of Directors of EPM. A curriculum was designed to train on its dissemination, in coordination with Universidad Grupo EPM and with the support of a supplier with experience in virtual training.
- Preparation of a guide to nominate members of the Board of Directors of EPM. This document collected the existing definitions or guidelines for the composition of the Board of Directors.
- Preparation of a guide to nominate members of the boards of directors of EPM.
- Documentation of the methodology to assess the CEO of EPM.
- Update of the rules of procedure of the Audit Committee of the Board of Directors of EPM.
- Stabilization of ARCA, the application that supports the management of the Board of Directors of EPM, in accordance with the user stories defined at the beginning of the project.

The following progress was obtained in the initiatives proposed to strengthen the control environment:

**Risk management mechanisms**

- Training on risk management as a tool for decision making, addressed to the members of the Management Committee of the Board of Directors of EPM.

**Strengthening of the internal control system**

- Assessment of EPM's internal control system through the Unified Form of Management Progress Report (FURAG, as per its acronym in Spanish) established by the Administrative Department for Public Service (DAFP, as per its acronym in Spanish).

**— Achievements and progress in Grupo EPM**

- Approval of the rules of procedure for the boards of directors of the international companies ENSA, Ticsa, and HET.
- Preparation of the guidelines for the management of the boards of directors of the affiliates.
- Preparation of the guidelines for the nomination of the boards of directors of the affiliates.
- Documentation of the methodology to assess the managers of the affiliates.
- Projection of the interaction agreement to adopt the guidelines for the execution and management of deals of the governance agreement in the water supply affiliates of Grupo EPM. In addition, design of the online course in coordination with Universidad Grupo EPM, in order to strengthen the dissemination of the governance agreement in the companies of Grupo EPM.

As for the initiatives proposed to strengthen the control environment, the following progress was obtained:

**Risk management mechanisms**

- Update of the strategic risk maps in the Colombian energy companies (transmission, distribution, and generation businesses), which are validated by the respective management committees.

# 2020–2023 Corporate Governance Plan

The 2020–2023 Corporate Governance Plan was designed based on a multiple-source analysis that consolidates a long-term vision and includes Grupo EPM’s initiatives to maintain constant evolution in the area of corporate governance.

## 1 Strengthening of ownership management

- 1 Define and implement majority shareholder statement.
- 2 Execute engagement management during electoral cycle (openness of information) and mayoral transition.
- 3 Define and implement rules of procedure of the shareholders’ meeting for the affiliates.
- 4 Define corporate governance matters to be included in the management reports for shareholders’ meetings.
- 5 Propose to the Municipality of Medellín a methodology to assess the Relations Framework Agreement.

## 2 Strengthening of governance bodies of Grupo EPM

- 1 Document methodology to assess the boards of directors of the affiliates.
- 2 Update codes of corporate governance of affiliates.
- 3 Implement peer review of boards of directors in EPM and affiliates.
- 4 Define and implement succession plan for Senior Management in affiliates.
- 5 Evaluate implementation of mechanisms for conflict resolution between governance bodies.
- 6 Update bylaws of international affiliates.
- 7 Define and implement rules of procedure of the Core Committee and Management Committee.
- 8 Update rules of procedure of the Audit Committee implemented in affiliates.

## 3 Strengthening of the intra-group engagement

- 1 Sign interaction agreement model of governance agreement with water supply and international energy affiliates.
- 2 Define policy concerning related party transactions.

## 4 Strengthening of the framework for action of governance model and its relations

- 1 Define and implement training, dissemination, and monitoring program of the general framework of governance.
- 2 Define information disclosure policy.
- 3 Propose evaluation of corporate governance.
- 4 Monitor evolution of ARCA application for the board of EPM.
- 5 Lead implementation of ARCA information system in the Colombian affiliates.
- 6 Evaluate applicability of the policy on contributions and zero donations.
- 7 Consider governance document structure.
- 8 Define initiatives to strengthen control environment.

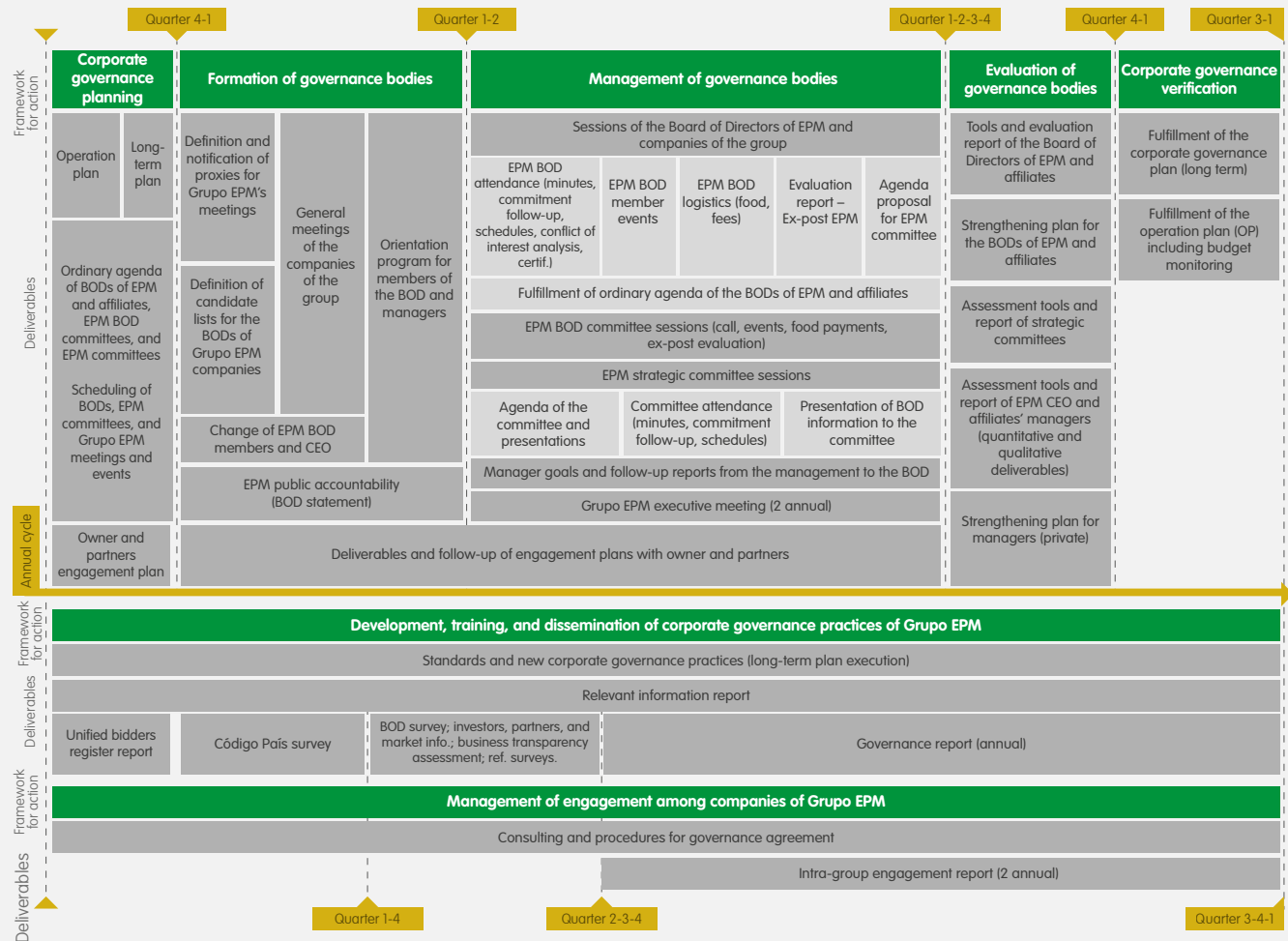
Legend 2020 2021 2022 2023

\*Affiliates: Colombian and international subordinate companies of Grupo EPM.

## 2019 Operation Plan of the Corporate Governance Unit

It consolidates the recurring deliverables of the annual cycle, in accordance with the framework for action and the corporate governance practices of Grupo EPM.

*(See annex 1: General Framework of Corporate Governance of Grupo EPM).*



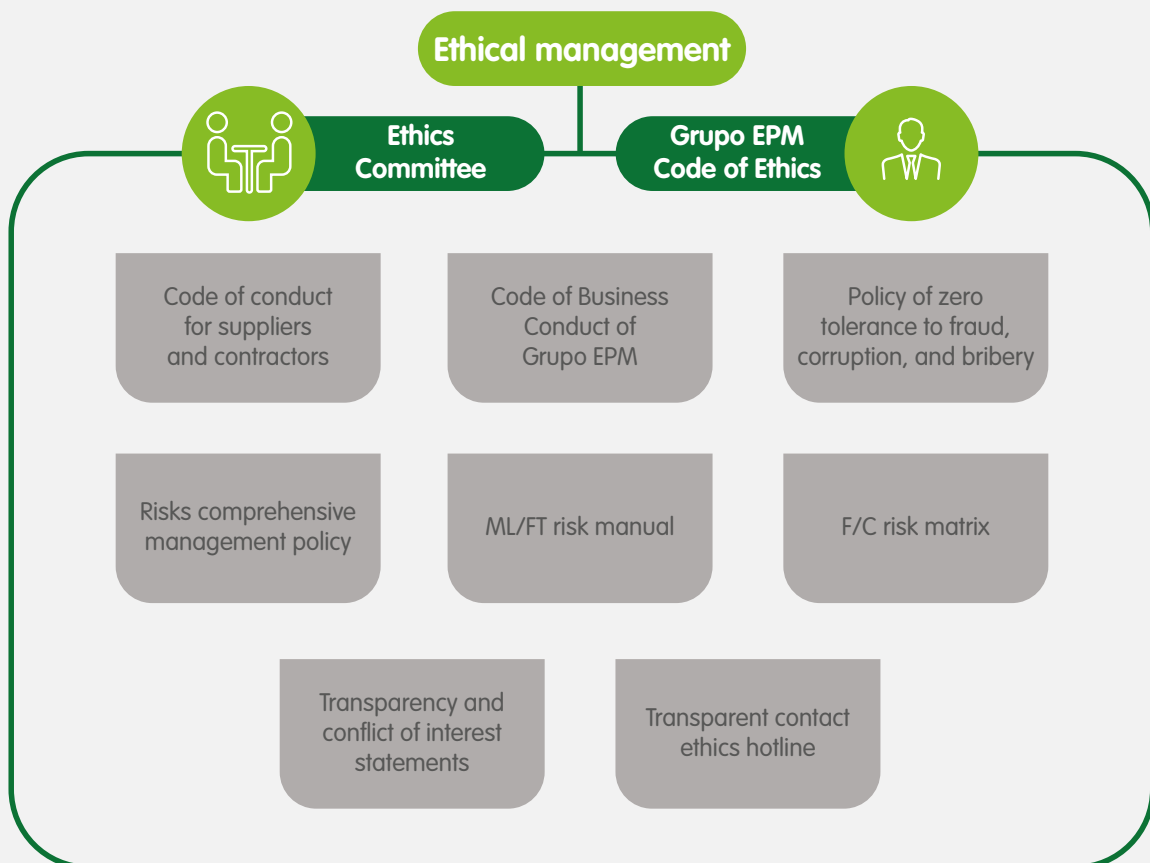
The outcome of the follow-up to the operation plan is detailed in this report.

## Accountability

### Ethical management of Grupo EPM GRI 102-17

EPM is aware of its role in society in which it operates and to which it provides its services. Therefore, it established social responsibility as the cross-cutting theme that guides its actions and strategy for optimizing operations and growth.

This responsibility becomes a reality in the performance of the human group that makes up the company, since each behavior of the EPM people reflects the principles of ethical action and values on which it is based.



During 2019, the aim was to develop the strengthening plan of ethical management in Grupo EPM. It was totally accomplished.



As part of ethical management, the organization developed the following actions aiming to encourage ethical and transparent behaviors among employees, fundamental to strengthen trust among the different stakeholders of the company.

- EPM and all its Colombian and international affiliates have the Contacto Transparente (Transparent Contact) **ethics hotline**, mechanism developed for receiving and recording signs and incidents of possible misconducts committed by EPM public servants and/or other stakeholders (customers and users, competitors and colleagues, community and environment, owner, state, EPM people, suppliers and contractors, and partners and investors), which may impact the fulfillment of the strategic objectives.  
[https://www.epm.com.co/site/portals/contacto\\_transparente/ie.html](https://www.epm.com.co/site/portals/contacto_transparente/ie.html).

This mechanism features an interactive environment (infographic) for providing training on and teaching about this topic and where the most relevant cases, the lessons learned, and the annual statistics regarding its operation are published with the purpose of increasing the ethical culture in our company. During 2019, a total of 150 incidents were received, of which 126 came from the Colombian affiliates and 24, from the international affiliates.

- The **Transparency Statement** is a voluntary initiative that has been implemented since 2015. As of 2019, it was accepted by 97.11% of the collaborators and those with a potential conflict of interest. The statements strengthen trust in the company-employee and company-citizenship relationships, as well as transparency in the work of Grupo EPM. During this year, the initiative was implemented in Aguas Regionales and Emvarias.
- Our policy of **zero tolerance to fraud, corruption, and bribery** has been adopted by all the group's companies since 2015.  
<https://www.epm.com.co/site/home/nuestra-empresa/politicas#Pol-tica-de-Cero-Tolerancia-al-Fraude-la-Corrupci-n-y-el-Soborno-1240>
- The **Code of Business Conduct of Grupo EPM** was approved in EPM as parent company in April 2018; in the course of the same year, it was approved through their boards of directors, in the Colombian energy and water affiliates; and, in 2019, it was adopted in all the international affiliates.  
[https://www.epm.com.co/site/Portals/0/centro\\_de\\_documentos/Manual-conducta-empresarial-de-Grupo.pdf](https://www.epm.com.co/site/Portals/0/centro_de_documentos/Manual-conducta-empresarial-de-Grupo.pdf)

- The **ethical climate survey** was conducted for the third year to diagnose the ethical culture in EPM and its impact on organizational culture changes and to collect the public servants' perceptions of it. The organization used the *Ethical Management Model for State Entities* by USAID<sup>2</sup>. The survey was conducted with 6,708 public servants. As for the rating of the responses for the 11 categories assessed, eight reached a scale of excellence; two reached a stage of development, implementation, and strengthening; and one showed deficiencies and gaps.
- During the year, we developed a social experiment regarding the behavior of public servants of EPM, which consisted in a free-will exercise named as **Tienda de la Transparencia** (Transparency Store). The organization made consumable items available to its employees in a "store" or space with no controls; the employees would take the items, pay for them, and take the change using the funds in cash available resulting from the commercialization of the products. They had a symbolic value of COP1,000 covering their cost. The experiment did not define a profit margin other than rounding the figure up to the nearest thousand. 4,049 trust transactions took place in all the stores installed. The employees widely embraced the initiative and expressed very good comments. We collected more than 200 comments, mostly congratulations and messages on conversations and reflections on the value of transparency. We shared the result of the experiment through mass email and Correo Unificado (Unified Mail) and in the Ethics Committee.
- The organization celebrated the **International Anti-Corruption Day**. The academic event, hosted and organized by EPM, was held at the Servir Auditorium of the EPM building on December 12, 2019. More than 120 people participated, including academics; compliance employees and public servants; professionals from the areas of ethics, auditing, and internal control; and persons responsible for this matter in companies of Antioquia.
- The company coordinated, invited to, and participated in the meetings of the **team of ethical management agents** with the purpose of analyzing ethical dilemmas and submitting them to the Ethics Committee for ethical evaluation and reflection; likewise, we participated in activities to strengthen the ethical climate of the company, namely the understanding of the concept and classification of "conflict of interest" and the types and degrees of consanguinity, through the analysis of cases and examples common to public servants.
- During 2019, the organization issued 49 opinions related to possible **conflicts of interest** in invitations to public servants coming from third parties to participate in events, which recommended, in the case of possible conflicts of interest, to reject some invitations or, otherwise, to accept them.

<sup>2</sup> The United States Agency for International Development is responsible for distributing most of the non-military foreign aid.

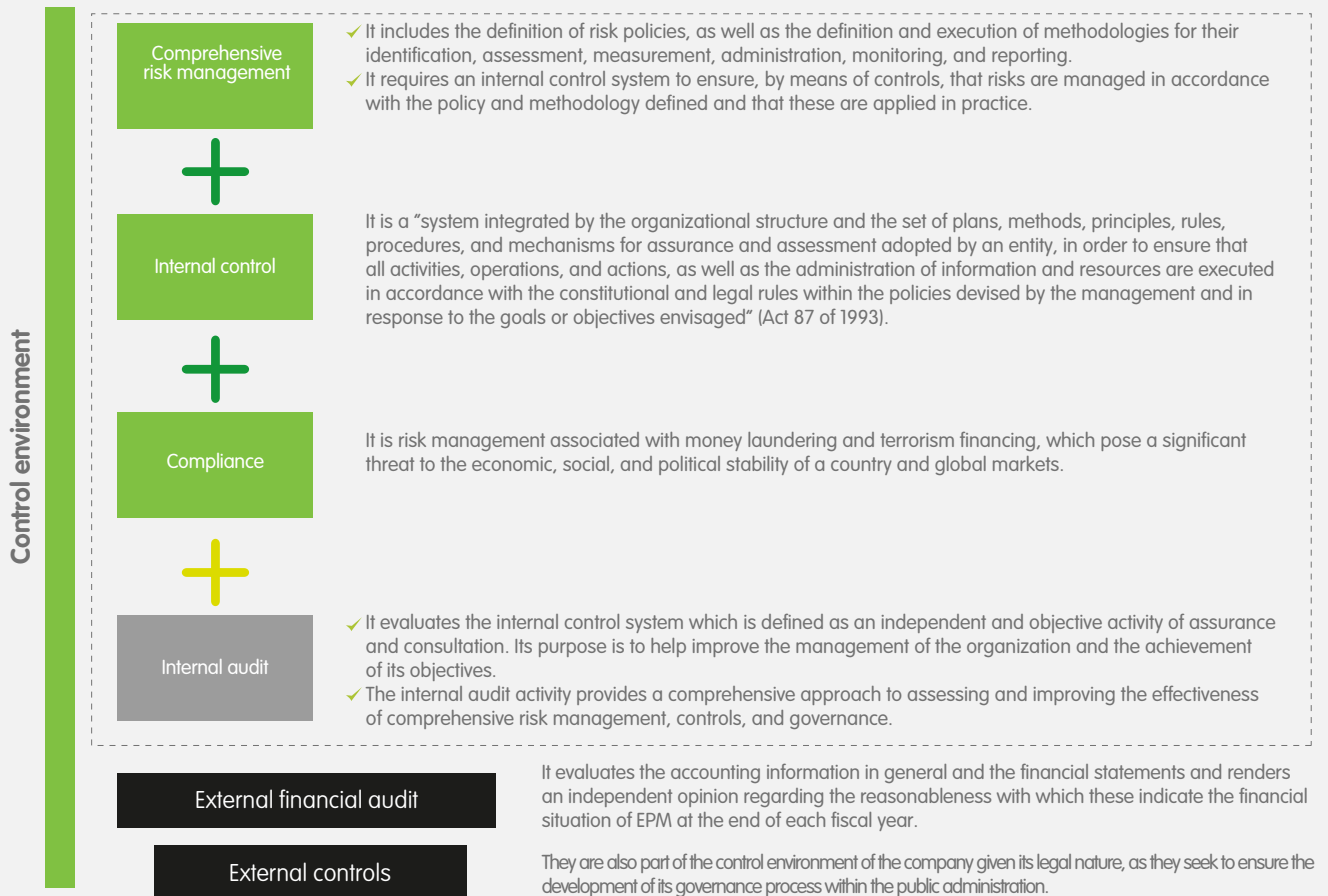
- With the purpose of supporting the definition of ex-post and ex-ante controls to minimize the materialization of risk scenarios associated with fraud, corruption, and bribery, the Compliance Unit contributed to the following processes:
  - Human resource admission
  - Supply
  - Materials management
  - Billing
  - Accounts receivable management
- During 2019, EPM and all the affiliates of Grupo EPM refined the operation of their **organizational structure for ethical management**; furthermore, the teams of ethical strengthening and management agents were restructured, specific functions were assigned, and their operation was tested; likewise, the role of the member appointed by the CEO was adjusted and the incorporation of a role for ethical management in senior level executive positions was proposed in November.
- In the session held on September 30, 2019, the Corporate Core Committee approved the **guidelines related to the strengthening of ethical management** as the framework for action of the group for each key mission: strategic leadership, capital, capabilities, control, and identity. The identity mission contains the guidelines associated with ethical management.
- At the end of the year, seven **Ethics Committee sessions** had been held and seven ethical dilemmas had been submitted to this committee for analysis and reflection.
- We coordinated, invited to, and participated in the 21 meetings that the **team of strengthening agents** held in the year to design and implement actions planned in the ethical management road map; likewise, we participated in all the activities to strengthen the company's ethics, aimed at raising the public servants' awareness of principles and values.
- The organization celebrated **Public Service Day**. More than 70 people from the company participated in the academic event, which was held at the Servir Auditorium of the EPM building on June 27, 2019, and which included five conversation circles on public service. The celebration had been promoted through announcements on Mi Canal (My Channel), internal communication channel; newsletters; and messages from the CEO.

- By strengthening ethical management in 2019, we achieved the development of actions focused on strengthening principles and values, namely the 11 meetings with the Colombian and international affiliates in the network for change, besides the integration and coordination meetings scheduled. As for **training**, we highlight the participation in one forum, two conferences, one congress, and workshops attended by more than 2,500 people. More than 1,180 public servants participated in the workshop on building ethical commitments. With regard to the 11 **orientation sessions** held in the year, we reinforced our ethical principles of action, corporate values, and conflicts of interest.
- We fulfilled the massive **communications** plan in the different internal media: announcements on Mi Canal, Correo Unificado, and Yammer, using trivia, reflections, statements, a game on ethics in the Tú Cuentas (You Count) decentralized events aiming to disclose ethical dilemmas and promote 27 reflections on different topics.

## Control environment of Grupo EPM

Its legal nature, its 100%-public capital, the economic sector in which it operates, and its condition as an issuer of securities are reasons why EPM is a company broadly supervised by internal control mechanisms regulated by law and external control bodies, as well as those that have been voluntarily adopted and have been implemented in the companies of the group.

In addition to favoring cohesion among the companies, the control environment allows the business group to have policies, processes, procedures, activities, and information that ensure the unity of purpose and direction and to comply with the internal and external legal framework that regulates it, all of which contributes to achieve its objectives and BHAG.



## Corporate audit management

In 2019, the risk-based audit plan approved by the Board of Directors and intended to end that year was completely implemented, covering the processes with the highest level of risk and according to the prioritization criteria that were set based on the methodology.

A total of 707 tasks for assurance and consulting and for management and development were implemented in Grupo EPM to assess mission, strategic, and support processes.

As a result of the audit work, opportunities for improvement were identified, which are managed by those responsible through the development of improvement plans and the verification of their fulfillment and effectiveness, in accordance with the monitoring conducted by the audit.

During 2019, the control effectiveness indicator (monitoring of improvement plans) was 91% in Grupo EPM.

In addition, as part of the corporate audit model whose purpose is to carry out assurance and consulting activities within the group, the following activities were performed:

- Definition and promotion of awareness-raising and communication plans in control culture, emphasizing the three lines of defense model and improvement plans.
- Quality assurance and improvement program: assessment to determine compliance with the international standards on auditing.
- Development of tools for data extraction and task automation.
- Assessment on the structuring of the Integrated Model of Planning and Management (MIPG, as per its acronym in Spanish).

As a result of the strategic approach of the corporate audit for the 2019-2025 period, the strategic initiatives are delimited by four management focal points:

Contribute to the harmony of life for a better world

**Alignment with the strategic objectives and risks**

Achieve results that contribute to the protection of the organization's value.

**Focus on prevention: Proactivity and future orientation**

Develop the capabilities, innovation, digital transformation, and quality of the internal audit activity.



**Trust relationships and strategic leadership**

Provide strategic support for decision-making.

**Strengthening of the control model**

Promote the best of the internal control system in the group and comprehensive and corporate audits (global opinions).



Improve and protect the organization's value

### — External audit plan **Código País 29.12**

Due to its legal nature of state-owned industrial and commercial company, EPM is not required to have an external financial audit. As a good corporate governance practice and in order to fulfill the commitments that the company has with multilateral banks, EPM hired an external financial auditor. The audit scope includes the opinion on the financial statements, an annual evaluation of the company's internal accounting control system (which is relevant for the preparation and reasonable submission of the financial statements), an audit to the information reported to the Energy and Gas Regulatory Commission (CREG, as per its acronym in Spanish) by the network operators and related to the expenses of administration, operation, and maintenance, and a specific audit to certify EPM's fulfillment of the commitments established in the legal stability contract, as well as the verification of the business environmental management index, the verification of the sustainability report, and the financial audit for the district heating and cooling system project.

As its external financial auditor, Grupo EPM continued with the private firm KPMG S.A.S., which is one of the four largest audit firms in the world.

Contract	Purpose	Period (Start-End)	Payments in 2019
CRW 55509 KPMG	EPM requests the contractor to provide the external audit services required by the company. Addendum to the contract for the final report of the Aguas Claras Wastewater Treatment Plant project (Bello), as part of credit 2120 OC-CO.	01/01/2019 31/12/2019	COP 1,737,758,243 (before VAT)

The value of the external audit contract during the January-December 2019 period was COP 1,737,758,243.

The fees paid by EPM represent 1.55% of KPMG's total revenue from the external audit activity for the same period.

## External control, supervision, and oversight authorities

### — External control authorities

They include the organizations to which the Political Constitution of Colombia entrusts the functions related to disciplinary control, defense of the people, and fiscal control. The control authorities of the Colombian state are the Office of the Comptroller General, the offices of territorial comptrollers, and the Office of the Public Prosecutor that includes the Office of the Inspector General, the Office of the Public Defender, and the offices of the district and municipal ombudspersons.

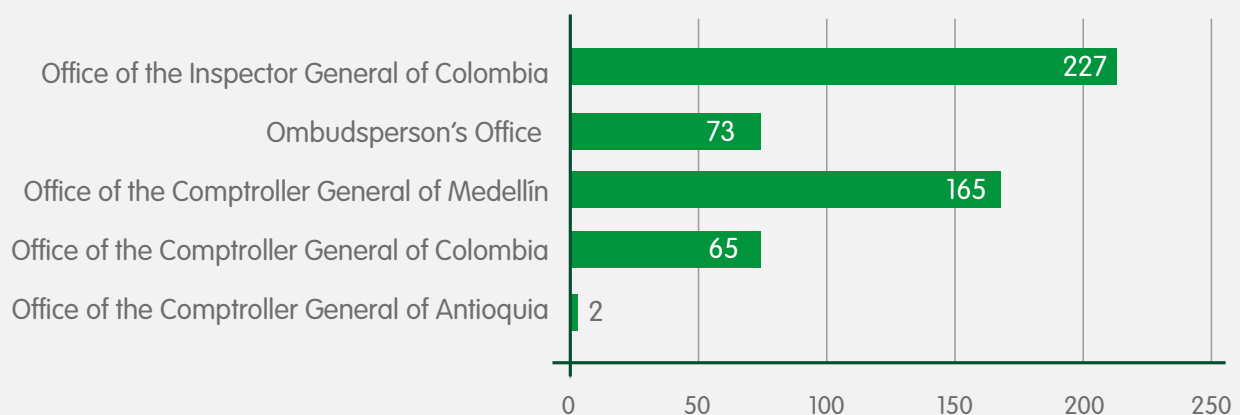
### — Supervision and oversight authorities

They are defined in the structure of the Colombian state with supervision and oversight functions in line with the services provided by EPM. The Superintendency of Public Utilities and the Financial Superintendency are part of this group.

In its duty of transparency, EPM is responsible for responding in a timely, comprehensive, and pertinent manner to the requirements made by the different control organizations and the supervision and oversight authorities.

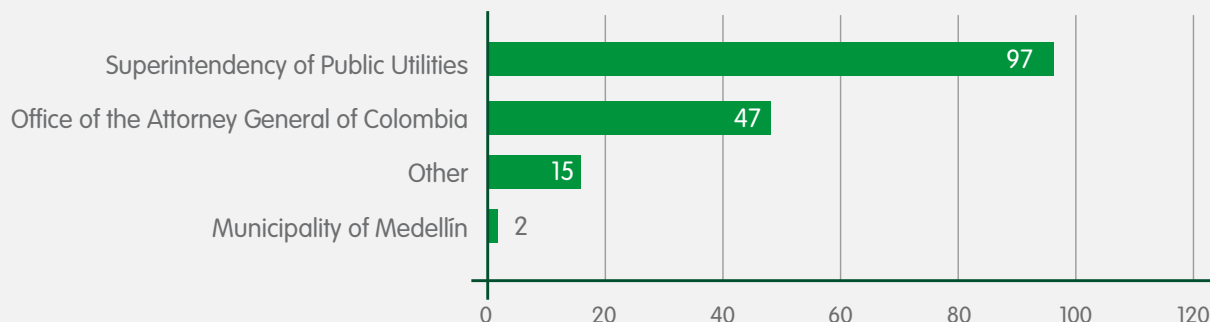
In compliance with its duty to account for the different requirements by the different control, supervision, and oversight authorities, EPM addressed 693 requests during 2019.

#### Requests from external control authorities





## Requests from other authorities



*Others:* Financial Superintendency of Colombia, Superintendency of Industry and Commerce, National Unit for Disaster Risk Management, and Office of the Municipal Comptroller of Bello, among others.

## Comprehensive risk management

**Código País 33.3 – iv. b) c) d); GRI 102-30**

The comprehensive risk management report is part of the sustainability report and can be consulted by [clicking here](#).

## Internal control

The MIPG is a new reference framework for directing, planning, executing, monitoring, evaluating, and controlling the management of public entities and agencies in order to generate results that address development plans and solve the needs and problems of citizens, with integrity and quality of service, in accordance with decrees 1499 and 648 of 2017 of the DAFP.

The responsibility for the MIPG in EPM lies with its legal representative (Decree 2198 of May 2, 2018). The institutionality of the company is represented by both the Institutional Committee for Management and Performance and the Institutional Committee for Control Coordination (Decree 2192 of January 5, 2018). **Código País 33.3 – iv. a)**

The top 10 actions developed in 2019 on MIPG were:

1. Completion of four of the 12 improvement plans, as a result of the gaps identified in the 2018 self-assessment.
2. Formation of the integration and coordination meeting of the MIPG, in which the progress with various aspects of the MIPG implementation have been shared.

3. Analysis of the assessment of the 2018 FURAG and identification of points to strengthen the management model.
4. Coordination to fill out the 2019 FURAG.
5. Harmonization of the code of ethics and clarification of concepts such as “value groups,” “citizenship,” and “stakeholders.”
6. Alignment of MIPG policies and EPM policies.
7. Gap analysis of the MIPG planning process vs. EPM process.
8. Preparation of training and communication plans on the MIPG at EPM.
9. Clarifications on the applicability of the MIPG in EPM and Colombian affiliates of Grupo EPM.
10. Beginning of the structuring of the second line of defense in EPM.

## Compliance **GRI 102-17**

The compliance report accounts for the transparency practices, is part of the sustainability report, and can be consulted by [clicking here](#).

The background of the page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, renewable energy, and industry. Recognizable symbols include wind turbines, solar panels, lightbulbs, gears, water droplets, recycling symbols, and stylized buildings. The icons are arranged in a dense, grid-like pattern across the entire page.

# Annexes

## Annexes

### Annex 1: General Framework of Corporate Governance of Grupo EPM

#### — Definition of corporate governance

According to what is established in clause 1.3 of the Code of Corporate Governance of EPM and Grupo EPM, corporate governance is “the system<sup>3</sup> by which the companies of Grupo EPM are run, managed, and controlled through a balance between ownership and management, in order to guarantee their sustainability and growth, the rights of their investors, transparency and ethics in their actions, and access to information for their stakeholders.”

#### — Strategic statement of corporate governance

Grupo EPM guides its management through the development and adoption of good practices of corporate governance, for the conscious decision-making of the governance bodies, the promotion of a business management culture that contributes to the balanced satisfaction of the needs of its stakeholders, the creation of value, and the sustainability of the companies within the framework of unity of purpose and direction.

#### — Objective of the General Framework of Corporate Governance of Grupo EPM

Define the scope of action of the owner, the executives, and the management of the Grupo EPM companies, implement the necessary practices to strengthen these governance bodies, verify their degree of compliance, and disclose the results to stakeholders.

#### — Scope of the General Framework of Corporate Governance of Grupo EPM

The General Framework of Corporate Governance is the set of elements that interact to strengthen corporate governance, promoting unity of purpose and direction through the implementation of a model aligned with the strategic planning defined for the group. The general framework is an inseparable part of the code of corporate governance and, in this sense, it is defined and implemented in EPM and adopted by the affiliate companies according to their internal procedures, adapting it to their rules and particularities applicable.

<sup>3</sup> Corporate governance is “the system by which companies are directed and controlled” (Sir Adrian Cadbury, 1992, Report on the Financial Aspects of Corporate Governance in the United Kingdom).

— Graphical representation of the General Framework of Corporate Governance of Grupo EPM

This model is based on the governance bodies, the definition of its framework for action using governance practices, control mechanisms, and accountability.



Graphical representation of the General Framework of Corporate Governance of Grupo EPM.

— Corporate governance planning



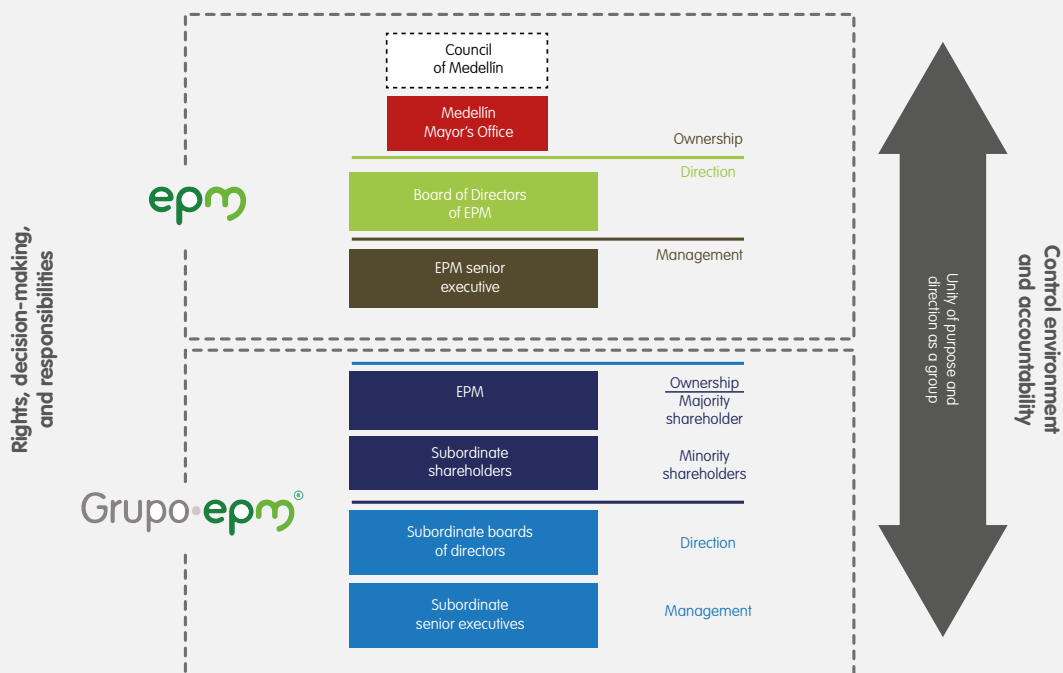
The General Framework of Corporate Governance considers the needs and expectations of stakeholders<sup>4</sup> in terms of corporate governance; it also seeks articulation with the components of strategic planning to align the interests of the governance bodies towards fulfilling the expectation of value creation, thus identifying the emphases, initiatives, objectives, goals, and time tables that must be accomplished to strengthen the level of maturity in corporate governance of Grupo EPM.

<sup>4</sup> Person or organization that can impact, be impacted, or be perceived as impacted by a decision or activity (ISO 9001-2015).

— Corporate governance bodies



Graphical representation of the governance levels of EPM parent company and the subordinate companies of the business group, indicating ownership, direction, and management. Likewise, the graphic shows the distribution of rights, decisions, and responsibilities so that there is a system of checks and balances, aligned with the unity of purpose and direction, in a control and accountability environment. The Code of Corporate Governance describes each level.

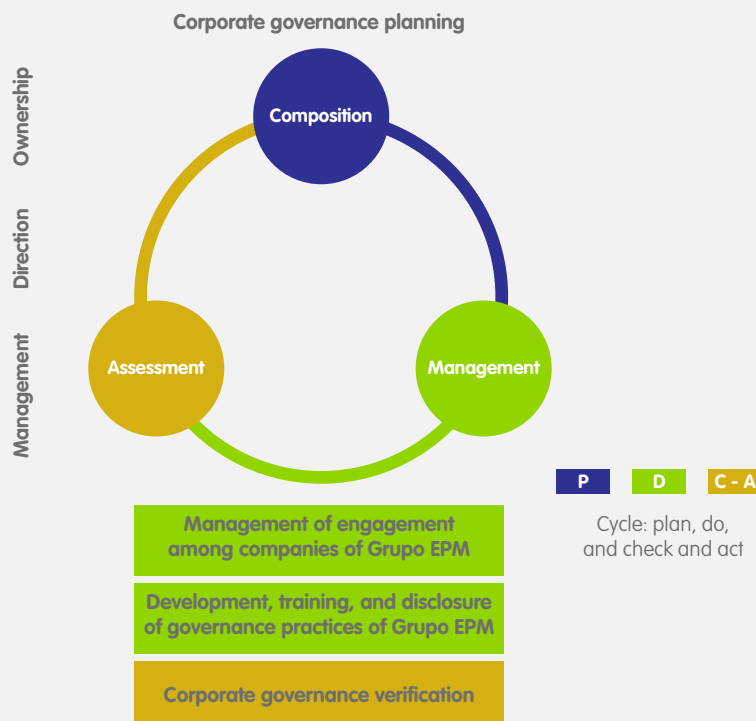


Graphic of governance bodies.

— Framework for action and practices



Graphical representation, in order of precedence and time, of the corporate governance practices applied to the governance bodies of Grupo EPM, including those aimed at strengthening the relationship among the companies of the group and those aimed at strengthening the evolution of corporate governance through development, training, and disclosure.



Graphic of general framework for action.

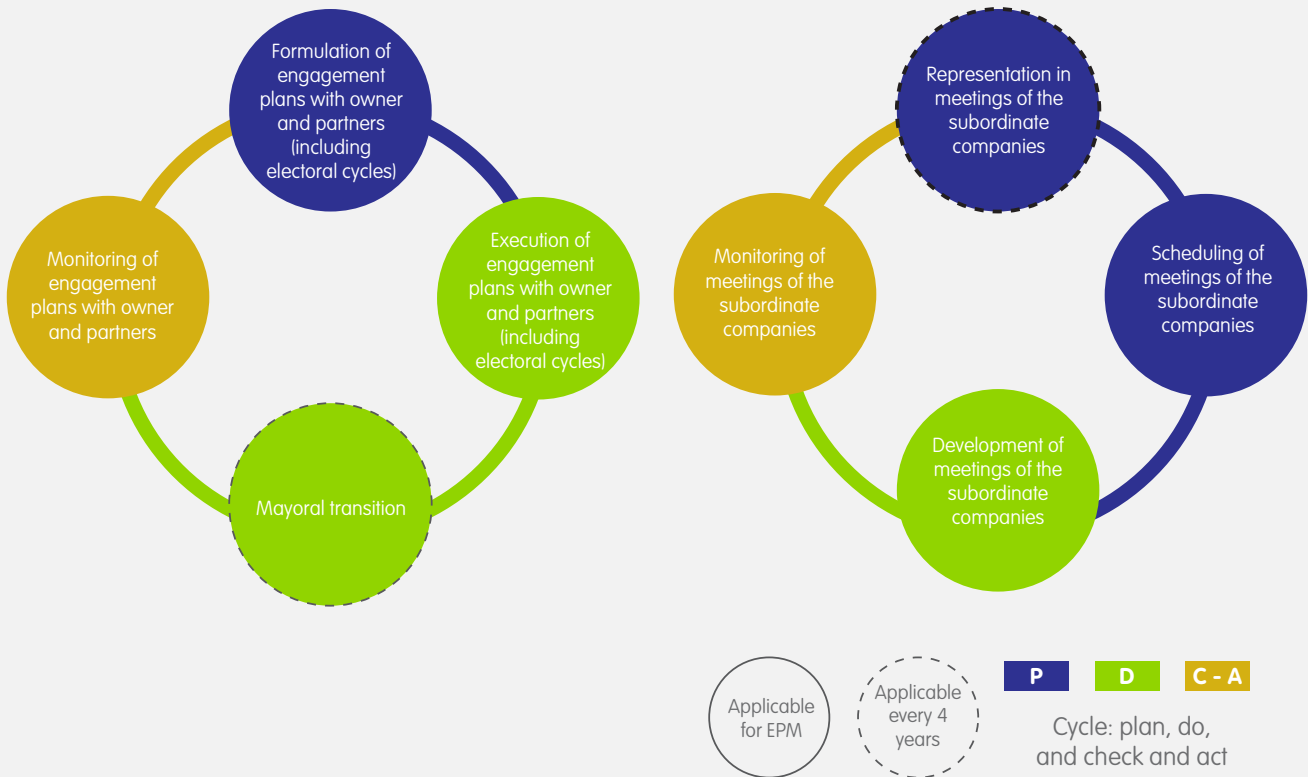


## Ownership

### Composition, management, and assessment of governance bodies

#### Practices of EPM with its owner and of EPM as majority shareholder

#### Practices of the subordinate companies of Grupo EPM

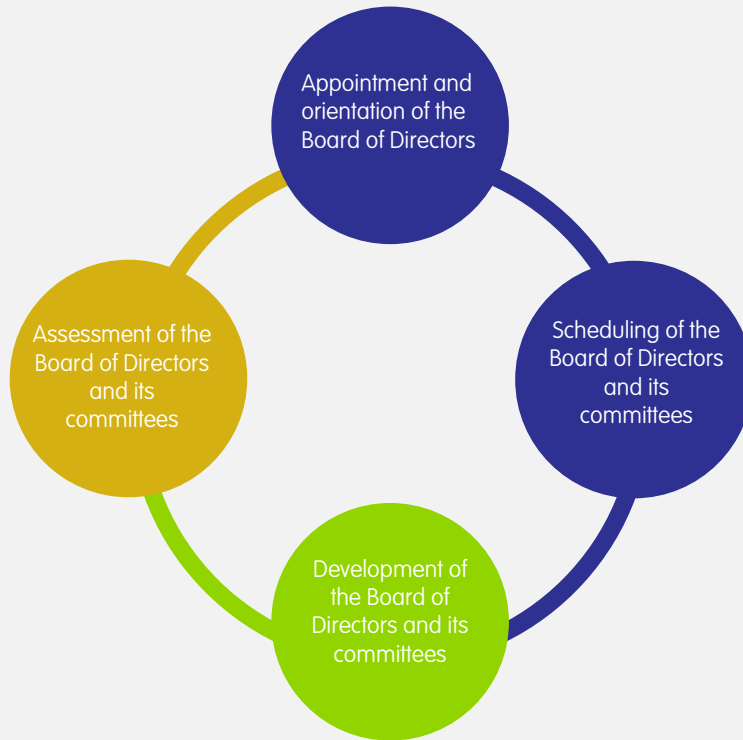


Graphic of framework for action detailing ownership.

## Direction

Composition, management, and assessment of governance bodies

Practices of EPM and the subordinate companies  
of Grupo EPM



**P** **D** **C - A**

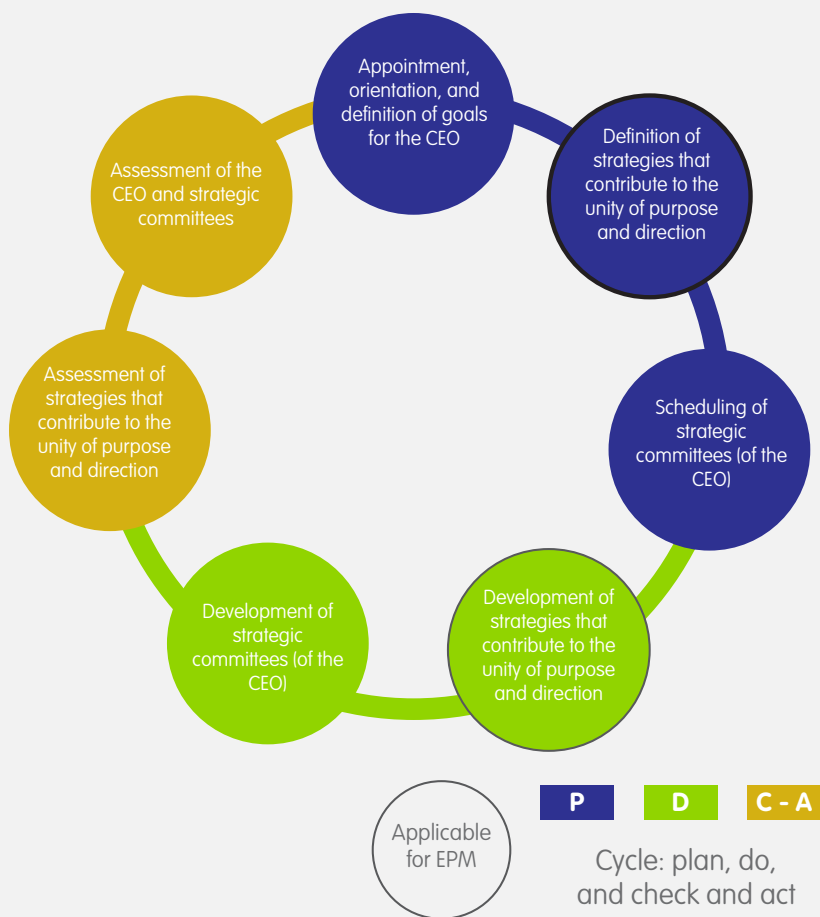
Cycle: plan, do,  
and check and act

*Graphic of framework for action detailing direction.*

## Management

Composition, management, and assessment of governance bodies

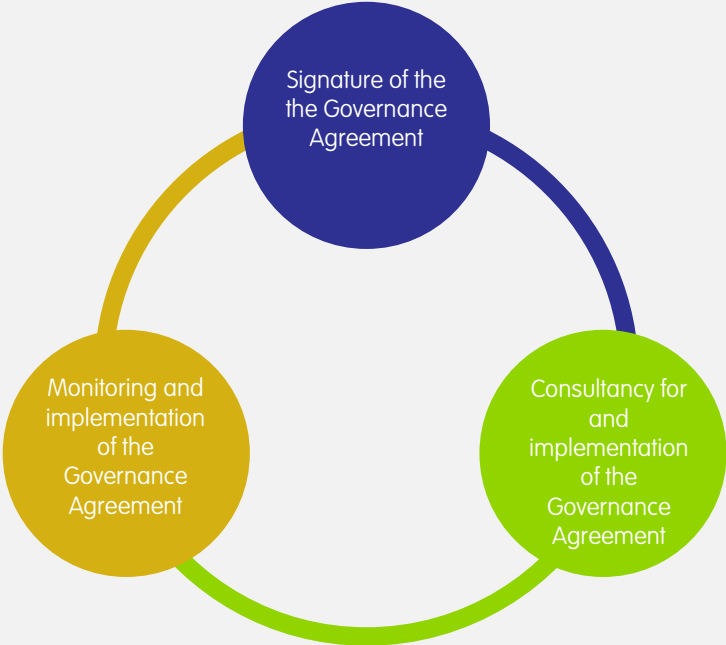
Practices of EPM and the subordinate companies of Grupo EPM



Graphic of framework for action detailing management.

Management of engagement among companies of Grupo EPM

Practices of EPM and the subordinate companies of Grupo EPM



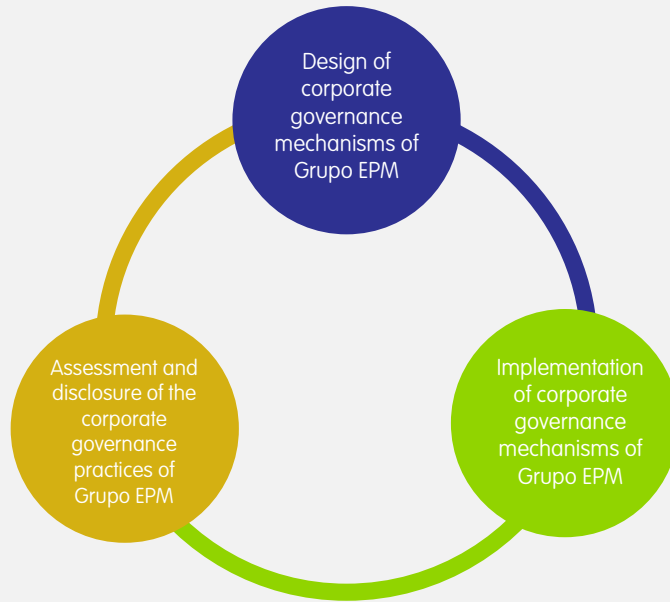
**P** **D** **C - A**

Cycle: plan, do,  
and check and act

*Graphic of framework for action detailing management of engagement among companies of the group.*

Development, training, and disclosure of governance practices of Grupo EPM

Practices of EPM and the subordinate companies of Grupo EPM



**P** **D** **C - A**

Cycle: plan, do, and check and act

*Graphic of framework for action detailing development, training, and disclosure of governance practices of Grupo EPM.*

## — Control mechanisms and accountability



Regulation, self-regulation, and control mechanisms ensure compliance with the rules that limit the exercise of the functions of each governance body of the organization; therefore, implementing these mechanisms in the framework of action of corporate governance is essential, since they contribute to the existence of checks and balances in the General Framework of Corporate Governance.

For Grupo EPM, ensuring the existence of the aforementioned mechanisms is of utmost importance; in consequence, it has internal and external controls. These controls include all those implemented by the bodies that by law exercise control, as well as voluntary measures that monitor the status of control practices in an impartial, independent, and objective manner, such as the assessment conducted by Transparencia por Colombia, the audit of the execution of the Annual Plan of Corporate Governance Activities, and the control exercised by the Financial Superintendency of Colombia and investors, among others. Likewise, the General Framework of Corporate Governance interacts with other management systems implemented, to promote a culture of risk management and controls, ethical management, compliance, among others, which strengthen control environment in the group.

In addition to the practices adopted within the control environment, bringing the company's management closer to citizens and, in general, to stakeholders is a priority of Grupo EPM, so that they can verify compliance with the best practices of corporate governance, since they are guarantors of the preservation of the value creation of the company.

Therefore, accountability completes the control environment described above, where, by means of timely, clear, and transparent communication mechanisms, Grupo EPM seeks to promote the construction of social capital that favors the durability of good business practices. In this way, the accountability takes place in practices such as the management of ethics, culture, and value; the disclosure of timely, complete, and available information to stakeholders and the market in general; the participation of citizens; the disclosure of conflicts of interest; and the classification of corporate governance standards by international external organizations such as risk rating agencies.

— **Corporate governance verification**



In accordance with the planning and results of the different assessments defined in the framework for action, progress is monitored, deviations are identified, and improvement actions that favor the achievement of the objectives and the strengthening of the level of maturity of Grupo EPM in terms of corporate governance are implemented.

— **Document structure of the General Framework of Corporate Governance of Grupo EPM**

The documentation of the practices that arise from the General Framework of Corporate Governance are organized as follows:

Level of the General Framework of Corporate Governance	Document that formalizes the corporate governance practice	Criterion to issue and formalize the document
General framework	Code of Corporate Governance	The document is projected in EPM, submitted for consideration, and formalized in the respective governance body of each company of the group.
Framework for action	Guides, rules, manuals, instructions, protocols, among other documents issued by the governance body in accordance with the authority or by the Corporate Governance Unit	The documents containing the practices are projected in EPM, submitted for consideration, and formalized in the respective governance body of each company. The documents containing the management and structuring of the General Framework of Corporate Governance—for example, the instructions to conduct the governance assessment, the instructions to enter into and manage the agreements, the application of the board’s assessment methodology, the application of the CEO’s assessment methodology—are projected and formalized in the Corporate Governance Unit of EPM, submitted for consideration, and adopted in the companies of the group through the mechanisms defined by the Governance Agreement.

The documents issued and the records resulting from the execution of the corporate governance practices are handled in accordance with the document management defined by each company of Grupo EPM.



## Annex 2: Compliance with the code

The compliance with the Code of Corporate Governance is published in detail on the website of EPM. To see it [click here](#).

The compliance with the Code of Corporate Governance is indicated as follows:

Section of the Code of Corporate Governance of EPM and Grupo EPM	Compliance	Criterion to issue and formalize the document
Introduction	100%	Compliance is detailed in each section.
Ownership of EPM and relationship with the Municipality of Medellín	100%	Compliance is detailed in each section.
Directorate – Board of Directors of EPM	100%	Compliance is detailed in each section.
Management – Senior Management of EPM	100%	Compliance is detailed in each section.
Grupo Empresarial EPM	100%	Compliance is detailed in each section.
Control structure in Grupo EPM	100%	Compliance is detailed in each section.
Corporate social responsibility in Grupo EPM	100%	The Sustainable Development Management of EPM leads the CSR for the group, from the definition of strategic elements to the monitoring of progress in management. During 2019, the main management for the group was to link the sustainability model with the strategic planning and to start assessing the contribution to the Sustainable Development Goals.

Section of the Code of Corporate Governance of EPM and Grupo EPM	Compliance	Criterion to issue and formalize the document
Ethical management in Grupo EPM	100%	The code of ethics has been approved by all the companies of the group; in 2019, the main achievements are summarized in the annual corporate governance report.
Transparency and disclosure of information	100%	Compliance is detailed in each section.
Engagement with investors	100%	Compliance is detailed in each section.
Related party transactions in Grupo EPM	100%	EPM has the financial policy, the manual of financial and accounting information guidelines in accordance with the IFRS, which includes the related party guideline.
Compliance with the code, availability, validity, reforms, and disclosure	100%	Compliance is detailed in each section.
<b>Level of compliance</b>	<b>100%</b>	<b>At the end of 2019, all the provisions set forth in the code were observed.</b>

## Annex 3: Context on the Relations Framework Agreement

The Relations Framework Agreement<sup>5</sup>, signed by EPM and the Municipality of Medellín in 2007, reflects the common goal of these two entities of creating conditions of business management that enable sustainability and value creation for their stakeholders, but, especially, that make EPM a viable source of revenue for the city of Medellín.



<sup>5</sup> Link to the Relations Framework Agreement:

<https://www.epm.com.co/site/Portals/5/documentos/InformacionRelevante/1.%20Convenio%20marco%20de%20relaciones.pdf>

## Annex 4: Résumés of the members of the Board of Directors



**Federico Gutiérrez Zuluaga**  
Mayor of Medellín

## Chairman of the Board of Directors of EPM

**(Since January 1, 2016)**  
**Non-independent**

Civil engineer, specialist in senior management and in political sciences.

Experienced in public administration.

### Education

Bachelor's degree in Civil Engineering | Universidad de Medellín (Colombia).

Specialization in Senior Management | Universidad de Medellín (Colombia).

Specialization in Political Sciences | Universidad Pontificia Bolivariana (Colombia).

### Experience

- Mayor of Medellín (2016-2019).
- Member of the Council of Medellín (2004–2007) – (2008–2011).

### Accolades

- Best Leaders in Overcoming Poverty award, category Capital Cities. Colombia Líder (2018).
- Outstanding Young Man of the Year, category Political, Legal, and Government Affairs. Junior Chamber Colombia (2009).



## Alberto Arroyave Lema

### Participation and social control

## Member of the Board of Directors of EPM

**(Since February 22, 2008)  
Independent**

Committed to constructive city processes based on community and social participation, with the purpose of promoting proposals and ideas that make a special contribution to the improvement of the provision of residential public utilities and the well-being of communities.

### Education

Bachelor's degree in Sociology | Universidad de Antioquia (Colombia).

### Experience

- Control member of the committee for development and social control of residential public utilities.
- Occupational and social consultant.
- Member of the committee for public policies of social organizations of Medellín.
- Member of different educational and academic committees in Medellín.
- Founder and editor of local newspapers.
- Member of the Council of the Municipality of Apartadó.



## Andrés Bernal Correa

### Business and financial management

## Member of the Board of Directors of EPM

**(Since February 6, 2012)  
Independent**

MBA with experience in business creation, growth strategies, M&A, financing, and operational and tax optimization.

Experienced in senior management positions in the financial and insurance sector.

Member of boards of directors of important national and international companies.

### Education

Bachelor's degree in Business Administration | Universidad Eafit (Colombia).

Master's degree in Business Administration | Babson College (USA).

Course on strategic planning | MIT (USA).

### Experience

- CEO of Group Orbis S.A.
- Vice president of Financing and Strategic Development of Sura Asset Management (2012–2017).
- Vice president of Financing and Investments of Grupo Sura S.A. (2004–2012).
- Corporate Investments manager of Corfinsura S.A. (2001–2004).
- Corporate Finance manager of Corfinsura S.A. (2000–2001).
- Project manager of Corfinsura S.A. (1996–1999).



## Carlos Raúl Yepes Jiménez

### Financial management and CSR

## Member of the Board of Directors of EPM

**(Since July 6, 2016)  
Independent**

Lawyer specialized in Business Law with experience in senior management positions in private companies and the banking sector.

CSR consultant.

Leader of social initiatives and projects that contribute to the transformation of communities.

Member of boards of directors of important national companies.

### Education

Bachelor's degree in Law | Universidad Pontificia Bolivariana (Colombia).

Specialization in Business Law | Universidad Externado de Colombia (Colombia).

Complementary education | University of Delaware; Kellogg School of Management; IESE Business School; and Yale School of Management (USA).

### Experience

- CEO of Grupo Bancolombia (2011–2016).
- Vice president of Corporate Affairs of Cementos Argos (2003).
- Legal director and auditing vice president of Banco Industrial Colombiano (1994).

### Accolades

- One of the Best 20 Leaders in Colombia. Fundación Liderazgo y Democracia and Revista Semana (2015).
- Transforming Leader. Revista América Economía (2014).
- Best Renowned Leader in Colombia. Merco survey (2014).
- Best Business Leaders in Colombia. Revista Semana (2013).
- Business Owner of the Year. La República newspaper (2012).
- Appointment as ambassador of the environment. Shared responsibility program between the United Nations Office on Drugs and Crime and the Colombian Directorate against Narcotics (2011).



## Claudia Jiménez Jaramillo

### Public and legal management

## Member of the Board of Directors of EPM

**(11/19/2010 – 12/07/2011)**  
**(Since January 21, 2016)**  
**Independent**

PhD in Law, with a diploma in International Public Administration, master in Internal Public Law, and specialized in Administrative Law.

Experienced in senior management positions in the public and private sectors, as well as in positions of tax consultancy, financial investments, and economic law.

Member of boards of directors of important national and international companies.

Graduate professor of social security, economic law, and transport.

### Education

PhD in Law | Université Paris 2 Panthéon-Assas (France).

Diploma in Public Administration | École Nationale d'Administration (France).

Master's degree in Public Law – Specialization in Administrative Law | Université Paris 2 Panthéon-Assas (France).

### Experience

- Public and economic law consultant.
- Financial and tax consultant.
- Executive director of the Large-Scale Mining Sector Association (SMGE, as per its acronym in Spanish) (2011–2014).
- Consultant minister of the Presidency of the Republic of Colombia (2008–2010).
- Colombian ambassador in Switzerland and Liechtenstein (2006–2008).
- Director of the Presidential Program for the Renewal of Public Administration in the Colombian Planning Department (2002–2005).

### Accolades

- One of the 500 Leaders of the Private Sector in Colombia. La Nota Económica magazine (2014–2015).
- One of the 10 Executives of the Year. Junior Chamber International (2004).





**Elena Rico Villegas**  
Public utilities management

## Member of the Board of Directors of EPM

**(Since January 21, 2016)  
Independent**

Electrical engineer specialized in finance, expert in management systems, and with extensive experience in project management and structuring.

Experienced in strengthening and increasing business competitiveness, innovation in the industry, and formation of collaborative networks.

### Education

Bachelor's degree in Electrical Engineering | Universidad Pontificia Bolivariana (Colombia).

Specialization in Finance | Universidad Eafit (Colombia).

### Experience

- Consultant on power generation, transmission, and distribution projects.
- Consultant on mass transit and telecommunications projects.
- Manager of the International Electrical Sector Trade Fair (FISE, as per its acronym in Spanish) (2007–2016).
- Director of the Energy Cluster (2006–2014).
- Design engineering and auditing of Empresa Antioqueña de Energía S.A. E.S.P. (1979–1981).



## Gabriel Ricardo Maya Maya

### Legal management

## Member of the Board of Directors of EPM

(Since August 17, 2006)  
Independent

Lawyer specialized in economic law.

Experienced in legal and administrative consultancy in the public and private sectors.

Member of boards of directors and administrative councils of companies from different sectors.

### Education

Bachelor's degree in Law | Universidad de Medellín (Colombia).

Specialization in Business Law | Universidad Externado de Colombia (Colombia).

### Experience

- Business law consultant.
- Member of administrative and consulting councils of Promotora Piccolo S.A., Qpros S.A.S., Transportes LAFE S.A.S., Laminaire S.A.S., and Decormaquilas S.A.S.
- Trade executive of the Antioquia branch of the Colombian Federation of Fuel and Energy Distributors (abbreviated Fendipetróleo in Spanish).
- Representative of the business and productive sectors of Antioquia in the Constitutional Convention of Antioquia.
- Technical secretary for the transparency pact of the Medellín Mayor's Office and the Antioquia Governor's Office (2004).
- Judge of the Antioquia Police Department, Antioquia's Government Secretariat, Antioquia Governor's Office.

### Publications

- *Cartilla para entender la UGPP* (Handbook to Understand the Unit for Pension Management and Parafiscal Contributions of Social Protection (UGPP, as per its acronym in Spanish). Diké publishing house. 2016.
- Razones y beneficios para constituirse o transformarse en S.A.S. (Reasons and Benefits to Incorporate or Transform into a Sociedad por Acciones Simplificada (simplified joint-stock company) pursuant to Act 1258 of 2008). Diké publishing house. 2010.



## Javier Genaro Gutiérrez P.

### Public utilities management

## Member of the Board of Directors of EPM

**(Since March 9, 2016)  
Independent**

Civil engineer specialized in finance. Experienced in senior management positions.

Member of boards of directors of important national and international companies.

### Education

Bachelor's degree in Civil Engineering | Universidad de los Andes (Colombia).

Specialization in Finance | Universidad Eafit (Colombia).

### Experience

- CEO of Interconexión Eléctrica S.A. E.S.P. (1992–2007).
- President of Ecopetrol S.A. (2007–2015).
- President of the Regional Energy Integration Commission (CIER, as per its acronym in Spanish) (1995–1997).
- Professor.

### Accolades

- Excellence award, category Internationalization. Revista América Economía (2005).
- One of the Top 10 Executives of the Year. La República newspaper (2005)
- Best Business Leader. Portafolio (2002).



## Manuel Santiago Mejía Correa

### Business management

## Member of the Board of Directors of EPM

**(Since April 30, 2012)  
Independent**

MBA with experience in senior management positions in the public and private sectors.

Member of boards of directors of important national public companies.

### Education

Bachelor's degree in Economics | Universidad de Antioquia (Colombia).

Master's degree in Business Administration | Southern Illinois University (USA)

### Experience

- Manager of Colombiana de Comercio S.A.
- Secretary of Treasury of Medellín (1980–1982).

## Annex 5: Statement by the Board of Directors of EPM on the performance of the CEO

In its session held on March 26, 2019, the Board of Directors of EPM, in the performance of its duties for the strengthening of and the compliance with corporate governance practices, evaluated the performance of Jorge Londoño De la Cuesta, CEO of EPM and leader of Grupo EPM, considering the results of 2018 described in its management report, as well as the assessment of the management style reflected in his actions, which are proof of the organizational values in the fulfillment of the group's goals.

It is important to note that, except for the Mayor of Medellín, Federico Gutiérrez Zuluaga, the members of the board exercise our functions with total autonomy before the management and the Municipality of Medellín as the owner of the company.

We also highlight that EPM is and will continue to be a one-hundred-percent public company at the service of all citizens.

The year 2018 brought enormous challenges due to the contingency of the Ituango hydroelectric project, a transcendental infrastructure work for Colombia, but also a regional development initiative that benefits 12 municipalities directly and over 160,000 people in its area of influence, not only through job generation, but through investments in institutional strengthening and the contribution to education, culture, residential public utilities and the strengthening of productive projects among communities, within the framework of the corporate social responsibility policy. With an optimistic attitude and immense gratitude for the support from so many people and institutions, we can affirm that we are making progress with the recovery of the project, committed to providing the country with the electrical energy that it requires for its development.

The board of directors recognizes not only the company's excellent financial and operational performance under the direction of Jorge Londoño De La Cuesta, but also his leadership capacity in facing the toughest year in the company's history, demonstrating great balance and exemplary integrity to address complex situations in a calm manner and transmitting peace of mind to the teams. His determination, dedication, commitment, and responsibility, added to his enormous hard work, have allowed him as a human being and professional to keep going without giving up, despite the adversities on all fronts. His exceptional human qualities are undoubtedly a hallmark that will forever mark the history of this institution.

In particular, we want to highlight how Jorge Londoño has handled the contingency of the Ituango hydroelectric project. He has always been present in every situation that has required attention and has permanently supported the internal and external teams, with ability and determination to make difficult and risky decisions, attentive to respond to all the requirements from various organisms and stakeholders, and with a transparent, effective, and accessible information to every audience, prioritizing always the life of the people, the environment, and the project. Today, thanks to the work of our CEO and his team, we are optimistic about the definitive recovery of the project and the possibility of being able to meet the commitments that we have acquired with Colombians.

Grupo EPM is an example of perseverance in its business purpose and a symbol of strength and leadership supported by principles and values. It has a history that has allowed it to overcome different situations, strengthen its spirit, and make its organizational culture evolve, seeking to remain in time and grow through sustainability criteria. The presence of Grupo EPM in Antioquia, in several regions of Colombia, and in different Latin American countries represents the materialization of a business strategy with a long-term vision, which has contributed to maintaining its financial strength and to the development of the territories where it operates, by generating well-being, opportunities, and better quality of life for the people.

Among the main financial results obtained through its businesses and affiliate companies, the group achieved revenues amounting to COP 16.3 trillion, with a 9% increase compared to the previous year; an EBITDA amounting to COP 5.1 trillion, 8% higher than that of 2017; and a period result of COP 2.4 trillion, which means an increase of 4% compared to 2017. These results, in general terms, are in line with and, in some cases, exceed the goals proposed for 2018. In turn, the EPM parent company achieved revenues amounting to COP 8.2 trillion, with a 10% increase compared to the previous year; an EBITDA amounting to COP 3.3 trillion, 7% higher than that of 2017; and a net profit of COP 2.3 trillion, which means an increase of 7%, results that continue to grow and exceed the goal we set for 2018.

Pursuant to the principle of sustainability, EPM made transfers during 2018 to its owner, the municipality of Medellín, so that they are used for social investment and the payment of public lighting, in accordance with the provisions of Agreement 069 of 1997. These transfers amounted to COP 1.5 trillion (including the alienation of shares of Isagen).

Grupo EPM has a positive impact reflected in the economic added value creation amounting to COP 8.6 trillion, which is distributed as follows:

- Reinvestment in the company 26%

- Owner 17%
- Goods and services suppliers 17%
- Grupo EPM people 16%
- Financial suppliers 14%
- State 6%
- Community and environment 3%

The previous results have been obtained within the framework of some categories known as “4C+1G” (closeness, coverage, consolidation, care for the environment, and growth) around which the CEO will report on his management. Through this statement, we emphasize the regional initiatives, in Urabá and Eastern Antioquia; the achievements related to the Unidos por el Agua (United for Water) program in Medellín, which closed the year with a total of 23,068 homes connected to the water supply and sewerage services; and various initiatives implemented by the national affiliates, which improve the universalization of public utilities. We also highlight the accumulated results in the protection of watersheds, which have exceeded the goals set; the progress made with the Sanitation and Wastewater Management Plan in Medellín; and the initiatives to promote sustainable mobility. All these initiatives reaffirm our commitment to the city, the department, and the country. Moreover, part of the results include a huge effort to save costs and expenses, austerity in the operation of the entity, and some shifts in non-strategic investments for the near future.

In the second half of 2018, an adjustment was made to the group’s strategic planning, in which the following aspects were prioritized:

1. Recover the Ituango hydroelectric project.
2. Obtain sources of liquidity.
3. Make businesses profitable.
4. Grow based on the initiatives within the framework of the Vision 2025 prospective exercise.
5. Significantly contribute to the evolution of the organizational culture.

The board of directors and the management team, headed by the CEO, will work together during 2019 to achieve a sound result in the main future challenges of Grupo EPM, both in terms of the recovery of the Ituango hydroelectric project, in the continuity of important social projects such as Unidos por el Agua and Unidos por el Gas (United for Natural Gas), as well as in the other focal points of its strategic planning. This will be done following a path that will be marked by innovation, digital transformation, the development of power generation projects from non-conventional renewable sources, new models, and additional services to offer solutions for homes and businesses. These initiatives will lead to efficiency in the operation and synergy between the different businesses, among others, thus strengthening the performance as a business group.

Receive, Mr. Londoño, on behalf of the Board of Directors of EPM, our most sincere congratulations and our gratitude for the work you and your team do.

Signed

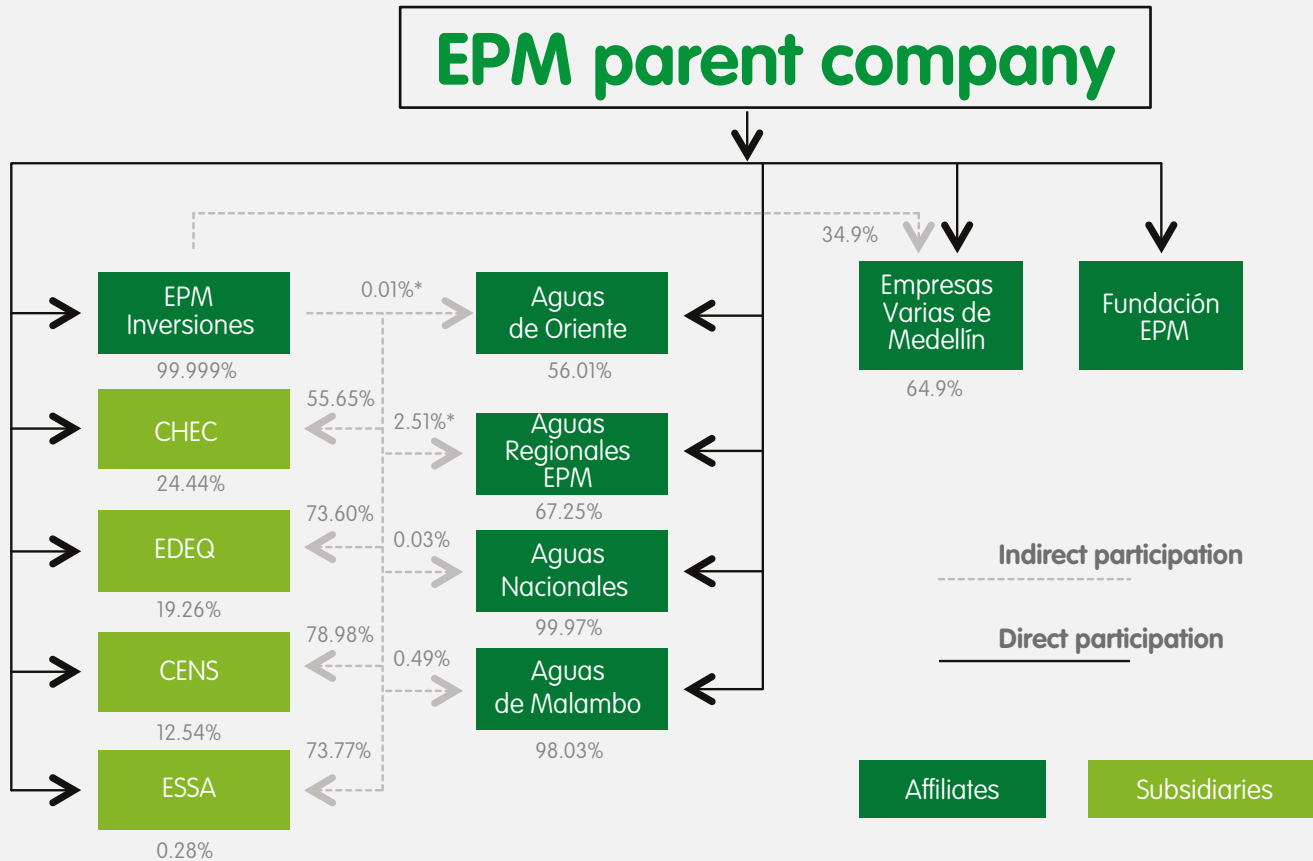
**Claudia Jiménez Jaramillo**

Chairwoman of the Management  
Committee of the Board of Directors of EPM

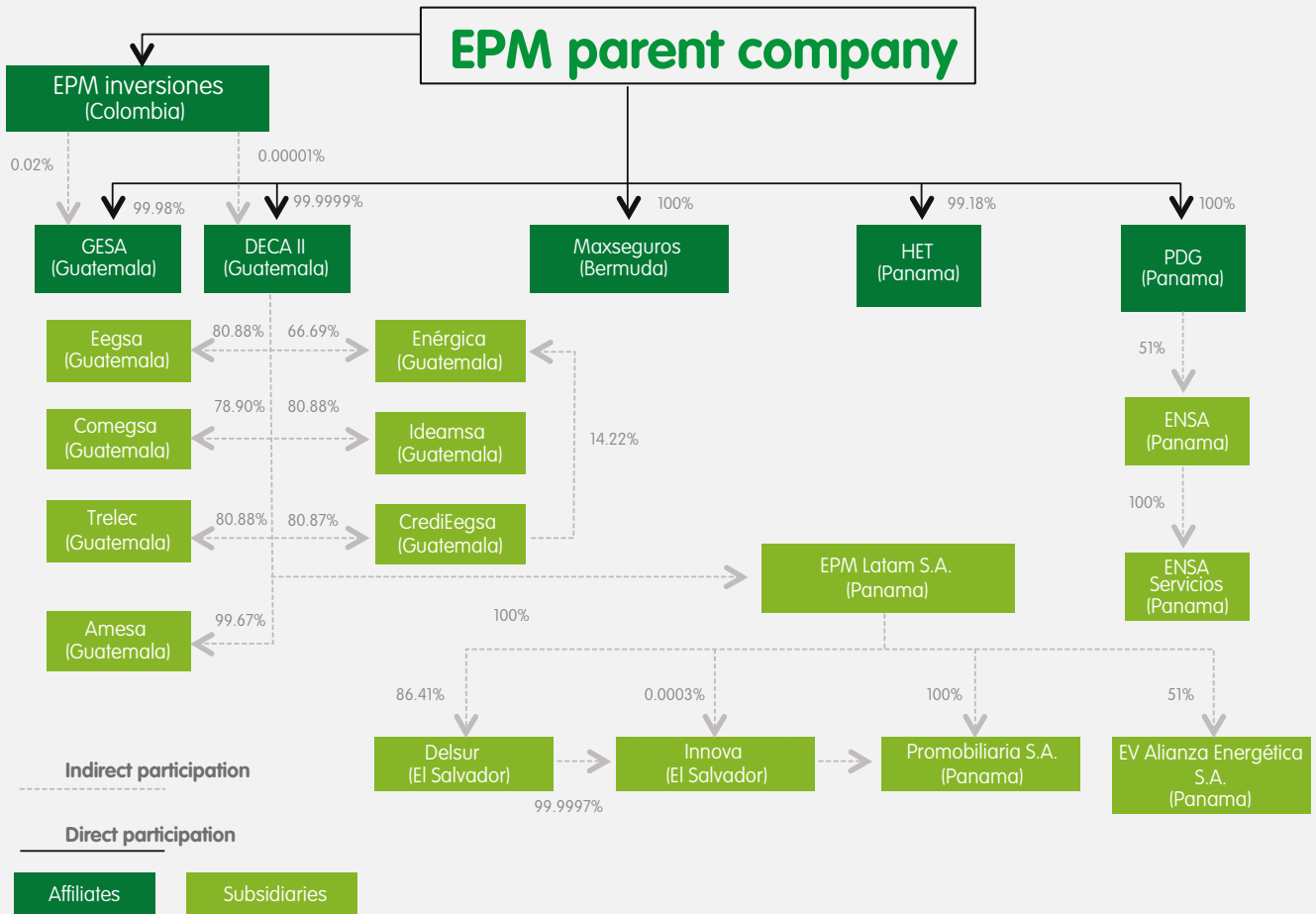


## Annex 6: Grupo EPM's shareholding structure

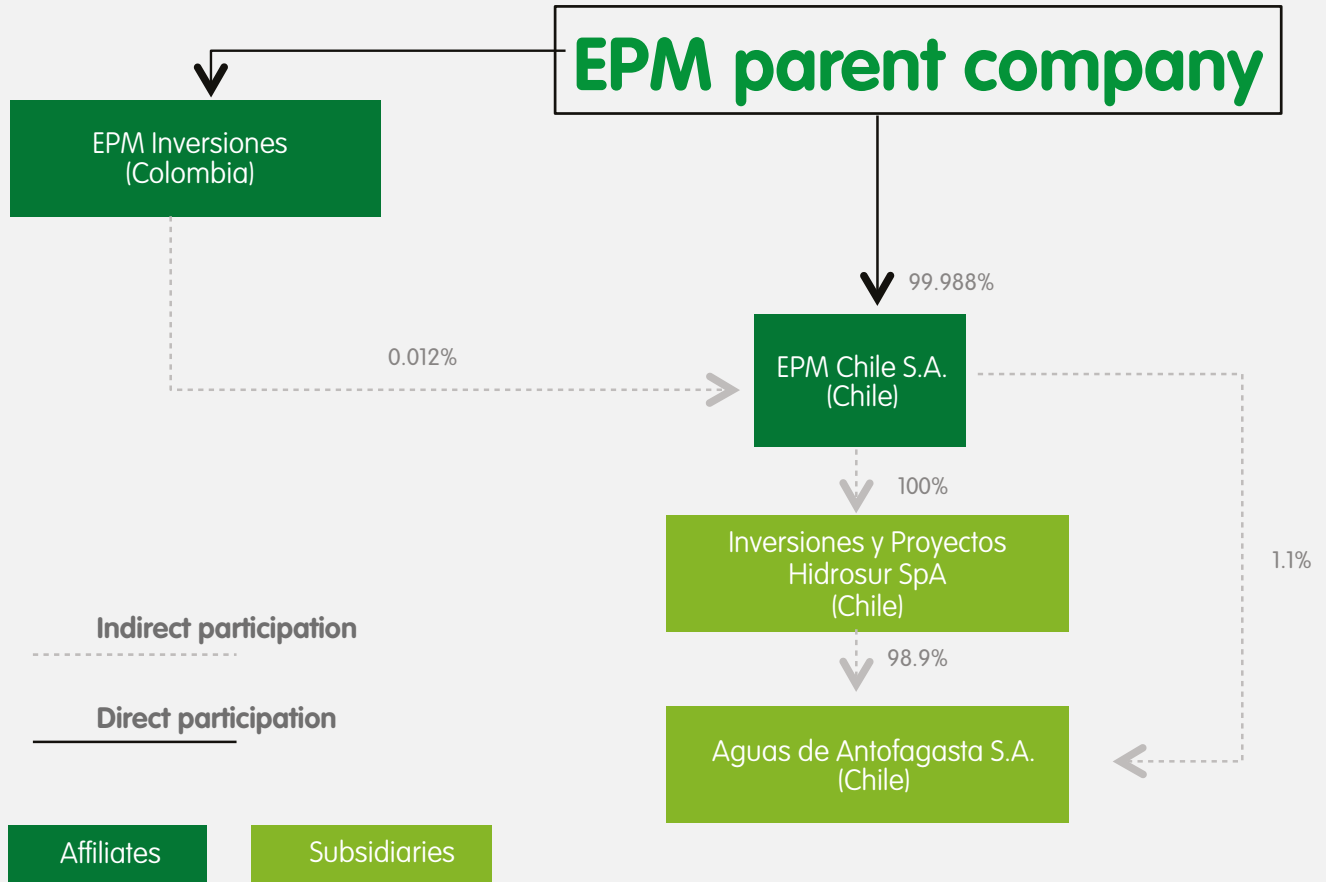
### Affiliates and subsidiaries in Colombia



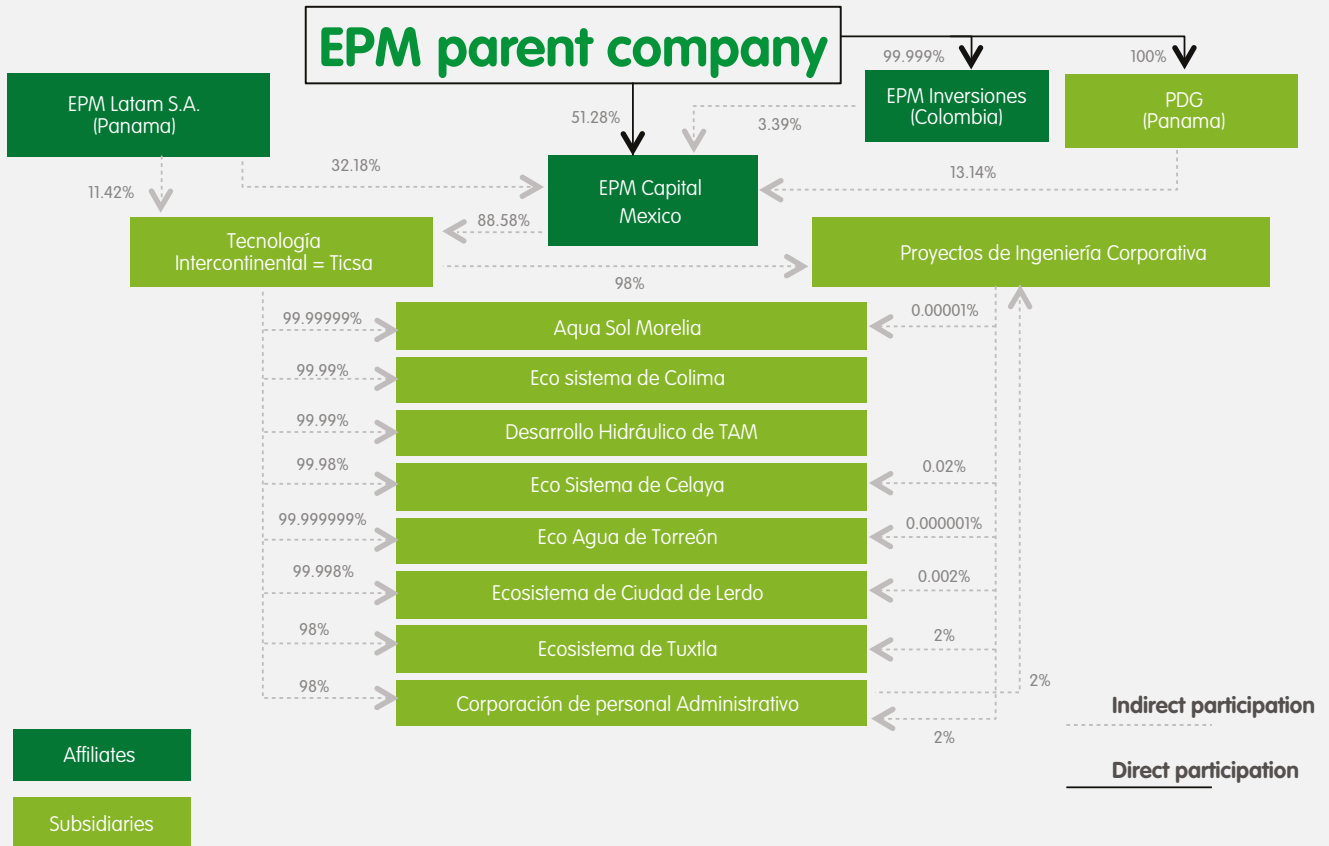
Affiliates and subsidiaries in Central America and the Caribbean



Affiliates and subsidiaries in Chile



Affiliates and subsidiaries in Mexico



## Annex 7: Composition of boards of directors of Grupo EPM for the 2019–2020 period

Colombian energy companies			
Company	Position	Name	Category
EDEQ	<b>1</b>	<b>Juan Felipe Valencia Gaviria</b>	<b>Internal</b>
	2	Juan Carlos Duque Ossa	Internal
	3	Diego Humberto Montoya Mesa	Internal
	S1	Juan Rafael López Foronda	Internal
	S2	Blanca Liliana Ruiz Arroyave	Internal
	S3	Carlos Mario Jaramillo Duque	Internal
CHEC	<b>1</b>	<b>Juan Felipe Valencia Gaviria</b>	<b>Internal</b>
	2	Juan Carlos Duque Ossa	Internal
	3	Diego Humberto Montoya Mesa	Internal
	<b>4</b>	<b>Gilberto Saffón Arango</b>	<b>External</b>
	<b>5</b>	<b>Governor of Caldas</b>	<b>Partner</b>
	S1	Juan Rafael López Foronda	Internal
	S2	Blanca Liliana Ruiz Arroyave	Internal
	S3	Alberto Mejía Reyes	Internal
	S4	Carlos Mario Jaramillo Duque	Internal
S5	<b>Mayor of Manizales</b>	<b>Partner</b>	
ESSA	<b>1</b>	<b>Inés Helena Vélez Pérez</b>	<b>Internal</b>
	2	Juan Felipe Valencia Gaviria	Internal
	<b>3</b>	<b>Governor of Santander</b>	<b>Partner</b>
	S1	John Jairo Celis Restrepo	Internal
	S2	Juan Carlos Duque Ossa	Internal
	S3	<b>Governor's delegate</b>	<b>Partner</b>
CENS	<b>1</b>	<b>Inés Helena Vélez Pérez</b>	<b>Internal</b>
	2	Juan Felipe Valencia Gaviria	Internal
	<b>3</b>	<b>Governor of Norte de Santander</b>	<b>Partner</b>
	S1	Juan Carlos Duque Ossa	Internal
	S2	Jaime Alberto Villa Valencia	Internal
	S3	Carlos Mario Tobón Osorio	Internal

International energy companies			
Company	Position	Name	Category
Delsur	1	Inés Helena Vélez Pérez	Internal
	2	Carlos Mario Tobón Osorio	Internal
	3	Eric Casamiquela	External
	S1	Diego Humberto Montoya Mesa	Internal
	S2	José Enrique Salazar Velásquez	Internal
Eegsa Trecec	1	Ramiro Valencia Cossio	External
	2	Inés Helena Vélez Pérez	Internal
	3	Alejandra Vanegas Valencia	Internal
	4	Carlos Mario Tobón Osorio	Internal
	5	Raúl Edmundo Archila S	External
	S1	Diego Humberto Montoya Mesa	Internal
	S2	José Enrique Salazar Velásquez	Internal
	S3	John Jairo Celis Restrepo	Internal
	S4	Juan Rafael López Foronda	Internal
	S5	Juan Carlos Duque Ossa	Internal
Comegsa	1	Ramiro Valencia Cossio	External
	2	Inés Helena Vélez Pérez	Internal
	3	Alejandra Vanegas Valencia	Internal
	4	Carlos Mario Tobón Osorio	Internal
	5	Diego Humberto Montoya Mesa	Internal
	S1	José Enrique Salazar Velásquez	Internal
	S2	John Jairo Celis Restrepo	Internal
	S3	Carlos Mario Jaramillo Duque	Internal
	S4	Juan Rafael López Foronda	Internal
	S5	Juan Carlos Duque Ossa	Internal
DECA II	1	Ramiro Valencia Cossio	External
	2	Inés Helena Vélez Pérez	Internal
	3	Alejandra Vanegas Valencia	Internal
	4	Carlos Mario Tobón Osorio	Internal
	5	Diego Humberto Montoya Mesa	Internal

International energy companies			
Company	Position	Name	Category
Credieegsa Enérgica Amesa Ideamsa GESA	1	Ramiro Valencia Cossio	External
	2	Inés Helena Vélez Pérez	Internal
	3	Alejandra Vanegas Valencia	Internal
	4	Carlos Mario Tobón Osorio	Internal
	5	Diego Humberto Montoya Mesa	Internal
	S1	José Enrique Salazar Velásquez	Internal
	S2	John Jairo Celis Restrepo	Internal
	S3	Carlos Mario Jaramillo Duque	Internal
	S4	Juan Rafael López Foronda	Internal
	S5	Juan Carlos Duque Ossa	Internal
ENSA	1	<b>Inés Helena Vélez Pérez</b>	<b>Internal</b>
	2	Alejandra Vanegas Valencia	Internal
	3	Tatyana Aristizábal	External
	4	Federico Alfaro Boyd	Partner
	5	Julio Javier Caballero Decerega	Partner
HET	1	<b>Carlos Alberto Solano Bonnett</b>	<b>Internal</b>
	2	Luz Marina Escobar Arango	Internal
	3	Juan Carlos Castro Padilla	Internal
	S1	Alberto Mejía Reyes	Internal
	S2	Santiago Villegas Yepes	Internal
EPM Chile	1	<b>Carlos Alberto Solano Bonnett</b>	<b>Internal</b>
	2	Alberto Mejía Reyes	Internal
	3	Carlos Mario Tobón Osorio	Internal

Colombian water supply companies			
Company	Position	Name	Category
Aguas de Oriente Antioqueño	<b>1</b>	<b>Jorge William Ramírez Tirado</b>	<b>Internal</b>
	2	Edgardo Martínez Echeverri	Internal
	3	Luisa María Pérez Fernández	Internal
	4	Mayor of El Retiro	Partner
	5	Representative of the Municipality of El Retiro	Partner
	S1	León Arturo Yepes Enriquez	Internal
	S2	Silvio Triana Castillo	Internal
	S3	Juan Carlos González Ramírez	Internal
	S4	Representative of the Municipality of El Retiro	Partner
	S5	Representative of the Municipality of El Retiro	Partner
Aguas de Malambo	<b>1</b>	<b>Santiago Ochoa Posada</b>	<b>Internal</b>
	2	Edgardo Martínez Echeverri	Internal
	3	Silvio Triana Castillo	Internal
	4	Maritza Amparo Orrego Martínez	Internal
	5	Mayor of Malambo	Partner
	S1	Jorge William Ramírez Tirado	Internal
	S2	León Arturo Yepes Enriquez	Internal
	S3	Johnier Alberto Montoya Pereira	Internal
	S4	Jorge Antonio Yepes Vélez	Internal
	S5	Luis Fernando López Marín	Internal
Aguas Regionales EPM	<b>1</b>	<b>Santiago Ochoa Posada</b>	<b>Internal</b>
	2	Juan Carlos Herrera Arciniegas	Internal
	<b>3</b>	<b>Vacant</b>	<b>External</b>
	4	Vacant	Internal
	5	Representative of Antioquia	Partner
	S1	Edgardo Martínez Echeverri	Internal
	S2	Jorge Antonio Yepes Vélez	Internal
	S3	León Arturo Yepes Enriquez	Internal
	S4	Jorge William Ramírez Tirado	Internal
	S5	Representative of Antioquia	Partner



Colombian water supply companies			
Company	Position	Name	Category
Empresas P�ublicas de Rionegro - EPRio	1	<b>Jorge William Ram�irez Tirado</b>	<b>Internal</b>
	2	Le�n Arturo Yepes Enriquez	Internal
	3	Adriana Janeth Pulgar�n Piedrahita	Internal
	4	Juan Carlos Castro Padilla	Internal
	5	Luisa Mar�a P�erez Fern�andez	Internal
	S1	Luis Fernando Aristiz�bal Gil	Internal
	S2	Jorge Antonio Yepes V�lez	Internal
	S3	�ngela Vergara Jaller	Internal
	S4	Luis Fernando L�pez Mar�n	Internal
	S5	Alejandro Jos� Jaramillo Arango	Internal
Aguas Nacionales	1	Le�n Arturo Yepes Enriquez	Internal
	2	Adriana Mar�a Londo�o Carvajal	Internal
	3	Juan Carlos Castro Padilla	Internal
	S1	Jorge William Ram�irez Tirado	Internal
	S2	Johnier Alberto Montoya Pereira	Internal
	S3	Jorge Alberto Cadavid Monroy	Internal

International water supply companies			
Company	Position	Name	Category
Ticsa	1	Vacant	Internal
	2	Vacant	Internal
	3	Gabriel Jaime Betancourt	Internal
	4	Gilberto Escobedo	External
	S1	Santiago Ochoa Posada	Internal
	S2	Alejandro José Jaramillo Arango	Internal
	S3	Adriana Janeth Pulgarín Piedrahita	Internal
	Permanent guest	Luis Guillermo Suárez Navarro	External
Aguas de Antofagasta	1	Víctor Rodrigo Vélez Marulanda	Internal
	2	Vacant	Internal
	3	Santiago Ochoa Posada	Internal
	4	Luis Guillermo Suárez Navarro	External
	5	Álvaro García Hurtado	External
	Permanent guest	Gabriel Jaime Betancourt Mesa	Internal
	Permanent guest	Jorge Andrés Tabares Ángel	Internal

Sanitation companies			
Empresa	Posición	Nombre	Categoría
Emvarias	1	Santiago Ochoa Posada	Internal
	2	Gabriel Jaime Betancourt	Internal
	3	Juan Carlos Castro Padilla	Internal
	S1	Luisa María Pérez Fernández	Internal
	S2	Carlos Arturo Díaz Romero	Internal
	S3	Ángela María Ocampo Carmona	Internal
	Permanent guest	Gabriel Jaime Velásquez Restrepo	Internal

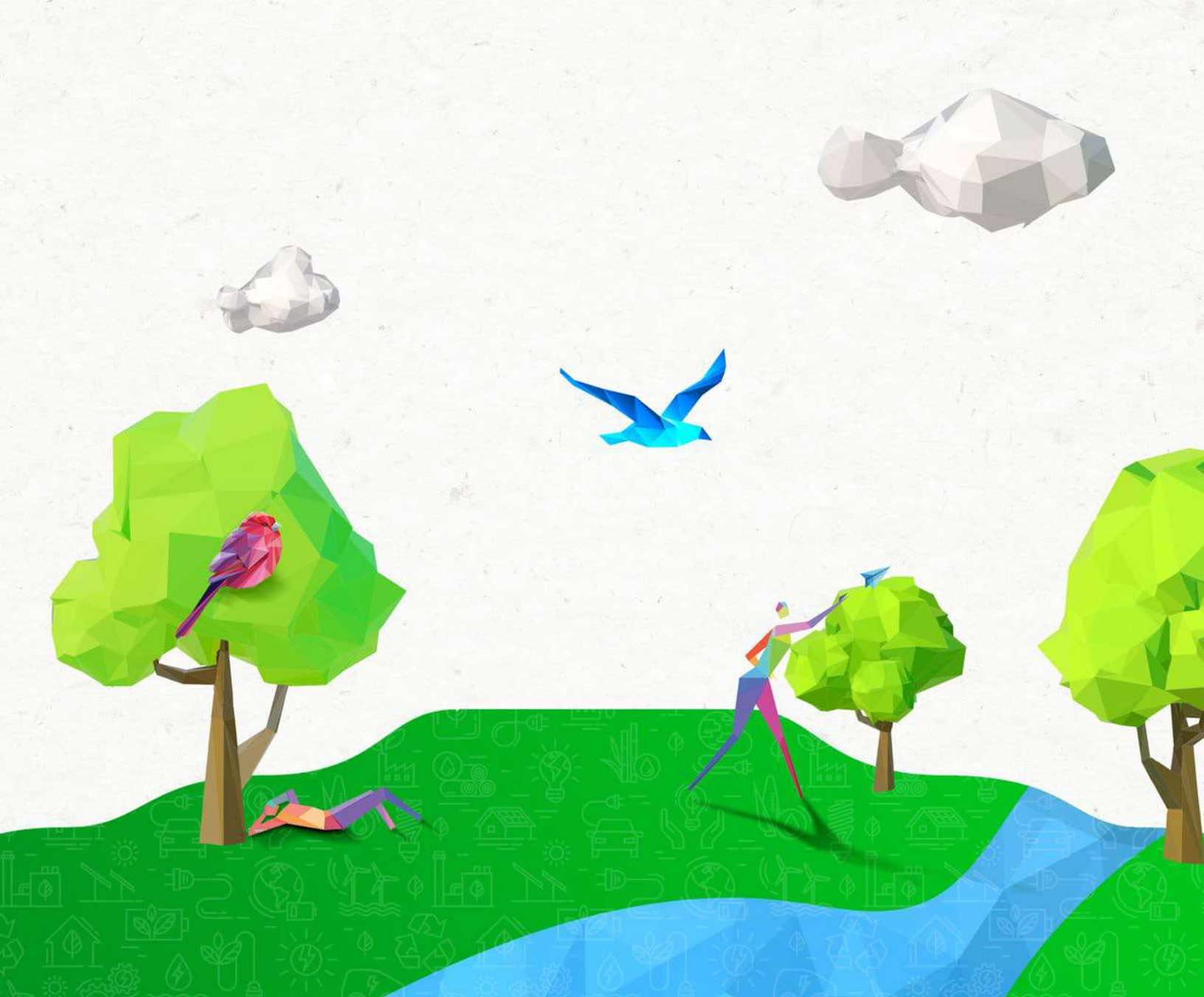
Corporate companies			
Company	Position	Name	Category
Maxseguros	1	<b>Maritza Alzate Buitrago</b>	<b>Internal</b>
	2	Jorge Andrés Tabares Ángel	Internal
	3	Jorge Mario Londoño Velásquez	External
Promobiliaria	1	<b>Alejandra Vanegas Valencia</b>	<b>Internal</b>
	2	Jorge Andrés Tabares Ángel	Internal
	3	Carlos Arturo Díaz Romero	Internal
	4	Fernando León Duque Becerra	External
	5	Ramiro Valencia Cossio	External
Fundación EPM	1	<b>Luz Mercedes Mejía López</b>	<b>Internal</b>
	2	María Inés Restrepo de Arango	External
	3	Claudia Restrepo Santamaría	External
	4	Luis Guillermo Patiño Aristizábal	Partner
	5	Valeria Restrepo Abad	Internal
	S1	Diana Rúa Jaramillo	Internal
	S2	Jorge Hernán Villa Hoyos	External

Investment vehicles			
Company	Position	Name	Category
EPM Inversiones	1	<b>Jorge Andrés Tabares Ángel</b>	<b>Internal</b>
	2	Juan Carlos Castro Padilla	Internal
	3	Ángela Vergara Jaller	Internal
	S1	Carlos Mario Giraldo Gómez	Internal
	S2	Ángela María Ocampo Carmona	Internal
	S3	Ángela María Loaiza Cortés	Internal
EPM Latam	1	<b>Carlos Mario Tobón Osorio</b>	<b>Internal</b>
	2	Juan Carlos Castro Padilla	Internal
	3	Maritza Amparo Orrego Martínez	Internal
Panama Distribución Group - PDG	1	<b>Carlos Mario Tobón Osorio</b>	<b>Internal</b>
	2	Juan Carlos Castro Padilla	Internal
	3	Ángela María Ocampo	Internal

Investment vehicles			
Company	Position	Name	Category
Inversiones y Proyectos Hidrosur	<b>1</b>	<b>Alejandro José Jaramillo Arango</b>	<b>Internal</b>
	2	Santiago Ochoa Posada	Internal
	3	Carlos Mario Tobón Osorio	Internal
EPM Mexico	<b>1</b>	<b>Juan Carlos Castro Padilla</b>	<b>Internal</b>
	2	Santiago Ochoa Posada	Internal
	3	Alejandro José Jaramillo Arango	Internal

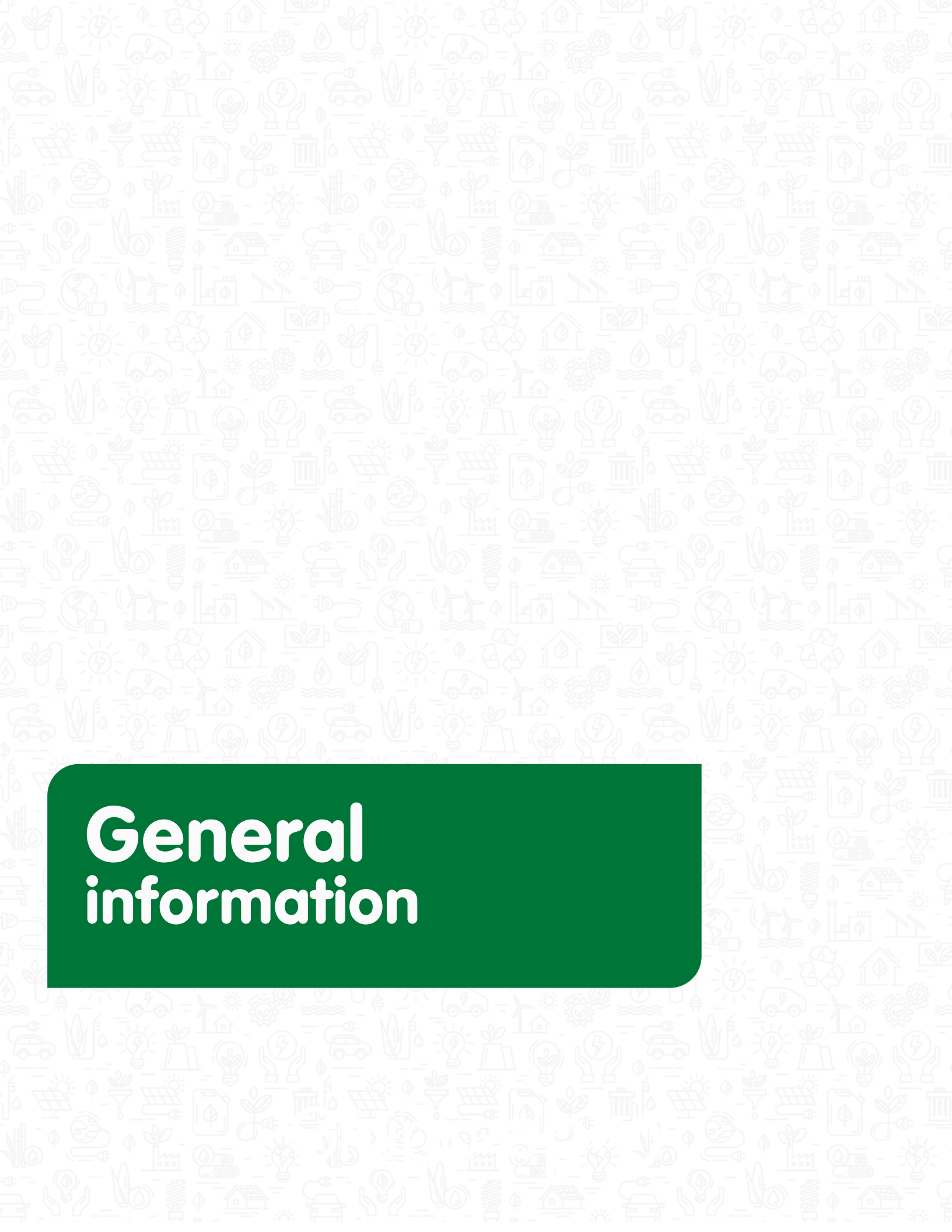
### Legends

- Bold**            Chairperson of board
- Red**             External member representing EPM
- Blue**            Member representing partners
- Gray**            Alternate member



# Social and environmental management

Grupo·epm



# General information



# Report profile

## Report Profile

EPM and Grupo EPM publish every year the information on its work in terms of sustainability.

**GRI 102-52.**

This report provides information from January 1 to December 31, 2019.

**GRI 102-50.**

The report was published on the website in May 2019.

**GRI 102-51.**

This report has been prepared in accordance with the GRI Standards: Comprehensive option.

**GRI 102-54**

This is the fourteenth EPM Sustainability Report prepared in accordance with the GRI methodology. **See GRI content index**

This sustainability report contains information on EPM and Grupo EPM and includes the financial statements of EPM and Grupo EPM. The social and environmental management contains information of the following companies of Grupo EPM: **GRI 102-45**



Country	Company	Business
Colombia	EPM	Water supply
		Sanitation
		Power generation
		Power transmission and distribution
		Natural gas
	Aguas Nacionales EPM	Water supply
	Empresa de Aguas de Oriente Antioqueño	
	Aguas Regionales	
	Aguas de Malambo	
	EPRio	
	Emvarias	Sanitation
	ESSA	Power generation
	CHEC	
EDEQ	Power transmission and distribution	
CENS		
El Salvador		Delsur
Guatemala	Eegsa	
Chile	Adasa	Water supply
Mexico	Ticsa	Sanitation
Panama	HET	Power generation
	ENSA	Power transmission and distribution

This report is in line with the Sustainable Development Goals (SDG), the Global Compact principles, the ISO 26000 standard, and the framework of the International Integrated Reporting Council (IIRC).

## Evolution of the EPM Sustainability Report

Concept	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019			
Scope	EPM								EPM and affiliates in Colombia	EPM and Grupo EPM							
Content	Sustainability Report (social and environmental topics)								Financial management								
									Social and environmental management								
									NA	Management of the CEO							
										Corporate governance							
										Management of the Board of Directors			Corporate governance				
										Management in Medellin			Review by the directorate		MIPG		
						Management self-assessment											
GRI methodology	3.0C		3.0B	3.0B+	3.1B+	3.1A+	G4 Comprehensive				GRI Standards: Comprehensive						
Assurance	Internal assurance			ICONTEC		Deloitte					KPMG						
Global Compact CoP	NA			Basic		Advanced		Advanced									
							96%	99%	95%	97%	98%	99%	NDA				
Systematization	NA								Idsos								
									NA						Idsos Analytics		
									NA	Excel standard formats						Idsos social and economic	
										Sharepoint	Web platform				NA		
Publication	Printed (FSC Standard)		Printed on recycled paper			Multimedia		Web				Web PDF					
Alignment with external initiatives	NA	GRI Global Compact								GRI							
										Global Compact							
										ODM			ODS				
										DJSI				NA			
										ISO 26000							
										NA			Integrated report				
																NTCGP 1000	
Accolades	NA									NA							
	NA							Equilibrio en la información		NA							
	NA																
	NA							Ajuste a comunicación de progreso (COP)				Pacto Global Red Colombia COP Avanzado					

The Sustainability Report includes the social and environmental management, the corporate governance management, the EPM's and Grupo EPM's financial management, and the CEO's management.

This information is annually reported to the stakeholders, the society in general, and other specific audiences through physical and virtual means.

The contents of the report were reviewed and approved by directors of the company and externally assured by KPMG, the firm that performs the external audit of EPM and the tax audit of the Grupo EPM's companies. **GRI 102-56.** For more information, see **External Assurance of the Report.**

The preparation of the report is coordinated by the Sustainable Development Management.

**Contact information:** **GRI 102-53**

E-mail: [sostenibilidad.epm@epm.com.co](mailto:sostenibilidad.epm@epm.com.co)

Phone number: (+57 4) 3802630.

Address of the parent company and EPM's headquarters: Carrera 58 # 42 – 125. Medellín, Antioquia, Colombia. **GRI 102-3**

## GRI disclosures

- 102-3** Location of headquarters.
- 102-45** Entities included in the consolidated financial statements.
- 102-50** Reporting period.
- 102-51** Date of most recent report.
- 102-52** Reporting cycle.
- 102-53** Contact point for questions regarding the report.
- 102-54** Claims of reporting in accordance with the GRI Standards.
- 102-56** External assurance.

The background of the entire page is a repeating pattern of small, light-colored icons. These icons represent various aspects of sustainability, including renewable energy (solar panels, wind turbines, light bulbs), nature (trees, leaves, water drops), recycling (recycling symbols, paper rolls), and social responsibility (hands holding a globe, people silhouettes).

# Relevant sustainability topics - Materiality

## Relevant sustainability topics - Materiality

In Grupo EPM, material or priority topics for sustainability are part of the strategic planning and support the environment analysis, the comprehensive risk management, and the business plan through the definition of challenges.

They are fundamental for managing the engagement with stakeholders and the actions related to them contribute to the achievement of the SDGs.

The SDGs outline the thematic route for the Global Development Agenda, which crystallizes the company-society relationship articulated with the materiality of Grupo EPM. See: [Articulation with the global development agenda - SDG](#).

Materiality is the process that defines the material or priority topics for the sustainability of companies and society. Matching business achievements with sustainable human development is the aspiration of a new line of business leadership that recognizes the role of companies in the common challenges of humanity.

For Grupo EPM, materiality is based on the GRI Standards and on the stakeholder engagement model implemented in EPM since 2010<sup>1</sup>, which is aligned with the principles of thoroughness, relevance, and response capacity of the AA1000 Standard.

The material topics of Grupo EPM were prioritized for each of the affiliated companies and aligned with the SDGs and the actions of the business plans. As part of the 2018 activities to update the strategic thinking on sustainability with stakeholders, the group's emphases were identified, which are those aspects that guide the management of the material topics according to the specific conditions in each territory. During 2019, the challenges defined for managing these topics were monitored.

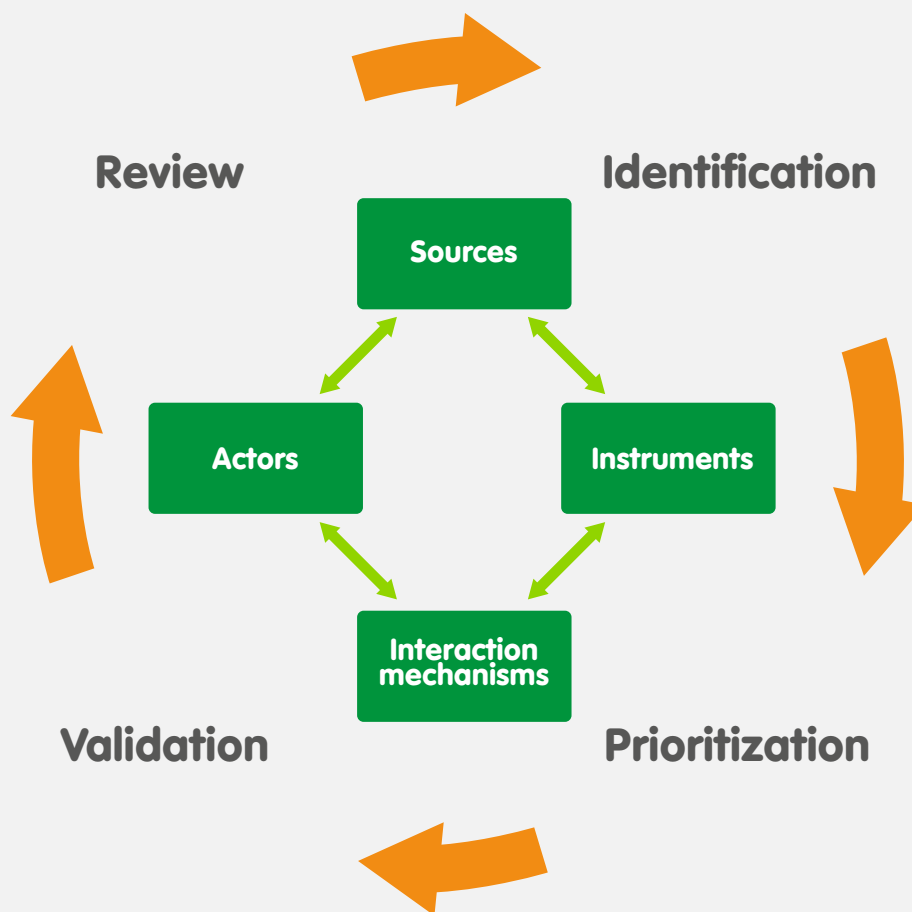
**GRI 102-46**

<sup>1</sup> The model is methodologically based on the *Practitioner's Handbook on Stakeholder Engagement*. Accountability Institute, UNEP, and Stakeholders Research Associates.

## Material topics and their emphases – Grupo EPM

Material topic	Emphasis
Access and purchasability	Public utility coverage in rural areas
	Public utility coverage in urban areas
	Migration from Venezuela
	Unserved population
Water and biodiversity	Areas of importance for water resources and environmental services
	Prevention of pollution
Quality and safety of products and services	Service continuity
	Education for sustainable production and consumption
	Legal and safe use of services
Organizational climate	Adaptability
	Organizational clarity
Responsible procurement for local development	Procurement criteria
	Generation of local capacities
Human rights	Decent work in the supply chain
Renewable energies	Offer of nonconventional renewable energies
Climate strategy	Mitigation
	Adaptation
Financial strength	Engagement with the owner
	Financial health
Fees and prices	Education and communication of the factors that affect fees
Transparency	Disclosure of information

## Procedure for identifying the materiality of Grupo EPM



### Identification of matters

In the materiality procedure, matters are a long list of outstanding aspects related to sustainability. Material topics are obtained by prioritizing the matters in that list.

In order to prepare the list of matters, the company resorted to the voices of the stakeholder groups by means of direct dialogs, in some cases, and studies on expectations, needs, satisfaction, or reputation, in other cases. Transactional interaction mechanisms, such as the ones for complaints and claims, were also used. The degree of the stakeholders' direct participation is heterogeneous because it corresponds to the engagement dynamic of each one of the group's affiliated companies that participated in the exercise, which are in different stages of evolution.

The voices of the stakeholder groups complemented the knowledge of the Grupo EPM people on their territories, as well as their experiences in the day-to-day interaction through the diverse processes of the companies.

The matters identified were contrasted with strategic planning elements of Grupo EPM, as well as with relevant global sustainability matters, in order to incorporate them if they had not been identified in prior steps, provided that they were pertinent to the group's environment and strategy. For this purpose, the following sources were considered: the thematic areas and the SDGs of the 2030 Global Development Agenda, the 2010–2017 UNDP Human Development Reports, the international social responsibility standard ISO 26000, the Dow Jones Sustainability Index, sustainability reports of outstanding companies of the industry, events on topics related to climate and human rights, and the GRI document that contains sustainability topics by sector. In this way, the group implemented the principle of completeness proposed by the AA1000 APS and adopted in the EPM stakeholders engagement model.

The resulting list of matters and related actors was subjected to subsequent processes of refining, revision, discussion, and analysis, as well as to a shortlisting, based on potential economic, environmental, and social impacts for Grupo EPM and the society, at the discretion of people who have vast knowledge on the affiliated companies and the corporate core of Grupo EPM. This is how the principle of relevance of the AA1000 APS was applied and the list of matters to prioritize was obtained.

## Prioritization of topics

The prioritization was carried out with specialists of the organization, following the prioritization criteria for material topics—a company's instrument for estimating the social, economic, and environmental value potentially created or destroyed by each topic for Grupo EPM and its stakeholders. This is how the principle of relevance was applied.

The instrument favors the convergence of criteria. With the purpose of minimizing the possibility that matters with a high importance in one of the three assessed categories present a low total rating despite having deep repercussions for sustainability, an empirical contrast of the results is carried out with people who have the capacity to visualize the impact of the priority sustainability topics on Grupo EPM, its stakeholders, and the society in general.

For analyzing the matters and topics, qualitative techniques were used and translated into numerical expressions that make it easier to understand, compare, and visualize certain features or trends, without forgetting that reality exceeds the limitations of the instruments trying to model it.



Prioritization criteria for material topics		
<p><b>Relevance of the topics for Grupo EPM</b> Impact or value of the topic for Grupo EPM.</p>	<p><b>Relevance of the topics for the stakeholders</b> Impact and value of the topic for the Grupo EPM's stakeholders.</p>	<p><b>Management potential of the topic</b> Possibilities or opportunities that the topic offers for its development.</p>
<p>It considers the strategic planning; the social, economic, and environmental aspects underlying Grupo EPM's policies; the capabilities of the companies; and the diverse time horizons.</p>	<p>It considers the expectations and needs of the stakeholders; the extent, scale, and urgency of the economic, social, or environmental impact; the closeness of the affected party; and the diverse time horizons.</p>	<p>It considers the status of the topic in the context, its development in the organization, and the mobilization of the stakeholders around it.</p>

The analysis of the management potential accounts for the application of the principle of responsiveness of the engagement model (the other two principles are completeness and relevance.)

## Validation

The Sustainable Development Management refines the final result with expert criteria. EPM's Executive Vice Presidency of Strategy and Growth is responsible for ensuring that the material topics identified are included in the Sustainability Report. The material topics are the axes upon which the departments, according to their functions, manage the engagement with each stakeholder group, during both businesses and other transversal processes.

The materiality results are communicated to the Corporate Strategic Planning and the Business Planning Departments, in order to ensure articulation with the Strategic Planning and support the context analysis, the comprehensive risk management, and the business plans.

In the Core Committee (the highest decision-making body of Grupo EPM) held on April 24, 2018, the materiality of the group was approved, that is, the relevant topics in terms of sustainability for Grupo EPM and its stakeholders.

## Review

The exercise described above was reviewed and validated in 2015 by the Management Committee of the Board of Directors of EPM and, in consequence, some adjustments were made to the material topics identified in 2014.

In 2017, the identification of material topics' emphases made it possible to review them and included the perspective of some stakeholder groups, such as customers and users, community, and suppliers and contractors, through discussions for the companies in Colombia and through secondary information for the international affiliates included in the exercise.

In 2018, the 11 material topics of Grupo EPM were defined and approved; during 2019, the main challenges in this regard were addressed. See: [Material topics](#)

**GRI 102-47**

## Risks associated with material topics

In 2010, the engagement risks for EPM were identified. In 2014, the risk methodology for Grupo EPM was applied to the material topics and, in 2015, the risks associated with each of these topics were established.

In 2018, the group's risk map was reviewed (see: [Comprehensive risk management](#)) due to the contingency in the Ituango hydroelectric project. The management of the material topics' emphases in 2019 contributed to minimize the effects of the group's risks, especially those related to building trust among stakeholders.

In 2019, the main signs regarding the engagement with stakeholders were analyzed, identifying those that should be managed as causes of some of the organization's risks.

## Special analysis of materiality considering the contingency derived from the Ituango hydroelectric project

The results of the identification of emphases and updating of material topics were reviewed considering the conditions derived from the Ituango hydroelectric project.

The material topics approved by the Core Committee in April 2018 remain valid as a sustainability guide for Grupo EPM.

In 2019, the main signs regarding the engagement with stakeholders were analyzed, identifying those with the highest intensity due to the situation in the project.

### Scope of the Sustainability Report **GRI 103-1**

The internal boundaries or materiality of the topics for the diverse areas of the organization was analyzed in the whole group. In 2018, the emphases of each material topic were established by territory in the different companies of the group. For the management of these emphases, the most significant challenges were identified and their management in 2019 can be found in each of the [Material topics](#) in the Challenges section.

The material topics are the bases to manage the sustainability; their management improves the engagement with stakeholders.

The external scope, that is, the materiality of the topic outside the organization, is expressed through the association between stakeholders and topics, which can be found at: [Stakeholder engagement](#), in the Stakeholders' topics and concerns section.

Material topics Grupo EPM 2018-2021



The position of the topics in the graph depends on their relevance for both Grupo EPM and the stakeholders, according to the prioritization criteria for the material topics.

**GRI 103-1**

### Supplementary information within the Sustainability Report

The Sustainability Report includes supplementary information regarding sustainability matters not classified as material topics. The report on these matters is preserved because it constitutes information of interest and because it responds to diverse commitments related to initiatives or assessments in which Grupo EPM has voluntarily participated and for which public information is necessary. The Sustainability Report is the most suitable means to provide this information.

**GRI 102-49**

## Restatement and correction of data given in previous reports

The following are the adjustments made to the data reported in previous years. These changes were the result of improvements to the calculation methodologies or modifications to the information systems:

### GRI 102-48

- In the financial statement by stakeholder group, environmental management costs were classified as Goods and services suppliers. As of 2019, they are classified as Community and environment. The values reclassified are COP 44,746 million in 2017 and COP 56,533 million in 2018.
- The organizational climate assessment result of Delsur was adjusted from 80 to 82 in 2018.
- The percentage of coverage in Delsur was adjusted to 87% in 2017 and from 97.00% to 95.60% in 2018, which corresponds to the departments that it serves in El Salvador (Cuscatlán, La Libertad, La Paz, San Salvador, and San Vicente). Taken from information published in 2014 by the National Energy Council at: <https://www.cne.gob.sv/tema/electrificacion-rural-2/estadisticas-de-electrificacion/>
- The 2018 figures for legal actions and complaints and claims concerning human rights in the Ituango hydroelectric project were corrected because there were errors in the information previously presented.
- The percentage of employees trained in human rights in 2017 and 2018 was adjusted due to the standardization of calculation criteria.
- The figures for incidents or grievances for damages or injuries to individuals filed in 2017 and for incidents or grievances for damages to furniture and fixtures received in 2018 were corrected due to the adjustment of the figures.
- In the table of energy consumption of the fleet and stationary equipment of Grupo EPM (MWh), the Diesel figure for 2018 was corrected due to a data purification; the same occurred in the table of the fleet and stationary equipment of EPM, where the vehicular natural gas figure for 2017 was also corrected.
- In the table of energy consumption of the fleet contracted by Grupo EPM (MWh), the vehicular natural gas figure for 2017 was adjusted due to a data purification; the same occurred in the table of the fleet contracted by EPM.



# Communication on Progress (CoP) - Global Compact

## Communication on Progress (CoP) - Global Compact

EPM manages the engagement with and commitment to its stakeholders according to the guidelines of the Practitioner's Handbook on Stakeholder Engagement by UNEP: *Accountability and Stakeholders Research Associates*.

Grupo EPM incorporates the ten principles of the United Nations Global Compact as part of its commitment to global sustainability and to its stakeholders. These actions are immersed in the organization's strategic and operative challenges in the following way:

- Human rights management is mainly associated with the following stakeholder groups: suppliers and contractors, community, customers and users, and Grupo EPM People. The detailed report can be found in [Human rights](#).
- Labor rights management is associated with Grupo EPM people, and is reported in detail on [Organizational climate](#) and [Work environment](#).
- Environmental management details are reported in [Water and biodiversity](#), [Renewable energies](#), [Climate strategy](#) and [Sustainable production and consumption](#).
- The management approach and the topics concerning anti-corruption are reported in [Transparency](#), which is composed of [Transparency practices](#) and [Information for stakeholders](#).

The alignment of the EPM's social and environmental management topics with the Global Compact principles is described in the section [Global Compact](#).

EPM is willing to continue with its adherence to the Global Compact, in force since 2006, and with its participation in the activities of the Global Compact Network in Colombia and, at the regional level, in the Antioquia Node.

This report follows the requirements of the Communication on Progress to respond to the EPM's commitment to the Global Compact of informing on the disclosure and application of the principles in its strategy and operations, convinced of their value as a starting point towards common purposes.

See the [Advanced Progress Communication Certificate of the Global Compact](#).

The background of the page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, such as renewable energy (solar panels, wind turbines, light bulbs), environmental protection (recycling symbols, water drops, trees), and social responsibility (hands holding a globe, people silhouettes). The icons are arranged in a grid-like fashion across the entire page.

# GRI content index



## GRI content index

GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	External assurance
GRI 102. General disclosures	1. Organizational profile	102-1 Name of the organization.	About us	✓
		102-2 Activities, brands, products, and services.		✓
		102-3 Location of headquarters.	Report profile	✓
		102-4 Location of operations.	About us	✓
		102-5 Ownership and legal form.	Control environment of Grupo EPM	✓
		102-6 Markets served.	About us	✓
		102-7 Scale of the organization.	Grupo EPM people	✓
			Staff. Omission: Neither the total number of employees by employment contract (permanent and temporary) nor the total number of employees by employment type (full-time and part-time) are included in the report because the information is not considered necessary for management and, therefore, it is not available.	✓
		102-8 Information on employees and other workers.	Purchasing and procurement. The nature of the work performed by contractors corresponds to the operation, maintenance, and commercialization of the products and services offered by Grupo EPM.	✓
			102-9 Supply chain.	Our supply chain cycle for goods and services
		Responsible procurement for local development		
		Engagement with suppliers and contractors		
		Strengthening and development of suppliers		
		Purchasing and procurement		
		102-10 Significant changes to the organization and its supply chain.	Ownership capital and structure of the group. During 2019, there were no significant changes in the operations or in the supply chain.	✓
		102-11 Precautionary principle or approach.	Precautionary principle	✓
			Climate strategy	
			Water and biodiversity	
		102-12 External initiatives.	Water conservation	✓
			Fundación EPM	
Commitment to external sustainability initiatives				
Shared responsibility for the environment				
102-13 Membership of associations.	Commitment to external sustainability initiatives	✓		
EU1 Installed capacity broken down by primary energy source and by regulatory regime.	About us	✓		
EU2 Net energy output broken down by primary energy source and by regulatory regime.		✓		
EU3 Number of residential, industrial, institutional, and commercial customer accounts.		Customers and users	✓	

## GRI content index

GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	External assurance
GRI 102. General disclosures	1. Organizational profile	EU4 Length of above and underground transmission and distribution lines.	About us	✓
			Service coverage and expansion	✓
		EU5 Allocation of CO <sub>2</sub> emissions allowances or equivalent, broken down by carbon trading framework.	EPM does not operate in carbon trading markets.	✓
	2. Strategy	102-14 Statement from senior decision-maker.	Message from the CEO	✓
		102-15 Key impacts, risks, and opportunities.	Strategic planning	✓
	3. Ethics and integrity	102-16 Values, principles, standards, and norms of behavior.	Transparency practices	✓
			Ethical management of Grupo EPM	✓
		102-17 Mechanisms for advice and concerns about ethics.	Compliance	✓
	4. Governance	102-18 Governance structure.	Composition of the board of directors	✓
			Management of the committees of the board of directors	
			Boards of directors of Grupo EPM	
			Ownership capital and structure of Grupo EPM	
			Annex 4: Résumés of the members of the board of directors	
		102-19 Delegating authority.	Composition of the board of directors	✓
		102-20 Executive-level responsibility for economic, environmental, and social topics.	Senior management. The Sustainable Development Management, appointed to the Executive Vice Presidency of Strategy and Growth, has as primary function “to lead the planning process in terms of economic, human, social, and environmental sustainability, and ensure its development and alignment with the Grupo EPM business plan, so that value creation is viable for Grupo EPM and its stakeholders.”	✓
		102-21 Consulting stakeholders on economic, environmental, and social topics.	Stakeholders’ engagement in the section called Dialogs with EPM’s stakeholders. The EPM’s Sustainable Development Management coordinates the stakeholders’ engagement model and reports on its performance to the senior management committees. The Vice Presidency of Corporate Communications and Relationships, along with the internal leaders of each stakeholder group, is responsible for materializing interaction and dialog.	✓
			Composition of the board of directors	
			102-22 Composition of the highest governance body and its committees.	
	102-23 Chair of the highest governance body.		Management of the board of directors	
	102-24 Nominating and selecting the highest governance body.		Composition of the board of directors	
	102-25 Conflicts of interest.	Conflicts of interest	✓	

## GRI content index

GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	External assurance
GRI 102. General disclosures	4. Governance	102-26 Role of highest governance body in setting purpose, values, and strategy.	Management of the board of directors. The committees supporting the management and the board of directors are responsible for approving and updating the purpose, values, mission, strategies, policies, and goals.	✓
			Management of the committees of the board of directors	
			Senior management's performance	
			Comprehensive risk management	
		102-27 Collective knowledge of highest governance body.	Management of the committees of the board of directors	✓
			Important actions of the board of directors in 2019	
			Profiles of the members and composition characteristics of the board	✓
		102-28 Evaluating the highest governance body's performance.	Assessment of the board of directors	
			Assessment of the CEO	
		102-29 Identifying and managing economic, environmental, and social impacts.	Important actions of the board of directors in 2019. The committees supporting the management and the board of directors are responsible for identifying and managing the impacts, risks, and opportunities.	✓
		102-30 Effectiveness of risk management processes.		✓
		102-31 Review of economic, environmental, and social topics.	Ordinary agenda and schedule of the board of directors	✓
			Ordinary agenda and schedule of the boards of directors of Grupo EPM	
			Comprehensive risk management	
		102-32 Highest governance body's role in sustainability reporting.	Relevant sustainability topics - Materiality, particularly in the validation stage.	✓
			Corporate Governance Report \ Presentation	
		102-33 Communicating critical concerns.	Comprehensive risk management	✓
			Management of the board of directors	
			Ituango hydroelectric project contingency in the corporate governance framework	
102-34 Nature and total number of critical concerns.	Senior management	✓		
	Management of the committees of the board of directors			
	Important actions of the board of directors in 2019	✓		
	Ituango hydroelectric project contingency in the corporate governance framework			

## GRI content index

GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	External assurance
GRI 102. General disclosures	4. Governance	102-35 Remuneration policies.	Remuneration of the board of directors. Remuneration of the senior management. Remuneration of the boards of directors of the companies of Grupo EPM. Omission: stakeholders involved in remuneration processes are not reported because the information is not available.	✓
		102-36 Process for determining remuneration.		
		102-37 Stakeholders' involvement in remuneration.		
		102-38 Annual total compensation ratio.	Remuneration of the senior management	✓
		102-39 Percentage increase in annual total compensation ratio.		
	5. Stakeholder engagement	102-40 List of stakeholder groups.	Identification of stakeholders	✓
		102-41 Collective bargaining agreements.	Trade unions	✓
		102-42 Identifying and selecting stakeholders.	Identification of stakeholders	✓
		102-43 Approach to stakeholder engagement.	Stakeholder engagement	✓
			Information for stakeholders	
		102-44 Key topics and concerns raised.	Topics raised by each stakeholder group during the material topics' emphases exercise are listed. They can be found in: Customers and users Community Suppliers and contractors Grupo EPM people Owner Partners Investors Colleagues State	✓
	6. Reporting practices	102-45 Entities included in the consolidated financial statements.	Report profile	✓
		102-46 Defining report content and topic boundaries.	Relevant sustainability topics - Materiality	✓
		102-47 List of material topics.		
		102-48 Restatements of information.	Relevant sustainability topics - Materiality in the section of Restatement and correction of data given in previous reports.	✓
		102-49 Changes in reporting.	Relevant sustainability topics - Materiality	✓
		102-50 Reporting period.	Report profile	✓
		102-51 Date of most recent report.		✓
		102-52 Reporting cycle.		✓

GRI content index

GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	External assurance
GRI 102. General disclosures	6. Reporting practices	102-53 Contact point for questions regarding the report.	Report profile	✓
		102-54 Claims of reporting in accordance with the GRI Standards.		✓
		102-55 GRI content index.	GRI content index	✓
		102-56 External assurance.	External assurance of the report	✓

Material topics and GRI standards								
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance	
Access and purchasability	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Access and purchasability			✓	
			103-2 The management approach and its components.				✓	
			103-3 Evaluation of the management approach.				✓	
	GRI 200. Economic standards	GRI 203. Indirect economic impacts	203-2 Significant indirect economic impacts.	Universalization and expansion of the service			The number of people benefited is calculated based on the information of individuals per house provided by DANE or using business' own calculations.	✓
				Account financing and default				✓
				Electrificación Rural (Rural Electrification)				✓
				Gas sin Fronteras (Gas without Borders)				✓
				Unidos por el Gas (United for Natural Gas)				✓
				Habilitación Viviendas (Habitable Homes)				✓
				Paga a tu Medida (Pay According to your Needs)				✓
				Prepaid services				✓
				Community meters				✓
				Unserved population				✓
	NA	Access	EU26 Percentage of population unserved in licensed distribution areas.	Universalization and expansion of the service	Unserved population	No data available	The percentage of unserved people in areas with electrical energy distribution is not reported.	✓
✓								
NA	NA	EPM-12 Solutions for unserved homes.					✓	
Water and biodiversity	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Water and biodiversity			✓	
			103-2 The management approach and its components.				✓	
			103-3 Evaluation of the management approach.				✓	
	GRI 300. Environmental standards	GRI 303. Water supply	303-1 Interactions with water as a shared resource.	Water conservation and biodiversity				✓
				Water use and effluents				✓

Material topics and GRI standards							
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Water and biodiversity	GRI 300. Environmental standards	GRI 303. Water supply	303-1 Interactions with water as a shared resource.	Management of impacts related to water and biodiversity			✓
			303-2 Management of water discharge-related impacts.	Management of impacts related to water and biodiversity		The group does not have specific guidelines on water quality and discharge, since these topics are regulated by the environmental regulations in force in each of the countries where Grupo EPM operates.	✓
				Water use and effluents			✓
			303-3 Water withdrawal.	Use of water and effluents. EPM does not operate in areas with water stress that could cause competitions for the resource, since the company supplies the basic water services.	No data available	For this year, water withdrawals will not be broken down by concentration of total dissolved solids.	✓
			303-4 Water discharge.		No data available	For this year, water discharges will not be broken down by concentration of total dissolved solids.	✓
			303-5 Water consumption.				✗
		GRI 304. Biodiversity	304-1 Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas.	Water conservation and biodiversity			✓
			304-2 Significant impacts of activities, products, and services on biodiversity.	Management of impacts related to water and biodiversity			✓
			304-3 Habitats protected or restored.	Water conservation and biodiversity			✓

Material topics and GRI standards									
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance		
Water and biodiversity	GRI 300. Environmental standards	GRI 304. Biodiversity	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations.	Conservation of threatened species			✗		
			EU13 Biodiversity of offset habitats compared to the biodiversity of the affected areas.	Management of impacts related to water and biodiversity			✓		
		GRI 306. Effluents and waste	306-1 Water discharge by quality and destination.	Water use and effluents			✓		
	NA	NA	EPM-01 Conservation areas.	Water conservation and biodiversity.			✓		
			EPM-10 Water protection.	Conservation of threatened species			✓		
Quality and safety of products and services	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Quality and safety of products and services			✓		
			103-2 The management approach and its components.				✓		
			103-3 Evaluation of the management approach.				✓		
	GRI 400. Social standards	Health and safety in the provision of the service.	GRI 417. Marketing and labeling	EU25 Number of injuries and deaths involving the organization's assets, including legal sentences, settlements, and pending legal cases of diseases.	Safety in the provision of service			✓	
				417-3 Incidents of non-compliance concerning marketing communications.				✓	
				GRI 418. Customer privacy	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data.	Customer service		Reported complaints correspond only to EPM.	✓
				GRI 419. Socioeconomic compliance	419-1 Non-compliance with laws and regulations in the social and economic area.	Safety in the provision of service			✓



Material topics and GRI standards							
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Quality and safety of products and services	GRI 400. Social standards	Access	EU28 Average power outage frequency.	Quality and continuity of service			✓
			EU29 Average power outage duration.				✓
			EU30 Average plant availability factor by energy source and by regulatory regime.	About us			✗
	NA	NA	EPM-03 Loss rate.	Loss management			✓
			EPM-04 Customer service channels.	Customer service			✓
			EPM-05 Complaints.	Customer satisfaction			✓
Organizational climate	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Organizational climate			✓
			103-2 The management approach and its components.				✓
			103-3 Evaluation of the management approach.				✓
	NA	NA	EPM-02 Results of the organizational climate assessment.				✓
Responsible procurement for local development	GRI 102. General disclosures	1. Organizational profile	102-9 Supply chain.	Responsible procurement for local development			✓
				Purchasing and procurement			
				Strengthening and development of suppliers			
				Engagement with suppliers and contractors			
	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Responsible procurement for local development			✓
			103-2 The management approach and its components.				✓
			103-3 Evaluation of the management approach.				✓
GRI 200. Economic standards	GRI 204. Procurement practices	204-1 Proportion of spending on local suppliers.	Purchasing and procurement			✓	

Material topics and GRI standards							
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Responsible procurement for local development	NA	NA	EPM-06 Number and value of social procurement contracts.	Purchasing and procurement			✓
			EPM-07 Number, value, and type of contracts in Grupo EPM.				✓
			EPM-08 External employment generated in Grupo EPM contracts.				✓
			EPM-09 Suppliers' satisfaction.	Engagement with suppliers and contractors			✓
Human rights	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Human rights			✓
			103-2 The management approach and its components.	Human rights in the supply chain. Human rights management in projects under construction. Institutional management in human rights. Security and human rights.			✓
			103-3 Evaluation of the management approach.	Human rights			✓
	GRI 400. Sociales	Comunidades locales	EU22 Número de personas desplazadas física o económicamente y la compensación otorgada, detallado por tipo de proyecto.	Human rights management in projects under construction. Security and human rights. This indicator corresponds only to the Ituango hydroelectric project.	Confidential information	The compensation offered to displaced people is not reported.	✗
		GRI 406. No discriminación	406-1 Casos de discriminación y acciones correctivas emprendidas.	Institutional management in human rights.		Reported scope correspond only to EPM.	✓
				Human rights in the supply chain			
		GRI 407. Libertad de asociación y negociación colectiva	407-1 Operaciones y proveedores cuyo derecho a la libertad de asociación y negociación colectiva podría estar en riesgo.	Institutional management in human rights.			✗
	Human rights in the supply chain					✗	

Material topics and GRI standards							
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Human rights	GRI 400. Social standards	GRI 408. Child labor	408-1 Operations and suppliers at significant risk for incidents of child labor.	Human rights in the supply chain. Risk associated with forced labor is minimized through the incorporation of clauses into the contracting specifications.			✗
		GRI 409. Forced or compulsory labor	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor.				✗
		GRI 410. Security practices	410-1 Security personnel trained on human rights policies or procedures.	Security and human rights.			✓
		GRI 411. Rights of indigenous peoples	411-1 Incidents of violations involving rights of indigenous peoples.	Human rights management in projects under construction. Institutional management in human rights.			✗
		GRI 412. Human rights assessment	412-1 Operations that have been subject to human rights reviews or impact assessments.				✗
			412-2 Employee training on human rights policies or procedures.	Institutional management in human rights. Security and human rights.			✓
			412-3 Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening.	Human rights in the supply chain	No data available	Investment agreements do not include human rights clauses.	✗
		GRI 413. Local communities	413-1 Operations with local community engagement, impact assessments, and development programs.	Human rights management in projects under construction. Security and human rights.			✗
		GRI 414. Supplier social assessment	414-1 New suppliers that were screened using social criteria.	Human rights in the supply chain	Not applicable	EPM has no social criteria that work as a filter in the new supplier selection process.	✓

Material topics and GRI standards								
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance	
Human rights	GRI 400. Social standards	GRI 414. Supplier social assessment	414-2 Negative social impacts in the supply chain and actions taken.	Human rights management in projects under construction. Security and human rights. Human rights in the supply chain.	Información no disponible	<ul style="list-style-type: none"> <li>Number of suppliers assessed for social impacts.</li> <li>Number and percentage of suppliers with negative social impacts identified.</li> <li>Percentage of suppliers with which improvements were agreed upon or with which relationships were terminated.</li> </ul>	✗	
Security and human rights.	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Renewable energies			✓	
			103-2 The management approach and its components.				✓	
			103-3 Evaluation of the management approach.				✓	
	NA	NA	EPM-20 Nonconventional renewable energy initiatives.	About us: Power generation mix				✗
				Biomass				✓
				Wind energy				✓
				Geothermal energy				✓
				Photovoltaic solar energy				✓
				Biogas				✓
				Small hydroelectric power stations				✓
Estrategia climática	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Climate strategy			✓	
			103-2 The management approach and its components.				✓	
			103-3 Evaluation of the management approach.				✓	
	GRI 200. Economic standards	GRI 201. Economic performance	201-2 Financial implications and other risks and opportunities due to climate change.	Management of the climate strategy				✗
				Adaptation to natural variability and climate change				

Material topics and GRI standards							
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Climate strategy	GRI 300. Environmental standards	GRI 305. Emissions	305-1 Direct (Scope 1) GHG emissions.	Gestión de la estrategia climática. Mitigación al cambio climático. Consultar el pie de página con la metodología utilizada para el cálculo de las emisiones.			✓
			305-2 Energy indirect (Scope 2) GHG emissions.				✓
			305-3 Other indirect (Scope 3) GHG emissions.				✓
			305-4 GHG emissions intensity.				✗
			305-5 Reduction of GHG emissions.				✓
Climate strategy	GRI 300. Environmental standards	GRI 305. Emissions	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions.	Mitigación al cambio climático. Los cálculos se realizan a partir del consumo de materiales y de factores de emisión obtenidos de la Agencia de Protección Ambiental de Estados Unidos (EPA); las emisiones que considera son: COV (g/km), CO (g/km), CO <sub>2</sub> (g/km), NOx (g/km), SO <sub>2</sub> (g/km), MP (g/km) y benceno (g/km), las cuales se aplican de acuerdo con el tipo de vehículo, equipo y combustible.			✓
Financial strength	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Financial strength			✓
			103-2 The management approach and its components.				✓
			103-3 Evaluation of the management approach.				✓

**Note:** The methodology used to calculate scope 1 and scope 2 emissions is the GHG Protocol. For scope 3 emissions, the group uses the Corporate Value Change Accounting and Reporting Standard.

Scope 1 emissions comprise CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, and HFC gases, and include gas emissions covered by the Montreal Protocol.

Scope 2 emissions comprise the total losses of electricity in the transmission and distribution of energy, and the consumption of electrical energy.

Emissions resulting from combustion are obtained from UPME (FECOC). For reservoirs, effluent treatment plants, and anaerobic lagoons, the group uses the IPCC emission factors. Electricity emission factors are taken from each of the countries. Assumptions:

i) In the case of reservoirs, the group assumes the following climates: Temperate, Warm, Moist, and Tropical wet; given that the IPCC guidelines do not provide specific references for our region.

ii) In the case of fuels, from the FECOC table it is assumed: For diesel fuel and fuel oil #2, B2 Diesel; for regular gasoline and premium gasoline, E10 gasoline (commercial mixture); for natural gas.

Material topics and GRI standards							
Material topic	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Financial strength	NA	NA	EPM-21 Resources from liquidity strategies.	2019 Management Report \ Financial results \ Grupo EPM's results \ Liquidity strategies			✗
			EPM-22 EPM's EBITDA				✗
			EPM-23 Grupo EPM's EBITDA				✗
			EPM-24 EPM's EBITDA margin		2019 Management Report \ Financial results \ Grupo EPM's results \ Financial indicators		✗
			EPM-25 Grupo EPM's EBITDA margin				✗
			EPM-26 EPM's net margin				✗
			EPM-27 Grupo EPM's net margin				✗
Fees and prices	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Fees and prices			✓
			103-2 The management approach and its components.				✓
			103-3 Evaluation of the management approach.				✓
Fees and prices	NA	NA	EPM-13 Fees by service type.	Water supply and sewerage fees			✓
				Sanitation fees			✓
				Electricity fees			✓
				Natural gas fees			✓
Transparency	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Transparency			✓
			103-2 The management approach and its components.				✓
			103-3 Evaluation of the management approach.				✓
		GRI 200. Economic standards	GRI 205. Anti-corruption	205-2 Communication and training about anti-corruption policies and procedures.	Transparency practices	No data available	<ul style="list-style-type: none"> <li>Number and percentage of governance body members that have received information and training, broken down by region.</li> <li>Number and percentage of business partners that have received information, broken down by region.</li> </ul>
	NA	NA	EPM-14 Business transparency index.				✗

Complementary matters and GRI standards									
Complementary matter	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance		
Corporate citizenship	GRI 200.	GRI 203. Impactos económicos indirectos	203-1 Infrastructure investments and services supported.	Corporate citizenship			✗		
				Fundación EPM			✗		
				City projects			✗		
			203-2 Significant indirect economic impacts.	Christmas lighting			✗		
				Events and sponsorships			✗		
				Fundación EPM			✗		
				City projects			✗		
Innovation management	NA	NA	EPM-19 Implementation of new businesses in development and innovation.	Technological developments			✗		
				Innovation management			✗		
				Urban solid waste management			✗		
				Nonconventional solutions for the water business			✗		
Work environment	GRI 102. General disclosures	1. Organizational profile	102-8 Information on employees and other workers.	Purchasing and procurement			✓		
		5. Stakeholder engagement		102-41 Collective bargaining agreements.	Trade unions			✓	
	GRI 103. Management approach			103-1 Explanation of the material topic and its boundary.	Work environment			✗	
						103-2 The management approach and its components.			✗
						103-3 Evaluation of the management approach.			✗
	GRI 400. Social standards	GRI 401. Employment		401-1 New employee hires and employee turnover.	Staff			✗	
				401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees.	Employee welfare and benefits			✗	
				401-3 Parental leave.				✗	
				EU14 Programs and processes to ensure the availability of a skilled workforce.	Personnel selection			✗	

Complementary matters and GRI standards							
Complementary matter	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Work environment	GRI 400. Social standards	GRI 401. Employment	EU15 Percentage of employees eligible to retire in the next 5 and 10 years, broken down by job category and by region.	Retirees and pensioners			✗
			EU16 Policies and requirements regarding health and safety of employees, contractors, and subcontractors.	Occupational health and safety			✗
			EU17 Days worked by contractor and subcontractor employees involved in construction, operation, and maintenance activities.				✗
			EU18 Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.				✗
		GRI 403. Occupational health and safety	403-2 Types of injury and rates of injury, occupational diseases, lost days, absenteeism, and number of work-related fatalities.				✗
			403-3 Workers with high incidence or high risk of diseases related to their occupation.				✗
			403-4 Health and safety topics covered in formal agreements with trade unions.				✗
		GRI 404. Training and education	404-1 Average hours of training per year per employee.	Training and development.			✗
			404-2 Programs for upgrading employee skills and transition assistance programs.	Employee welfare and benefits			✗



Complementary matters and GRI standards							
Complementary matter	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance
Work environment	GRI 400. Social standards	GRI 404. Training and education	404-3 Percentage of employees receiving regular performance and career development reviews.	Employee performance			✗
		GRI 405. Diversity and equal opportunity	405-1 Diversity of governance bodies and employees.	Staff			✗
	NA	NA	EPM-16 Percentage of employees surveyed in quality of life and psychosocial risk.	Quality of life			✗
Social and environmental management in projects	GRI 200. Economic standards	GRI 203. Indirect economic impacts	203-1 Infrastructure investments and services supported.	Social and environmental management in projects. Ituango hydroelectric project. Aguas Claras – EPM's wastewater treatment plant park. Aldeas Program. Intermediate projects.			✗
			203-2 Significant indirect economic impacts.			✗	
	GRI 400. Social standards	GRI 413. Local communities	413-1 Operations with local community engagement, impact assessments, and development programs.		In all projects, impacts are assessed and analyzed in order to identify the negative ones.		
			413-2 Operations with significant—actual and potential—negative impacts on local communities.			✗	
Sustainable production and consumption	GRI 103. Management approach		103-1 Explanation of the material topic and its boundary.	Sustainable production and consumption			✓
			103-2 The management approach and its components.			✓	
			103-3 Evaluation of the management approach.			✓	
	GRI 300. Environmental standards	GRI 301. Materials	301-1 Materials used by weight or volume.	Other consumptions and efficient practices. Energy consumption is directly measured. For the calorific values of fuels, the group uses the values provided by UPME.			✗
			301-2 Recycled input materials used.			✗	
		GRI 302. Energy	302-1 Energy consumption within the organization.	Energy consumption			✓
			About us: Power generation mix.			✗	

Complementary matters and GRI standards										
Complementary matter	GRI standard	GRI standard title	GRI standard disclosures	Location in the report / Response	Omissions	Remarks	External assurance			
Sustainable production and consumption	GRI 300. Environmental standards	GRI 302. Energy	302-2 Energy consumption outside of the organization.	Energy consumption. For the calorific values of fuels, the group uses the values provided by UPME.			✓			
				About us: Power generation mix.			✗			
			302-3 Energy intensity.	Energy consumption			No data available	Information reported only for the water and sanitation businesses.	✗	
			302-4 Reduction of energy consumption.						✗	
		302-5 Reductions in energy requirements of products and services.						✗		
		GRI 306. Effluents and waste	306-2 Waste by type and disposal method.	Waste management						✗
			306-4 Transport of hazardous waste.							✗



# External assurance of the report

## External assurance

In accordance with the independence standards required by the Code of Ethics of the International Federation of Accountants ([IFAC](#)), the independent assurance report issued by KPMG confirms their independence from EPM. In addition, it mentions that all its employees conduct annual updates to the ethics policy, in which they specifically declare no conflicts of interest with EPM, its subsidiaries, or its stakeholders.

The assurance was conducted in accordance with [ISAE 3000](#) - International Standard on Assurance Engagements Other than Audits or Reviews of Historical Financial Information, emitida por el International Auditing and Assurance Standard Board ([IAASB](#)) of the International Federation of Accountants ([IFAC](#)).

In accordance with [GRI 102-56](#), the assurance report presents, for each of the material aspects, the GRI standards disclosures or the EPM indicators that were subject to verification.

The conclusion of the independent verification states that there is no evidence that would suggest that the Sustainability Report contains significant errors or that has not been prepared in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative ([GRI](#)), with comprehensive compliance criteria.

This Sustainability Report was externally assured by KPMG, the firm that performs the external audit of EPM and the tax audit of the Grupo EPM's companies.

See the external assurance certificate on: [Independent assurance report](#).




The background of the entire page is a repeating pattern of small, light-colored icons. These icons represent various aspects of sustainability, including renewable energy (solar panels, wind turbines, water drops), recycling (recycling symbols, paper, plastic), nature (trees, leaves, mountains), and social responsibility (hands holding a globe, people silhouettes).

# Alignment with sustainability initiatives




# GRI – ISO 26000

## GRI - ISO 26000



Alignment between the GRI Standards used in the Sustainability Report and the ISO 26000 Standard			
GRI Standards		ISO 26000 Standard	
		Key Principles and Core Subjects of ISO 26000	ISO 26000 matters
	GRI 101. Reporting principles	Accountability	Accountability
	GRI 101. Using the GRI Standards for sustainability reporting		
	GRI 101. Making claims related to the use of the GRI Standards		
	GRI 102-1. Organizational profile	Human rights	Fundamental principles and rights at work
		Organizational governance	Organizational governance
		Labor practices	Conditions of work and social protection
			Social dialogue
	GRI 102-2. Strategy	Organizational governance	Organizational governance
	GRI 102-3. Ethics and integrity	Ethical behavior	Ethical behavior
	GRI 102-4. Governance	Organizational governance	Organizational governance
	GRI 102-5. Stakeholder engagement		
GRI 102-6. Reporting practice	Accountability	Accountability	
	GRI 103-1. Explanation of the material topic and its boundary	Accountability	Accountability
	GRI 103-2. The management approach and its components		
	GRI 103-3. Evaluation of the management approach		

**Alignment between the GRI Standards used in the Sustainability Report and the ISO 26000 Standard**


GRI Standards		ISO 26000 Standard	
		Key Principles and Core Subjects of ISO 26000	ISO 26000 matters
	GRI 201. Economic performance	Environment	Climate change mitigation and adaptation
		Community involvement and development	Wealth and income creation
			Social investment
	Community involvement and development		
	GRI 203. Indirect economic impacts	Consumer issues	Access to essential services
		Human rights	Economic, social, and cultural rights
		Community involvement and development	Employment creation and skills development
			Technology development and access
			Education and culture
			Wealth and income creation
		Social investment	
	Community involvement and development		
	Fair operating practices	Promoting social responsibility in the sphere of influence	
		Respect for property rights	
	GRI 204. Procurement practices	Community involvement and development	Employment creation and skills development
Wealth and income creation			
GRI 205. Anti-corruption	Fair operating practices	Promoting social responsibility in the sphere of influence	
		Anti-corruption	




**Alignment between the GRI Standards used in the Sustainability Report and the ISO 26000 Standard**

GRI Standards		ISO 26000 Standard	
		Key Principles and Core Subjects of ISO 26000	ISO 26000 matters
	GRI 301. Materials	Environment	Sustainable resource use
	GRI 302. Energy		Fair operating practices
	GRI 303. Water supply	Environment	Sustainable resource use
	GRI 304. Biodiversity		Protection of the environment, biodiversity, and restoration of natural habitats
	GRI 305. Emissions		Climate change mitigation and adaptation
	GRI 306. Effluents and waste		Prevention of pollution
			Protection of the environment, biodiversity, and restoration of natural habitats
	Sustainable resource use		
	GRI 401. Employment	Community involvement and development	Technology development and access
		Labor practices	Conditions of work and social protection
	Occupational health and safety		
	Employment and employment relationships		
	GRI 403. Occupational health and safety		Occupational health and safety
	GRI 404. Training and education	Community involvement and development	Employment creation and skills development
		Labor practices	Human development and training in the workplace
	GRI 405. Diversity and equal opportunity	Human rights	Discrimination and vulnerable groups
			Fundamental principles and rights at work
GRI 406. Non-discrimination	Human rights	Employment and employment relationships	
		Discrimination and vulnerable groups	
		Fundamental principles and rights at work	


**Alignment between the GRI Standards used in the Sustainability Report and the ISO 26000 Standard**

GRI Standards		ISO 26000 Standard	
		Key Principles and Core Subjects of ISO 26000	ISO 26000 matters
	GRI 406. Non-discrimination	Human rights	Resolving grievances
	GRI 407. Freedom of association and collective bargaining		Avoidance of complicity
			Due diligence
			Civil and political rights
			Fundamental principles and rights at work
			Human rights risk situations
	Labor practices	Social dialogue	
		Employment and employment relationships	
	GRI 408. Child labor	Human rights	Avoidance of complicity
			Due diligence
			Discrimination and vulnerable groups
			Fundamental principles and rights at work
		Human rights risk situations	
	Fair operating practices	Promoting social responsibility in the sphere of influence	
	GRI 409. Forced or compulsory labor	Human rights	Avoidance of complicity
Due diligence			
Discrimination and vulnerable groups			
Fundamental principles and rights at work			
Human rights risk situations			
Fair operating practices	Promoting social responsibility in the sphere of influence		
GRI 410. Security practices	Human rights	Avoidance of complicity	


**Alignment between the GRI Standards used in the Sustainability Report and the ISO 26000 Standard**

GRI Standards		ISO 26000 Standard		
		Key Principles and Core Subjects of ISO 26000	ISO 26000 matters	
	GRI 410. Security practices	Fair operating practices	Promoting social responsibility in the sphere of influence	
		Labor practices	Employment and employment relationships	
	GRI 411. Rights of indigenous peoples	Human rights		Civil and political rights
				Discrimination and vulnerable groups
				Resolving grievances
	GRI 412. Human rights assessment	Human rights		Respect for property rights
				Avoidance of complicity
	GRI 412. Human rights assessment	Human rights		Due diligence
				Human rights risk situations
	GRI 412. Human rights assessment	Fair operating practices		Promoting social responsibility in the sphere of influence
	GRI 413. Local communities	Human rights		Economic, social, and cultural rights
		Environment		Prevention of pollution
				Protection of the environment, biodiversity, and restoration of natural habitats
Community involvement and development			Employment creation and skills development	
			Technology development and access	
			Education and culture	
			Wealth and income creation	
			Social investment	
	Community involvement and development			
	Healthcare			

Alignment between the GRI Standards used in the Sustainability Report and the ISO 26000 Standard

GRI Standards		ISO 26000 Standard	
		Key Principles and Core Subjects of ISO 26000	ISO 26000 matters
	GRI 414. Supplier social assessment	Human rights	Avoidance of complicity
			Due diligence
			Fundamental principles and rights at work
		Community involvement and development	Employment creation and skills development
			Technology development and access
			Education and culture
			Wealth and income creation
			Social investment
			Community involvement and development
		Fair operating practices	Healthcare
Promoting social responsibility in the sphere of influence			
Labor practices	Conditions of work and social protection		
	Human development and training in the workplace		
	Social dialogue		
	Occupational health and safety		
	Employment and employment relationships		
GRI 416. Customer health and safety	Consumer issues	Sustainable consumption	
		Protecting consumers' health and safety	
	Human rights	Economic, social, and cultural rights	

**Alignment between the GRI Standards used in the Sustainability Report and the ISO 26000 Standard**

GRI Standards		ISO 26000 Standard	
		Key Principles and Core Subjects of ISO 26000	ISO 26000 matters
	GRI 416. Customer health and safety	Community involvement and development	Education and culture
			Community involvement and development
			Healthcare
		Fair operating practices	Promoting social responsibility in the sphere of influence
	Labor practices	Occupational health and safety	
	GRI 417. Marketing and labeling	Consumer issues	Sustainable consumption
			Fair marketing
	Protecting consumers' health and safety		
	Consumer service, support, and complaint and dispute resolution		
	GRI 418. Customer Privacy		Access to essential services
Education and awareness			
Fair marketing			
Consumer data protection and privacy			
GRI 419. Socioeconomic compliance	Consumer service, support, and complaint and dispute resolution		
	Community involvement and development	Wealth and income creation	
	Fair operating practices	Respect for property rights	

The background of the slide is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, such as renewable energy (solar panels, wind turbines, light bulbs), nature (trees, leaves, water droplets), and social development (hands holding a globe, people silhouettes).

# Articulation with the Global Development Agenda - SDGs

## Articulation with the Global Development Agenda - SDGs

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### Sustainable Development Goals – SDGs

Interpreting “Architecture for a better world”, it is understood that companies need a sustainable world to fulfil their purpose and that, to build such a world, the commitment of the business sector is indispensable. Grupo EPM embraces this concept in its business purpose, in its BHAG that includes the universalization of public utilities, in its care for the environment through its commitments to water protection and carbon neutral operation, and in its business actions.

The 2030 Agenda for Sustainable Development has provided a model of shared prosperity in a sustainable world. The 2019 report shows progress and favorable trends, but it is clear that many areas need immediate collective attention: the natural environment is deteriorating at an alarming rate, the goal to end extreme poverty by 2030 is being jeopardized, and people struggle to respond to entrenched deprivation, violent conflicts and vulnerabilities to natural disasters.<sup>1</sup>

The report therefore highlights areas that can drive progress across all 17 SDGs: financing; resilience; sustainable and inclusive economies; more effective institutions; local action; better use of data; and harnessing science, technology and innovation with a greater focus on digital transformation.

Regarding the SDGs 6 and 7, which are central to Grupo EPM, the report shows progress in the access to safely managed drinking water and sanitation, but millions of people still do not have these services, especially in rural areas. Water stress affects people on every continent, requiring immediate and collective action.

The world is making progress towards goal 7 with encouraging signs that energy is becoming more sustainable and widely available. Nearly 9 out of 10 people now have access to electricity, but reaching the unserved will require increased efforts.

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<sup>1</sup> United Nations, *The Sustainable Development Goals Report 2019*. Available at: <https://reliefweb.int/sites/reliefweb.int/files/resources/The-Sustainable-Development-Goals-Report-2019.pdf>, consultado el 11 de febrero de 2020.

The SDGs nourish both the purpose of contributing to the harmony of life for a better world and the material topics and actions through which Grupo EPM contributes to local and global development.

## Sustainable Development Goals - Major milestones regarding the SDGs in the global context and in Grupo EPM



















	2016	2017	2018	2019
	<p><b>First UN SDGs report</b> It sets benchmarks for the actions of the sustainable development agenda for the next 15 years.</p>	<p><b>Second UN SDGs report</b> Progress is unequal in the different regions, among genders, and among people from different ages, strata, and locations. To accomplish the audacious vision of the 2030 agenda, progress must be faster and more inclusive.</p>	<p><b>Third UN SDGs report</b> Progress has been made in guaranteeing access to energy, especially in the least developed countries. However, national priorities and strengthened political ambitions are still needed to guide the world towards the accomplishment of the energy goals by 2030.</p>	<p><b>Fourth UN SDGs report 2019</b> Climate change jeopardizes progress in all areas of sustainable development. Increasing inequality among and within countries requires immediate attention. Progress has been slow in many SDGs; the global response to date has not been ambitious enough.</p>
	<p><b>It identifies priority SDG targets for Grupo EPM</b> Included in the SDGs highlighted in the image. It associates SDGs with initiatives and the Balanced Scorecard of the group's business plan. It strengthens the 2017-2020 business plan. It applies SDGs as driving forces for the challenges of material topics.</p>	<p><b>It strengthens connections between material topics of Grupo EPM and SDGs.</b> The identification of emphases or aspects of specific material topics in the territories helps determining the connection with the SDG targets to act more accordingly.</p>	<p><b>It disseminates the SDGs, especially among its suppliers and contractors,</b> and promotes their application in personal and business activities, through partnerships with companies and institutions from different sectors that share its practices, in order to contribute to sustainable human development.</p>	<p><b>It starts assessing EPM's contribution to the SDGs.</b> Based on the priority SDG targets for Grupo EPM, it seeks to express its contribution to these goals.</p>



# Alignment between the Sustainable Development Goals and the Grupo EPM's material topics and strategic goals

		<b>Material topics</b>	 <b>Purpose: Contribute to the harmony of life for a better world</b>									
			Value creation		Customers and markets		Operations			Learning and development		
			Increase value for stakeholders	Grow in markets and businesses	Strengthen engagement with external stakeholders	Provide comprehensive quality service to customers and users	Ensure required cash flow	Optimize processes	Assess and manage operational safety	Optimize development of projects	Develop organizational capabilities	Achieve cultural evolution
    	 <b>17 Partnerships for the goals</b>	 Access and purchasability	✓	✓	✓	✓		✓	✓	✓		
		 Water and biodiversity	✓	✓	✓			✓	✓	✓		
		 Quality and safety of products and services	✓	✓	✓	✓	✓	✓	✓	✓		

		<b>Material topics</b>	 <b>Purpose: Contribute to the harmony of life for a better world</b>									
			Value creation	Customers and markets			Operations			Learning and development		
			Increase value for stakeholders	Grow in markets and businesses	Strengthen engagement with external stakeholders	Provide comprehensive quality service to customers and users	Ensure required cash flow	Optimize processes	Assess and manage operational safety	Optimize development of projects	Develop organizational capabilities	Achieve cultural evolution
	 <b>17 Partnerships for the goals</b>	 Organizational climate	✓		✓	✓					✓	✓
		 Responsible procurement for local development	✓	✓	✓	✓			✓	✓		
		 Human rights	✓		✓			✓	✓	✓		
		 Renewable energies	✓	✓	✓							

		<b>Material topics</b>	 <b>Purpose: Contribute to the harmony of life for a better world</b>										
			Value creation	Customers and markets			Operations				Learning and development		
			Increase value for stakeholders	Grow in markets and businesses	Strengthen engagement with external stakeholders	Provide comprehensive quality service to customers and users	Ensure required cash flow	Optimize processes	Assess and manage operational safety	Optimize development of projects	Develop organizational capabilities	Achieve cultural evolution	
		 <b>17 Partnerships for the goals</b>	 Climate strategy	✓	✓	✓		✓	✓	✓			
			 Financial Strength	✓	✓	✓		✓			✓	✓	
			 Fees and prices	✓		✓		✓					
			 Transparency	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## EPM's contribution to the Sustainable Development Goals - SDGs

In 2019, EPM started quantifying its contribution to the SDGs, according to the Grupo EPM's strategic planning, which can be found in the Strategic Planning section of the 2019 Management Report. To this end, the company identified the targets that are most relevant to the core activities of the group's companies, since they are the starting point to achieve the greatest contribution to sustainable human development.

The measurement of this contribution follows the methodological parameters of the Grupo EPM's Balanced Scorecard (BSC), and will be expressed in terms of the contribution to the national development plans of each country where the group operates. In the case of companies in Colombia, the reference is the National Development Plan 2018-2022. The measurement of contributions will be gradually extended to the group's companies and other priority targets. The first targets measured for EPM in terms of contribution to the SDGs are: 6.1: Achieve universal and equitable access to safe and affordable drinking water for all; 6.2: Achieve access to adequate and equitable sanitation and hygiene for all; 6.6: Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes; and 7.1: Ensure universal access to affordable, reliable, and modern energy services.

### EPM's contribution to the SDG target 6.1



**SDG target 6.1**  
Achieve universal and equitable access to safe and affordable drinking water for all.



**Colombia National Development Plan 2018-2022**  
**Indicator:** people with access to adequate drinking water solutions.  
**Colombia's 2022 target:** 47,244,643 people.

**In 2019, EPM**  
contributed **7.9%** of the Colombia's 2022 target.



**EPM's contribution to the SDG target 6.2**



**In 2019, EPM** contributed **8.1%** of the Colombia's 2022 target.

**SDG target 6.2**  
Achieve access to adequate and equitable sanitation and hygiene for all.

**Colombia National Development Plan 2018-2022**  
**Indicator:** people with access to adequate wastewater management solutions.  
**Colombia's 2022 target:** 45,501,155 people.



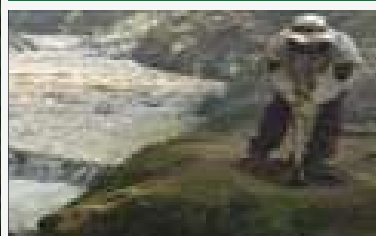
**EPM's contribution to the SDG target 6.6**



**In 2019, EPM** contributed **8.4%\*** of the Colombia's 2022 target.

**SDG target 6.6**  
Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

**Colombia National Development Plan 2018-2022**  
**Indicator:** areas under sustainable conservation systems (restoration, agroforestry systems, sustainable forest management).  
**Target:** 1,402,900 ha.



*\* Note: calculation made with the total amount, as of 2019, of areas owned by EPM located in forest ecosystems (natural forests and plantations), acquired historically for the protection of their reservoirs and water supply basins, and those areas where water protection initiatives are implemented (forest conservation, payment for environmental services, restoration, reforestation, forest promotion program, sustainable use practices, offset, and acquisition of land). Of the latter initiatives there are no detailed records before 2016.*

**EPM's contribution to the SDG target 7.1**



**SDG target 7.1**  
Ensure universal access to affordable, reliable, and modern energy services.



**In 2019, EPM** exceeded the Colombia's 2022 target in quality indicators:  
**SAIDI: 14.55 SAIFI: 7.29**

**Colombia National Development Plan 2018-2022**

**Indicator 1: SAIDI.** Average duration of power interruptions per year. **Colombia's 2022 target:** 27 hours.

**Indicator 2: SAIFI.** Average amount of power interruptions per year. **Colombia's 2022 target:** 35 hours.



# Global Compact

Alignment between material topics and the Global Compact's principles										
Global Compact's principles - GC										
Material topics	Human rights		Labor standards				Environment			Anti-corruption
	01 - Human rights protection	02 - Non-complicity in human rights abuses	03 - Freedom of association and collective bargaining	04 - Elimination of forced and compulsory labor	05 - Abolition of child labor	06 - Non-discrimination	07 - Prevention of environmental problems	08 - Promotion of environmental responsibility	09 - Promotion of environmentally friendly technologies	10 - Work against corruption, extortion, and bribery
Access and purchasability	✓									
Water and biodiversity							✓	✓	✓	
Quality and safety of products and services	✓							✓		
Organizational climate	✓		✓	✓	✓	✓				
Responsible procurement for local development		✓		✓	✓					✓
Human rights	✓	✓	✓	✓	✓	✓				
Renewable energies							✓	✓	✓	
Climate strategy							✓	✓	✓	
Financial strength										✓
Fees and prices	✓									
Transparency										✓



Alignment between material topics and the Global Compact's principles										
Global Compact's principles - GC										
Complementary matters	Human rights		Labor standards				Environment			Anti-corruption
	01 - Human rights protection	02 - Non-complicity in human rights abuses	03 - Freedom of association and collective bargaining	04 - Elimination of forced and compulsory labor	05 - Abolition of child labor	06 - Non-discrimination	07 - Prevention of environmental problems	08 - Promotion of environmental responsibility	09 - Promotion of environmentally friendly technologies	10 - Work against corruption, extortion, and bribery
Corporate citizenship	✓	✓			✓		✓	✓	✓	
Innovation management							✓	✓	✓	
Work environment	✓	✓	✓	✓	✓	✓				✓
Social and environmental management in projects	✓	✓			✓		✓	✓	✓	
Sustainable production and consumption							✓	✓	✓	



## Integrated Report - IIRC

Alignment between the Integrated Report (IIRC) and the 2019 Sustainability Report	
Integrated Report Content - IIRC	Location in the Sustainability Report
Organizational overview and its external environment	<a href="#">About Us</a>
	<a href="#">Our organization</a>
	<a href="#">Staff</a>
	<a href="#">Trade unions</a>
	<a href="#">Control environment of Grupo EPM</a>
	<a href="#">Growth</a>
	<a href="#">Stakeholders</a>
	<a href="#">Our supply chain cycle for goods and services</a>
	<a href="#">Report profile</a>
Corporate governance	<a href="#">Corporate Governance Report</a>
Business model	<a href="#">About Us</a>
	<a href="#">Our history</a>
	<a href="#">Strategic planning</a>
Risks and opportunities	<a href="#">Strategic planning</a>
	<a href="#">Comprehensive risk management</a>
Strategy and resource allocation	<a href="#">2019 Management Report</a>
Performance	<a href="#">Access and purchasability</a>
	<a href="#">Water and biodiversity</a>
	<a href="#">Organizational climate</a>
	<a href="#">Quality and safety of products and services</a>
	<a href="#">Responsible procurement for local development</a>
	<a href="#">Human rights</a>
	<a href="#">Renewable energies</a>
	<a href="#">Climate strategy</a>
	<a href="#">Financial strength</a>
<a href="#">Fees and prices</a>	

Alignment between the Integrated Report (IIRC) and the 2019 Sustainability Report	
Integrated Report Content - IIRC	Location in the Sustainability Report
Performance	<a href="#">Transparency</a>
	<a href="#">Corporate citizenship</a>
	<a href="#">Innovation management</a>
	<a href="#">Working environment</a>
	<a href="#">Social and environmental management in projects</a>
	<a href="#">Sustainable production and consumption</a>
	<a href="#">Financial management</a>
Future perspectives	<a href="#">Strategic planning</a>
Basis of preparation and presentation	<a href="#">Relevant sustainability topics - Materiality</a>

Integrated Report's principles - IIRC	Location in the Sustainability Report
Strategic focus and future orientation	<a href="#">Strategic planning</a>
Connectivity of information	Alignment between the capitals of the Integrated Report (IIRC) and the material topics
Stakeholders engagement	<a href="#">Our stakeholders</a>
Materiality	<a href="#">Report profile</a>
	<a href="#">Relevant sustainability topics - Materiality</a>
Conciseness	<p>The process of preparing this report is led by the EPM's Sustainable Development Management. This management unit sets the guidelines to identify the information that will be reported. Identifying material topics and complementary matters ensures that the report focuses on the more relevant aspects of the management.</p> <p>The web report enables navigating and creating links between the different topics presented, reducing duplications.</p>
Reliability and completeness	<p>The process for preparing the report takes into account the voices of people from the different group's businesses, companies, and departments. This increases reliability and traceability of the information reported.</p> <p>See also: <a href="#">External assurance</a></p>
Comparability and consistency	Alignment with sustainability initiatives
	<a href="#">Relevant sustainability topics - Materiality</a>

## Alignment between the capitals of the Integrated Report (IIRC) and the material topics

Material topics	Capitals					
	Natural	Human	Social	Intellectual	Financial	Manufactured
Access and purchasability			✓		✓	✓
Water and biodiversity	✓					
Quality and safety of products and services			✓			✓
Organizational climate		✓				
Responsible procurement for local development		✓	✓			✓
Human rights			✓			
Renewable energies	✓			✓		
Climate strategy	✓					
Financial strength					✓	
Fees and prices			✓		✓	
Transparency		✓	✓			

Capitals	Meaning
Natural	All renewable and nonrenewable environmental resources and processes that provide goods and services and that support the past, current, and future prosperity of an organization.
Human	People’s skills and experience, and their capacity and motivations to innovate.
Social	The institutions and relationships established within and between each community, group of stakeholders, and other networks, and the ability to share information to enhance individual and collective well-being.
Intellectual	Organizational, knowledge-based intangibles.
Financial	The pool of funds that is available to an organization for use in the production of goods or the provision of services obtained through financing, such as debt, equity or grants, or generated through operations or investments.
Manufactured	Manufactured physical objects that are available to an organization for use in the production of goods or the provision of services.



# **Institutional performance monitoring and evaluation**

## Institutional performance monitoring and evaluation

Integrated Model of Planning and Management - MIPG		
MIPG	Company's language	Correlation with the 2019 Sustainability Report
1. Human resource dimension	Employee welfare and benefits. Quality of life. Organizational climate. Training and development. Personnel selection. Health and safety at work. Ethics and values.	<a href="#">Grupo EPM people</a>
		<a href="#">Organizational climate</a>
		<a href="#">Working environment</a>
		<a href="#">Our group (Ethical management of Grupo EPM)</a>
		<a href="#">Transparency practices</a>
2. Dimension Strategic planning	Strategic planning. Business plans and corporate services. Corporate governance. Business projects. Balanced Scorecard's strategic goals. Risk management. Information technology.	<a href="#">Strategic planning</a>
		<a href="#">Corporate Governance Report</a>
		<a href="#">Project development</a>
		<a href="#">Social and environmental management in projects</a>
		<a href="#">Ituango project</a>
		<a href="#">Comprehensive risk management</a>
		<a href="#">Information technology</a>
3. Dimension Result-oriented management with values	Organizational structure. Stakeholders. Processes (control of non-conforming products). Digital government, anti-corruption and citizen service plan, and procedure rationalization. Budget management. Regulations and legal defense. Citizen participation. Accountability. Digital government.	<a href="#">Our organization</a>
		<a href="#">Our stakeholders</a>
		<a href="#">Safety in the service provision</a>
		<a href="#">Transparency practices</a>
		<a href="#">Fees and prices</a>
		<a href="#">Digital government</a>
		<a href="#">Public accountability</a>
		<a href="#">Information for stakeholders</a>
		<a href="#">Stakeholder engagement</a>
		<a href="#">Policy – Budget management and efficiency of public expenditure</a>
		<a href="#">Financial results</a>
<a href="#">Integrated Model of Planning and Management - MIPG</a>		



**Integrated Model of Planning and Management - MIPG**

MIPG	Company's language	Correlation with the 2019 Sustainability Report
4. Dimension Result assessment	Customer satisfaction survey results. Complaints and claims (products, services). Institutional performance monitoring and evaluation (internal audit results of EPM's QMS and improvement plans). Process indicators. Follow-up to individual performance. Accountability.	<a href="#">Customer satisfaction</a>
		<a href="#">Safety in the service provision</a>
		<a href="#">Customer service</a>
		<a href="#">Integrated Model of Planning and Management - MIPG</a>
		<a href="#">Financial results</a>
		<a href="#">Suppliers and contractors</a>
		<a href="#">Corporate Governance Report</a>
		<a href="#">Transparency - Public accountability</a>
		<a href="#">Engagement with suppliers and contractors</a>
		<a href="#">Employee performance</a>
5. Dimension Information and communication	Communication with stakeholders. Transparency and access to information. Document management. Information management.	<a href="#">Information for stakeholders</a>
		<a href="#">Stakeholder engagement</a>
		<a href="#">Education for and communication with customers and users and the community</a>
		<a href="#">Transparency practices</a>
		<a href="#">Policy – Budget management and efficiency of public expenditure</a>
		<a href="#">Financial results</a>
		<a href="#">Policy - Document management</a>
6. Knowledge management	Development and innovation. Knowledge management.	<a href="#">2019 Management Report - Innovation management</a>
		<a href="#">Innovation management</a>
7. Internal control	Independent audit results (internal audit and external audit). Risks and controls.	<a href="#">Dimension Internal control</a>
		<a href="#">Accountability</a>
		<a href="#">Comprehensive risk management</a>



# Stakeholders



# Identification of stakeholders

## Identification of stakeholders

To identify stakeholders in Grupo EPM, three criteria are considered **GRI 102-42:**

- **The legitimacy** of the stakeholder group is evaluated in the context of its desirable, own, or suitable actions within the system of standards, values, beliefs, and definitions of society. In operational terms, the legitimacy level is estimated based on the existence of regulations, contracts, and agreements, regarding the topics that link it to the organization.
- **Power** is evaluated in terms of coercive power (force or weapons); utilitarian power (direct or indirect, such as the power of information and knowledge); and symbolic power (relations, political support, and social and cultural recognition).
- **Urgency** or dependency is assessed in terms of the criticality of the urgency (extent of the dependency or the response demand it has over the organization), and the promptness required to respond to the urgency.

The stakeholder groups identified by EPM based on these criteria **GRI 102-40** are listed below:

- Customers and users
- Colleagues
- Community
- Owner
- State
- Grupo EPM people
- Investors
- Suppliers and contractors
- Partners / Shareholders

Stakeholders are groups of people or entities that impact or are highly impacted by Grupo EPM and have relatively stable and common interests with it. In technical terms, stakeholders are social groups with a high level of legitimacy, power, and urgency, that have a certain homogeneity and stability in their interests with regard to Grupo EPM.

The priority topics for the sustainability of Grupo EPM and its stakeholders are detailed on [Material topics](#).

Stakeholders make up the network of significantly close and interdependent actors, fundamental in the search for common purposes to build a better world.



# Our stakeholders

## Customers and users

### Composition

People, companies, and other organizations with which a relationship has been established from the service provision.

Grupo EPM installations			
Service	2017	2018	2019
Energy	6,367,752	6,579,750	6,756,355
Natural gas	1,132,329	1,196,467	1,260,940
Water supply	1,477,534	1,561,140	1,600,225
Sewerage	1,419,400	1,493,835	1,540,873
Waste collection	789,334	818,098	868,335

*Source: Commercial Vice Presidency.*

- This table quantifies the installations served by some of the public utilities.
- Data reported for the waste collection service were adjusted for each year considering the calculation criterion of Emvarias.

*Ticsa indirectly serves 1,298,319 customers through the operation of eight wastewater treatment plants.*

EPM installations			
Service	2017	2018	2019
Energy	2,368,457	2,437,797	2,508,552
Natural gas	1,132,329	1,196,467	1,260,940
Water supply	1,186,434	1,228,667	1,266,504
Sewerage	1,153,683	1,192,580	1,233,212
<b>EPM installations *</b>	<b>2,405,861</b>	<b>2,477,761</b>	<b>2,549,957</b>

*Source: Commercial Vice Presidency.*

*This table quantifies the installations served by some of the public utilities.*

*\* Corresponding to the amount of installations with at least one service.*

## Engagement goal

Improve the experience of our customers and users by facilitating their interaction with the company and providing them with solutions that respond to their needs and expectations and that demonstrate our permanent concern about their well-being and sustainability.

## Leader of the engagement plan

Commercial Vice Presidency.

## Related topics

Related material topics <b>GRI 102-44</b>	Access and purchasability
	Water and biodiversity
	Quality and safety of products and services
	Human rights
	Renewable energies
	Climate strategy
	Financial strength
	Fees and prices
	Transparency
Related complementary matters <b>GRI 102-44</b>	Corporate citizenship
	Development and innovation
	Working environment
	Social and environmental management in projects
	Sustainable production and consumption

## Management indicators

**102-44** Key topics and concerns raised.



## Colleagues

### Composition

Entities committed to the provision of the services offered by Grupo EPM.

### Engagement goal

Jointly manage issues of common interest that strengthen the development and sustainability of the sector and its environment.

### Leader of the engagement plan

External Relationships Management.

### Related topics

Related material topics <b>GRI 102-44</b>	Access and purchasability
	Water and biodiversity
	Quality and safety of products and services
	Human rights
	Renewable energies
	Climate strategy
	Fees and prices
	Transparency

### Management indicators

**102-44** Key topics and concerns raised.

# Community

## Composition

People located in the areas where the companies of Grupo EPM are present through their projects and operations.

## Engagement goal

Establish and fulfill multidirectional commitments with the community and its representatives in the territories where the companies of Grupo EPM are present, which favor the sustainability of the environments and a better quality of life for the communities.

## Leader of the engagement plan

Customer and Community Education Unit.

## Related topics

Related material topics <b>GRI 102-44</b>	Access and purchasability
	Water and biodiversity
	Quality and safety of products and services
	Responsible procurement for local development
	Human rights
	Renewable energies
	Climate strategy
	Fees and prices
	Financial strength
	Transparency
Related complementary matters <b>GRI 102-44</b>	Corporate citizenship
	Development and innovation
	Working environment
	Social and environmental management in projects
	Sustainable production and consumption

## Management indicators

**102-44** Key topics and concerns raised.

**201-1** Direct economic value generated and distributed.

Value distributed by EPM to the community		
2017	2018	2019
COP 212,665 million (2%)	COP 272,904 million (3%)	COP 261,189 million (3%)

The environmental management costs were classified as part of Goods and services suppliers. As of 2019, they are classified as part of Community and environment. The values reclassified are COP 44,746 million in 2017 and COP 56,533 million in 2018.

The value distributed was taken from the financial statement by stakeholder group, prepared in accordance with the Fourth Financial Statement methodology by Luis Perera Aldama.

## Owner

### Composition

Owner, that is, the Municipality of Medellín for EPM and EPM for the affiliated companies.

### Engagement goal

Promote compliance with the framework for action established between EPM and the Municipality of Medellín, which defines the principles and obligations that characterize the owner-company relationship, taking into account the primary purpose for which each was created, to ensure an appropriate corporate governability and contribute to the sustainability of the company.

### Leader of the engagement plan

Corporate Governance Unit.

### Related topics

Related material topics <b>GRI 102-44</b>	Access and purchasability
	Quality and safety of products and services
	Organizational climate
	Human rights
	Renewable energies
	Financial strength
	Fees and prices
	Transparency
Related complementary matters <b>GRI 102-44</b>	Corporate citizenship
	Development and innovation
	Social and environmental management in projects

## Management indicators

**102-44** Key topics and concerns raised.

**201-1** Direct economic value generated and distributed.

Value distributed by EPM to the owner		
2017	2018	2019
COP 1,309,136 million (16%)	COP 1,503,504 million (17%)	COP 1,289,652 million (12%)

The value distributed was taken from the financial statement by stakeholder group, prepared in accordance with the Fourth Financial Statement methodology by Luis Perera Aldama.

## State

### Composition

Colombian state entities and organizations at the national, departmental, and municipal level, as well as state entities from other countries and supranational organizations whose actions could impact matters of interest to Grupo EPM.

### Engagement goal

Establish and maintain a close relationship with the state, so as to align actions and join efforts in search of economic, environmental, and social sustainability of the territories where Grupo EPM is present or of interest to it and in search of the accomplishment of the strategic objectives of both of them.

### Leader of the engagement plan

External Relationships Management.

### Related topics

Related material topics <b>GRI 102-44</b>	Access and purchasability
	Water and biodiversity
	Quality and safety of products and services
	Responsible procurement for local development
	Human rights
	Renewable energies
	Climate strategy
	Fees and prices
	Transparency
Related complementary matters <b>GRI 102-44</b>	Corporate citizenship
	Development and innovation
	Social and environmental management in projects
	Sustainable production and consumption

## Management indicators

**102-44** Key topics and concerns raised.

**201-1** Direct economic value generated and distributed.

Value distributed by EPM to the state		
2017	2018	2019
COP 1,057,387 million (13%)	COP 500,795 million (6%)	COP 1,104,460 million (11%)

The value distributed was taken from the financial statement by stakeholder group, prepared in accordance with the Fourth Financial Statement methodology by Luis Perera Aldama.

## Grupo EPM people

### Composition

Public servants, beneficiaries, retirees, pensioners, apprentices from the National Training Service (SENA, as per its acronym in Spanish), and interns of Grupo EPM.

Grupo EPM people	2017	2018	2019
Executive staff	607	617	614
Professional staff	4,767	5,006	5,261
Non-professional staff	7,881	7,855	8,171
<b>Total public servants</b>	<b>13,255</b>	<b>13,478</b>	<b>14,046</b>
Beneficiaries	11,912	12,351	12,021
Retirees <sup>1</sup>	3,293	3,604	3,547
Apprentices and interns	616	681	860
<b>Total Grupo EPM people</b>	<b>29,076</b>	<b>30,114</b>	<b>30,474</b>

<sup>1</sup> There are no available data regarding pensioners through private pension funds or public funds.

EPM people	2017	2018	2019
Executive staff	226	219	226
Professional staff	2,878	2,817	2,942
Non-professional staff	4,182	4,117	4,346
<b>Total public servants</b>	<b>7,286</b>	<b>7,153</b>	<b>7,514</b>
Beneficiaries	11,912	12,351	12,021
Retirees <sup>1</sup>	2,193	2,135	2,098
Apprentices and interns	345	411	394
<b>Total EPM people</b>	<b>21,736</b>	<b>22,050</b>	<b>22,027</b>

<sup>1</sup> There are no available data regarding pensioners through private pension funds or public funds.



## Engagement goal

Strengthen the relationship between Grupo EPM people and the organization, in order to improve trust and enhance the sustainable human development of stakeholders, thus achieving compliance with corporate goals.

## Leader of the engagement plan

Vice Presidency of Human Resources and Technology.

## Related topics

Related material topics <b>GRI 102-44</b>	Organizational climate
	Human rights
	Transparency
Related complementary matters <b>GRI 102-44</b>	Working environment
	Sustainable production and consumption

## Management indicators

**102-44** Key topics and concerns raised.

**201-1** Direct economic value generated and distributed.

Value distributed in EPM people		
2017	2018	2019
COP 1,255,589 million (15%)	COP 1,344,782 million (16%)	COP 1,469,552 million (14%)

The value distributed was taken from the financial statement by stakeholder group, prepared in accordance with the Fourth Financial Statement methodology by Luis Perera Aldama.

## Investors

### Composition

Agents who are determinant for the provision of long-term financial resources to Grupo EPM. They act directly or indirectly in the capital market and do not share ownership in EPM or its affiliated companies. They include local and international bondholders, long-term funding providers, facilitators, and governmental entities.

### Engagement goal

Consolidate trustworthy relationships with the investors and other local and international actors of the securities market, through good management of economic, social, and environmental matters.

### Leader of the engagement plan

Directorate of Capital Management.

### Related topics

Related material topics <b>GRI 102-44</b>	Water and biodiversity
	Human rights
	Climate strategy
	Renewable energies
	Financial strength
	Fees and prices
	Transparency
Related complementary matters <b>GRI 102-44</b>	Social and environmental management in projects
	Sustainable production and consumption

### Management indicators

**102-44** Key topics and concerns raised.

## Main achievements of the relationship plan

Goals for 2019	Achievements in 2019	Accomplishment
Hold the 13th annual event for investors of Grupo EPM.	The annual event was held on April 24 in Bogotá. It counted on the participation of the most representative actors of the securities market. The management, performance, and achievements of the business group during the previous year, as well as the expectations and challenges for the current year, were highlighted during the event.	Total
Conduct teleconferences to report quarterly financial results.	Four quarterly results teleconferences were conducted (in Spanish and English) for national and international investors.	Total
Participate in annual events of international capital markets, such as non-deal roadshows, organized by the commercial banking sector.	The company participated in three international events held in the United States during the second and third trimesters of the year. During these events, it was possible to introduce and update information about the main topics of the business group that are of interest to investors.	Total
Keep both versions of the investor's website updated and improve navigation to facilitate access to content.	Both versions of the website were updated throughout the year.	Total
Additional achievement not included in the engagement plan: comply with the requirements of the Colombian Securities Exchange.	IR recognition awarded by the Colombian Securities Exchange for the 2019-2020 period.	Total
Additional achievement not included in the engagement plan: hold a roadshow in the United States, Europe, Asia, Chile, Peru, and Colombia, as part of the successful placement of bonds in the international capital market, equivalent to USD 1,382 million, in a combination of dollars and pesos, performed on July 11, 2019.	A total of 111 accounts of institutional investors were processed.	Total

## Challenges

Challenges for 2020	Achievement indicator
Hold the 14th annual event for investors of Grupo EPM.	Holding an annual event for investors of Grupo EPM during the second trimester of the year.
Conduct teleconferences to report quarterly financial results.	Fulfillment of four quarterly consolidated results teleconferences (in Spanish and English) for national and international investors.
Participate in annual events of international capital markets, such as non-deal roadshows, organized by the commercial banking.	Participation in three international events held in the United States during the second and third trimesters of the year to introduce and update information for investors about the main topics of the business group that are of interest to them.
Keep both versions of the investor's website updated and improve navigation to facilitate access to content.	Constant updates of the website and improvement of the navigation to facilitate access to content in both English and Spanish versions.

## Suppliers and contractors

### Composition

Natural and legal persons that provide or are able to provide goods or services to any of the companies of Grupo EPM. They include suppliers of labor, small suppliers of goods and services, suppliers of knowledge, strategic suppliers, and big suppliers of goods and services.

### Engagement goal

Number of suppliers registered in the supplier and contractor information system of EPM		
2017	2018	2019
3,397	5,290	7,514

*This report corresponds to the suppliers registered in the Ariba system as of December 31 of each year.*

Establish, through goods and services procurement, relationships to build and integrate skills with the purpose of achieving environmental sustainable development and value creation for all the parties and the society in general.

### Leader of the engagement plan

Vice Presidency of Shared Services and Supplies.

## Related topics

Related material topics <b>GRI 102-44</b>	Water and biodiversity
	Quality and safety of products and services
	Responsible procurement for local development
	Human rights
	Climate strategy
	Fees and prices
	Financial strength
	Transparency
Related complementary matters <b>GRI 102-44</b>	Working environment
	Sustainable production and consumption

## Management indicators

**102-44** Key topics and concerns raised.

**201-1** Direct economic value generated and distributed.

Value distributed by EPM to:	2017	2018	2019
Goods and services suppliers	COP 1,312,223 million (16%)	COP 1,389,542 million (16%)	COP 1,513,734 million (15%)
Financial suppliers	COP 822,031 million (10%)	COP 1,236,127 million (14%)	COP 1,231,287 million (12%)
<b>Total suppliers and contractors</b>	<b>COP 2,134,254 million (26%)</b>	<b>COP 2,625,669 million (30%)</b>	<b>COP 2,745,021 million (26%)</b>

The environmental management costs were classified as part of Goods and services suppliers. As of 2019, they are classified as part of Community and environment. The values reclassified are COP 44,746 million in 2017 and COP 56,533 million in 2018.

The value distributed was taken from the financial statement by stakeholder group, prepared in accordance with the Fourth Financial Statement methodology by Luis Perera Aldama.

## Partners

### Composition

Natural persons and legal entities that have non-controlling property rights in the national or international affiliated companies that are part of Grupo EPM.

The term partners applies for EPM. For the affiliated companies of Grupo EPM, they are called shareholders.

### Engagement goal

Ensure respect for the rights of shareholders and compliance with commitments to facilitate decision-making and strengthen trust, following the corporate governance practices.

### Leader of the engagement plan

Corporate Governance Unit.

### Related topics

Related material topics <b>GRI 102-44</b>	Access and purchasability
	Quality and safety of products and services
	Nonconventional renewable energies
	Financial strength
	Fees and prices
Related complementary matters <b>GRI 102-44</b>	Transparency
	Corporate citizenship
	Development and innovation

### Management indicators

**102-44** Key topics and concerns raised.



# Stakeholder engagement



## Stakeholder engagement

The materiality exercise, which includes the stakeholders’ view, is described in [Relevant sustainability topics - Materiality](#).

This exercise guides the sustainability management of Grupo EPM based on 11 material topics and their emphases in each territory. For the management of these emphases, the most significant challenges were identified and can be found in each [Material topic](#) in the challenges section.

### Stakeholders’ topics and concerns

Material topics pointed out by each stakeholder group									
Material topic	Customers and users	Community	Suppliers and contractors	Grupo EPM people	Partners / Shareholders	Owner	Investors	State	Colleagues
Access and purchasability	✓	✓			✓	✓		✓	✓
Water and biodiversity	✓	✓	✓				✓	✓	✓
Quality and safety of products and services	✓	✓	✓		✓	✓		✓	✓
Organizational climate				✓		✓			
Responsible procurement for local development		✓	✓					✓	
Human rights	✓	✓	✓	✓		✓	✓	✓	✓
Renewable energies	✓	✓			✓	✓	✓	✓	✓
Climate strategy	✓	✓	✓				✓	✓	✓
Financial strength	✓	✓	✓		✓	✓	✓		
Fees and prices	✓	✓	✓		✓	✓	✓	✓	✓
Transparency	✓	✓	✓	✓	✓	✓	✓	✓	✓

## Dialogs with EPM's stakeholders GRI 102-43

The **2018 EPM Management Report** was presented on April 2 as a practice of transparency and openness of information. This event was broadcast live on the regional channel Telemedellín, on the Aló EPM radio network, and through the internal and external media. The EPM's CEO and the Medellín mayor, as the chairman of the company's Board of Directors, presented information on the results and challenges of the main management areas. This event was a social media trend in Medellín (with the #RendiciónDeCuentasEPM hashtag) and had a section in the website with information and answers to the concerns of participants.

Subsequently, a press conference was held to allow journalists from the local, regional, and national media to expand the information. This report highlights publications of content in media such as Noticias RCN (television), announcements on airport screens, press notices in the El Tiempo and El Colombiano newspapers, and posts on social media, as follows:

- Twitter: more than 150 posts.
- Facebook: more than 30 posts.
- Instagram: more than 20 posts.

There were spaces to discuss the management report with actors including congresspersons from Antioquia, the Council of Medellín, the National Association of Public Utilities and Communication Companies (Andesco, as per its acronym in Spanish), the Colombian Association of Engineers (ACIEM, as per its acronym in Spanish), the Colombian Chamber of Infrastructure, the Antioquia Intersectoral Committee, and Proantioquia. There was also a space with some directors and editors of the news media.

The EPM Management Report, as well as relevant information on the milestones of the Ituango hydroelectric project, was also submitted to 143 business leaders in Colombia.

**Meeting with investors.** The EPM's CEO and the executive vice president of Corporate Finance and Risk and Investments Management presented the most relevant facts of the business management in the city of Bogotá, on April 23, 2019.

The public accountability information is available at:

<http://www.epm.com.co/site/Home/SostenibilidadEPM/InformedeSostenibilidad.aspx>

In addition to this, the national energy affiliates CENS, CHEC, EDEQ, and ESSA used various means to report their management to the stakeholders in their respective territories.

Other events were also held with stakeholders, where topics mainly related to the Ituango hydroelectric project were addressed:

### State:

- Debates at the Council of Medellín.

### Colleagues:

- Boards of directors of the National Business Association of Colombia (ANDI, as per its acronym in Spanish) at the Antioquia and national levels, Andesco, and the Colombian Association of Electricity Generators to present the progress on the project contingency.
- Sessions of the Vice Presidency of Mining, Hydrocarbons, and Energy and the Environmental Chamber of the ANDI at the national level.
- Sessions of the Environmental Committee of the ANDI at the Antioquia level to discuss and agree on the wastewater treatment ruling for the industries of Valle de Aburrá.
- Fourth Colombian Business Congress of the ANDI in Medellín.
- Congress of Andesco.
- ExpoSolar congress of the Colombian Association of Electricity Distributors.
- Sessions of the Colombian Mexican Chamber of Commerce
- Forty-ninth Regular Session of the OAS General Assembly in Medellín.

**Media, columnists, and journalists.** Roundtable sessions with columnists and journalists from Bogotá and Medellín and attention to media requirements. Visits to the Ituango hydroelectric project were made with international correspondents and community media.

Finally, the company held a meeting with alternative media at the project facilities and shared contingency progress bulletins with leaders of companies and sectors.

**Industries.** The company held meetings with sectors such as the Colombian Chamber of Infrastructure of Medellín, ACIEM, the Antioquia Intersectoral Committee, and Proantioquia to share the challenges that impact the development of the region and the country.

During 2019, a total of 4,000 people visited the Ituango hydroelectric project. In order to inform the stakeholders about the progress with the recovery of the project, visits were made to the main works, technical presentations were conducted, and visits were made to the unified control post (PMU, as per its acronym in Spanish) and the Technical Monitoring Center.

The most relevant actors that have visited the works include community leaders, representatives of the academia, businesspeople, sector leaders, members of the Council of Medellín, members of the Departmental Assembly of Antioquia, congresspersons, public servants of the national government, the media (local, regional, national, and international), candidates for the governor's office and mayor's offices, columnists, college students, authorities, and the community of the area of influence and the Lower Cauca region, among others.

## Financial statement by stakeholder groups **GRI 102-43**

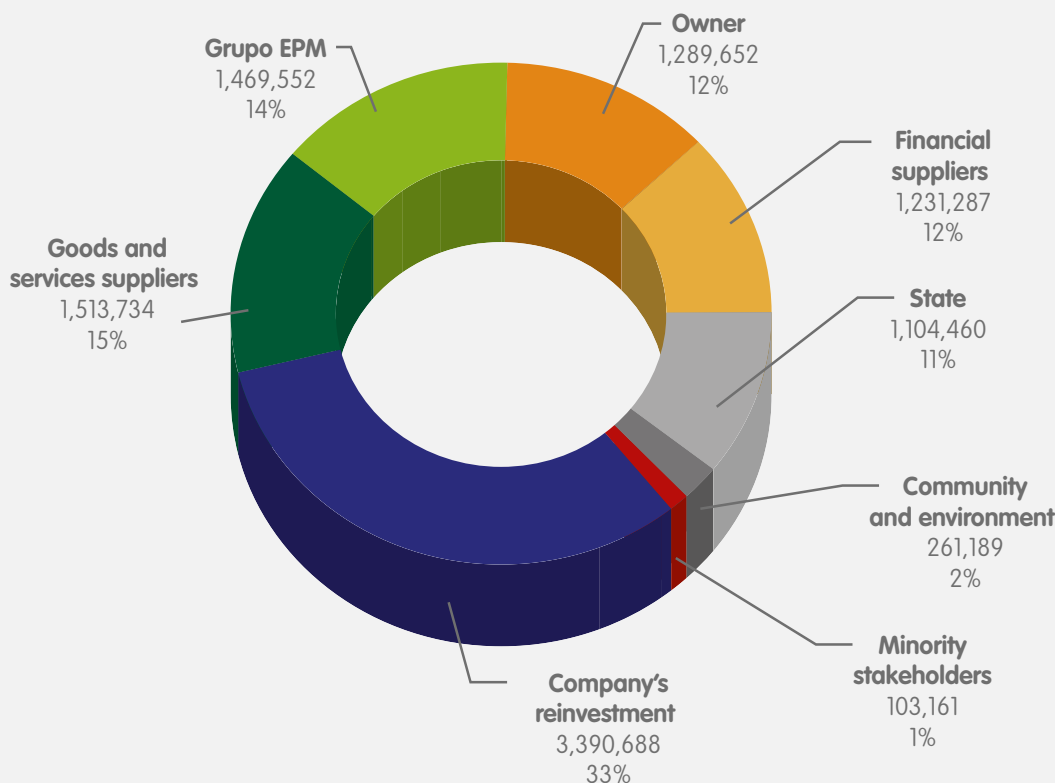
The graph of value generated and distributed shows a quantitative expression of the impact on stakeholders, based on the Fourth Financial Statement methodology by the Uruguayan Luis Perera Aldama.

<b>EPM financial statement by stakeholders in 2019</b>		
	<b>2019</b>	<b>Participation</b>
<b>Total value generated (TVG)</b>	<b>7,892,625</b>	<b>100%</b>
Operating value generated (OVG)	8,268,869	105%
Revenue	16,053,483	203%
Direct costs	-7,784,614	-99%
<b>Added value generated (AVG)</b>	<b>-376,244</b>	<b>-5%</b>
Affiliates and associates	-164,151	-2%
Accounting items	-212,093	-3%
<b>Total added value distributed (AVD)</b>	<b>7,898,151</b>	<b>100%</b>
Company's reinvestment	2,852,684	36%
Goods and services suppliers	1,078,375	14%
Grupo EPM people	1,004,667	13%
Owner	673,987	9%
Financial suppliers	750,526	10%
State	1,247,427	16%
Community and environment	187,346	2%
Minority stakeholders	103,139	1%

**Source:** Executive Vice Presidency of Finance and Investment Management.

## EPM financial statement by stakeholders in 2019

Value generated and distributed = COP 10,363,723 million



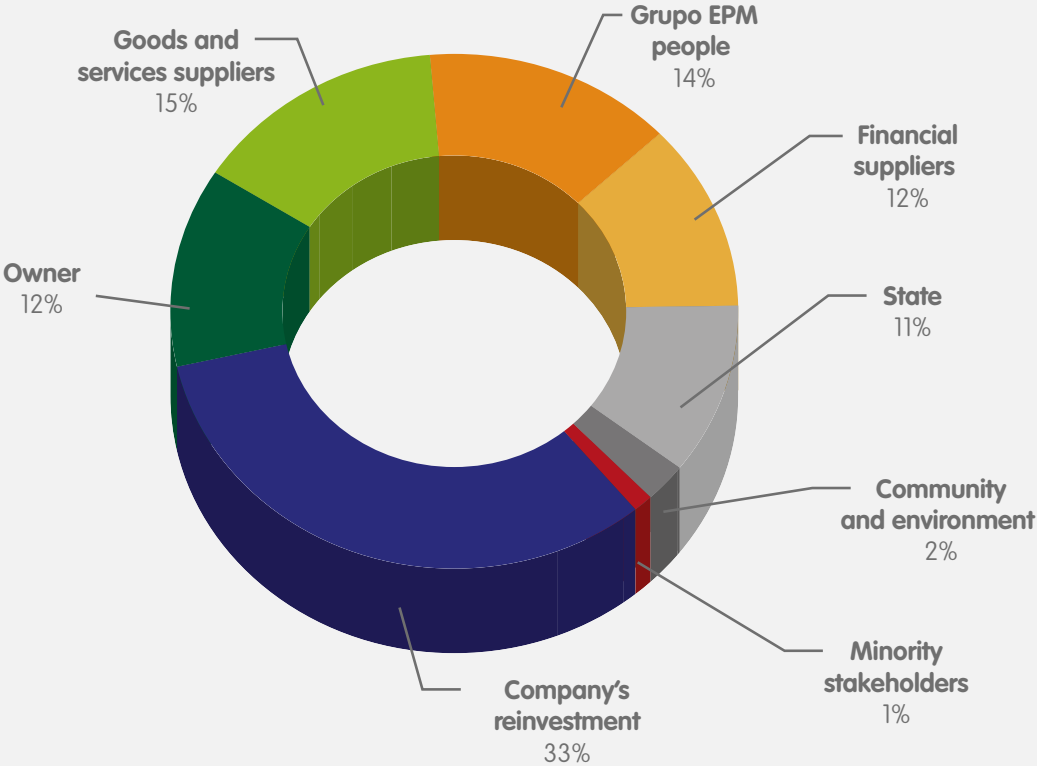
**Source:** Executive Vice Presidency of Finance and Investment Management.

Revenue	Operating income, net exchange difference from the company's own position, and financial returns from debtors.
Direct costs	Costs of goods sold, commercial operation, and direct supplies used for the provision of public utilities.
Affiliates and associates	Net results of the equity method, income from dividends, and other results associated with the acquisition or disposition of equity investments.
Accounting items	Non-cash income and expenses associated with impairment of assets and provisions for liabilities.
Company's reinvestment	Depreciation, maintenance, repairs, costs for quality control, and undistributed surpluses.
Owner	Ordinary and extraordinary transfers effectively paid.
Financial suppliers	Net results of income and expenses from interests, commissions, other results, and exchange difference with financial entities.
Grupo EPM people	Costs and expenses associated with the staff and the actuarial calculation.
Goods and services suppliers	Costs and expenses associated with the procurement of goods and services not directly related to the other stakeholder groups.
State	National and territorial taxes and contributions.
Community and environment	Act 56 of 1981 - Public works regulations, Act 99 of 1993 - General Environmental Law of Colombia, Fund for the Electrification of Non-interconnected Areas, Fund for the Electrification of Interconnected Rural Areas, environmental fees, and contributions to Fundación Grupo EPM.
Minority stakeholders	Effective payment of dividends to shareholders and partners of the companies directly and indirectly controlled by EPM.

Grupo EPM financial statement by stakeholders – Historical record (million COP)							
	2013	2014	2015	2016	2017	2018	2019
<b>Total value generated (TVG)</b>	<b>7,266,391</b>	<b>7,721,717</b>	<b>8,180,633</b>	<b>7,395,881</b>	<b>8,388,647</b>	<b>8,648,962</b>	<b>10,363,723</b>
Operating value generated (OVG)	7,866,383	7,066,843	8,501,525	8,048,649	8,771,017	9,308,234	10,668,666
Revenue	13,306,570	12,443,064	15,424,867	15,280,241	15,155,519	16,573,026	18,543,069
Direct costs	-5,440,187	-5,376,221	-6,923,342	-7,231,592	-6,384,502	-7,264,792	-7,874,403
<b>Added value generated (AVG)</b>	<b>-599,992</b>	<b>654,874</b>	<b>-320,891</b>	<b>-652,767</b>	<b>-382,370</b>	<b>-659,272</b>	<b>-304,943</b>
Affiliates and associates	22,798	950,978	-192,709	-177,432	-67,137	-112,095	-149,273
Accounting items	-622,790	-296,104	-128,183	-475,335	-315,234	-547,177	-155,670
<b>Total added value distributed (AVD)</b>	<b>7,266,391</b>	<b>7,721,717</b>	<b>8,180,633</b>	<b>7,395,881</b>	<b>8,388,647</b>	<b>8,648,962</b>	<b>10,363,723</b>
Company's reinvestment	1,412,901	1,480,818	1,091,010	2,322,245	2,333,287	2,274,919	3,390,688
Owner	1,234,557	1,984,566	991,139	816,521	1,309,136	1,503,504	1,289,652
Goods and services suppliers	1,318,933	1,034,034	1,299,596	1,288,590	1,312,193	1,389,542	1,513,734
Grupo EPM people	1,410,574	883,283	1,016,864	1,117,763	1,255,589	1,344,782	1,469,552
Financial suppliers	768,475	1,123,480	2,583,090	512,808	822,031	1,236,127	1,231,287
State	909,354	946,341	776,462	1,065,965	1,057,387	500,795	1,104,460
Community and environment	131,563	163,043	254,066	193,958	212,695	272,904	261,189
Minority stakeholders	80,035	106,152	168,405	78,031	86,328	126,389	103,161

**Source:** Executive Vice Presidency of Finance and Investment Management.

**Grupo EPM financial statement by stakeholders**  
Historical record (million COP)



*Source: Executive Vice Presidency of Finance and Investment Management.*

Grupo EPM financial statement by stakeholders and business segments in 2019 (million COP)					
	Total Grupo EPM	Energy segment	Water segment	Other segments	Deletions among segments
<b>Total value generated (TVG)</b>	<b>10,363,723</b>	<b>7,918,572</b>	<b>2,228,755</b>	<b>374,163</b>	<b>-157,767</b>
Operating value generated (OVG)	10,668,666	8,274,395	2,269,884	306,672	-182,285
Revenue	18,543,069	16,059,010	2,401,650	317,484	-235,075
Direct costs	-7,874,403	-7,784,615	-131,766	-10,812	52,790
Added value generated (AVG)	-304,943	-355,823	-41,129	67,491	24,518
Affiliates and associates	-149,273	-164,150	-3,582	21,759	-3,300
Accounting items	-155,670	-191,673	-37,547	45,732	27,818
<b>Total added value distributed (AVD)</b>	<b>10,363,723</b>	<b>7,918,572</b>	<b>2,228,755</b>	<b>374,163</b>	<b>-157,767</b>
Company's reinvestment	3,390,688	2,852,683	960,024	-425,810	3,791
Goods and services suppliers	1,513,734	1,053,446	474,959	66,874	-81,545
Grupo EPM people	1,469,552	1,004,667	334,769	137,086	-6,970
Owner	1,289,652	673,987	152,143	463,522	0
Financial suppliers	1,231,287	750,526	215,275	343,869	-78,383
State	1,104,460	1,247,428	62,972	-211,400	5,460
Community and environment	261,189	232,696	28,591	22	-120
Minority stakeholders	103,161	103,139	22	0	0

**Source:** Executive Vice Presidency of Finance and Investment Management.



## Grupo EPM financial statement by stakeholders and business segments in 2019 (million COP)

	Total Grupo EPM	Colombia	Chile	El Salvador	Guatemala	Panama	Mexico	Bermuda	Deletions among countries
<b>Total value generated (TVG)</b>	<b>10,363,723</b>	<b>8,236,408</b>	<b>533,456</b>	<b>228,255</b>	<b>553,141</b>	<b>691,133</b>	<b>230,176</b>	<b>11,588</b>	<b>-120,434</b>
Operating value generated (OVG)	10,668,666	8,425,842	494,321	235,136	622,951	687,489	311,841	11,588	-120,502
Revenue	18,543,069	11,814,839	561,273	1,046,787	2,434,935	2,474,224	314,389	17,578	-120,956
Direct costs	-7,874,403	-3,388,997	-66,952	-811,651	-1,811,984	-1,786,735	-2,548	-5,990	454
Added value generated (AVG)	-304,943	-189,434	39,135	-6,881	-69,810	3,644	-81,665	0	68
Affiliates and associates	-149,273	-47,980	-23	-5,973	-37,377	19,647	-77,567	0	0
Accounting items	-155,670	-141,454	39,158	-908	-32,433	-16,003	-4,098	0	68
<b>Total added value distributed (AVD)</b>	<b>10,363,723</b>	<b>8,236,408</b>	<b>533,456</b>	<b>228,255</b>	<b>553,141</b>	<b>691,133</b>	<b>230,176</b>	<b>11,588</b>	<b>-120,434</b>
Company's reinvestment	3,390,688	2,433,001	383,066	77,983	224,916	247,164	17,618	9,674	-2,734
Goods and services suppliers	1,289,652	1,289,652	0	0	0	0	0	0	0
Grupo EPM people	1,513,734	1,029,220	64,086	29,732	90,115	175,926	121,041	3,755	-141
Owner	1,469,552	1,191,250	52,153	48,036	84,506	59,841	33,218	548	0
Financial suppliers	1,231,287	992,648	147,160	11,206	63,666	92,389	45,071	-3,294	-117,559
State	1,104,460	976,269	-113,094	53,444	60,317	113,391	13,228	905	0
Community and environment	261,189	258,646	85	0	46	2,412	0	0	0
Minority stakeholders	103,161	65,722	0	7,854	29,575	10	0	0	0

*Source: Executive Vice Presidency of Finance and Investment Management.*

The background of the entire page is a repeating pattern of small, light-colored icons. These icons represent various aspects of sustainability, including renewable energy (solar panels, wind turbines, light bulbs), nature (trees, leaves, water droplets), recycling (recycling symbols, paper rolls), and social responsibility (hands holding a globe, people silhouettes).

# Commitments to external sustainability initiatives

## Commitments to external sustainability initiatives

### External sustainability initiatives signed or adopted by EPM

	<p><b>Sustainable Development Goals 2030</b> 2030 Agenda for sustainable development, 17 goals focused on people, the planet, prosperity, peace, and alliances.</p>
	<p><b>Architecture for a better world</b> Corporate sustainability, priorities of the post-2015 global development agenda, long-term business goals, action and collaboration platforms, social and market-related drivers and incentives, transparency, and public accountability.</p>
	<p><b>Global Compact Principles</b> Labor rights, human rights, environment, and anti-corruption.</p>
	<p><b>Business for peace - Global Compact</b> Role of the companies in relation to peace in the territories where they have direct influence.</p>
	<p><b>The CEO Water Mandate - Global Compact</b> Commitment of the private sector to water management.</p>
	<p><b>Rio Declaration</b> • Sustainable development.</p>
	<p><b>COP 21. Paris Agreement</b> Emission mitigation.</p>
	<p><b>Global Reporting Initiative - GRI</b> • Global sustainability report.</p>
	<p><b>Guías Colombia (Colombia Guidelines)</b> • Human rights and international humanitarian law.</p>
	<p><b>Transparencia por Colombia (Transparency for Colombia)</b> • Transparency indicator in public utility companies.</p>
	<p><b>AA1000 Stakeholder Engagement Standard</b> • Stakeholders engagement.</p>
	<p><b>ISO 26000 – International Standard on Social Responsibility</b> • Governance, human rights, labor practices, environment, fair operating practices, consumer issues, and community involvement and development.</p>

	<p><b>Ethos indicators</b></p> <ul style="list-style-type: none"> <li>• Values, transparency, and corporate governance; internal audience, environment, suppliers, consumers, community, government, and society.</li> </ul>
	<p><b>ISO 14001 – Environmental Management</b></p> <ul style="list-style-type: none"> <li>• Pollution and environmental management.</li> </ul>
	<p><b>Equator Principles</b></p> <ul style="list-style-type: none"> <li>• Environmental and social management.</li> </ul>

## Participation in guilds and associations

Type	Guild or association
<p><b>National and international guilds and associations</b></p>	Collective Agreement of the Colombian Electricity Sector
	Agency for Cooperation and Investment of Medellín and the Metropolitan Area - ACI
	Center for Tax Studies of Antioquia - CETA
	Colombian Association of Finance Executives - ACEF
	Colombian Association of Electricity Generators - Acolgen
	Latin American Association of Water and Sanitation Operators - ALOAS
	National Association of Utilities and Communication Companies - Andesco
	National Business Association of Colombia - ANDI
	Colombian Association of Labor Relations - Ascort
	Association of Corporate Foundations - AFE
	Colombian Association of Electricity Distributors - Asocodis
	Colombian Association of Natural Gas - Naturgas
	Colombian Association of Conformity Assessment Bodies - ASOCEC
	Cátedra del Agua
	Center for Research and Technological Development - CIDET
	Medellín Electrical Energy Cluster
Colombia Inteligente	

Type	Guild or association
<b>National and international guilds and associations</b>	Regional Energy Integration Commission - CIER
	National Commission for Health and Safety at Work of the Electricity Sector - Ministry of Labor
	Marketing Advisory Committee - MAC
	Transmission Planning Advisory Committee - CAPT
	Colombian Member Committee of the Regional Energy Integration Commission - COCIER
	Committee of Employees and Compliance Officers of the Real Sector
	Security Committee - CEA-OSAC
	Inter-institutional Committee of Libraries
	Inter-institutional Committee for Environmental Education of Antioquia - CIDEA
	Inter-institutional Committee for Environmental Education of Medellín - CIDEAM
	Reading Plan Sectoral Committee
	Inter-institutional Thematic Committee on Climate Change of the Municipality of Medellín
	University - Industry - Government Committee - UIGC
	Colombian Council for Security
	World Energy Council - WEC
	National Operation Council of Gas - CNO-Gas
	National Operation Council - CNO
	Ruta N Medellín Corporation
	High Cost Account
	Global Movement of High-Impact Entrepreneurs - Endeavor
	Digital Resource Committee - G8
	Colombian Institute of Tax Law - ICDT
	Colombian Institute of Technical Standards and Certification - ICONTEC
Colombian Institute for Subterranean Infrastructure Technologies - ICTIS	
<i>International Hydropower Association - IHA</i>	
Colombian Institute of Internal Auditors - IIA	

Type	Guild or association
<b>National and international guilds and associations</b>	National Institute of Metrology
	<i>Information Systems Audit and Control Association - ISACA</i>
	<i>International Water Association - IWA</i>
	Committee on Critical Infrastructure, Operational Risk, and National Cyber Defense of the Ministry of National Defense
	Cultural Committee Alliance for Medellín Downtown
	Committee of Medellín Museums - MMM
	Committee of the Electricity Sector (of the National Training Service)
	National Committee for Adaptation to Climate Change
	Regional Hub for Adaptation to Climate Change
	Colombian Accreditation Organism - ONAC
	Regional Platform of the Global Water Operators' Partnerships Alliance (GWOPA) for Latin
	America and the Caribbean - WOP-LAC
	Network of Antioquia Museums - RMA
	Latin American and Caribbean Network for the Popularization of Science and Technology - RedPop
	<b>Trade guilds and associations</b>
Camacol	
Medellin-Antioquia Chamber of Commerce	
Colombian Mexican Chamber of Commerce	
Camacol Caldas	
Camacol Risaralda	
La Dorada Chamber of Commerce	
Chinchiná Chamber of Commerce	
Dos Quebradas Chamber of Commerce	
Pereira Chamber of Commerce	



# Shared responsibility for the environment

## Shared responsibility for the environment

Grupo EPM is committed to the environment in the territories where it operates, and establishes synergies through agreements, inter-administrative contracts, working groups, and other strategic alliances that seek to develop actions for the protection of the natural resources and the improvement of the living conditions of the surrounding communities.

Guided by the environmental policy and the strategic goals of Grupo EPM, the group maintained the commitments acquired with the regional environmental authorities such as Corantioquia, Cornare, Corpourabá, Corpocaldas, Carder, the Corporation for the Development of Caldas, and Área Metropolitana del Valle de Aburrá, through different agreements in lines of work such as protection of basins and reservoirs; protection and promotion of biodiversity; environmental education; ecotourism; air quality; emission reduction; adequate management of ordinary, special, and dangerous waste; and sustainable mobility in Valle de Aburrá with the promotion of natural gas and electric mobility. The group also continued with the execution of the agreements and actions with universities, community organizations, and state entities to mitigate the effects of the Ituango hydroelectric project contingency.

In 2019, EPM and nine affiliates of the group, in association with different institutions, carried out 276 environmental responsibility actions, led by the parent company with 94 initiatives, CHEC with 71, DelSur with 34, and Aguas Regionales with 24, followed by Eegsa, CENS, ESSA, Aguas de Malambo, Adasa, and HET.

In the search for a favorable environment for all the agents of the public utilities sector, Grupo EPM worked with entities of the national government such as the Colombian Ministry of Environment and Sustainable Development; the Colombian Ministry of the Interior; the Colombian Ministry of Housing, City, and Territory; the Colombian Institute of Anthropology and History, and the guilds; this contributed to the generation, revision, and analysis of Decree 138 of 2019 and its implementation, regulation on survey, search, and rescue of the country's archaeological heritage in the development of infrastructure projects. This year, EPM also actively participated in the workshops to contribute to the National Development Plan (Act 1955 of 2019) with the improvement of the process to obtain tax incentives for sustainable mobility, unconventional sources of energy, and energy efficiency.

EPM continued with alliances through the establishment of framework agreements with Cornare, Área Metropolitana del Valle de Aburrá, and Corpourabá and through the establishment of direct agreements with Corantioquia for the protection of areas of influence of the power generation reservoirs in its jurisdiction.





# Precautionary principle

## Precautionary principle

According to the precautionary principle<sup>1</sup>, the lack of full scientific certainty is not an excuse to postpone the adoption of effective and early measures to prevent environmental and human health degradation.

In Grupo EPM, a cautious approach to protect the environment and human health is incorporated from its strategic planning, based on the sustainable human development precepts.

Grupo EPM has undertaken actions based on national environmental and risk-management policies related to loss of biodiversity, climate change, and risks for people.

### GRI 102-11

During 2019, the company continued applying the scale of values for decision-making, which prioritizes the preservation of people's lives, followed by the protection of the environment and, lastly, the recovery of the Ituango hydroelectric project, with the certainty that all the activities undertaken have met the strict safety and control conditions.

Given the risk situation of the project, and in order to avoid the deterioration of the spillway and its associated works, EPM recommended, according to the PMU as a measure to reduce risk, the installation and operation of the generating units and the commissioning of the intermediate discharge tunnel, a situation that technically allows the energy contained in the reservoir water to be released and, therefore, avoids the increase in the risk level for downstream communities. See the [Ituango hydroelectric project report](#).

Other actions by Grupo EPM consistent with the precautionary principle are mentioned in [Climate strategy](#) y [Water and biodiversity](#).

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<sup>1</sup> Rio Declaration, UN Conference on Environment and Development, 1992.

In 2019 the business **purpose** of Grupo EPM emphasizes an ecosystemic approach focused on the whole: **contribute to the harmony of life for a better world.**

This expansion of the field of vision is an invitation to recognize the ecosystem, to see beyond individual interests to have a group, territory, humanity vision, taking into account future generations and life in all its dimensions.

The purpose, consistent with the precautionary principle, means being aware of our relationship with all its parts and of our impact on them.

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, renewable energy, and industry. Recognizable symbols include solar panels, wind turbines, light bulbs, gears, recycling symbols, water droplets, and stylized buildings. The icons are arranged in a dense, grid-like fashion across the entire surface.

# Material topics

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, renewable energy, and technology. Recognizable symbols include solar panels, wind turbines, light bulbs, gears, recycling symbols, water droplets, and stylized houses or buildings. The icons are arranged in a dense, grid-like fashion across the entire surface.

# Access and purchasability



## Access and purchasability

Higher availability of public utilities through solutions that favor human and territorial development. Access involves providing services to populations living in areas with technical or legal restrictions for its provision, as well as offers for customers and users to permanently enjoy residential public utilities.

Availability of public utilities through conventional and nonconventional solutions that favor human and territorial development.

In compliance with regulations and standards, access involves service availability through infrastructure solutions that also aim at providing services to populations living in areas with technical or legal restrictions for its provision, that is, unserved populations.

Purchasability refers to the options and solutions available for customers and users to permanently enjoy residential public utilities, meeting their tastes, preferences, and needs, and taking into account their ability and willingness to pay.

## Relevance

Universalization, understood as purchasability and access solutions, is a focus of the CSR policy. It is also present at the core of the business, is the essential contribution of Grupo EPM to the development of territories, and represents high social value for the organization and its stakeholders.

The lack of access to public utilities is a determining aspect of poverty with ethical, reputational, and economic implications directly related to Grupo EPM's businesses.

## Main achievements

Program / Action	Challenge	Company	Achievements in 2019	Accomplishment
Habilitación Viviendas (Habitable Homes)	Connect 38,307 users from strata 1, 2, and 3 through the Habilitación Viviendas Gas program.	EPM	41,874 users from strata 1, 2, and 3 were connected. 29,239 in Valle de Aburrá and 12,635 in Antioquia.	Total
	Connect 63 customers through the Usuarios Desconectados (Disconnected Users) program.	EDEQ	42 customers were connected. The program is expected to continue in 2020.	Partial
	Standardize the provision of the service to 1,159 users located in 17 settlements with high-loss transformers.	ESSA	4,910 users in 28 below-average settlements were standardized, exceeding the goal.	Total
	Connect 6,000 new users in informal human settlements through the Habilitación Viviendas program.	CENS	3,525 users in informal human settlements were connected.	Partial
Paga a tu Medida (Pay According to your Needs)	Connect 20,000 customers to the Paga a tu Medida program.	EPM	32,570 customers were connected to the Paga a tu Medida offer, with a 162% execution in relation to the goal. Since the beginning of the program in 2014, 195,653 customers have benefited from it.	Total
	Connect 4,232 customers to the Paga a tu Medida offer.	CENS	1,347 were connected to the Paga a tu Medida offer, accomplishing 31% of the annual goal. Since the beginning of the program in 2018, 5,766 customers have benefited from it.	Not accomplished
	Connect 5,000 customers to the Paga a tu Medida program.	ESSA	6,380 customers were connected to the offer, accomplishing 128% of the annual goal. Since the beginning of the offer in 2018, 8,018 customers have been connected.	Total
Unserved population	Legalize and enable the water supply service in 17,225 solutions for homes that do not have the service.	EPM	The water supply service was legalized and enabled to 15,390 facilities through the Unidos por el Agua (United for Water) program, accomplishing 89% of the goal due to technical difficulties. Pending connections were scheduled for 2020.	Not accomplished
	Connect 10,000 new customers through the Unidos por el Gas (United for Natural Gas) program.	EPM	12,004 customers were connected through the program, accomplishing 120% of the goal.	Total

Program / Action	Challenge	Company	Achievements in 2019	Accomplishment
Unserved population	Connect 10,000 new customers through the Unidos por el Gas (United for Natural Gas) program.	EPM	12,004 customers were connected through the program, accomplishing 120% of the goal.	Total
	Install 2,450 gas connections in existing homes that do not have access to this service.	EPM	3,333 gas connections were installed, accomplishing 136% of the goal, through the intervention of the Municipality of Medellín in neighborhoods such as El Compromiso, La Aldea, El Salado, and Juan XIII.	Total
	Legalize and enable the energy service in 2,000 existing homes that do not have the service.	EPM	The energy service was legalized and enabled to 4,157 homes, accomplishing 207% of the goal.	Total
	Legalize and enable the wastewater management service in 18,779 homes that do not have the service.	EPM	The sewerage service was legalized and enabled to 14,291 homes through the Unidos por el Agua (United for Water) program, accomplishing 76% of the annual goal due to technical difficulties. Pending connections were scheduled for 2020.	Not accomplished
Prepaid services	Connect 3,000 customers to the prepaid energy program.	CENS	3,885 customers were connected to the prepaid energy program, accomplishing 130% of the goal. Since the beginning of the program in 2016, 14,573 customers have been connected.	Total
Universalization and expansion of the service	Achieve 85.59% universalization in the gas service.	EPM	A 85.84% indicator was achieved, accomplishing 100.3% of the goal.	Total
	Achieve 100% universalization in the wastewater management service.	Aguas del Oriente	A 100% indicator was achieved.	Total
	Achieve 75.17% universalization in the wastewater management service.	Aguas Regionales	A 74.20% indicator was achieved, accomplishing 99% of the goal.	Partial
	Achieve 77.17% universalization in the wastewater management service.	Aguas de Malambo	A 75.82% indicator was achieved, accomplishing 98% of the goal.	Partial
	Achieve 95.37% universalization in the wastewater management service.	EPM	A 95.30% indicator was achieved.	Partial
	Achieve 99.4% universalization in the solid waste management service.	Emvarias	A 99.87% indicator was achieved, accomplishing 99.28% of the goal.	Partial



Program / Action	Challenge	Company	Achievements in 2019	Accomplishment
Universalization and expansion of the service	Achieve 91.76% universalization in the water supply service.	Aguas de Malambo	A 91.23% indicator was achieved, accomplishing 99% of the goal.	Partial
	Achieve 91.79% universalization in the water supply service.	Aguas Regionales	A 91.75% indicator was achieved.	Partial
	Achieve 97.27% universalization in the water supply service.	EPM	A 97.24% indicator was achieved.	Partial
	Achieve 100% universalization in the water supply service.	Aguas del Oriente	A 100% indicator was achieved.	Total
	Connect 49,430 new customers to the gas system.	EPM	67,040 new customers were connected to the service, accomplishing 135% of the goal.	Total
	Connect 8,816 customers outside Valle de Aburrá to the gas service.	EPM	13,981 customers outside Valle de Aburrá were connected to the service, accomplishing 158% of the goal.	Partial
	Build 157 km of gas pipeline networks.	EPM	82 km of gas pipeline networks were built in Valle de Aburrá and 83 km outside Valle de Aburrá, for a total of 165 km and accomplishing 105% of the goal.	Total
	Build 87 km of gas pipeline networks outside Valle de Aburrá.	EPM	83 km of gas pipeline networks were built outside Valle de Aburrá, accomplishing 98% of the goal.	Partial
Electrificación Rural (Rural Electrification)	Electrify 2,400 homes with company's own resources, achieving 96.3% rural coverage.	ESSA	5,116 homes were electrified, impacting 15,860 people and achieving 96.40% rural coverage.	Total
	Connect 3,184 homes to the Electrificación Rural program through conventional networks.	EPM	6,074 homes were connected with company's resources.	Total

## Challenges

Program, project, initiative, or action	Challenge	Year in which it is achieved	Scope and coverage			Achievement indicator
			Territory	Business	Company	
Electrificación Rural (Rural Electrification)	Electrify 4,000 homes in rural areas.	2020	Colombia - Santander	Power - T&D	ESSA	Number of electrified homes and % of rural coverage.
Paga a tu Medida (Pay According to your Needs)	Connect 18,000 customers to the Paga a tu Medida program.	2020	Colombia - Antioquia	All the businesses	EPM	Number of users connected to the Paga a tu Medida offer.
	Connect 1,700 customers to the Paga a tu Medida program.	2020	Colombia - Norte de Santander	Power - T&D	CENS	Number of users connected to the Paga a tu Medida offer.
	Connect 5,000 customers to the Paga a tu Medida program.	2020	Colombia - Santander	Power - T&D	ESSA	Number of users connected to the Paga a tu Medida offer.
Unserviced population	Connect 11,500 wastewater services in existing homes that do not have access to this service.	2020	Colombia - Antioquia	Water supply and sanitation	EPM	Solutions for existing unserved homes. Number of customers and users.
	Connect 3,000 water supply services in existing homes that do not have access to this service.	2020	Colombia - Antioquia	Water supply and sanitation	EPM	Solutions for existing unserved homes. Number of customers and users.
	Connect 1,500 energy services in existing homes that do not have access to this service.	2020	Colombia - Antioquia	Power - T&D	EPM	Number of connections made / Number of connections estimated.
	Install 1,344 gas connections in existing homes that do not have access to this service.	2020	Colombia - Antioquia	Power - Gas	EPM	Number of existing homes connected / Target number of existing homes without service.
Prepaid services	Connect 1,000 customers to the prepaid water program.	2020	Colombia - Antioquia	Water supply and sanitation	EPM	Number of users connected to the prepaid water offer.
	Connect 14,000 customers to the prepaid energy program.	2020	Colombia - Antioquia	Power - T&D	EPM	Number of users connected to the prepaid energy offer.

Program, project, initiative, or action	Challenge	Year in which it is achieved	Scope and coverage			Achievement indicator
			Territory	Business	Company	
Prepaid services	Connect 2,800 customers to the prepaid energy program.	2020	Colombia - Norte de Santander	Power - T&D	CENS	Number of users connected to the prepaid energy offer.
	Connect 4,000 customers to the prepaid energy program.	2020	Colombia - Santander	Power - T&D	ESSA	Number of users connected to the prepaid energy offer.
Universalization and expansion of the service	Achieve 96.95% universalization in the water supply service in the Grupo EPM's national affiliates.	2020	Colombia	Water supply and sanitation	Grupo EPM	% of service universalization.
	Achieve 93.93% universalization in the wastewater service in Grupo EPM in Colombia.	2020	Colombia	Water supply and sanitation	Grupo EPM	% of service universalization.
	Achieve 97.02% universalization in the energy service in Grupo EPM in Colombia.	2020	Colombia	Power - T&D	Grupo EPM	% of service universalization.
	Achieve 87.82% universalization in the gas service.	2020	Colombia - Antioquia	Power - Gas	EPM	% of service universalization.
	Achieve 93.79% universalization in the wastewater management service.	2020	Colombia - Antioquia	Water supply and sanitation	EPM	% of service universalization.
	Connect 22,000 new families through the Unidos por el Gas (United for Natural Gas) program.	2020	Colombia - Antioquia	Power - Gas	EPM	Customers connected.
	Achieve 95.60% universalization in the wastewater management service.	2020	Colombia	Water supply and sanitation	EPM	% of service universalization.
	Achieve 96.82% universalization in the energy service.	2020	Colombia	Power - T&D	EPM	% of service universalization.

Program, project, initiative, or action	Challenge	Year in which it is achieved	Scope and coverage			Achievement indicator
			Territory	Business	Company	
Universalization and expansion of the service	Achieve 97.41% universalization in the water supply service.	2020	Colombia - Antioquia	Water supply and sanitation	EPM	% of service universalization.
	Achieve 99.7% universalization in the solid waste management service.	2020	Colombia - Antioquia	Water supply and sanitation	Emvarias	% of service universalization.

### Related stakeholders

Customers and users

Community

Owner

State

Partners

### GRI standard disclosures and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 203-2** Significant indirect economic impacts.
- EU 26** Percentage of population unserved in licensed distribution areas.
- EPM-12** Solutions for unserved homes.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Colombia – Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas

## Sustainable Development Goals



The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, renewable energy, and social development. Recognizable symbols include wind turbines, solar panels, lightbulbs, water droplets, recycling symbols, houses, and hands holding a globe or a leaf. The icons are arranged in a dense, grid-like fashion across the entire surface.

# Universalization and expansion of the service

## Universalization and expansion of the service

The social purpose of Grupo EPM is to improve the universalization of its services in the territories where it operates. This is achieved through a joint and coordinated work with variables such as the connection of new customers and the connection of unserved populations located in places with technical or legal limitations for the provision of services.

### Management in 2019

In 2019, Grupo EPM reported a favorable growth in the number of customers in all its services, thanks to programs such as *Habilitación Viviendas* (Habitable Homes) and *Electrificación Rural* (Rural Electrification) and the expansion of water supply, energy, and gas networks.

In EPM, the percentage of universalization for the water supply and sewerage services closed at 97.24% and 95.30%, respectively. For the electrical energy service, it closed at 96.50%; and for the gas service, at 85.84%.

With the universalization of the residential public utilities, Grupo EPM has contributed to improve the quality of life of more than 6,756,355 customers and users as of December 2019.

In EPM, 1,266,504 customers and users benefit from the water supply service and 1,233,212 from the sewerage service, which represents a 3% growth for each service with respect to the previous year. It is worth highlighting the *Unidos por el Agua* program developed in the municipality of Medellín, which seeks to improve the quality of life of the community by taking these two utilities to their homes.

During the year, the company successfully connected 18,323 homes, reaching a total of 41,391 and exceeding the goal of 40,200 clients and users set at the beginning of the program. In Colombia, Grupo EPM closed the year with 1,421,027 customers and users of the water supply service and 1,362,670 of the sewerage service.

For the energy service, the universalization dynamic reached 96.50% in Antioquia, equivalent to 2,508,552 customers and users. In Colombia, the figure amounts to 4,584,486 customers and users of Grupo EPM.

The loss management program, the electrification of rural homes, the strengthening of purchasability commercial offers, the purchase of assets under the modality of future asset, and the expansion of primary and secondary networks were strategies that leveraged service universalization.

The 1.2% growth in the gas service universalization was the result of reaching three new populations, for a total of 119 localities in Antioquia and 1,260,940 customers and users.

Regarding the sanitation service, Emvarias has contributed to improve the living conditions in 868,335 homes, which represents a 6% increase with respect to the previous year.

Service universalization - Water supply (%)			
Companies	2017	2018	2019
EPM	96.13%	97.15%	97.24%
Aguas del Oriente	100.00%	100.00%	100.00%
Aguas Regionales	0.00%	91.41%	91.75%
EPRio	0.00%	98.00%	97.00%
Aguas de Malambo	91.00%	91.49%	91.23%
Adasa	100.00%	100.00%	100.00%
<b>Water supply - Grupo EPM</b>	<b>NDA</b>	<b>NDA</b>	<b>96.75%</b>

*Source: Commercial Vice Presidency*

The water supply service universalization in the Colombian companies achieves 96.75%. This calculation does not include the result of the Chilean company Adasa, since it corresponds to the percentage of service coverage.

Service universalization - Sewerage (%)			
Companies	2017	2018	2019
EPM	94.08%	95.15%	95.30%
Aguas del Oriente	100.00%	100.00%	100%
Aguas Regionales	0.00%	73.19%	74.20%
EPRio	0.00%	97.49%	97.00%
Aguas de Malambo	73.80%	76.18%	75.82%
Adasa	99.80%	99.86%	99.38%
<b>Wastewater management - Grupo EPM</b>	<b>NDA</b>	<b>NDA</b>	<b>93.50%</b>

*Source: Commercial Vice Presidency.*



The wastewater management service universalization in the Colombian companies achieves 93.50%. This calculation does not include the result of the Chilean company Adasa, since it corresponds to the percentage of service coverage.

Service universalization - Energy (%)			
Companies	2017	2018	2019
EPM	96.56%	96.42%	96.50%
CHEC	99.12%	98.73%	99.05%
ESSA	96.15%	95.89%	96.47%
CENS	93.09%	91.92%	92.83%
EDEQ	98.74%	98.88%	99.08%
Delsur	95.60%	95.60%	95.60%
Eegsa	99.20%	99.32%	98.59%
ENSA	96.30%	95.10%	94.70%
<b>Energy - Grupo EPM</b>	<b>97.56%</b>	<b>96.42%</b>	<b>96.43%</b>

*Source: Commercial Vice Presidency.*

The energy service universalization in the Colombian companies achieves 96.43%. This calculation does not include the result of the international companies Delsur (El Salvador), Eegsa (Guatemala), and ENSA (Panama), since it corresponds to the percentage of service coverage.

The coverage percentage calculated for Delsur corresponds to the departments that it serves in El Salvador (Cuscatlán, La Libertad, La Paz, San Salvador, and San Vicente). Taken from the information published in 2014 by the National Energy Council at:

<https://www.cne.gob.sv/tema/electrificacion-rural-2/estadisticas-de-electrificacion/>

Service universalization - Gas (%)			
Companies	2017	2018	2019
EPM	82.75%	84.63%	85.84%

*Source: Commercial Vice Presidency.*

Water supply networks - Primary distribution - Accumulated (km)			
Companies	2017	2018	2019
EPM	283	283	284
Aguas del Oriente	2	2	2
Aguas Regionales	74	144	393
EPRio	0	10	14
Aguas de Malambo	14	15	4
Adasa	161	164	167
<b>Grupo EPM</b>	<b>534</b>	<b>618</b>	<b>865</b>

Source: Vice Presidency of Water and Sanitation.

Water supply networks - Secondary distribution - Accumulated (km)			
Companies	2017	2018	2019
EPM	3,583	3,627	3,641
Aguas del Oriente	30	30	30
Aguas Regionales	600	601	2,054
EPRio	0	348	343
Aguas de Malambo	167	162	151
Adasa	1,119	1,126	1,129
<b>Grupo EPM</b>	<b>5,499</b>	<b>5,894</b>	<b>7,348</b>

Source: Vice Presidency of Water and Sanitation.

Sewerage networks - Primary distribution - Accumulated (km)			
Companies	2017	2018	2019
EPM	388	392	394
Aguas del Oriente	16	16	16
Aguas Regionales	81	81	435
EPRio	0	20	20
Aguas de Malambo	32	23	9
Adasa	178	181	181
<b>Grupo EPM</b>	<b>695</b>	<b>713</b>	<b>1,055</b>

Source: Vice Presidency of Water and Sanitation.

Sewerage networks - Secondary distribution - Accumulated (km)			
Companies	2017	2018	2019
EPM	4,228	4,261	4,299
Aguas del Oriente	4	4	4
Aguas Regionales	375	41	411
EPRio	0	133	133
Aguas de Malambo	84	93	120
Adasa	896	899	902
<b>Grupo EPM</b>	<b>5,587</b>	<b>5,431</b>	<b>5,869</b>

*Source: Vice Presidency of Water and Sanitation.*

A primary distribution network or matrix is a pipeline system that makes up the main service grid of a population and distributes water from the pipeline, treatment plant, or compensation tanks to the secondary networks. It also maintains basic service pressures for the proper functioning of the entire system and generally does not distribute water en route.

A secondary distribution network is the part of the distribution network derived from the primary network. It distributes water to the neighborhoods and urbanizations of the city, and can distribute water en route.

Energy networks - Primary distribution - Built (km)			
Companies	2017	2018	2019
EPM	1,031	839	1,132
CHEC	22	38	32
ESSA	724	1,001	216
CENS	58	52	114
EDEQ	13	8	0
Delsur	48	40	85
Eegsa	144	138	64
ENSA	129	66	79
<b>Grupo EPM</b>	<b>2,169</b>	<b>2,182</b>	<b>1,722</b>

*Source: Vice Presidency of Power Transmission and Distribution.*

Energy networks - Primary distribution - Accumulated (km)			
Companies	2017	2018	2019
EPM	51,909	53,085	54,218
CHEC	10,068	12,220	10,121
ESSA	21,502	22,502	22,754
CENS	13,711	13,890	12,645
EDEQ	2,451	2,458	2,466
Delsur	4,974	5,014	5,058
Eegsa	8,753	8,920	9,009
ENSA	4,701	4,780	4,860
<b>Grupo EPM</b>	<b>118,069</b>	<b>122,869</b>	<b>121,131</b>

*Source: Vice Presidency of Power Transmission and Distribution.*

Medium, high, and ultra-high voltage networks. Nominal voltage between 1 kV and 500 kV.

Energy networks - Secondary distribution - Built (km)			
Companies	2017	2018	2019
EPM	1,051	2,438	871
CHEC	62	71	111
ESSA	1,036	1,861	404
CENS	105	15	24
EDEQ	36	10	0
Delsur	-14	-16	138
Eegsa	176	192	163
ENSA	188	170	160
<b>Grupo EPM</b>	<b>2,640</b>	<b>4,741</b>	<b>1,871</b>

*Source: Vice Presidency of Power Transmission and Distribution.*

Energy networks - Secondary distribution - Accumulated (km)			
Companies	2017	2018	2019
EPM	38,971	41,512	42,383
CHEC	12,844	13,025	13,136
ESSA	31,715	33,576	33,980
CENS	12,405	12,481	14,064
EDEQ	2,774	2,781	2,768
Delsur	5,666	5,650	5,686
Eegsa	8,489	8,681	8,843
ENSA	6,950	7,121	7,281
<b>Grupo EPM</b>	<b>119,814</b>	<b>124,827</b>	<b>128,141</b>

*Source: Vice Presidency of Power Transmission and Distribution.*

Total low voltage networks: nominal voltage lower than 1 kV.

Gas networks - EPM (km)			
Companies	2017	2018	2019
Steel line pipe - Built	88	88	88
Polyethylene pipe networks - Built	150	215	165
Polyethylene pipe networks - Accumulated	7,939	8,154	8,319

*Source: Vice Presidency of Natural Gas.*

## GRI standards disclosures and EPM indicators

203-2 Significant indirect economic impacts.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Empresas Varias de Medellín - Emvarias  
 Aguas de Antofagasta - Adasa  
 Tecnología Intercontinental -Ticsa  
 Hidroecológica del Teribe - HET

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Norte de Santander  
 Colombia – Malambo, Atlántico  
 Chile  
 El Salvador  
 Panama  
 Guatemala  
 Mexico

#### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Account financing and defaulting

## Account financing and defaulting

The account financing service aims at regularizing defaulting customers by financing payable items at low interest rates in the long term.

When customers fail to pay their bills, services have to be disconnected until they regularize their situation, due to regulations and system fairness. Once they have paid or have made a payment agreement, the service is reconnected within 24 business hours. Default is more likely to occur in populations with socioeconomic limitations (strata 1, 2, and 3) and security problems due to structural situations of the country.

### Management in 2019

The Grupo EPM's portfolio had a good performance in 2019, which can be evidenced in the decreased number of defaulting customers.

For the Colombian local market, the portfolio management was framed within an economy that is recovering thanks to the good dynamism of household consumption and investment, despite a labor market with a notable deterioration; added to the escalation of social protests that may cause greater inflationary pressures, economic downturn, and devaluation.

Actions aimed at improving the portfolio were implemented based on detailed analyzes of user payment behaviors, in order to identify focuses of attention and differentiated management according to classification of customers, segmentation of target markets, and attention to credit risk signals during the customer attraction process.

A decrease is observed in the number of customers being financed, as well as in the general balance of deferred accounts. This is mainly associated with the offer of alternatives such as partial payments and extension of payment terms, which allow for a more agile recovery of the portfolio without losing solidarity.



During 2019, Grupo EPM managed to reduce by 10,233 the amount of customers with at least one defaulting service. The most important reductions occurred in EPM water supply, Emvarias, EPM energy, and CENS, which is mainly associated with the coverage expansion through on-site strategies such as effective disconnections, particularly in the regional market; the improvement in portfolio recovery indicators by the ally in charge of the collection management; and the administration of portfolio focused on areas with high default rates, using heat maps to direct collection actions.

In contrast, Adasa, ENSA, and Eegsa had an increase in defaulting customers. In the specific case of ENSA, there is a greater deterioration evidenced in the real increase of 1,230 defaulting facilities. This is mainly associated with the economic situation of Panama during 2019 and with weather situations, such as cold fronts, that made in-site disconnection actions difficult. However, further deterioration was contained through preventive and coercive strategies, customer education events, and payment options.

Defaulting in water companies - Grupo EPM			
Concept / Indicator	2017	2018	2019
<b>EPM</b>			
Residential	18,210	20,448	19,442
Non-residential	3,453	3,621	3,540
<b>Total</b>	<b>21,663</b>	<b>24,069</b>	<b>22,982</b>
Defaulting %	1.83%	1.96%	1.81%
<b>Aguas Regionales</b>			
Residential	6,038	6,724	7,008
Non-residential	915	915	869
<b>Total</b>	<b>6,953</b>	<b>7,639</b>	<b>7,877</b>
Defaulting %	7.78%	8.18%	7.95%
<b>Aguas del Oriente</b>			
Residential	41	67	52
Non-residential	13	15	17
<b>Total</b>	<b>54</b>	<b>82</b>	<b>69</b>
Defaulting %	1.11%	1.51%	4.66%
<b>Aguas de Malambo</b>			
Residential	3,981	10,377	14,121
Non-residential	53	297	306
<b>Total</b>	<b>4,034</b>	<b>10,674</b>	<b>14,427</b>
Defaulting %	17.6%	44.9%	41.0%

Defaulting in water companies - Grupo EPM			
<b>EPRio</b>			
Residential	NA	566	145
Non-residential	NA	204	113
<b>Total</b>	<b>NA</b>	<b>770</b>	<b>258</b>
Defaulting %	NA	2.35%	0.73%
<b>Adasa</b>			
Residential	7,025	7,401	8,324
Non-residential	355	385	454
<b>Total</b>	<b>7,380</b>	<b>7,786</b>	<b>8,778</b>
Defaulting %	4.19%	4.39%	4.90%
<b>Total water companies - Grupo EPM</b>			
<b>Residential</b>	<b>35,295</b>	<b>45,583</b>	<b>49,092</b>
<b>Non-residential</b>	<b>4,789</b>	<b>5,437</b>	<b>5,299</b>
<b>Total</b>	<b>40,084</b>	<b>51,020</b>	<b>54,391</b>

*Source: Commercial Vice Presidency.*

Defaulting percentage in water supply - Grupo EPM			
Company	2017	2018	2019
EPM	17.55%	44.86%	41.00%
Aguas Regionales	1.11%	1.51%	4.66%
Aguas del Oriente	7.78%	8.18%	7.95%
Aguas de Malambo	1.83%	1.96%	1.81%
EPRio	N.A.	2.35%	0.73%
Adasa	4.19%	4.39%	4.90%

*Source: Commercial Vice Presidency.*

<b>Account financing - Grupo EPM's water affiliates</b>			
<b>Company / Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Aguas del Oriente</b>			
Customers financed	30	21	421
Million COP financed	5	5	54
<b>Aguas Regionales</b>			
Customers financed	8,644	9,727	26,942
Million COP financed	2,502	2,887	7,868
<b>Aguas de Malambo</b>			
Customers financed	2,723	4,365	6,972
Million COP financed	2,538	2,767	3,155
<b>EPRio</b>			
Customers financed	NA	26	151
Million COP financed	NA	6	32
<b>Emvarias</b>			
Customers financed	19,543	17,281	1,334
Million COP financed	601	619	61
<b>Adasa</b>			
Customers financed	4,348	3,894	3,557
Million COP financed	8,019	7,656	6,625
<b>Total water supply affiliates</b>			
<b>Customers financed</b>	<b>35,288</b>	<b>35,314</b>	<b>39,377</b>
<b>Million COP financed</b>	<b>13,665</b>	<b>13,940</b>	<b>17,796</b>

*Source: Commercial Vice Presidency.*

Defaulting in energy companies - Grupo EPM			
Concept / Indicator	2017	2018	2019
<b>EPM</b>			
Residential	63,684	60,869	56,468
Non-residential	9,475	8,664	8,127
<b>Total</b>	<b>73,159</b>	<b>69,533</b>	<b>64,595</b>
Defaulting %	3.1%	2.85%	2.57%
<b>CHEC</b>			
Residential	7,928	6,654	6,505
Non-residential	1,422	1,554	1,536
<b>Total</b>	<b>9,350</b>	<b>8,208</b>	<b>8,041</b>
Defaulting %	1.96%	1.68%	1.61%
<b>ESSA</b>			
Residential	40,367	35,134	33,192
Non-residential	5,121	5,368	5,573
<b>Total</b>	<b>45,488</b>	<b>40,502</b>	<b>38,765</b>
Defaulting %	5.84%	4.97%	4.62%
<b>CENS</b>			
Residential	35,668	34,730	30,462
Non-residential	4,075	4,005	3,642
<b>Total</b>	<b>39,743</b>	<b>38,735</b>	<b>34,104</b>
Defaulting %	7.98%	7.46%	6.33%
<b>EDEQ</b>			
Residential	1,588	2,059	2,354
Non-residential	866	570	527
<b>Total</b>	<b>2,454</b>	<b>2,629</b>	<b>2,881</b>
Defaulting %	1.32%	1.36%	1.45%
<b>Delsur</b>			
Total residential	4,220	3,540	3,685
Non-residential	1,850	470	477
<b>Total</b>	<b>6,070</b>	<b>4,010</b>	<b>4,162</b>
Defaulting %	1.58%	1.02%	1.00%

Defaulting in water companies - Grupo EPM			
Concept / Indicator	2017	2018	2019
<b>Eegsa</b>			
Residential	12,628	12,461	15,035
Non-residential	2,741	2,108	2,932
<b>Total</b>	<b>15,369</b>	<b>14,569</b>	<b>17,967</b>
Defaulting %	1.00%	0.91%	1.07%
<b>ENSA</b>			
Residential	67,739	62,238	63,468
Non-residential	3,696	4,633	5,794
<b>Total</b>	<b>71,435</b>	<b>66,871</b>	<b>69,262</b>
Defaulting %	13.84%	12.71%	13.80%
<b>Total energy companies</b>			
<b>Residential</b>	<b>233,822</b>	<b>217,685</b>	<b>211,169</b>
<b>Non-residential</b>	<b>29,246</b>	<b>27,372</b>	<b>28,608</b>
<b>Total</b>	<b>263,068</b>	<b>245,057</b>	<b>239,777</b>

Source: Commercial Vice Presidency.

Defaulting percentage in energy companies - Grupo EPM			
Company	2017	2018	2019
EPM	3.09%	2.85%	2.57%
CHEC	1.96%	1.68%	1.61%
ESSA	5.84%	4.97%	4.62%
CENS	7.98%	7.46%	6.33%
EDEQ	1.32%	1.36%	1.45%
Delsur	1.58%	1.02%	1.00%
Eegsa	1.00%	0.91%	1.07%
ENSA	13.84%	12.71%	13.80%

Source: Commercial Vice Presidency.

<b>Account financing - Grupo EPM's energy affiliates</b>			
<b>Company / Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>EPM</b>			
Customers financed	74,721	69,663	70,215
Million COP financed	34,588	26,154	33,630
<b>CHEC</b>			
Customers financed	3,438	3,534	2,598
Million COP financed	1,903	1,893	1,389
<b>ESSA</b>			
Customers financed	12,887	11,527	7,068
Million COP financed	13,348	11,863	6,432
<b>CENS</b>			
Customers financed	27,895	32,544	40,520
Million COP financed	15,552	20,819	15,935
<b>EDEQ</b>			
Customers financed	18,733	18,278	15,353
Million COP financed	2,411	3,380	3,753
<b>Delsur</b>			
Customers financed	1,315	1,806	1,955
Million COP financed	1,905	4,437	7,328
<b>Eegsa</b>			
Customers financed	575	503	529
Million COP financed	1,176	887	1,326
<b>ENSA</b>			
Customers financed	1,753	2,282	2,807
Million COP financed	3	2	3
<b>Total</b>			
<b>Customers financed</b>	<b>141,317</b>	<b>140,137</b>	<b>141,045</b>
<b>Million COP financed</b>	<b>70,886</b>	<b>69,435</b>	<b>69,797</b>

*Source: Commercial Vice Presidency.*

## GRI standards disclosures and EPM indicators

203-2 Significant indirect economic impacts.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander  
 - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Colombia – Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

#### Businesses

Water supply  
 Sanitation  
 Electrical energy

The background of the entire page is a repeating pattern of small, light-colored icons. These icons include a variety of symbols related to energy and development: solar panels, wind turbines, light bulbs, hands holding a plug, houses, factories, and plants. The icons are arranged in a dense, overlapping grid.

# Electrificación Rural (Rural Electrification)



## Electrificación Rural (Rural Electrification)

The Electrificación Rural program is developed within all Grupo EPM's Colombian companies in order to expand the electrical energy service coverage to rural areas. Investments are made with company's resources and with the participation of public institutions, the Fund for the Electrification of Interconnected Rural Areas (FAER, as per its acronym in Spanish), and private institutions.

### Management in 2019

In 2019, Grupo EPM managed to connect 12,162 facilities in rural areas, benefiting about 38,487 people, with an investment of COP 56,332 million.

In 2018, the rural electrification plan of the network operator (PECOR) approved the connection of 3,184 facilities; however, in 2019, EPM connected 6,074 homes, mainly in the Urabá, Western, and Lower Cauca subregions, with the highest number of connections. The above, considering that there was a decrease in investment and restrictions in the PECOR.

At the international level, it is worth highlighting the execution of five projects in Eegsa and the start of the Carí project in the Kuna Yala region, where more than 500 customers of ENSA will benefit from the project. In Colombia, CENS connected 121 customers and users in the municipalities of Lourdes, Los Patios, and Sardinata.

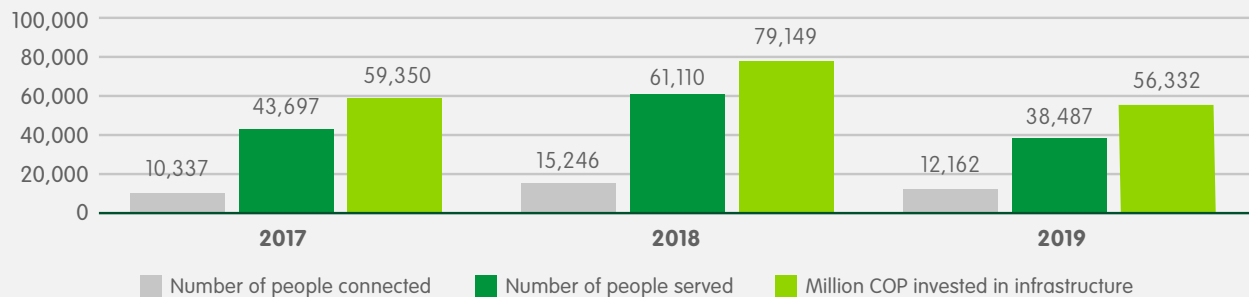
The Electrificación Rural program generates a high social impact on the communities where Grupo EPM operates.

Electrificación Rural - Grupo EPM			
Concept / Indicator	2017	2018	2019
<b>EPM</b>			
Number of facilities connected	2,292	4,807	6,074
Number of people served	9,168	19,228	18,829
Million COP invested in infrastructure	20,205	30,900	34,704
<b>CHEC</b>			
Number of facilities connected	174	126	80
Number of people served	696	504	248
Million COP invested in infrastructure	1,158	775	540

<b>Electrificación Rural - Grupo EPM</b>			
<b>ESSA</b>			
Number of facilities connected	5,033	6,472	5,116
Number of people served	20,132	25,888	15,860
Million COP invested in infrastructure	33,202	44,310	17,254
<b>CENS</b>			
Number of facilities connected	258	81	121
Number of people served	1,032	324	375
Million COP invested in infrastructure	2,863	1,361	1,622
<b>EDEQ</b>			
Number of facilities connected	0	0	0
Number of people served	0	0	0
Million COP invested in infrastructure	0	0	346
<b>Delsur</b>			
Number of facilities connected	1,307	3,152	590
Number of people served	4,725	12,608	2,360
Million COP invested in infrastructure	407	471	1,383
<b>Eegsa</b>			
Number of facilities connected	1,042	126	181
Number of people served	7,020	630	815
Million COP invested in infrastructure	N.D.	413	482
<b>ENSA</b>			
Number of facilities connected	231	482	0
Number of people served	924	1,928	0
Million COP invested in infrastructure	1,515	919	0
<b>Total customers - Energy companies</b>			
<b>Number of facilities connected</b>	<b>10,337</b>	<b>15,246</b>	<b>12,162</b>
<b>Number of people served</b>	<b>43,697</b>	<b>61,110</b>	<b>38,487</b>
<b>Million COP invested in infrastructure</b>	<b>59,350</b>	<b>79,149</b>	<b>56,332</b>

Source: Vice Presidency of Power Transmission and Distribution.

Electrificación Rural - Grupo EPM



Source: Vice Presidency of Power Transmission and Distribution.

GRI standards disclosures and EPM indicators

203-2 Significant indirect economic impacts.

Scope and coverage

Companies

- Empresas Públicas de Medellín - EPM
- Aguas Regionales EPM
- Empresa de Aguas del Oriente Antioqueño
- Aguas de Malambo
- Central Hidroeléctrica de Caldas - CHEC
- Electrificadora de Santander - ESSA
- Empresa de Energía del Quindío - EDEQ
- Centrales Eléctricas del Norte de Santander - CENS
- Distribuidora de Electricidad del Sur - Delsur
- Empresa Eléctrica de Guatemala - Eegsa
- Elektra Noreste - ENSA

Territory

- Colombia – Antioquia
- Colombia – Caldas
- Colombia – Quindío
- Colombia – Risaralda
- Colombia – Santander
- Colombia – Norte de Santander
- Colombia – Malambo, Atlántico
- El Salvador
- Guatemala
- Panama

Businesses

- Electrical energy

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to energy, sustainability, and technology, including solar panels, wind turbines, light bulbs, gears, water droplets, and stylized houses. The icons are arranged in a grid-like fashion, creating a textured, thematic background.

# **Gas sin Fronteras (Gas without Borders)**

## Gas sin Fronteras (Gas without Borders)

The Gas sin Fronteras program takes the piped natural gas service to the municipalities of Antioquia located outside the Medellín’s metropolitan area, through compressed natural gas systems. From pressure reducing stations, the gas is distributed through pipelines to homes, commercial establishments, and other consumption places.

### Management in 2019

EPM managed to take natural gas to three new populations. In total, 119 populations in Antioquia have access to the service. During the year, 13,981 customers were connected and 45,159 people benefited from the service.

In 2019, EPM took the natural gas service to the municipality of Remedios and to the small towns of Versalles (Santa Bárbara) and Nueva Colonia (Turbo). In this way, the company consolidates its presence in 119 populations of Antioquia with 1,260,940 customers in the regulated market (homes and businesses); 5.4% more than the previous year.

Gas sin Fronteras - EPM			
Concept / Indicator	2017	2018	2019
Number of facilities connected	15,778	12,621	13,981
Number of people served	48,912	39,125	45,159
Million COP invested	8,366	8,546	6,923

**Source:** Vice Presidency of Natural Gas.

The gas business had been reporting so far on the total investment, but from now on it will only report on investment in the Gas sin Fronteras program. For this reason, the values reported in 2017 and 2018 were adjusted.

### GRI standard disclosures and EPM indicators

203-2 Significant indirect economic impacts.

#### Scope and coverage

**Company**

Empresas Públicas de Medellín - EPM

**Territory**

Colombia – Antioquia

**Business**

Natural gas

The background of the entire page is a repeating pattern of small, light green icons. These icons include a variety of symbols such as light bulbs, gears, wind turbines, solar panels, water droplets, leaves, and industrial buildings, all arranged in a grid-like fashion.

# Unidos por el Gas (United for Natural Gas)

## Unidos por el Gas (United for Natural Gas)

Program created in June 2019, with the purpose of applying a subsidy corresponding to 100% of the charges for the connection of natural gas networks to homes from strata 1, 2, and 3 located in Medellín, in accordance with the methodology established by the Energy and Gas Regulatory Commission.

### Management in 2019

As a result of an alliance with the Municipality of Medellín, 12,004 families (37,573 people) from socioeconomic strata 1, 2, and 3 benefited from the 100% subsidy for the service connection, with an investment of COP 7,211 million.

The goal to improve the quality of life of at least 10,000 families in Medellín was exceeded, which is mainly due to the social actions carried out in the neighborhoods, the advertising campaign led by EPM and the Medellín Mayor's Office, the creation of commercial incentive plans and a work contract for advisors, the close communication and synergy among the areas involved, and the development of media campaigns to disseminate the program.

Among the neighborhoods with the greatest number of connections are: Buenos Aires, San Javier, Manrique, and Villa Hermosa. Of the total number of connections, 15% were families belonging to stratum 1, 40% to stratum 2, and 45% to stratum 3.

### GRI standards disclosures and EPM indicators

203-2 Significant indirect economic impacts.

#### Scope and coverage

**Company**

Empresas Públicas de Medellín - EPM

**Territory**

Colombia – Antioquia

**Business**

Natural gas

The background of the entire page is a repeating pattern of small, light green icons. These icons include a house with a leaf, a lightbulb, a recycling symbol, a wind turbine, a solar panel, a water drop, a leaf, a gear, a plug, a car, a factory, a globe, and a hand holding a leaf. The icons are arranged in a grid-like pattern across the entire page.

# Habilitación Viviendas (Habitable Homes)



## Habilitación Viviendas (Habitable Homes)

The Habilitación Viviendas program is a social commitment of Grupo EPM to fund the basic infrastructure of the energy, gas, and water supply services for the most vulnerable homes, with the purpose of improving their life conditions. It started in the 60s and is one of the programs with the highest coverage rates registered today for public utilities in Valle de Aburrá. CHEC, CENS, ESSA, and EDEQ also implement this social responsibility program.

### Management in 2019

In 2019, Grupo EPM connected 125,936 homes to the water supply, sewerage, energy, and gas services. Thus, the organization transformed the lives of 397,398 people, with an investment of COP 101,270 million.

36,739 homes were connected to the water supply and sewerage services, reaching 113,891 people. The investment was COP 57,929 million. The construction works are carried out through the community action boards of the impacted sectors, creating local jobs and financial surpluses that are invested in the community.

Likewise, 35,319 homes were connected to the energy service, with an investment of COP 26,492 million and benefiting 109,481 people. It is worth highlighting the positive impact generated by the expansion of the energy service coverage through the Habilitación Vivienda Interna (Habitable Internal Homes) program, aimed at below-average sectors in the area of influence of all Grupo EPM's companies of energy in Colombia. Investments were made with group's resources and the participation of public and private institutions and the FAER.

53,878 homes were connected to the gas service, with an investment of COP 16,849 million and improving the quality of life of 174,026 people.

<b>Habilitación Viviendas - Water supply</b>			
<b>Concept / Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Facilities connected	31,689	38,498	36,739
People served	98,236	115,494	113,891
Million COP invested	15,137	30,706	57,929

*Source: Vice Presidency of Water and Sanitation.*

<b>Habilitación Viviendas - Energy</b>			
<b>Concept / Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>EPM</b>			
Number of facilities connected	24,374	20,564	19,836
Number of people served	97,496	82,256	61,492
Million COP invested	21,573	21,309	20,457
<b>CHEC</b>			
Number of facilities connected	1,632	1,253	1,286
Number of people served	6,528	5,012	3,978
Million COP invested	1,023	723	978
<b>ESSA</b>			
Number of facilities connected	3,329	7,706	4,910
Number of people served	26,283	49,208	15,221
Million COP invested	1,917	4,437	2,946
<b>CENS</b>			
Number of facilities connected	7,073	6,979	8,727
Number of people served	28,292	27,916	27,054
Million COP invested	1,313	1,534	1,613
<b>EDEQ</b>			
Number of facilities connected	348	1,015	560
Number of people served	1,392	4,060	1,736
Million COP invested	81	508	498

*Source: Vice Presidency of Power Transmission and Distribution.*

Habilitación Viviendas - Gas			
Concept / Indicator	2017	2018	2019
Number of facilities connected	57,059	63,856	53,878
Number of people served	176,883	197,957	174,026
Million COP invested	20,275	18,762	16,849

Source: Vice Presidency of Natural Gas.

## GRI standards disclosures and EPM indicators

203-2 Significant indirect economic impacts.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia – Norte de Santander

#### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



**Paga a tu Medida  
(Pay According to your Needs)**

## Paga a tu Medida (Pay According to your Needs)

Paga a tu Medida is a program that allows users to pay their EPM bill in up to five installments or partial payments each month; the minimum amount depends on the territory. Users only need to go to one of the payment points and indicate their citizenship ID number or the EPM contract number. The bill is not necessary. With this alternative, the company seeks to improve the quality of life of its users, offering them different options to pay their bills in the way that best fits the family budget. Likewise, EPM seeks to improve its portfolio performance and reduce operating costs of disconnection and reconnection.

### Management in 2019

In 2019, EPM connected 32,570 customers and users and gave them the option to pay their bills in installments, according to their income possibilities.

The total amount of customers linked to the offer in Grupo EPM is 209,437.

In CENS and ESSA, 7,727 customers and users joined the program.

Paga a tu Medida was consolidated as a solution to continue enjoying the services and avoid their disconnection, despite the payment difficulties. Statistics show that the customers who join this program have fewer days of suspension, in contrast to those who do not.

The success of the program during 2019 was driven by promotional strategies in the service channels such as on-hold messages and posts on social media. It was also offered as the first option among the solutions for the payment of bills.

Paga a tu Medida - Number of customers registered			
Indicator	2017	2018	2019
EPM	51,070	42,375	32,570
ESSA	N.A.	1,638	6,380
CENS	N.A.	4,419	1,347
<b>Total</b>	<b>51,070</b>	<b>48,432</b>	<b>40,297</b>

*Source: Commercial Vice Presidency.*

Paga a tu Medida - Number of customers registered



Source: Commercial Vice Presidency.

GRI standards disclosures and EPM indicators

203-2 Significant indirect economic impacts.

Scope and coverage

**Companies**

Empresas Públicas de Medellín - EPM  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS

**Territory**

Colombia – Antioquia  
 Colombia – Santander  
 Colombia – Norte de Santander

**Businesses**

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to services, technology, and sustainability, including lightbulbs, gears, houses, cars, plants, and abstract shapes. The icons are arranged in a grid-like pattern across the entire page.

# Prepaid services

## Prepaid services

Prepayment is a method for purchasing public utilities that seeks to avoid disconnections due to payment difficulties. This offer enables users to control consumption according to their income, and to use public utilities more efficiently and consciously.

The prepaid offer includes the delivery of a consumption meter on free lease, its installation at no cost, social support, among other conveniences that allow customers and users to continue enjoying the service.

## Management in 2019

EPM connected 2,834 customers and users to the prepaid water service, for a total of 25,211 people. As for prepaid energy, EPM connected 17,527 homes during the year, for a total of 317,618 customers in Grupo EPM. ESSA and CENS connected 5,335 and 3,885 customers and users, respectively, to this service method.

Prepaid offers enjoy high acceptability by customers and users. The highest number of connections in 2019 took place in the water service, due to the arrival of customers that could not be connected in 2018, the growing trend of customers being disconnected, the higher operating capacity in contracts, and the greater availability of meters. In the last quarter of the year, meters started to be installed on the wall (not on the floor), in order to improve their service life and reduce the amount of replacements per year. To this end, weekly follow-ups were implemented to improve the contractor's efficiency.

As for energy, service channels were articulated in 2019 aiming at achieving greater efficiency in the identification of the target market; in addition to new sales channels that were enabled for the offer, specifically in the regions. The energy service was standardized in high-loss areas of the metropolitan area of Medellín and in the Urabá and Lower Cauca subregions.

For their part, CENS and ESSA connected 9,220 customers and users during the year, for a total of 41,585 people since the beginning of the offer.



Prepaid water - EPM			
Concept / Indicator	2017	2018	2019
Number of facilities connected	3,934	2,168	2,834
Number of people served	17,703	9,756	12,753
Million COP invested	2,939	6,279	7,308
Average consumption (m <sup>3</sup> ) per prepaid installation	8.3	7.7	7.4
Average consumption (m <sup>3</sup> ) per postpaid installation	12.1	12.8	11.8

**Source:** Commercial Vice Presidency.

Prepaid energy - EPM			
Concept / Indicator	2017	2018	2019
Number of facilities connected	22,084	15,550	17,527
Number of people served	88,336	62,200	70,108
Million COP invested	15,617	8,271	10,060
Average consumption (kWh) per prepaid installation	116	115	116
Average consumption (kWh) per postpaid installation	132	129	127

**Source:** Commercial Vice Presidency.

The 2018 average postpaid consumption was adjusted in order to standardize the source with the power transmission and distribution business.

Prepaid energy - ESSA			
Concept / Indicator	2017	2018	2019
Number of facilities connected	4,975	7,826	5,335
Number of people served	19,900	31,304	16,539
Million COP invested	3,379	1,620	3,794
Average consumption (kWh) per prepaid installation	82	79	83
Average consumption (kWh) per postpaid installation	193	187	191

**Source:** Commercial Vice Presidency.

Prepaid energy - CENS			
Concept / Indicator	2017	2018	2019
Number of facilities connected	4,570	5,630	3,885
Number of people served	22,850	25,335	12,043
Million COP invested	450	522	430
Average consumption (kWh) per prepaid installation	90	90	108
Average consumption (kWh) per postpaid installation	120	120	149

Source: Commercial Vice Presidency.

## GRI standard disclosures and EPM indicators

203-2 Significant indirect economic impacts.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS

#### Territory

Colombia – Antioquia  
 Colombia – Santander  
 Colombia – Norte de Santander

#### Businesses

Water supply  
 Sanitation  
 Electrical energy

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, energy, and community, such as solar panels, wind turbines, light bulbs, recycling symbols, and houses. The icons are arranged in a grid-like pattern across the entire page.

# Community meters

## Community meters

The use of community water meters is a nonconventional way of providing the service in sectors where, due to restrictions to install pipelines, it is not possible to have individual meters. These collective meters allow the service to be extended to homes and users have to pay the average consumption of their socioeconomic stratum.

### Management in 2019

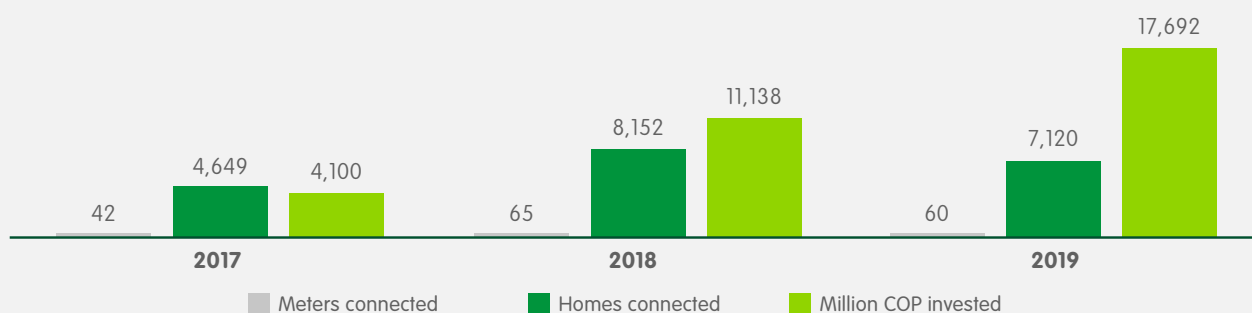
In 2019, Grupo EPM installed 60 community meters to improve the quality of life of 7,120 families. The investment amounted to COP 17,692 million.

With the intervention of 14 community meters and the completion of works in some meters installed in 2018, EPM managed to connect 4,472 families to the water supply service in the sectors of: La Honda, La Cruz (Stages 1 and 2), Bello Oriente, Versailles (Stages 2 and 3), Brisas del Jardín, Brisas del Edén, Altavista, Luz del Mundo, Moravia, Esfuerzos de Paz 1, Esfuerzos de Paz 2, and Unión de Cristo, which benefited from the Unidos por el Agua program.

In Chile, Adasa installed 46 new meters to monitor and control drinking water consumption, benefiting 2,648 families.

Water community meters			
Concept / Indicator	2017	2018	2019
<b>EPM</b>			
Number of meters connected	7	23	14
Number of people served	5,512	15,776	13,863
Million COP invested	4,100	11,138	17,692
Number of homes connected	1,110	3,944	4,472
<b>Aguas Regionales - Urabá region</b>			
Number of meters connected	10	9	0
Number of people served	3,771	5,568	0
Million COP invested	NDA	NDA	0
Number of homes connected	1,257	1,856	0
<b>Adasa</b>			
Number of meters connected	25	33	46
Number of people served	9,128	9,408	10,592
Million COP invested	0	0	0
Number of homes connected	2,282	2,352	2,648

Water community meters



Source: Vice Presidency of Water and Sanitation.

### GRI standards disclosures and EPM indicators

203-2 Significant indirect economic impacts.

#### Scope and coverage

**Companies**

Empresas Públicas de Medellín - EPM  
Aguas de Antofagasta - Adasa

**Territory**

Colombia – Antioquia  
Chile

**Businesses**

Water supply  
Sanitation

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, renewable energy, and social development. Recognizable symbols include solar panels, wind turbines, lightbulbs, water droplets, recycling symbols, houses, and hands holding a globe or a leaf. The icons are arranged in a dense, grid-like fashion across the entire surface.

# Unserviced population

## Unserviced population

Unserviced populations are those settled down in places with technical or legal limitations for providing the service, such as those located in high-risk areas or outside the perimeters of the land use plans. The solutions often exceed the exclusive scope of the companies providing the service; therefore, the involvement of multiple stakeholders becomes necessary.

### Management in 2019

In Medellín, the company improved the quality of life of 15,390 homes with the water supply service; 14,291 with the sewerage service; 4,157 with the energy service; and 3,333 with the gas service.

Thanks to the actions taken with municipal administrations and other entities, EPM solved the technical and legal difficulties that these families had to access to residential public utilities.

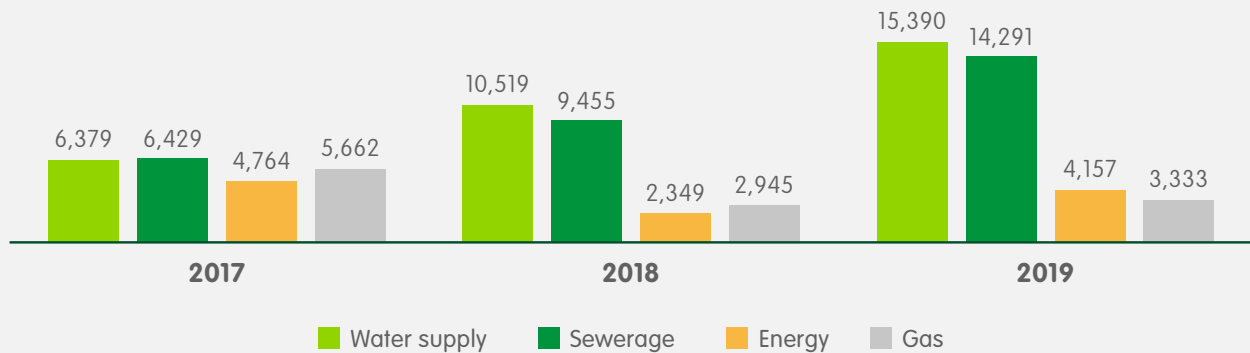
The Unidos por el Agua program reached 41,391 families, exceeding the initial goal of 40,200. This was possible thanks to the joint work of EPM with the Municipality of Medellín, the Social Institute for Housing and Habitat of Medellín (Isvimed, as per its acronym in Spanish), Empresa de Desarrollo Urbano (EDU), among other organizations. These homes did not have access to the service due to technical or legal limitations that prevented its provision.

Regarding energy, the synergies and joint efforts among different EPM departments involved, allies (contractors), territorial entities, and the community are noteworthy.

As for gas, 3,333 homes were connected, 73% of which belong to neighborhoods such as El Compromiso, La Aldea, El Salado, and Juan XXIII, in Medellín. These families now enjoy the benefits of a cheaper and safer fuel in their homes. The remaining families belong to La Luz del Mundo, Los Mangos, La Verdad, and La Palma in the San Cristóbal small town.



Homes connected



Source: Commercial Vice Presidency.

GRI standards disclosures and EPM indicators

**EPM-12** Solutions for unserved homes.

**EU 26** Percentage of population unserved in licensed distribution areas.

Scope and coverage

**Companies**

Empresas Públicas de Medellín - EPM

**Territory**

Colombia – Antioquia

**Businesses**

Water supply  
Sanitation  
Electrical energy  
Natural gas



# Water and biodiversity



## Water and biodiversity

Integrated water resources and biodiversity management of Grupo EPM is based on the interdependence on said resources and on the importance of contributing to its care, keeping the mandatory commitments and implementing different voluntary initiatives to protect the watersheds that are of interest for the group's companies and in the areas of influence of their businesses, both through their own actions and in partnership with other stakeholders, for the benefit of the territories and the communities.

Grupo EPM is aware of its interdependence on water and biodiversity and is committed to contribute to their care in the watersheds supplying its systems and reservoirs, to manage the impacts generated by its direct operations, and to protect the ecosystems located in the areas owned by the group, which means contributing to inform about them and to improve the environmental management in its projects and in the territories where the group is present.

Moreover, carrying out an integrated water resources and biodiversity management contributes to the sustainability of Grupo EPM itself and the territories where it operates, through joint activities with different stakeholders and taking into account the land use plan, the characteristics of the territories, the conservation of ecosystems, the supply and demand, and the risks related to water and biodiversity.

### Relevance

The economic, social, and environmental value is influenced by water deficit which leads to water availability, shortage, and rationing, along with their consequent harmful effects on the quality of life of the population, their economic activities, and the health of ecosystems. The most critical aspects regarding availability are associated with drinking water supply for the population, industrial processes, power generation, and maintenance of ecosystem functions.

The economic, social, and environmental value is also affected when there is water excess and alterations in water quality. In general, supply and distribution systems can be affected, while impacts on availability, continuity, and quality of the water to be supplied are generated, as well as economic costs due to water losses, recovery works, rehabilitation, reconstruction of systems, and protection of ecosystems.

In terms of biodiversity, which has value in itself, it generates high economic, environmental, and social value for Grupo EPM because it is the functional basis for the maintenance and support of ecosystem services, necessary for climate regulation, the water cycle, the rainfall regime, soil protection, erosion control, and the conservation of the structure and composition of fauna and flora species, among others, while contributing to the availability of water resources.

## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Water conservation and biodiversity	Implement watershed protection initiatives in priority areas for conservation, in order to accomplish the annual goal set for the water protection indicator (WPI) for Grupo EPM in 2019: 14,376 ha. It includes (grouped) the Cauca, Porce, Nare, Aburrá, Chinchiná watersheds and other watersheds, as well as some supplying Aguas Regionales.	Grupo EPM	In 2019, initiatives that had an impact in the protection of 19,619 ha in watersheds supplying the organization's systems and reservoirs were developed.	Total
	Contribute to the accomplishment of the WPI for Grupo EPM, through the implementation of protection initiatives in other watersheds in areas of interest:  EPM: 1,488 ha. CENS: 1,032 ha. ESSA: 611.4 ha. EDEQ: 235.15 ha. CHEC: 904 ha.	Grupo EPM	The transmission and distribution business contributed 4,667 ha in 2019 to accomplish the goals of Grupo EPM. Although EPM withdraw 307 ha due to the apportionment of a property by the owner, CHEC increased its contribution by 719 ha, which helped accomplish the transmission and distribution business goal.	Total
	Conduct a study of fauna and flora in the areas of the Peñol-Guatapé, Las Playas, Guadalupe, and Porce reservoirs:  <ul style="list-style-type: none"> <li>Survey a baseline of fish species in the Guadalupe River watershed (2019).</li> <li>Report monitoring of biodiversity in Miraflores and Riogrande I, and take inventory of fauna and flora in La Sierra (2021).</li> <li>Define the viability of fish repopulation in Porce III (2020).</li> <li>Verify the importance of the lower watershed of the Porce River as a possible migratory route for fish species (2020).</li> </ul>	EPM	<ul style="list-style-type: none"> <li><b>Survey a baseline of fish species in the Guadalupe River watershed:</b> se realizó el estudio y se tiene informe final con resultados. Se encontró baja riqueza y diversidad en peces, y un ensamblaje dominado por especies introducidas como la trucha (<i>Micropterus salmoides</i>).</li> <li><b>Define the viability of fish repopulation in Porce III:</b> field trips to different points of the Magdalena-Cauca watershed were made to take genetic samples and learn about the niche conditions in which the species lives; the movements between the Porce III reservoir and the Guadalupe River are being analyzed; and, finally, the genetics of <i>Brycon henni</i> is under analysis to determine the genetic variability of this species. The final report of the study will be available in 2021.</li> </ul>	Total

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
<b>Water conservation and biodiversity</b>	<p>Conduct a study of fauna and flora in the areas of the Peñol-Guatapé, Las Playas, Guadalupe, and Porce reservoirs:</p> <ul style="list-style-type: none"> <li>• Survey a baseline of fish species in the Guadalupe River watershed (2019).</li> <li>• Report monitoring of biodiversity in Miraflores and Riogrande I, and take inventory of fauna and flora in La Sierra (2021).</li> <li>• Define the viability of fish repopulation in Porce III (2020).</li> <li>• Verify the importance of the lower watershed of the Porce River as a possible migratory route for fish species (2020).</li> </ul>	EPM	<ul style="list-style-type: none"> <li>• <b>Verify the importance of the lower watershed of the Porce River as a possible migratory route for fish species:</b> the second field trip was brought forward during the upstream migration of the first semester of 2019 and progress is made with the identification of more than 28,000 fish larvae through molecular methods.</li> </ul>	Total
<b>Water use and effluents</b>	Stabilize the Aguas Claras WWTP in 2019 and continue with the expansion of the San Fernando WWTP to guarantee the quality of the effluents, in accordance with the limits established by the discharge standard, after achieving the stabilization of the biological processes.	EPM	The Aguas Claras WWTP is stabilized and treats all the flow carried by the Interceptor Norte (North Interceptor) since November 2019. The expansion of the San Fernando WWTP water line is operating since October 2019.	Total
<b>Management of impacts related to water and biodiversity*</b>	Modernize the El Retiro WWTP to allow for the tertiary treatment of wastewater in 2019 and the compliance with the parameters established by the discharge standard in 2020, thus protecting the use of the Negro River as a water source for water supply systems.	EPM	It is in the stage of completion and stabilization; EPM expects to comply with the discharge standard in 2020.	Partial
<i>*The wastewater treatment plants (WWTP) treat the wastewater of the sanitation service users. This contributes to improving the quality of life of populations and caring for the environment.</i>	Receive for operation the Aguas de Malambo WWTP in 2019 and achieve its stabilization in 2020.	Aguas de Malambo	The construction project for the WWTP is 90% complete, as the National Infrastructure Agency (ANI, as per its acronym in Spanish) has not provided the license to build the underground crossing that will connect the central and northern collectors to the wastewater pumping station. Once the company have the license by the ANI, it will proceed with the work. It is expected to resume the work in 2020.	Not accomplished

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
<p><b>Water use and effluents</b></p> <p><b>Management of impacts related to water and biodiversity*</b></p> <p><i>*The wastewater treatment plants (WWTP) treat the wastewater of the sanitation service users. This contributes to improving the quality of life of populations and caring for the environment.</i></p>	<p>Valle de San Nicolás sanitation project: modernize the El Retiro WWTP to allow for the tertiary treatment of wastewater, thus protecting the use of the Negro River as a water source for water supply systems, and build the El Escobero and Don Diego WWTPs, so as to ensure compliance with Ruling 631 of 2015, after the stabilization of the biological processes.</p>	<p>EPM</p>	<p>The El Retiro WWTP is in the stage of completion and stabilization; EPM expects to comply with the discharge standard in 2020. The investments in the Escobero and Don Diego WWTPs were postponed due to the contingency of the Ituango project.</p>	<p>Partial</p>
<p><b>Water use and effluents</b></p>	<p>Save 7,170.09 m3 on water consumption at Emvarias' operations facilities between the years 2017 and 2021.</p>	<p>Emvarias</p>	<p>In 2019, around 10,000 m3 was saved, which represents a 26% reduction.</p>	<p>Total</p>
<p><b>Management of impacts related to water and biodiversity</b></p>	<p>Reduce the pollutant load discharged to the water sources as a result of the leachate generated in the La Pradera landfill, by assembling the equipment corresponding to the second phase of treatment in 2019, in order to improve the quality of the discharge by 60% once the second phase of the leachate treatment plant is operating and stabilized in 2020.</p>	<p>Emvarias</p>	<p>During the first semester of 2019, the company stabilized the second phase of the leachate treatment plant at the La Pradera landfill, with positive results regarding the reduction of the concentration of pollutants.</p>	<p>Total</p>

## Challenges

Program, project, initiative, or action	Challenge	Year in which it is achieved	Scope and coverage			Progress in management in 2019
			Company	Business	Territory	
<b>Water conservation and biodiversity</b>	<p>Implement watershed protection initiatives in priority areas for conservation, in order to accomplish the annual goal set for the water protection indicator (WPI) for Grupo EPM in 2020: 9,528 ha.</p> <p>It includes (grouped) the Cauca, Porce, Nare, Aburrá, Chinchiná watersheds and other watersheds, as well as some supplying Aguas Regionales. Likewise the transmission and distribution business companies will contribute to the goal in other watersheds.</p>	2020	Grupo EPM	All the businesses	Colombia	Cumulative WPI 2016–2019: 76,505
	<p>Optimize the water quality monitoring network for the Porce II and Porce III reservoirs:</p> <ul style="list-style-type: none"> <li>• Reduce or relocate the current monitoring stations.</li> <li>• Reduce the number of parameters.</li> </ul>	2020	EPM	Power generation	Colombia – Antioquia	
	<p>Assess the importance of the lower watershed of the Porce River as a possible migratory route for fish species.</p>	2020	EPM	Power generation	Colombia – Antioquia	
	<p>Apply the hydrosedimentological model in the contributing watersheds of the Las Playas reservoir in order to define the priority areas for the conservation strategy.</p>	2021	EPM	Power generation	Colombia – Antioquia	



Program, project, initiative, or action	Challenge	Year in which it is achieved	Scope and coverage			Progress in management in 2019
			Company	Business	Territory	
<p><b>Water use and effluents</b></p> <p><b>Management of impacts related to water and biodiversity*</b></p> <p><i>*The wastewater treatment plants (WWTP) treat the wastewater of the sanitation service users. This contributes to improving the quality of life of populations and caring for the environment.</i></p>	Comply with the parameters of the discharge standard in 2020 at the El Retiro WWTP, after the modernization of the plant completed in 2019.	2020	EPM	Water and sanitation	Colombia – Antioquia	Modernization of the El Retiro WWTP in 2019.
	Remove the pollution load contributed to the Negro River surface water source, by optimizing the Tranvía WWTP, while ensuring compliance with the discharge standard (Ruling 631 of 2015). The construction is planned for 2022 and the plant is expected to be stabilized for the following year to be able to discharge the water to the surface source in better conditions in 2023.	2023	EPM	Water and sanitation	Colombia – Antioquia	
	Build stages 1 and 2A of the Interceptor Sur (South Interceptor) in the municipality of Caldas.	2020	EPM	Water and sanitation	Colombia – Antioquia	
	Reduce the pollution load discharged to the Urabá region watersheds, so as to favor the operation of the WWTPs of the municipalities of Apartadó, Carepa, and Turbo, guaranteeing compliance with the provisions established in the discharge standard, after the stabilization of the biological processes. In 2019 the resources from contributions under condition will be negotiated for the construction of the WWTP.	2022	Aguas Regionales	Water and sanitation	Colombia – Antioquia	Once the designs were completed, the company started the procedure to negotiate the resources for the construction of the treatment plants (contributions under condition and works instead of taxes).

**Note:** The accomplishment of this challenge depends on the management of resources to make the investment, either using the figure of contributions under condition or the figure of works instead of taxes.

Program, project, initiative, or action	Challenge	Year in which it is achieved	Scope and coverage			Progress in management in 2019
			Company	Business	Territory	
<p><b>Water use and effluents</b></p> <p><b>Management of impacts related to water and biodiversity*</b></p> <p><i>*The wastewater treatment plants (WWTP) treat the wastewater of the sanitation service users. This contributes to improving the quality of life of populations and caring for the environment.</i></p>	<p>Receive for operation the Aguas de Malambo WWTP and achieve its stabilization.</p>	2020	Aguas de Malambo	Water and sanitation	Colombia - Malambo, Atlántico	<p>The construction of the WWTP is 90% complete; it is not operational because the ANI has not provided the license to build the underground crossing that will connect the central and northern collectors to the wastewater pumping station. The company expects to resume the work in 2020.</p>
<p><b>Management of impacts related to water and biodiversity</b></p>	<p>Assess the impact of the floating solar panel infrastructure on the water quality in the Peñol-Guatapé reservoir.</p>	2021	EPM	Power generation	Colombia – Antioquia	
	<p>Reduce the pollutant load discharged to the water sources as a result of the leachate generated in the La Pradera landfill, in order to improve the quality of the discharge by 60% once the second phase of the leachate treatment plant is operating and stabilized in 2020.</p>	2020	Emvarias	Water and sanitation	Colombia – Antioquia	<p>In 2019 the company stabilized the second phase of the leachate treatment plant at the La Pradera landfill, which reduced the concentration of pollutants.</p>

In order to define the indicators, challenges, and goals associated with water and biodiversity, Grupo EPM takes into account the strategic planning, the big hairy audacious goal (BHAG), the corporate social responsibility and environmental policies, the integrated water resources and biodiversity management strategy, territorial studies and analyses, the identification of synergies with allies for the development of initiatives, historical information, the compliance with the related environmental regulations, among others.

As an example, the goals for the WPI were defined taking into account the strategic planning of Grupo EPM, the above-mentioned policies, and the characteristics of each hydrographic basin (land uses, problems, water models, possibilities of alliances with other stakeholders, etc.).

The goals associated with efficient water use and water saving at the facilities are defined taking into account the historical data of water consumption, its variations, the infrastructure conditions, technological possibilities for its improvement, and cultural matters. Some facilities have already reached very good levels on efficient use and saving of water; therefore, they are still under monitoring. If necessary, improvement plans are established in those facilities where progress has not yet been achieved, according to the technological and economic possibilities. Grupo EPM has indicators and goals associated with water and biodiversity in the balanced scorecard and in its different plans, which are regularly monitored at different levels of the organization.

## Sustainable Development Goals



## Related stakeholders

Customers  
and users

Colleagues

Community

State

Grupo EPM  
people

Investors

Suppliers and  
contractors

## GRI standards disclosures and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 303-1** Water withdrawal by source.
- 303-2** Management of water discharge related impacts.
- 303-3** Water recycled and reused.
- 303-4** Water discharge.
- 303-5** Water consumption.
- 304-1** Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
- 304-2** Significant impacts of activities, products, and services on biodiversity.
- 304-3** Habitats protected or restored.
- 304-4** Red List species and national conservation list species with habitats in areas affected by operations.
- EU13** Biodiversity of offset habitats compared to the biodiversity of the affected areas.
- 306-1** Water discharge by quality and destination.
- EPM-01** Conservation areas.
- EPM-10** Water protection.

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## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 EPM Chile  
 Aguas de Antofagasta - Adasa  
 Aguas Nacionales EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Hidroecológica del Teribe - HET

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Malambo, Atlántico  
 Colombia – Norte de Santander  
 Colombia – Quindío  
 Colombia – Santander  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Water conservation and biodiversity

## Water conservation and biodiversity

The protection and improvement of the hydrographic basins as well as the environmental services that they provide are crucial to ensure the availability of the water resource, the diversity of flora and fauna, the sustainability of the territories, and the quality of life of the communities.

The environmental conditions of the hydrographic basins have a direct impact on the water sources supplying the reservoirs and other systems. To help improve these conditions and prevent risks associated with the availability of water in its operations and in the populations served, Grupo EPM undertakes, directly and with other stakeholders, programs and projects for the integrated water resource and biodiversity management, by developing initiatives associated with the support to the system of protected areas, restoration and reforestation, promotion of sustainable practices and uses, environmental offset, payment for environmental services, and environmental awareness-raising for the protection of the environmental services that the hydrographic basins and their ecosystems provide.

### Management in 2019

In 2019, Grupo EPM made progress with the road map deployment of its integrated water resources and biodiversity management strategy: Water and Biodiversity for Life and Sustainability.

In 2019, it was possible to contribute to the protection of 19,618 ha in the watersheds supplying the group's systems and reservoirs, for an accumulated of 76,505 ha in the 2016–2019 period, which is equivalent to the 56% of the goal of 137,000 ha established in the environmental dimension of the 2025 BHAG.

Moreover, Grupo EPM contributes to water and biodiversity care with the conservation of its properties that have a total area of 796.9 km<sup>2</sup>, of which 86% is located within declared protected areas, buffer zones, or zones with high biodiversity value that have not yet been declared as protected areas. Of this total, 640.4 km<sup>2</sup> corresponds to forest cover.

This report highlights that the companies of Grupo EPM give an account of 399 species in any conservation status in their operation centers—according to the International Union for Conservation of Nature (IUCN), national lists, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Therefore, the protection of forest cover and other associated ecosystems constitute refuges, habitats, and resources essential for their survival.

## Water protection and conservation areas

In compliance with the water protection goal established in the BHAG of Grupo EPM, various strategies are developed for that purpose in the hydrographic basins of the Porce, Grande, Aburrá, Porce-Alto Nechí, and Nare rivers (including La Fe and Negro-Nare), as well as the Cauca (including areas of influence of the Ituango project) and the Chinchiná watersheds, other watersheds in areas of influence of CHEC, some supply basins of Aguas Regionales in Urabá, and other basins in areas of influence of EPM and the affiliates CENS, ESSA, CHEC, and EDEQ.

The contribution in 2019 to the protection of 19,618 ha (196.18 km<sup>2</sup>) was accomplished through the implementation of strategies and initiatives such as:

- **Forest conservation:** including support to public and private protected areas and programs of payment for environmental services: 1,022.65 ha (10.22 km<sup>2</sup>).
- **Restoration and reforestation:** including restoration and the forestry encouragement program: 13,800.28 ha (138 km<sup>2</sup>).
- **Sustainable practices and uses:** including silvopastoral and agroforestry systems, live fences and barriers, good agro-environmental practices, erosion control, and rural basic sanitation systems: 1,757.82 ha (17.58 km<sup>2</sup>).
- **Environmental offset and new protected areas:** including purchase of lands for offset and new areas for the protection of reservoirs: 3,038 ha (30.38 km<sup>2</sup>).

Likewise, in its properties, Grupo EPM preserves natural forests and favors the recovery of vegetation cover through ecological restoration activities (active and passive), enrichment with native species, and establishment of forest plantations. Additionally, in these areas, biological information is collected and applied studies are conducted to make progress with the implementation of the integrated water resources and biodiversity management strategy.

## Development of initiatives and alliances with other stakeholders

The following are some of the main programs and initiatives developed, directly or with other stakeholders, by the companies of Grupo EPM in 2019 to protect the hydrographic basins that supply their reservoirs or systems, as well as water and biodiversity:

- Integrated biodiversity management in areas of influence of power generation plants of EPM: continuity in the execution of an agreement with Universidad de Antioquia, through which the conditions of the otter population in Porce III is analyzed. The group took fauna and flora inventories in Playas, Peñol-Guatapé, Porce II, and Porce III and monitored the fish in the Porce II, Porce III, Troneras, and Miraflores reservoirs and main tributaries; cyanobacteria in Peñol-Guatapé and Riogrande II; and the presence of disease vectors under public health surveillance. The diagnosis of the fishery product management was discussed.
- Support to the BanCO2 program and other payment for environmental service structures, initiative to compensate farmer families for environmental services. Grupo EPM is involved in the program by supporting farmers, so that they take care of the forests and, thus, protect the fauna and contribute to the conservation of the environmental services that they provide. In recent years, EPM, CHEC, EDEQ, ESSA, CENS, and Aguas Regionales have signed agreements with the environmental authorities to contribute to the care of more than 12,000 ha (120 km<sup>2</sup>) of forest.
- EPM forestry encouragement program: through this program, over 2.7 million seedlings were provided to the communities and owners of land located in the hydrographic basins supplying the company's reservoirs. For this purpose, the company has the La Montaña, Robledales, Guayacanes, and Guadales plant nurseries in Eastern and Northern Antioquia and is supported by 12 municipal plant nurseries in the Porce River basin. These plants are used in the protection of riverbanks, living fences, and restoration and improvement of forests.
- Participation of EPM, CHEC, and Aguas Regionales in the basin councils, consultative mechanisms that allow them to use the knowledge, experiences, and perspectives of the different stakeholders present in the territory for a better management. EPM participates in the basin councils of the Aburrá, Negro, Grande, Nare, and Samaná Norte rivers; CHEC, in the Chinchiná River basin council; and Aguas Regionales, in the basin councils of the Turbo and León rivers.



- Agreements and alliances with environmental authorities, municipalities, and other public and private entities to develop environmental protection projects and initiatives: this report highlights the protection and improvement of the hydrographic basins of the Riogrande II and La Fe reservoirs in partnership with Cuenca Verde Corporation; the identification of critical environmental services and the adjustment of simulation models that strengthen the design of the Paramos, Biodiversity, and Water Resources project in partnership with the Chinchiná River Basin Corporation; and the development of community projects for sustainable production and ecological tourism in the watershed of the Porce River in partnership with the United Nations Development Programme (UNDP). For more information on partnerships and agreements, refer to the [Shared responsibility for the environment](#) section.
- Construction and commissioning of rural basic sanitation systems for more than 700 families and development of community monitoring strategies in the biological corridor of the puma from Eastern Antioquia.
- Biannual monitoring of water flows and water quality in the main tributaries of the reservoirs of EPM and monthly monitoring in the water sources supplying the water supply systems of EPM.
- Instrumentation of minor sources to improve the control of concession and environmental flows. In 2019 the pilot project in the Las Despensas, La Larga, and La Afluente sources was completed and the design stage for the implementation of the other sources began.
- Implementation of management activities for the conservation of epiphytes by EPM and CENS, through actions such as measurement of relocated species survival; monitoring of species in closed season (vascular epiphytes); evaluation of physical, reproductive, and sanitary status; and maintenance to ensure their survival.
- Installation of 13.62 km of covered cable in urban and rural areas of Antioquia. This cable protects the flora and fauna from the impact that the networks could cause.
- Trelec made progress with the installation of antibee plastics on transmission line poles in central Guatemala and with the efforts to prevent the construction of bird nests in structures of electrical substations. With these actions, the company minimizes problems in the networks and protects the fauna.

- Contribution to biodiversity and water care: this is made by implementing the management plan of the Bosques de la CHEC Forest Reserve; likewise, the group supports the business and community strengthening to foster the implementation of sustainable business processes with an environmental and social approach, using the methodology of business networks, in rural settlements and areas surrounding the Río Claro River basin and the San Julián stream in the municipality of Villamaría.
- Programs of awareness-raising and strengthening of the environmental protection culture aimed at the communities of the areas of influence of the projects and operations of Grupo EPM: the group holds awareness-raising and training activities regarding environmental topics, efficient water use and water saving, good environmental practices, and celebration of environmental days. The disclosure, promotion, and pedagogy of these activities is supported through social media, press releases, radio and television programs, workshops, and events. This report highlights the implementation of the EPM Cuidamundos (World's Protector) and Unidos por el Agua (United for Water) programs, the awareness-raising and training on environmental care carried out in agreement with the UNDP for the development of productive projects, and the training plan for teachers on the management of hydrographic basins, biodiversity, and climate change, supported by the Colombian Ministry of Environment and Sustainable Development.
- Other noteworthy initiatives: the Guardianas de la Quebrada Cameguadua (Female Guardians of the Cameguadua Stream) program by CHEC; the guided visits of students from educational institutions in Urabá to the Aguas Regionales purification plants; the awareness-raising and training programs by CENS on natural resource conservation for students, contractors, the community, and workers; the awareness-raising program by ESSA on natural resource conservation for students in areas of interest; the awareness-raising programs on environmental care for Eegsa and Delsur workers; and the permanent programming of Fundación EPM in the Water Museum, where visitors learn to care for water and enjoy it with all their senses.

## Main supply hydrographic basins

Main supply hydrographic basins Water supply and power generation						
Basin	Reservoir	Main tributaries	Max. technical volume in Mm <sup>3</sup>	Power stations/ DWTP	Company	Use
Piedras Blancas stream	Piedras Blancas	Piedras Blancas stream – Chorrillos stream	*0.5	Villa Hermosa and La Montaña DWTPs	EPM	Water supply
Las Palmas stream	La Fe	Las Palmas stream – Pantanillo and El Buey rivers	11.33	La Ayurá DWTP	EPM	Water supply
Grande River	Riogrande II	Chico River – Grande River	185.87	<ul style="list-style-type: none"> <li>Manantiales DWTP</li> <li>La Tasajera hydroelectric power station</li> <li>Niquía power station</li> </ul>	EPM	Multiple uses: <ul style="list-style-type: none"> <li>Water supply</li> <li>Power generation</li> </ul>
Tenche River	Miraflores	Tenche River	102.22	Troneras and Guadalupe III and IV.	EPM	Power generation
Guadalupe River	Troneras	Nechí, Pajarito, Dolores, Concepción, Tenche, and Guadalupe rivers	28.92	Troneras and Guadalupe III and IV	EPM	Power generation
Grande River	Quebradona	Grande River	1.93	Mocorongo power station	EPM	Power generation
Nare River	Peñol – Guatapé	Pantanillo, Negro, and Nare rivers	1,071.69	Guatapé	EPM	Power generation
Guatapé River	Playas	Nare and Guatapé rivers	69.57	Playas	EPM	Power generation
Porce River	Porce II	Porce River	142.71	Porce II	EPM	Power generation
Porce River	Porce III	Guadalupe and Porce rivers	155.9	Porce III	EPM	Power generation
Chinchiná River	Cameguadua	Chinchiná and Campo Alegre rivers and downstream for the chain La Estrella stream	N.R.	Ínsula and La Esmeralda	CHEC	Power generation
San Francisco River	San Francisco	San Francisco River	N.R.	San Francisco	CHEC	Power generation
Lebrija River	Linderos	Lebrija River	N.R.	Palmas	ESSA	Power generation
Teribe River	Bonyic	Bonyic stream	N.R.	Bonyic	Hidroecológica del Teribe	Power generation

This report shows the main hydrographic basins that supply the reservoirs intended for water supply and hydroelectric power generation of Grupo EPM. Moreover, these hydrographic basins supply the populations and communities settled in them, as well as other productive sectors that use the water resources that they provide.

This table does not include the reservoir of the Ituango hydroelectric project, as it is in the construction stage, nor the catchment sources of the small power stations and the minor water purification plants.

*(\*) The usable volume of the Piedras Blancas reservoir for operation was established at 0.5 million m<sup>3</sup> due to the age of the infrastructure and due to security reasons.*

## Areas owned by the companies of Grupo EPM – Land uses

Areas and land uses (km <sup>2</sup> ) – Grupo EPM							
Company / Business	Reservoirs	Built-up area	Forests and natural areas	Forest plantations	Non-classified area	Total area	Geographic location
CHEC – Power generation	1.0	1.1	64.9	0.0	0.0	67.0	Caldas, Colombia
CENS – Transmission and distribution	0	0.1	0	0	0.1	0.2	Norte de Santander, Colombia
Emvarias – Water supply and sanitation	0.0	0.4	3.3	0.0	0.1	3.8	Antioquia, Colombia
EPM – Water supply and sanitation	1.6	0.3	13.2	14.5	0.9	30.5	Antioquia, Colombia
EPM – Power generation	107.7	6.3	210.6	56.2	2.1	382.8	Antioquia, Colombia
EPM – Ituango project	25.4	2.3	267.7	0.0	7.7	303.1	Antioquia, Colombia
HET – Power generation	0.1	0.0	2.0	0.0	0.0	2.1	Panamá
<b>Overall total</b>	<b>135.7</b>	<b>10.4</b>	<b>569.1</b>	<b>71.3</b>	<b>10.5</b>	<b>796.9</b>	

**Source:** *Idsos 2019 (CHEC, Emvarias, EPRio, EPM, and HET), Génesis Geographic Information System (EPM).*

Out of 796.9 km<sup>2</sup> of operational areas of Grupo EPM, 640.4 km<sup>2</sup> has forest cover (forest and natural ecosystems and forest plantations) of great importance for the protection of its systems and reservoirs and the hydrographic basins that supply them.

## GRI standards disclosures and EPM indicators

- EPM-01** Conservation areas.
- EPM-10** Water protection (WPI).
- 303-1** Interactions with water as a shared resource.
- 304-1** Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
- 304-3** Habitats protected or restored.

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## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS  
 Empresa Eléctrica de Guatemala - Eegsa  
 Distribuidora de Electricidad del Sur - Delsur

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Guatemala  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy



## Water use and effluents

The water withdrawn by the companies of Grupo EPM comes mainly from surface sources, which are used in production processes such as water supply and hydroelectric power generation. Furthermore, the water withdrawn by the companies' facilities for domestic use comes mainly from aqueducts and surface sources.

The companies of Grupo EPM analyze their use of water in production processes and facilities, as well as the type of supply sources, in order to implement initiatives and projects that allow them to use it in a more efficient way and contribute to its sustainability.

Moreover, the companies of the group manage their effluents such as the discharges of water used in hydroelectric power generation, as well as wastewater produced in their own facilities and wastewater collected from their customers and users through the sanitation service, thus avoiding the direct discharge, without treatment, of millions of cubic meters of wastewater to water sources and soils.

*\*In Colombia, Decree 1076 of 2015 defines effluent as the final discharge, to a body of water, a sewerage, or the soil, of elements, substances, or compounds contained in a liquid medium.*

## Management in 2019

The total volume of water used for production activities, cooling, and domestic use by Grupo EPM in 2019 was 20,146 Mm<sup>3</sup>, amount equivalent to 20 million megaliters, which are distributed as follows:

- 99.94% of the total volume of water used was surface water.
- 87.64% of the total volume of water was used by EPM.
- 12.36% of the total volume of water was used by the affiliated companies.

During the period reported, it was possible to save 3.14 Mm<sup>3</sup> of the water used in the purification process, thanks to the use of recirculated water coming from backwashing. Likewise, in the hydroelectric power generation process, 32.71 Mm<sup>3</sup> of water was reused, which optimized its use in these processes.

With the commissioning of the Aguas Claras WWTP, which joins the existing San Fernando WWTP, EPM collects and treats more than 84% of the Valle de Aburrá wastewater, preventing more than 140 t of organic matter per day from reaching the Aburrá River; this contributes to raising the level of dissolved oxygen in the river to an average of 5 mg/l, characteristic of decontaminated rivers.

## Water use and effluent management

During 2019, progress was made in each company of Grupo EPM through the development of projects and initiatives associated with efficient water use and water saving and wastewater management. The following achievements stand out:

- Implementation of the treatment system of water coming from the process of filter sludge washing at the Caldas, La Ayurá, and Villa Hermosa drinking water treatment plants (DWTP), in order to properly manage their effluents.
- Non-revenue water management through the control of technical losses, activities for the control of commercial losses, and engagement and communication activities. In 2019 the volume of water losses in the system was 91.6 m<sup>3</sup>/year, 1.6 m<sup>3</sup>/year above the established goal.



- Progress made by EPRio with the identification of wrong connections in the rainwater and wastewater collection systems of the municipalities that it serves, and the necessary arrangements for correcting them. Moreover, it is carrying out a program to reduce commercial losses through the identification of illegal connections, the installation of anti-fraud devices, and the management for the installation standardization of meters.
- Recirculation, monitoring, and permanent registration of the water used for cleaning the filters of the La Ayurá, La Cascada, La Montaña, Manantiales, San Antonio de Prado, San Cristóbal, Villa Hermosa, and Aguas Frías DWTPs, in order to reduce losses and contribute to the efficient water use in the water purification process.
- Implementation of initiatives and activities in the development of water saving and efficient use plans at the facilities of EPM and its Colombian and international affiliates; it is worth mentioning, among others, the analysis of water consumption, the control of leaks, the identification of green areas to implement drip irrigation, and the awareness-raising and training campaigns on water care and use aimed at the staff.
- Implementation of the five-year water saving and efficient water use plan in Malambo. Among other programs, this report highlights the control of losses (installation of micro-meters for 81% of the total users), the monitoring in the catchment phase, and the educational and awareness-raising campaigns on water saving and efficient water use.
- Monthly monitoring of the water consumption in the EPM building, especially in relation to maintenance activities. Water consumption decreased by 3.9% compared to the previous year, although it is worth noting that in 2018 there was an increase as a result of the Bauer failure of the cooling towers and at the end of 2019 there was an increase due to tests at the fountain of life and its light show and to the building's facade washing activities.
- Progress with the Valle de Aburrá sanitation and wastewater management plan (SWMP) through the construction and start of the stabilization process of the Aguas Claras WWTP, the start of the Interceptor Sur construction, and the completion of modernization and the start of expansion of the San Fernando WWTP. Likewise, the organization continues the execution of the La Iguaná, La García, Piedras Blancas, and El Salado projects to reduce the pollution load discharged by the sewerage system to the Aburrá River basin.
- Operation of the odor control system and preparation of a contingency plan in case of offensive odor generation at the San Fernando WWTP.
- Completion in 2019 of the designs of the Apartadó, Carepa, and Turbo wastewater treatment systems (WWTS). Similarly, the negotiations started to obtain resources from contributions under condition for their construction.
- Progress of 99% with the construction of the Aguas de Malambo WWTP.

## Water-related risk management

To manage risks associated with water shortage in the places where Grupo EPM has operations, reservoirs, or water withdrawal systems to provide the services of water supply and hydroelectric power generation, the group carries out studies, installs and operates hydrometeorological stations, and uses hydrometeorological indicators and models of its own and of government entities such as the Institute of Hydrology, Meteorology and Environmental Studies (Ideam, as per its acronym in Spanish) and environmental authorities. Among all these activities, this report highlights the following:

- The National Study of Water (ENA, as per its acronym in Spanish), versions 2014 and 2018, presents the aridity index for Colombia and its different regions, which shows that the department of Antioquia—where the majority of EPM’s power stations or production sites are located (power generation and drinking water supply)—has a moderate aridity index or surplus surface water. Moreover, in areas such as La Guajira, there is a moderate to high aridity index, but in this region EPM generates power in a wind farm, which does not require water for production.
- As for the provision of the water supply service, EPM has 10 purification plants for which no significant impact is identified. However, the La Iguana, La Valeria, and Piedras Blancas lower supply watersheds show a medium water vulnerability index (WVI) in dry year, according to the update of the 2018 Plan for Land Use and Basin Management (POMCA) of the Aburrá River. The same happens with the Pantanillo River, according to the POMCA of the Negro River. For its part, Aguas Regionales, in the Turbo watershed, shows medium and high values of WVI, but in any case shows shortage vulnerability at a very high category according to the diagnosis of the POMCA of the León River, conducted by the Corporation for the Sustainable Development of Urabá (Corpourabá). In addition, the 2018 update report on the state of the water resource in Antioquia shows that some supply sources in the Western region show medium to high values for this index.
- The affiliated company Adasa is located in the Antofagasta region in Chile, which is associated with a scenario of extreme aridity determined by geography and climate. However, 45% of the total water consumed for its water purification processes comes from seawater, an abundant resource compared to other types of water sources.

- For the risk management associated with the availability of the water resource, EPM has a hydrometeorological information system that supports the planning, construction, and operation of drinking water supply and power generation projects. This system features approximately 200 hydrometeorological stations installed in the watersheds and tributaries of all its reservoirs and projects, located in the departments of Antioquia and La Guajira. These stations capture the information of various hydrometeorological variables in real time, using sensors and transmitting them through several systems such as GOES and Skada.
- As part of the deployment of its climate strategy, Grupo EPM has conducted studies with Universidad Nacional de Colombia for climate modeling in the areas where it has its systems and reservoirs. These studies make it possible to advance in resilient management and articulate mitigation and adaptation issues with the integrated water resources and biodiversity management strategy.
- For their part, EPM and Aguas Regionales manage the risks associated with water availability by conducting the Study of Alternatives for New Catchment Sources for the Urabá Region of Antioquia. They also have contingency plans to mitigate the impacts generated by the dry season on current sources and carry out awareness-raising activities on water care and efficient water use aimed at the communities.
- It is important to note that in Colombian regulations, the use of water resources for human consumption has priority over any other use, so there is no competition over this resource for water supply.
- Finally, studies, indicators, and models are important inputs for the definition of strategies, goals, infrastructure needs (modernization, expansion, interconnection, new projects), or new studies, among other aspects.

## Water withdrawal

Grupo EPM water withdrawal (thousands of m <sup>3</sup> )*				
2019	<b>20,146,579</b>		↓	-15%
2018	23,697,825		↑	6%
2017	22,450,889		↑	38%

\* 1 megaliter = 1,000 m<sup>3</sup>

Surface water			Water supply			Other sources*		
2019	<b>20,136,221</b>	↓ -15%	2019	<b>1,162</b>	↓ -29%	2019	<b>9,196</b>	↑ 32%
2018	23,689,239	↑ 6%	2018	1,626	↑ 180%	2018	6,960	↑ 5%
2017	22,443,686	↑ 38%	2017	581	↑ -13%	2017	6,622	N.A.

*\*Other sources: Groundwater, sea/ocean, tank car, atmosphere (rainwater), and bottled water.*

The 99.94% of the total volume of water used by the companies of Grupo EPM in 2019 corresponds to surface sources. The 15% reduction in the use of this type of water source is mainly due to the reduction by 5% of EPM hydroelectric power generation and also to the contingency reported by CHEC in the conduction of the Camaguadua reservoir to the Ínsula station, which limited the withdrawal for power generation during five months.

Similarly, the decrease in the water withdrawn from aqueducts is the result of the exit from operation of some facilities such as the Santa Fe de Antioquia WWTP and the adjustment in the classification of the type of source used by a facility of Aguas Regionales.

## Water withdrawal from other sources

Water withdrawal from other sources (thousands of m <sup>3</sup> )					
2019	<b>9,196</b>		↑ 32%		
2018	6,960		↑ 5%		
2017	6,622		NDA		

Groundwater Thousands of m <sup>3</sup>			Sea/ocean Thousands of m <sup>3</sup>			Tank car Thousands of m <sup>3</sup>			Atmosphere and bottled water Thousands of m <sup>3</sup>		
2019	<b>1,362</b>	↓ -32%	2019	<b>7,833</b>	↑ 58%	2019	<b>0.28</b>	↓ -3%	2019	<b>0.07</b>	17%
2018	2,007	↑ 15%	2018	4,952	↑ 1%	2018	0.29	↓ -3%	2018	0.06	↑ 0%
2017	1,740	NDA	2017	4,882	NDA	2017	0.30	NDA	2017	0.06	→ NDA

The increase in water withdrawal from other sources\* is the result of the additional seawater demand by Adasa, caused by sand silting in the plant's catchments during the winter.

The 87% of the groundwater withdrawn is used by Aguas Regionales for the provision of the water supply service in the Urabá region and the remaining 13% corresponds to catchment for domestic use at some power stations and substations.

The remaining sources of water withdrawal from other sources in the period are marginal and correspond to 276 m<sup>3</sup> of water from tank cars that supply two EPM power substations and one Aguas de Malambo pumping station; 60 m<sup>3</sup> of rainwater for domestic use at the EPM La Cascada substation; and 8 m<sup>3</sup> of bottled water for a CHEC office. This type of water withdrawal is used in facilities where access to other sources such as aqueduct, surface water, or groundwater is difficult.

## Water consumption and use

Grupo EPM water use (thousands of m <sup>3</sup> )*			
2019	<b>20,146,579</b>	↓	-15%
2018	23,697,825	↑	6%
2017	22,450,889	↑	38%

\* 1 megaliter = 1,000 m<sup>3</sup>

Production			
2019	<b>20,119,357</b>	↓	-15%
2018	23,694,132	↑	6%
2017	22,446,867	↑	38%

Cooling			
2019	<b>26,457</b>	↑	800%
2018	2,941	↓	-13%
2017	3,372	↓	-96%

Domestic			
2019	<b>765</b>	↑	2%
2018	752	↑	16%
2017	650	↓	-4%

Of the total volume of water used by the companies of Grupo EPM, 99.98% was used for production processes. Of this amount, 98.18% was used for power generation and 1.81%, for water supply.

The increase in water use for cooling in the last year is mainly due to the increase in the power generation at the La Sierra thermal power station.

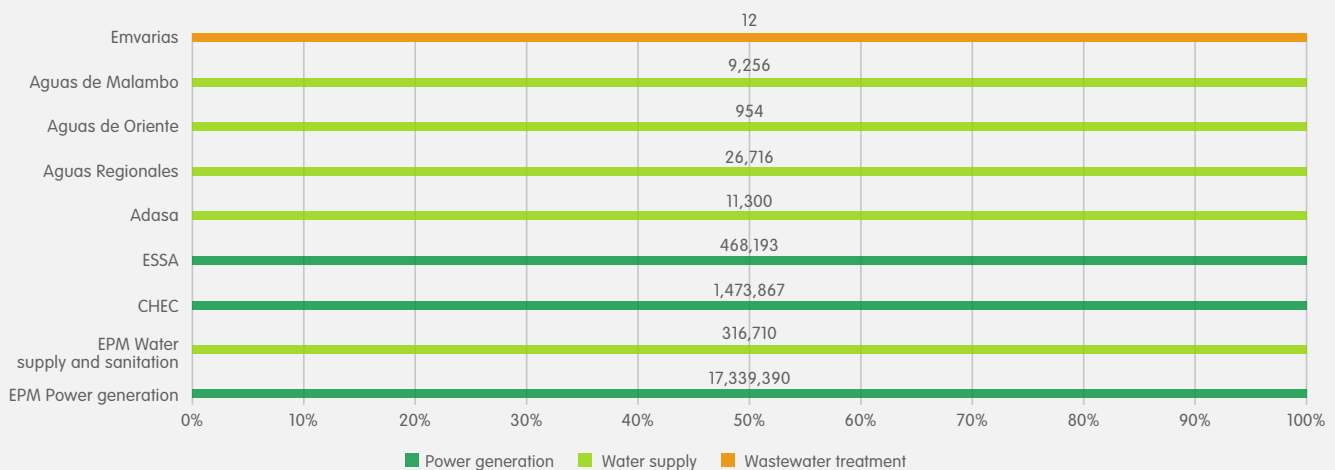
Water recirculated or reused in EPM processes Thousands of m <sup>3</sup>			
Process	2017	2018	2019
Hydroelectric power generation	29,588	24,561	32,710
Thermal power generation	1	0.61	2
Water supply	2,032	1,926	3,148
Administrative and customer service facilities	73	72	0
<b>Total</b>	<b>31,694</b>	<b>26,560</b>	<b>35,860</b>

Source: Idsos application.

The increase in water reuse or recirculation is mainly due to increased power generation in the last year at the Guatapé hydroelectric power station and the La Sierra thermal power station, which are the stations that use this process in the highest proportion. The percentage of water reused in the power generation process with respect to the total water used in the same process is 17%; in addition, the percentage of recirculated water in water supply with respect to the total water used in the process is 0.89%.

The significant increase in recirculated water in the water supply process is mainly due to recirculation in the Manantiales DWTP, considering the quality of the water entering the plant. The volume of water used for water recirculation at the DWTPs depends on the quality of the sources caught; water recirculation takes place as long as it does not affect the quality of the drinking water produced at the plant.

**Water for production purposes per Grupo EPM company**  
Thousands of m<sup>3</sup>/2019



The greater volume of water used by the companies of Grupo EPM is destined for hydroelectric power generation, followed by drinking water supply.

## Water discharges

Power generation – Grupo EPM Water discharge (thousands of m <sup>3</sup> )		
Discharges	2018	2019
EPM - Hydroelectric power generation stations	21,524,726	17,312,798
HET - Hydroelectric power generation station	395	499,460
CHEC - Hydroelectric power generation stations	1,817,391	1,473,863
EPM - Thermal power generation station (*)	2,921	26,449
ESSA - Hydroelectric power generation station		468,193
<b>Total</b>	<b>23,345,433</b>	<b>19,780,764</b>

The largest volume of effluents results from the discharges from power generation, which corresponds to the same volume of water used for this production process. These discharges are not reported as effluents because their quality is not negatively impacted in the generation process; on the contrary, this process generally helps to improve the quality of the receiving sources. The reason for the decrease in the total volume of water discharged compared to the previous year is the decrease in hydroelectric power generation in 2019.

Origin of effluents – Grupo EPM (thousands of m <sup>3</sup> )			
2019	85,195	↑	59%
2018	53,709		3%
2017	52,158		-64%

Production			
2019	58,165	↑	16%
2018	50,315	↑	6%
2017	47,519	↓	-27%

Cooling			
2019	26,429	↑	799%
2018	2,941	↓	-13%
2017	3,369	↓	-96%

Domestic			
2019	601	↑	33%
2018	453	↓	-65%
2017	1,270	↑	125%

The largest volumes of effluents come from the WWTPs of Grupo EPM, where wastewater from users of the sanitation service is treated. The volume of water treated and discharged with better quality parameters than those of the receiving sources was 50.87 million m<sup>3</sup> in these plants.



Source receiving effluents – Grupo EPM (thousands of m³)				
2019	85,195	↑	59%	
2018	53,709	↑	3%	
2017	52,158		-64%	

Surface water		Soil		Sewerage			
2019	80,116	↑	94%	2019	4,913	↑	41%
2018	50,100	↑	6%	2018	3,487	↓	-31%
2017	47,047	↓	-66%	2017	5,085	↑	4%

The 94% of effluents is discharged to surface water sources. The 63% corresponds to discharges from production activities; 93% of them have secondary treatment before their discharge at the El Retiro, San Fernando, and El Tranvía WWTPs and at the Emvarias leachate treatment plant. The effluents from the WWTPs are discharged to surface water sources after receiving the treatments in these plants to improve their quality. The effluents from the Aguas Regionales WWTP are not reported because its projects are in different stages of design, property purchase, construction, etc., in accordance with the SWMP timelines.

The facilities of the companies of Grupo EPM discharge their wastewater to the sewerage systems of the territories where they are located; those facilities that do not have access to these systems treat their effluents in their own WWTPs, which are discharged to the soil after treatment.

Furthermore, there are discharges to surface water sources of water used in the cooling process of the Guatapé and La Sierra power stations. The water used in this process does not suffer alterations in its quality.

## Water withdrawal and discharge per category

- There are records with the total concentrations of solids (mg/l) taken from the main tributary of the power generation reservoirs and the discharge from the EPM stations. The information corresponds to samples taken in the first half of 2019, and the environmental compliance reports for the second half of 2019 are pending delivery. For the main tributaries of the Porce II and Porce III reservoirs, there are measurements of total solids (TS), dissolved solids (DS), and total suspended solids (TSS). In all cases the TS are less than 1,000 mg/l; thus, the total DS should also be lower and, therefore, all monitored sources and discharges are classified as fresh water or clear water (DS<1000 mg/l).
- There are records of TS in the water withdrawal sources for water supply of the EPM systems. The monitoring was conducted in the lower catchment area on a biannual basis in 2019. In all cases the TS are less than 1,000 mg/l; thus, the total DS should also be lower and, therefore, the monitored sources and discharges are classified as fresh water or clear water (DS<1000 mg/l), except for one measurement in the second semester of 2019 in the source supplying the Manantiales DWTP, which reported 1,174 mg/l; in this case, the source is classified as other types of water.

## GRI standards disclosures and EPM indicators

- 303-1** Interactions with water as a shared resource (Chapter Action: water conservation and biodiversity).
- 303-2** Management of water discharge related impacts.
- 303-3** Water withdrawal.
- 303-4** Water discharge.
- 303-5** Water consumption.
- 306-1** Water discharge by quality and destination.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia – Antioquia  
 Colombia-Malambo, Atlántico  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia-Norte de Santander  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Management of impacts related to water and biodiversity

## Management of impacts related to water and biodiversity

Grupo EPM, in the development, construction, and operation of its infrastructure projects, seeks to minimize negative environmental effects and maximize positive impacts. To this end, environmental restriction analyses (ERA), environmental diagnoses of alternatives (EDA), feasibility studies, and environmental impact assessments (EIA) are conducted since the early stages of the projects, aiming, among other things, to cause the lowest possible impact on water and biodiversity. The license or permit granted by the respective environmental authority establishes the environmental management plan (EMP) of the projects, which defines the impacted areas and their corresponding prevention, reduction, control, mitigation, offset, and correction actions.

### Management in 2019

Grupo EPM protects 561.8 km<sup>2</sup> of forests and natural ecosystems, 135.8 km<sup>2</sup> of reservoirs, and 70.7 km<sup>2</sup> of forest plantations. The sum of these areas represents a contribution to the conservation of biodiversity.

The offset for impact management implemented by Grupo EPM in 2019 was for 10.75 km<sup>2</sup>, of which 9.71 km<sup>2</sup> was for the Ituango hydroelectric project. The group achieved a 98.6% progress (accumulated offset) of the cumulative goal of 179.76 km<sup>2</sup>.

The significant environmental impacts related to water and biodiversity of the projects by Grupo EPM are mainly generated during the construction phase. For the power generation and water supply businesses, these impacts have to do with loss of vegetation cover, effects on habitats, and fauna displacement in the flood zone of the reservoirs and in the infrastructure construction sites. Furthermore, the significant impacts in the power transmission and distribution projects are associated with the loss of vegetation cover in the corridors of the transmission lines and negative effect on wildlife, especially birds, where electrocution or collision caused by the power lines may occur.

By the same token, the greatest impact caused by the construction and operation of the WWTPs is positive and is related to the improvement of water quality during the operation, which entails benefits for the ecosystems and the communities where these types of systems operate. Furthermore, the significant positive impacts associated with solid waste management have to do with improving public health and the quality of life of the populations it serves and the significant negative impacts, with landfill leachates, which can affect the soil and water sources.

The companies of Grupo EPM manage the impacts of their projects, works, and activities by implementing the management measures defined in the EMPs. For said impacts, this report highlights measures such as the offset for conservation and the non-net loss of biodiversity, as shown in the table about areas impacted and offset in this chapter. With respect to fauna, rescue, relocation, repopulation, and monitoring activities are carried out in the relevant cases; protection measures such as the implementation of covered cables and underground lines are taken in the cases viable for these alternatives. In addition, landfill leachates are treated before dumping and Emvarias is working to improve the process with a state-of-the-art plant.

Regarding the impacts associated with water, this report emphasizes the management of effluents by the companies of Grupo EPM, which includes:

- In places where there is no access to sewerage systems, the management of discharges from the companies' facilities is carried out in their own WWTSS.
- The management of wastewater collected from users through the provision of the sanitation service prevents millions of m<sup>3</sup> of untreated wastewater from being discharged directly to water sources and the soil.
- The turbinated water discharge for power generation is caught directly from water sources of the reservoirs. The force of the water passing through the headrace is used to move the generators and is discharged back to the same river where it was caught or to another river in the same basin. During the process, water movement provides greater oxygenation when it is discharged to the receiving water sources and helps to improve its conditions. Plans and protocols are established for the management of discharges, including, where appropriate, warning systems for winter floods and monitoring of quality parameters, including the temperature for cooling discharges of some thermal power stations. See more details on effluent discharges in the chapter **Water use and effluents**.

It is also worth noting some of the programs and initiatives developed by the companies of the group to manage impacts associated with water and biodiversity:

In 2019, Grupo EPM reported that 80.1% of the total area is located in forest or other vegetation cover of ecological importance around its operational centers, so that directly or indirectly impacted habitats are protected or restored. The strategies for the protection of natural ecosystems and the recovery of other areas intervened by the construction or operation of projects continue to be a powerful initiative for the management of impacts and the contribution to the conservation of biodiversity and ecosystem services with benefits for the territories. Only 1.3% of the total area corresponds to infrastructure required for the operation of the businesses.

Impacted and offset areas (km <sup>2</sup> ) – Grupo EPM					
Company / Business	Impacted area	Offset goal	Offset area in 2019	Accumulated offset area	Total offset progress (%)
EPM-Ituango	65.94	174.58	9.71	173.8	99.55
EPM-VP of Transmission	0.52	5.08	0.99	1.01	19.88
ENSA	0.11	0.1	0.05	0.05	50.00

**Source:** IDSOS, 2019.

Moreover, 17.2% of the total area corresponds to reservoir areas for power generation or drinking water supply, which in turn constitute new ecosystems that offer availability of resources, refuge, and habitat for different species of fauna and flora. During 2019, the company continued with the comprehensive management of reservoirs, including the control of invasive aquatic plants, monitoring of cyanobacteria, management of solid waste, and erosion control, in order to improve the environmental conditions. In addition, hydrobiological monitoring (including ichthyofauna) was conducted in some reservoirs and tributary streams.

Also, in the group's own lands (operational centers), progress was made with the natural succession processes in 336.2 km<sup>2</sup> through passive restoration, represented in the succession advance of vegetation, a natural action that is facilitated by land control and surveillance, an activity that also favors the preservation of 209.6 km<sup>2</sup> of primary and secondary forests and the conservation of the fauna and flora present in them. Some of the projects conducted monitoring, inventories, or studies of flora or fauna contributing to the knowledge of biodiversity and to the decision-making to manage it comprehensively.

Furthermore, different silvicultural activities were implemented for the active restoration of 13.9 km<sup>2</sup> to recover the ecosystem functionality of areas degraded either by the activities of the projects or by previous actions. Additionally, EPM continued with the management of forest plantations in 70.7 km<sup>2</sup>, where wood has been harnessed to contribute to the forest chain of northern Antioquia and to provide raw material to the Aldeas program, which seeks to make territories of EPM viable by building wooden houses and schools.

See the consolidated information about the areas of the operational centers of the companies of Grupo EPM in the chapter **Water conservation and biodiversity** (table Areas and land uses (km<sup>2</sup>) – Grupo EPM).

Protected, adjacent, or high-biodiversity areas (km <sup>2</sup> ) in 2019 – Grupo EPM							
Company / Business	Protected, adjacent, or high-biodiversity areas				Other areas	Total areas	Reference protected area
	Declared protected	Adjacent	Undeclared high-biodiversity	Total			
CENS – VP of Power Transmission and Distribution		0.05				0.05	NDA
CHEC – Power generation	42.74	17.74	5.27	65.75	1.24	66.99	Bosques de la CHEC Forest Reserve, Los Nevados National Natural Park buffer zone
Emvarias – Water supply and sanitation	0.00	0.00	0.67	0.67	3.15	3.82	NDA
EPM – Water supply and sanitation	26.95	2.68	0.00	29.63	0.87	30.5	Nare Forest Reserve
EPM – Power generation	180.65	33.74	120.58	334.98	47.86	382.85	Playas Regional Forest Reserve and some municipal forest reserves. Regional Integrated Management District (DRMI, as per its acronym in Spanish) of the Peñol-Guatapé reservoir and the upper basin of the Guatapé River, Cacica Noria DRMI
EPM – Ituango	89.62	62.88	100.38	252.88	50.19	303.06	Peque DMRI
HET – Power generation	16.44	0.00	0.00	16.44	0.00	16.44	Palo Seco Protected Forest
<b>Overall total</b>	<b>356.4</b>	<b>117.09</b>	<b>226.9</b>	<b>700.35</b>	<b>103.31</b>	<b>803.71</b>	

**Source:** IDSOS 2019 (CENS, CHEC, Emvarias, EPM, EPRio, and HET).

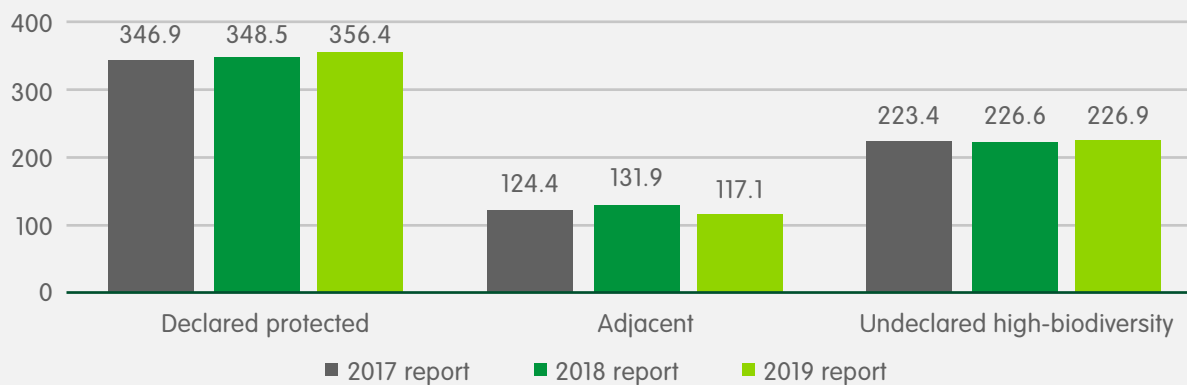
**Note:** Only protected areas with statute established by competent environmental authorities are referenced. The information of EPRio is included, from this report on, in EPM – Water supply and sanitation.



For the companies of Grupo EPM, 789.3 km<sup>2</sup> was reported in operational areas. However, protected areas are larger (803.7 km<sup>2</sup>) because HET reports that it has a concession for the administration of 11.99 km<sup>2</sup> of the Palo Seco Protected Forest, where 2.14 km<sup>2</sup> of its property is included. Thus, of the total area, 44.3% is within any statute of protection, 28.2% is in buffer zones of (adjacent to) protected areas, and 14.6% is considered important ecosystems for the conservation of biodiversity, which are not included in declared protected areas. Grupo EPM continued working with the environmental authorities and other stakeholders to expand and strengthen the system of protected areas, contributing to the conservation of ecosystems and the species inhabiting them.

Compared to previous years, 2019 had a decrease in the adjacent areas reported by the release of the EPM Chile report; however, with the CENS report and the increase in offset areas of the Ituango hydroelectric project, there is an increase in the contribution to declared protected areas and undeclared high-biodiversity areas.

**Protected, adjacent, or high-biodiversity areas (km<sup>2</sup>) 2017, 2018, 2019**



*Source: IDSOS, 2017, 2018, and 2019.*

### Areas impacted by transmission and distribution projects (km<sup>2</sup>) in 2019 – Grupo EPM

Company – Business	Total line or network length (km)	Built-up area – Easements (km <sup>2</sup> )	Line or network length in protected area (km)	Total protected area (km <sup>2</sup> )
CENS – VP of Power Transmission and Distribution	3.3	0.1	0.1	0.1
CHEC – Power Transmission and Distribution	58.0	0.0	1.1	1.1
Delsur – VP of Power Transmission and Distribution	3.9	0.0	0.0	0.0
ENSA – VP of Power Transmission and Distribution	0.6	0.1	0.0	0.0
EPM – VP of Power Transmission and Distribution	146.9	1.0	1.0	1.0
EDEQ – Deputy Manager's Office of Maintenance, Substations, and Lines	157.3	0.0	0.0	0.0
Eegsa – Power distribution	565.2	0.1	0.1	0.1
Trelec – Power transmission	21.8	0.0	0.0	0.0
<b>Overall total</b>	<b>957.0</b>	<b>1.3</b>	<b>2.3</b>	<b>2.3</b>

*Source: IDSOS, 2019.*

In power transmission and distribution project activities, Grupo EPM impacts vegetation cover with the construction and maintenance of easements in protected areas (2.3 km<sup>2</sup>). Nevertheless, impacts on forests, natural ecosystems, and communities were reduced by ending the closed season for endangered species, subtracting protected areas, offsetting forests, and carrying out other impact management actions.

Areas impacted by transmission and distribution projects (km <sup>2</sup> ) in 2019 – Grupo EPM					
Company – Business	Impacted area (km <sup>2</sup> )	Target offset area	Offset area in 2019	Accumulated offset area	Progress percentage
CHEC – Project area	0.003	0.012	0.012	0.012	100%
Delsur – VP of Power Transmission and Distribution	0.010	0.010	0.010	0.010	100%
ENSA – VP of Power Transmission and Distribution	0.010	0.060	0.060	0.060	100%
EPM – VP of Ituango Project	65.946	174.581	9.712	173.820	100%
EPM – VP of Power Transmission and Distribution	0.980	0.750	0.980	0.980	131%
<b>Overall total</b>	<b>66.95</b>	<b>175.41</b>	<b>10.77</b>	<b>174.88</b>	

*Source: IDSOS, 2019.*

For impact management in 66.95 km<sup>2</sup>, Grupo EPM has a progress of almost 100% in the cumulative offset area as of 2019.

### GRI standards disclosures and EPM indicators

- 303-1** Water withdrawal by source.
- GRI 303-2** Management of water discharge-related impacts.
- GRI 304-2** Significant impacts of activities, products, and services on biodiversity.
- EU13** Biodiversity of offset habitats compared to the biodiversity of the affected areas.

### Scope and coverage

**Companies**

Empresas Públicas de Medellín - EPM  
Empresas Varias de Medellín - Emvarias

**Territory**

Colombia – Antioquia  
Colombia – Caldas  
Colombia – Santander  
Colombia – Norte de Santander

**Businesses**

Water supply  
Sanitation  
Electrical energy



# Conservation of threatened species

## Conservation of threatened species

Given that Grupo EPM is located in different countries of Latin America, countries located, in turn, in various biogeographic regions and ecosystems, there is a broad report of the biodiversity of the neotropical realm and mainly of the species of fauna and flora in some status of threat, which find their habitat in the 56,180 ha (561.8 km<sup>2</sup>) of forests and other covers of ecological importance in the operational areas owned, leased, or managed by the companies of the group.

Additionally, Grupo EPM is committed to the comprehensive management of biodiversity and ecosystem services through different projects and initiatives of its own or in collaboration with other stakeholders, some of them mandatory and others voluntary, so as to support the conservation of species of flora and fauna threatened mainly by the loss or alteration of their habitats, the pollution of the environment, or their overexploitation in the different territories where the group develops its operations.

In the development of this action, Grupo EPM takes into account the lists of threatened species according to national regulations and the IUCN; likewise, the group lists the species in closed season at the international (according to the CITES), national, or regional (according to Colombian regulations) levels.

In 2019 Grupo EPM reported in its operational areas in five countries (Chile, Colombia, Guatemala, El Salvador, and Panama) 399 species in some status of threat, 146 according to IUCN, 150 in national lists, 221 reported in the CITES, and 174 in closed season at the national or regional levels. The most representative biological groups were epiphytes (119 species) and birds (116 species).

Grupo EPM continued the inventories of fauna and flora, implementation of conservation strategies for threatened species, study and applied research, protection and restoration of its own areas, support for protected areas, and implementation of management measures to improve the habitats of threatened species.

To get to know the biodiversity of the fauna and flora of the different territories where it develops its operations, Grupo EPM registered 635 threatened species in five countries (Chile, Colombia, Guatemala, El Salvador, and Panama) in 2019. Of the total registered there are 399 different species, some common among countries (Iguana iguana (iguana), Panthera onca (jaguar), and Cedrela odorata (cedar); other migratory (Setophaga cerulea); and other endemic (Dendrobates truncatus (yellow-striped poison frog) and Spheniscus humboldti (Humboldt penguin)).

Of the total species, 134 are on the IUCN list (222 reports), 146 on national lists (247 reports), 221 are in international closed season (362 CITES reports), and 174 are in national or regional closed season (174 reports only for Colombia). The increase in national closed seasons had to do in part with the reports of vascular and nonvascular epiphytes, resulting from the characterization study of the Porce III hydroelectric power plant (99 reports).

During 2019, Grupo EPM monitored the flora, terrestrial fauna, and ichthyofauna in the protected areas of the Porce II and Porce III reservoirs and made progress with the study of the endemic sabaleta species (*Brycon henni*) and the alternatives for its repopulation. It continued with the studies of migratory fish species in the Porce River and with the characterization of the fauna associated with forest plantations of the Guatapé hydroelectric power plant. It also made progress with the implementation of the conservation strategy of the silvery-brown tamarin (*Saguinus leucopus*) and the neotropical otter (*Lontra longicaudis*) in Porce III.

In the Ituango project, Grupo EPM continued with the hydrobiological monitoring in the middle and lower basins of the Cauca River and it has also been making progress with the design, implementation, and discussion of monitoring, follow-up, management, protection, and conservation strategies for focal bird species (*Aburria aburri*, *Ara militaris*, *Clytoctantes alixii*, *Myrmeciza palliata*, *Contopus cooperi*, *Hypopyrrhus pyrohypogaster*, *Icterus icterus*, *Myiarchus apicalis*, *Odontophorus hyperythrus*, *Ortalis columbiana*, *Psittacara wagleri*, *Ramphastos ambiguus*, *Ramphastos vitellinus*, *Thryophilus sernai*, and *Ramphocelus flammigerus*). This is supported by the study of potential receiving areas and their floristic composition to understand the dynamics of these bird species. Finally, CENS monitored the effectiveness of flight diverters for its transmission lines.

In general, species reports are prepared from monitoring or inventories for project prefeasibility and feasibility studies. From this, permits are processed before the competent environmental authorities and alternatives such as rescues and offset are proposed. These measures include, for instance, the planting by Emvarias of threatened species such as *Syagrus sancona*, *Bombacopsis quinata*, *Swietenia macrophylla*, and *Cariniana pyriformis* as forest offset.

## Report on the number of species by threat list, country, company, and business of Grupo EPM – 2019

Country	Business	Records / Species	IUCN*						National lists*						CITES			Closed season***				
			Amt.	CR	EN	NT	VU	Total	2**	3**	CR	EN	NT	VU	Total	I	II	Total	Natl.	Natl. - Reg.	Reg.	Total
Chile	Adasa – VP of Water and Sanitation	No. of recs.	10		1	5	4	10					5	5	3		3					
		No. of spp.	6		1	3	2	6					4	4	2		2					
Colombia	Aguas Nacionales – VP of Water and Sanitation	No. of recs.	1			1		1					1	1								
		No. of spp.	1			1		1					1	1								
	Aguas Regionales EPM - VP of Water and Sanitation	No. of recs.	6	1	1	1		3					4	4	3	3	6					
		No. of spp.	4	1	1	1		3			1		2	3	3	1	4					
	CENS – VP of Power Transmission and Distribution	No. of recs.	6													6	6					
		No. of spp.	6													6	6					
	CHEC – Power generation	No. of recs.	38		6	14	12	32			7		15	22	7	10	17					
		No. of spp.	38		6	14	12	32			7		15	22	7	10	17					
	Emvarias – VP of Water and Sanitation	No. of recs.	20		3	3	9	15			2	3	6	11	3	7	10	5	1	2	8	
		No. of spp.	20		3	3	9	15			2	3	6	11	3	7	10	5	1	2	8	
	EPM – VP of Water and Sanitation	No. of recs.	20	2	1	1	4	8			2	6	8	16		3	3	7	1	1	9	
		No. of spp.	20	2	1	1	4	8			2	6	8	16		3	3	7	1	1	9	
	EPM – VP of Power Generation	No. of recs.	248	2	13	17	19	51			4	7	22	33	12	163	175	105		7	112	
		No. of spp.	180	1	7	12	10	30			2	4	12	18	7	120	127	98		3	101	
	EPM – VP of Projects and Engineering	No. of recs.	62	3	3	7	24	37			2	6	31	39		14	14			4	4	
		No. of spp.	62	1	2	5	13	21			1	3	15	19		10				3	3	
	EPM – VP of Power Transmission and Distribution	No. of recs.	142	3	5	7	14	29			5	12	3	21	41	10	78	88	28	3	7	38
		No. of spp.	123	3	3	6	12	24			4	10	3	14	31	9	70	79	21	3	6	30
ESSA – VP of Transmission and Distribution	No. of recs.	14	2			7	9			1	6	3	10		1	1			3	3		
	No. of spp.	12	2			5	7			1	4	3	8		1	1			3	3		
Subtotal Colombia	No. of recs.	557	13	32	51	89	185			16	47	3	111	177	36	285	320	145	5	24	174	
	No. of spp.	351	9	20	31	48	108			11	26	3	54	93	19	185	204	127	4	13	144	



Report on the number of species by threat list, country, company, and business of Grupo EPM – 2019																						
Country	Business	Records / Species	IUCN*						National lists*						CITES			Closed season***				
			Amt.	CR	EN	NT	VU	Total	2**	3**	CR	EN	NT	VU	Total	I	II	Total	Natl.	Natl. - Reg.	Reg.	Total
El Salvador	Delsur – VP of Power Transmission and Distribution	No. of recs.	24	2	3	8	4	17			2	8	8	6	24	5	7	12				
		No. of spp.	24	2	3	8	4	17			2	8	8	6	24	5	7	12				
Guatemala	Eegsa – Power distribution	No. of recs.	12				1	1	8	4					12		1	1				
		No. of spp.	12				1	1	8	4					12		1	1				
Panama	ENSA – VP of Power Transmission and Distribution	No. of recs.	20			4	1	5			1			11	12	6	11	17				
		No. of spp.	9			2	1	3			1			5	6	2	4	6				
	HET – VP of Power Generation	No. of recs.	12		1	2	2	5				3		9	12	5	3	8				
		No. of spp.	12		1	2	2	5				3		9	12	5	3	8				
<b>Total records</b>			<b>635</b>	<b>15</b>	<b>24</b>	<b>70</b>	<b>101</b>	<b>210</b>	<b>8</b>	<b>4</b>	<b>20</b>	<b>58</b>	<b>11</b>	<b>142</b>	<b>243</b>	<b>55</b>	<b>307</b>	<b>362</b>	<b>145</b>	<b>5</b>	<b>24</b>	<b>174</b>
<b>Total species</b>			<b>399</b>	<b>11</b>	<b>24</b>	<b>44</b>	<b>55</b>	<b>134</b>	<b>8</b>	<b>4</b>	<b>14</b>	<b>35</b>	<b>11</b>	<b>78</b>	<b>150</b>	<b>28</b>	<b>193</b>	<b>221</b>	<b>127</b>	<b>4</b>	<b>13</b>	<b>144</b>

**Source:** IDSOS application, 2019 (EPM, CHEC, CENS, ESSA, Aguas Nacionales EPM, Aguas Regionales, Emvarias, Delsur, Adasa, Eegsa, ENSA, and HET).

\* Categories: critically endangered (CR), endangered (EN), vulnerable (VU), and near threatened (NT).  
 Conservation status (IUCN: <https://www.iucnredlist.org/>; CITES: <http://checklist.cites.org/>; Colombia: Ruling 1912 of 2017; Chile: National Species Inventory <http://especies.mma.gob.cl/>; Guatemala: List of Threatened Species, LEA, 2008; Panama: Ruling DM-0657 of 2016; El Salvador: <https://historico.elsalvador.com/historico/129130/los-10-animales-en-peligro-de-extincion-en-el-salvador.html>.)

\*\* The species reported in the national list for Eegsa in Guatemala are not standardized according to the conservation categories of the IUCN and have their own numerical categories ranging from 1 to 3.

\*\*\* The categories of national and regional closed seasons apply for Colombia according to Inderena and regional autonomous corporations.

The main reports of threatened species were observed in EPM projects (303), followed by reports in power transmission and distribution affiliates (57), power generation affiliates (48), and water supply and sanitation affiliates (11). There are 10 critically endangered (CR) species in the IUCN reports including *Ateles hybridus* (variegated spider monkey), *Crax alberti* (blue-billed curassow), *Dermochelys coriacea* (leatherback turtle), *Eretmochelys imbricata* (hawksbill turtle), *Hampea thespesioides* (wild achote), *Magnolia espinalii* (magnolio), *Pimelodus grosskopfii* (barbudo, capaz), *Pitcairnia lindae* (bromelia), *Podocnemis lewyana* (Magdalena River turtle), and *Saguinus oedipus* (cotton-headed tamarin). These species find habitat, refuge, and resources for their survival in the protected areas of the operational centers.

In general terms, since the companies of Grupo EPM are located in different countries, altitudinal gradients, and latitudes, among other unique features of each territory, there is representation of various types of natural ecosystems such as paramos, deserts, dry forests, tropical rainforests, among others, as well as the reservoirs that are configured as artificial ecosystems. In all these environments, species from different biological groups are protected, several in any conservation status. In 2019 there were 635 records, of which 59% corresponds to fauna; birds are the most representative group since they are very conspicuous, with a representation of 116 species. The vascular and nonvascular epiphytes, almost completely in closed season, greatly increased the reports of flora with a representation of 119 species. The trees follow in number of records (98) with 60 threatened species.

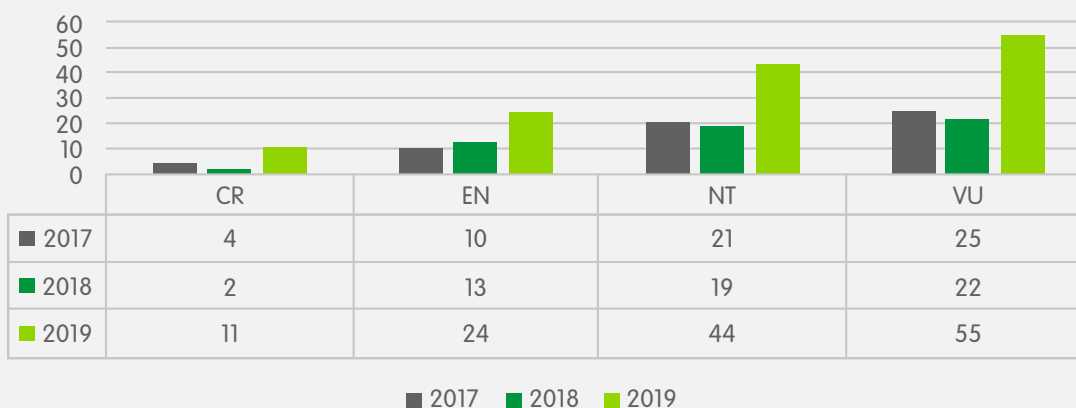
Number of species by biological group – Total threatened species according to the IUCN and CITES											
Biological group	Number of records	Amount of species	Conservation status					CITES			Closed seasons
			CR	EN	NT	VU	Total	I	II	Total	
Amphibians	20	11	0	2	2	3	7	0	4	4	
Birds	201	116	1	4	27	15	47	7	72	79	
Mammals	79	35	3	4	8	8	23	14	11	25	
Fish	43	17	1	1	2	5	9				
Reptiles	31	17	3	1	2	4	10	5	7	12	4
<b>Subtotal fauna</b>	<b>374</b>	<b>196</b>	<b>8</b>	<b>12</b>	<b>41</b>	<b>35</b>	<b>96</b>	<b>26</b>	<b>94</b>	<b>120</b>	<b>4</b>
Tree ferns	26	16	0	0	0	3	3	0	16	16	26
Palms	13	8	0	2	0	0	2				
Trees	98	60	2	8	3	17	30	0	4	4	28
Epiphytes	124	119	1	2	0	0	3	2	79	81	116
<b>Subtotal flora</b>	<b>261</b>	<b>203</b>	<b>3</b>	<b>12</b>	<b>3</b>	<b>20</b>	<b>38</b>	<b>2</b>	<b>99</b>	<b>101</b>	<b>170</b>
<b>Overall total</b>	<b>635</b>	<b>399</b>	<b>11</b>	<b>24</b>	<b>44</b>	<b>55</b>	<b>134</b>	<b>28</b>	<b>193</b>	<b>221</b>	<b>174</b>

**Source:** IDSOS application, 2019 (EPM, CHEC, CENS, ESSA, Aguas Nacionales EPM, Aguas Regionales, Emvarias, Delsur, Adasa, Eegsa, ENSA, and HET).

\* Categories: critically endangered (CR), endangered (EN), vulnerable (VU), and near threatened (NT). Conservation status (IUCN: <https://www.iucnredlist.org/>; CITES: <http://checklist.cites.org/>)

Compared with the records of the last three years, there is a notable increase in the amount of species in 2019, because this year fauna and flora monitoring was carried out at the Porce II and III hydroelectric power plants, with a comprehensive report of epiphytes (99 species). In addition, Delsur added its own species this year.

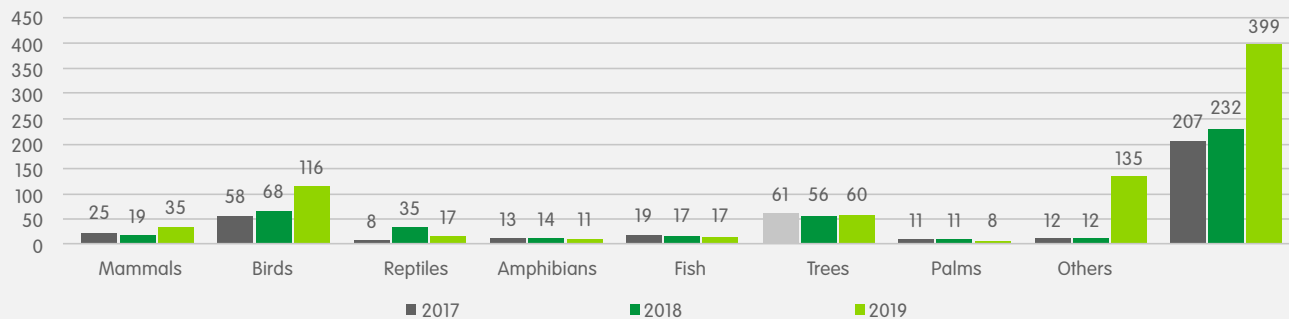
### IUCN threatened species – 2019



**Source:** IDSOS (EPM, CHEC, CENS, ESSA, Aguas Nacionales EPM, Aguas Regionales, Emvarias, ADASA, Eegsa, ENSA, and HET).

\* Unlike previous reports, this report takes into account multitemporal analyses.

### Number of threatened species by biological group in 2017, 2018, 2019



**Source:** IDSOS (EPM, CHEC, CENS, ESSA, Aguas Nacionales EPM, Emvarias, EPM Chile, Adasa, Eegsa, ENSA, and HET).

<sup>1</sup> Others: ferns and epiphytes.

Conservation status: the species reported in the IUCN are considered for this analysis (IUCN: <https://www.iucnredlist.org/>).

## GRI standards disclosures and EPM indicators

**304-4** IUCN Red List species and national conservation list species with habitats in areas affected by operations.

**EPM-01** Conservation areas.

**EPM-10** Water protection.

## Scope and coverage

### Companies

Adasa - VP Agua y Saneamiento  
 Aguas Nacionales EPM - VP Agua y Saneamiento  
 Aguas Regionales EPM - VP Agua y Saneamiento  
 CENS - VP Transmisión y Distribución de Energía  
 CHEC - Generación de Energía  
 Emvarias - VP Agua y Saneamiento  
 EPM - VP Agua y Saneamiento  
 EPM - VP Generación Energía  
 EPM - VP Proyectos e Ingeniería  
 EPM- VP Transmisión y Distribución Energía  
 ESSA - VP Transmisión y Distribución  
 Delsur - VP Transmisión y Distribución Energía  
 Eegsa-Distribución Energía  
 ENSA - VP Transmisión y Distribución Energía  
 HET - VP Generación Energía

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Chile  
 Guatemala  
 Panama  
 El Salvador

### Businesses

Water supply  
 Sanitation  
 Electrical energy

**Quality and safety of  
products and services**



## Quality and safety of products and services

It involves meeting the expectations of customers and users, as well as the quality-oriented regulatory and control requirements, the service continuity and safety, and other aspects related to the commercial offer.

It refers to the technical and commercial characteristics necessary to meet the expectations of customers and users, as well as the regulatory and control requirements. This topic includes service quality, continuity, and safety, as well as aspects related to assistance, education, communication, customer satisfaction, and corporate reputation.

### Relevance

Economic value is associated with the objective of process optimization—basis of the competitiveness of the group's businesses—and quality to satisfy customers and users requirements. Regarding social value, product quality has an impact on quality of life and human development, while safety protects the life and health of the individuals that make up the stakeholders.

## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Quality and continuity of service	Achieve the SAIDI index = 13.75	EPM	SAIDI result: 14.55 hours	Not accomplished
	Achieve the SAIFI index = 8	EPM	SAIFI result: 7.29 interruptions	Total
	Achieve the SAIDI index = 25.75	ESSA	SAIDI result: 23.15 hours	Total
	Achieve the SAIFI index = 16.06	ESSA	SAIFI result: 15.13 interruptions	Total
	Achieve the SAIFI index = 30.6	CENS	SAIDI result: 27.33 hours	Total
	Achieve the SAIFI index = 9.3	CENS	SAIFI result: 8.96 interruptions	Total
	Put into operation the Campo Dos and the Gamarra substations at 34.5/13.8 kV; and repower the Ocaña – Convención transmission line at 115 kV.	CENS	The Campo Dos and Gamarra substations came into operation with 24 MVA; the Ocaña – Convención transmission line was repowered to 115 kV.	Partial
	Achieve a percentage of 100% in continuity of street and public space cleaning.	Emvarias	An indicator of 100.16% was achieved, mainly due to the mechanical sweeping.	Total
Quality and continuity of service	Replace 267.6 km of power networks and 6,448 poles.	CENS	138 km of power networks were built and 3,482 poles were replaced.	Not accomplished
	Transfer 100% of the families to the lines of Ocaña – Convención and Variante Belén – Ínsula.		All the families of the Ocaña – Convención and Variante Belén – Ínsula lines were transferred.	Total
Education for and communication with customers, users, and the community	Ensure that the families in the community supply line of the Unidos por el Agua (United for Water) program have a maximum consumption of 18 m <sup>3</sup> of water per month.	EPM	The average consumption for the year was 19.6 m <sup>3</sup> of water in the homes benefiting from the Unidos por el Agua program. During the second half of 2019 an average consumption of 17.5 m <sup>3</sup> was maintained.	Partial
	Hold 28 events of the Por ti estamos ahí (We are there for you) program, which allow the development of activities in a territory to talk with the community about the provision of residential public utilities.	EPM	A total of 33 events of the Por ti estamos ahí program were held.	Total

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Education for and communication with customers, users, and the community	Raise awareness of safe use of residential public utilities among 26,000 people.	EPM	30,354 people participated in awareness-raising activities on the safe use of residential public utilities.	Total
	Reach 50,000 people with the education process to migrants in the energy service, considering that this population does not know the Colombian pricing system and promotes social protest.	CENS	The education and training activities for users were not aimed specifically at the migrant population because there is no corresponding census. However, 55,358 people were benefited, including people from Venezuela, using strategies that involve games, participation, and the establishment of continuous engagement spaces.	Not accomplished
Education for and communication with customers, users, and the community	Reach 60,000 people through educational strategies, including activities in the customer service rooms.	CENS	A total of 55,358 people participated, using strategies that involve games, participation, and the establishment of continuous engagement spaces.	Not accomplished
	Conduct educational talks to more than 500 rural users on energy theft in residential networks.	ENSA	There were 93 meetings (59 in Colón and 34 in Panama), attended by 2,132 people.	Total
Loss management	Achieve a loss rate of network operator less than or equal to 6.97%.	EPM	Result of loss rate of the network operator: 7.57%.	Not accomplished
	Achieve a loss rate of network operator less than or equal to 11.63%.	ESSA	Result of loss rate of the network operator: 11.84%.	Not accomplished
	Achieve a loss rate of network operator less than or equal to 12.20%.	CENS	Result of loss rate of the network operator: 11.91% with an energy recovery indicator of 28.06 GWh.	Total



Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Loss management	Achieve a loss rate of network operator less than or equal to 8.27%.	CHEC	Result of loss rate of the network operator: 7.51%	Total
	Achieve a loss rate of natural gas less than or equal to 3.3%.	EPM	The indicator closes at 4.3%. This year an improvement was made in obtaining the information for calculating this indicator, mainly by adjusting errors in the billing information and in the standardization of facilities with significant fraud levels. By 2020, the indicator is expected to remain stable with a moderate downward trend.	Not accomplished
	Achieve a water supply continuity indicator = 99.7%.	EPM	The monthly average continuity was 99.81%.	Total
	Achieve a water supply continuity indicator = 95.19%.	Aguas Regionales	The water supply continuity indicator as of December 2019 was 92.94%.	Partial
Loss management	Achieve a water supply continuity indicator = 99.7%.	Aguas del Oriente	The monthly average continuity was 99.9%.	Total
	Achieve a water supply continuity indicator = 68%.	Aguas de Malambo	This challenge was only partially met because the continuity as of December 2019 was 65.41%.	Partial
	Reduce the water loss rate per billed user (LRBU) = 12.92.	Aguas Regionales	The result of the LRBU was 9.95 m <sup>3</sup> /billed user, with 130% fulfillment of the set goal.	Total
	Reduce the water loss rate per billed user = 4.	Aguas del Oriente	The result of the LRBU was 2.61 m <sup>3</sup> /billed user.	Total
	Reduce the water loss rate per billed user = 6.72.	EPM	The result of the LRBU was 6.05 m <sup>3</sup> /billed user.	Total

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Loss management	Install six theftproof networks in the company's area of operation in high-risk communities.	Delsur	Three theftproof networks were installed in the communities of Las Margaritas, Diez de Octubre – Tercera Etapa, and Tierra de Gosén. The others were not installed because the resources were redirected to the development of the theftproof network in the Tierra de Gosén community (human settlement located in Lourdes, Colón).	Partial
	Reduce the water loss rate per billed user = 14.95.	Aguas de Malambo	The result of the LRBU was 17.98 m <sup>3</sup> /billed user, with 83.17% fulfillment of the set goal.	Not accomplished
Customer service	Register new customers to the electronic billing mechanism.	ENSA	A total of 20,700 new customers were registered for electronic billing, for a total of 104,584 customers who receive the bill via email.	Total

## Challenges

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Business	Territory
Quality and continuity of service	Achieve the SAIDI index = 12.65.	2020	EPM	Power – Transmission and distribution	Colombia – Antioquia
	Achieve the SAIFI index = 8.				
	Obtain a water quality risk index < 5%.	2020	Aguas de Malambo	Water and sanitation	
			EPM		
			Aguas del Oriente		
	Aguas Regionales				
	Achieve a percentage of 100% in continuity of street and public space cleaning.	2020	Emvarias		
	Achieve the SAIDI index = 25.73.	2020	CHEC	Power – Transmission and distribution	
Achieve the SAIFI index = 21.91.					
Achieve the SAIDI index = 22.20.	2020	ESSA		Colombia – Santander	
Achieve the SAIFI index = 15.21.					
Quality and continuity of service	Achieve the water supply continuity indicator = 77%.	2020	Aguas de Malambo	Water and sanitation	Colombia – Malambo
	Achieve the water supply continuity indicator = 96.82%.	2020	Aguas Regionales		Colombia – Antioquia
	Achieve the water supply continuity indicator = 99.7%.	2020	EPM Aguas del Oriente		
Education for and communication with customers, users, and the community	Achieve a maximum water consumption of 18 m <sup>3</sup> per month for families in the community supply line of Unidos por el Agua program.	2020	EPM	Water and sanitation	Colombia – Antioquia
Education for and communication with customers, users, and the community	Hold 40 events of the Por ti estamos ahí program, which allow the development of engagement and educational activities.	2020	EPM	All the businesses	Colombia – Antioquia

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Business	Territory
Education for and communication with customers, users, and the community	Carry out engagement activities, community strengthening, and training on environmental preservation with at least 25,000 inhabitants of the municipalities downstream of the Ituango hydroelectric project.	2020	EPM	All the businesses	Colombia – Antioquia
	Through the Cuidamundos en tu Colegio (World’s Protector in your School) program, raise awareness among students from 70 schools in the department about caring for the environment and the responsible use of residential public utilities.				
Loss management	Reduce the water loss rate per billed user = 7.08.	2020	Grupo EPM	Water and sanitation	Colombia – Antioquia
	Reduce the water loss rate per billed user = 11.85.		Aguas Regionales		
	Reduce the water loss rate per billed user = 13.57.		Aguas de Malambo		Colombia – Malambo
	Reduce the water loss rate per billed user = 4.		Aguas del Oriente	Colombia – Antioquia	
	Achieve a loss rate of natural gas less than or equal to 4.3%.		EPM	Energy – Natural gas	
	Achieve a loss rate of network operator less than or equal to 8.47%.		CHEC	Power – T&D	Colombia – Caldas
Customer satisfaction	Achieve a grievance indicator less than or equal to 3.94.	2020	EPM	All the businesses	Colombia – Antioquia

## Related sustainable development goals



## Related stakeholders

Customers and users

Community

## GRI standards and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 416-2** Incidents of noncompliance concerning the health and safety impacts of products and services.
- 417-3** Incidents of noncompliance concerning marketing communications.
- 418-1** Substantiated complaints concerning breaches of customer privacy and loss of customer data.
- 419-1** Noncompliance with laws and regulations in the social and economic area.
- EU25** Number of injuries and deaths involving the organization’s assets, including legal sentences, settlements, and pending legal cases of diseases.
- EU28** Average power outage frequency.
- EU29** Average power outage duration.
- EPM-03** Loss rate.
- EPM-04** Customer service channels.
- EPM-05** Complaints.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa  
 Tecnología Intercontinental -Ticsa  
 Empresas Varias de Medellín - Emvarias

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



**Quality and continuity  
of service**

## Quality and continuity of service

Service quality comprises technical and commercial characteristics inherent to its provision. They must meet the expectations of users and the requirements of regulatory and control entities.

Continuity refers to how long the user has had the service.

### Management in 2019

In 2019, all the companies of Grupo EPM reported a water quality risk index (WQRI) significantly lower than the legal reference value of 5%, which guarantees the supply of water suitable for human consumption throughout the year, in accordance with Ruling 2115 of 2007.

The water supply continuity index for EPM was 99.81%, which is higher than the goal of 99.7%, and therefore makes it possible to maintain service provision above that defined in Ruling CRA 315 of 2005. The other companies of Grupo EPM show high percentages of continuity in the provision of service, which indicates an improvement in the quality of life of their customers and users. Several pumping equipment and the power station were put into operation at Aguas de Malambo to achieve an average continuity of 56.56% (38.77% in 2018). In Turbo, 24-hour continuity was achieved for 33% of customers and users.

In relation to water quality index, working groups were established with health and environmental authorities for the quality of the water withdrawn, quality variables were characterized in the water purification process, and the distribution network was systematically monitored. In addition, the modernization and expansion of the secondary treatment area was carried out in the San Fernando wastewater treatment plant and in the tertiary treatment and disinfection areas of the El Retiro plant. It should be noted that, during 2019, all the group's water companies supplied water suitable for human consumption.



The power quality indexes showed improvements thanks to EPM's efforts to strengthen the infrastructure of the distribution system (preventive and corrective maintenance of the local distribution system – SDL), but also thanks to expansion and replacement activities, implementation of suspensions, application of new loops automation, and installation of new equipment that helps reduce power service restoration times. EPM also started works for the modernization of the low and medium voltage underground networks located in Medellín's downtown, near the Paseo Bolívar, with an investment of COP 1,023 million.

It is worth highlighting the standardization of the monitoring of activities and processes associated with the quality of service in EPM and the national affiliates, as well as the development of an analysis tool for measuring and monitoring the time required to respond to events, thus guaranteeing the restoration of services in the shortest possible time.

EPM's natural gas service achieved 100% fulfillment as required by the regulations for ELSI (equivalent length of service interruption), PIIP (pressure index in individual pipeline), and OI (odorization index) indicators.

Regarding the waste collection service provided by Emvarias, the Medellín Council approved the feasibility and designs began for the construction of the solid waste transfer station that will be used for the garbage trucks to unload the waste into larger capacity vehicles that in turn will carry it to the landfill. This reduces the number of vehicles in circulation, which has a direct impact on emissions of air pollutants and vehicle traffic. Furthermore, a system of underground waste containers was installed in Parque Rojas Pinilla in Medellín, which favors the sorting and disposal of waste, as well as 295 large capacity containers in Ciudadela Nuevo Occidente, benefiting 25 residential units and more than 60,000 users, who are favored with better health conditions.

Continuity of the water and sanitation service (%)			
Companies	2017	2018	2019
EPM	99.94%	99.89%	99.81%
Aguas del Oriente	99.80%	99.94%	99.99%
Aguas Regionales	93.66%	89.10%	92.94%
Aguas de Malambo	30.70%	38.77%	65.41%
EPRio	98.00%	99.92%	99.88%
Emvarias	100.00%	100.00%	100.00%
Ticsa	99.47%	97.30%	99.87%
Adasa	98.13%	98.99%	98.79%

**Source:** Vice Presidency of Water and Sanitation.

The value of Ticsa corresponds to continuity in sanitation.

The value of Emvarias corresponds to continuity in waste collection and street cleaning.

The 2019 value for Aguas de Malambo corresponds to the year-end figure; in previous years, the average was reported.

Aguas Regionales includes the western and Urabá regions.

Water quality risk index – EPM (%)			
Municipality	2017	2018	2019
Medellín	0.07%	0.08%	0.75%
Copacabana	0.05%	0.17%	0.52%
Girardota	0.02%	0.15%	0.26%
La Estrella	0.12%	0.11%	0.56%
Caldas	0.47%	0.29%	0.47%
Barbosa	0.40%	0.33%	0.24%
Sabaneta	0.27%	0.27%	0.82%
Envigado	0.14%	0.13%	0.41%
Bello	0.06%	0.10%	0.38%
Itagüí	0.07%	0.10%	0.48%

**Source:** Vice Presidency of Water and Sanitation.

Water quality risk index – Aguas del Oriente (%)			
Municipality	2017	2018	2019
El Retiro	1.04%	0.20%	0.48%

*Source: Vice Presidency of Water and Sanitation.*

Water quality risk index – Aguas Regionales (%)			
Municipality	2017	2018	2019
Sopetrán	0.00%	0.22%	0.00%
San Jerónimo	0.00%	0.31%	0.00%
Santa Fe de Antioquia	0.00%	0.18%	0.09%
Olaya	0.00%	0.00%	0.00%
Apartadó	0.00%	0.00%	0.02%
Turbo	0.16%	0.08%	0.33%
Chigorodó	0.00%	0.04%	0.00%
Carepa	0.00%	0.05%	0.02%
Mutatá	0.00%	0.00%	0.00%
El Reposo	0.00%	0.00%	0.00%
Bajirá	0.00%	0.32%	0.00%

*Source: Vice Presidency of Water and Sanitation.*

Water quality risk index – Aguas de Malambo (%)			
Municipality	2017	2018	2019
Malambo	0.00%	0.50%	0.56%

*Source: Vice Presidency of Water and Sanitation.*

Water quality risk index – EPRio (%)			
Concept	2017	2018	2019
EPRio	1.57%	0.34%	2.95%

*Source: Vice Presidency of Water and Sanitation.*

<b>System Average Interruption Duration Index (SAIDI) – (hours)</b>			
<b>Companies</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
EPM	17.08	14.72	14.55
CHEC	33.74	29.57	29.49
ESSA	28.82	25.34	23.15
CENS	28.65	26.96	27.33
EDEQ	8.67	8.12	8.07
Delsur	18.22	15.60	17.57
Eegsa	3.75	3.97	4.31
ENSA	13.23	12.70	12.43

**Source:** Vice Presidency of Power Transmission and Distribution.

<b>System Average Interruption Frequency Index (SAIFI) – (amount)</b>			
<b>Companies</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
EPM - T&D	7.21	6.67	7.29
CHEC	27.29	24.61	27.88
ESSA	18.69	16.80	15.13
CENS	9.76	10.53	8.96
EDEQ	11.97	5.73	6.54
Delsur	9.04	7.96	9.16
Eegsa	2.43	2.70	2.70
ENSA	6.21	7.42	6.47

**Source:** Vice Presidency of Power Transmission and Distribution.

*SAIDI – System Average Interruption Duration Index Calculated as the total interruption time (in hours) that the average system user was deprived of electrical energy supply in the assessed period.*

*SAIFI – System Average Interruption Frequency Index Number of times an average system user experiences an electrical energy service interruption in the assessed period.*

Continuity of natural gas service – EPM			
Concept	2017	2018	2019
Pressure index in individual pipelines (PIIP)	100.00%	100.00%	100.00%
Odorization index (OI)	100.00%	100.00%	100.00%
Equivalent length of service interruption (ELSI)	0.00	0.00	0.00

Source: Vice Presidency of Natural Gas.

## GRI standards and EPM indicators

**EU28** Average power outage frequency.

**EU29** Average power outage duration.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
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 Empresa Eléctrica de Guatemala - Eegsa  
 Tecnología Intercontinental -Ticsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama  
 Mexico

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



**Education for and  
communication with customers,  
users, and the community**

## Education for and communication with customers, users, and the community

The engagement with customers and community is managed through educational communication at levels of awareness-raising, information, and training on basic aspects of the provision of residential public utilities. On the other hand, communication for planned interruptions is aimed at minimizing inconvenience, while marketing communication seeks to position Grupo EPM's brand, its services, and the different offers associated with comparability and access, to improve the user-company relationship, and to strengthen reliable relationships.

### Management in 2019

Grupo EPM carried out 160,000 education activities nationwide, which enabled the engagement with 526,000 people. In Antioquia, 125,000 activities were carried out and the organization interacted with 255,000 people.

We approach the community with various engagement programs, such as Por ti estamos ahí, creation of networks of community leaders, the work with the educational community, the Cuidamundos en tu Colegio (World's Protector in Your School) program, the visits to the power plants, the development of workshops, working groups, discussion sessions, and home visits in all the territories where the business group operates.

In Colombia, Grupo EPM held 71 events of the Por ti estamos ahí program. A total of 99,750 people were benefited; 33 events took place in the department of Antioquia where 75,000 people participated.

EPM and its affiliates in Colombia conducted, respectively, 76,000 and 71,000 discussion sessions about the understanding of the utilities bill, fees, and the meter reading process.

Through the Cuidamundos program, EPM and its affiliates in Colombia interacted with 72,460 children, young people, and adults of the educational sector through 830 activities related to environmental care, the prevention of electrical hazards, and the appropriate use of public utilities and natural resources. In Delsur affiliate, awareness-raising activities on these issues were carried out with 2,300 children and 6,300 parents.

Several activities were carried out concerning education on safe use and 30,000 people participated in Antioquia. It is worth mentioning the drawing contest on prevention of electrical hazard in 33 territories and the development of the second version of the Especialidad Scout (Scout Specialty), where 54 groups and 3,000 scouts designed and executed, with enthusiasm and commitment, communication strategies to promote safe use and prevention of electrical hazard.

The Social and Educational Management Plan of the Unidos por el Agua program was developed and 74,000 people from the benefited neighborhoods participated throughout the year. The following goals were achieved: generate reliable relationships with the leaders and communities of the territories, facilitate the technical development of works, and empower the community to use, care for, and respect the new infrastructure, and also commit them to the efficient use of the resource and timely payment of the bill.

With the aim of recovering the trust of the communities downstream the Ituango hydroelectric project, multiple engagement and group strategies, including discussion sessions, workshops, and home visits, were developed, through which we were able to establish close dialogs with 43,000 inhabitants of the area of influence of this work.

Programs such as government seminars, business approach sessions, and visits to EPM power plants were developed with employees and executives of the companies and institutions belonging to the segments of the government, companies, and large customers, to which EPM provides with its services and with which it consolidates a strategic relationship as an ally. A total of 7,600 public servants from administrations and company employees took part in these activities.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



The background of the slide is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, energy, and industry, such as solar panels, wind turbines, light bulbs, gears, and houses. The icons are arranged in a grid-like pattern across the entire page.

# Loss management

## Loss management

Loss control and reduction programs in the water supply service are aimed at reducing water waste by controlling and preventing leaks and through commercial activities and social interventions to promote a responsible use by users and the community.

In the energy and natural gas services, programs include education, access and purchasability value propositions, and technologies to minimize the vulnerability of the infrastructure concerning illegal actions.

## Management in 2019

EPM maintained the loss rate per billed user (LRBU) at 6.05 m<sup>3</sup>/user/month, while for non-revenue water, it achieved a result of 30.58%.

Aguas de Oriente, Aguas Regionales, and Adasa significantly improved their loss rates per billed user and non-revenue water.

CHEC, CENS, EDEQ, and Eegsa decreased their loss indicator. It should be noted that the largest reduction reported was 14% compared to the previous year for the CHEC affiliate, which stood at 7.52%.

Grupo EPM's water supply affiliates in Colombia took actions aimed at the early detection of leaks and their respective repair, the control of pressure according to the needs and growth of the system, the replacement of networks and the rearrangement of the system, the renewal of the customer's meter park, the detection and elimination of fraud, and the formulation of alternatives for disconnected customers.

For EPM, there was a 2% reduction in the volume of system losses, from 90.9 million of m<sup>3</sup>/year in 2018 to 89.5 million m<sup>3</sup>/year in 2019. In comparison to the previous year, the loss rate per billed user (LRBU) stood at 6.05 m<sup>3</sup>/user/month as of December 2019. The non-revenue water index as of December 2019 was 30.58%.

With respect to the management and control of energy losses, at Grupo EPM, the nontechnical loss indicator for the network operator has been at excellent levels since the beginning of the program, both for EPM and for the Colombian affiliates of Grupo EPM.

The results indicate an integral and sustainable management over time in Colombia, which has reduced the loss rate of the network operator (LRNO) from 9.44% in 2015 to 8.72% in a period of 4 years.

EPM obtained a natural gas loss indicator of 4.3%, improving by 9% compared to 2018, mainly due to the adjustment of errors in billing information and the standardization of facilities with significant fraud levels. Some of the actions that most contributed to the improvement were as follows: verification of the accuracy of customers' meters due to damage or termination of their service life, progress in programs and controls for customers who consume natural gas without having concluded the connection process, implementation of programs and actions to control fraud and natural gas theft, and control over leaks due to network damage and operational maneuvers.

Non-revenue water index – (%)			
Companies	2017	2018	2019
EPM	30.79%	30.51%	30.58%
Aguas del Oriente	18.00%	21.70%	20.30%
Aguas Regionales	41.99%	46.06%	43.79%
EPRio	28.17%	16.90%	19.86%
Aguas de Malambo	51.70%	55.44%	58.32%
Adasa	27.01%	26.42%	24.64%

**Source:** Vice Presidency of Water and Sanitation.

Loss rate per billed water supply user (LRBU) – (m <sup>3</sup> )			
Companies	2017	2018	2019
EPM	6.26	6.05	6.05
Aguas del Oriente	2.29	2.87	2.61
Aguas Regionales	10.10	10.89	9.95
EPRio	4.90	2.58	2.95
Aguas de Malambo	15.67	17.22	17.98
Adasa	7.12	6.79	6.79

**Source:** Vice Presidency of Water and Sanitation.

\*Expressed in m<sup>3</sup>/billed user.

Loss rate of the regulated network operator (LRRNO) – (%)			
Companies	2017	2018	2019
EPM	7.00%	7.22%	7.57%
CHEC	8.45%	8.71%	7.51%
ESSA	12.06%	11.65%	11.84%
CENS	13.51%	12.83%	11.91%
EDEQ	8.38%	8.03%	7.77%
Delsur	8.64%	8.81%	8.90%
Eegsa	4.68%	4.52%	4.48%
ENSA	10.36%	11.37%	11.47%

**Source:** Vice Presidency of Power Transmission and Distribution.

Commercial loss rate of regulated market – (%)			
Companies	2017	2018	2019
EPM	11.44%	11.93%	12.12%
CHEC	12.99%	13.30%	11.27%
ESSA	15.03%	14.79%	15.17%
CENS	17.05%	16.55%	15.12%
EDEQ	11.35%	10.86%	10.16%
Delsur	8.71%	8.88%	8.90%
Eegsa	5.78%	5.62%	5.59%
ENSA	10.36%	11.37%	11.47%

**Source:** Vice Presidency of Power Transmission and Distribution.

National transmission system loss rate (NTSLR) – (%)			
Company	2017	2018	2019
EPM	1.46%	1.47%	1.31%

**Source:** Vice Presidency of Power Transmission and Distribution.

The methodology may vary in each country according to its regulations.

LRRNO: Loss rate of the regulated network operator (%).

CLR: Commercial loss rate (regulated market) (%).

NTSLR: National transmission system loss rate – Regulated market (%).

Natural gas loss indicator – (%)			
Company	2017	2018	2019
EPM	2.93%	4.70%	4.30%

**Source:** Vice Presidency of Natural Gas.

## GRI standards and EPM indicators

**EPM-03** Loss rate.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas de Malambo  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
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 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

#### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

#### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



**Customer  
satisfaction**

## Customer satisfaction

In Colombia, Grupo EPM evaluates the state of the relationship with customers in terms of complaints and measures customer experience with the negative impact percentage. Based on these results, action plans aimed at improving the value proposition were implemented by adjusting it to the needs of each segment and optimizing processes, relationships, and bonds with customers.

### Management in 2019

Considering the average of customer experience results in companies, negative critical incidents should not exceed 22%. In the last assessment conducted in 2019, EPM obtained 21.3% of negative experiences.

EPM's grievance indicator result was 4.1, showing a 27% improvement compared with the previous year. The Colombian companies of Grupo EPM satisfactorily achieved the goals set, except for CENS and Aguas de Malambo.

Through the company Ipsos Napoleón Franco, EPM conducted five customer experience assessments by applying 20 thousand surveys. The recommendation index reached by EPM in 2019 is 54.4, above the reference of 50 in the market. Likewise, 21.3% of customers and users (one point below the reference) expressed that they experienced one negative critical incident with any of the transactions assessed. The causes of their dissatisfactions were managed with the areas involved.

With the purpose of boosting the actions that create value to the customers and redesigning the moments that negatively impact their experience to transform them into pleasant moments, the processes and formalities for the connection to the energy and water supply services were simplified, eliminating 40% of the requirements; the connection to the natural gas service was standardized; and the options to simplify the demonstration of the connection to the property were increased from two to 10. In addition, an agreement was entered into with the National Registrar's Office of Civil Status to perform biometric validation, eliminating the need to send copies of documents and share information online. Assistance to the involved areas was provided with the application of adjustments for the improvement of the customer experience at the different contact points and tests with customers were carried out to perceive their experience with new initiatives before being launched to the market.



Complaint behavior at EPM and the Colombian companies of Grupo EPM is positive. EPM showed a 24% decrease in attributable complaints compared to the previous year. ESSA stands out in the national energy companies with a 22% decrease, whereas CENS achieved 62% of its goal due to the delay in repairing damage in rural areas. It is worth highlighting the management of Aguas del Oriente and Aguas Regionales among the national water affiliates. Aguas de Malambo affiliate also showed an improvement with a 10% decrease in complaints compared to the previous year; however, only 68% of the goal was achieved due to failures in service provision.

Grievance indicator – Affiliates in Colombia			
Company	2017	2018	2019
EPM	6.25	5.62	4.1
CHEC	1.51	1.06	1.01
EDEQ	0.57	0.46	0.44
ESSA	1.28	1.03	0.76
CENS	1.24	1.53	1.60
Aguas Regionales	2.21	1.61	1.2
Aguas de Oriente	4.22	3.92	0.6
Aguas de Malambo	21.94	35.45	32.33
Emvarias	NDA	2.55	1.91

**Source:** Commercial Vice Presidency.

## GRI standards and EPM indicators

**102-43** Approach to stakeholder engagement.

**102-44** Key topics and concerns raised.

**EPM-05** Complaints.

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## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas

The background of the entire page is a repeating pattern of small, light green icons. These icons include symbols for renewable energy (solar panels, wind turbines, water droplets), technology (lightbulbs, gears, circuit boards), and industry (factories, trucks, houses). The icons are arranged in a grid-like fashion, creating a textured, thematic background.

# Safety in the service provision

## Safety in the service provision

Operational excellence is one of Grupo EPM's strategic focuses in the provision of services. To achieve this purpose, the organization develops risk prevention, mitigation, and control plans, as well as contingency plans to deal with events, methods and technologies with quality standards, and educational actions to ensure the adoption of practices that ensure the integrity of infrastructure and the safety of employees, users, and the community.

### Management in 2019

In Colombia, Grupo EPM interacted with more than 453,000 people in the regions where it operates. The organization carried out more than 160,000 educational activities on basic aspects of the provision and safe and efficient use of residential public utilities.

Engagement with contractors is carried out through awareness-raising spaces, promotion activities, and follow-up on compliance with the safety and health system in field work, where positive changes and reduction of damages and accidents are evident as a result of compliance with safety standards.

EPM performed activities related to integrated risk management at different management levels:

- Updating of the risk map of the processes in the water supply and sewerage service cycles.
- Updating of the risk map at the company level of the water supply and sanitation businesses in Aguas de Malambo, Aguas Regionales, Aguas Nacionales, Aguas de Oriente, and Emvarias.
- Construction and updating of risk maps, monitoring of the status of risks, controls, and improvement actions of investment projects of the water supply and sanitation businesses.
- Construction and updating of risk maps, monitoring of the status of risks, controls, and improvement actions of specialized risk analysis (Emvarias – La Piñuela landfill cell).
- Development of disaster risk management plans to comply with Decree 2157 of 2017.

In 2019 two deaths due to accidents were recorded in Emvarias.

Although accidents showed a significant increase in 2019 in the energy companies in Colombia, deaths decreased. The causes of these events arose from improper intervention in energized networks without authorization and equipment, noncompliance with rules, improper intervention by noncompetent personnel, noncompliance with safety distances, and lack of knowledge of electrical risks. As for incidents or grievances for damages or injuries to individuals, there is a 57% decrease compared to 2018, as well as a 53% decrease in cases settled in favor of the company.

Grupo EPM carried out education and community outreach activities through various programs, discussion sessions, workshops, and working groups that allow and facilitate training on basic aspects of the provision and safe and efficient use of residential public utilities.

During 2019 there were no incidents of noncompliance with advertising and marketing communication regulations.

A total of 15,762 legal appeals were filed by customers, of which 10,110 were filed against EPM. In comparison with 2018, there was an increase of 21%. CENS and ESSA affiliates respectively reported 2,038 and 2,480 appeals.

In terms of fines and penalties, 140 of these were imposed on the group during the year, for a total value of COP 16,878 million. The majority of these were related to deficiencies in the quality and continuity of the service.

<b>Accidents in the service provision (amount or number)</b>			
<b>Concept</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Fire victims due to electrical accidents.	44	34	64
Deaths due to accidents.	18	34	29
Accident victims for other reasons.	78	84	65
<b>Accident victims</b>	<b>140</b>	<b>152</b>	<b>158</b>

*Source: Executive Vice Presidency of Business Management.*

Incidents and grievances due to service provision (amount or number)			
Concept	2017	2018	2019
Incidents or grievances for damages or injuries to individuals filed in the year.	133	109	47
Incidents or grievances due to damages or injuries to individuals settled in the year in favor of the company.	67	47	22
Incidents or grievances due to damages or injuries to individuals settled in the year in favor of the claimant.	12	7	4
Incidents or grievances due to harms of goods or fixtures filed in the year.	4,745	5,818	5,162
Incidents or grievances due to damage to tangible property settled in the year in favor of the company.	3,131	2,974	3,235
Incidents or grievances due to damage to tangible property settled in the year in favor of the claimant.	1,277	1,575	1,731
Incidents due to deaths filed in the year.	0	0	25
Incidents due to deaths settled in the year in favor of the company.	0	0	10
Incidents due to deaths settled in the year in favor of the claimant.	2	9	3
Appeals filed by customers in connection with the service provision.	9,603	12,996	15,762
Incidents due to regulatory noncompliance in advertising and marketing communication.	0	0	0
Fines due to regulatory noncompliance.	72	82	140
Number of fines due to regulatory noncompliance.	3,068	2,710	16,878

**Source:** Secretary-General's Office, Executive Vice Presidency of Business Management, and Management of Business and Investments.

## GRI standards and EPM indicators

- 417-3** Incidents of noncompliance concerning marketing communications.
- 419-1** Noncompliance with laws and regulations in the social and economic area.
- EU25** Number of injuries and deaths involving the organization's assets, including legal sentences, settlements, and pending legal cases of diseases.

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## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa  
 Tecnología Intercontinental -Ticsa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Customer service



## Customer service

Grupo EPM aims to deliver a value proposition of public utilities and a portfolio of solutions with an integral focus on customers and users, under parameters of opportunity, quality, coverage, innovation, and continuity of service, seeking to promote social development with equity, quality of life, competitiveness, and mutual sustainability.

## Management in 2019

During the year, EPM received around six million transactions nationwide through all the channels, of which 4% were made through digital media and self-service modules, such as online requests, complaints, and claims; the EPM application; and the Ema chatbot.

EPM used technology to enable the evolution of the commercial operation to digital management and thus improve performance and customer experience.

The following improvements were developed in 2019:

- Development of the electronic form for construction companies.
- Improvement of the website functions with the purpose of improving the customer experience in the interaction with the website. Customers can send their requests, complaints, and claims, as well as query formalities and services.
- Commissioning of an artificial intelligence system (EMA chatbot): the chatbot provides online service to customers and users in three transactions, namely query of amounts payable, request of bill copies, and query of formalities. A total of 101,000 interactions were processed during the year.
- Creation of the robotic process automation (RPA) experience center for Grupo EPM: by using this technology, the center increases the efficiency of some commercial activities, through the standardization of repetitive and numerous tasks, to simplify and speed up the customer request processes.
- Addition of new functionalities to the mobile application: they include the request of turns in office lines, the query of office locations, and the information on the requirements for the most frequent transactions. The APP has been downloaded on 28,000 devices.
- Development of the interactive bill (QR code scanning) and submission of the bill through WhatsApp and the Factura Web platform: 317,000 customers and users are registered to this platform.

- Implementation of technological developments to reduce waiting times by means of solutions that include thermal printing, electronic signature, fingerprint biometrics, e-mail submission of assisted-customer certificates, online document storage, and document encryption.
- Standardization of the commercial customer-service system at the four national energy affiliates: this ensures the regulatory compliance with the due process, the income stream of the companies, and the minimization of penalty risks. In this way, technological obsolescence is overcome and the standardization of processes among affiliates is strengthened.
- Installation of eight Puntos Fáciles (Easy Points) in the metropolitan area of Valle de Aburrá: this allows customers and users to address queries, complete formalities, and make payments at the closest point. The points were installed at the EPM offices in the Miguel de Aguinaga building and in the municipalities of Bello and Envigado; at the Parque de Berrío metro station; at the Más Cerca (service offices) of the Belén and Castilla neighborhoods; at Parque de los Deseos, and at the Pablo Tobón Uribe Hospital.

During 2019, no grievances were filed for breaches of customer privacy and losses of customer data.

## GRI standards and EPM indicators

**418-1** Substantiated complaints concerning breaches of customer privacy and loss of customer data.

**EPM-04** Customer service channels.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS

#### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico

#### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Organizational climate

## Organizational climate

It refers to the employees' collective perception of the company's practices, policies, structure, processes, and systems, which impacts the human environment in which daily work takes place.

### Relevance

It directly influences employees' satisfaction, commitment, and productivity and, therefore, the achievement of the company's goals. In addition, it creates social value between Grupo EPM people and Grupo EPM companies and extends it to the other stakeholders in terms of trust and legitimacy.

### Management in 2019

The management of the organizational climate is a practice that Grupo EPM continues to strengthen through the support to work teams with the commitment of leaders. The Closeness management orientation was reflected in the execution of the Leadership School's development plans, where strengthening strategies were defined to enhance organizational climate and trust among EPM's executives and EPM people.

In 2019, a transition regarding the evolution of this indicator began. First, the employees' collective perception of the company's practices, policies, structure, processes, and systems (known as organizational climate indicator) was measured. Then, it was subjected to a work environment model, in which emphasis was placed on occupational risk issues and indicators focused on leadership. Finally, at the end of the year, adaptability was examined and considered a major theme to be developed by Grupo EPM in the coming years.

EPM continued to improve its work environment by fostering an environment of respect and closeness based on a leadership style that allows employees to have a satisfactory experience in the development of their activities within the company, as well as emotional well-being, balance between family and work life, and balance between professional contribution and recognition—all in line with the strategic goals.

In view of the above, plans to improve the work environment within work teams were built and implemented in order to monitor and manage all these dimensions. Additionally, a Quality of Life and Psychosocial Risk study was conducted regarding the Leadership variable, whose satisfactory results are worth highlighting this year.

In a collaborative exercise that gives continuity to the above-mentioned transition, discussions took place at EPM in September about the possibility to study adaptability, a material topic that has been addressed in coordination with EPM people. Adaptability refers to the ability to respond to signals in the environment with a business group perspective and a free-flowing and timely relationship with allies to meet market demands, regarding the culture, composition, and legal system of each Grupo EPM company as an opportunity rather than a limitation for action.

At the end of the year, affiliates were asked to inquire their companies if they believed transition towards the adaptability material topic was appropriate.

Organizational climate assessment results - Grupo EPM			
Company	2017	2018	2019
EPM	59	N.A.	N.A.
Adasa	72	N.A.	N.A.
CHEC	54	N.A.	N.A.
ESSA	54	N.A.	N.A.
EDEQ	62	N.A.	N.A.
CENS	55	N.A.	N.A.
Delsur	N.A.	82	N.A.
Eegsa	89	86	N.A.
ENSA	N.A.	74	77
Ticsa	N.A.	75	N.A.

**Source:** Vice Presidency of Human Resources and Technology.

In 2019, organizational climate was only measured at the Delsur and ENSA affiliates. In the group’s water companies in Colombia, organizational climate is not assessed. It is managed by evaluating Quality of Life and Psychosocial Risk.

ENSA used the *Great Place To Work* methodology.

The result of the organizational climate assessment at Delsur in 2018 was adjusted from 80 to 82.

## Achievements in 2019

Challenges for 2019	Company	Achievements in 2019	Accomplishment
Implement the Quality of Life program by constantly identifying, assessing, avoiding, intervening, and monitoring exposure to psychosocial risk factors, at work and outside work, to prevent diseases associated with occupational stress.	EPM	The Quality of Life program was executed as expected. The results of the 2019 Quality of Life– Psychosocial Risk assessment show a stabilization of the indicators as a result of the actions taken. 86.07% of the population surveyed at EPM were found to be at low or no risk, which classifies EPM as a healthy company.	Total
Execute the Cultural Transformation module at the Leadership School.	EPM	The Cultural Transformation module was designed. Its implementation was scheduled for the third quarter of 2019 and for the fourth quarter with managers. In addition, the Cultural Evolution module was executed at the Leadership School.	Total
Implement the training plan for topics that leverage cultural transformation.	EPM	The cultural training plan was executed. The following actions stand out: <ul style="list-style-type: none"> <li>• Design of curriculum for the development of innovation capabilities.</li> <li>• Spokesperson training: instructional and content design, identification of target audience, and agenda.</li> <li>• Spokesperson training for over 84 executives.</li> <li>• Online course on diversity and inclusion for 2,400 people.</li> <li>• 33 awareness workshops, with the participation of 200 people.</li> <li>• Signing of the work agreement with the UNDP for gender equality certification.</li> <li>• Labor Market Inclusion of People with Disabilities Award by Comfenalco.</li> <li>• Launch of the T-Academy program, which allows applying the 70/20/10 model adopted by Universidad EPM to develop organizational capabilities, especially Digital DNA and Transformative Innovation. A total of 11 teams participated in such program with innovation initiatives.</li> </ul>	Total

Challenges for 2019	Company	Achievements in 2019	Accomplishment
Implement the training plan for topics that leverage cultural transformation.	EPM	<ul style="list-style-type: none"> <li>30 people attended the Design Thinking and Lean Startup course (Eafit University).</li> <li>15 people attended the 4RI (Blockchain, OT, AI), convergence of technologies, and thought models that allow new proposals to new challenges course (ITM).</li> <li>The Knowledge Forum on Spatial and Temporal Characterization of Hydroclimatology in Colombia was held.</li> </ul>	Total
Conduct on-demand individual conversations on self-recognition with executives.	EPM	More than 80 individual conversations were held with strategic audiences.	Total
Achieve 95% compliance with the change plan designed to support the Juntos Transformamos Nuestra Historia (Together We Transform Our History) initiative.	CENS	A management initiative was implemented to optimize business processes and provide an innovative energy service that satisfies the demands of the stakeholders and strengthens relationships with energy customers/users, thus offering them timely services, useful solutions, and fair prices.	Total
Build organizational climate and psychosocial risk management plans for 38 work teams.	ESSA	The 38 organizational climate and psychosocial risk management plans were disseminated, with the participation of leaders and work teams.	Total
Define and implement the improvement plan (>=90%) based on the results of the Quality of Life survey 2018.	Aguas Nacionales	This challenge was postponed to 2020.	Not accomplished.
Execute the psychosocial risk intervention plans (90%) with the work teams, emphasizing on the dimensions that scored a higher risk.	EDEQ	The monitoring and management plan for the prevention of psychosocial risk and improvement of the work environment was 96% accomplished.	Total
Conduct "conversation circles" with public servants from the entire organization and all levels.	EPM	<p>This challenge was fully accomplished. The following achievements stand out:</p> <ul style="list-style-type: none"> <li>Development and dissemination of the new organizational purpose.</li> <li>More than 180 conversation circles for the board of directors, the management committee, executives, enablers, pioneers, and other groups. 1,005 people attended.</li> <li>More than 80 individual conversations with strategic audiences.</li> <li>More than 40 integration and coordination meetings.</li> <li>Conversational capital assessment.</li> </ul>	Total

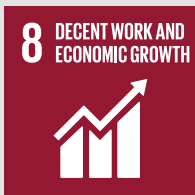
Challenges for 2019	Company	Achievements in 2019	Accomplishment
Implement the action plan derived from the organizational climate survey.	Ticsa	100% of the actions identified in the organizational climate assessment were executed.	Total
Implement the strategy of nominal groups with all the CHEC work teams to obtain information on advances regarding organizational climate.	CHEC	The proposed goal was 100% accomplished. 61 nominal groups were held, impacting 718 employees.	Total

## Challenges for 2020

Challenges	Year in which it is achieved	Scope and coverage		
		Company	Business	Territory
Define and implement the improvement plan ( $\geq 90\%$ ) based on the results of the Quality of Life survey 2018.	2020	Aguas Nacionales	Water and sanitation	Colombia - Antioquia
Implement the action plan derived from the organizational climate survey.	2020	Ticsa	Water and sanitation	Mexico



## Related sustainable development goals



## Related stakeholders

Customers and users

Community

Grupo EPM people

Suppliers and contractors

## GRI standards and EPM indicators

**103-1** Explanation of the material topic and its boundary.

**103-2** The management approach and its components.

**103-3** Evaluation of the management approach.

**EPM-02** Results of the organizational climate assessment.

## Scope and coverage

### Companies

Empresas Públicas de Medellín – EPM  
 Aguas Nacionales EPM  
 Empresas Públicas de Rionegro – E.P. Rio  
 Empresas Varias de Medellín – Emvarias  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresa de Energía del Quindío – EDEQ  
 Distribuidora de Electricidad del Sur – Delsur  
 Empresa Eléctrica de Guatemala – Eegsa  
 Tecnología Intercontinental – Ticsa  
 Hidroecológica del Teribe – HET  
 Aguas de Antofagasta – Adasa

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Colombia – Malambo, Atlántico  
 Chile  
 Panama  
 Guatemala  
 El Salvador  
 Mexico

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



# Responsible procurement for local development



## Responsible procurement for local development

Procurement criteria and practices that promote sustainable development and competitiveness of the territories where Grupo EPM operates.

Develop local capacities and foster sustainability through practices that promote the local business networking.

### Relevance

It is a fundamental tool to leverage the sustainability and competitiveness of the territories. It potentially strengthens economic dynamics with income for the community and promotes local business networking. It contributes to improving the trust and reputation of Grupo EPM among its stakeholders, as well as to avoiding pressure from demands outside its business area that generate less value in terms of development.

## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Purchasing and procurement	Identify the regional procurement potential according to the annual purchasing and procurement plan.	EPM	The procurement plan was analyzed with each vice presidency in order to identify the regional procurement potential; the result of this analysis did not show any possibilities of implementing this modality.	Total
Strengthening and development of suppliers	Implement a supplier development initiative through the allies identified in the sustainable ecosystem for suppliers.	EPM	The following initiatives were implemented: 1. Development of two suppliers with the Centre for Science and Technology of Antioquia (CTA, as per its acronym in Spanish). 2. Closure of the third cohort with the graduation of 249 people in the thermofusion and electrofusion course through the Water Sector Industrialization Program (PISA, as per its acronym in Spanish). 3. Completion of the implementation of the Water Technical Skills School, which will start operating in March 2020.	Total
	Fulfill the supplier development plan proposed for the year.	Emvarias	The work plan for the development of two vehicle maintenance service providers was fulfilled in its entirety, improving their productivity by at least 10%.	Total
	Fulfill the supplier development plan proposed for the year.	EPM	The work plan for the development of 26 providers was fulfilled in its entirety, of which 24 improved their productivity by at least 10%.	Total

## Challenges

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Business	Territory
Purchasing and procurement	Fulfill the supplier development plan proposed for the year.	2020	EPM	Power - Gas	Colombia - Antioquia
Strengthening and development of suppliers	Put into operation the Water Technical Skills School and start level 2 training courses in thermofusion and electrofusion to achieve accreditation in labor skills.	2020	EPM	All the businesses	Colombia - Antioquia

## Related sustainable development goals



## Related stakeholders

Community

State

Suppliers and contractors

## GRI standards and EPM indicators

- 102-9** Supply chain.
- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 204-1** Proportion of spending on local suppliers.
- EPM-06** Number and value of social procurement contracts.
- EPM-07** Number, value, and type of contracts in Grupo EPM.
- EPM-08** External employment generated in Grupo EPM contracts.
- EPM-09** Suppliers' satisfaction.

## Scope and coverage

### Companies

Empresas Públicas de Medellín – EPM  
 Aguas de Malambo  
 Aguas Nacionales EPM  
 Aguas Regionales EPM  
 Centrales Eléctricas del Norte de Santander - CENS  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Empresa de Aguas del Oriente Antioqueño  
 Electrificadora de Santander - ESSA  
 Aguas de Antofagasta - Adasa  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Tecnología Intercontinental -Ticsa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Santander  
 Colombia - Norte de Santander  
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 El Salvador  
 Panama

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, energy, and industry, such as solar panels, wind turbines, light bulbs, gears, water droplets, and recycling symbols. The icons are arranged in a grid-like pattern across the entire page.

# Engagement with suppliers and contractors

## Engagement with suppliers and contractors

The suppliers and contractors engagement plan, formerly called Recyproco, promotes the interaction, communication, and implementation of different mechanisms of discussion, consultation, and participation of suppliers and contractors with Grupo EPM.

### Management in 2019

Progress was made in the strengthening of engagement, clear and timely communication, and closeness to this stakeholder group.

The subjects addressed included regulations, procurement, human rights, code of conduct, prevention of frauds to EPM, permanent information on the contingency of the Ituango hydroelectric project, occupational health and safety, registration in the Ariba information system, Global Compact, among others. These topics have been communicated and shared with all the national affiliates.

The contractors satisfaction and loyalty assessment and the reputation analysis (EPM's own measurements) were conducted with the purpose of showing that the actions taken through the engagement plan are aimed at meeting the suppliers and contractors engagement and reputation goals.

The following are the events held in 2019 in EPM, its power and water supply affiliates in Colombia, Emvarias, and Fundación EPM. These events were discussion, engagement, and communication spaces to address different topics of interest with suppliers and contractors.



In the contractors reputation assessment, a score of 867 points was obtained out of a goal of 762 points set for 2019. The goal was exceeded by 12%.



In the contractors loyalty assessment, a score of **60.9 points** was obtained out of a goal of **52.8 points**, which indicates the contractors' intention to remain loyal and satisfied, exceeding the goal by 13%.

In the contractors satisfaction assessment, the organization obtained a score of **89.7 points**, which means a decrease of 0.5 points compared to the previous year.

Indicator	Result 2018	Result 2019
Reputation	930	867
Contractor loyalty	52.1	60.9
Contractor satisfaction	90.2	89.7

In 2019, the suppliers and contractors engagement plan was developed, which involves various actions that seek to strengthen the relationship, communication, and closeness to this stakeholder group.

- Three workshops were conducted in collaboration with contractors specialized in the design and construction of water supply and sewerage systems, with the participation of 17 companies and EPM employees. The purpose of the first workshop was to disseminate the results of the analysis conducted based on the opportunities for improvement identified in previous workshops. The second workshop, on trenchless technology, was carried out with the objective of sharing experiences among the companies that develop this technology and finding opportunities for improvement in its implementation. Eight people from five companies attended this workshop. The third workshop was aimed at informing designers, constructors, and suppliers involved in the infrastructure of water supply and sewerage systems on the investments planned in the POIR 2020-2024 (Regulated Investment and Work Plan). These workshops received 56 attendees.
- Sustainable Ecosystem for Suppliers and Contractors Development program. Three workshops on project management were conducted in partnership with the Center for Innovation and Technological Development of the Electricity Sector (CIDET, as per its acronym in Spanish), which were attended by five people from four companies.
- The event Innovar+ (Innovate+) brought together representatives from the academic community, the state, suppliers and contractors, and EPM staff. The topics addressed included short- and long-term technical events, workshops on innovation and co-creation tools, supplier and contractor recognition program, networking, and trade fair. The event received 1,200 attendees.

- Annual event with suppliers and contractors: it was held in Medellín with the participation of 340 people. The topics addressed included progress in supplier development initiatives through the Sustainable Ecosystem for Suppliers Development, changes in the supplier registration process, internal assessment of the requirements by the Occupational Health and Safety Management System (OHSMS), electronic billing, progress in the EPM supply chain, and tips on public risk. In addition, EPM disclosed its innovation challenges, as well as its intentions to develop, along with suppliers and contractors, diverse alternatives to solve some current problems.
- A workshop on electronic billing for suppliers, contractors, and community action boards was carried out in order to create a space for talking and solving questions. The event had 70 attendees.
- A communication was sent to suppliers and contractors via Recyproco, in order to introduce Entérate (Get Informed), a space where the most important news on EPM are announced.
- The supplier development program—which involved Innpulsa Colombia and the consulting firm Causa & Efecto—was closed. 19 suppliers participated in this program.
- Suppliers and Contractors were invited to participate in the sixth version of the Global Compact Lecture, held at Universidad EAFIT.
- A talk titled “The role of the BIM methodology in the context of the 4.0 revolution and the sustainable development goals of suppliers and other companies” was held with the participation of design, audit, and construction contractors.
- Presentation to suppliers and contractors in the areas of influence of the Ituango project, Nechí and Porce, of the comprehensive plan for the prevention of public risk due to social violence. The event was attended by 20 companies.
- The loyalty survey was conducted in order to know the perception of suppliers and contractors on the topics related to registration, proposal submission, and contract execution.



**Event with suppliers and contractors. 1,200 attendees**

## GRI standards and EPM indicators

**102-9** Supply chain.

**EPM-09** Suppliers' satisfaction.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín – EPM  
 Aguas de Malambo  
 Aguas Nacionales EPM  
 Aguas Regionales EPM  
 Centrales Eléctricas del Norte de Santander - CENS  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Empresa de Aguas del Oriente Antioqueño  
 Electrificadora de Santander - ESSA

#### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico

#### Businesses

Water  
 Electrical energy  
 Sanitation  
 Natural gas



**Strengthening and  
development of suppliers  
and contractors**

## Strengthening and development of suppliers and contractors

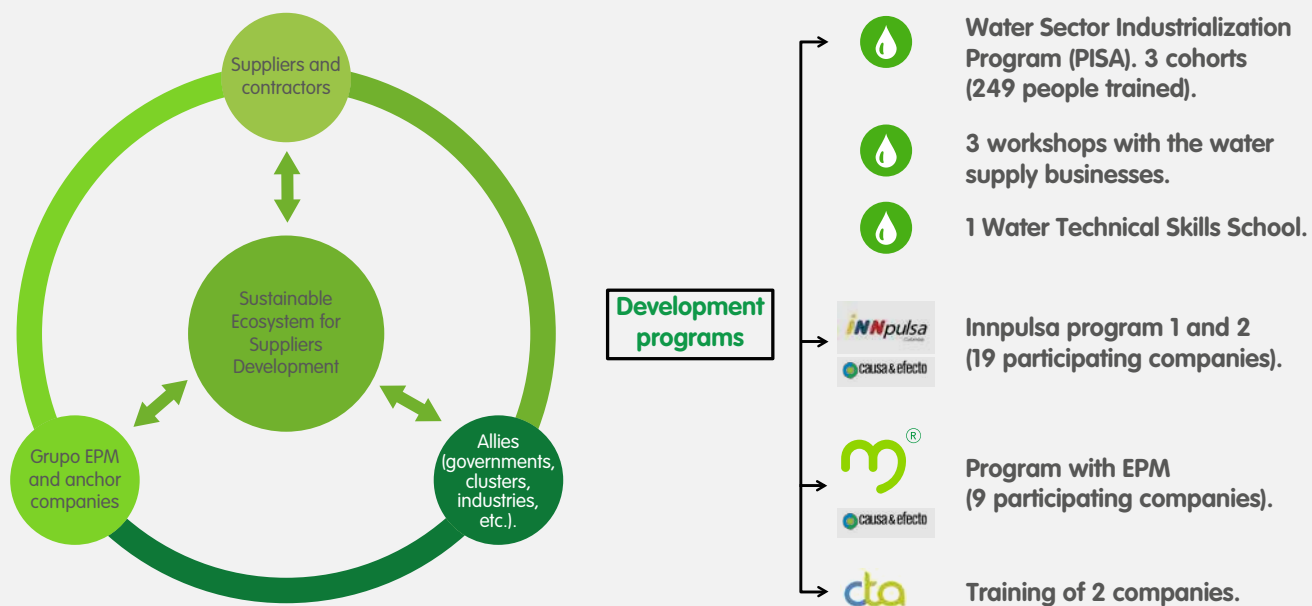
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Grupo EPM fosters the local business networking in the regions where it operates, through procurement and the development of capacities in its suppliers and contractors. In this sense, for EPM, the strengthening and development of suppliers and contractors aims to increase the competitiveness and sustainability of the production chains in the short, medium, and long term, through the creation and consolidation of relationships between Grupo EPM and this stakeholder group. It, therefore, generates bonds of trust to create processes of specialization and complementation that benefit the parties, articulating their strategic plans to improve economic, social, and environmental conditions.

### Management in 2019

The Sustainable Ecosystem for Suppliers Development was consolidated and is being positioned through the implementation of different initiatives, alliances, and spaces for work with suppliers to drive their capacity-building processes and fulfill the purpose of achieving competitiveness and sustainability in the organization, along with allies such as PISA, the Causa & Efecto program, government allies, industries, clusters, among others.

## Sustainable Ecosystem for Suppliers Development



### — Supplier development program with Causa & Efecto and EPM

- The supplier development program continued with the financial support of Innpulsa Colombia and the participation of Causa & Efecto and EPM. A total of 19 companies improved their productivity and quality levels thanks to the methodologies provided in this program by the consulting company.

### — PISA: Water Sector Industrialization Program

- Initiative that brings together the companies from the water sector (water supply and wastewater management). It seeks to improve the productivity and competitiveness of these companies and of the country in general, based on the training and specialization of the human resources from the supplier and contractor companies, including the EPM staff at the different levels (operational, technical, technological, professional, and specialized). In this program, 249 people (three cohorts) have been trained in the areas of electrofusion and thermofusion.

### — Skills Training School

- This school was established and put into operation to improve the skills and abilities of employees and assistants for the construction, operation, and maintenance of EPM's water supply and sewerage networks. Initially, it will provide services to the operations staff of the contractors engaged in the water supply business and projects and engineering; as well as the operating staff related to the Vice Presidency of Water and Sanitation of EPM and the community in general. The school operates through a training camp with 12 modules where people can receive training and develop skills in areas such as shoring, electrofusion and thermofusion, fills, pavements, use of basic tools, among others. The above, complying with the technical standards and occupational health and safety systems required in this type of activities. Trainings will start in February 2020.

### — Development program with Grupo Pares

- It is worth highlighting the work carried out with Grupo Pares with the purpose of promoting external collaboration networks with companies from different economic sectors. The program is led by Isagen, Haceb, and EPM and consists of a joint initiative for the recognition of those companies that have active programs aimed at the development and strengthening of suppliers, seeking to improve productivity and competitiveness of the industry and the country. Four meetings were held in 2019 with the participation of 40 people representing 20 companies.
- The Occupational Health and Safety Management (OHSMS) survey was sent to suppliers and contractors and 753 answers were received. The results will be used to design an action plan to be implemented in 2020, taking into account the conclusions and opportunities for improvement identified.



Photographs of PISA trainings and thermofusion and electrofusion courses conducted by SENA



Modules of the Water Technical Skills School



## GRI standards and EPM indicators

102-9 Supply chain.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín – EPM  
 Aguas de Malambo  
 Aguas Nacionales EPM  
 Aguas Regionales EPM  
 Centrales Eléctricas del Norte de Santander - CENS  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Empresa de Aguas del Oriente Antioqueño  
 Electrificadora de Santander - ESSA

#### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico

#### Businesses

Water  
 Electrical energy  
 Sanitation  
 Natural gas



# Purchasing and procurement

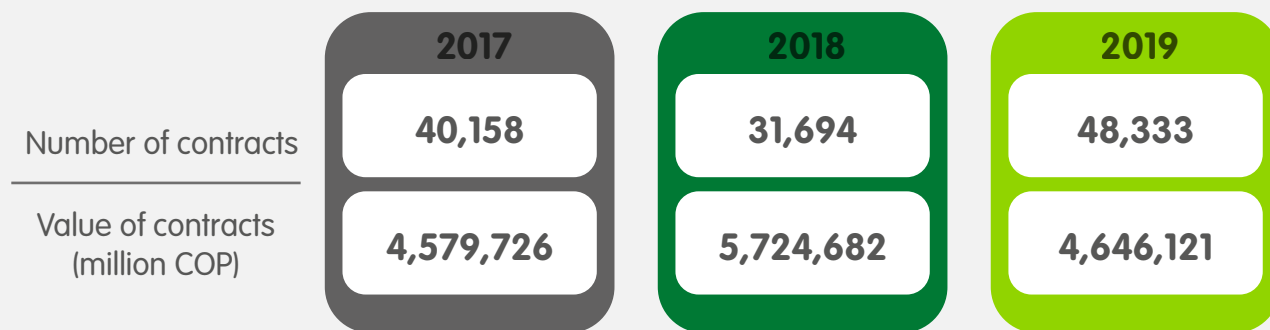
## Purchasing and procurement

The purpose of contracting goods and services is to meet the operational and administrative needs of the organization. It also supports social and environmental policies to contribute to the development of sustainable and competitive territories in the areas where Grupo EPM operates.

The transaction agreements were signed with the international affiliates Elektra Noreste S.A. - ENSA (Panama), Distribuidora Eléctrica del Sur - Delsur (El Salvador), and Empresa Eléctrica de Guatemala S.A. – Eegsa (Guatemala) for the first joint national and international purchase of goods; specifically, aluminum conductors and insulators.

Support to the Ituango hydroelectric project continued through the temporary import and reexport of equipment to deal with the contingency and through consulting services and economic assessments for the acquisition of new equipment.

### Grupo EPM procurement



EPM procurement in 2019 was mainly related to consulting services, civil works, and service provision.

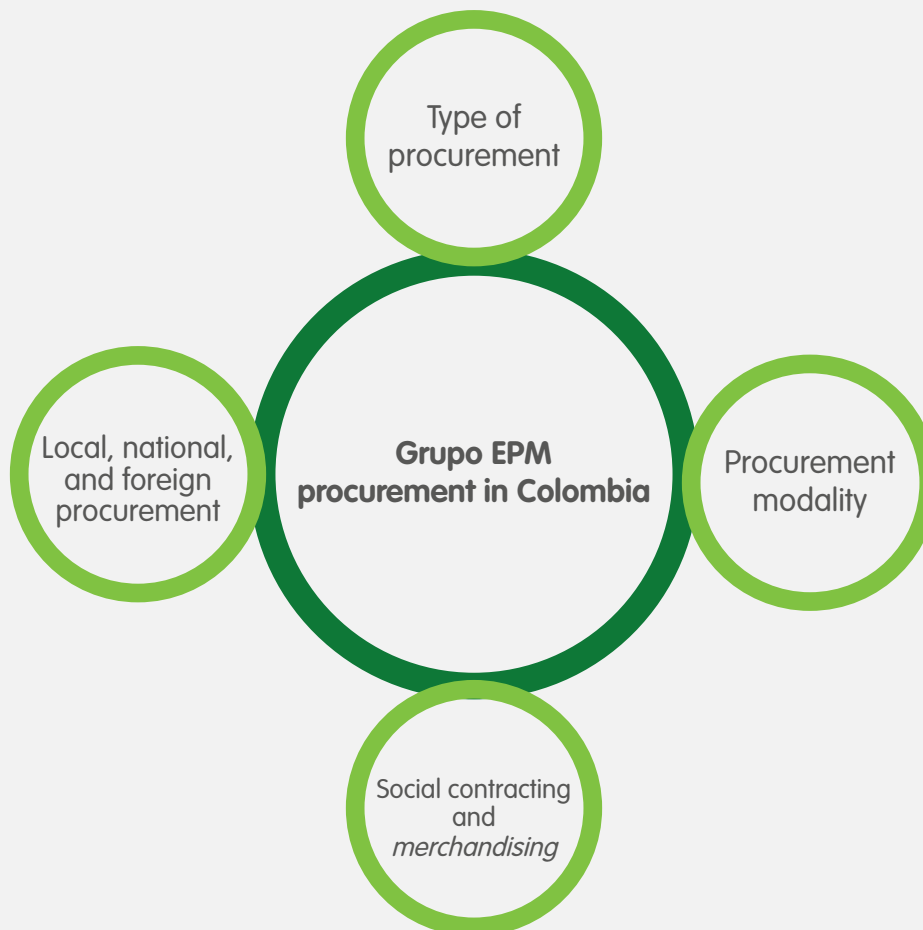
Grupo EPM total procurement						
Company	2017		2018		2019	
	Number of contracts	Value of contracts (million COP)	Number of contracts	Value of contracts (million COP)	Number of contracts	Value of contracts (million COP)
EPM	35,474	2,701,567	27,551	4,251,922	39,270	3,320,730
Aguas de Malambo	48	3,577	109	39,335	115	17,367
Aguas Nacionales	41	32,635	35	13,415	0	0
Aguas Regionales	182	22,564	100	25,253	193	32,489
Aguas del Oriente	53	753	31	1,006	37	1,885
Empresas Varias de Medellín	220	984,288	190	178,667	166	154,066
Central Hidroeléctrica de Caldas - CHEC	1,413	111,358	1,472	114,830	1,232	115,290
Centrales Eléctricas del Norte de Santander - CENS	543	33,982	411	212,711	328	86,545
Electrificadora de Santander - ESSA	455	248,002	531	528,674	614	181,636
Empresa de Energía del Quindío - EDEQ	379	38,446	240	31,680	486	110,117
Empresas Públicas de Rionegro - EPRio			52	14,627	31	137,272

Grupo EPM total procurement						
Company	2017		2018		2019	
	Number of contracts	Value of contracts (million COP)	Number of contracts	Value of contracts (million COP)	Number of contracts	Value of contracts (million COP)
Aguas de Antofagasta - Adasa	100	101,035	109	123,581	153	183,298
Delsur - El Salvador	36	5,651	46	14,022	36	7,838
Eegsa - Guatemala	1,009	123,298	651	24,797	5,534	164,441
ENSA - Panamá	124	140,119	83	66,156	86	107,292
EPM Chile - Chile	4	633	8	729	N.A	N.A
HET - Panamá	3	344	0	0	4	1,815
Ticsa - México	74	31,474	75	83,277	48	24,041
<b>Grupo EPM total procurement</b>	<b>40,158</b>	<b>4,579,726</b>	<b>31,694</b>	<b>5,724,682</b>	<b>48,333</b>	<b>4,646,121</b>

**Source:** Vice Presidency of Supply and Shared Services.

Efficient practices have been incorporated that add greater value to the different areas of the company with specialized purchasing methodologies, management by category, eligibility lists, strategic allies, supply contracts, operative purchases (with greater participation of local suppliers) and joint purchases (among companies of Grupo EPM). In this way, the capacities of different local, regional, and national stakeholders were involved. The final purpose was to obtain goods and services within the required time, at a fair price, in efficient amounts, and in compliance with the requested technical specifications. This is how the organization seeks the integration of economic, social, ethical, and environmental criteria in its contract awarding process.

## Classification of Grupo EPM procurement in Colombia



- **Type of procurement:** classification by the most common types: public works, provision of services, supply, among others.
- **Procurement modality:** classification by contractor selection: single application, private application, or public application.
- **Social procurement and merchandising:** classification of social procurement (community action boards and community associations).
- **Local, national, and foreign procurement:** classification by the location of the contractor with whom the contract is signed.

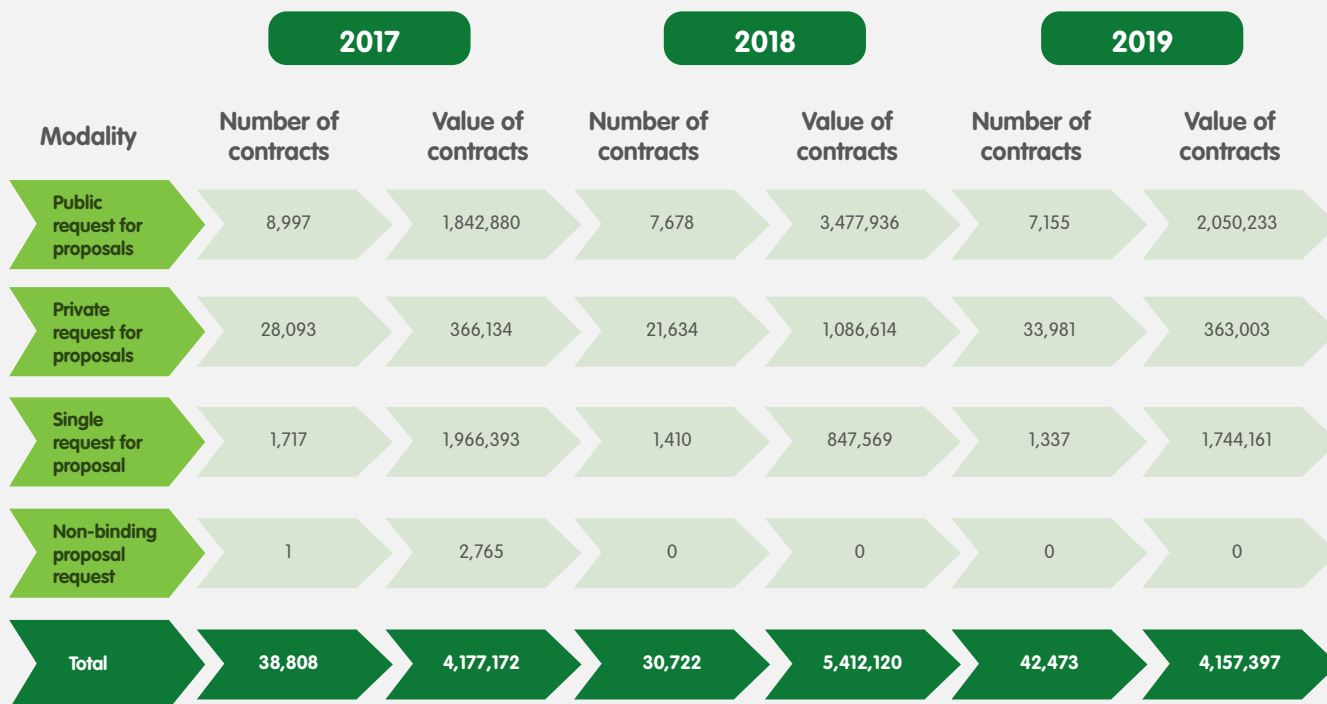
## Type of procurement

Type of procurement in companies of Grupo EPM in Colombia						
Type of contract	2017		2018		2019	
	Number of contracts	Value of contracts (million COP)	Number of contracts	Value of contracts (million COP)	Number of contracts	Value of contracts (million COP)
Supply of goods and services	21,517	756,635	28,204	2,589,588	39,979	1,965,685
Provision of services	1,421	1,361,377	1,325	1,077,302	1,539	1,025,709
Other	15,367	875,195	672	756,779	492	333,815
Contract of work	136	743,438	134	722,129	143	621,575
Movables and small purchases	225	205,467	251	164,656	172	74,094
Consultancy	69	173,601	102	81,405	108	71,326
Advertising connections and agreements	73	61,459	34	20,261	40	65,193
<b>Total type of procurement</b>	<b>38,808</b>	<b>4,177,172</b>	<b>30,722</b>	<b>5,412,120</b>	<b>42,473</b>	<b>4,157,397</b>

**Source:** Vice Presidency of Supply and Shared Services.

The amounts and values correspond to what the companies of Grupo EPM located in Colombia signed each year.

## Procurement by modality



The amounts and values correspond to what the companies of Grupo EPM located in Colombia signed each year. The values are expressed in million COP.

In 2019, the three procurement modalities were public request for proposals (49%), private request for proposals (9%), and single request for proposal (42%).

The modalities are combined with other purchases that, due to their characteristics, are not processed through the supply chain but directly with the specialized areas, including energy purchase, gas transportation, real estate, and special projects, among others. Procurement is a fundamental lever that seeks to promote sustainable development and competitiveness in the territories where Grupo EPM operates, improving economic dynamics and the generation of local capacities.

## Social procurement

It is a strategy through which EPM contracts works and services with community action boards and other community associations, with the purpose of contributing to the strengthening and sustainable development of the communities where it operates.



It relies on regulatory, procedural, and management resources that, without affecting transparency, economic efficiency, and technical and legal rigor, favor the inclusion of suppliers and contractors from the base of the pyramid, which otherwise could not be considered. Social procurement aims at:

- Creating jobs through a concentric action in the area of influence of the project or service required, in such a way as to effectively contribute to leveraging the development of the communities in the areas of influence of EPM.
- Reinvesting surpluses in the community impacted by the project or service required, in order to improve their quality of life and development.

In the Ituango hydroelectric project, EPM has strengthened the community organizations in the area of influence thanks to the social procurement strategy. This initiative has been conducted with community action boards and associations for the execution of works and services that are required in the territory, as part of the environmental and social management of the project.

Social procurement						
Company	2017		2018		2019	
	Number of contracts	Value (million COP)	Number of contracts	Value (million COP)	Number of contracts	Value (million COP)
EPM	62	22,967	60	40,204	116	37,662
Emvarias	44	2,030	36	3,251	28	2,018
Aguas del Oriente	0	0	1	1,565	0	0
CENS	1	31	0	0	0	0
ESSA	0	0	0	0	5	80
<b>Total</b>	<b>107</b>	<b>25,028</b>	<b>97</b>	<b>45,019</b>	<b>149</b>	<b>39,760</b>

**Source:** Vice Presidency of Supply and Shared Services.

The amounts and values correspond to the value signed in contracts in Colombian pesos.

Through the social procurement program, 149 contracts were signed in 2019 amounting to COP 39,760 million. About COP 3,990 million correspond to contracts signed in the area of influence of the Ituango hydroelectric project. Compared to 2018, there was a 12% decrease in the value of contracts.

EPM paid 150 contracts amounting to COP 506,324 million. The increase compared to the previous year (COP 49,255 million) is the result of contracts signed before 2017 that were in execution during 2019.

## Local, national, and foreign procurement

The origin refers to the place where contracted suppliers are located. It indicates whether the supplier is local, regional, national or foreign.

For Grupo EPM, a **local** supplier is the one located in the municipalities, small towns, and rural settlements within the metropolitan area of the company under evaluation. A **regional** supplier is understood as the supplier based in the same region of the company that supplies, but outside the metropolitan area. A **national** supplier is the one operating in several departments of Colombia. A **foreign** supplier is that located outside of Colombia.

In 2019, the companies of Grupo EPM in Colombia signed contracts for COP 4,157,397 million, of which 40% was awarded to local suppliers, 7% to regional suppliers, 52% to national suppliers, and the remaining 1% to foreign suppliers.

Origin of the contractors	2017		2018		2019	
	Number of contracts	Value of contracts	Number of contracts	Value of contracts	Number of contracts	Value of contracts
Local	30,073	2,821,704	14,840	3,185,484	36,414	1,653,036
Regional	1,916	118,391	9,379	128,347	1,605	288,047
National	6,757	1,153,273	6,444	2,027,896	4,415	2,166,515
Foreign	62	83,805	59	70,393	39	49,799
<b>Total</b>	<b>38,808</b>	<b>4,177,172</b>	<b>30,722</b>	<b>5,412,120</b>	<b>42,473</b>	<b>4,157,397</b>

The amounts and values correspond to the contracts signed in 2019 by the companies of Grupo EPM in Colombia. The values are expressed in million COP.

Regarding national contracting, there is an increase in the value, which contrasts with a decrease in the number of contracts.

As for foreign contracts, there is a decrease in both the value and the number of contracts.

## External jobs created

It corresponds to the information on the external jobs created in Colombia through the contracts in force during the year.

External jobs created in Colombia	
Company	2019
EPM	24,101
Emvarias	3,865
ESSA	2,974
CENS	2,141
CHEC	2,044
Aguas Nacionales	692
Aguas Regionales	445
EDEQ	367
Aguas de Malambo	112
Empresas Públicas de Rionegro	33
Aguas del Oriente	7
<b>Total external jobs created</b>	<b>36,780</b>

*Source: Vice Presidency of Supply and Shared Services.*

It corresponds to the external individuals linked to Grupo EPM through contracts and subcontracts of works and services that have a high labor component.

For Grupo EPM, it is important to perform this type of measurements, as they provide a view of the quality, stability, and equity of the jobs created, in agreement with the group’s sustainability purpose and its relationship with this stakeholder group.

## GRI standards and EPM indicators

**102-9** Supply chain.

**204-1** Proportion of spending on local suppliers.

**EPM-06** Number and value of social procurement contracts.

**EPM-07** Number, value, and type of contracts in Grupo EPM.

**EPM-08** External employment generated in Grupo EPM contracts.

## Scope and coverage

### Companies

Empresas Públicas de Medellín – EPM  
 Aguas de Malambo  
 Aguas Nacionales EPM  
 Aguas Regionales EPM  
 Centrales Eléctricas del Norte de Santander - CENS  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Empresa de Aguas del Oriente Antioqueño  
 Electrificadora de Santander - ESSA  
 Aguas de Antofagasta - Adasa  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Tecnología Intercontinental -Ticsa  
 Empresas Públicas de Rionegro - EPRio

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 Mexico  
 Guatemala  
 El Salvador  
 Panama

### Businesses

Water  
 Electrical energy  
 Sanitation  
 Natural gas

The background of the entire page is a repeating pattern of small, light green icons. These icons include symbols for renewable energy (solar panels, wind turbines, light bulbs), human rights (hands holding a heart, scales of justice), and general sustainability (recycling symbols, leaves, water drops).

# Human rights



## Human rights

By proclaiming its human rights institutional policy, Grupo EPM announces its commitment to adopt, in its own operations, and to promote, in the operations with third parties, compliance with the provisions of the Universal Declaration of Human Rights and its protocols, conventions, and binding agreements, including the international humanitarian law, and the constitution and the legal framework of each country where it operates.

For the organization, it is a challenge in terms of its own sustainability and assumes it with the conviction that respect for human dignity is a fundamental commitment on the sustainable human development agenda.

### Relevance

The practices of respect and promotion of human rights are a corporate imperative based on the recognition of people's dignity. This is the starting point for Grupo EPM's companies. Additionally, the organization is aware that this approach can lead to significant results on the viability of operations.

In terms of risk management, it favors the management of matters related to reputation, operation, finances, and the law.

## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Human rights in the supply chain	Formalize the instructions for dealing with cases associated with non-compliance with the code of conduct for suppliers and contractors, as well as for dealing with reputational warnings from third parties for the energy affiliates in Colombia.	Grupo EPM	The instructions were formalized for all the energy affiliates as well as for the water supply affiliates in Colombia.	Total
	Develop the diagnosis and identification of human rights gaps in the supply chain promoted by Guías Colombia (Colombia Guidelines) and define a work plan.	EPM	The assessment that resulted from the diagnosis was carried out; the report on opportunities for improvement and recommendations was received according to the analysis of the Technical Secretariat of Guías Colombia. Based on this outcome, a work plan will be defined to address the recommendations, with the aim of starting implementation in 2020.	Total
Institutional management in human rights	Establish a management system for gender equity.	EPM	All actions associated with EPM's participation in the certification for the Equipares Seal of Equity were carried out. With the support of the Colombian Ministry of Labor and the United Nations Development Program (UNDP), the management scheme was defined to carry out the gender equity diagnosis in EPM, identify options for improvement, define a work plan, and implement relevant actions. The foregoing is supported by the internal body created to promote diversity and gender equity.	Total

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Institutional management in human rights	Incorporate due diligence criteria in human rights for the property management.	EPM	A land restitution work team was set up. Risk analyses associated with possible land restitution processes were carried out for all projects under formulation and implementation. This work team identified the need to make adjustments according to the realities of this issue in the country. These adjustments were approved by the corresponding internal body. Progress is being made in incorporating activities into the processes of each area and in formulating a matrix that allows risks to be calculated for subsequent analysis.	Total
Institutional management in human rights	Incorporate the institutional Guide for Intercultural Engagement and Dialogue with Ethnic Communities.	EPM	The guide was prepared with the support of the Office of the United Nations High Commissioner for Human Rights in Colombia. A validation with organizations and representatives of various ethnic groups was carried out and subsequently the guide was officially launched. An official press release was issued and published together with the guide on the EPM website.	Total
	Develop a human rights grievance mechanism.	CENS	The existing grievance mechanisms were identified and a diagnosis was made of each one based on the guidelines of Guías Colombia in order to identify the gaps in a human rights-oriented mechanism. As a result, three new human rights-oriented mechanisms were formulated for suppliers and contractors, safety, and ongoing projects.	Total



Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Institutional management in human rights	Hire 20 people with disabilities.	EPM	As part of the pilot program for the inclusion of people with disabilities, 20 people were admitted to the institution (12 bachelor's degree holders and 8 associate degree holders). This is the first phase of this initiative which seeks to consolidate a culture of inclusion and diversity in EPM.	Total

## Challenges 2020

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Territory	Business
Human rights in the supply chain	Develop a self-diagnosis assessment for the identification of human rights gaps in the supply chain.	2020	CENS ESSA EDEQ CHEC	Colombia	Power – T&D
	Define the work plan identified based on the assessment made with Guías Colombia and implement the actions defined in 2020.	2020	EPM	Colombia - Antioquia	All the businesses
Institutional management in human rights	Update the human rights risk map and the formulation of treatment plans to address them.	2020	CENS	Colombia	Power – T&D
	Formulate and design a human rights-oriented grievance mechanism.	2020	EDEQ CHEC ESSA		
	Formally incorporate the Institutional Guide for Engagement and Dialogue with Ethnic Communities into the company's operations.	2020	CHEC CENS ESSA		

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Territory	Business
Institutional management in human rights	Carry out the human rights due diligence procedure defined for Grupo EPM, which includes the risk map, formulation of treatment plans, adoption of the policy, and the human rights training course.	2020	ENSA	Panama	Electrical energy
			HET		
			Ticsa	Mexico	Water and sanitation

## Related sustainable development goals



## Related stakeholders

Customers and users

Community

Grupo EPM people

Suppliers and contractors

## GRI standards and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 406-1** Incidents of discrimination and corrective actions taken.
- 407-1** Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk.
- 408-1** Operations and suppliers at significant risk for incidents of child labor.
- 409-1** Operations and suppliers at significant risk for incidents of forced or compulsory labor.
- 410-1** Security personnel trained in human rights policies or procedures.
- 411-1** Incidents of violations involving rights of indigenous peoples.
- 412-1** Operations that have been subject to human rights reviews or impact assessments.
- 412-2** Employee training on human rights policies or procedures.
- 412-3** Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening.
- 414-1** New suppliers that were screened using social criteria.
- 414-2** Negative social impacts in the supply chain and actions taken.
- 413-1** Operations with local community engagement, impact assessments, and development programs.
- EU22** Number of people physically or economically displaced and compensation, broken down by type of project.

## Scope and coverage

### Companies

Empresas Públicas de Medellín – EPM  
 Aguas Regionales EPM  
 Aguas de Malambo  
 Empresas Varias de Medellín – Emvarias  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresa de Energía del Quindío – EDEQ  
 Centrales Eléctricas del Norte de Santander – CENS  
 Distribuidora de Electricidad del Sur – Delsur  
 Empresa Eléctrica de Guatemala – Eegsa  
 Elektra Noreste – ENSA

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Colombia – Risaralda  
 Colombia – Malambo, Atlántico  
 Guatemala  
 El Salvador  
 Panama

### Businesses

Water supply  
 Electrical energy  
 Sanitation  
 Natural gas



# Human rights in the supply chain

## Human rights in the supply chain

Since human rights started to be addressed institutionally in 2011, EPM has concentrated much of its efforts to promote their management throughout its supply chain. EPM seeks to ensure that all companies with which the organization has contractual relations are aligned with the commitment to respect and promote HR, recognizing the risks that may arise from the operations that third parties carry out in the development of commercial agreements with the organization.

In line with this approach and considering that it is important to strengthen this management in the corporate practice, the company has been working on the conceptual approach, the insertion of practices, and the adoption of instruments consistent with respect for human rights along with the contractors of the group's companies.

Awareness raising and training for suppliers and contractors is ongoing at the energy affiliates in Colombia. The aim is to formally incorporate human rights in the operations, as well as to assess performance in terms of HR, labor practices, social impact, and environmental impact.

## Management in 2019

A diagnosis of responsible human rights management practices in the supply chain was carried out, using the tool designed by Guías Colombia initiative.

The purpose of the assessment was the identification of management gaps in human rights with companies that are now EPM contractors, as well as those elements on which it is a priority to act in order to make this management more effective.

Similarly, it allowed the company to measure the actual state of implementation of Guías Colombia on supply chain which was published in 2017 and which contains guidelines for companies in the exercise of due diligence on human rights with their suppliers and contractors through responsible and transparent management. Based on the results obtained, lines of action will be defined to strengthen management from 2020 onwards.

Following the recommendations of the UN Guiding Principles, EPM carries out periodic human rights risk and impact assessment exercises. Based on the results of these exercises, the organization carries out a prioritization applying the institutional risk methodology. Based on this, it defines treatment plans with specific actions, responsible parties, timetables, and associated resources.

Although an individualized analysis of suppliers has not been made due to the considerable volume of contracts, a cross-cutting analysis has been made of the risks associated with the operation of the companies that are part of the supply chain. Several risks have been identified, such as respect for freedom of association, discrimination for various reasons, safety and health at work, decent working conditions—which is one of the explicit commitments of the institutional human rights policy—and the prohibition of child labor. In this way, it is considered that the evaluation coverage is 100% in the operation through third parties.

Although the organization does not currently have in the supplier selection process a criteria for awarding points to firms that mitigate social impacts, it does manage compliance and respect for human rights in the supply chain through different controls. The code of conduct for suppliers and contractors of Grupo EPM is currently included in the contracting specifications. Each supplier must accept the code of conduct in order to continue in the process, so that they commit to managing different issues, including respect for human rights. Different controls are also implemented so that, if non-compliance is detected, EPM can remove a bid or terminate a contract early.

EPM cares for social impacts in its contracting processes. Therefore, it seeks to establish controls in contracts that could pose a risk, where characteristics of the activity to be contracted could be hazardous or where workers could be exposed to dangers. Controls include those associated with occupational health and safety (OHS) and the creation of jobs in the regions, when applicable.

During the monitoring of the execution of contracts, EPM validates monthly the compliance with the OHS requirements through standardized formats, which consolidate the compliance with the regulations in force and the contractual provisions established to ensure safe working conditions and compliance with the payments of the contractors' labor obligations. When applicable, EPM also validates the employment of labor in the regions.

An internal Integration and Coordination Meeting (abbreviated RIC in Spanish) was established to monitor the behavior of contractors with the commitments contained in the code of conduct. It functions as a control mechanism to address cases involving suppliers and contractors in practices that affect third parties. The RIC receives warnings through the transparent contact hotline or through notification by the organization's compliance unit. In order to respond to each case, different areas of the company are convened as well as, if necessary, the contractor's representatives, in order to resolve and close each case.

Additionally, as a tool for the identification of early warnings and to detect and address likely real human rights impacts, EPM maintains the institutional mechanism for human rights grievances for workers of contractors. This tool was designed to facilitate the relationship with this stakeholder and identify actions to strengthen processes related to contractual management and respect for human rights of contractors and their personnel. According to the specificities of each incident, a work team with representation from different departments of the company is formed to advance the investigation and issue a final recommendation.

Grupo EPM designed a human rights-oriented grievance mechanism for the suppliers and contractors of the CENS affiliate during the year of this report. This mechanism will come into operation in 2020 and will address cases related to violations of labor obligations, complaints about child labor and discrimination, among others, involving companies in the supply chain in this affiliate.

Four labor claims were brought before the affiliate CHEC by contractor workers. They were addressed comprehensively through the mechanisms that were determined to be relevant, seeking the comprehensive resolution of the associated situations.

Cases addressed for non-compliance with the code of conduct of EPM			
Concept	2017	2018	2019
Employee complaints received	10	14	9
Employee complaints resolved	8	14	8
Employee complaints under analysis	2	0	1

**Source:** Vice Presidency of Shared Services and Supplies.

*The figures include both incidents reported through the human rights-oriented grievance mechanism for contractors, and those received by the RIC which deals with cases involving suppliers and contractors in practices affecting third parties.*



Cases addressed for non-compliance with Grupo EPM code of conduct			
Concept	2017	2018	2019
Cases received in the year	10	14	13
Cases resolved in the year	8	14	12
Cases under analysis	2	0	1

**Source:** Vice Presidency of Shared Services and Supplies.

The cases received and resolved in 2019 include four cases filed by workers of contractors of the CHEC affiliate. The remaining nine cases correspond to EPM.

## GRI standards and EPM indicators

- 407-1** Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk.
- 408-1** Operations and suppliers at significant risk for incidents of child labor.
- 409-1** Operations and suppliers at significant risk for incidents of forced or compulsory labor.
- 412-3** Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening.
- 414-1** New suppliers that were screened using social criteria.
- 414-2** Negative social impacts in the supply chain and actions taken.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia – Norte de Santander

### Businesses

Electrical energy  
 Natural gas



# Human rights management in projects under construction

## Human rights management in projects under construction

The commitment to respect and promote human rights is a business activity premise in the development of all the projects conducted by the organization. The institutional approach to this matter, delimited within the institutional procedure of due diligence, the human rights policy, and its supplementary guidelines, provides a basis so that each department responsible for implementing a project defines priorities and lines of action, according to the needs identified in the environment through the engagement with stakeholders.

To this end, each time the construction of an infrastructure project involving an intervention with significant impacts is initiated, the organization conducts an assessment to define specific treatment strategies for the risks identified in the territories. For projects where construction takes a considerable amount of time, assessments are made periodically to keep the findings up to date. In this type of project, there are also human rights-oriented grievance mechanisms so that communities can inform the organization of situations that may affect them.

### Management in 2019

Support was provided to the process of prior consultation with the Nutabe indigenous community from Orobajo. Total agreements were reached along with 26 projects to be developed. The agreements are currently in the implementation phase.

#### Ituango hydroelectric project

The Ituango hydroelectric project, which is being built by EPM in northern Antioquia, is currently the largest project in terms of power generation in Colombia. Once it is fully operational, it will provide 2,400 MW to the national electricity system. Therefore, its development is of great importance for the country because of its contribution in reliability, competitiveness, and safety to meet the demand for electricity.

On April 28, 2018, a contingency situation arose in the project as a result of the obstruction and subsequent natural unblocking of a diversion tunnel of the Cauca River. From the beginning of this event, EPM guided its decisions and actions prioritizing the protection of the communities that could be affected. Along with the national, departmental, and local authorities, Act 1523 of April 24, 2012, which adopts the National Policy on Disaster Risk Management, and Decree 2157 of December 20, 2017, were implemented. Therefore, the National Unit for Disaster Risk Management (abbreviated UNGRD in Spanish), through the National Council for Risk Management, has been the body in charge of calling on the institutions of the National System for Disaster Risk Management (abbreviated SNGRD in Spanish) to respond to the emergency generated as a result of the contingency in the Ituango hydroelectric project. These institutions have worked together to ensure the protection of the rights of people who have been at risk. Therefore, the UNGRD established the warning levels and issued the preventive evacuation orders in order to safeguard people's lives.

As the company responsible for the project, EPM activated the Protocol for Addressing Events and Crises (abbreviated PADEC in Spanish), participating in the attention of the emergency as any other entity of the national system. Likewise, EPM launched a Technical Monitoring Center (abbreviated CMT in Spanish), which operates 24 hours a day to track technical information in real time.

With the aim of informing, providing a context, and calling on the authorities responsible for guaranteeing human rights to carry out their activities, relations have been established with entities such as the Office of the Public Defender, the Office of the Inspector General of Colombia, and municipal ombudsmen offices, which have received requests for assistance from the community.

EPM participated in the event Clandestine Market of Knowledge organized by the Truth and Reconciliation Commission, which in turn is part of the Comprehensive System of Truth, Justice, Reparation, and Non-Repetition, created in the framework of the peace agreements in the country. The purpose was to establish a space for seeking dialogue with the communities and transparency regarding the development of activities from the Ituango hydroelectric project.

Due diligence work was carried out for the closure of gate No. 1 of the project in the context of the contingency, which included the creation of a protocol and the implementation of various actions. These included a due diligence protocol for dealing with socio-political situations that involve a risk to human rights; a meeting with guarantor authorities to discuss the situation and motivate their actions if required; and a meeting with the Office of the Attorney General of Colombia to activate actions.

Apart from this situation and in order to integrate the project into the region and responsibly manage environmental and social impacts, the company continued the implementation of various strategies, such as involvement in development initiatives with a gender perspective, with the aim of contributing to the prevention of gender violence; training on sexual health and sexual and reproductive health rights; and, in general, strengthening gender equity in the area of direct influence of the project.

The socio-political risk and human rights matrix of the Ituango project was updated, including in this matrix the human rights risks for the project. From this exercise, 13 risk scenarios were identified; for each of them, preventive and corrective controls have been identified for their attention.

### Ethnic communities

There have been no reports of situations arising from the operation of Grupo EPM companies that have negative effects on the community, nor have there been any cases related to the impact on the rights of special communities (indigenous peoples and other ethnic communities) that have been reported and processed through formal complaint or grievance channels.

CHEC affiliate managed requirements through the support of social management and the indigenous authorities. In addition, social management was carried out for viability in four indigenous reservations in Riosucio. This initiative seeks to generate spaces of continuous contact, agreements, and knowledge of both the dynamics of the indigenous culture and CHEC and the processes related to the power service. The company recognizes the settlement of 14 formally established indigenous reservations in its area of influence (Caldas and Risaralda), as well as the presence and participation of African-descent communities. These communities are recognized as special communities under the CHEC community stakeholder engagement model.

<b>Jobs created in the Ituango hydroelectric project</b>			
<b>Concept</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Jobs created	11,210	7,871	6,324
People from the region hired	2,457	1,735	1,816

**Source:** Executive Vice Presidency of Projects and Engineering.

<b>Complaints and claims concerning human rights in the Ituango hydroelectric project</b>			
<b>Concept</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Complaints and claims received concerning public and private security (IHL)	2	0	0
Complaints and claims resolved concerning public and private security (IHL)	2	0	0
Complaints and claims received concerning HR	0	0	0
Complaints and claims resolved concerning HR	0	0	0
Complaints and claims received concerning labor issues and engagement with contractors	0	0	52
Complaints and claims resolved concerning labor issues and engagement with contractors	0	0	51
Communications addressed	548	718	239
Communications resolved	527	709	209
<b>Total</b>	<b>1,079</b>	<b>1,427</b>	<b>448</b>

**Source:** Executive Vice Presidency of Projects and Engineering.

The variance in comparison with 2018 is attributable to the fact that project contingency recovery actions have been undertaken for 2019, resulting in a decrease in the number of communications received.

The data published in the 2018 report had an error, which was corrected.

Legal actions filed in the Ituango hydroelectric project			
Concept	2017	2018	2019
Rights to petition addressed	948	2,285	3,239
Rights to petition resolved	916	2,141	3,054
Writs for protection of constitutional rights addressed	7	24	33
Writs for protection of constitutional rights resolved	5	13	14
Claims addressed	31	40	35
Claims resolved	6	30	4
<b>Total legal actions addressed</b>	<b>986</b>	<b>2,349</b>	<b>3,307</b>
<b>Total legal actions resolved</b>	<b>927</b>	<b>2,184</b>	<b>3,072</b>

*Source: Executive Vice Presidency of Projects and Engineering.*

*Most of the claims in 2019 arose from group, public interest, or nullity actions related to the contingency of the project. The increase in rights to petition corresponds to petitions associated with the downstream contingency of the project. Data shown in this table is adjusted from that published in the 2018 report. Regarding the writs for protection of constitutional rights, most of them were related to the project's contingency; those that were reported as resolved were ruled in favor of EPM.*

## GRI standards and EPM indicators

- EU22** Number of physically or economically displaced people and the compensation granted, broken down by type of project.
- 411-1** Incidents of violations involving rights of indigenous peoples.
- 412-1** Operations that have been subject to human rights reviews or impact assessments.
- 413-1** Operations with local community engagement, impact assessments, and development programs.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
Central Hidroeléctrica de Caldas - CHEC

### Territory

Colombia - Antioquia  
Colombia - Caldas  
Colombia - Risaralda

### Business

Electrical energy





## Institutional management in human rights

Although since its adhesion to the United Nations Global Compact in 2006, EPM has been committed to incorporate in its practices the respect for human rights, the organization has undertaken, since 2011, the task of implementing a specific work scheme on the subject, as a fundamental step towards the strengthening of its relationships with all its stakeholders. With this endeavor, the company formally assumed the cross-cutting management of this topic in all its business operations.

By proclaiming its institutional human rights policy in 2012, the organization ratified, announced, and made explicit its commitment to the respect for human rights in its business activities and laid the formal foundations for its implementation in the entire Grupo EPM.

Nowadays, Grupo EPM is progressing in the implementation of human rights, with the objective of achieving by 2023 the development of the due diligence procedure in all national and international companies that are part of it. To this end and based on the UN Guiding Principles, it defined the following aspects as elements of management for each affiliated company: identification and prioritization of risks in human rights, design and development of a management plan, internal and external training on human rights in the companies, adoption of the institutional policy, implementation of a human rights-oriented grievance mechanism, and continuous communication for stakeholders on the commitment and management in this regard.

Institutional management in this area includes the fulfillment of each of these milestones, complemented by the development of specific actions to respect human rights in operations, the adoption of instruments and tools to strengthen the management of the company, promote respect in the operations of third parties, and report on the progress of implementation. In this work, the organization makes a permanent reference to the progresses made in terms of human rights and the companies worldwide and, in particular, it embraces and applies the UN Guiding Principles as a guideline in the internal approach of this matter.

## Management in 2019

As part of the pilot program for the inclusion of people with physical, sensory, or cognitive disabilities, 20 new public servants with different professional profiles joined the organization. In this way, the first part of this initiative, which seeks to consolidate a culture of inclusion and diversity in EPM, was concluded.

The initiative also includes the Equipares gender equity labor certification process, which is supported by the Colombian Ministry of Labor and the United Nations Development Program (UNDP). A management scheme was defined with both institutions to carry out the equity diagnosis in EPM, identify options for improvement, define a work plan, and implement the corresponding actions. The foregoing is supported by the RIC for Diversity and Gender Equity, which was created to promote this issue within the organization.

There is freedom of association at EPM. A total of 96.6% of the employees are members, directly or by extension, of one or more than one of the six existing union organizations. At the national affiliated companies of Grupo EPM, the percentage of union affiliation is 75.6%, considering that some of the affiliates, such as Aguas del Oriente and Aguas Nacionales, due to their size, do not have union organizations. In 2019, no discrimination claims were reported in the organization.

### **Ethnic communities**

EPM formally presented the Institutional Guide for Intercultural Engagement and Dialogue with Ethnic Communities, which establishes the principles of engagement with these communities on the premise of recognition, understanding, and mutual respect in the exercise and guarantee of rights. The guide was prepared by an interdisciplinary group from different areas of the organization and was supported by the Office of the United Nations High Commissioner for Human Rights in Colombia. As part of the process, there were different spaces for participation with organizations representing ethnic peoples. From 2020 onwards, the process of gradually adopting the guide will begin in the different companies of Grupo EPM.

During 2019 EPM did not receive any complaints associated with events of possible violation of human rights to members of ethnic, African-descent, or Roma communities located in its areas of operation.

In accordance with its concern for developing business practices that promote respect for HR, EPM maintained an active participation in different spaces related to this subject. In this regard, it is worth mentioning Guías Colombia, an initiative composed of companies, members of the civil society, and the government for the promotion and guidance of company-environment relationships, under minimal criteria of observance and respect for human rights and the international humanitarian law. In 2019, the Institutional Guide for Intercultural Engagement and Dialogue with Ethnic Communities. was prepared. The company is also an active member of the Global Compact Colombian Network with its working group on HR.

## Property management

EPM periodically carries out exercises to identify risks and impacts on human rights derived from its operations, following the recommendations of the United Nations Guiding Principles. Based on the findings, response plans to the prioritized risks are defined. One of them has to do with the acquisition of land and the establishment of easements.

As a general principle, EPM promotes voluntary negotiation and agreements as a method of property management for acquiring land and obtaining rights to land required for project development. However, some situations of a legal or judicial nature can lead to imposition or expropriation processes, in which the company seeks to carry out these processes in strict compliance with the requirements demanded for such purposes.

In the application of measures to mitigate the risks set out in Act 1448 of 2011 – Victims and Land Restitution, analyses were carried out in order to minimize the possible violation of rights, both of the victims and of possible second occupiers, or those who, for some reason, are in good faith on the property, living on it or making use of it. This approach was made for projects in the formulation, execution, and operation stages. In this way, a diagnosis was obtained on the properties owned by the company prior to the enforcement of the Act and in turn it was possible to make timely decisions on property management for the new requirements. In 2019, property analyses were carried out in the following projects: Interconnection Caldas – La Estrella; Barbosa Water Catchment, Valle de San Nicolás, Otras Cuencas (Other Basins); Iguaná – La García; WWTP Palmitas, San Lorenzo – Calizas, and Nueva Colonia.

A total of 188 projects were impacted by the analysis, for a total of 9,322 properties, of which 379 have shown some type of warning in restitution. This situation is not unrelated to the management of EPM, considering that in different regions of the country there has been evidence of victimization and violence associated with the armed conflict. In view of this reality, the organization has been incorporating the recommendations of the Guide for the Purchase and Acquisition of Rights on the Land and Rights of Use, issued by Guías Colombia, into institutional property management.

As part of the management, special work was developed with the CENS affiliate, in order to design a human rights-oriented grievance mechanism. As a result, three new human rights-oriented mechanisms for supply chain management processes, safety, and projects under construction were formulated and will become operational in 2020. The guide to complaints and claims mechanisms published by Guías Colombia was used as a reference for this work.

Regarding the implementation of the human rights work plan in all the companies of Grupo EPM, during 2019, the ENSA company operating in Panama began to undertake field work to identify risks, characterize operating environments, and identify the rights-holders referred to the categories of individuals or groups whose rights may be potentially affected by the operations. Additionally, a conceptual standardization plan was developed on the subject, with the areas involved in the management of said risks in this company.

Training on human rights – Trained employees			
Companies	2017	2018	2019
EPM	0	71	349
Emvarias	0	0	89
CHEC	315	117	71
ESSA	246	0	212
CENS	65	165	101
EDEQ	0	106	157
Delsur	0	0	32
Eegsa	866	568	642
<b>Total</b>	<b>1,492</b>	<b>1,027</b>	<b>1,653</b>

*Source: Vice Presidency of Human Resources and Technology, Executive Vice Presidency of Business Management.*

Training on human rights – Hours of training			
Companies	2017	2018	2019
EPM	0	142	698
Emvarias	0	0	79
CHEC	43	303	355
ESSA	41	0	212
CENS	87	543	155
EDEQ	0	212	215
Delsur	0	0	64
Eegsa	39	568	642
<b>Total</b>	<b>210</b>	<b>1,768</b>	<b>2,420</b>

*Source: Vice Presidency of Human Resources and Technology, Executive Vice Presidency of Business Management.*

Training on human rights – Percentage of employees trained			
Companies	2017	2018	2019
EPM	0%	1%	5%
Emvarias	0%	0%	35%
CHEC	31%	12%	7%
ESSA	25%	5%	22%
CENS	13%	30%	18%
EDEQ	0%	26%	36%
Delsur	0%	0%	10%
Eegsa	100%	72%	83%

*Source: Vice Presidency of Human Resources and Technology, Executive Vice Presidency of Business Management.*

## GRI standards and EPM indicators

- 406-1** Incidents of discrimination and corrective actions taken.
- 407-1** Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk.
- 411-1** Incidents of violations involving rights of indigenous peoples.
- 412-1** Operations that have been subject to human rights reviews or impact assessments.
- 412-2** Employee training on human rights policies or procedures.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Empresas Varias de Medellín - Emvarias  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia – Norte de Santander  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water supply  
 Electrical energy  
 Sanitation  
 Natural gas



# Security and human rights

## Security and human rights

Grupo EPM is aware of the importance of carrying out a preventive approach in human rights as part of the development of its security strategies. Therefore and as a business principle, management actions aimed at ensuring the protection of its operations, employees, and assets are carefully developed both in the operations carried out by private security agencies and in those operations derived from the fulfillment of agreements with public security forces in the cases in which these are established, adopting and applying the regulations of the country in which the operation is carried out.

Based on its institutional human rights policy, the organization is committed to “include, in the security service contracts and agreements signed with private firms and official security organisms, explicit commitments to respect and promote human rights. In no case will the company accept the provision of these services by social actors that are outside the constitutional and legal framework.”

In the development of its security operations, EPM embraces the recommendations included in the Voluntary Principles that propose a set of guiding principles for the companies regarding public security forces, private security organizations, and civil society. It also incorporates the guidelines of the security guide, published by the Guías Colombia initiative, which provides guidelines for action on human rights and international humanitarian law when security activities are implemented in the companies.

With the purpose of continuously monitoring the operations in its areas of influence, the company has implemented mechanisms to address complaints and claims from the communities. The management of security contractors, among other aspects, is also monitored through these mechanisms.

## Management in 2019

The EPM Corporate Core Committee formally approved the Security Directive, which is a statement that involves all companies of Grupo EPM, both national and international, and includes in its content the commitment to respect human rights.

With the approval of this directive, EPM is granted decision rights on the issue of security in relation to affiliates within and outside Colombia. Thus the commitment already made in EPM's institutional security policy to respect human rights in security activities is reaffirmed and endorsed, which in turn is consistent with the institutional human rights policy.

In relation to the progress made in the company's security policy, in 2019 the EPM Management Committee approved the Security Guidelines, which constitute a provision through which the policy is implemented, defining what must be done to fulfill or achieve what is stated in it and the limits of its application. As part of these guidelines, the one referring to human rights was approved, which establishes: "Respect for Human Rights, insofar as they may be affected by security activities."

In 2019, the agreement with the Colombian Army was maintained. Its purpose is to act in coordination with the state security systems within the current legal framework, in order to strengthen the protection and security conditions required in the facilities, infrastructure, and activities associated with operations. As a general principle, all agreements that EPM signs with the Colombian public security force include the obligation to "respect international treaties on human rights and international humanitarian law signed by the Colombian state, promoting their preservation and defense."

It is important to emphasize that the nature of these agreements is for cooperation; it is not within the power or competence of EPM to give operational instructions to members of the police or the national army. However, by embracing the national and international recommendations in this regard, the organization has placed an explicit emphasis on framing the operations derived from these agreements within the permanent respect for human rights. To this end, besides including specific recommendations in the agreements, the organization fosters permanent monitoring and analysis spaces with security staff and police district commanders and army commanders in the areas in which the company operates. The structure of the agreements also includes the decision of providing permanent face-to-face training on human rights to the personnel from the national army and the police with instructors and training specific to each institution.



### Business security practices

During 2019, surveillance and security contracts continued in force with the companies Visan and Colviseg. For the formalization of these contracts, it is required that the firm guarantees that its personnel receives training on human rights and international humanitarian law, appropriate use of force, and application of voluntary principles. In these contracts 1,331 guards were employed, of which 97% received training on these subjects.

With regard to the private security companies, EPM demands from the service providers the strict fulfillment of the legal provisions currently in force in Colombia and, specially, of the regulation issued by the Superintendency of Private Surveillance and Security, including the background check to the staff hired by contractors.

A relevant decision in terms of security has to do with the disarmament of the security contractor staff. As an organizational policy, the optimal scheme is determined based on the threat identified in terms of physical security and security of facilities. With this analysis, it is determined which facilities should have armed security guards. Today, 78% of security guards do not use firearms in their operations.

In the territories affected by the armed conflict, it is recommended to have unarmed security guards, in order to avoid situations that may entail impacts on the human rights of private security personnel and the community regarding the use of said elements.

With the purpose of monitoring the operations in its areas of influence, the company has implemented mechanisms to address complaints and claims in relation to the human rights. The management of the security contractors' employees is also monitored through these mechanisms. There were no complaints related to this service over the reported period.

In the reported period, EPM maintained the protocol for handling social protest events with de facto proceedings.

Training on human rights for security staff – EPM contractors			
Concept	2017	2018	2019
Total security staff – Contractors	1,460	125	1,331
Security staff trained on human rights – Contractors	0	0	1,289
Training hours on human rights – Security staff – Contractors	9	41	2,464
Average training duration (hours)	NDA	NDA	1.9
Percentage of trained security staff	NDA	NDA	97%

**Source:** Vice Presidency of Shared Services and Supplies and Executive Vice Presidency of Business Management.

Training on human rights for EPM security staff	
Concept	2019
Total number of people in the security area	26
Trained internal security staff	20
Hours of training	40
Percentage of trained security staff	77%

**Source:** EPM Security Directorate.

## GRI standards and EPM indicators

- EU22** Number of physically or economically displaced people and the compensation granted, broken down by type of project.
- 410-1** Security personnel trained on human rights policies or procedures.
- 412-2** Employee training on human rights policies or procedures.
- 413-1** Operations with local community engagement, impact assessments, and development programs.
- 414-1** New suppliers that were screened using social criteria.
- 414-2** Negative social impacts in the supply chain and actions taken.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Empresas Varias de Medellín - Emvarias

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander

### Businesses

Water supply  
 Electrical energy  
 Sanitation  
 Natural gas



# Renewable energies



## Renewable energies

It is the offer of alternative, efficient, and clean renewable energy solutions to ensure full and timely energy supply, maintaining productivity, protecting the environment, ensuring the efficient use of energy, and preserving renewable natural resources.

Nonconventional renewable energies come from clean sources. They are alternative solutions to traditional energy production, which can contribute to the economic and social development. Solar, wind, hydraulic, geothermal, and tidal energies, as well as biomass, are part of this group of energies.

It is necessary to ensure full and timely energy supply, maintaining productivity, protecting the environment, ensuring the efficient use of energy, and preserving renewable natural resources.

The stakeholders demand to move from exploration to the offer of these types of energy.

In Colombia, the issuance of Act 1715 of 2014, the implementation of some regulatory decrees, and the commitment of the national government to the country's energy transition through nonconventional renewable energy programs have further encouraged the use of this type of energy sources. In this way, their use was increased to maintain productivity, protect the environment, ensure the efficient use of energy, preserve and conserve renewable natural resources, reduce greenhouse gas emissions, and ensure full and timely energy supply capacity.

## Relevance

The offer of energy from efficient, sustainable, and renewable energy sources—different from large hydroelectric projects—creates an important economic value for Grupo EPM and its stakeholders because it prevents the increase in the costs of energy due to low competitiveness levels, meets the new market demands, minimizes the risk of depending exclusively on water, and improves the coverage of unserved populations. For all these reasons, it has a high social value.

Clean energy generates high environmental value because it contributes to reducing greenhouse gas emissions.

The production and use of nonconventional energy sources has been declared as a matter useful to the public, of social interest, and of national convenience. It is also fundamental to ensure full and timely energy supply, competitiveness, protection of the environment, efficient use of energy, and preservation and conservation of renewable natural resources.

## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Renewable energies	Select a strategic ally to develop nonconventional renewable energy initiatives (solar and wind energy, self-generation).	EPM	Selection of Invernergy as a strategic ally, negotiation of the clauses of the knowledge transfer plan, and signing of a collaboration framework agreement.	Total
Biogas	Reclaim biogas for cogeneration in the Colima wastewater treatment plant.	Ticsa	The analysis of the investment was conducted on the feasibility study for reclaiming biogas for cogeneration in the Colima WWTP. This analysis included financial, technical, and legal aspects.	Not accomplished
Biomass	Develop cost-effective processes to obtain renewable fuels (2G ethanol, green diesel, green gasoline, and biojet fuel).	EPM	The contract ended on November 17, 2019. The operating variables were validated to determine the economic feasibility of the project.	Total
Photovoltaic solar energy	Fulfill 100% of the work plan formulated for the implementation of the solar energy self-generation project at El Parnaso, feasibility report and dissemination of the results obtained.	ESSA	30% of the work plan was executed. The process "Study and implementation of techniques to improve energy production at the El Parnaso solar self-generation system by ESSA" is in the precontractual stage.	Not accomplished

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Photovoltaic solar energy	Create ENSA Servicios as an affiliated company of ENSA for the provision of technical and commercial services related to the energy sector, including the installation of solar panels.	ENSA	ENSA Servicios installed two charging stations for electric vehicles: one at its headquarters in Arco Iris, province of Colón, and other for Mi Bus, the company in charge of the public transportation service in the metropolitan area of Panama. An agreement was reached for the installation of BMW chargers and another agreement was signed to build two public charging stations in Town Center shopping mall, Costa del Este. In addition, the company started a pilot plan along with UN Environment, so that ENSA, through ENSA Servicios, became the first private company with solar heaters. The first solar panels were installed for a residential customer in the province of Colón.	Total
	Develop a pilot project with floating solar panels in an EPM reservoir.	EPM	The project continues in implementation phase because the measurements and comparisons of rooftop and floating systems were not completed due to technical issues. The project final report is expected to be submitted in 2020.	Partial
	Install solar panels in corporate offices.	Delsur	Delsur installed a photovoltaic generator on the rooftop of its Escuela de Capacitación Técnica (Technical Training School). To date, 2,050 kWh have been generated, which represents savings of 19.07 tonnes of CO <sub>2</sub> .	Total
	Install photovoltaic systems at ENSA's headquarters in Panama.	ENSA	This initiative will start in March 2020.	Not accomplished

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Photovoltaic solar energy	Develop a line of business in EPM for the sale of electricity produced by a photovoltaic solar system to large EPM customers.	EPM	The second stage of solar roofs was installed in El Tesoro commercial park. The assembly of solar roofs in Plaza Mayor was started; they are expected to operate in 2020.	Total
	Develop a line of business in EPM for the sale of electricity produced by a photovoltaic solar system to residential customers.	EPM	The commercial offer for residential customers was launched. The installed capacity reached 7.75 kWp.	Total
	Plan, design, and develop the business model for the implementation of distributed generation in the CENS electrical system.	CENS	Other activities related to the integration of the renewable energy model into the portfolio were carried out: design of the solution and technical specifications of the equipment for the rural energy project; invitation by the Ministry of Mines and Energy to participate in the construction of 280 photovoltaic solutions for users; and requests for the connection of 44 small-scale self-generation units, of which 22 were connected to the CENS' local distribution system.	Not accomplished
	Install a photovoltaic solar system on the building roof of the CHEC's administrative headquarters in Estación Uribe.	CHEC	The project has 25.92 kWp installed, with an approximate production of 3,000 kWh/month and is composed of 96 polycrystalline solar panels (270 W each) and a 20 kW AC/DC converter. In 2019, it contributed 29 MWh, corresponding to 4% of the energy to Estación Uribe. Regarding the smart building, the photovoltaic system contributed 8% of energy. In addition, the emission of more than 10 tonnes of CO <sub>2</sub> into the environment was avoided.	Total



## Challenges

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in 2019
			Company	Business	Territory	
Biogas	Use biogas as an alternative source of renewable energy at the San Fernando wastewater treatment plant.	2022	EPM	Natural gas	Colombia – Antioquia	A business case was submitted for evaluation during the 2020 planning cycle and was approved by the executives.
Biogas	Stabilize the biogas treatment system. Maintain the Hoffgas 2000 chimney ignition with the connection of 91 chimneys of the Carrilera cell and the average burn of 1,100 m <sup>3</sup> /hour in the La Pradera sanitary landfill.	2022	Emvarias	Water and sanitation	Colombia – Antioquia	NDA
Biomass	Use the biomass from the Ituango reservoir to generate electricity.	2020	EPM	Electrical energy	Colombia – Antioquia	NDA
Geothermal energy	Complete the feasibility study of the geothermal project.	2020	CHEC	Electrical energy	Colombia – Caldas	EPM and CHEC met the requirements of the environmental authority. The financial model was prepared to estimate the cost of energy production in the project for future decision-making.

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in 2019
			Company	Business	Territory	
Small hydroelectric power stations	Evaluate competitiveness strategies for small hydroelectric power stations to be implemented in future projects related to this technology in Grupo EPM.	2020	EPM	Electrical energy	Colombia – Antioquia	A project was structured and the procedure to modify the environmental license was started. Potential allies were analyzed to advance in the development of the project.
	Meet the requirements of Corpocaldas regarding the approval of the environmental impact assessment for the construction of a small hydroelectric power station within the established term and obtain the archaeological license.	2020	CHEC	Electrical energy	Colombia – Caldas	The technical, economic, and environmental feasibility study of the PGu5 project was completed and an environmental impact assessment was submitted to Corpocaldas.
Small hydroelectric power stations	Contract the environmental impact assessment for the technical, economic, and environmental feasibility of the PGu6 project (Guacaica), corresponding to a small hydroelectric power station.	2020	CHEC	Electrical energy	Colombia – Caldas	Corpocaldas granted the exoneration for the environmental diagnosis of alternatives.
Photovoltaic solar energy	Develop, along with a strategic ally, a large-scale solar park connected to the system.	2020	EPM	Electrical energy	Colombia – Caldas	EPM purchased the entire project. The environmental impact assessment is progressing as planned. As of the end of 2019, the solar resource available was measured on site during 13 months.

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in 2019
			Company	Business	Territory	
Photovoltaic solar energy	Develop nanostructured solar cells with materials available in Antioquia.	2024	EPM	Electrical energy	Colombia – Antioquia	An invention patent was registered in the USA and the industrial production of these flexible solar cells with new materials is being negotiated with an international ally, aiming at being the first distributors of this technology.
Photovoltaic solar energy	Launch the new commercial portfolio of the electrical energy service with solar panel technology for customers in the regulated market.	2020	ESSA	Electrical energy	Colombia – Santander	NDA
	Design a rural energy solution with off-grid photovoltaic sources.	2020	CENS	Electrical energy	Colombia - Norte de Santander	The solution was designed as well as the technical specifications of the equipment for solutions of 1 kWp for homes and 3 kWp for schools. It will be developed, as a pilot project, through a collaborative agreement between Ecopetrol and CENS for 49 families of La Selva, a rural settlement in the municipality of Tibú, Norte de Santander.
	Develop a pilot project of solar panels on floating membranes.	2023	EPM	Electrical energy	Colombia – Antioquia	A confidentiality agreement was signed with the technology supplier.

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in 2019
			Company	Business	Territory	
Photovoltaic solar energy and wind energy	Implement the alliance between EPM and Invernergy for nonconventional renewable energies (wind and solar energy).	2020	EPM	Electrical energy	Colombia	EPM signed an alliance with Invernergy, a world-class company, to develop projects for the generation and sale of nonconventional renewable energy, especially wind and solar energy, as well as solar self-generation projects. Solar and wind projects are grouped under this agreement.
Wind energy	Conduct technical, economic, and environmental feasibility studies for the development of large-scale wind farms.	2020	EPM	Electrical energy	Colombia	The environmental impact assessment of a park under study was reformulated. An agreement was reached with nine of eleven certified communities for the prior consultation. Environmental studies were started for the connection line and two measurement towers were installed in new projects.

## Related sustainable development goals



## Related stakeholders

Customers and users	Colleagues	Community	Owner
State	Suppliers and contractors	Investors	Partners

## GRI standards and EPM indicators

**103-1** Explanation of the material topic and its boundary.

**103-2** The management approach and its components.

**103-3** Evaluation of the management approach.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Tecnología Intercontinental -Ticsa  
 Elektra Noreste - ENSA  
 Empresas Varias de Medellín - Emvarias

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Mexico  
 Guatemala  
 Panama  
 El Salvador

### Businesses

Electrical energy  
 Sanitation

The background of the entire page is a repeating pattern of small, light green icons. These icons include various symbols for renewable energy (solar panels, wind turbines, water droplets, light bulbs), sustainability (recycling symbols, leaves, trees), and technology (gears, circuit boards, hands holding a globe). The icons are arranged in a dense, overlapping grid.

# Small hydroelectric power stations

## Small hydroelectric power stations

The electrical energy produced by small hydroelectric power stations (SHPS) is considered clean and classified as renewable, since its development has little impact on the environment. This technology uses the potential energy of streams and small rivers, which are abundant in Colombia.

Grupo EPM has the largest amount of SHPS in the Colombian market. It currently has an initiative to improve its competitiveness based on the implementation of improvements to the planning, construction, and operation processes that lead to the execution of new projects using this technology.

### Management in 2019

Within the initiatives approved for the growth of Grupo EPM, Vision 2025 seeks to evaluate competitiveness strategies for SHPS, in order to implement them in future projects related to this technology in the companies of the group.

In 2019, a project was structured and an environmental license was modified. Potential allies were also analyzed to advance in the development of this project.

The environmental impact assessment of a new SHPS was filed and the exoneration of the environmental diagnosis of alternatives was achieved for another project.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
Central Hidroeléctrica de Caldas - CHEC

#### Territory

Colombia - Antioquia  
Colombia - Caldas

#### Business

Electrical energy

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to renewable energy and sustainability, including solar panels, wind turbines, light bulbs, water droplets, leaves, recycling symbols, and houses with solar panels. The icons are arranged in a grid-like fashion, creating a textured, eco-friendly background.

# Biomass



## Biomass

Biomass is biological organic matter that can be used as an energy source. Its renewable nature is explained by the fact that its energy content comes from the solar energy fixed by living organisms on chemical compounds during the photosynthesis process, in which CO<sub>2</sub>, water, and minerals are transformed into oxygen and high-energy organic compounds such as sucrose, starch, and cellulose.

The organic matter from wastewater, the sludge resulting from its treatment, and the organic fraction of the municipal solid waste (MSW) are also considered biomass.

Colombia has great biomass resource potential and, therefore, EPM has conducted studies for a possible business based on the use of forest biomass or on the production of biofuels using second generation raw materials, including some types of grass that do not affect human food security.

## Management in 2019

In the Cauca River, a large amount of biomass that is being accumulated in the reservoir of the Ituango hydroelectric project can cause the proliferation of disease vectors and the generation of methane in the process of decomposition. To address this problem, different options for using this material were analyzed with some industrial companies and possible technological alternatives were evaluated.

In the execution of the project to obtain 2G ethanol in agreement with Universidad de Antioquia, operating variables were validated to determine the economic feasibility of the process at the pilot plant level and the final technical and financial assessment was received. Despite the fact that the demand for biofuels is expected to increase in the coming years, the commercialization of bioethanol produced from lignocellulosic material is affected by variables exogenous to the process (the price depends on the price of sugar), which could affect the viability of the project.

The reservoir of the Ituango hydroelectric project is receiving a large volume of floating material from the river (123,000 m<sup>3</sup>/year), including water hyacinth (2,200 m<sup>3</sup>/year). In addition, there is not enough space for storing it. Trying to find solutions to this problem, a team was formed to evaluate technological alternatives for the use of this floating material in the production of electricity.

The analysis takes into account aspects such as:

- Availability of the plant's land: effective area and material storage center.
- Comparison of alternatives: Equivalent annual cost (EAC) of the floating material disposal vs. power generation.
- Externalities related to the new alternative: creation of jobs / local labor, alternative solution according to the ANLA's requirements, environmentally friendly, modular / scalable, use of local energy crops, solution for other reservoirs (e.g. forest harvesting).
- Solution for the use of this material through its valorization.

In 2020, progress will be made on the most suitable solution. To this end, a characterization of the existing biomass and a quantitative evaluation of the other technological solutions will be performed.



**Material floating in the reservoir being removed**



**Classified logs**



Floating biomass

Investment in biomass projects (million COP)			
Concept / Indicator	2017	2018	2019
Production of bioethanol and biobutanol from lignocellulosic biomass and development of pilot plant.	1,407	163	207
Production of liquid biohydrocarbons through hydrotreating and hydrothermal liquefaction of biomass.	142	-	-
<b>Total investment</b>	<b>1,549</b>	<b>163</b>	<b>207</b>

Source: Executive Vice Presidency of Strategy and Growth / Development and Innovation Management.

## Scope and coverage

### Company

Empresas Públicas de Medellín - EPM

### Territory

Colombia - Antioquia

### Business

Electrical energy



# Wind energy

## Wind energy

Wind energy is the most mature and efficient renewable energy. It is one of the energy sources with the greatest potential. Aware of the quality of the wind resource and that there is a growing number of productive projects of this type in Latin America, Grupo EPM wants to continue betting on this energy source as a viable alternative that favors power generation and global warming mitigation.

### Management in 2019

In order to increase the energy portfolio of EPM through nonconventional renewable energy solutions (solar parks, wind farms, and self-generation plants) and gain the key capacities to develop this type of businesses, a strategic alliance was signed with Invernergy, a world-class company with which the knowledge transfer plan clauses were negotiated and a collaboration framework agreement was signed.

EPM continues fostering the development of large-scale wind farms, as part of the portfolio of projects for the growth of the generation business in the short, medium, and long term. It has been studying several projects in the Colombian territory (La Guajira and other regions), which are in different stages (recognition, prefeasibility, and feasibility).

In 2019, the environmental impact assessment for a new wind farm was reformulated due to the dynamics in the process of engagement with the communities. With regard to the prior consultation, agreements were reached with nine of the eleven communities in the area of influence, environmental studies for the substation connection line were started, and the analysis of environmental restrictions for the selection of the transmission line alignment was completed.

Moreover, two measurement towers were installed in new projects and two additional projects were identified.

Due to technical and regulatory reasons, after completing its service life, the Jepírachi wind farm, located in La Guajira, entered the decommissioning phase. Similarly, a process of disinvestment was carried out in Los Cururos wind farm, located in Coquimbo, northern Chile.

Investment in wind projects (million COP)			
Concept / Indicator	2017	2018	2019
Development of large-scale wind farms - Studies	834	3,107	1,117

**Source:** Vice Presidency of Power Generation.

## Scope and coverage

### Company

Empresas Públicas de Medellín - EPM

### Territory

Colombia - Antioquia

### Business

Electrical energy



# Geothermal energy

## Geothermal energy

Geothermal energy is produced thanks to the natural heat inside the Earth. It comes out in the forms of hot springs, steam emissions, and mud volcanos. It is used to generate electrical energy when water vapor is carried by pressure to the surface to a geothermal power station.

Besides coming from a renewable source, this energy does not require large extensions of land, has a low environmental impact, provides firm energy, is environmentally friendly, and poses a low risk for the neighboring communities since its operation is very safe and clean.

EPM, in cooperation with CHEC, is making progress in the studies and licenses to develop a project for a geothermal energy plant that would be located in central-western Colombia.

## Management in 2019

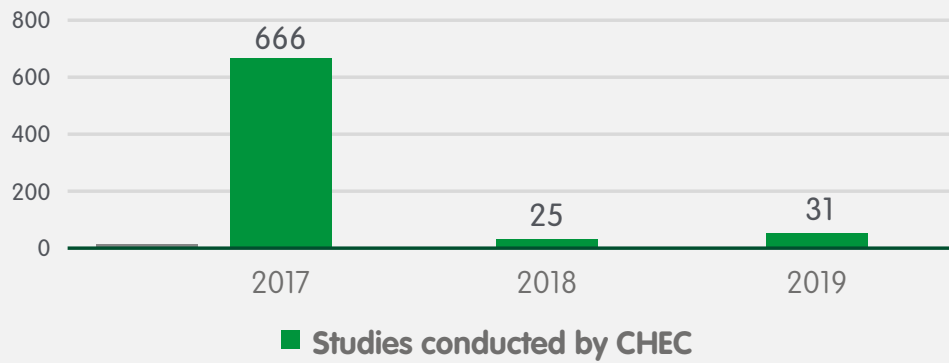
EPM and CHEC met the requirements of the environmental authorities and prepared the financial model to estimate the cost of energy production in the project for future decision-making.

The additional information of the environmental impact assessment for the geothermal project in the Ruiz volcanic massif was submitted to Corpocaldas and a request to end the closed season and declassify the reserve area was submitted to the Ministry of Environment and Sustainable Development.

In addition, the project's financial model and risk management plan are already available.



Investment in studies - Geothermal project (million COP)



Source: Vice Presidency of Power Generation.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
Central Hidroeléctrica de Caldas - CHEC

### Territory

Colombia - Antioquia  
Colombia - Caldas

### Business

Electrical energy



# Photovoltaic solar energy

## Photovoltaic solar energy

The capacity to generate photovoltaic solar energy has been increasing and the costs associated with its production have been decreasing, which makes it an attractive and competitive technology.

Photovoltaic solar energy is of great interest to Grupo EPM, as well as the implementation of projects that make use of the available solar resource. The formulation of initiatives and projects in non-interconnected and difficult-access areas, the installation of small-scale photovoltaic systems, and the development of large-scale projects are becoming increasingly common.

In the specific case of Colombia, where Grupo EPM has an important electricity market share, there has been a favorable trend towards this technology. In consequence, it is one of the main bets for the future energy supply.

## Management in 2019

EPM seeks to expand its energy portfolio through the implementation of nonconventional renewable energy solutions: solar parks, wind farms, and self-generation plants. Inenergy was selected as a strategic ally with which the clauses of the knowledge transfer plan were negotiated and a collaboration framework agreement was signed.

In addition, Grupo EPM has been developing photovoltaic solar projects at its own facilities and is consolidating different business models that enable the implementation of self-generation and distributed generation offers.

EPM has been consolidating two photovoltaic solar energy offers for large customers and homes. Regarding the solution for large customers, two important projects stand out: the installation of the second stage in the El Tesoro commercial park and the assembly of the roof in Plaza Mayor convention and exhibition center. On July 10, 2019, EPM launched its solutions for homes and installed a capacity of 5.27 kWp.

Progress was also made in the development, along with a strategic ally, of a large-scale solar park in Colombia, connected to the electrical system. In 2019, EPM acquired the project, conducted the on-site measurement of the available solar resource for 13 months, and made progress on the environmental impact assessment. Additionally, the company concluded the feasibility study of another project that could be included in the alliance and filed the connection study.

At the same time, EPM signed an alliance with Invenergy, a world-class company, to develop projects for the generation and sale of nonconventional renewable energies, especially wind and solar energy, as well as solar self-generation projects. According to the agreement, EPM will have the option of purchasing these projects once they come into operation, thus expanding the energy mix of the company and the group.

EPM also continued with its pilot project of floating solar panels in the Peñol-Guatapé reservoir, Eastern Antioquia, overcoming technical problems to complete the measurements of the rooftop and floating systems.

The national and international subsidiaries are interested in developing photovoltaic solar projects at their own facilities and in consolidating a business model for implementing self-generation and distributed generation offers.

Although it is a long-range initiative, EPM takes part in the project “Development of nanostructured solar cells with materials available in Antioquia”, contributing laboratory equipment and the knowledge of EPM professionals.

<b>Investment in solar projects (million COP)</b>			
<b>Concept / Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Execution of projects in EPM parent company	7,411	1,677	1,039
Execution of projects in the affiliated companies	651	621	508
<b>Total investment</b>	<b>8,062</b>	<b>2,298</b>	<b>1,547</b>

*Source: Executive Vice Presidency of Strategy and Growth / Development and Innovation Management.*

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS  
 Elektra Noreste - ENSA  
 Distribuidora de Electricidad del Sur - Delsur

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Santander  
 Colombia - Norte de Santander  
 El Salvador  
 Panama

### Business

Electrical energy



# Biogas

## Biogas

Biogas is a gas obtained from the breakdown of organic matter or waste in the absence of oxygen. Biogas is commonly generated in wastewater treatment plants (WWTP) and landfills.

Biogas is an energy source of interest to Grupo EPM and, therefore, it has conducted analyses to define the best use of biogas generated in the La Pradera landfill, located in the northern sub-region of the department of Antioquia, and in the San Fernando WWTP, located in Itagüí. Some options are the generation of electricity or heat or its purification and injection into the network. This is possible in Colombia pursuant to Ruling 240 of 2016 by the Energy and Gas Regulatory Commission (abbreviated CREG in Spanish), according to which biogas that is produced and used for self-generation in these plants can be converted, through chemical processes, into **biomethane** and subsequently injected into the natural gas network.

## Management in 2019

In the Aguas Claras WWTP, significant progress was made in self-generation of electrical energy thanks to the production of biogas and its use as fuel for motor generators.

With the burning of biogas at the La Pradera landfill, the company achieved 7,365 hours of burning, which represents 84% of the annual burning goal, assuming that there is a 24-hour gas emission. The average flow rate of gas burned was 942.56 m<sup>3</sup>/h, with a decrease from the previous year.

The production of biogas in the San Fernando WWTP displayed ups and downs, closing the year with a 16.34% decrease compared to 2018.

In 2019, there was a 16.34% decrease in methane production, compared to 2018, at the San Fernando WWTP, which is equivalent to 816,146 m<sup>3</sup>. The causes of this decrease include the following events: Between January and April 2019, the extraction of primary sludge decreased due to internal obstructions in the pumping equipment and the reduction in the efficiency of the pumps; in August 2019, the Bardenpho system started to operate, which, due to its high efficiency, generates more sludge; there were some problems in the adjustment of the centrifuge thickening system; and in August and October 2019, there were events of acidification of the digester 1.

In the last quarter, the Aguas Claras WWTP produced a total of 2,149,644 m<sup>3</sup> of biogas, which was used to generate up to 2,700 KWh, equivalent to 40% of the plant's electrical energy demand.

The average flow rate of gas burned in the La Pradera landfill was 942.56 m<sup>3</sup>/h, a lower volume than the previous year. There are no projects involving the use of biogas in 2020.

In addition, the project "Use of biogas as an alternative source of renewable energy at the San Fernando WWTP" is under analysis, which demonstrates that closing cycles, using resources, and optimizing processes increase value for stakeholders, improve energy efficiency thanks to the use of 100% biogas, reduce methane and carbon dioxide emissions, and favor a more efficient and circular use of energy resources and raw materials.

Moreover, another alternative energy source is promoted: biomethane, a nonconventional energy source that can become a substitute for a nonrenewable resource such as natural gas or replace current energy generation technology with a different technology that uses thermal energy.



<b>Biogas production (m<sup>3</sup>) San Fernando wastewater treatment plant</b>			
<b>Month</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
January	427,038	502,173	401,950
February	411,646	470,163	341,307
March	473,335	502,646	366,057
April	452,134	490,025	376,771
May	406,799	458,703	393,363
June	439,440	496,059	396,830
July	246,631	532,679	408,165
August	490,264	460,363	408,928
September	425,345	463,837	415,602
October	482,239	488,164	468,060
November	493,915	429,344	544,129
December	520,395	500,149	465,997
<b>Total</b>	<b>5,269,181</b>	<b>5,794,305</b>	<b>4,987,159</b>

*Source: Vice Presidency of Water and Sanitation.*

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
Empresas Varias de Medellín - Emvarias

### Territory

Colombia - Antioquia

### Businesses

Sanitation  
Electrical energy



# Climate strategy



## Climate strategy

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Through this strategy, Grupo EPM aims to achieve resilient and carbon-efficient businesses, through the integration of the climate variable in the different analyses and corporate decisions, thus contributing to sustainability and competitiveness, minimizing vulnerability to climatic risks and developing low GHG (greenhouse gas) emission operations in all the regions where the group offers its products and services, under the principles of comprehensiveness, competitiveness, flexibility, and innovation.

With this purpose it seeks to respond to the precautionary principle enshrined in domestic and international law, as a guiding and protective principle of the environment whose purpose is to guide the conduct of all agents to prevent or avoid serious and irreversible damage to the environment; even when such damage is not at an ending or threatening stage but at a prior stage and different from the risk or danger of damage, and there is no absolute scientific certainty about its occurrence.

### Relevance

The bidirectional relationship between climate events and Grupo EPM's businesses requires maintaining a business development that considers the analysis of climate variables in its decision making.

Considering climate variability and change and their influence in the ecosystems, in the territories, and in the availability of natural resources, Grupo EPM needs to have strategies to provide its services, restructure its products, leverage its competitive advantages, and establish risk management systems that enable the group itself and its environments to adapt, thus favoring stronger economies in harmony with society and the environment.

## Main achievements

Challenges	Achievements in 2019	Accomplishment
Obtain the certification of reduction of emissions caused by La Vuelta and La Herradura small hydroelectric power stations, the Jepirachi wind farm, and REDD+ EPM.	The designated operational entity verified: The capture of 63,636 tCO <sub>2</sub> achieved between 2014 and 2017 by the REDD+ EPM project. The reduction of 73,285 tCO <sub>2</sub> e by the operation of La Vuelta and La Herradura small hydroelectric power stations, as well as the 24,604 tCO <sub>2</sub> e reduction achieved by the operation of the Jepirachi wind farm in 2018. The validation and verification body issued the opinion for the registration of the Porce III hydroelectric project in the Cercarbono standard for a first accreditation period 2011-2020; and it also issued the certification of 8,775,917 tCO <sub>2</sub> e reduced in the period 2011-2018.	Total
Obtain the certification of reduction of emissions caused by the Los Cururos wind farm operation during 2016, 2017, and 2018.	This milestone was eliminated due to the sale of EPM Chile.	Not accomplished
Update the 2017 GHG inventory of emissions of Grupo EPM, based on the adjustments made to the calculation methodology by external assurance.	Grupo EPM 2017 greenhouse gas emissions inventory was updated based on the adjustments indicated by external assurance.	Total
Prepare and disclose the 2018 GHG inventory of the group with the adjusted methodology.	Grupo EPM 2018 greenhouse gas emissions inventory was prepared, incorporating gas leaks in air conditioning and refrigeration systems, leaks in fire extinguishing equipment and the estimation of emissions from organic waste composting processes, among others.	Total
Integrate the results of Phase II Climate Study conducted with the Universidad Nacional into the measures and actions defined in Grupo EPM's Adaptation Plan.	The results and recommendations of the study carried out with the Universidad Nacional were discussed with the corresponding organizational bodies. The 2020 budget was allocated to continue climate scenario modeling.	Total
Integrate the climate risk analysis into the methodological system of business risk management and the control and monitoring systems.	The proposal for the climate risk model was completed and shared internally. The documents, the template for its implementation and the road map for 2020 were delivered.	Total

## Challenges

Challenges	Year in which it is achieved	Scope and coverage		
		Company	Business	Territory
Establishment of indicators in mitigation and adaptation of Grupo EPM, based on the prioritized actions.	2020	Grupo EPM	All the businesses	All the territories
Second auction of reduced tCO <sub>2</sub> from EPM (carbon tax)	2020	EPM	Electrical energy	Colombia – Antioquia
Verification of emissions reduction by the operation of the Jepírachi wind farm in 2019.	2020	EPM	Electrical energy	Colombia – Antioquia
Identification of new emission reduction projects to be registered in Colombian carbon standards.	2020	EPM	All the businesses	Colombia – Antioquia
Estimation of reduced emissions from internal mitigation initiatives.	2020	Grupo EPM	All the businesses	All the territories
Implementation of the Weather Research and Forecasting (WRF) climate model to monitor climate variables in businesses.	2020	EPM	Electrical energy	Colombia – Antioquia
Incorporation of the climate risk model in business risk management (EPM and national energy affiliates).	2020	Grupo EPM	Electrical energy	Colombia
Estimation of Grupo EPM's 2019 GHG emissions inventory.	2020	EPM	All the businesses	Colombia – Antioquia

## Related sustainable development goals



## Related stakeholders

Colleagues

Community

State

## GRI standards and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 201-2** Financial implications and other risks and opportunities due to climate change.
- 305-1** Direct (Scope 1) GHG emissions.
- 305-2** Energy indirect (Scope 2) GHG emissions.
- 305-3** Other indirect (Scope 3) GHG emissions.
- 305-4** GHG emissions intensity.
- 305-5** Reduction of GHG emissions.
- 305-7** Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Malambo, Atlántico  
 Colombia - Norte de Santander  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas

The background of the slide is a repeating pattern of small, light green icons. These icons include symbols for renewable energy (solar panels, wind turbines, light bulbs), sustainability (recycling symbols, leaves, water drops), and business/technology (gears, hands holding a lightbulb, a car, a house).

# Strategy management

## Strategy management

Climate change poses important challenges for the human race and the global economy. It is considered as one of the main challenges in sustainable human development; therefore, it becomes a key aspect of study and comprehensive analysis from the environmental, social, political, economic, technological, regulatory, and cultural perspectives to define business stances.

Fixing strategies based on the aforementioned perspectives enables the companies to face the challenge posed by their growth and development considering the climate impact.

## Management in 2019

In 2019, Grupo EPM's climate strategy was implemented with priority actions in energy efficiency, sustainable mobility, renewable energy, ecosystem conservation, and use of opportunities derived from emissions management.

EPM structured and registered the Porce III hydroelectric project in the Colombian Cercarbono standard, for a first credit period (2011-2020) and verification of the reduction of 8,775,917 tCO<sub>2</sub> (2011-2018).

The first auction of 550,000 certified emission reductions (CER) from the operation of EPM's La Vuelta and La Herradura small hydroelectric power stations was held for large commercial customers in Colombia who need to meet carbon tax obligations.

With this action, the company obtained income of approximately COP 8,500 million that will be reinvested in the development and strengthening of climate initiatives.



## Main progress

### — Emissions inventory

In the quest for a carbon neutral operation from 2025, the company estimates its carbon footprint annually. It includes national and international businesses and affiliates. For 2019, the calculation was 912,020.43 tCO<sub>2</sub>e, which showed an increase with respect to 2018, when the EPM inventory was 182,064 tCO<sub>2</sub>e and that of Grupo EPM was 619,117 tCO<sub>2</sub>e. The main variations were in thermal generation due to the continuous operation of La Sierra thermal power station during December.

For the calculation, methodological adjustments were incorporated and internal workshops were held in order to achieve knowledge transfer, standardize criteria, and progress in strengthening the analysis and provision of information. To see the breakdown of the EPM and Grupo EPM inventory, go to the “Climate change mitigation” action.

### — Emission factor

EPM committed since 2012 to keep its emission factor below the factor of the National Interconnected System (abbreviated SIN in Spanish), which it has been achieved since then. EPM's emission factor for 2019 was 0.0279 tCO<sub>2</sub>e/MWh, while the national power emission factor was 0.1644 tCO<sub>2</sub>e/MWh; this shows that EPM's emissions remain below the SIN. The highest power consumption of Grupo EPM was recorded in thermal generation (58.19%), in its own vehicle fleet and stationary equipment (12.03%), and in water supply (11.72%).

### — Emissions offset and low-carbon products

The technical working group for the analysis of offset alternatives and low-carbon products was maintained. Emission reduction projects, potential offset initiatives, and opportunities arising from emissions management were monitored.

At the end of 2019, there are six projects registered by EPM with different national and international emission reduction standards. Through these projects, EPM achieved the following goals:

- The first verification of the capture of 63,636 tCO<sub>2</sub>e by the REDD+ EPM project (2014-2017). It should be noted that this project stems from one of the commitments made by EPM in its 2012 climate declaration.

- Verification of the reduction of 73,285 tCO<sub>2</sub>e by the operation of La Vuelta and La Herradura small hydroelectric power stations (2018) and 24,604 tCO<sub>2</sub>e by the Jepírachi wind farm operation (2018).
- Verification of the reduction of 8,775,917 tCO<sub>2</sub>e by operation of Porce III hydroelectric project (2011-2018).
- Renewal of the third and last credit period of the Jepírachi wind farm and La Vuelta and La Herradura small hydroelectric power stations (2019-2025).

Income worth COP 8,415 million was obtained from the first auction of 550,000 certificates available from the La Vuelta and La Herradura small hydroelectric power stations as well as COP 2,570 million from the sale of 746,356 renewable energy certificate (REC) or REC certificates of origin from the Jepírachi wind farm, La Vuelta and La Herradura small hydroelectric power stations, and Porce III hydroelectric project.

In addition, progress was made in the analysis of scenarios and projections of the emissions inventory by 2030 to propose the scheme of goals and offsets among the group, for the contribution to the carbon neutral operation commitment.

The accounting matrix for emissions, cost, and income management was designed.

### — Risk analysis and climate risk scenarios

- Implementation and monitoring of adaptation measures by the different businesses and companies of Grupo EPM.
- Integration of actions with the integrated water resources and biodiversity management strategy.
- Formulation of the climate risk model integrated into the business risk analysis methodology.
- Design of a proposal for the establishment of a specialized technical group to carry out a permanent study of climate scenarios with an impact on businesses, considering the results and recommendations of the Phase II Climate Study, carried out by the Universidad Nacional.

For further details, read the section “Adaptation to climate change and variability”.

## EPM and Colombia emission factor in 2019

EPM's emission factor / SIN's emission factor				
tCO <sub>2</sub> e indicator / MWh year	2016	2017	2018	2019
EPM's emission factor	0.0513	0.0097	0.0096	0.0279
SIN's emission factor	0.2100	0.1100	0.1070	0.1644

Source: EPM.

EPM's emission factor remains below the national emission factor.

The variations resulted from an increase of 740.59% in natural gas for the generation of 159.25 GWh at the La Sierra thermal power station in 2019, compared to 19.29 GWh generated in 2018, due to the support it must offer to the power generation committed by EPM to the Ituango hydroelectric project.

The values for the national emission factor correspond to the calculation made by XM, as the country's official source to date.

*Source:* <https://www.xm.com.co/Paginas/detalle-noticias.aspx?identificador=2383>

## Balance of renewable energy certificates 2019

Balance of accumulated and redeemed certificates						
Power plant	Accumulated issued as of 2019	Redeemed in 2017	Redeemed in 2018	Redeemed in 2019	Total redeemed as of 2019	Balance
Jepírachi	44,762	0	23,164	21,598	44,762	0
La Vuelta	34,066	0	6,733	8,482	15,215	18,851
La Herradura	66,414	1,191		24,775	25,966	40,448
Porce III	2,322,238	461,000	1,132,362	691,501	2,284,863	37,375
<b>Total</b>	<b>2,467,480</b>	<b>462,191</b>	<b>1,162,259</b>	<b>746,356</b>	<b>2,370,806</b>	<b>96,674</b>

*Source:* EPM. Directorate of Markets.

As of 2019, a total of 2,467,480 renewable energy certificates from Jepírachi, La Vuelta, La Herradura, and Porce III have been issued, of which 2,370,806 have been redeemed. This represents an approximate income of COP 4,204 million. Of this amount, COP 2,570 million corresponds to 2019.

The income received from this initiative will be reinvested in the development of new projects.

## Projects to reduce emissions by 2019

Emission reduction projects registered in international carbon standards.							
Project	Standard	Credit period	Estimated tCO <sub>2</sub> e reduced	Verified tCO <sub>2</sub> e reduced			
				2016	2017	2018	2019
Jepirachi wind farm	Clean development mechanism	2004-2025	25,631	22,590	1,358	24,604	NDA
La Vuelta and La Herradura small hydroelectric power stations		2005-2025	77,149	72,908	85,559	73,285	NDA
Bello WWTP		2015-2035	79,640	NA	NA	NA	NDA
REDD+ EPM project:	Climate, community, and biodiversity	2014-2033	5,462	63,636 between 2014-2017		NDA	NDA
Porce III hydroelectric project	Cercarbono	2011 - 2020	1,139,242	1,038,409	1,246,901	1,328,608	NDA
Ituango hydroelectric project	Verified Carbon Standard (VCS)	2018-2027	4,383,088	NA	NA	NA	NA

**Source:** Sustainable Development Management.

The estimated tCO<sub>2</sub>e reduced correspond to those recorded in the project design document. The 2019 tCO<sub>2</sub>e will be in the process of verification between 2020-2022.

Verification of the reduction of emissions is carried out for the expired year.

## GRI standards and EPM indicators

- 201-2** Financial implications and other risks and opportunities due to climate change.
- 305-1** Direct (Scope 1) GHG emissions.
- 305-2** Energy indirect (Scope 2) GHG emissions.
- 305-3** Other indirect (Scope 3) GHG emissions.
- 305-4** GHG emissions intensity.
- 305-5** Reduction of GHG emissions.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Tecnología Intercontinental -Ticsa  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water supply  
 Electrical energy  
 Sanitation  
 Natural gas



# Climate change mitigation

## Climate change mitigation

Set of actions, initiatives, projects, and programs developed by the company with the purpose of avoiding and reducing GHG emissions in its processes and operations.

As part of its commitment to improve air quality and sustainable mobility in the metropolitan area of Valle de Aburrá, EPM installed natural gas for 4,264 vehicles during 2019, 80% of which used the financing plan offered by the company, for an approximate amount of COP 2,800 million per year. Currently, there are about 25,000 vehicles converted to natural gas in metropolitan area of Valle de Aburrá.

Considering the pollutants emissions per kilometer travelled, by replacing diesel Euro IV freight and public transport vehicles with natural gas vehicles, reductions of over 94% are obtained for particulate matter, 94% for volatile organic compounds, 95% for nitrogen oxides, and 99% for sulfur oxides.

The public lighting program of the EPM power transmission and distribution business met its challenge in the technological change of public lighting in the city of Medellín, through the installation of 2,151 LED light points that allowed for energy savings of 41,544 kWh and a decrease of 6.83 tons of CO<sub>2</sub>e.

EPM water supply and sanitation put into operation the Aguas Claras WWTP, through which it is estimated that 84% of the wastewater in the metropolitan area of Valle de Aburrá will be treated while contributing to the reduction of the region's carbon footprint.

As part of the natural gas, water supply, and sanitation businesses, EPM began a project to use the biogas generated at the San Fernando WWTP to inject it into the natural gas network as a biomethane. The project was approved at the feasibility level and will be implemented between 2020-2022. It will allow the efficient use of energy resources, raw materials, and reduction of methane and carbon dioxide emissions. High efficiency technologies are expected to treat 100% of the biogas, allowing the capture of more than 98% methane.

As part of the implementation of Grupo EPM's climate strategy, significant progress was made by businesses and companies related to energy efficiency, renewable energies, and sustainable mobility. Thus, the following has been achieved:

## Energy efficiency

- Due to the delay in the commissioning of the Ituango hydroelectric project, an exclusive contract was entered into to guarantee the supply of natural gas for 3 years, starting on December 1, 2019, for La Sierra thermal power station. This action supports the power generation demand.
- Through the Llame Antes de Excavar (Call before You Dig) program and the installation of excess flow valves, leaks in the natural gas distribution and transportation system were reduced, which contributes to lower methane emissions, since natural gas contains between 83%-98% of this greenhouse gas.
- EPM's La Alpujarra district heating and cooling, which started operations in 2016, remained active. It is recognized as a sustainable energy-efficient solution that uses waste heat, reduces heat island effects, CO<sub>2</sub> emissions by 30%, and 100% of ozone-depleting substances (ODS).
- The EPM transmission and distribution business fulfilled 100% of its plan for the prevention, management, and replacement of SF<sub>6</sub> gas. It addressed all the leaks reported and replaced 17.74 kg as of December 2019.
- Due to changes in lighting, a reduction of 32,725,413 kWh was achieved in the EPM building.
- As for the water supply business, EPM achieved 34.28% self-generation at the San Fernando WWTP from the biogas generated and began testing for the implementation of the cogeneration system at the Aguas Claras WWTP.
- Aguas de Malambo made progress in implementing actions to reduce energy consumption by 20% at its wastewater treatment plant.
- CHEC recorded 7.51% in its annual losses compared to the estimated 8.27%. Therefore, it reduced its losses by 0.76%, meeting its annual reduction target. It also achieved the replacement of four 33 kV voltage level switches with vacuum SF<sub>6</sub> quenching medium. To reduce SF<sub>6</sub> emissions, it began the process of characterizing and reviewing the energy performance of facilities, substations and major plants, in order to propose improvements and energy efficiency action plans. It also achieved that 19% of its customers (7,477) were linked to the e-bill initiative, exceeding the expected goal of 15%.
- EDEQ achieved an energy loss rate of 8.28%, which means 101% fulfillment of its annual goal of 8.37%. It also received certification for its 2018 emissions inventory in compliance with the requirements of the first year of its 2018-2021 carbon neutral operation.



- CENS closed 2019 with an energy recovery indicator of 11.91% in relation to the goal of 12.20%.
- ESSA put into operation the machine for the recovery and treatment of SF<sub>6</sub> gas. It achieved a control indicator of 1.5% for power equipment, meeting the goal set for maintenance below 3% for the year.
- Eegsa achieved a reduction of 0.04% in the total energy loss rate with respect to 2018 and 0.02% with respect to technical energy losses. Eegsa continued its maintenance work in substations to increase its SF<sub>6</sub> control rate.
- Delsur continued the gradual shift from fluorescent lighting to LED lighting, replacing a total of 226 lamps. It also included the measure for all new projects, carried out preventive actions in the emission of greenhouse gases associated with energy losses, managed to document the energy efficiency specifications for the acquisition of new electrical equipment, and obtained a 3% reduction in electrical energy consumption with respect to 2017.
- ENSA carried out an inventory of air conditioners according to the type of gas and last maintenance, in order to estimate GHG emissions due to their operation.

## Renewable energies

- The EPM – Invenergy partnership was formalized to invest, develop, build, operate, and maintain power generation parks with wind or solar technologies (including the possibility of rooftops) in Colombia. Progress was made in the study of 18 new projects to expand the company's renewable power generation portfolio (five hydroelectric, eight wind, and five solar projects).
- The pilot project of photovoltaic solar energy in EPM reservoirs (100 kW – floating panels) showed relevant results of reduction in water evaporation, improvement of energy efficiency, and decrease in algae growth. Cost and performance advantages are analyzed.
- CENS carried out proceedings before the Mining and Energy Planning Unit (abbreviated UPME in Spanish) to ensure the viability of the distribution and commercialization of 220 MW of energy from nonconventional renewable sources.
- Through commercial management, progress was made in obtaining subsidies from the Colombian Ministry of Mines and Energy to connect users of the non-interconnected area (NIA) in the Quindío region to individual photovoltaic solar solutions.
- CHEC has an installed capacity of 25.92 kWp (kilowatt peak) and an approximate generation of 3,000 kWh/month for the supply of photovoltaic energy in the company's facilities.

- CHEC and EPM obtained the financial model for the development of the geothermal project in the region of Nereidas (Manizales) and the small hydroelectric power station in the Guacaica river basin (PGU5). The environmental legal proceedings are still in progress.
- An inter-institutional agreement was reached in Malambo to carry out a pilot project to install solar panels in its water treatment plant and replace the 100 kWh consumption.
- Eegsa put out to tender 60 MW for suppliers with renewable technology to contribute to climate change mitigation through its energy distribution and commercialization processes.
- ENSA started the project to install 450 solar panels of 325 W each to provide self-consumption in several of its facilities. The estimated reduction for the first year is 196,413.75 kWh/year and 138 tons of CO<sub>2</sub> per year.

### — Sustainable mobility

- Through public-private partnerships for mobility, EPM promoted the use of vehicular natural gas (VNG) and electrical energy as key elements to mitigate air pollution in the metropolitan area of Valle de Aburrá.

#### **In the natural gas component:**

- 3.800 bonds were delivered for installation of VNG equipment, of which EPM contributed about COP 1,400 million. A total of 411 buses of the massive transport system and 4 Emvarias garbage compactor vehicles began to operate, for a total of 63 vehicles.
- As of December 2019, there are 503 dedicated vehicles in the region, including buses, trucks, dump trucks, and taxis, as well as 17 stations. The company acquired three tank cars for drinking water service and put into operation a dump truck, a vacuum truck, and a bus.

#### **In the electrical component:**

- It was closed with a total of 20 public charging stations with 600 users, more than 1,100 vehicles in operation, 66 electric buses, and 7 taxis.
- Public financing for electric bicycles and motorcycles was implemented as well as an agreement for the financing of electric vehicles for EPM employees.
- Five new facilities were built for internal charging for EPM customers, reaching a total of 50.
- Progress was made in the joint structuring with Renting Colombia for the first all-electric car rental project in the country. The first electric truck project was also promoted through this system.

The following was achieved through the **Sustainable Business Mobility Plan**:

- A total of 136 executives and 324 employees in teleworking, 56 of which entered the program in 2019.
- Flexible hours were maintained with five working days scheduled in a staggered manner from 6:00 a.m.
- A total of 180 new people joined the En Bici al Trabajo (Bike-Riding to Work) program, for a total of 705. There are 221 bike parking spaces in the head office and 24 in alternate offices.
- The EnBici mobile application was enabled and now it has 471 users.

**In the international affiliated companies of Grupo EPM:**

- EDEQ put two electric vehicle semi-fast charging stations into commercial operation and developed a 90% internal charging offer.
- ESSA opened the first public fast and slow charging station for users of this technology.
- CENS promoted sustainable mobility systems for its employees, installed 8 bike parking spaces with a capacity of 72 bikes, and the first electric vehicle came into operation.
- Aguas Regionales provided 54 electric bicycles for employee use and initiated a campaign for carpooling.
- Aguas de Malambo purchased eight electric bicycles that will be used to monitor the drinking water service networks. They are intended to reduce greenhouse gas emissions by 20%.
- Eegsa implemented financing plans for motorcycles and electric bicycles among its employees, joined the Association of Electric Mobility of Guatemala, and sponsored four electric mobility events.
- Delsur installed the first charging station for electric vehicles in the country, carried out a road test to promote electromobility, and participated in the technical committee of the Transport Commission, in the Legislative Assembly, to promote the bill for the entry of electric vehicles into El Salvador.
- ENSA installed three charging points for electric cars at its head office and three at its alternate office. It also made progress in adapting the site for the installation of electric bicycles.

Each company and business has prioritized actions in its road map for 2020, which will be monitored and controlled in order to facilitate the fulfillment of common challenges and the construction of indicators by component, within the mitigation plan of Grupo EPM's climate strategy.

## GHG emissions inventory (scope 1 and 2), Grupo EPM and EPM

GHG emissions inventory (tCO <sub>2</sub> e)				
Grupo EPM	2016	2017	2018	2019
Scope 1	590,694	60,471	93,397	267,862
Scope 2	306,841	516,580	525,720	644,157
<b>Total</b>	<b>897,535</b>	<b>577,051</b>	<b>619,117</b>	<b>912,020</b>
EPM	2016	2017	2018	2019
Scope 1	514,664	45,480	84,572	236,298
Scope 2	131,972	92,179	97,492	162,298
<b>Total</b>	<b>646,636</b>	<b>137,659</b>	<b>182,064</b>	<b>398,596</b>

**Source:** Idsos application. Sustainable Development Management.

Grupo EPM's 2019 inventory includes the GHG emissions of: EPM, ESSA, CHEC, EDEQ, CENS, ENSA, Delsur, Eegsa, HET, Aguas de Malambo, Aguas Regionales EPM, Aguas del Oriente, Emvarias, and Adasa. The GHG protocol methodology is followed and the CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, and HFC gases are included.

There is a considerable increase compared to 2018, mainly due to a 740.59% increase in natural gas for the generation of 159.25 GWh at the La Sierra thermal power station in 2019, compared to 19.29 GWh generated in 2018, due to the support it must offer to the power generation committed by EPM to the Ituango hydroelectric project.

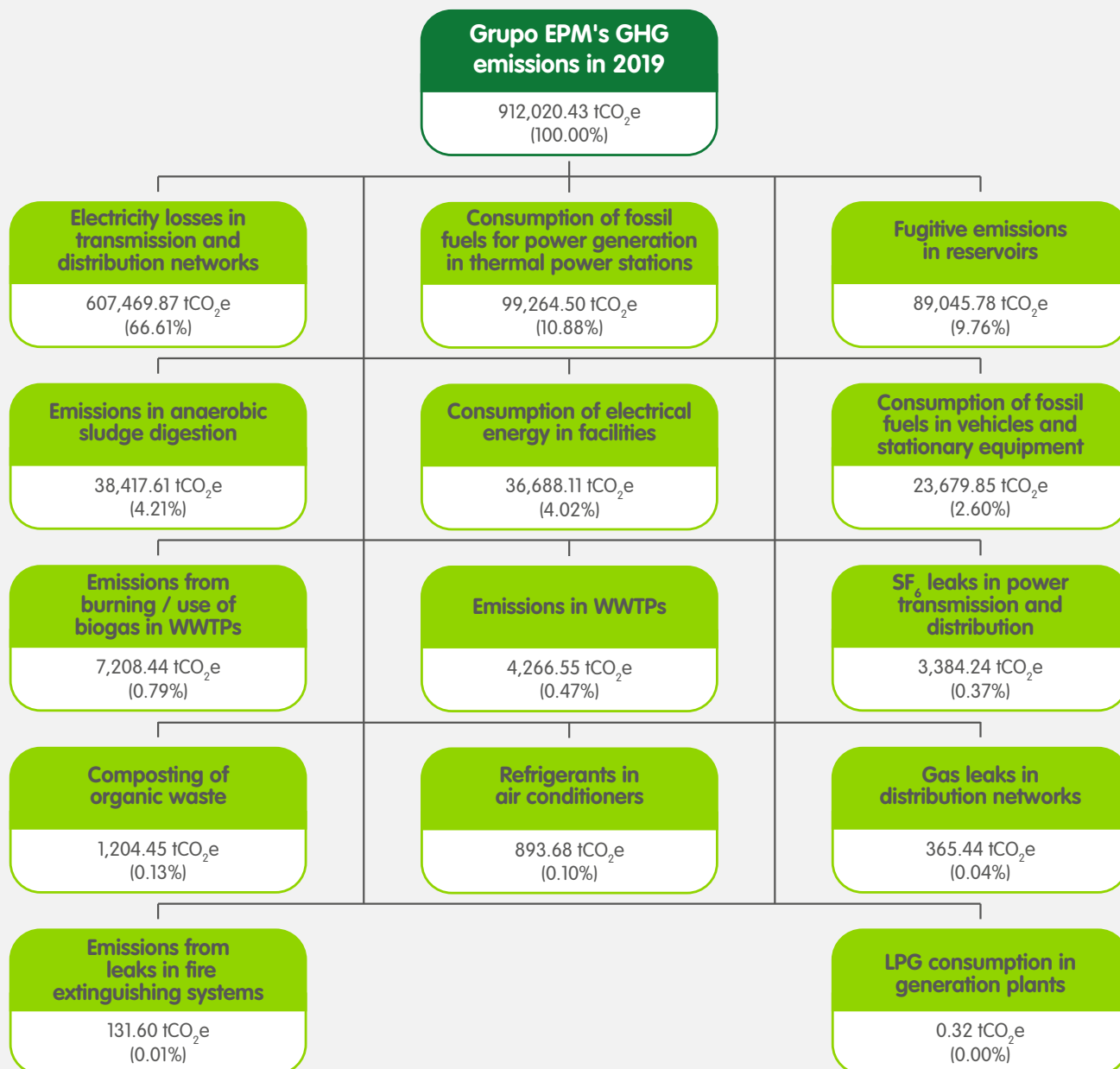
Minor changes are reported in the 2018 inventory calculation, due to the inclusion of EPRio, and the registration of emissions from composting.

**Note:** The annual inventory is calculated for the expired year.

*Direct (Scope 1) GHG emissions.* They include the emissions from the sources owned or controlled by the company, as well as the emissions from vehicles of the company's fleet, the emissions from steam or boilers, and the fugitive emissions from the company's air conditioners, ducts, or systems.

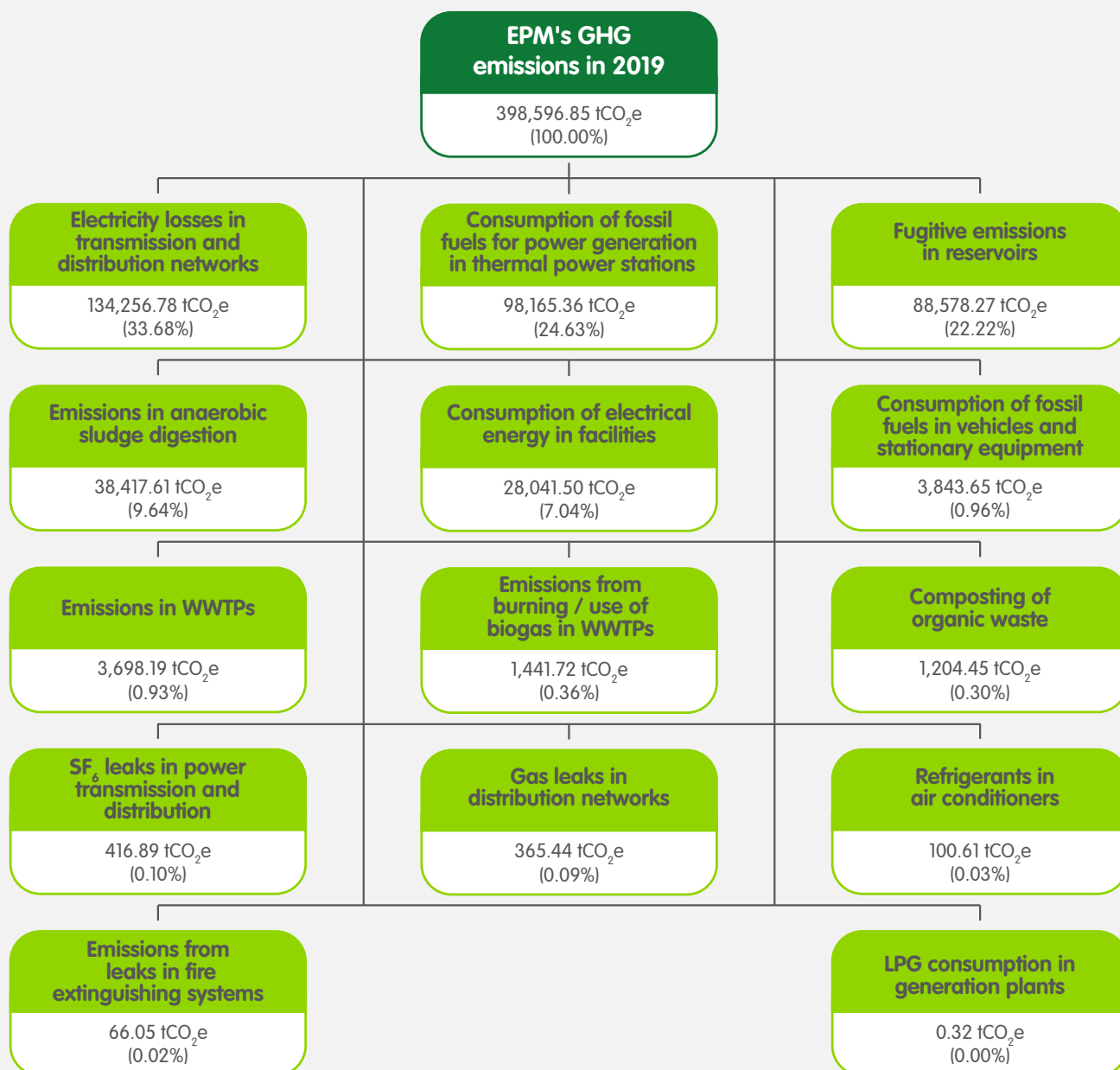
*Energy indirect (Scope 2) GHG emissions.* They include the emissions from the electrical consumption and those from heat, steam, and refrigeration sources that are acquired externally, as well as those associated with losses of power in the transmission and distribution networks.

## Details of scope 1 and 2 emissions of Grupo EPM by activity



Source: Idsos application.

## Details of scope 1 and 2 emissions of EPM by activity



Source: Idsos application.

## EPM's GHG emissions inventory (scope 3)

EPM's emission inventory (scope 3)								
Concept / Indicator	2016		2017		2018		2019	
	Ton CO <sub>2</sub> e	%	Ton CO <sub>2</sub> e	%	Ton CO <sub>2</sub> e	%	Ton CO <sub>2</sub> e	%
Goods and services	* 16,118	0.64%	* 16,118	0.58%	* 16,118	0.70%	* 16,118	0.64%
Capital assets	* 525	0.02%	* 525	0.02%	* 525	0.02%	* 525	0.02%
Fuels	67,355	2.67%	2,049	0.07%	2,218	0.10%	10,369	0.41%
Waste	42,143	1.67%	51,767	1.85%	59,224	2.58%	*** 68,051	18.07%
Land transport + air transport	4,756	0.19%	2,363	0.08%	2,631	0.11%	3,685	0.15%
Transportation of personnel	** 3,260	0.05%	** 3,260	0.12%	3,124	0.14%	3,938	0.16%
Use of products sold	2,390,537	94.76%	2,718,413	97.28%	2,208,003	96.34%	2,023,557	80.55%
<b>Total</b>	<b>2,524,694</b>	<b>100.00%</b>	<b>2,794,494</b>	<b>100.00%</b>	<b>2,291,843</b>	<b>100.00%</b>	<b>2,512,087</b>	<b>100.00%</b>

**Source:** Sustainable Development Management.

\* Values of 2012 are used.

\*\* Values of 2015 are used.

\*\*\* The 157,002 tons of wood generated due to the filling of the Ituango project's reservoir are excluded. It is estimated that this waste would generate around 385,841 tons CO<sub>2</sub>e.

- Scope 3 emission inventory uses the calculation baseline of 2012 and follows the GHG Protocol methodology and the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, published by the WRI and the WBCSD.
- In the "goods and services" and "capital goods" categories, the same values as in 2012 are maintained.
- The results show that the highest emissions are still those associated with the consumption of products sold by the company.
- Despite the implementation of alternative means of transportation for employees (bicycle, teleworking, carpooling, etc.), there is a considerable increase in the emissions produced by their commuting between 2017 and 2019, mainly due to the gradual increase in the number of employees during this period, since they were 6,500 in 2017, 7,153 in 2018, and 7,917 in 2019.

**Note:** Other indirect (Scope 3) GHG emissions. They include the rest of the indirect emissions as a result of the activities of the company that do not come from the company's sources or sources controlled by the company (production of acquired materials; work trips; transportation of raw materials, fuels, and products; and consumption of products or services offered by the company).

## SOx and NOx emissions – Grupo EPM

SOx and NOx emissions – Grupo EPM						
Concept / Indicator (Ton / year)	2017 <sup>(1)</sup>		2018 <sup>(2)</sup>		2019 <sup>(3)</sup>	
NOx and SOx emissions	NOx	SOx	NOx	SOx	NOx	SOx
La Sierra thermal power station (isokinetic sampling).	3.89	0.00	2.53	0.00	21.74	0.11
Transportation of personnel, supplies, and products in vehicles of the group.	70.26	1.02	44.31	0.43	56.82	0.45
Adasa			60.45	3.21	28.32	1.50
<b>Total</b>	<b>74.15</b>	<b>1.02</b>	<b>107.29</b>	<b>3.63</b>	<b>106.89</b>	<b>2.06</b>

**Source:** EPM calculations. (Emission factors taken from the EPA's AP-42).

(1) Including EPM, Aguas de Malambo, Aguas del Oriente, Aguas Regionales, CENS, CHEC, Delsur, ENSA, ESSA, Eegsa, HET, and Ticsa.

(2) Including EPM, Adasa, Aguas de Malambo, Aguas del Oriente, Aguas Regionales, CENS, CHEC, Delsur, ENSA, and ESSA. Adasa reports for the first time in 2018.

(3) Including EPM, Adasa, Aguas de Malambo, Aguas del Oriente, Aguas Regionales, CENS, CHEC, Delsur, Emvarias, ENSA, and ESSA.

The main variations in NOx in this period are due to power generation from natural gas by La Sierra thermal power station from December onwards, as well as to previous tests carried out with ACPM for this plant.

Power generation with natural gas will continue for three years, in order to support the generation commitment assumed by the company with the Ituango project.

SOx: sulfur dioxide.

NOx: nitrogen oxide.

The calculations are made based on the consumption of compounds and emission factors obtained from the United States Environmental Protection Agency (EPA). The different emissions it considers include: VOC (g/km), OC (g/km), CO<sub>2</sub> (g/km), NOx (g/km), SO<sub>2</sub> (g/km), PM (g/km), and benzene (g/km). These are calculated according to the type of vehicle, equipment, and fuel used in the company.



## SOx and NOx emissions – EPM

SOx and NOx emissions – EPM						
Concept / Indicator (Ton / year)	2017 <sup>(1)</sup>		2018 <sup>(2)</sup>		2019 <sup>(3)</sup>	
NOx and SOx emissions	NOx	SOx	NOx	SOx	NOx	SOx
La Sierra thermal power station (isokinetic sampling)	3.89	0.00	2.53	0.00	21.74	0.11
Transportation of personnel, supplies, and products in vehicles of the group.	12.04	0.11	16.53	0.13	14.70	0.17
<b>Total</b>	<b>15.93</b>	<b>0.11</b>	<b>19.07</b>	<b>0.13</b>	<b>36.44</b>	<b>0.28</b>

Source: EPM.

(1) 308 automobiles and pickup trucks, 291 motorcycles, 94 trucks and buses.

(2) 302 automobiles and pickup trucks, 281 motorcycles, 103 trucks and buses.

(3) 266 automobiles and pickup trucks, 278 motorcycles, 76 trucks and buses in 2018.

The main variations in NOx in 2019 are due to power generation from natural gas during December at La Sierra thermal power station and prior testing with ACPM.

## Other emissions – Grupo EPM

Other emissions – Grupo EPM				
Concept / Indicator (Ton)	Benzene	Particulate matter	CO	VOCs
2017 <sup>(1)</sup>	0.16	2.26	103.06	9.62
2018 <sup>(2)</sup>	0.10	1.61	71.31	8.44
2019 <sup>(3)</sup>	0.16	4.50	71.40	9.81

Source: EPM.

(1) Including EPM, Aguas de Malambo, Aguas del Oriente, Aguas Regionales, CHEC, Delsur, ENSA, and ESSA. (733 automobiles and pickup trucks, 313 motorcycles, 296 trucks and buses).

(2) Including EPM, Aguas de Malambo, Aguas del Oriente, Aguas Regionales, CENS, CHEC, Delsur, ENSA, ESSA, Eegsa, HET, and Ticsa. (601 automobiles and pickup trucks, 307 motorcycles, 395 trucks and buses).

(3) Including EPM, Adasa, Aguas de Malambo, Aguas del Oriente, Aguas Regionales, CENS, CHEC, Delsur, Emvarias, and ESSA. (596 automobiles and pickup trucks, 302 motorcycles,\* 378 trucks and buses).

There are variations in particulate matter and volatile organic pollutants, mainly due to the update in the report of the number of vehicles that includes Emvarias.

\*According to the 2019 report, Emvarias added to its fleet 89 waste collection vehicles that use natural gas.

## Other emissions – EPM

Other emissions – EPM				
Concept / Indicator (Ton)	Benzene	Particulate matter	CO	VOCs
2017 <sup>(1)</sup>	0.05	0.49	36.67	3.36
2018 <sup>(2)</sup>	0.05	0.76	38.31	3.96
2019 <sup>(3)</sup>	0.06	0.56	32.76	4.17

Source: EPM.

(1) 308 automobiles and pickup trucks, 291 motorcycles, 94 trucks and buses.

(2) 302 automobiles and pickup trucks, 281 motorcycles, 103 trucks and buses.

(3) 266 automobiles and pickup trucks, 278 motorcycles, 76 trucks and buses.

Significant decreases in particulate matter and carbon monoxide emissions are reported as a result of the decrease in EPM's vehicle fleet in this period.

## GRI standards and EPM indicators

**305-1** Direct (Scope 1) GHG emissions.

**305-2** Energy indirect (Scope 2) GHG emissions.

**305-3** Other indirect (Scope 3) GHG emissions.

**305-4** GHG emissions intensity.

**305-5** Reduction of GHG emissions.

**305-7** Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions.

## Scope and coverage

### Companies

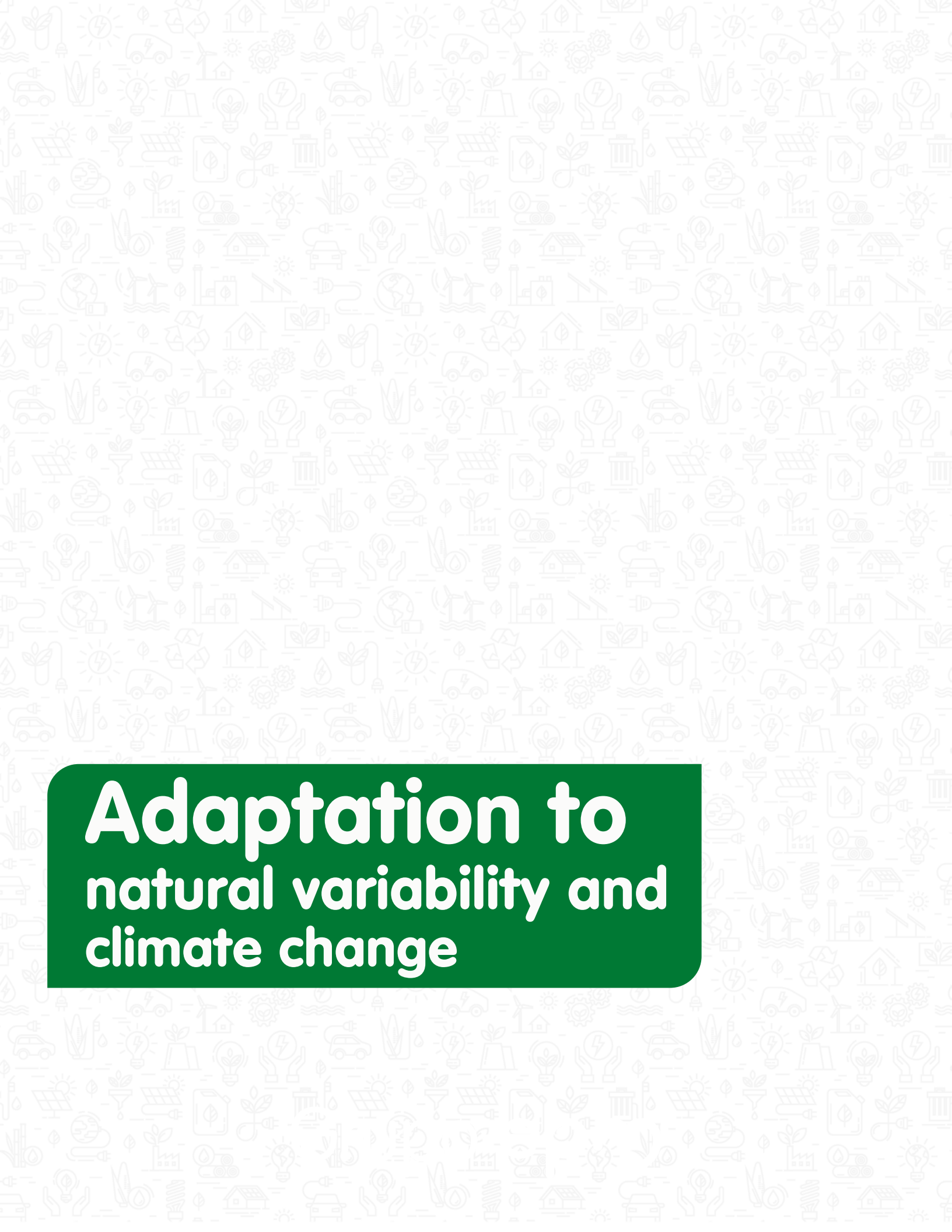
Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Hidroecológica del Teribe - HET

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water supply  
 Electrical energy  
 Sanitation  
 Natural gas

The background of the image is a repeating pattern of small, light green icons. These icons include a variety of symbols related to sustainability and climate change, such as wind turbines, solar panels, light bulbs, water droplets, leaves, recycling symbols, and houses with solar panels. The icons are arranged in a dense, grid-like pattern across the entire page.

# Adaptation to natural variability and climate change

## Adaptation to natural variability and climate change

Set of strategies, measures, and projects duly identified, assessed, and prioritized over time, in accordance with the scale of risk related to climate events, to strengthen the response capacity of businesses, services, surroundings, and communities and to contribute to the continuation of the company despite the climate changing conditions.

### Management in 2019

Based on the climate risk matrixes of the companies and businesses of Grupo EPM and the analysis of the business risk methodology, a proposal was prepared for the Comprehensive Climate Risk Management module, which aims to facilitate the identification, analysis, and permanent management of climate risks as appropriate at the group, business, company, project, or process levels.

The Phase II Climate Study was completed, providing climate scenarios by 2040 for the areas of greatest interest to water supply and power businesses located in Antioquia. Temperature rises, storms, and dry periods are expected to impact power generation, water supply, and electrical energy distribution.

EPM water and sanitation was able to complete the water source quality modeling of La Fe reservoir and the first stage of the sewerage modeling. These reports will be integrated with the results of climate modeling to define adaptation strategies.

Seeking to implement the measures established in Grupo Empresarial EPM's Adaptation Plan, either through its management focal points (knowledge, communities, infrastructure, ecosystems) or its cross-cutting themes (cultural transformation, financing, inter-institutional management, follow-up, and monitoring), progress was made during 2019 in actions aimed at strengthening climate knowledge, risk analysis, reviewing and updating contingency plans, and inter-institutional management. The most recurrent actions were those aimed at conservation, planting, reforestation, and payment for environmental services.

## Knowledge and infrastructure

- The Phase II Climate Study conducted by EPM with the Universidad Nacional indicates that temperature rises are expected for the period 2040-2070 (0.9°C-2.4°C), as well as decreases in quarterly accumulated precipitation, and more consecutive days without rain that will affect flow regulation and water supply sources in the main basins of interest to EPM. These will need to be considered in order to strengthen measures related to design, infrastructure operation, energy complementarity analysis, and sediment and flow management.
- As part of the proposal for the Comprehensive Climate Risk Management Module, a redefinition was included for the description of the climate risk category of “natural and anthropogenic risks”, and the list of climate risks to be included in the list of business risks was determined. The plan for implementation from 2020 onwards was analyzed.
- Two servers were installed in EPM’s computer network, which will enable the development of climate modeling exercises by a group of experts in the water supply and power business and will provide timely signals for the group’s climate adaptation plan.
- The company maintained a constant participation at the national, sectoral, union, and territorial levels, in matters of climatic interest, action plans, and development of bills and regulations.
- In compliance with Decree 2157 of 2017 of the Colombian Ministry of Environment and Sustainable Development, the power generation business prepared and submitted to the National Environmental Licensing Authority (abbreviated ANLA in Spanish) the disaster risk management plans (abbreviated PGRD in Spanish) for the major power generation plants (Guatapé, Playas, Termosierra, Porce II, Porce III, Riogrande, and the Guatrón power generation plant); it also made progress in identifying the risk to the Sonsón I and II, Pajarito I and II, Julio Simón Santamaría, La Vuelta, La Herradura, and Caracolí small hydroelectric power stations.
- EPM transmission and distribution carried out disaster management plans for 61% of the substations and 100% of the transmission lines, which include an emergency and contingency plan. It is expected that 100 per cent of the plans will be completed by 2020.
- EPM water and sanitation is making progress in assessing the needs for strengthening hydrometeorological instrumentation in drinking water supply basins.
- Aguas Regionales continued to monitor hydroclimatic variables to prevent and minimize the occurrence of climatic risks in areas of interest to the company. It included climate variables in the updating of contingency plans for water supply and sewerage with operational and commercial areas, continued with the assessment of alternative sources of water supply (groundwater and surface water) and with the optimization and expansion of sewerage networks. It also monitored and updated the current sanitation plans for their subsequent approval by the environmental authorities.

- Aguas de Malambo approached companies in the sector to learn about contingency plans and analysis of opportunities for the study of alternative sources of drinking water supply.
- CHEC achieved the approval of the strategic business risk “Risks derived from climate change and other natural events”; it participated in the articulation of local and regional actions where integral climate change management plans are currently defined (abbreviated PIGCC in Spanish), and made progress in the instrumentation for the monitoring of hydroclimatic variables.
- Trelec was able to insure against all risks, including the climate variable, 84 power substations, and promoted technological actions for risk monitoring.
- Delsur monitored climate conditions through El Salvador Ministry of Environment. It monitors online the behavior of climatic phenomena and plans the availability of the necessary personnel to respond to network failures due to the occurrence of climatic events.

## Communities and ecosystems

In this area of climate strategy management, Grupo EPM aims to articulate efforts, commitments, and management of matters related both to the group’s climate adaptation measures and to the integrated water resources and biodiversity management. In this regard, there has been significant progress to develop conservation, offset, and forest management initiatives as well as to contribute to the goal of water protection, community programs, and engagement with voluntary inter-institutional agreements, such as BanCO2.

In summary:

- CHEC took part in the development of the program Mujeres Cafeteras Sembrando Sostenibilidad (Women Coffee Growers Planting Sustainability) for the planting of 108,000 trees in basins that serve rural water supply systems, in alliance with the Departmental Committee of Coffee Growers of Caldas. A total of 14 new families joined the BanCO2 Program.
- EDEQ planted 970 trees in the municipality of Salento, Quindío, and continued with the establishment of biological corridors, ecological restoration, and the second phase of the Proyecto Armonía Electrovegetal (Electro-plant Harmony Project), through which 690 trees were planted in 22 different locations in the city of Armenia.
- CENS paid for BanCO2 environmental services and continued with its commitments in the water protection indicator.
- Eegsa continued with the agreement to protect 17.57 ha within the United Nations National Park and installed 2,650 meters of shielded cable in the distribution network.
- ENSA continued the process of reforesting 100% of the trees felled at a ratio of 1 to 1 by 2020.

To see the detailed progress of these actions, please refer to the chapter [“Water conservation and biodiversity”](#).

By 2020, priority will be given to actions in the road map of each company and business, which will be monitored and controlled in order to facilitate the fulfilment of common challenges and the construction of indicators by component within the adaptation plan of Grupo EPM’s climate strategy.

## GRI standards and EPM indicators

201-2 Financial implications and other risks and opportunities due to climate change.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 EPM Chile  
 Elektra Noreste - ENSA

#### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama

#### Businesses

Water supply  
 Electrical energy  
 Sanitation  
 Natural gas



# Financial strength





## Financial strength

Management of the Grupo EPM's financial health, with a vision of competitiveness and continuity in the long term, considering growth limits and corporate governance practices, in order to create economic value, contribute to the sustainable human development, and increase the value offered to the stakeholders.

Financial strength is essential for the competitiveness and continuity of the organization.

Financial and growth goals must take into account the organizational, natural, and market conditions on which the achievement of results depends.

The proper administration of financial resources requires a prospective analysis of the business group, focused on the prevention of risks associated with undue political interference and the implementation of controls that not only avoid decisions damaging to the organization's long-term continuity but also prevent resources from being diverted to initiatives that are not aligned with its corporate purpose.

Financial strength represents the basis to respond to the commitment of generating economic value, which directly contributes to sustainable human development and to the increase in the value offered to stakeholders, including the return on the owners' investment.

The relationship with the Municipality of Medellín, in its role as owner of EPM, is regulated by the Law, the autonomy granted by administrative decentralization, and internal regulations. In addition, the owner–company relationship is delimited in the Relations Framework Agreement signed in 2007 by the Medellín Mayor's Office and EPM. The detailed report on EPM's ownership structure, which includes the follow-up to the framework agreement and the transfers, can be found in the [Corporate Governance Report](#).

## Relevance

It allows the company to meet the requirements of working capital, investment needs, obligations to the owner, and financial muscle to grow. It is fundamental to contribute to the sustainability of its environment through the creation of shared value and the distribution of the value generated, considering social, natural, and market limits.

## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Liquidity strategies	Save COP 300 billion in actual costs and expenses without including the business operation.	Grupo EPM	Grupo EPM managed to save COP 131 billion.	Partial
	Obtain lines of credit that will contribute to maintaining adequate liquidity levels in the Grupo EPM companies.		The financial conditions for loans with HSBC, Bancolombia, and Banco Agrario were improved. Negotiations for a line of credit with CAF for ESSA started, and approvals were obtained for short- and/or long-term lines of credit for CENS.	Total
	Shift non-priority investments by COP 477 billion.		Grupo EPM managed to lower the execution of investments by COP 301 billion.	Partial
Liquidity strategies	Carry out the necessary procedures to divest non-strategic assets by COP 3.8 trillion approved by EPM's Board of Directors.	EPM	<p>The total divestment made in 2019 was COP 531 billion.</p> <p>Energy assets in Chile (PELC and EPM Transmisión Chile): on November 27, 2019, the sale transaction was closed; price adjustment will be paid to the seller in February 2020.</p> <p>Sale of ISA shares: due to market conditions, ISA shares were not sold.</p> <p>Adasa: the process is currently suspended due to Chile's social situation.</p> <p>Minority divestments: between August and November 2019, Gasorient shares were sold, while the first phase of the sale of Promioriente shares ended in December 2019.</p>	Partial

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Liquidity strategies	Execute the engagement plans with Owner and Partners, focusing on the construction and strengthening of long-term relationships; manage their compliance; and perform a quarterly follow-up for the report to the Balanced Scorecard.	EPM	Each of the 13 actions proposed in the engagement plan with Owner and Partners was periodically monitored, which allowed the timely identification of signs and possible improvement actions that ultimately led to a 100% accomplishment of the plan.	Total
	Obtain confirmation of “All construction and assembly risks” and “Noncontractual civil liability” coverage of the insurance for the Ituango hydroelectric project incident.	EPM	According to the established schedule, on September 2019, coverage was confirmed for damage to the project’s works and equipment. Therefore, on December 2019, Mapfre (insurance company) made a first advance payment corresponding to consequential damage in civil works.	Total
	Manage and strengthen engagement in the electoral cycle, taking into account the Relations Framework Agreement and coordinate activities for the new administration on-boarding.	EPM	EPM held face-to-face sessions for six days with the participation of the elected mayor to discuss the management activities carried out in each of the businesses, projects, and corporate areas. The management reports of the manager and the board of directors for the 2016–2019 period were submitted.	Total

## Challenges for 2020

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Business	Territory
Liquidity strategies	Save COP 300 billion in actual costs and expenses without including the business operation.	2020	Grupo EPM	All the businesses	All the territories
	Obtain financing sources for COP 1.8 trillion that will contribute to maintaining adequate liquidity levels in the Grupo EPM companies.	2020	Grupo EPM	All the businesses	All the territories
	Obtain disbursements for USD 100 million from the insurance policy due to the Ituango hydroelectric project's incident.	2020	EPM	All the businesses	Colombia - Antioquia

\* **Business operation:** Resources necessary for the provision of residential public utilities.

## Related sustainable development goals



## Related stakeholders

Customers and users	Community	Owner	State
Investors	Suppliers and contractors	Partners	

## GRI standards and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- EPM-22** EPM's EBITDA.
- EPM-23** Grupo EPM's EBITDA.
- EPM-24** EPM's EBITDA margin.
- EPM-25** Grupo EPM's EBITDA margin.
- EPM-26** EPM's net margin.
- EPM-27** Grupo EPM's net margin.
- EPM-32** Resources from liquidity strategies.

## Action

CEO's management report in section: [Financial results](#)

## Scope and coverage

### Companies

Empresas Públicas de Medellín – EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro – E.P. Rio  
 Aguas de Malambo  
 Empresas Varias de Medellín – Emvarias  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresa de Energía del Quindío – EDEQ  
 Centrales Eléctricas del Norte de Santander – CENS  
 Distribuidora de Electricidad del Sur – Delsur  
 Empresa Eléctrica de Guatemala – Eegsa  
 Tecnología Intercontinental – Ticsa  
 Hidroecológica del Teribe – HET  
 Elektra Noreste – ENSA  
 Aguas de Antofagasta – Adasa

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Colombia – Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



# Fees and prices



## Fees and prices

Actions before the government and the regulatory authorities to implement pricing methodologies that are fair and efficient for users; complemented by activities to educate and inform customers and users on the factors that affect the fee.

The fees for the services provided by Grupo EPM are subject to regulations. Therefore, actions are constantly taken before the government and regulatory authorities in order to maintain fair and efficient pricing methodologies for users. Competitive fees are one of the purposes of Grupo EPM and, consequently, the group also works on a business efficiency scheme for its costs and processes.

In the case of large power and natural gas customers, Grupo EPM offers fees that can be negotiated in the components of commercialization margin and supply value. In this case, the other components are regulated (transport, distribution, and others).

### Relevance

It favors the recovery of costs and the achievement of the company's strategic goals. It impacts the stakeholders' trust in the organization by influencing their perception on the fairness of the fees when they compare the company's surplus with the people's income and with the proportional increase of both over time.



## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Water supply and sewerage fees	Make the regional market request to the Drinking Water and Basic Sanitation Regulatory Commission (CRA, as per its acronym in Spanish) for the regional fee of water supply and sewerage in EPM and Rionegro.	EPM	The request was submitted to the CRA to declare as regional market the areas of water and sewerage services provision in the municipalities of the interconnected system, Caldas and Rionegro.	Total
Sanitation fees	Continue the pricing modification processes for leachate treatment and final disposal.	Emvarias	The investment and operating costs associated with the leachate treatment conducted at the La Pradera landfill were recognized. These costs were applied in the February 2020 billing.	Total
Electricity fees	Manage the approval of income for Grupo EPM's power distribution business and actively participate in the process of implementation of the new methodology for transmission compensation.	EPM	This challenge was postponed to 2020.	Not accomplished
	Implement educational strategies that include the topic of fees and prices, impacting 55,000 people.	CENS	56,020 people were impacted through the following strategies: Conoce Tu Consumo (Calculate Your Consumption), CENS te visita (CENS visits you), institutional closeness, educational engagement events, training with leaders, government seminar, education in localities, training for companies, and events for social support in case of losses.	Total

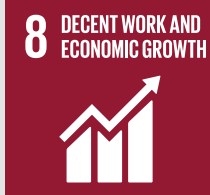
Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Electricity fees	Conduct the institutional communication campaign to educate 40% of the users.	Delsur	Different campaigns were conducted on the use of energy and other topics of interest to all customers.	Partial
	Perform 10 closeness activities (engagement strategies), impacting 42,500 customers and users and focusing on municipalities that show high rates of receivables.	ESSA	The 10 closeness activities scheduled were performed in the places with high rates of receivables. 44,931 customers and users were impacted with intervention in 27 municipalities, 6 <i>comunas</i> , and 3 small towns through 182 activities.	Total
Gas fees	Proactively manage the approval of retail distribution and commercialization charges of natural gas for EPM.	EPM	The Energy and Gas Regulatory Commission (CREG, as per its acronym in Spanish) made no progress in defining the calculation methodologies proposed in the regulatory agenda.	Not accomplished

## Challenges for 2020

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Business	Territory
Water supply and sewerage fees	Modify the Ruling CRA 688 of 2014 regarding the calculation methodology of the provision for investment.	2020	EPM	Water and sanitation	Colombia
	Request the CRA to declare the regional market in order to set the regional fees for the water supply and sewerage services in the municipalities of the interconnected system, Caldas and Rionegro.		Emvarias		Colombia - Antioquia
	Request the fee adjustment for the final disposal cost of the waste collection service.		Aguas Regionales		
	Request the CRA to declare the regional market.				

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage		
			Company	Business	Territory
Water supply and sewerage fees	Request the fee adjustment (components: Regulated Work and Investment Plan and demand) of the water supply and sewerage services.	2020	Aguas de Malambo	Water and sanitation	Colombia - Malambo
Electricity fees	Request the approval of income for Grupo EPM's power distribution business and actively participate in the definition process of the new methodology for transmission compensation.	2020	EPM	Power - T&D	Colombia - Antioquia
Electricity fees	Articulate and modify the operation of Grupo EPM in accordance with the provisions of the Ruling CREG 015/18, especially regarding the investment plan, and actively participate in the definition process of the new methodology for transmission compensation.	2020	EPM	Power - T&D	Colombia - Antioquia
	Manage the approval of income for the power distribution business.		EDEQ		Colombia - Quindío
Gas fees	Proactively manage the approval of retail distribution and commercialization charges of the natural gas service.	2020	EPM	Power - Gas	Colombia

## Related sustainable development goals



## Related stakeholders

Customers and users  
State

Colleagues  
Investors

Owner  
Partners

## GRI standards and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- EPM-13** Fees by service type.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Mexico  
 Panama

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



**Bill**

## Bill

The EPM bill is the company's means of invoicing the services provided and communicating with users through a modern, personalized, close, and easy-to-interpret format that seeks to favor the understanding of the values billed and keep the community updated with information on different topics of interest.

## Management in 2019

A section to identify charges for recovery of consumptions from other periods was included in the bill, as well as a message for those cases when - for reasons beyond EPM's control - it is not possible to access the property to read the meter.

In the consumption histogram of the last 6 months, the month billed was included for greater clarity of the trend.

For the energy service, a message was included for those cases when there are no charges in a specific billing period.

An increase of four pesos was applied to the energy service fee for strata 4, 5, and 6 of the residential, industrial, commercial, and nonregulated sectors, as stipulated in Ruling SSPD 20191000035615, which regulates and was authorized by Article 313 of Act 1955 of 2019 - National Development Plan 2019-2022.

In order to properly interpret the bill, it is important that users understand the concepts that affect the values billed. The main elements to be considered are the consumption units and the fees of each service, as well as the credits, consumption days, works executed, among others.

The consumption of each service depends mainly on customer's use habits; variables such as the number of people living in the house, the technical conditions of the installations, and the features of the appliances and equipment of the home modify the value of the bill. The days of consumption billed also modify the value, since they may change in some months of the year due to factors such as the number of days and holidays.

The fees for each of the services are established by the respective regulatory commissions through pricing formulas that, depending on their application and the different variables that are defined for each of the services, are likely to generate increases or reductions in the values.

Other concepts that should also be taken into account when checking the bill values include interests due to accounts outstanding or paid after the due date, financing of consumption, works carried out, new services or purchases made with the Somos credit program, or charges for service cutoffs or reconnections. Additionally, EPM has agreements in some municipalities for billing services provided by other entities, including waste collection, public lighting, and other products such as Vital and Red Hogar insurances.

Education and dissemination activities were conducted to favor the understanding of the bill. The main activities are described below:

**Lectura a tu Medida (Reading at Your Measure):** With the purpose of contributing to a better understanding of the meter reading process and of the bill itself, conversations were held with nearly 147,000 people through home visits, talks, and discussions with different groups throughout the country.

**Líderes Amigos de EPM (Friend Leaders of EPM):** It is a strategy that favors conversation spaces as the basis to establish bonds of trust, which has allowed the national companies of the group to hold permanent meetings with community representatives. During the year, more than 10,000 people participated in these meetings between leaders and representatives of the communities.

**Government seminars, business approach sessions, and visits to EPM power plants** with employees and executives of the companies and institutions belonging to the segments of government, business, and large customers, to whom EPM provides with its services and with whom it seeks to establish a strategic alliance. With these activities, 7,600 public servants and employees of companies and large customers of Grupo EPM were reached.

In 2019, a dissemination session on the myths and realities of the bill was held in order to favor the understanding of the consumption items.

The increase related to the coming into operation of the Aguas Claras plant as well as the water supply and sewerage services' fee path were addressed.

It was reported that EPM's energy fee was among the lowest compared to the main service providers and distributors in Colombia, considering the quality of service.

The television series called Camino al Barrio (On the Way to the Neighborhood) broadcast a special on the processes of meter reading and billing and on the regulation of public utilities.

## Scope and coverage

### Company

Empresas Públicas de Medellín - EPM

### Territory

Colombia - Antioquia

### Businesses

Water  
Sanitation  
Electrical energy  
Natural gas



The background of the entire page is a repeating pattern of small, light green icons. These icons include a variety of symbols related to water, energy, and sustainability, such as water droplets, lightbulbs, wind turbines, solar panels, recycling symbols, and houses with leaves, all arranged in a grid-like fashion.

# Water supply and sewerage fees

## Water supply and sewerage fees

The water supply and sewerage services are regulated residential public utilities. Therefore, Grupo EPM permanently stands for the welfare of the population before the national government and the decentralized regulatory and controlling entities, through market conditions that favor the coverage and provision of these services with quality and continuity, at competitive and efficient rates that ensure, in turn, the financial sufficiency of the company.

### Management in 2019

Grupo EPM participated in regulatory spaces established by the CRA, the Superintendency of Residential Public Utilities (SSPD, as per its acronym in Spanish), and the Colombian Ministry of Housing, City, and Territory (MVCT, as per its acronym in Spanish).

The Ruling CRA 906 determined the methodology for classifying service providers according to the level of risk; the Ruling CRA 907 defined the methodology for incorporating environmental investments into the fees; and the Ruling SSPD 40585 regulated the taking of water quality samples by the SSPD.

The regulatory management in 2019 consisted in the construction of general regulations for the sector and the preparation of the calculations that made it possible to request the CRA to declare as regional market the supply areas within the interconnected system, Caldas and Rionegro, which is expected to be approved in the second half of 2020.

One of the most important regulatory efforts was the issuance of the Ruling CRA 906, which defined the criteria, methodologies, indicators, parameters, and models that are mandatory for assessing the actions and results of the suppliers and established the methodology for classifying them according to the level of risk. Similarly, the Ruling CRA 907 defined the methodology to recognize in the fee the additional environmental investments made by the companies for the protection of basins and water sources.

During the “citizen participation” process of the Ruling SSPD 40585, the group participated in the definition of the methodology for taking drinking water quality samples by the SSPD. Samples will be taken when the SSPD does not have the water quality information provided by the health authorities; when the administered records show water quality levels classified as unfit for human consumption; when third parties or users submit reports or complaints about the possible presence of substances that could damage human health; or when unforeseen events occur that could affect the quality of the water provided by the suppliers.

Article 14 of Act 1955 of 2019 authorized the vertical disintegration of the sewerage service, provided that this solution presents efficiencies in relation to operation, administration, maintenance, or investment costs. Likewise, it enabled suppliers to treat non-domestic wastewater discharged to the sewerage system. In this regard, EPM has already prepared the commercial offer for the provision of treatment services to third parties, which involves receiving wastewater from the industry into its sewerage network and charging them for the treatment.

<b>EPM water supply - Full fee (stratum 4)</b>			
<b>Fixed charge (COP/User)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Metropolitan area	8,566	6,173	6,359
<b>Variable charge (COP/m<sup>3</sup>)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Interconnected system	1,776	2,357	2,596
Caldas	1,507	1,779	1,925
Barbosa	1,309	1,735	1,996

**Source:** Commercial Directorate of Water and Sanitation.

*Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines.*

<b>EPM sewerage - Full fee (stratum 4)</b>			
<b>Fixed charge (COP/User)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Metropolitan area	4,598	3,543	3,650
<b>Variable charge (COP/m<sup>3</sup>)</b>			
Interconnected	1,761	1,876	2,289
Caldas	648	930	1,084
Barbosa	952	1,191	1,318

**Source:** Commercial Directorate of Water and Sanitation.

Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines.

### Aguas Regionales

<b>Aguas Regionales water supply - Full fee (stratum 4)</b>			
<b>Fixed charge (COP/User)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Western region	7,868	8,133	8,407
Urabá region	6,773	7,001	7,224
<b>Variable charge (COP/m<sup>3</sup>)</b>			
<b>Western region</b>			
Santa Fe de Antioquia	1,518	1,569	1,868
San Jerónimo	1,619	1,689	1,799
Sopetrán	1,098	1,280	1,491
Olaya	760	884	1,058
<b>Urabá region</b>			
Apartadó	1,396	1,442	1,544
Carepa	739	825	1,006
Chigorodó	1,501	1,552	1,670
Mutatá	1,755	1,847	1,903
Turbo	1,742	1,903	2,026
Bajirá	1,755	1,847	1,903
El Reposo	1,396	1,442	1,544

**Source:** Commercial Directorate of Water and Sanitation.

Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. Variations correspond mainly to the fee indexation regarding the consumer price index, thus favoring the recovery of costs and the provision of a quality service. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines.

<b>Aguas Regionales sewerage - Full fee (stratum 4)</b>			
<b>Fixed charge (COP/User)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Western region	4,574	4,722	4,864
Urabá region	3,909	4,040	4,172
<b>Variable charge (COP/m<sup>3</sup>)</b>			
<b>Western region</b>			
Santa Fe de Antioquia	1,166	1,209	1,365
San Jerónimo	1,674	2,104	2,455
Sopetrán	643	799	1,170
Olaya	350	469	613
<b>Urabá region</b>			
Apartadó	1,633	1,900	2,161
Carepa	1,103	1,237	1,402
Chigorodó	1,636	1,701	1,919
Mutatá	1,071	1,117	1,318
Turbo	1,086	1,205	1,337

**Source:** Commercial Directorate of Water and Sanitation.

Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. Variations correspond mainly to the fee indexation regarding the consumer price index, thus favoring the recovery of costs and the provision of a quality service. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines.

## Aguas de Malambo

<b>Aguas de Malambo water supply - Full fee (stratum 4)</b>			
<b>Concept</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Fixed charge (COP/User)	6,685	6,910	7,118
Variable charge (COP/m <sup>3</sup> )	1,590	1,646	1,696

**Source:** Commercial Directorate of Water and Sanitation.

Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. Variations correspond to the fee indexation regarding the consumer price index, thus favoring the recovery of costs and the provision of a quality service. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines.

Aguas de Malambo sewerage - Full fee (stratum 4)			
Concept	2017	2018	2019
Fixed charge (COP/User)	3,415	3,530	3,636
Variable charge (COP/m <sup>3</sup> )	783	821	852

**Source:** Commercial Directorate of Water and Sanitation.

Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. Variations correspond to the fee indexation regarding the consumer price index, thus favoring the recovery of costs and the provision of a quality service. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines.

## Aguas del Oriente

Aguas del Oriente - El Retiro - Water supply - Full fee (stratum 4)			
Concept	2017	2018	2019
Fixed charge (COP/User)	5,804	6,786	8,468
Variable charge (COP/m <sup>3</sup> )	1,719	1,792	2,779

**Source:** Commercial Directorate of Water and Sanitation.

Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. The increase in 2018 corresponds to the implementation of Ruling CRA 825 of 2017. The significant variation in the fee from 2018 to 2019 corresponds to the application of the pricing methodology CRA 844 of 2018. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines.

Aguas del Oriente - El Retiro - Sewerage - Full fee (stratum 4)			
System	2017	2018	2019
Fixed charge (COP/User)	2,559	4,127	4,811
Variable charge (COP/m <sup>3</sup> )	239	679	1,182

**Source:** Commercial Directorate of Water and Sanitation.

Values as of December of each year in current prices, where the evolution of the values charged to users can be observed. Variations correspond to the fee indexation regarding the consumer price index, thus favoring the recovery of costs and the provision of a quality service. These values correspond to the full fee, that is, they do not include the subsidies or contributions that each municipality determines. The increase in 2018 corresponds to the implementation of Ruling CRA 825 of 2017.

## GRI standards and EPM indicators

**EPM-13** Fees by service type.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo

#### Territory

Colombia - Antioquia  
 Colombia - Malambo, Atlántico

#### Businesses

Water  
 Sanitation



# Sanitation fees



## Sanitation fees

The public sanitation service is regulated. Therefore, Grupo EPM permanently stands for the welfare of the population before the national government and the decentralized regulatory and controlling entities, through market conditions that favor the coverage and provision of the service with quality and continuity, at competitive and efficient rates that ensure, in turn, the financial sufficiency of the company.

## Management in 2019

In 2019, Grupo EPM participated in spaces established by the CRA, the SSPD, and the MVCT, in order to contribute to the strengthening of the sector through regulatory developments.

In regulatory terms, it is worth highlighting the Ruling CRA 888, which established the productivity factor in each of the costs of the public sanitation service activities, and the Ruling CRA 905, which modified the economic reference cost for the leachate treatment component for Emvarias.

In December 2018, the MVCT issued the Decree 2412 of 2018, which established the incentive for the reclamation of solid waste. This regulation defines, among other aspects, the percentage of fee increase for the final disposal of waste from landfills. In compliance with this Decree, the bills of August 2019 included the incentive for the reclamation of waste, which amounted to COP 6,624.93/t—resources that are transferred to the Municipality of Medellín for funding treatment and reclamation projects.

Similarly, the Ministry, pursuant to Ruling 0938 of 2019, approved the Decree 1784 of 2018 regarding final disposal and waste treatment activities, which applies to the construction of new landfills or the expansion of existing ones. This regulation makes additional demands for operating landfills and incorporates new requirements for monitoring them.

In addition, through Ruling CRA 888 of 2019, the Commission added Ruling CRA 720 of 2015 and defined the productivity factor that should be applied by the companies that provide sanitation services to municipalities with more than 5,000 users in urban areas.

Applying the productivity factor of 0.072% defined in this regulation, the sanitation service bills of September 2019 in Medellín incorporated a transfer of productivity gain on the reference costs. This parameter will be valid until March 2020. Likewise, based on Ruling CRA 900 of 2019, the general terms of the agreements of street and public space cleaning were established to solve the disputes among the service providers of the confluence area, and the methodologies for calculating and geographically assigning the sweeping and cleaning kilometers to each provider were determined.

Finally, through Ruling CRA 905 of 2019, the Commission resolved the request of Empresas Varias de Medellín S.A. E.S.P. for the modification of the costs of the leachate treatment activity in the La Pradera landfill. This new regulation allows Emvarias to recover the investments and costs for the operation and maintenance of the leachate treatment plant. With the application of this resolution, the financial sufficiency in this activity is guaranteed. This new recognition is expected to be included in the fees of the February 2020 billing, which implies an estimated increase of COP 339 in the average bill of stratum 4.

<b>Fees by user of the ordinary sanitation service in Medellín</b>			
<b>Fixed charge (COP/User)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Stratum 1	7,620	8,113	8,064
Stratum 2	10,556	11,233	11,173
Stratum 3	15,275	16,251	16,170
Stratum 4	18,914	20,109	20,027
Stratum 5	38,829	41,233	41,134
Stratum 6	47,258	50,123	50,088
Small commercial generators	48,740	51,558	51,713
Variable fee in m <sup>3</sup> - Large generators	48,634	51,809	55,634

**Source:** Emvarias.

Values as of December of each year in current prices, where the evolution of the fees charged to users can be observed. Variations correspond to the fee indexation regarding the consumer price index, the monthly minimum wage, the fuel oil and diesel oil index, and the levelling works index. This favors the recovery of costs and the provision of a quality service. The decrease in the fee charged to residential users in 2019 compared to 2018 corresponds to the decrease in tonnes presented by each subscriber.

### GRI standards and EPM indicators

**EPM-13** Fees by service type.

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### Scope and coverage

<b>Company</b>	<b>Territory</b>	<b>Business</b>
Empresas Varias de Medellín - Emvarias	Colombia - Antioquia	Sanitation

The background of the entire page is a repeating pattern of small, light green icons. These icons include a variety of symbols related to energy and sustainability, such as light bulbs, solar panels, wind turbines, houses with solar roofs, recycling symbols, and hands holding a globe or a leaf. The icons are arranged in a dense, grid-like pattern across the entire page.

# Electricity fees

## Electricity fees

Due to their nature, residential public utility fees are subject to regulations. This means that the fees that EPM charges cannot be freely set, but they are subject to the conditions supported by the Law and determined by the regulatory body that, in this case, is CREG. This entity sets the rules of the methodologies for calculating fees, which are based on efficiency criteria so that only efficient costs and expenses are transferred to consumers. In all the regions where Grupo EPM provides its services, it seeks to maintain competitive fees that favor cost recovery and companies' sustainability. In 2019, EPM continued its proactive efforts before the regulatory body and the government to ensure that the rules issued for the next fee period reflect fair and efficient prices.

The costs covered with the fees include the assets required to provide the service, the costs of managing, operating, and maintaining them to bring electrical energy from the energy sources to the end user, and the entire support process for customer service.

## Management in 2019

The company has been preparing for a correct approval of the distribution charge based on the new Ruling CREG 015 of 2018, which will affect the fee to the final user because this component has an important impact on the unit cost, since it recognizes the new projects that aim at a service without interruptions and in compliance with high international standards.

In 2019, EPM continued to offer its customers competitive fees at all voltage levels, especially at level 1, whose price was always among the four cheapest in the country. The companies of Grupo EPM were on the same path.

The group continued consolidating the joint purchasing strategy, which represents savings for users. Its position as a buyer constantly stood out among the first three places.

The coverage in contracts that seek to minimize exposure to the stock market was above 87%. Customers were given fair prices below the average market price and protected from fluctuations on the energy exchange.

Evolution of power fees - EPM (COP/kWh)			
Concept	2017	2018	2019
Stratum 1	207	214	223
Stratum 2	259	268	278
Stratum 3	400	424	441
Stratum 4	471	498	519
Stratum 5	565	598	623
Stratum 6			
Commercial			
Industrial			

**Source:** Vice Presidency of Power Transmission and Distribution / Power Commercialization Transactions Unit.

Values correspond to the fee of December 2019.

Evolution of power fees - EDEQ (COP/kWh)			
Concept	2017	2018	2019
Stratum 1	221	228	234
Stratum 2	276	285	296
Stratum 3	422	450	453
Stratum 4	497	530	533
Stratum 5	596	636	640
Stratum 6			
Commercial			
Industrial			

**Source:** Vice Presidency of Power Transmission and Distribution / Power Commercialization Transactions Unit.

Values correspond to the fee of December 2019.

Evolution of power fees - ESSA (COP/kWh)			
Concept	2017	2018	2019
Stratum 1	208	215	223
Stratum 2	260	269	279
Stratum 3	419	419	450
Stratum 4	493	493	530
Stratum 5	591	592	623
Stratum 6	591	592	636
Commercial			
Industrial			

**Source:** Vice Presidency of Power Transmission and Distribution / Power Commercialization Transactions Unit.

Values correspond to the fee of December 2019.

Evolution of power fees - CENS (COP/kWh)			
Concept	2017	2018	2019
Stratum 1	210	216	225
Stratum 2	262	270	282
Stratum 3	413	451	453
Stratum 4	487	531	533
Stratum 5	584	637	640
Stratum 6			
Commercial			
Industrial			

**Source:** Vice Presidency of Power Transmission and Distribution / Power Commercialization Transactions Unit.

Values correspond to the fee of December 2019.

Evolution of power fees - CHEC (COP/kWh)			
Concept	2017	2018	2019
Stratum 1	226	234	243
Stratum 2	275	285	296
Stratum 3	436	466	472
Stratum 4	513	548	556
Stratum 5	616	658	667
Stratum 6			
Commercial			
Industrial			

**Source:** Vice Presidency of Power Transmission and Distribution / Power Commercialization Transactions Unit.

Values correspond to the fee of December 2019.

Evolution of power fees - ENSA (USD/kWh)			
Use	2017	2018	2019
Residential	0.15	0.17	0.2
Commercial	0.17	0.21	0.24
Industrial	0.15	0.18	0.21

**Source:** Vice Presidency of Power Transmission and Distribution / Power Commercialization Transactions Unit.

Values correspond to the fee of December 2018.

Evolution of power fees - Delsur (USD/kWh)			
Use	2017	2018	2019
Residential	0.20	0.21	0.228
Commercial	0.18	0.19	0.206
Industrial	0.15	0.16	0.169

**Source:** Vice Presidency of Power Transmission and Distribution. Commercial Management.

Values correspond to the fee of December 2019.

Evolution of power fees - Eegsa (USD/kWh)			
Use	2017	2018	2019
Simple low voltage	0.15	0.14	0.17

**Source:** Vice Presidency of Power Transmission and Distribution / Power Commercialization Transactions Unit.

Values correspond to the fee of December 2019.



## GRI standards and EPM indicators

**EPM-13** Fees by service type.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA

#### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Santander  
 Colombia - Norte de Santander  
 El Salvador  
 Guatemala  
 Panama

#### Business

Electrical energy

The background of the entire page is a repeating pattern of small, light green icons. These icons include a variety of symbols related to energy, sustainability, and industry, such as lightbulbs, gears, wind turbines, solar panels, water droplets, and stylized buildings. The icons are arranged in a dense, overlapping grid.

# Natural gas fees

## Natural gas fees

The fees of the residential public utility of natural gas through pipelines are regulated by CREG. Based on the definition of specific compensation methodologies for each activity of the natural gas value chain (production, transport, distribution, and commercialization), this regulatory body ensures the transference of efficient costs of investment, administration, operation, and maintenance to the users.

It is understood that every fee has a comprehensive nature, since it involves a coverage and a level of service quality. In all the regions where it provides its services, EPM seeks to maintain competitive fees that favor cost recovery and companies' sustainability.

The commercialization cost, collected through a fixed charge, compensates the customer service process.

## Management in 2019

During 2019, the group met the CREG requirements related to necessary information on investments and AOM expenses for the process of approval of the charges of natural gas distribution through pipeline networks for the next fee period.

It also reviewed and discussed several rulings issued by CREG on proposed modifications to define efficient values for the costs and expenses of AOM and other assets.

The new charges for distribution and commercialization of natural gas through pipeline networks are expected to be approved in 2020, as a result of the efforts made in 2019.

The documents proposed by CREG were also studied and observed as the basis for establishing the new general fee formula for the distribution of fuel gas through pipelines and for the transport of natural gas in cargo vehicles.

Such methodologies should come into effect during 2020.

Evolution of EPM natural gas fees - Integrated (COP/m <sup>3</sup> )				
Sector	Stratum	2017	2018	2019
Residential	Stratum 1	850	876	928
	Stratum 2	908	946	1,026
	Stratum 3	1,574	1,694	1,884
	Stratum 4	1,535	1,686	1,884
	Stratum 5	1,778	1,961	2,201
	Stratum 6	1,685	1,867	2,099
Non-residential (commercial + industrial)		1,424	1,489	1,491
Commercial		1,431	1,497	1,500
Industrial		1,416	1,481	1,482
Vehicular natural gas		910	964	1,024

**Source:** Vice Presidency of Gas, Commercial Management.

*Average fee (including the fixed charge) based on average consumption by stratum.*

Average for the municipalities of Medellín, Barbosa, Girardota, Copacabana, Bello, Envigado, Itagüí, Sabaneta, La Estrella, Caldas, La Ceja, La Unión, El Retiro, Sonsón, Apartadó, Turbo, Chigorodó, Carepa, Necoclí, Arboletes, Frontino, Cañasgordas, Fredonia, Santa Bárbara, Jardín, Jericó, San Juan de Urabá, Abejorral, Angelópolis, Belmira, Betania, Betulia, Caramanta, Carolina del Príncipe, Cocorná, Concordia, Gómez Plata, Granada, Guadalupe, Hispania, Montebello, Mutatá, Pueblorrico, Puerto Nare, Salgar, San Carlos, San Luis, San Pedro de Urabá, San Rafael, Tamesis, Tarso, Titiribí, Urrao, Valparaíso, Venecia, Maceo, Amalfi, Santo Domingo, Caracolí, Yolombó, San Vicente, Ituango, Liborina, Olaya, Sabanalarga, San Andrés de Cuerquia, Valdivia, Concepción, Dabeiba, Remedios, San José de la Montaña, San Roque (urban area), Toledo, Vegachí, and Yalí.

From the March 2018 billing, CREG approved new markets and provisional distribution charges for the municipalities covered by EPM.

It defined an integrated market and eight sub-markets corresponding to the municipalities that received investment resources from the nation.

The new regulatory framework defined through Ruling CREG 202/2013 was also implemented.

In order to compare fees, those published in previous periods were recalculated according to the markets defined from March 2018.

For the Southeast municipalities, the previous regulatory framework (CREG 011/2003) and its approved charges continued in force.

The variation of the fee between strata 1 and 2 corresponds to the first 20 m<sup>3</sup>. The variation is not comparable, since the calculation depends on the behavior of the consumer price index and the maximum percentages of subsidies authorized.

The average fees are obtained based on the average consumption of each market.

Evolution of EPM natural gas fees - Markets with investment resources (COP/m <sup>3</sup> )				
Sector	Stratum	2017	2018	2019
Residential	Stratum 1	679	704	727
	Stratum 2	893	923	952
	Stratum 3	2,899	2,996	3,141
	Stratum 4	2,772	2,945	3,156
	Stratum 5	3,912	4,321	4,679
	Stratum 6	3,480	3,805	3,955
Commercial		3,254	3,297	3,318
Industrial		2,893	2,995	3,032

**Source:** Vice Presidency of Gas, Commercial Management.

*Average fee (including the fixed charge) based on average consumption by stratum.*

Average for the municipalities of Guatapé, El Peñol, Yarumal, San Pedro de los Milagros, Santa Rosa de Osos, Entreríos, Donmatías, Santa Fe de Antioquia, San Jerónimo, Sopetrán, Amagá, Puerto Berrío, San José del Nus, and Cisneros.

From the March 2018 billing, CREG approved new markets and provisional distribution charges for the municipalities covered by EPM.

It defined an integrated market and eight sub-markets corresponding to the municipalities that received investment resources from the nation.

The new regulatory framework defined through Ruling CREG 202/2013 was also implemented.

Evolution of EPM natural gas fees - Southeastern area (COP/m <sup>3</sup> )				
Sector	Stratum	2017	2018	2019
Residential	Stratum 1	1,440	1,488	1,387
	Stratum 2	813	854	953
	Stratum 3	3,562	3,751	3,531
	Stratum 4	3,562	3,751	3,531
	Stratum 5	4,275	4,501	4,238
	Stratum 6	4,275	4,501	4,238
Non-residential (commercial + industrial)				
Commercial		3,879	4,085	4,129
Industrial		3,879	4,085	4,129
Vehicular natural gas		1,114	1,250	1,195

**Source:** Vice Presidency of Gas, Commercial Management.

Average fee (including the fixed charge) based on average consumption by stratum.

Applicable to Guarne, Marinilla, Rionegro, and El Santuario.

## GRI standards and EPM indicators

**EPM-13** Fees by service type.

### Scope and coverage

**Company**

Empresas Públicas de Medellín - EPM

**Territory**

Colombia - Antioquia

**Business**

Gas



**Transparency**



## Transparency

The Grupo EPM's companies develop communication, education, and engagement strategies, based on truthfulness, completeness, appropriateness, timeliness, and clarity of the information delivered on the company's management, in order to guarantee the stakeholders' trust.

## Relevance

It minimizes corruption, extra costs, and reputational risks. It strengthens stakeholders' trust and allows them to exercise social control and make decisions for their benefit in the social, environmental, and economic spheres.



## Achievements

Action	Challenges	Company	Achievements in 2019	Accomplishment
Information for stakeholders	Hold nine meetings with candidates running for mayors in Antioquia.	EPM	Development of the scheduled meetings and organization of a visit to the Ituango hydroelectric project.	Total
	Develop a weekly thematic agenda with mass and alternative media, within the framework of the newsworthy issues of the company, through press releases, attention to media requirements, and press conferences.		Every week of the year, a meeting was held to plan the topics to be addressed with mass media. The weekly agenda is informed to the company's management team.	Total
	Strengthen EPM's accountability activities with stakeholders, in accordance with the provisions of the Integrated Model of Planning and Management (abbreviated MIPG in Spanish).		The proposal for the implementation and management of the accountability process was structured in the light of the MIPG. Its feasibility is being evaluated.	Partial
	Create educational spaces with mass and alternative media to achieve a better understanding of topics related to the sector and the organization, according to the agenda defined each month.		Visits to the Ituango project and to the Aguas Claras treatment plant in order to show the development of these projects. With Club de la Prensa, which groups together local journalists, the company held a seminar on power generation and distribution.	Total
Transparency practices	Ensure compliance with Act 1712 and Decree 103 of 2014 by publishing on the website the required information on transparency and access to public information.	EPM	The requirements to publish information on the EPM's website were met, a campaign to communicate and complete the legal requirements was carried out, and the request of the Office of the Inspector General of Colombia to fill out the Active Transparency Index (abbreviated ITA in Spanish), based on the comprehensive and detailed compliance with Act 1712, was addressed.	Total

Action	Challenges	Company	Achievements in 2019	Accomplishment
Transparency practices	Consolidate the organizational structure for ethical management.	EPM	The teams of ethics agents were reconfigured to assign specific functions and test their performance. The role of the member delegated by the CEO was adjusted and a proposal was made to incorporate a new role for ethical management in top-level executive positions, which will be submitted to the Ethics Committee for consideration.	Total
	Contribute to the implementation of the United Nations Office on Drugs and Crime (UNODC) program "Towards integrity: an alliance between the public and private sectors against corruption in Colombia".		EPM's participation in this program is suspended due to budgetary restrictions.	Not accomplished
	Develop at least one ethical dilemma for reflection in each session of the Ethics Committee.		The Ethics Committee held seven sessions and analyzed and reflected on seven ethical dilemmas. Likewise, it published 27 ethical dilemmas in the internal communication channel called "Mi Canal". In addition, an ethical reflection on conflicts of interest and another on the Transparency Store were internally published.	Total
	Execute the actions defined in the road map for strengthening ethical management in the organization.		The actions aimed at strengthening ethical management were executed as planned in the road map.	Total
	Formalize the internal mechanism called Integration and Coordination Meeting (abbreviated RIC in Spanish), which was established to analyze risks and impacts of (reputational, ML/FT, F/C/B, legal and other) warnings.	Grupo EPM	The RIC mechanism was formalized and is currently operating. The formal document is published in the internal regulatory management application "Enter".	Total
	Implement the Transparency Statement and the Conflict of Interest Statement.	Aguas de Malambo	This challenge is expected to be met during the first half of 2020.	Not accomplished
		Aguas Regionales	The Transparency Statement and the Conflict of Interest Statement were implemented in this affiliated company.	Partial

## Challenges

Action	Challenges	Year in which it is achieved	Territory	Business	Company
Transparency practices	Ensure compliance with Act 1712 and Decree 103 of 2014 by publishing on the website the required information on transparency and access to public information.	2020	Colombia - Antioquia	All the businesses	EPM
	Implement the Transparency Statement and the Conflict of Interest Statement.	2020	Chile	Water and sanitation	Adasa
			Colombia - Antioquia		Aguas de Malambo
			El Salvador	Power - T&D	Delsur
			Guatemala		Eegsa
			Panama		ENSA
					HET

## Related sustainable development goals



## Related stakeholders

Customers and users  
Grupo EPM people

Community  
Investors

Owner  
Suppliers and contractors

State  
Partners

Colleagues

## GRI standards and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 205-2** Communication and training about anti-corruption policies and procedures.
- EPM-14** Business transparency index.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Electrificadora de Santander - ESSA  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Hidroecológica del Teribe - HET  
 Tecnología Intercontinental -Ticsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama  
 Mexico

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Information for stakeholders

## Information for stakeholders

Grupo EPM shares its business management with its stakeholders, directly and through communication media, as one of the mechanisms to strengthen and transcend the informative purpose and consolidate the relationships with stakeholders.

To achieve this, the following are the main mechanisms:

**Media management:** Information and engagement activities with mass media based on respect, equity, transparency, opportunity, truthfulness, openness, and service vocation, in accordance with EPM's Communication Policy and EPM's Manual of Relations with Mass Media.

**External media:** Management of media aimed at external audiences and stakeholders in the areas of influence of each of the companies of Grupo EPM, with relevant information on the interaction with the territory, matters related to public utilities, and as a promotional mechanism of communities and customers.

**Social media:** Permanent communication with virtual communities through discussions in the interest of stakeholders aimed at strengthening relationships and transparency, as well as at building sustainability and protecting reputation.

**Sustainability report:** Balanced report on the economic, social, and environmental management of the previous year and its positive or negative impact on society. It is a corporate sustainability management tool that makes it possible to identify gaps, risks, and opportunities; as well as prioritize actions and keep track on the initiatives reported.

**Public accountability:** Action carried out every year in order to inform the main achievements and challenges of the corporate management and its alignment with stakeholders.

## Management in 2019

During the year, permanent information activities were conducted on the actions and achievements of Grupo EPM. It is worth highlighting the media management regarding the progress made in reducing the risk to the communities downstream of the Ituango hydroelectric project, particularly during the closure of the powerhouse gates. In addition, several visits to the project and educational activities were performed in coordination with communication media, in order to learn about different aspects of the projects and the provision of public utilities in general.

### — Discussion of EPM's current topics with different audiences

The company continued with its dynamic of informing trades, state entities, and different communities on the various dimensions of its work.

The presentations before investors are noteworthy, as well as those before audiences such as the Council of Medellín, the Colombian National Trade Council, the Bogotá Intersectoral Committee, and the Antioquia Intersectoral Committee, among others. At these meetings, the company provided information on the development of the Ituango hydroelectric project, especially on the activities aimed at reducing risk to the surrounding communities.

Additionally, progress was made in the informative openness strategy in election times, with virtual and face-to-face interaction spaces in which the candidates for mayor and municipal councilor, as well as the community in general, participated as a contribution to strengthening the democratic exercise in the country with a view to the regional elections that took place in October 2019.

These communication and engagement actions sought to ensure that the candidates for popularly elected seats had opportune, true, sufficient, rigorous, and useful information to form informed opinions and prospective analysis based on first-hand information about the company.

Once the candidates for governor of Antioquia, mayor of Medellín, and mayor of the other municipalities in the region had been firmly defined, the company enabled face-to-face discussion spaces between them and EPM and scheduled visits and meetings in which technical topics related to the business operations were addressed with an emphasis on future actions in the territories: projects under development, operation of plants and networks, financial results, contributions to social and environmental development, etc.



## — Media management

In 2019, EPM conducted multimedia management actions with local, regional, national, and international reach, applying its communication policy to consolidate the relationship with the media within a framework of respect and trust and providing timely and accurate information.

During the year, the company published press releases and statements; addressed daily requirements from journalists; held press conferences, discussions, and interviews with the CEO; and scheduled visits to its headquarters and projects with media representatives.

During the closing of the floodgates that controlled the flow of water to the Ituango hydroelectric project's powerhouse, press management was key to opportunely clarify rumors or fake news about the Cauca River's behavior.

Similarly, information was provided on the Aguas Claras wastewater treatment plant, particularly on the inauguration of the project and the subsequent problems related to the odors that affected the surrounding community.

Informative visits were made to the Ituango project with local and national media, media directors, and columnists; in addition to informative programs to learn about management aspects such as the protection of the Medellín River, measures to deal with the drinking-water coloration due to the presence of manganese, and the modernization of the San Fernando wastewater treatment plant, among others.

A critical element of press management is the permanent monitoring of the media. In 2019, the contractor that provides this service improved the platform, enabling the option to generate monthly reports on the presence of the business group in traditional media and social networks.

Finally, a seminar on the power generation and distribution processes was held with the journalists, members of the Club de la Prensa corporation. Employees from these areas of the company participated in the presentation of the different modules.

## — External Media

- *Camino al Barrio*: Open television program produced by EPM, which shows the communities of Medellín and Valle de Aburrá. This program was broadcast on Saturdays.

- *EPM Radio*: This collaborative model between EPM and the community favors interaction with users regarding the services, programs, projects, and products offered by Grupo EPM. In 2019, Aló EPM was broadcast daily in the department of Antioquia.
- *Revista EPM*: Semiannual magazine mainly aimed at the academic community, with articles prepared by technical staff of Grupo EPM. In 2019, two issues of the magazine were published addressing different topics related to public utilities.

## — Social media

In 2019, all the EPM's social networks increased their number of followers. The main topics addressed in these social platforms were, among others, the Ituango hydroelectric project and the progress made regarding the contingency; as well as the problem related to the odors that affected the community surrounding the Aguas Claras WWTP when it started operating in the northern area of Valle de Aburrá.

The company constantly monitored the information published on social media, in order to communicate news in a clear, accurate, and timely manner. To this end, it decided to issue daily and joint reports on the publications in traditional media and social networks such as Facebook, Youtube, Twitter, and Instagram.

## — Sustainability report

Most companies of Grupo EPM draw up their sustainability reports using the GRI methodology, which facilitates the preparation of these documents regardless of their size, industry, or location. The EPM report follows the Global Reporting Initiative (GRI) standards and is in line with the International Integrated Reporting Council (IIRC) framework.

The preparation of the Grupo EPM's report is a continuous organizational learning process that is in constant evolution. Grupo EPM's reports are presented to the shareholders, the employees, and the community in different spaces for dialog, such as meetings with community action boards and municipal councils, among others.

The Global Reporting Initiative is an organization that promotes the use of sustainability reports so that organizations can become more sustainable and contribute to sustainable development.

See: [www.globalreporting.org/information/about-gri/Pages/default.aspx](http://www.globalreporting.org/information/about-gri/Pages/default.aspx)

For more information on the Sustainability Report, see [Report profile](#).

The management and sustainability reports of Grupo EPM's affiliates are available at each company's website.

### — Public accountability

As a proof of transparency and commitment to a fluid and clear engagement with its stakeholders—which enables compliance with the Anti-Corruption and Citizen Service Plan and with the Digital Government Policy—EPM reports every year the main achievements and challenges of its business management.

In order to share these results with as many people as possible and to go beyond an information function, the strategy is designed under the guidelines of the Unified Accountability Manual of the Administrative Department for Public Service, addressing the three basic elements referred to in this document: information actions, dialogue actions, and incentive actions. The objective is not only to generate content on the business management, but also to listen to and solve citizens' concerns.

Within this strategy, it is worth highlighting the Public Accountability central event held on April 2, 2019, at the EPM building, where the CEO Jorge Londoño De La Cuesta and the Mayor of Medellín Federico Gutiérrez Zuluaga presented before the company's stakeholders the 2018 Management Report, based on the main axes: service coverage, actions of the group in the territories of the country, sanitation of the Medellín River, sustainable mobility, care for the environment, Ituango project, and creation of distributed value.

The event was attended by more than 300 people, besides the internal public, and was broadcast live on the Telemedellín channel and via streaming on social media, reaching more than 1,500 people.

In addition, a strategy was implemented to disseminate the main contents in mass media, through press announcements with regional and national reach, journalistic notes in the RCN news and on airport screens, as well as in the company's media and social networks.

## Related stakeholders

Customers and users

State

Colleagues

Gente Grupo EPM

Community

Investors

Owner

Suppliers and contractors

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
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 Aguas de Malambo  
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 Aguas de Antofagasta - Adasa

### Territory

Colombia – Antioquia  
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 El Salvador  
 Guatemala  
 Mexico  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Transparency practices

## Transparency practices

To preserve trust and credibility among all its stakeholders, Grupo EPM incorporates in its management clear rules regarding organizational culture standards and principles, as well as mechanisms for participation, interaction, and verification of objective and goal fulfillment. This set of actions raises stakeholders' awareness so that they become responsible, participate, identify and exercise their rights and obligations, actively promote integrity, and fight corruption. The practices developed in EPM facilitate compliance with the strategic goals of the group and not only have their origin in the compliance with the laws, but are also the basis of a culture based on ethical values and principles. Transparency is one of Grupo EPM's values and is considered a fundamental principle for good governance and management; which has made it possible to preserve trust and credibility among the different stakeholder groups.

Grupo EPM aims to become a corporate benchmark in transparency practices by incorporating international standards into its compliance management, actively participating in collective actions that generate high impact on society, and managing best transparency practices.

Its current practices include:

**Ethics and transparency mechanisms:** They refer to practices and tools implemented to minimize the materialization of risk situations related to fraud, corruption, bribery, money laundering, and financing of terrorism.

**Transparency assessment:** Grupo EPM's companies voluntarily participate in the assessment of transparency practices by public utility providers in Colombia, in order to identify their degree of development and encourage them to implement improvement plans and actions in their activities, recognize the companies committed to ethical and transparent relationships with their stakeholders, and foster compliance with international standards.

**Digital government:** A strategy that seeks to improve efficiency, promote transparency, and encourage citizens' collaboration and participation. It is based on the strengthening of the actions with stakeholder groups and of the conditions to enhance competitiveness in the institutions linked to the Colombian government, using information and communications technology as leverage.

## Management in 2019

In terms of digital government, aligned with the MIPG, the company was awarded with new seals of excellence in several categories: Open Governance, Participation Exercises, Open Governance-Data and online procedures and services.

During the year, the money laundering and financing of terrorism risk (ML/FT) integration mechanism was strengthened in EPM and the Colombian affiliates of the business group. All the companies of the group have the *Transparent Contact* Ethics Hotline for receiving and recording signs and incidents related to possible misconducts committed by employees of EPM members of the stakeholder groups.

### — Ethics and transparency mechanisms:

The mechanisms to prevent fraud, corruption, and bribery in Grupo EPM strengthen the capacities for participating, monitoring, influencing, and discussing with all public and private actors. The organization implements self-regulatory initiatives and instruments that allow it to preserve an environment of security, transparency, and trust.

Among the mechanisms established, it is worth mentioning: Code of Ethics; Code of Business Conduct; Corporate Governance Manual; Code of Conduct for Suppliers and Contractors; Policy of Zero Tolerance to Fraud, Corruption, and Bribery; Transparent Contact Ethics Hotline; and several additional initiatives:

- Transparency Statement.
- Conflict of Interest Statement.
- Ethical Climate Survey.
- Manual of the Risk Management System for Money Laundering and Terrorism Financing.
- Collective Agreement of the Electricity Sector.
- Compliance Committee of the Real Sector of Antioquia.

Within the management in 2019, there are some remarkable actions:

- EPM and all its affiliates have the Transparent Contact Ethics Hotline for receiving and recording signs and incidents related to possible misconducts committed by EPM employees and/or other stakeholder groups (customers and users, colleagues, community, owner, state, EPM people, suppliers and contractors, partners and investors), which may affect the fulfillment of the strategic goals. The incidents received through the Ethics Hotline, as well as the way they are addressed, are reported by means of e-mails sent to 7,815 employees and contractors in the EPM database, among whom the use of this mechanism is promoted:

<https://www.epm.com.co/site/home/transparencia/contacto-transparente>

The most relevant cases, the lessons learned, and the annual statistics on the operation of the mechanism are also published:

[https://www.epm.com.co/site/portals/contacto\\_transparente/ie.html](https://www.epm.com.co/site/portals/contacto_transparente/ie.html)

- The transparency statement has been accepted by 7,680 people, that is, 97.11% of the EPM collaborators and those with a potential conflict of interest. In 2019, it was adopted by Aguas Regionales and Emvarias.
- The Code of Business Conduct of Grupo EPM was adopted by the affiliates located outside Colombia:
 

[https://www.epm.com.co/site/Portals/0/centro\\_de\\_documentos/Manual-conducta-empresarial-de-Grupo.pdf](https://www.epm.com.co/site/Portals/0/centro_de_documentos/Manual-conducta-empresarial-de-Grupo.pdf)
- In EPM, the Ethical Climate Survey achieved the excellence rating in 8 of the 11 categories assessed; 2 were classified in development, implementation, and strengthening stage; and 1 had deficiencies and gaps that needed to be primarily addressed. This survey was sent to 6,708 EPM employees and 2,584 (35%) responses were received. The results were disclosed in the Ethics Committee and the Corporate Core Committee.
- In the development of the social experiment called Tienda de la Transparencia (Transparency Store), some comestibles were made available to employees in a “store” or space that was not controlled or supervised. 4,049 transparent transactions were recorded in all the stores installed at EPM’s headquarters.
- The celebration of the International Anti-Corruption Day consisted in an academic event with the participation of 120 people, including academics; employees and compliance officers; professionals in the areas of ethics, audit, and internal control; and people in charge of this matter in companies in Antioquia.



- Nine meetings were held to strengthen the ML/FT integration mechanism in EPM and its national affiliates.
- EPM contributed to the celebration of the International Day for the Prevention of Money Laundering and Financing of Terrorism.
- Support was provided to various departments of the organization and to Colombian affiliates on topics related to regulatory compliance in personal data protection, implementation of biometric devices for face-to-face service, sending of bills via WhatsApp, and public charging on the Driivz platform, among other aspects:  
<https://www.epm.com.co/site/home/transparencia/transparencia-de-nuestra-gestion>
- The Anti-Corruption Plan was presented in the Audit Committee of the Board of Directors, which was attended by two out of the three board members that make up this committee.

As for the ethical management, educational events were permanently developed for EPM employees, including the Workshop for the Creation of Ethical Commitments that in 2019 received 1,152 attendees. Likewise, educational materials and videos were designed to encourage reflection on 28 ethical dilemmas, which were included in the internal communications plan regarding ethical management. More than 2,500 people received training.

During the year, the group reinforced the ethical principles of action, the corporate values, and the understanding of conflicts of interest in the orientation of new employees; in addition, 11 meetings were held to strengthen ethical management with the affiliates in Colombia and abroad.

### — Ethical and transparent management with suppliers and contractors

The following activities were carried out during 2019:

- A communication was sent to 5,500 suppliers and contractors: “We count on you to build the Anti-Corruption and Citizen Service Plan”, seeking to receive ideas, comments, or suggestions. The 2019 Plan was published in March, with the adjustments and remarks made by suppliers and contractors.
- Eight cases were dealt with to validate compliance with the Code of Conduct by suppliers and contractors.
- An alert was issued on attempts of fraud to suppliers and contractors on behalf of EPM.

- The potential corruption risks related to suppliers and contractors were validated, as well as the controls in the processes to mitigate them. Two opportunities for improvement were identified in the controls of the supplier management process; their implementation in 2020 is being evaluated.
- A mass communication was sent to suppliers and contractors asking them not to give Christmas gifts to Grupo EPM employees. Likewise, employees were given official instructions not to accept invitations, gifts, or favors that could, in any way, affect the impartiality of their actions in Grupo EPM.

### — Business Transparency Assessment

EPM, along with its affiliates in Colombia, actively participates in the Business Transparency Assessment, Public Utilities chapter, promoted by the Transparencia por Colombia corporation.

The overall goal of the assessment is to improve transparency and anti-corruption standards, through the identification of corruption risks for strengthening the business management. It is a tool that identifies institutional designs and practices that lead to corruption risks.

The Transparencia por Colombia corporation defined that the assessment will be conducted every two years, which is why there was no assessment in 2019. However, each affiliated company executed an improvement plan aiming at bridging gaps and achieving the goals that were initially set according to the measurement results.

The challenge for 2020 is not only to conduct the assessment, but also to promote practices within the group that maintain a low level of corruption risk, define how much the policies and mechanisms to prevent corruption risks have been improved, provide access to information, and promote spaces for dialog and participation with the different stakeholder groups in all the affiliated companies.

### — Digital government

Grupo EPM is committed to the Digital Government Policy, promoting the appropriate use of information and communications technology to consolidate competitive, proactive, and innovative state and citizens that create public value in an environment of digital trust.

The organization mobilizes its five main purposes:

- Enable and improve the provision of reliable and quality digital services.
- Achieve secure and efficient internal processes.
- Make decisions based on data.
- Empower citizens.
- Drive the development of smart cities and territories.

This mobilization is achieved through the following actions:

- Appropriate internal management supported by technological and business management architectures.
- Provision of quality digital services.
- Use of technology to solve real problems.
- Promotion so that the state reaches the areas that the market does not, enabling the creation of new markets.
- Building of digital trust among the state, the citizens, and other actors in the digital ecosystem.
- Permanent dialog in a simple, co-responsible, predictable, and safe environment.

In 2019, the organization made progress in the defined purposes and these efforts were materialized in several seals of excellence in the following categories:

- Open governance: fees for natural gas, electricity, water supply, and wastewater services.
- Participation exercises.
- Online services: e-bill.
- IT management capabilities: third entity in the country to receive this seal.

## GRI standards and EPM indicators

**205-2** Communication and training about anti-corruption policies and procedures.

**EPM-14** Business transparency index.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
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 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

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 Guatemala  
 Mexico  
 Panama

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas



# Complementary matters

# Corporate citizenship



## Corporate citizenship

The social responsibility model of Grupo EPM promotes actions that are directly related to its role as public utility provider. Moreover, either directly or through Fundación EPM, it takes actions that meet the needs of the communities in the areas where it operates, such as social investment, programs, and contributions to public policies that are part of the concept of corporate citizenship. This way, it promotes, among communities, their development, inclusion in the urban dynamics, economic activities, and access to information and cultural, educational, social, job, and financial opportunities.

### Related stakeholders

Community

Owner

State

Partners

### GRI standards and EPM indicators

**203-1** Infrastructure investments and services supported.

**203-2** Significant indirect economic impacts.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín – EPM  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresas Varias de Medellín – Emvarias  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Centrales Eléctricas del Norte de Santander – CENS  
 Empresa de Energía del Quindío – EDEQ  
 Aguas de Malambo  
 Aguas de Antofagasta – Adasa  
 Empresa Eléctrica de Guatemala – Eegsa  
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 Chile  
 Guatemala  
 Panama

#### Businesses

Water and sanitation  
 Electrical energy  
 Natural gas



# Christmas lighting



## Christmas lighting

Christmas lighting is an annual project run by Grupo EPM that contributes to the construction of a civic culture, the promotion of values, and the preservation of the community traditions, and allows families to get together and enjoy the city.

To give life to the 2019 Christmas lighting called “EPM Christmas lighting, traditions that light up Christmas,” a team of 220 people, including professionals and artisans, worked throughout the year.

This year, Medellín’s Christmas lighting installed in the Parque Norte focused on Antioquia’s December traditions, while that installed in Parques del Río had a more urban and modern air with a proposal that integrated an architectural design, the river bed, and the community’s appropriation of the space.

Some of the main figures of EPM 2019 Christmas lighting include: 32,000 figures, 27 million LED bulbs in about 25 kilometers of circuits, 7 tons of metallic paper, 170 tons of iron, 810 kilometers of LED rope light and 9 kilometers of neon rope light, 159 fiber posts, and, and 170 1000-watt projectors.

Moreover, the 7th edition of the Encendamos la Alegría (Turn on the Joy) contest was developed, and the following 8 municipalities were the winners in terms of design, construction, assembly, maintenance, and removal of the Christmas lighting: Caracolí, Carolina del Príncipe, Cocorná, Concordia, Dabeiba, El Carmen de Atrato, Girardota, and Santo Domingo.

## Management in 2019

Grupo EPM emphasized family unity and the recovery of Christmas traditions, as the theme of the Christmas lighting.

The Turn on the Joy contest brought together communities from different regions in Colombia to recreate their Christmas traditions. This proposal boosts tourism, stimulates the economy, and contributes to job creation.

As for the affiliates of Grupo EPM:

CENS: in 2019, its Christmas lighting strategy only focused on the city of Cúcuta, in places such as: CENS Ecoparque Pamplonita, Parque de Ingenieros, Catedral San José, and the facades of the headquarters of the company's regional offices.

CHEC: with the Revivamos Nuestras Tradiciones (Revive our Traditions) slogan, the Christmas lighting in the city of Manizales and ten rural settlements included 1,079 flat figures and 1,370 volumetric figures. A total of 38,000 thousand meters of LED rope light, 56,000 thousand meters of mini LED light extensions, and 62 light projectors on trees all around the city were used.

EDEQ: its 2019 Christmas Lighting was called "Luz Que Da Magia a las Familias Quindianas" (Light that Gives Magic to Families in Quindio), a company's strategy to promote tourism in the region, Christmas traditions, and family unity based on three lines of work: Turn on the Joy, public lighting loyalty campaign, and support to tourism in the region. For the Christmas lighting and decoration of ten of the twelve municipalities in the department, 450 figures were installed, along with 1,500,000 thousand mini LED bulbs and 14 kilometers of LED rope light. In the Turn on the Joy contest, the winning municipalities were Quimbaya and La Tebaida.

ESSA: with themes that recreated nature, ecology, and Santander's culture, ESSA illuminated 9 parks and 4 main roads in Bucaramanga, in coordination with the municipal administration.

EPM Christmas lighting			
Indicator	2017	2018	2019
Direct jobs	286	219	220
Indirect jobs (street peddlers)	350	350	430
People benefited	2,508,452	2,427,129	2,483,545
Investment (million COP)	15,000	10,000	10,000

*Source: Vice Presidency of Power Transmission and Distribution.*

Christmas lighting - Energy affiliates of Grupo EPM			
Indicator	2017	2018	2019
Direct jobs	412	317	189
Indirect jobs (street peddlers)	208	454	454
People benefited	2,010,627	1,942,143	2,296,994
Investment (million COP)	7,867	4,598	3,281

*Source: Vice Presidency of Power Transmission and Distribution.*

## GRI standards and EPM indicators

203-2 Significant indirect economic impacts.

### Scope and coverage

#### Companies

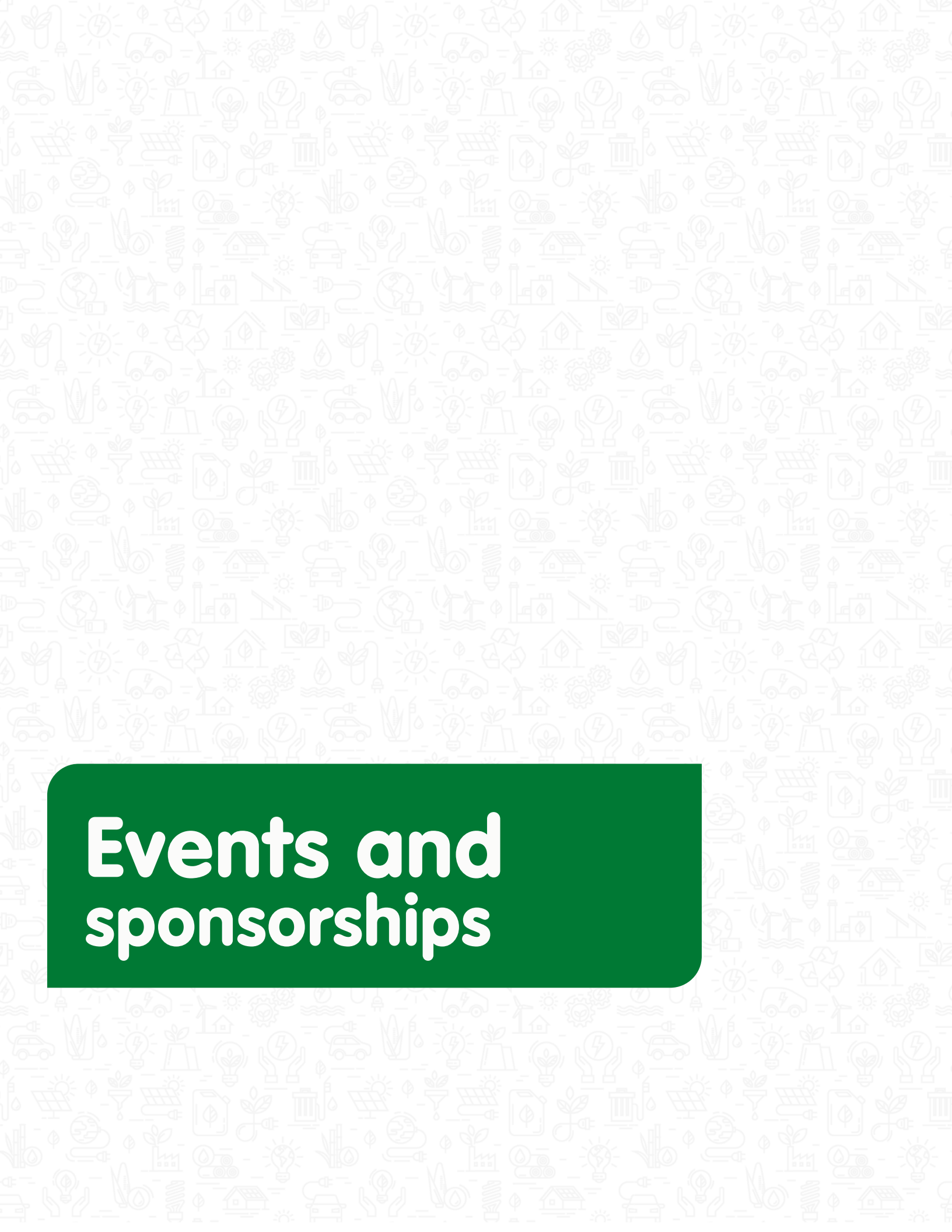
Empresas Públicas de Medellín – EPM  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresa de Energía del Quindío – EDEQ  
 Centrales Eléctricas del Norte de Santander – CENS

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Norte de Santander  
 Colombia – Santander

#### Businesses

Electrical energy



# Events and sponsorships

## Events and sponsorships

Grupo EPM develops and supports events and open advertising engagements that strategically aim at generating, supporting, and strengthening its relationships with the stakeholders, to seek the development of the regions where it operates and enhance the business group's reputation.

With a sense of social responsibility, local and regional initiatives having a positive impact on the community are supported by the organization. These initiatives address issues such as conservation of natural resources, technical issues to favor a sustainable culture, safe use of public utilities, and exploitation of recyclable materials, among others. They also contribute to the human, economic, cultural, social, and environmental development processes of the territories where the Group's companies operate.

## Management in 2019

Its participation in events and sponsorships allowed Grupo EPM to strengthen its relationship with the different stakeholders in 2019 while contributing to the organizational purpose and brand positioning of its companies. In the case of EPM, some of them include engagement in local and national events such as the Flowers Marathon, the Book and Culture Festival, and the Flowers' Festival, and participation in city spaces that contribute to culture, such as engagement with the Museum of Antioquia, the Museum of Modern Art of Medellín (MAMM, as per its acronym in Spanish), the Philharmonic Orchestra of Antioquia, and the Explora Park, among others.

In terms of events, the company continued to develop activities to engage with different stakeholders in the context of the Ituango hydroelectric project contingency.

Events of engagement with and pedagogical participation of the community also stand out, such as: Unidos por el Agua (United for Water), Festival Buen Comienzo (Buen Comienzo Festival), meetings with community leaders, Especialidad Scout Cuidamundo (World's Protector Scout) and traveling exhibition on the history of the Medellín River.

Furthermore, awareness-raising events were held to help make some infrastructure projects viable, and the Aguas Claras wastewater treatment plant was inaugurated. There were also meeting spaces with suppliers and contractors, and the company participated in local competitions, such as the Acodal Congress and FISE. In addition, there was engagement in brand activation in commercial, cultural, environmental, and sports events such as the Somos program of Grupo EPM, Expoinmobiliaria, Transformemos la Música en Cultura Verde (Let's Make Music Turn Green), International Environmental Trade Fair, and UCI 2.1 Tour. Thanks to its innovative spirit in the use of renewable energies and sustainable mobility, EPM was the protagonist or participant in events such as Expo Solar, Innovate Yourself, CT+I Fair, and Mobility Fair.

EPM sponsorships			
Number of sponsorships	2017	2018	2019
Local (only Medellín)	61	18	34
National	46	20	18
International	0	0	1

*Source: Corporate Identity Management.*

Investment in EPM sponsorships			
Contributions (million COP)	2017	2018	2019
Local (only Medellín)	4,022	2,371	3,804
National	3,867	4,835	4,340
International	0	0	89

*Source: Corporate Identity Management.*

EPM events			
Number of events	2017	2018	2019
Commercial	111	27	48
Non-commercial	363	120	77

*Source: Corporate Identity Management.*

Investment in EPM Events			
Contributions (million COP)	2017	2018	2019
Commercial	706	147	819
Non-commercial	3,149	1,080	1,659

*Source: Corporate Identity Management.*

As for the energy affiliates, CENS focused on supporting athletes from different disciplines such as gymnastics, rugby, and skating. Moreover, this affiliate allocated resources for different regional fairs, such as technology and construction fairs and the Book and Culture Festival. CHEC was involved in events organized by local municipalities, and EDEQ continued to participate in regional development initiatives such as *Invest in Armenia* and *Armenia Cómo Vamos* (Armenia How Are We Doing). ESSA participated in days of rural global women projects and Cero Papel (Zero Paper) campaigns, in the context of the Regional Transmission System projects. In Guatemala, Eegsa sponsored the mapping that illuminated the Metropolitan Cathedral during the Christmas Festival.

<b>Total number of sponsorships and contributions – Energy affiliates of Grupo EPM</b>			
<b>Total sponsorships and contributions</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Number of sponsorships	152	81	109
Contributions (million COP)	1,770	1,180	1,285

*Source: Vice Presidency of Power Transmission and Distribution.*

<b>Total number of events - Energy affiliates of Grupo EPM</b>			
<b>Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Number of contributions made	118	49	145
Contributions (million COP)	1,404	2,821	1,104
Coverage (beneficiaries)	52,095	964,959	1,113,381

*Source: Vice Presidency of Power Transmission and Distribution.*

As for the water and sanitation affiliates:

Aguas de Antofagasta hosted and held the 1st Day of New Technologies for the sanitary sector. This initiative aimed to show, through different companies, the new machinery and methods used in the sanitary industry, emphasizing the mitigation of the impacts on the community caused by the executions of works in the city.

In Colombia, Aguas Regionales organized various community education days in the municipalities of Urabá and western Antioquia and was engaged in events such as Feria del Agua (Water Fair), Caravanas Aguas Regionales (Aguas Regionales Caravan), and meetings and working days with community leaders.

Envarias participated in the Flowers' Festival and in the XXI Andesco Congress as a speaker and had an informative stand to provide information about the most important projects for the city such as Ruta Recicla (Recycling Road), Estación de Transferencias de Residuos Sólidos (Solid Waste Transfer Station), and urban waste containerization.

Aguas de Malambo held a special event in the Concord neighborhoods of the municipality of Malambo, Atlántico, on the occasion of the Water Day. In addition, it organized a playful-educational brigade there in alliance with other entities, which included educational spaces and spaces to reach the community.

<b>Total number of sponsorships and contributions – Water affiliates of Grupo EPM</b>			
<b>Total sponsorships and contributions</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Number of sponsorships	152	52	62
Contributions (million COP)	265	210	171

*Source: Vice Presidency of Water and Sanitation.*

<b>Total number of events - Water affiliates of Grupo EPM</b>			
<b>Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Number of events held	169	832	4,028
Contributions (million COP)	423	860	24,357
Coverage (beneficiaries)	806,686	666,375	51,923

*Source: Vice Presidency of Water and Sanitation.*



## GRI standards and EPM indicators

203-2 Significant indirect economic impacts.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín – EPM  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresa de Energía del Quindío – EDEQ  
 Centrales Eléctricas del Norte de Santander – CENS  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Empresas Varias de Medellín – Emvarias  
 Elektra Noreste – ENSA  
 Aguas de Antofagasta – Adasa

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Norte de Santander  
 Colombia – Santander  
 Colombia – Malambo, Atlántico  
 Chile  
 Panama

#### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



**Fundación  
EPM**

## Fundación EPM

Fundación EPM was created in 2000 to contribute to the development of competitive and sustainable territories in the current and potential areas of influence of Grupo EPM, with programs and projects of social and environmental management that favor the conservation of natural resources and the proper use of public utilities.

As part of its work, it manages initiatives such as Water for Education, Education for Water; Articulated Life Units (UVAs); the EPM Water Museum; the EPM Library; the Deseos Park, and the House of Music.

In this sense, and contributing to the corporate strategy of Grupo EPM, this foundation takes actions aimed at strengthening closeness to communities, improving coverage of residential public utilities, and promoting care for the environment. This includes the development of educational activities within the framework of environmental and social management processes, aimed at promoting the provision of public utilities and making infrastructure projects viable in the territories, thus contributing to the materialization of Grupo EPM's higher purpose.

## Management in 2019

During 2019, more than 4 million people benefited from the corporate citizenship programs led by Fundación EPM, such as Water for Education, Education for Water, Articulated Life Units (UVAs), the EPM Water Museum, the EPM Library, the Deseos Park, and the House of Music, including students who received a scholarship to fulfill their dreams thanks to the resources provided by Fundación EPM to the Corporation for the Promotion of Higher Education in Antioquia.

Through its Water for Education, Water Education program, and thanks to its articulated work with the communities and public and private entities, Fundación EPM managed to install 45 water purification solutions in rural educational centers in the department of Antioquia, thus benefiting 4,988 children. Since 2011, the program has installed 722 water purification solutions in 5 departments in Colombia.

Fundación EPM continues to operate the following programs: UVAs, the EPM Water Museum, the EPM Library, the Deseos Park, and the House of Music, offering educational, cultural, and recreational activities to promote social adoption of knowledge and care for natural resources.

The Antioquia's Higher Education Scholarship Fund benefited 542 young people from the department, who received a scholarship covering tuition fees and maintenance expenses, in order to pursue their higher education studies, at a technical, technological, and university level. This program is developed in alliance with the Antioquia Governor's Office and the Antioquia Development Institute (IDEA, as per its acronym in Spanish).

Additionally, as a strategic ally of Grupo EPM to favor the provision of public utilities and make infrastructure projects viable in the territories, Fundación EPM supported and led educational processes within the framework of environmental and social management in infrastructure projects such as Ituango, Nueva Esperanza, and La Sierra Cocorná. It also worked together with Emvarias to educate communities in the proper management of solid waste and with Aguas de Malambo to promote access to drinking water and a culture of payment and legality, among other notable actions.

<b>Fundación EPM / Beneficiaries, programs, and projects</b>			
<b>Program or project</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Agua para la Educación, Educación para el Agua	7,042	5,520	4,988
EPM Library	508,811	402,026	395,139
Education to customers and EPM community	15,547	86,060	157,773
Malambo Source of Life Fund	4,297	8,136	3,530
EPM Water Museum	99,574	104,236	97,517
Deseos Park and House of Music	1,891,617	1,720,568	1,800,195
UVAs (14) **	1,743,881	1,882,993	1,774,118
Ambiente para la Vida (Environment for Life)	NA	NA	42,840
Cultura Ciudadana del Aseo (Civic Culture on Cleaning)	NA	NA	18,542
La Sierra Cocorná PMA and PMS	NA	NA	131
Puertas Abiertas (Open Doors)	NA	NA	2,013
Agua Hecha Raíces (Water Takes Root)	NA	504	885
Antioquia's Higher Education Scholarship Fund*	595	270	542

\* The figures of the Antioquia Higher Education Scholarship Fund correspond to the 2019 scholarship holders. This program is developed in alliance with the Antioquia Governor's Office and the IDEA. In total, 11,617 students throughout the department have benefited from it, of which 1,993 are supported with resources provided by Fundación EPM to the Corporation for the Promotion of Higher Education.

\*\* The information corresponds to the education and culture component of Fundación EPM.

### GRI standards and EPM indicators

203-1 Infrastructure investments and services supported.

### Scope and coverage

**Companies**

- Empresas Públicas de Medellín - EPM
- Aguas Nacionales EPM
- Aguas de Malambo
- Empresas Varias de Medellín - Emvarias

**Territory**

- Colombia – Antioquia
- Colombia – Malambo, Atlántico
- Colombia – Chocó
- Colombia – Cundinamarca

**Businesses**

- Water
- Electrical energy
- Sanitation



# City projects

## City projects

Grupo EPM, aware of its role in the construction of a fair, educated, and sustainable society, defines projects with a visible impact on the quality of life of the inhabitants in the territories where it operates.

### Management in 2019

While EPM continued with its fundraising activities in important parks of the city, the water and energy affiliates of Grupo EPM carried out outstanding actions with the communities in the municipalities where they provide their services.

In the department of Quindío, EDEQ implemented mobilizing strategies for regional development, including water purification in rural schools, consolidation of the youth leadership network, and scholarships awarded to young university students.

CENS supported the strengthening of community organizations and production units and networks in Norte de Santander, while investing in the improvement of physical educational infrastructures and community spaces.

Aguas Regionales participated in the construction of 850 meters of footpaths, as part of the Acueducto Aéreo y Senderos de Vida (Overhead Water Supply System and Life Paths) project conducted by Grupo EPM in the municipality of Turbo (Urabá). This affiliate also participated in the installation of a playground in the same town.

Aguas de Antofagasta continued to promote its botanical garden, a 3,200 m<sup>2</sup> space with nine thematic gardens and more than 560 native and exotic species in full development, where children, youth, and adults can learn to appreciate, preserve, and protect biodiversity.

Adasa, in partnership with the municipality, delivered the first Plaza del Agua (Water Square) in the Antofagasta region, a free and open public space for the community living in the Balneario Municipal.

In Guatemala, Trelec transferred a total of 152 square meters to facilitate the planning and construction of the Cuatro Caminos (Fourth Paths) project, an important infrastructure work that improves road circulation in eight areas of this Central American country.

<b>Management of urban spaces owned by EPM</b>			
<b>Impact</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Visitor assistance service – city guides (million COP)	387	402	309
Maintenance of Pies Descalzos park and Puerta Urbana (million COP)	243	276	344
Cost of toilet units for community use (million COP)	289	307	410
Number of visitors to Pies Descalzos park and Puerta Urbana	281,024	311,297	219,088

*Source: Vice Presidency of Shared Services and Supplies / Administrative Support Management / Fundación EPM.*

<b>Plots delivered in free lease by EPM to the community</b>			
<b>Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Free-lease contracts signed	63	61	61
Benefit for the community (million COP)*	3,528	3,702	3,785

*Source: Vice Presidency of Shared Services and Supplies.*

\* The reported value corresponds to the estimated percentage of profitability of assets in free lease, which is equivalent to the cost of leasing that commodataries did not pay, since this type of contracts are legally free of charge.



## GRI standards and EPM indicators

203-1 Infrastructure investments and services supported.

203-2 Significant indirect economic impacts.

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## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa  
 Aguas Regionales EPM

### Territory

Colombia – Antioquia  
 Colombia – Quindío  
 Colombia - Norte de Santander  
 Chile  
 Guatemala  
 Panama

### Businesses

Water  
 Electrical energy

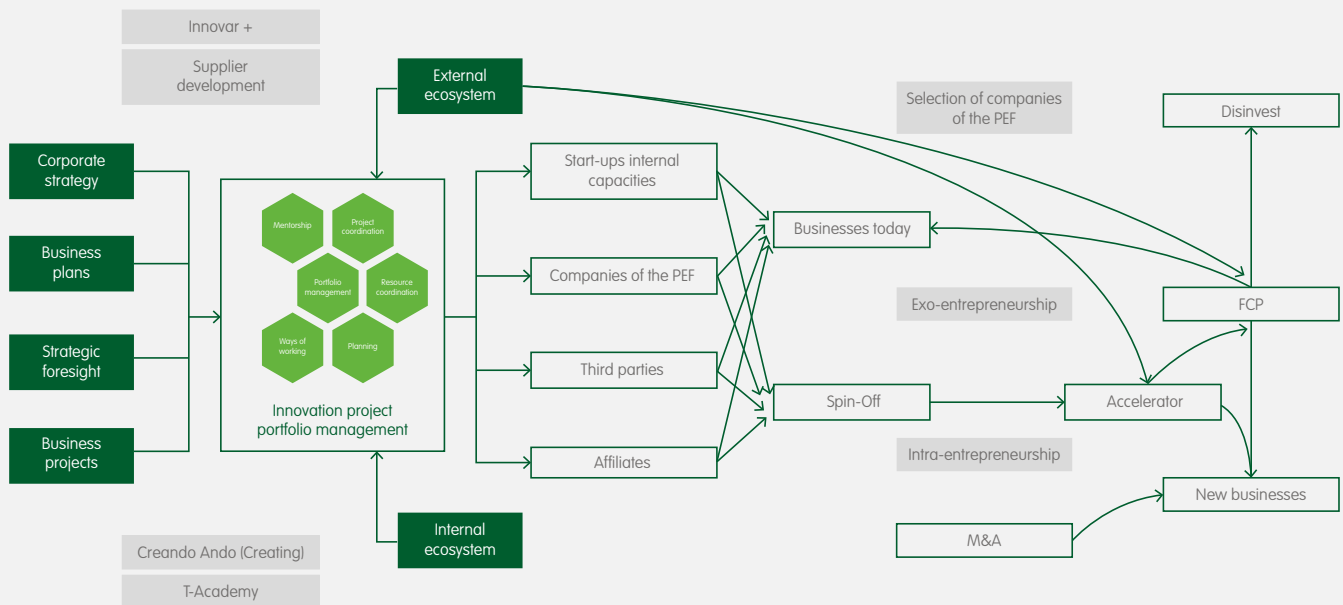




## Innovation management

EPM wants to grow with people through innovation and operation efficiency in order to contribute to the development of sustainable and competitive territories. Therefore, it conceptualizes, incubates, and escalates options to develop new businesses, as well as identifies and transfers new technologies to strengthen current businesses while optimizing the existing processes.

It also features the services of strategic forecasting for all businesses, a task that is carried out by the EPM Library and seeks to strengthen the innovation process. Grupo EPM has followed an important path in this management. It incorporated the culture of innovation as a competence of all its employees and applied the innovation model described below, which starts from generating ideas, prioritizing, validating prototypes, and executing pilot projects, until reaching solutions, implemented improvements, or new products or services for customers.



Furthermore, Grupo EPM recognizes the importance of maintaining continuous learning and having a network of allies to identify people, entrepreneurs, entities, and companies to make alliances for collaborative work, make investments through the capital fund, and establish a win-win relationship to build the required solutions.

## Main achievements

Program, project, initiative, or action	Goal	Company	Achievements in 2019	Accomplishment
Technological developments	Apply thermal barrier coatings in thermal and hydraulic power stations.	EPM	Development of component repair protocols for thermal and hydraulic power stations using new thermal spray and welding technologies. Application of thermal barrier coatings on gas turbines.	Total
	Monitor, control, and diagnose the telemetry pilot in Sucre, in the small town of Olaya.	EPM	The operational and quality variables of the water supply system in Sucre were followed up, and the agreement was amended in order to include the monitoring and control of an additional subnormal sector in this small town.	Total
	Execute the Power Generation in Water Supply Networks pilot project: design, site definition, and equipment for power generation in water supply networks.	EPM	Main equipment and dashboards for both sites were received and started to be installed. Personnel designated by EPM were trained in the operation and maintenance of PAT (pumps as turbines) systems as established in the pilot. Testing will follow.	Total
	Promote the conversion of more vehicles to vehicular natural gas.	EPM	A total of 4,251 vehicles were converted to vehicular natural gas, thus accomplishing the goal by 140% (the initial goal was 3,500 vehicles).	Total
	Install distribution transformers with vegetable dielectric oil, raise awareness of new technology, and adapt processes.	EPM	A total of 19 transformers were manufactured, tested, and delivered. The installation points are yet to be determined, which will be assessed and monitored in terms of benefits and technical performance.	Total
Transformational innovation	Implement the Innovation Management System (IMS) and obtain the NTC 5801 certification.	ESSA	77.7% of the work plan was executed.	Partial

## Challenges

Program, project, initiative, or action	Challenge	Year in which it is achieved	Scope and coverage		
			Company	Business	Territory
Technological developments	Implement a pilot project for power generation in EPM's water supply network through technological developments (PAT systems - pumps such as turbines).	2020	EPM	Water	Colombia – Antioquia
	Conduct studies to determine the viability of the water-sale business at service stations (supply of high volumes of water to fill tank trucks).	2020	EPM	Water	Colombia – Antioquia
	Start remodeling the industrial workshop and applying thermal barrier coatings to power-generating equipment using locally developed materials.	2020	EPM	Electrical energy	Colombia – Antioquia
	Carry out studies and a pilot to determine the feasibility of offering comprehensive management services for dielectric oils.	2020	EPM	Electrical energy	Colombia – Antioquia
Development of new businesses	Promote the conversion of 3,500 vehicles to vehicular natural gas.	2020	EPM	Natural gas	Colombia – Antioquia
Entrepreneurship	Manage the investments of the Private Equity Fund (PEF) I and II (Ventures EPM program), and work jointly with the companies in which EPM has a stake.	2020	EPM	All the businesses	Colombia – Antioquia
Transformational innovation	Develop and execute, together with Fundación EPM, the Desafíos Tecnológicos (Technological Challenges) and Innóvate EPM (Innovate Yourself) programs to foster innovative capabilities among new generations.	2020	EPM	All the businesses	Colombia – Antioquia

## Related stakeholders

Customers and users	Community	Owner	State
Grupo EPM people	Suppliers and contractors	Partners	Investors

## GRI standards disclosures and EPM indicators

**EPM-11** Innovation efficiencies.

**EPM-19** New innovation businesses.

## Scope and coverage

### Companies

Empresas Públicas de Medellín – EPM  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresa de Energía del Quindío – EDEQ  
 Empresas Varias de Medellín – Emvarias  
 Distribuidora de Electricidad del Sur – Delsur  
 Empresa Eléctrica de Guatemala – Eegsa  
 Elektra Noreste - ENSA

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Guatemala  
 Panama

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas

The background of the image is a repeating pattern of small, light green icons. These icons include a variety of symbols such as lightbulbs, gears, wind turbines, solar panels, recycling symbols, and stylized houses, all representing themes of innovation, technology, and sustainability. The icons are arranged in a dense, grid-like fashion across the entire page.

# Transformational innovation

## Transformational innovation

With this initiative, the innovation ability among Grupo EPM employees has been fostered. This ability is driven by people's motivation, knowledge, and creativity. Transformational innovation enables the development and implementation of solutions that change lives and deliver economic, social, and environmental value.

### Management in 2019

In 2019, the *Innovar +* training and discussion event was held as a commitment to open innovation. This event, based on a knowledge exchange among a diverse audience regarding topics of interest and specific problems, seeks to promote collaborative work for the development of real solutions. A total of 3,604 people attended the different activities: TED talks, technical sessions, workshops, and conferences.

In 2019, innovation challenges by business were designed and launched in the *Innovar+* event. The purpose of this event was to demonstrate that innovation is useful and easily accessible and to provide a space for networking and co-creation. Employees, suppliers, and students from different universities participated in the event. It is important to highlight the good evaluation feedback of the technical sessions that were part of the event. Well-known companies in the country showed their commitment to Grupo EPM by sharing their knowledge and participating with stands. This was the first open innovation event with suppliers.

The *Creando Ando 2019* version was held with a group scope, in which 76 initiatives were analyzed, and 11 were selected to nurture the innovation portfolio. To mature these initiatives, a sort of training called *T-Academy* was conducted to strengthen the intra-entrepreneurial spirit within the organization and acquire new knowledge to close technological gaps. As a result, 12 teams were formed and started a process of "learning by doing" with specific training aimed at achieving the established goals. They received technical mentoring to prototype the proposed solution and, finally, presented a pitch (presentation against the clock) to executives, thus providing an initial support to give continuity to the prototyped solution.

The *relationship with the young audience program* was successfully executed, in which the following two activities were carried out: *Circuito Solar EPM* (Solar Circuit EPM), in which 180 teams from educational institutions in Antioquia enrolled and from which 173 students and 40 teachers benefited; and *Innovate EPM*, in which 45 projects from 15 universities participated, attended the different modules of basic training in innovation, and received mentoring with experts.



The first EPM Design, Architecture, and Engineering Biennial Event was held. The innovative spirit of designers, who creatively address the problems that occur in the infrastructure projects developed in the company, stood out.

To achieve digital transformation at EPM, progress was made with four start-up teams, and some teams from previous years (Chispa, Azul, wow, easyweb) were strengthened. These groups are made up of people from different areas who seek to develop digital products to solve a specific business challenge by applying practices such as: *Design Thinking, Lean Startup, and Agile*. Start-up groups not only managed to apply new ways of doing but also encouraged other people thanks to their performance as a team. Regarding the products designed, it was found that it is possible to obtain results through experiential learning and problem resolution, since in 86% of the start-up teams, at least a minimum viable product was built.

CHEC executed the *Innóvate CHEC* program, fostering open innovation in the Department of Caldas. In 2019, initiatives applicable to CHEC's businesses were identified, and the current aim is to accelerate the winning project. Additionally, both CHEC and CENS held training workshops regarding innovation-related activities.

ESSA held the *Pásala Inn knowledge management and innovation fair* and made progress in implementing the innovation management system under NTC 5801.

ENSA, an international affiliate, is making progress in its innovation program through the Gente que Ilumina (Enlightening People) platform.

Investments in transformational innovation (million COP)		
Concept / Indicator	2018	2019
EPM parent company	1,063	613
Grupo EPM affiliates	3,677	255
<b>Total investment</b>	<b>4,740</b>	<b>868</b>

**Source:** Executive Vice Presidency of Strategy and Growth / Development and Innovation Management.

## GRI standards disclosures and EPM indicators

**EPM-11** Innovation efficiencies.

**EPM-19** New innovation businesses.

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### Scope and coverage

#### Companies

Empresas Públicas de Medellín – EPM  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Elektra Noreste – ENSA

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Santander  
 Panamá

#### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



# Technological developments

## Technological developments

In order to optimize the infrastructure performance in the different operating processes and be at the forefront of technological advances, EPM develops research, development, and innovation projects aimed at the production of new materials, products, and devices, and at the establishment and improvement of new processes, systems, and services.

Through these developments, not only the capacities of operating staff are strengthened, but also the generation of new knowledge in the organization and in the members of research groups of the universities or entities involved. It is possible to obtain important inventions for the protection of intellectual property or to achieve a possible commercial operation and placing on the market, which constitutes an innovation.

To achieve the corporate goals and provide new solutions, EPM commits to the integration of technologies and participates in the development of some of them.

## Management in 2019

In 2019, Grupo EPM addressed several initiatives that have an approximate window of opportunity of five years and a potential impact on the profitability of the current businesses. For this purpose, initiatives for the water and sanitation; solid waste; power generation, transmission, and distribution businesses were addressed.

In 2019, the *Flor Captadora* (Water Collector) initiative, a device to purify rainwater for the supply of drinking water on a small scale, continued to be implemented, as well as the pilot project to evaluate the feasibility of implementing PAT (pumps as turbines) technology in EPM's water supply network, the remote management project in rural water supply systems in the municipality of Olaya (Antioquia), and the evaluation of alternatives for the reuse of dehydrated sludge from the Valle de Aburrá purification process.

In terms of solid waste management, Emvarias continued with the installation and operation of the Puntos Naranja (Orange Points), worked on a cleaning route management system, developed activities to implement a new weighing model on the scales of the La Pradera landfill, and launched a pilot program for the La Ruta Recicla (The Recycling Road) to broaden the coverage of the recycling business.

EPM worked on *supplying high-efficiency distribution transformers* that have a less environmental impact than traditional transformers. In addition, it addressed the development and commissioning of an advanced analytical product that allows daily monitoring of the status of the quality indicators at EPM's distribution networks through an interactive map for each region in Antioquia.

The company also worked together with Universidad Nacional de Colombia (Medellín campus) in the implementation of repair and protection processes for critical components subjected to surface damage in thermal and hydraulic power stations using thermal spraying and welding technologies.

An agreement was signed between EPM, ERCO Energía S.A.S., Universidad Escuela de Ingeniería de Antioquia, and University College of London (UCL) to carry out a "peer-to-peer" energy pilot project, where end users can trade electrical energy between them.

The *Optimización de Podas* (Pruning Optimization) pilot was executed to technically and financially assess the implementation of unmanned aerial vehicles (drones) in forest cover survey and the implementation of advanced analytics to particularly determine pruning sites.

Finally, the national and international energy affiliates worked on technological developments from different fronts: smart metering, computer systems and technological applications for users, application of LED technologies in public lighting, process automation, drone implementation in operational processes, energy loss management, and energy storage using batteries.

In some initiatives, the biggest challenge was related to the process of acquiring the goods, since, new technology requires different technical specifications than the traditional ones and a different negotiation process with the manufacturer or supplier.

Investments in technological developments (million COP)			
Concept / Indicator	2017	2018	2019
EPM parent company	571	6,069	3,611
Grupo EPM affiliates	3,917	9,534	32,707
<b>Total investment</b>	<b>4,488</b>	<b>15,603</b>	<b>36,318</b>

**Source:** Executive Vice Presidency of Strategy and Growth / Development and Innovation Management.

### GRI standards disclosures and EPM indicators

**EPM-11** Innovation efficiencies.

**EPM-19** New innovation businesses.

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### Scope and coverage

**Companies**

Empresas Públicas de Medellín – EPM  
Empresas Varias de Medellín – Emvarias  
Empresa Eléctrica de Guatemala – Eegsa

**Territory**

Colombia – Antioquia  
Guatemala

**Businesses**

Water  
Sanitation  
Electrical energy



# Development of new businesses

## Development of new businesses

In response to the 2018 strategic planning which seeks the group's growth through innovation, the Innovation Management Model conceives a new business as the implementation of a new (previously non-existent) product, service, or solution that is marketed and delivered to final customers that are outside the organization as a result of an innovation project. Based on this guideline, EPM has made progress in structuring potential new businesses or in optimizing the current ones, thus achieving efficiencies that result in lower costs for the company and make it more efficient for its users.

### Management in 2019

In the structuring of such businesses, new technologies are incorporated and adapted while analyzing the regulations and verifying that incursion into these potential new businesses or models is allowed. During this year, progress was made in identifying a new business opportunity that favorably impacts the Transmission and Distribution business in order to offer renewed mineral dielectric oil and related services. For this purpose, the oils in the transformers are given a new use, thus obtaining new earnings and generating a positive impact on the environment, as it is no longer required to export this waste for final disposal.

The projects that might become potential new businesses for EPM's future are included in the [Management report](#), chapter, in the "Innovation Efficiencies" and "Vision 2025" sections.

Through a collective effort since 2018, technological roadmaps were built considering the drivers and trends until the classification of opportunities in the short, medium, and long term was achieved, which will enable the structuring and incorporation of the businesses of the future EPM.

Such roadmaps become an important input for the annual review of the innovation focal points to be addressed with each business, in order to explore these new solutions that add value.



ESSA was selected within the **Mega Innovadores de Innpulsa** (Innpulsa’s Mega Innovators) program, whose purpose is to foster the capabilities of exploration and development of new sources of income among large- and medium-sized companies to identify and develop new businesses (adjacent or outside the “core”), thus consolidating models of exponential growth. The initiatives selected for the pilot phase were: Gestiona tu energía con ESSA (Manage Your Energy Use with ESSA) (Internet of Things), Advice and consultancy services in energy efficiency, and power generation from solid urban waste. The investments made by this affiliate amount to COP 15 million.

As for the affiliates in Central America, Delsur has made progress in the promotion of electric mobility in El Salvador and in turning electrical stations into a sustainable business (in approval of regulatory laws), with a total of investment of COP 42 million.

In Panama, ENSA made progress in developing the new business of solar heaters for customers through ENSA Services, with an investment of COP 92 million.

## GRI standards disclosures and EPM indicators

**EPM-19** New innovation businesses.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Electrificadora de Santander - ESSA  
 Distribuidora de Electricidad del Sur - Delsur

#### Territory

Colombia – Antioquia  
 Colombia – Santander  
 El Salvador

#### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



# Entrepreneurship

## Entrepreneurship

Corporate entrepreneurship is defined as a process under which teams within an organization develop, launch, and manage new business opportunities different from the traditional ones, thus leveraging the company's assets, capabilities, market presence, or other resources (Amarocho, 2015). Every venture requires an entrepreneurial spirit willing to innovate and take some risks to succeed in an ever-changing and increasingly competitive global market (*Business\_Dictionary, 2018*).

EPM promotes entrepreneurship through Ventures EPM, a program that materializes the general strategy of investment in ventures through the Accelerator and Private Equity Fund by providing strategic and financial support to companies in EPM's sectors of interest for development of new products or services or for the improvement of the group's processes.

## Management in 2019

Ventures EPM ended the period of investment in new companies of the Private Equity Fund I, made progress in the structuring of the Private Equity Fund II, and managed to select the managing company for this second fund.

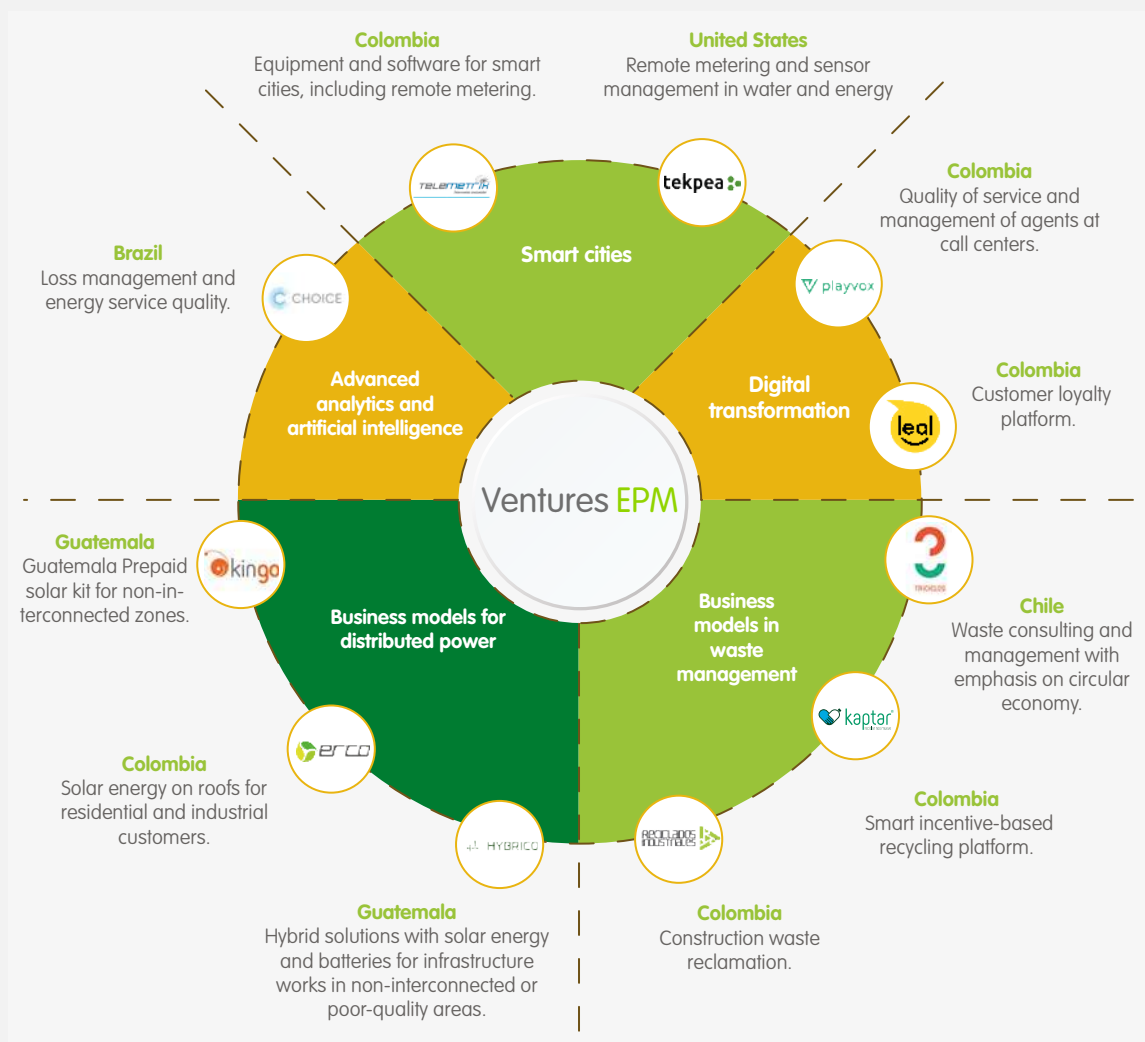
Ventures EPM represents a firm commitment to entrepreneurship as a growth engine and enabler of capabilities and profitability. This program has two purposes: to accelerate ventures that enhance the creation of high-value companies for our environment and national ecosystem and to create and direct different investment funds for entrepreneurs.

- Accelerator: accelerating start-ups is a key process in the development of the open innovation strategy, as it speeds up their transition to become stronger companies through a demanding support plan with access to resources so that EPM can then capture value from these startups and solve current business challenges, promote new businesses, and become potential investment prospects. In 2019, the first company acceleration pilot project was carried out, in partnership with Ruta N and Créame, through a call in which 74 companies participated, of which three—aligned with EPM's innovation focal points—were selected to be accelerated.

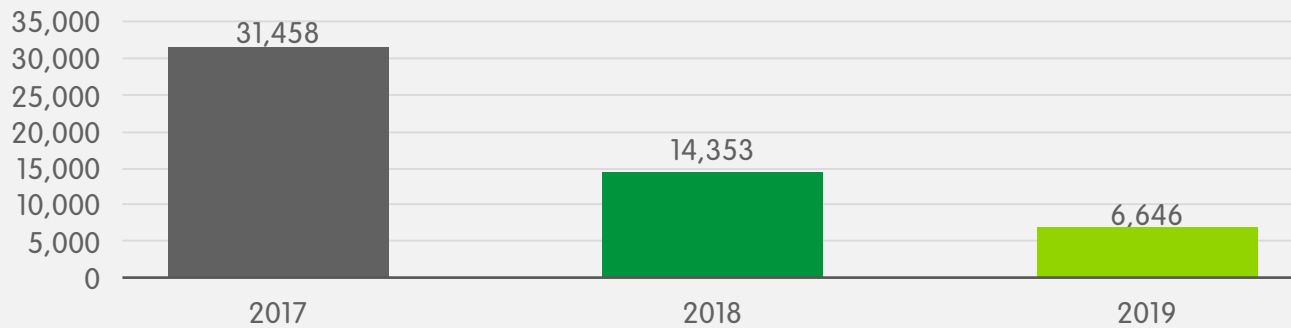
- Private Equity Fund (PEF): investment vehicle developed on-site and approved since 2011 to leverage ventures that have a high component of science, technology, and innovation and, thus, can enhance current and future businesses, always aiming to exceed the challenges faced by businesses. The PEF helps ventures by injecting capital, fostering teamwork to develop innovations that improve the quality of life of public utilities' users, and building relationships to promote them at the national and international levels.

In 2019, the participation in the LEAL company was agreed upon, and the investment period ended with a 91% execution in 11 active companies. The current investments are framed within the strategic scope of Grupo EPM and are in the maturity period to then achieve their maximum valuation and knowledge creation.

The following figure details the 11 companies in which Grupo EPM has a stake, their country of origin, and their innovation focal point for the group:



Investments made (million COP)



**Source:** Executive Vice Presidency of Strategy and Growth / Development and Innovation Management.

**Note:** The investments reported were made by the Innovation and Entrepreneurship Capital Fund.

## GRI standards disclosures and EPM indicators

**EPM-19** New innovation businesses.

### Scope and coverage

**Company**

Empresas Públicas de Medellín - EPM

**Territory**

Colombia – Antioquia

**Businesses**

Water  
Sanitation  
Electrical energy  
Natural gas

# Working environment



## Working environment

Grupo EPM understands the working environment based on the objective and subjective conditions that form the environment for employee performance, seeking that people have a satisfactory experience when developing their activities in the company. This dynamic includes, among others, factors such as:

**Health and safety:** This factor focuses on preventing workplace risks for its people, suppliers, and contractors. It promotes the culture of self-care, safe and healthy work environments, continuous improvement, and efficient performance.

**Training and development:** The learning management process focuses on ensuring a smart organization, capable of learning through the training of its people and strengthening their employability through education.

**Employment and equity:** They consist of aspects related to the company-employee relationship, including remuneration, gender equity and equal employment opportunities, as well as the exercise of union and association rights.

**Quality of life:** It is based on the identification, assessment, prevention, intervention, and ongoing monitoring of exposure of employees to psychosocial risk factors, at work and outside work.

**Employee welfare:** It becomes evident by timely delivering monetary benefits and implementing programs and activities that harmonize the employee's family and work life.

Today, companies focus their strategies and efforts toward creating healthy environments and improving the quality of life of their collaborators, motivating them, meeting their needs, and building a sense of belonging to the organization. A suitable working environment helps people do their work under optimal conditions, which makes them more productive and gives them balance between personal and professional development.

## Main achievements

Challenges	Achievements in 2019	Accomplishment
Implement the indebtedness management program for EPM's public servants.	EPM designed and implemented the EPM Contigo (EPM with You) program, aimed at public servants with high indebtedness levels. The company provided trainings and workshops on the proper management of finances, individual and family support, and financial advice, which contributed to improving the quality of life of the servants and their families. 361 public servants participated in all the stages of the program.	Total
Execute, with austerity criteria, 100% of the recreational and sports activities and corporate events.	As a result of austerity measures due to the contingency of the Ituango hydroelectric project, all corporate activities and events were reviewed; those generating the greatest impact were preserved. With innovative ideas and strategic alliances with different entities, all the programmed activities were carried out and the number of participants of Family Day and Classic Day increased, generating a growth in cultural events.	Total
Obtain a total risk indicator of 60%, equivalent to low / non-existent risk for the population.	A result of 64.09% was achieved. In general, the results obtained in the quality of life assessment were the product of all the actions that each company led, which include leadership programs, personal finances, teleworking, and forums that sought to clarify different organizational issues.	Total
Establish cross-cutting goals in a way that collaborative work is promoted.	EPM led a methodology to allow the owners of first-level indicators and those indicators that were assigned as performance objectives to the vice presidents to identify the units that should adopt these indicators, thus creating the interaction matrix, which was communicated to all the heads of the organization to identify in what issues they should be involved.	Total
Execute four leadership development programs with the Colegio de Altos Estudios de Quirama (Quirama's High School of Advanced Studies) to have an impact on 80 executives.	<p>The organization continued strengthening leadership through actions focused on self-management, people management, and result-based management. The management-oriented closeness was reflected in the execution of the Leadership School's development plans, where strengthening strategies were defined to enhance organizational climate and trust among EPM executives and EPM people.</p> <p>The leaders participated in programs and activities such as group and individual conversation circles designed to strengthen the actions of cultural evolution; advanced training for leaders of the Colegio de Altos Estudios de Quirama, aimed at strengthening conscious leadership; ABC program for administrative management, which was also attended by team managers; individual support through executive coaching strategy; and senior management training with INALDE from the Universidad de la Sabana.</p>	Total



Challenges	Achievements in 2019	Accomplishment
Execute 100% of the cultural transformation contract with Confluye.	The contract was 100% executed and it included additional activities to hold the meetings of managers from affiliates and create more conversation circles with new groups such as managers and administrative assistants.	Total
Prepare the collective bargaining process with the trade union Sintraemsdes.	<p>The company made progress with the collective bargaining with Sintraemsdes, during which the well-being and improvement of the quality of life of workers and the sustainability of the company were constant fundamental premises.</p> <p>This report highlights important achievements in recognizing the needs of different stakeholders and expanding the coverage of the agreed benefits; similarly, in line with the business purpose, collaborators were provided with access to sustainable mobility alternatives.</p>	Total
Analyze the bargaining agreements of the trade unions Sinpro and Sintraemsdes to make recommendations regarding their application.	EPM studied all the bargaining agreements in force and their regulations and prepared a report compiling the interpretation and due application of the collective labor agreements in the company.	Total
Reach a disabling injury frequency rate (DIFR) of 0.26.	A DIFR of 0.28 was reached.	Partial
Cover 224 vacant positions approved by the Board of Directors until December 2018.	The organization covered the vacant positions and adjusted the business rules defined for the 2018 contingency, expanding them to allow public servants of national and international affiliates to participate in selection processes and establishing a provision order, among other changes.	Total

## Challenges

EPM challenges for 2020		
Short-, medium-, and long-term goals	Year in which it is achieved	Achievement indicator
Continue the collective bargaining processes between EPM and Sinpro and Sintraelecól.	2020	Bargaining strategy accomplishment.
Obtain a total risk indicator of 60.5%, equivalent to low / non-existent risk for the population.	2020	Total risk indicator.
Reach a disabling injury frequency rate (DIFR) of 0.23.	2020	DIFR indicator.
Reach a disabling injury frequency rate (DIFR) of 0.22.	2021	DIFR indicator.

## Related stakeholders

Customers  
and users

Community

Grupo EPM  
people

Suppliers and  
contractors

## GRI standards disclosures and EPM indicators

- 102-8** Information on employees and other workers.
- 102-41** Collective bargaining agreements.
- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 401-1** New employee hires and employee turnover.
- 401-2** Benefits provided to full-time employees that are not provided to temporary or part-time employees.
- EU14** Programs and processes to ensure the availability of a skilled workforce.
- EU15** Percentage of employees eligible to retire in the next 5 and 10 years, broken down by job category and by region.
- EU16** Policies and requirements regarding health and safety of employees, contractors, and subcontractors.
- EU17** Days worked by contractor and subcontractor employees involved in construction, operation, and maintenance activities.
- EU18** Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.
- 403-2** Types of injury and rates of injury, occupational diseases, lost days, absenteeism, and number of work-related fatalities.
- 403-3** Workers with high incidence or high risk of diseases related to their occupation.
- 403-4** Health and safety topics covered in formal agreements with trade unions.
- 404-1** Average hours of training per year per employee.
- 404-2** Programs for upgrading employee skills and transition assistance programs.
- 404-3** Percentage of employees receiving regular performance and career development reviews.
- 405-1** Diversity of governance bodies and employees.
- EPM-16** Percentage of employees surveyed in quality of life.

## Scope and coverage

### Companies

Empresas Públicas de Medellín E.S.P. - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Regional de Occidente  
 Aguas de Urabá  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Tecnología Intercontinental - Ticsa  
 Aguas de Antofagasta - Adasa

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia - Norte de Santander  
 Colombia-Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama  
 Mexico

### Businesses

Water supply  
 Sanitation  
 Electrical energy  
 Natural gas

# Employee welfare and benefits

## Employee welfare and benefits

Grupo EPM promotes the quality of life of its public servants and their family group, by timely delivering monetary benefits and implementing programs and activities that harmonize their family and work life. In this way, EPM promotes spaces of assistance, recreation, sports, and social and cultural projection, in a dynamic that consolidates the sense of belonging and strengthens the corporate culture for the fulfillment of organizational objectives.

### Management in 2019

The 92.49% of EPM employees used at least one of the benefits granted by the company. A total of 52,099 benefits amounting to COP 31,028 million were delivered and 161 people benefited from housing loans amounting to COP 21,001 million.

All the welfare events of 2019 were carried out.

EPM continues encouraging its teleworking strategy, to which 324 public servants have integrated: 136 executives are authorized to perform mobile telework, 100 public servants telework in a supplementary mode (three days at home and two at EPM), and 88 public servants telework in an autonomous mode (five days at home). Moreover, with the aim of promoting sustainable mobility, the company defined a strategy called En Bici al Trabajo (Bike-Riding to Work) with 705 people enrolled in the program during 2019. Likewise, bike parking spaces were adjusted in the EPM Building and in alternate EPM offices and the use of the EnBici mobile application was enabled.

EPM designed and implemented the EPM Contigo program, aimed at public servants with high indebtedness levels. The company provided trainings and workshops on the proper management of finances, individual and family support, and financial advice, which contributed to improving the quality of life of the servants and their families. 361 public servants have participated in all the stages of the program.

<b>People benefited from employee welfare programs – EPM (amount or number)</b>			
<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Social projection	5,612	2,252	3,015
Cultural events	20,787	6,950	12,270
Sports and recreation	17,198	10,884	11,786
<b>Total</b>	<b>43,597</b>	<b>20,086</b>	<b>27,071</b>

*Source: Vice Presidency of Human Resources and Technology.*

<b>Value of the employee welfare programs – EPM (million COP)</b>			
<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Social projection	484	396	394
Cultural events	2,254	97	227
Sports and recreation	2,778	2,105	2,497
<b>Total</b>	<b>5,516</b>	<b>2,598</b>	<b>3,118</b>

*Source: Vice Presidency of Human Resources and Technology.*

As a result of austerity measures due to the contingency of the Ituango hydroelectric project, all corporate activities and events were reviewed; those generating the greatest impact were preserved. With innovative ideas and strategic alliances with different entities, all the programmed activities were carried out and the number of participants of Family Day and Classic Day increased, generating a growth in cultural events.

<b>Loans disbursed – EPM</b>			
<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Home loans	479	260	161
Loans for other items	2,241	1,878	1,186
Value of loans (in million COP)	58,764	33,019	21,667

*Source: Vice Presidency of Human Resources and Technology.*

In 2017 a total of COP 45 billion was injected into the funds resulting from the signing of the collective bargaining agreements (COP 22,500 million for each union). In 2018 the injection was COP 4,500 million (COP 2,250 million for each union) and in 2019 it was COP 1,125 million for one of the unions.

<b>Benefits – EPM</b>			
<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Benefits granted	50,086	53,430	52,099
Value of benefits (million COP)	38,753	50,191	31,028

*Source: Vice Presidency of Human Resources and Technology.*

<b>People benefited from the employee welfare programs – Grupo EPM</b>			
<b>Companies</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
EPM	43,597	20,086	27,071
Aguas del Oriente	13	14	15
Aguas Regionales	248	277	253
Aguas Nacionales	23	21	91
EPRio	144	130	108
Aguas de Malambo	92	92	74
Emvarias	701	565	236
CHEC	29,156	34,340	34,200
ESSA	8,085	10,621	10,750
CENS	1,859	556	571
EDEQ	2,264	928	1,019
ENSA	548	564	541
Eegsa	554	790	658
Adasa	0	0	74
Ticsa	283	502	597
<b>Total</b>	<b>87,574</b>	<b>69,486</b>	<b>76,289</b>

*Source: Vice Presidency of Human Resources and Technology.*

<b>Value of the employee welfare programs – Grupo EPM (million COP)</b>			
<b>Companies</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
EPM	26,278	30,621	31,028
Aguas del Oriente	7	6	8
Aguas Regionales	107	125	415
Aguas Nacionales	25	8	50
EPRio	14	14	13
Aguas de Malambo	52	26	48
Emvarias	1,507	1,457	1,696
CHEC	1,612	1,064	1,108
ESSA	1,660	1,142	973
CENS	3,132	480	3,111
EDEQ	825	890	1,038
ENSA	540	1,090	4,110
Eegsa	2,971	13,268	3,263
Adasa	0	0	3,959
Ticsa	200	291	626
<b>Total</b>	<b>38,929</b>	<b>50,482</b>	<b>51,446</b>

*Source: Vice Presidency of Human Resources and Technology.*

EPM, CHEQ, EDEQ, CENS, ESSA, ENSA, and Eegsa expanded the benefit-granting coverage, including aspects related to health and formal and non-formal education. Aguas Regionales, Aguas Nacionales, and Aguas de Malambo fulfilled their welfare plans.

Each affiliated company of Grupo EPM defines and executes welfare plans with sports, recreational, and cultural activities. In the affiliated companies, the development of these activities included actions such as: prevention of musculoskeletal diseases, nutritional program, celebration of special dates, talent festival, and promotion of healthy lifestyles.



Authorized absences and leaves in Grupo EPM		
Companies	2018	2019
Extralegal birth- or abortion-related authorized absences – Women	34	58
Extralegal birth- or abortion-related authorized absences – Men	92	137
Legal leaves – Women	447	350
Legal leaves – Men	473	321
Women incorporated after maternity leave	227	133
Men incorporated after paternity leave	464	206

**Source:** Vice Presidency of Human Resources and Technology.

With the purpose of providing more quality of life for families, EPM, EDEQ, and CHEC expanded the possibilities for public servants of both sexes to qualify for extralegal maternity and paternity leaves. Similarly, among the companies of Grupo EPM, legal maternity and paternity leaves were granted.

## GRI standards disclosures and EPM indicators

- 401-2** Benefits provided to full-time employees that are not provided to temporary or part-time employees.
- 401-3** Parental leave.
- 404-2** Programs for upgrading employee skills and transition assistance programs.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Tecnología Intercontinental -Ticsa  
 Elektra Noreste - ENSA

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia - Norte de Santander  
 Colombia-Malambo, Atlántico  
 El Salvador  
 Guatemala  
 Mexico

### Businesses

Electrical energy  
 Water supply  
 Sanitation  
 Natural gas

**Quality  
of life**

## Quality of life

The quality of life program is based on the identification, assessment, prevention, intervention, and ongoing monitoring of exposure of employees to psychosocial risk factors, at work and outside work. Health and safety at work transcend the traditional concepts and become an important aspect associated with productivity in modern organizations. Therefore, the assessment of psychosocial risks gives each company vital information to focus on the actions that foresee and prevent occupational diseases.

The quality of life and psychosocial risk assessment becomes a management tool that guides and focuses the efforts for the improvement of the organizational results and the welfare of the public servants and their families.

## Management in 2019

The results of the 2019 quality of life and psychosocial risk assessment show a stabilization of the indicators as a result of all the actions taken, which is demonstrated by the 86.07% of the population surveyed. According to the results, EPM is at a low or non-existent risk, which classifies it as a healthy company.

There was an increase of 3.61% in coverage during 2019 at EPM; 6,246 public servants participated, equivalent to 83.12% of the company's total population. **83.12% of the company's total population.**

Employees surveyed – Quality of life – Grupo EPM			
Item	2017	2018	2019
Quality of life survey – Employees surveyed	5,423	6,028	6,246

*Source:* Vice Presidency of Human Resources and Technology.

*Note:* at only applies for companies in Colombia.

With the purpose of improving the working environment assessment in the quality of life component, three dimensions were taken as basis, whose results are the following.

Results of the quality of life survey – EPM			
Item	2017	2018	2019
Quality of life survey – Role clarity	46.39%	50.86%	49.53%
Quality of life survey – Social relationships at work	54.84%	55.16%	54.93%
Quality of life survey – Leadership	45.58%	48.43%	46.09%

**Source:** Vice Presidency of Human Resources and Technology.

Results of the quality of life survey – Grupo EPM			
Companies	2017	2018	2019
EPM	61.94	64.22	64.09
Aguas del Oriente	77.78	42.86	60.00
Aguas Regionales	41.07	38.89	56.32
Aguas Nacionales	38.55	35.34	42.61
Aguas de Malambo	23.21	50.00	37.25
Emvarias	22.36	21.55	31.90
CHEC	55.74	53.60	61.17
ESSA	57.20	62.76	60.96
CENS	55.30	58.39	59.68
EDEQ	64.11	56.87	67.71

**Source:** Vice Presidency of Human Resources and Technology.

In general, the results obtained in the quality of life assessment during 2019 were the product of all the actions that each company led, which include leadership programs, personal finances, teleworking, and forums that sought to clarify different organizational issues.

At the affiliates Ticsa and Eegsa, the survey is applied every two years.

## Management indicator

**EPM-16** Percentage of employees surveyed in quality of life and psychosocial risk.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín E.S.P. - EPM  
 Central Hidroeléctrica de Caldas S.A. E.S.P. - CHEC  
 Electrificadora de Santander S.A. E.S.P. - ESSA  
 Empresa de Energía del Quindío S.A E.S.P. - EDEQ  
 Centrales Eléctricas del Norte de Santander S.A E.S.P. - CENS  
 Aguas Regionales  
 Aguas Nacionales EPM S.A. E.S.P.  
 Aguas de Malambo S.A. E.S.P.  
 Tecnología Intercontinental S.A.P.I. de C.V.-Ticsa

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Colombia – Malambo, Atlántico  
 Colombia – Risaralda  
 Mexico

#### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation

# Employee performance

## Employee performance

Performance management in Grupo EPM leverages contributions and behaviors aligned with strategic planning and organizational objectives and capabilities, encouraging individual and collective improvement. Through conversations, leaders should allow public servants to know and understand what is expected of them, both in terms of results that they are required to present and in the way of being and doing things (actions) in their daily performance.

### Management in 2019

Leaders' conversational skills were strengthened to foster their responsibility for performance management and people development. To this end, the organization conducted a statistical analysis of the information to make decisions for the benefit of the performance components and updated the regulations.

The training for the preparation of performance objectives, development plans, and evaluation of actions continued.

The affiliated companies CHEC, EDEQ, ESSA, and CENS focused their efforts on stabilizing the performance, development, and efficiency modules of the human capital management (HCM) tool to define their employees' performance commitments. Standardization sessions of the performance process were held with the affiliates Emvarias, Aguas Nacionales, EPRio, and HET.



Employees with performance assessment			
Companie	2017	2018	2019
EPM	90%	99%	94%
Aguas Regionales	7%	100%	0%
Aguas Nacionales	100%	100%	100%
EPRio	0%	66%	0%
Ticsa	100%	100%	100%
Adasa	100%	100%	100%
Aguas Regionales	7%	100%	0%
Emvarias	58%	50%	0%
EPM Chile	100%	100%	0%
CHEC	89%	91%	99%
ESSA	89%	93%	96%
CENS	94%	93%	98%
EDEQ	97%	0%	99%
Delsur	0%	100%	100%
Eegsa	100%	0%	20%
ENSA	100%	100%	100%

**Source:** Vice Presidency of Human Resources and Technology.

CHEC expects to conduct an assessment of 984 (99%) employees who have performance commitments for 2019 in the information system.

EDEQ defined the performance commitments for 2019 for 293 (99%) workers.

ENSA defined the performance assessment objectives for all personnel, including unionized and trusted personnel from ENSA and ENSA Servicios.

Delsur defined the performance assessment for 100% of the population.

Adasa, Aguas Nacionales, and Ticsa assigned objectives to 100% of the population.

## Management indicator

**404-3** Percentage of employees receiving regular performance and career development reviews.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Nacionales EPM  
 Aguas Regionales EPM  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Aguas de Antofagasta - Adasa  
 Elektra Noreste - ENSA  
 Empresa Eléctrica de Guatemala - Eegsa  
 Distribuidora de Electricidad del Sur - Delsur  
 Hidroecológica del Teribe - HET  
 Tecnología Intercontinental -Ticsa

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Risaralda  
 Colombia – Santander  
 Colombia - Norte de Santander  
 Guatemala  
 Chile  
 Mexico  
 El Salvador  
 Panama

### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various concepts related to sustainability, technology, and industry, such as solar panels, wind turbines, lightbulbs, gears, recycling symbols, and houses with leaves. The icons are arranged in a grid-like pattern across the entire page.

# Training and development

## Training and development

In Grupo EPM, development management refers to a series of practices and scenarios of guided exposure, support, and training, aimed at preparing people to fulfill the present and future needs of the organization as part of talent planning.

EPM implements development strategies to enhance the competencies of each collaborator and align their knowledge, behavior, and skills with the strategic plan of the organization. Therefore, the 70/20/10 approach is used, in which the 70 is defined by the possibility of exposing public servants to new work scenarios to develop skills; the 20 refers to the possibility of learning with others; and the 10 includes all the guided training strategies, which are used by Universidad Grupo EPM to strengthen knowledge.

## Management in 2019

The knowledge map was designed for 80% of the Vision 2025 processes and projects, favoring the identification of key, critical, and general knowledge of EPM and the initially critical positions of the businesses.

The structuring of new curricula for other capacities and processes continued and the learning module was implemented again in the HCM application. The organization also continued strengthening leadership through actions focused on self-management, people management, and result-based management.

The management-oriented closeness was reflected in the execution of the Leadership School's development plans, where strengthening strategies were defined to enhance organizational climate and trust among EPM executives and EPM people. The leaders participated in group and individual conversation circles designed to strengthen the actions of cultural evolution; advanced training for leaders of the Colegio de Altos Estudios de Quirama, aimed at strengthening conscious leadership; ABC program for administrative management, which was also attended by team managers; individual support through executive coaching strategy; and senior management training with INALDE from Universidad de la Sabana.

Implementation of the organizational learning plan			
Company	2017	2018	2019
EPM	94%	100%	94%

Budget execution			
Company	2017	2018	2019
EPM	84%	93%	95%

Training and development in EPM			
Item	2017	2018	2019
Training hours – Executives	51	75	34
Training hours – Professionals	37	13	32
Training hours – Assistants, technicians, and technologists	25	14	31
Training hours – Maintenance staff	37	20	40
<b>Training hours – Average employee</b>	<b>33</b>	<b>17</b>	<b>32</b>
Learning events held	804	512	561
Graduate programs approved	15	2	0
Scholarships granted	0	0	0
Trips abroad for training approved	68	46	41

**Source:** Vice Presidency of Human Resources and Technology.

This report highlights the constant increase (until 2018) in the hours allocated to the development of executives, thanks to the sustained effort of the Leadership School to train in managerial skills and actions that help consolidate closeness. In 2019 the leadership training hour indicator declined because there was a transition to a strategy of conversation circles. In 2019, the training hour indicator and the number of learning events held for all occupational levels, except for executives, increased. This was possible after overcoming the Ituango hydroelectric project contingency measures, which negatively impacted the indicators of 2018.

Training hours – Average employee of Grupo EPM			
Companies	2017	2018	2019
EPM	33	17	32
Aguas del Oriente	17	5	48
Aguas Regionales	35	50	53
Aguas Nacionales	39	19	0
Aguas de Malambo	2	4	0
Ticsa	15	20	18
Adasa	32	24	40
Aguas Regionales	35	50	53
Emvarias	35	38	92
EPM Chile	27	74	0
HET	24	0	36
CHEC	60	47	63
ESSA	59	55	96
CENS	45	28	34
EDEQ	56	65	44
Delsur	64	48	47
Eegsa	53	134	114
ENSA	40	34	6

**Source:** Vice Presidency of Human Resources and Technology.

At CHEC the investments made in the interactive training in power distribution networks, qualified by Colciencias as a technological development project, allow the company to have an estimated income deduction of COP 42,384 million.

In agreement with the National Training Service (SENA, as per its acronym in Spanish), progress was made with the construction of the learning environment called Network Training Camp for the training of linemen.

In CENS, 81% of collaborators participated in 68 events held: Leadership School, strengthening of competencies, training in occupational health and safety, and environmental and laboratory standards.

In ESSA, 98% of the workers participated in the 183 events related to issues aimed at aligning competencies, behaviors, and skills with the organization’s strategic plan, as well as topics related to professional and labor development of employees.

Furthermore, EDEQ carried out the program on managerial skills and the Development of the Initial Innovation System program. Aguas Regionales was supported by EPM in training and learning activities in various areas related to know-how, in order to qualify the work performed. Aguas de Malambo and Aguas Nacionales also fulfilled their training plans and 52 workers of the operating area were certified in labor competency standards.

In Eegsa, the entire executive team participated in the Leadership School.

## GRI standards disclosures and EPM indicators

**404-1** Average hours of training per year per employee.

**404-2** Programs for upgrading employee skills and transition assistance programs.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Tecnología Intercontinental -Ticsa  
 Aguas de Antofagasta - Adasa

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia - Norte de Santander  
 Colombia-Malambo, Atlántico  
 Chile  
 El Salvador  
 Panama  
 Mexico  
 Guatemala

#### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation



# Retirees and pensioners



## Retirees and pensioners

In order to maintain its relationship with retirees and pensioners, the business group develops various strategies that favor engagement with this subgroup of stakeholders, including social projection activities such as psychological and spiritual counseling and the full-adulthood program (for retirees and pensioners and pre-pensioners).

### Management in 2019

The relationship with retirees and pensioners is permanently strengthened through the implementation of varied, innovative, and inclusive activities that are addressed from different dimensions: personal, social, recreational, and cultural. The organization's commitment to and communication with this group is warm and close, which is reflected in their participation and presence in all planned activities

EPM has a pre-pensioners' program for those who are less than three years away to retire. 34 people participated in 2019.

CHEC holds every year a meeting with the affiliated company's pensioners and retirees to give continuity to the close relationship with this group of people.

CENS reached the retired staff to clarify doubts regarding the procedures of interest before the affiliated company. Another highlight is the updating of the website in terms of information needed by retirees.

EPM, EDEQ, CHEC, Delsur, and Emvarias have programs to improve the aptitudes of workers who begin their transition to retirement (pre-pensioners), with the purpose of helping them assume this stage as an opportunity for personal, social, and occupational development and that they can generate a change of attitude towards their retirement from the respective organizations.

EPM retirees and pensioners			
Item	2017	2018	2019
Pensioners in the year	39	42	71
Direct retirees (cumulative)	2,193	2,135	2,098

*Source: Vice Presidency of Human Resources and Technology.*

EPM projection of personnel close to retirement			
Item	2019	2020	2021
Executives	14	8	11
Professionals	128	58	73
Technologists, technicians, and assistants	130	75	88
Maintenance staff	44	40	39
<b>Total</b>	<b>316</b>	<b>181</b>	<b>211</b>

*Source: Vice Presidency of Human Resources and Technology.*

The retirees under EPM's responsibility were so until June 30, 1995. The number of people who would apply for the recognition of the pension according to their age is reported.

Grupo EPM consolidated retirees and pensioners			
Item	2017	2018	2019
Pensioners in the year	976	908	920
Direct retirees (cumulative)	3,710	3,604	3,547

*Source: Vice Presidency of Human Resources and Technology.*

Grupo EPM projection of personnel close to retirement			
Item	2019	2020	2021
Executives	32	10	15
Professionals	226	71	131
Technologists, technicians, and assistants	329	100	242
Maintenance staff	210	40	39
<b>Total</b>	<b>797</b>	<b>221</b>	<b>427</b>

## GRI standards disclosures and EPM indicators

**EU15** Percentage of employees eligible to retire in the next 5 and 10 years, broken down by job category and by region.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Empresa de Energía del Quindío - EDEQ  
 Central Hidroeléctrica de Caldas - CHEC  
 Centrales Eléctricas del Norte de Santander - CENS  
 Electrificadora de Santander - ESSA  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Santander  
 Colombia - Norte de Santander  
 El Salvador  
 Guatemala

#### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation



# Trade unions

## Trade unions

The relationship with trade unions is based on equality and under the terms provided by the law. It has two moments: one with the approach to the bargaining of the petitions and collective agreements and another with the relationship and application of the existing regulatory framework.

Currently there are 28 trade unions in Grupo EPM, of which 21 are national and seven international, with a union membership rate of over 90% and with the signing of 18 collective agreements and two arbitration awards. The framework of the negotiations is a declaration that reflects the nature of this agreement in labor law, so that all the benefits that trade unions receive are subject to the criteria of proportionality, reasonableness, coherence, relevance, legality, and union pluralism. Likewise, union leaders are recognized as having the competence to exercise control and oversight within the sphere inherent to labor associations.

## Management in 2019

Progress was made with the collective bargaining with Sintraemsdes in an environment of respect and cordiality, which allowed the parties to close the agreement at the stage of direct settlement, a milestone that had not been achieved for 15 years.

During the negotiation the well-being and improvement of the quality of life of workers and the sustainability of the company were constant fundamental premises. This report highlights important achievements in recognizing the needs of different stakeholders and expanding the coverage of the agreed benefits; similarly, in line with the business purpose, collaborators were provided with access to sustainable mobility alternatives.

The Colombian affiliates validated the correct application and fulfillment of the collective labor agreements and provided legal support and advice in the collective bargaining processes. They provided support in the labor and legal review of the work regulations and in the regulation of the collective bargaining benefits considered in terms of housing, health, and education.

The trade unions of EDEQ, CENS, and ESSA reduced the administrative complaints to the territorial offices of the Colombian Ministry of Labor. The Ministry of Labor updated the authorizations to work overtime for the Colombian affiliates requiring them.

The objective of the corporate core in the affiliates outside Colombia is to build, implement, and consolidate a management model for labor and union relations. During 2019, support was provided to the boards of directors of some of the international affiliates to prepare and define the bargaining process strategy.

Affiliation to trade unions in EPM			
Item	2017	2018	2019
Unions	5	5	6
Employees covered by collective bargaining agreements	7,277	7,145	7,505
Under no agreements	9	8	10

**Source:** Vice Presidency of Human Resources and Technology.

Affiliation to trade unions in energy affiliates			
Item	2017	2018	2019
Unions	8	8	10
Employees covered by collective bargaining agreements	3,521	3,395	4,275
Under no agreements	32	33	35

**Source:** Vice Presidency of Human Resources and Technology.

The information of affiliation or beneficiaries of 2019 corresponds to the affiliates CHEC, CENS, EDEQ, and ESSA. The information of those under no agreements corresponds only to the Colombian energy affiliated companies.

Affiliation to trade unions in water and sanitation affiliates			
Item	2017	2018	2019
Unions	5	5	5
Employees covered by collective bargaining agreements	983	972	1,049
Under no agreements	39	61	190

The information of affiliation or beneficiaries of 2019 corresponds to the affiliates Aguas de Malambo, Aguas Regionales, Aguas Nacionales, and Emvarias.

Others indicators on trade unions in the business group			
Item	2017	2018	2019
Bargaining agreements and arbitration awards	10	10	20
Complaints	7	3	12
Hours of leaders' leaves for union business	17,335	35,894	54,491

**Source:** Vice Presidency of Human Resources and Technology.

The leave for union business is compensated ordinary time off for the exercise of union and collective association of the unionized workers.

## GRI standards disclosures and EPM indicators

102-41 Collective bargaining agreements.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Tecnología Intercontinental -Ticsa  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia-Norte de Santander  
 Colombia-Malambo, Atlántico  
 Chile  
 El Salvador  
 Panama  
 Mexico  
 Guatemala

#### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation





**Staff**

## Staff

At EPM, the staff is defined by structured occupational groups: executives; professionals; technologists, technicians, and assistants; and maintenance staff. The report of assigned employees includes levels, categories, and classes of positions, as well as wages existing in each affiliate.

Some of the affiliated companies in Colombia offer a fixed compensation and certain benefits, most of them included in the collective agreement. Other companies offer an integral salary to individuals who meet the requirements.

## Management in 2019

EPM ranked seventh out of 100 companies in the 2019 Merco Talento Colombia Ranking, dropping a position with respect to the 2018 assessment.

In compliance with Act 789 of 2002, the companies of Grupo EPM in Colombia have the apprenticeship program, through which students of two- and three-year associate programs and bachelor programs get the opportunity to complete the internship required by educational institutions. In 2019 EPM admitted 752 interns.

EPM staff by gender			
Item	2017	2018	2019
Men	5,208	5,157	5,452
Women	2,423	2,400	2,456
<b>Total</b>	<b>7,631</b>	<b>7,557</b>	<b>7,908</b>

**Source:** Vice Presidency of Human Resources and Technology.

*Including apprentices and interns.*

At EPM 78 promotions, 236 changes through selection processes, and 307 transfers took place. In this way, mobility in the organization was strengthened, a path undertaken since 2016, which has contributed to the renewal and the generation of new opportunities of professional growth for the company's staff, promoting sense of belonging and reward.

Since 2017, EPM is working in the inclusion of people with disabilities and the certification of gender equity, in line with the Sustainable Development Goals derived from the Global Compact, specifically goals 1, 4, and 5. With this purpose, EPM designed and executed a pilot program that included training, signage, reasonable adjustments, legal frameworks, and hiring of people with disabilities, initially apprentices and interns. During 2019 the company temporarily hired eight technicians and 12 professionals with physical, sensory, or cognitive disabilities. This initiative favored the inclusion of all the variables that should be taken into account before sharing to people with disabilities the possibility of accessing the EPM selection processes.

Actions are being taken before the Ministry of Labor and Social Security to engage EPM in the Equipares gender equity certification program. This engagement will favor a diagnosis of eight minimum conditions necessary to access the certification as a company that cares about and respects gender equity parameters.

EPM first-level executives			
Gender	2017	2018	2019
Men	6	6	6
Women	1	2	3
<b>Total</b>	<b>7</b>	<b>8</b>	<b>9</b>

*Source: Vice Presidency of Human Resources and Technology.*

<b>EPM staff by position and gender</b>			
<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Male executives	170	164	167
Female executives	56	55	59
<b>Executives</b>	<b>226</b>	<b>212</b>	<b>226</b>
Male professionals	1,632	1,609	1,687
Female professionals	1,246	1,208	1,255
<b>Professionals</b>	<b>2,878</b>	<b>2,817</b>	<b>2,942</b>
Male technologists, technicians, and assistants	1,885	1,882	1,993
Female technologists, technicians, and assistants	915	903	927
<b>Technologists, technicians, and assistants</b>	<b>2,800</b>	<b>2,785</b>	<b>2,920</b>
Male maintenance staff	1,371	1,322	1,412
Female maintenance staff	11	10	14
<b>Maintenance staff</b>	<b>1,382</b>	<b>1,332</b>	<b>1,426</b>
Male apprentices	108	151	164
Female apprentices	165	188	178
<b>Apprentices</b>	<b>273</b>	<b>339</b>	<b>342</b>
Male interns	42	36	29
Female interns	30	36	23
<b>Interns</b>	<b>72</b>	<b>72</b>	<b>52</b>
<b>Total</b>	<b>7,631</b>	<b>7,557</b>	<b>7,908</b>

*Source: Vice Presidency of Human Resources and Technology.*

To strengthen diversity and inclusion at EPM, through the recognition, respect, and integration of differences in the organization's daily life, with emphasis on historically excluded groups, the recommendations of the Guide to Achieve a Diverse Public Employment are followed. This guide seeks to implement a differential approach in human management practices that seek real and effective access to employment and remove any type of discrimination in the workplace due to gender condition, ethnic-racial belonging, disability situation, sexual orientation, or other similar factors.

EPM staff by hierarchy			
Item	2017	2018	2019
Executives	226	219	226
Professionals	2,878	2,817	2,942
Technologists, technicians, and assistants	2,800	2,785	2,920
Maintenance staff	1,382	1,332	1,426
<b>Total staff</b>	<b>7,286</b>	<b>7,153</b>	<b>7,514</b>
Apprentices	273	339	342
Interns	72	72	52
<b>Total</b>	<b>7,631</b>	<b>7,564</b>	<b>7,908</b>

*Source: Vice Presidency of Human Resources and Technology.*

The staff grew by 5.05% as a result of the coverage of positions authorized by the Board of Directors to guarantee operational safety, execution of infrastructure and business projects, and proper development of the businesses. It also decreased as a result of the Ituango project contingency. For the most part, fixed-term contracts were not renewed.

Staff distribution by age			
Item	2017	2018	2019
Under 30 years	661	489	505
Between 30 and 50 years	4,003	3,857	4,283
Over 50 years	2,622	2,807	2,726
<b>Total</b>	<b>7,286</b>	<b>7,153</b>	<b>7,514</b>

*Source: Vice Presidency of Human Resources and Technology.*

*Note: Not including apprentices and interns.*

To strengthen diversity and inclusion, the organization does not present age discrimination, since it assesses the skills of the age ranges required for the positions.

<b>EPM average basic wage (million COP)</b>			
<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Executives	16.7	17.6	18.8
Professionals	6.6	7.0	7.4
Technologists, technicians, and assistants	3.0	3.2	3.4
Maintenance staff	1.9	2.1	2.2

*Source: Vice Presidency of Human Resources and Technology.*

<b>Grupo EPM staff</b>			
<b>Company</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
EPM	7,286	7,153	7,514
Aguas Nacionales EPM	20	21	141
Aguas del Oriente Antioqueño	12	13	15
Aguas Regionales EPM	241	215	229
EPRio	N.A.	129	87
Aguas de Malambo	92	91	80
Empresas Varias de Medellín - Emvarias	264	261	257
Central Hidroeléctrica de Caldas - CHEC	1,008	995	994
Electrificadora de Santander - ESSA	1,000	977	986
Empresa de Energía del Quindío - EDEQ	417	405	439
Centrales Eléctricas del Norte de Santander - CENS	516	556	571
Delsur	302	314	320
Grupo DECA Guatemala	809	790	774
EPM Chile (Cururos)	5	6	0
Tecnología Intercontinental -Ticsa	235	502	597
Hidroecológica del Teribe S.A. HET	26	24	24
Elektra Noreste S. A. ENSA	574	566	544
Aguas de Antofagasta - Adasa	448	460	474
<b>Total Grupo EPM</b>	<b>13,255</b>	<b>13,478</b>	<b>14,046</b>

The number of employees of Grupo EPM tended to increase in the last three years, largely due to the incorporation of new affiliated companies such as EPRio and Ticsa Colombia and the increase in the EPM staff.

<b>Grupo EPM staff by hierarchy</b>			
<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Executives	607	617	614
Professionals	4,767	5,006	5,261
Professionals	7,881	7,855	8,171
<b>Total staff</b>	<b>13,255</b>	<b>13,478</b>	<b>14,046</b>
Beneficiaries	11,912	12,351	
Retirees	3,293	3,604	3,547
Apprentices and interns	616	681	860
<b>Total</b>	<b>29,076</b>	<b>30,114</b>	<b>18,453</b>

<b>Geographical distribution of Grupo EPM staff</b>			
<b>Country</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Chile	453	466	474
Colombia	10,856	11,021	11,536
Guatemala	809	790	774
Mexico	235	297	374
Panama	600	590	568
El Salvador	302	314	320
<b>Overall total</b>	<b>13,255</b>	<b>13,478</b>	<b>14,046</b>

*Source: Vice Presidency of Human Resources and Technology.*

## Management indicators

- 102-8** Information on employees and other workers.
- 401-1** New employee hires and employee turnover.
- 405-1** Diversity of governance bodies and employees.

## Scope and coverage

### Companies

Empresas Públicas de Medellín E.S.P. - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 EPM Chile  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Regional de Occidente  
 Aguas de Urabá  
 Aguas Nacionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Tecnología Intercontinental - Ticsa  
 Aguas de Antofagasta - Adasa

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia - Norte de Santander  
 Guatemala  
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 Colombia-Malambo, Atlántico  
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### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation





## Occupational safety and health

At EPM, the Occupational Health and Safety Management System focuses on preventing workplace risks for its people, suppliers, and contractors. It promotes the culture of self-care, safe and healthy work environments, continuous improvement, and efficient performance. It complies with the current applicable legal regulations and manages the required resources to achieve the mitigation and control of hazards identified in the interest of the comprehensive welfare of EPM people, in order to favor sustainable productivity and development in the service provision.

### Management in 2019

The organization implemented Ruling 0312 of 2019 that defines minimum standards of the Occupational Health and Safety Management System, with strict compliance with standards, requirements, and procedures that establish, register, verify, and control the fulfillment of basic conditions of technological and scientific capacity; patrimonial and financial sufficiency; and technical and administrative capacity for the operation, exercise, and development of activities by EPM and its contractors.

The company met 92.5% of the standard requirements.

Progress was made with the implementation of the Occupational Health and Safety Management System at EPM. EPM completed internal and external audits to comply with the provisions of Ruling 0312 and Decree 1072 by the Ministry of Labor and Social Security and provided the corresponding reports to define the associated improvement plans.

After the modification of Ruling 0312 by the Ministry of Labor, the management model for contractors is adjusted. This ruling is applied in relation to mandatory standards, requirements, and procedures for the operation, exercise, and development of activities of EPM as employer and its contractors in the General System of Occupational Risks.

EPM has defined programs aimed at raising awareness and strengthening the self-care culture in collaborators, ensuring their commitment and contribution to improving working and health conditions. The company has established work plans in the operating units based on the prioritization of the risk matrix, safety inspections, actions to improve processes, and investigations of reported accidents and incidents. To respond to health needs and conditions, there are surveillance systems under analytical work in the databases fed by the health conditions.

The companies of Grupo EPM in Colombia continue making progress with the implementation of the minimum standards to implement the Occupational Health and Safety Management System for employers and contractors.

To strengthen the safety culture at EPM, several activities were conducted with the occupational risk administrator:

- Training courses.
- Self-care. The importance of following the procedures and adopting good practices.
- Promotion of good practices of communication, participation, and cooperation among employees regarding health and safety at work.

<b>Disabling injury frequency rate (DIFR) – Grupo EPM</b>			
<b>Companie</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
EPM	0.25	0.71	0.28
Aguas Regionales	0.00	0.72	0.00
Aguas Nacionales	0.00	0.16	0.13
Aguas de Malambo	0.00	1.14	0.79
Emvarias	0.00	0.12	0.27
CHEC	0.00	0.45	0.31
ESSA	0.00	0.09	0.20
CENS	0.00	0.33	0.18
EDEQ	0.00	0.05	0.59

*Source: Vice Presidency of Human Resources and Technology.*

**DIFR variation:** The DIFR was strongly impacted during 2018 due to a fatal accident that occurred in the area of power transmission and distribution, which, according to the American National Standards Institute (ANSI), generates 6,000 days lost with effect on the severity.

**Absenteeism variation:** As a result of the increase in work accidents by 22% and the fatal accident in the area of power transmission and distribution, work-related absenteeism increased strongly.

Training in occupational health and safety at EPM			
Item	2017	2018	2019
Training hours	7,185	7,637	4,718
Amount of employees trained	5,705	15,559	5,760

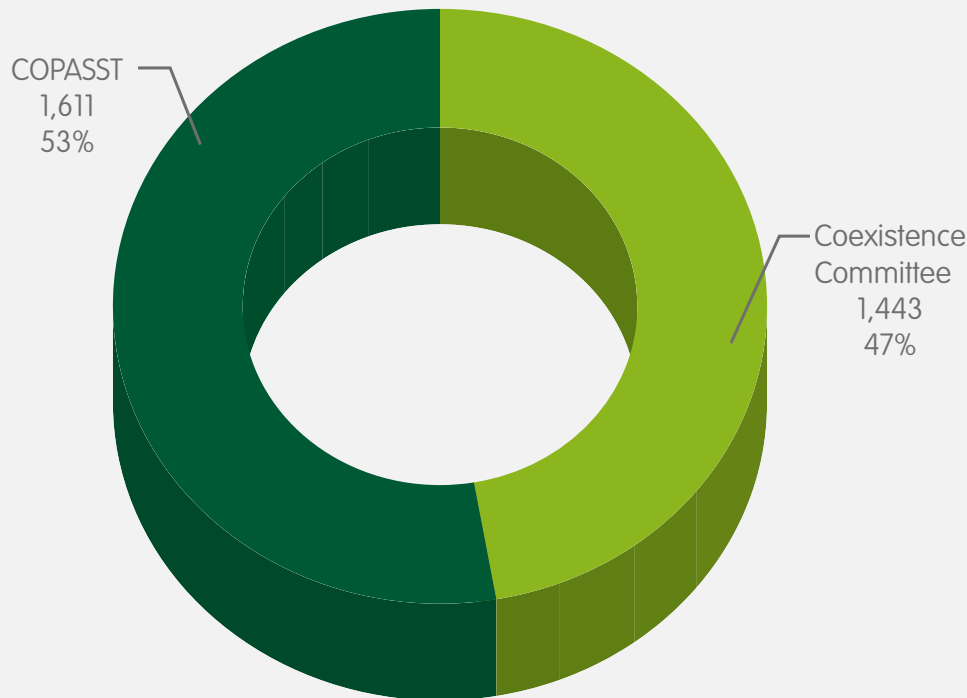
*Source: Vicepresidencia Talento Humano y Tecnología.*

Training in occupational health and safety in Grupo EPM – Colombia			
Item	2017	2018	2019
Training hours	79,375	15,520	117,376
Amount of employees trained	16,184	16,938	16,860

*Source: Vice Presidency of Human Resources and Technology.*

Considering some events that took place in several work areas in 2019, the organization strengthened training in topics such as electrical hazard, emergency response, work at heights, and handling of chemical products, which generated an increase in the participation of staff in these training scenarios.

### Participation in occupational health and safety committees at EPM (number of employees)



*Source: Vice Presidency of Human Resources and Technology.*

At EPM, elections were held for the Coexistence Committee and the Joint Committee on Occupational Safety and Health (COPASST, as per its acronym in Spanish), with a participation of 1,443 and 1,611 public servants respectively. Compared with the previous elections, there was an increase in participation of 3% for COPASST and 15% for the Coexistence Committee.

At EPM, COPASST has the mission of promoting and monitoring compliance with the standards and regulations on health and safety at work, thus contributing to the protection of the physical integrity of workers and the safety of the company in general. The members of COPASST accept this responsibility when they are elected to be part of this committee.

## GRI standards disclosures and EPM indicators

- EU16** Policies and requirements regarding health and safety of employees, contractors, and subcontractors.
- EU17** Days worked by contractor and subcontractor employees involved in construction, operation, and maintenance activities.
- EU18** Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.
- 403-2** Types of injury and rates of injury, occupational diseases, lost days, absenteeism, and number of work-related fatalities.
- 403-3** Workers with high incidence or high risk of diseases related to their occupation.
- 403-4** Health and safety topics covered in formal agreements with trade unions.

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## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Centrales Eléctricas del Norte de Santander - CENS

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia - Malambo,  
 Atlántico  
 El Salvador  
 Guatemala  
 Colombia - Norte de  
 Santander

### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation



# Personnel selection

## Personnel selection

Grupo EPM develops the activities necessary for the selection of individuals who meet the position requirements and adapt to the cultural characteristics of the affiliates. The services include the management of apprentices and interns, as well as the review, analysis of requirements, and assessment with the purpose of filling vacancies and ensuring successful performance in the position.

### Management in 2019

The HCM tool has been used for the selection processes in the different affiliated companies of the group. Similarly, the business rules are standardized with the corporate core guidelines and Grupo EPM Services started providing the selection service to the affiliates.

The EPM human resources management establishes procedures and standards and entails the promotion, transfer, and selection mechanisms. The HCM tool is used to facilitate the selection process management and maintain the process traceability and transparency.

The following vacant positions were filled: 570 with external staff and 135 with internal staff.

Personnel selection at EPM			
Item	2017	2018	2019
Selection processes	1,367	376	790
Contract adjustments	650	224	311
People hired	2,014	135	570

*Source: Vice Presidency of Human Resources and Technology.*



Personnel selection in Grupo EPM			
Item	2017	2018	2019
Selection processes	2,288	882	1,606
Contract adjustments	1,197	661	670
People hired	3,089	832	1,395

*Source: Vice Presidency of Human Resources and Technology.*

The organization adjusted the business rules defined for the 2018 contingency, expanding them to allow public servants of national and international affiliates to participate in selection processes and establishing a provision order, among other changes.

## Management indicator

**EU14** Programs and processes to ensure the availability of a skilled workforce.

### Scope and coverage

#### Companies

Empresas Públicas de Medellín E.S.P. - EPM  
 Central Hidroeléctrica de Caldas - CHEC  
 Empresa de Energía del Quindío - EDEQ  
 Electrificadora de Santander - ESSA  
 Centrales Eléctricas del Norte de Santander - CENS  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Regional de Occidente  
 Aguas de Urabá  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Aguas de Antofagasta - Adasa

#### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia - Norte de Santander  
 Guatemala  
 Panama  
 Colombia-Malambo, Atlántico  
 Chile

#### Businesses

Electrical energy  
 Natural gas  
 Water supply  
 Sanitation



# **Social and environmental management in projects**



## Social and environmental management in projects

It is the set of environmental and social activities carried out by Grupo EPM as a developer of projects transforming the regions in which it operates. The purpose is to contribute to the construction of competitive and sustainable territories, by handling negative impacts and enhancing positive ones, as well as to avoid the materialization of risks in the construction and operation phases. This largely depends on the capacities to manage the socio-political dimension, the understanding of social and environmental forces, and the construction of trust in the territories, among others.

Today, infrastructure projects are being built for the country's expansion and energy growth, such as the Ituango Hydroelectric Project in the department of Antioquia, with an installed capacity of 2,400 MW, which will meet 17% of Colombia's power demand from 2021 onwards with the entry into operation of its first machine. For this purpose, all environmental and social obligations derived from the environmental license and other administrative acts issued by the National Environmental Licensing Authority (abbreviated ANLA in Spanish) must be satisfied. Likewise, substations and lines of the Regional Transmission System are being built and repowered to meet the energy demand in Antioquia, Caldas, Santander, and Norte de Santander. For this, the related environmental licenses or permits were obtained in a timely manner, and the obligations derived from them were met.

In basic sanitation projects, progress is being made in collecting wastewater through sewage networks and stabilizing the EPM Aguas Claras Wastewater Treatment Plant Park, located in Bello. It has a treatment capacity of 5.0 m<sup>3</sup>/s and a biochemical oxygen demand (BOD<sub>5</sub>) of 123 t/day, which receives residential, industrial, and commercial wastewater from Medellín and Bello and is part of the Medellín River and its tributary streams sanitation plan. In addition, the feasibility studies of the transfer station project for the management of solid municipal waste in Medellín were conducted.

Finally, the Aldeas sustainable construction program contributes to making projects and territories viable through sustainable timber construction. This includes housing, tourist infrastructure, and social and community equipment in the department of Antioquia.

## Achievements in 2019

Project	Goals	Year in which it is achieved	Achievements in 2019	Accomplishment
EPM's Aguas Claras Wastewater Treatment Plant Park.	Improve water quality of the Medellín River.	2019	<p>Operation indicators of the Aguas Claras WWTP (percentage of organic load and suspended solids removed from the Medellín River) since January 31, 2019 when it reached its stabilization level:</p> <ul style="list-style-type: none"> <li>Waste treated: 5.0 m<sup>3</sup>/s.</li> <li>Removal: BOD<sub>5</sub> 123t/day, 80% total suspended solids (TSS).</li> </ul> <p>Medellín River's Sanitation and Wastewater Management Plan (SWMP) works for the collection of wastewater discharges: Progress was made in the collection of discharges from public sewerage networks Interceptor Sur – Etapa 1 (South Interceptor – Stage 1) and Sanitation of the Piedras Blancas, Rodas, and El Salado basins), a process that will continue in 2020.</p>	Partial
Aldeas	Achieve the sustainable infrastructure construction plan (Aldeas).	2019	<p>12 Emvarias Infrastructure modules and three plant nurseries were built. A contract was signed for the construction of 18 homes; however, its execution will start in 2020. The contracting process for the construction of three schools was postponed to 2020.</p>	Partial
All the projects	Strengthen capacities in the environmental and social component of the project management initiative (Vision 2025 program).	2019	The plan (project management outline) was achieved, which consists of learning and developing the knowledge and skills required for project development.	Total
All the projects	Strengthen and articulate the vision of territory in the environmental and social management of projects.	2019	<p>The environmental project management plan was integrated with the regional initiatives of the Área Metropolitana del Valle de Aburrá in forest harvesting and ecological connectivity. The project implementation schedules of different businesses were articulated in the same territory to generate the least impact and achieve the required synergies in the management of procedures.</p>	Total

**Note:** the achievements associated with the execution and management of the Ituango hydroelectric project can be found in the [Ituango project](#) chapter.

## Challenges

Projects	Challenges	Year in which it is achieved	Territory	Business	Company
All	Manage environmental and social impacts in Grupo EPM projects.	2019	Colombia – Antioquia	All the businesses	EPM
All	Manage procedures and environmental licensing required for the construction of Grupo EPM projects.	2019	Colombia – Antioquia	All the businesses	EPM
Aguas Claras – EPM's Wastewater Treatment Plant Park	Implement the action plan for the Stabilization of the Aguas Claras WWTP, and make progress in the works of the Medellín River's Sanitation and Wastewater Management Plan (SWMP).	2019	Colombia – Antioquia	Sanitation	EPM
Aldeas	Achieve the sustainable infrastructure construction plan (Aldeas).	2019	Colombia – Antioquia	All the businesses	EPM

**Note:** the achievements associated with the execution and management of the Ituango hydroelectric project can be found in the [Ituango project](#) chapter.

## Environmental investment, cost, and expenditure

Environmental investments in 2019 - Grupo EPM (million COP)									
Company	Environmental and social impact management	Biotic environment	Social management	Physical environment	Environmental management	Environmental and social studies	Forestry offsets	Others <sup>1</sup>	Total
EPM	126,811	38,511	34,764	14,206	3,122	2,204	1,433	50,449	271,500
Adasa	0	0	0	0	0	0	0	572	572
CENS	424	318	307	0	0	0	546	541	2,135
ESSA	0	0	0	0	696	0	0	0	696
Delsur	46	0	0	0	14	0	0	0	60
Eegsa	2,731	0	84	0	0	47	0	144	3,007
ENSA	0	6	0	0	63	0	0	15	84
<b>Total</b>	<b>130,012</b>	<b>38,835</b>	<b>35,156</b>	<b>14,206</b>	<b>3,894</b>	<b>2,251</b>	<b>1,980</b>	<b>51,721</b>	<b>278,055</b>

**Source:** Executive Vice Presidency of Finance and Investment Management.

**<sup>1</sup>Other projects include:** Archeology program.

Contribution to the construction of sustainable territories.

Technical management of environmental procedures.

Management for engagement and communication.

1% provision for forced investment.

Environmental costs and expenditures in 2019 – Grupo EPM (million COP)								
Company	Environmental impact management	Management for the protection and improvement of the environment	Comprehensive environmental management of equipment and waste	Water and weather management	Technical management of environmental procedures	Environmental studies	Other environmental activities <sup>2</sup>	Total
EPM <sup>1</sup>	31,783	2,327	3,967	8,064	2,258	2,565	1,919	52,883
Adasa	2,889	46	2,882	0	92	39	265	6,212
CHEC	617	1,620	861	0	105	1,232	383	4,819
Emvarias	974	305	0	0	837	770	132	3,018
Ticsa	291	0	1,646	432	64	16	3	2,452
HET	2,320	0	0	0	0	0	0	2,320
CENS	1,429	11	85	0	401	0	26	1,951
ESSA	1,276	181	0	0	11	39	0	1,508
Aguas Nacionales	373	0	0	0	0	0	239	612
Aguas de Malambo	146	151	0	146	96	0	0	539
EDEQ	299	0	40	0	31	0	0	370
Eegsa	0	271	0	0	0	93	0	364
Aguas Regionales	85	110	0	45	30	39	0	310
Delsur	2	0	116	0	43	0	0	162
ENSA	36	20	43	0	10	0	2	110
Aguas del Oriente Antioqueño	13	0	0	11	0	0	0	24
<b>Total</b>	<b>42,535</b>	<b>5,043</b>	<b>9,639</b>	<b>8,698</b>	<b>3,980</b>	<b>4,793</b>	<b>2,968</b>	<b>77,656</b>

**Source:** Vice Presidency of Corporate Finance and Investment Management – Directorate of Accounting and Costs.

**Notes:**

<sup>1</sup> Includes equity investments.

<sup>2</sup> Other environmental activities include: environmental management monitoring, environmental process plan, and design.

## Environmental costs and expenditures in 2019 – EPM (million COP)

Businesses	Environmental impact management	Management for the protection and improvement of the environment	Comprehensive environmental management of equipment and waste	Water and weather management	Technical management of environmental procedures	Environmental studies	Other environmental activities <sup>1</sup>	Total
Power generation	15,688	1,461	0	7,219	2,194	2,460	223	29,246
Power transmission	2,104	0	0	0	1	0	2	2,108
Power distribution	5,445	240	3,611	0	46	86	78	9,505
Natural gas	55	0	0	0	0	8	15	77
Water supply	6,998	625	204	815	17	11	948	9,618
Wastewater management	1,493	1	152	0	0	0	652	2,299
Equity investments	0	0	0	30	0	0	0	30
<b>Total EPM</b>	<b>31,783</b>	<b>2,327</b>	<b>3,967</b>	<b>8,064</b>	<b>2,258</b>	<b>2,565</b>	<b>1,919</b>	<b>52,883</b>

**Source:** Vice Presidency of Corporate Finance and Investment Management – Directorate of Accounting and Costs.

**Note:**

<sup>1</sup> Other environmental activities include: environmental management monitoring, environmental process plan, and design.



## Related stakeholders

Customers and users

Community

Owner

State

Investors

## GRI standards disclosures and EPM indicators

**203-1** Infrastructure investments and services supported.

**203-2** Significant indirect economic impacts.

**413-1** Operations with local community engagement, impact assessments, and development programs.

**413-2** Operations with significant actual and potential negative impacts on local communities.

## Scope and coverage

### Companies

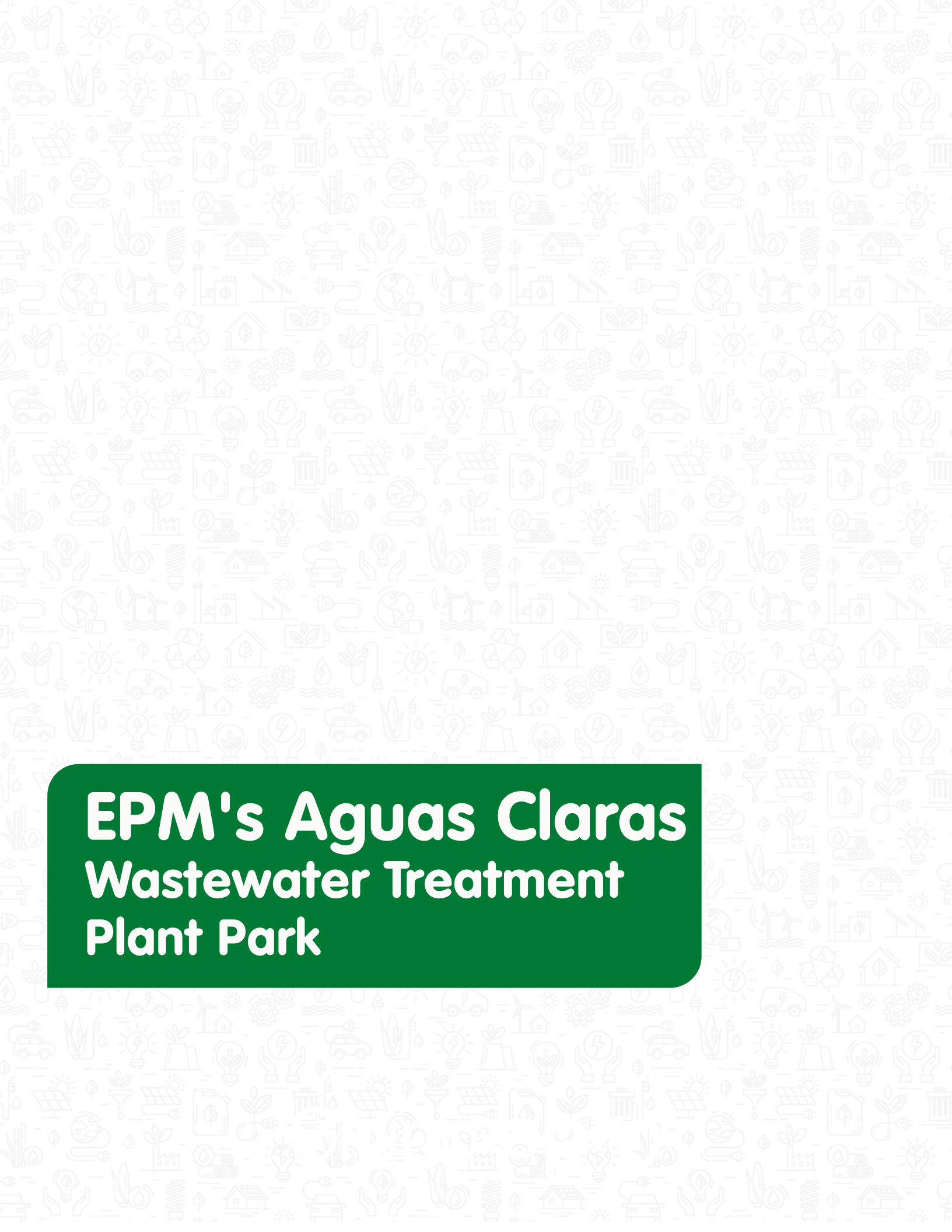
Empresas Públicas de Medellín – EPM  
 Aguas Regionales  
 Aguas Nacionales EPM  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Centrales Eléctricas del Norte de Santander – CENS

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Norte de Santander  
 Colombia – Santander

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



# **EPM's Aguas Claras Wastewater Treatment Plant Park**

## Aguas Claras – EPM's wastewater treatment plant park

EPM's Aguas Claras Wastewater Treatment Plant Park is part of the works that constitute the SWMP.

- Treatment capacity:  
Flow: 5.0 m<sup>3</sup>/s.  
Removal:
  - DBO<sub>5</sub>: 123t/day.
  - 80% total suspended solids (TSS).

This secondary treatment plant receives domestic, industrial, and commercial wastewater from Medellín and Bello. It is the largest and most modern in the country and one of the most advanced of its kind in Latin America. It began operations in October 2018 and reached its stabilization level on January 31, 2019.

### Management in 2019

The processes of stabilization of the physicochemical and biological processes in the plant and completion of the biosolids thermal drying plant continued, which allows a 70% reduction of sludge weight from secondary treatment for a better use and final disposal. In addition, the characterization tests of the resulting biosolid started to be conducted in order to determine its properties and strengthen its potential uses. Additionally, all the actions and activities related to the project's Social Management Plan continued, such as environmental education workshops and awareness-raising with different stakeholders, as well as information and communication processes.

#### Achievements:

- Compliance with 100% of the environmental license responsibilities.
- Monitoring and verification of the maintenance tasks carried out on the 12,433 offset trees in ten micro-watersheds of the municipality of Bello and in areas intervened by the project using a mobile application designed by EPM for online reporting on the conditions of the trees. As a result, 2,156 trees died, which corresponds to 17%. This information is reported to the competent environmental authority.

- For the 32 rulings that granted forest harvesting permits, 18 were completed, for which all the obligations imposed by the Área Metropolitana del Valle de Aburrá, the environmental authority, had already been fulfilled. The remaining 12 rulings have current obligations related to maintenance. However, they continue to be addressed within the framework of the project's operation.
- Conservation and protection of the wild fauna that enters the plant. In July 2019, fauna monitoring began in the area of influence of the Interceptor Norte (Northern Interceptor) based on the results of the ecological connectivity study conducted in 2011.
- In regard to the social management component, the following achievements are reported:
  - Four environmental education workshops conducted with the community.
  - 27 environmental education workshops conducted with project workers.
  - Environmental day at the area of direct influence of the project.
  - Delivery of 725 school kits to seven educational institutions in the area of direct influence of the project.
  - 16 discussion sessions for stakeholders during the plant testing and stabilization stage.
  - 100% achievement of the activities of the information and participation program as a result of 62 guided visits to the project.

### Challenges:

- Generation of odors during the stabilization and start-up phase of the plant, which started on October 2018 and lasted four months. This impact decreased as the process of biological stabilization of the microorganisms responsible for the digestion of organic matter evolved. Over this period, information was amplified through mass media, social media, meetings with communities, and immediate and personalized assistance.

Similarly, to determine the degree of affectation of the odors generated during the stabilization process, the Universidad Pontificia Bolivariana was contracted to monitor gases (ammonia-NH<sub>3</sub> and hydrogen sulfide H<sub>2</sub>S). It was found that all concentrations were below the limits established in Resolution 1541 of 2013 of the Ministry of Environment and Sustainable Development and posed no health risk. These measurements were taken at air quality points located at Puerta del Norte, Colegio Navarra, the electrical substation, and inside the plant.

### GRI standards disclosures and EPM indicators

- 203-1** Infrastructure investments and services supported.
- 203-2** Significant indirect economic impacts.
- 413-1** Operations with local community engagement, impact assessments, and development programs.
- 413-2** Operations with significant actual and potential negative impacts on local communities.

### Scope and coverage

<b>Companies</b>	<b>Territory</b>	<b>Business</b>
Empresas Públicas de Medellín – EPM Aguas Nacionales EPM	Colombia – Antioquia	Sanitation



# Aldeas program

## Aldeas program

Aldeas is an innovative initiative that takes advantage of trees reaching their maturity period in the more than 4,000 ha of forest plantations around the power generation reservoirs and drinking water supply. Its purpose is to provide an added value by offering a portfolio of constructive solutions for communities and territories with a high degree of socio-economic vulnerability in the regions where EPM operates.

The Aldeas program contributes to:

- Strengthening of public-private partnerships for the promotion of the social and environmental development of the communities.
- The construction of safe habitats in the rural environment where families can continue promoting the agricultural development of the country.
- The promotion of forest governance through the sustainable use of trees that complete their maturation cycle in the forests owned by EPM.
- The feasibility of projects and the validation of EPM's presence in the territories.
- The articulation of the forestry sector, the wood industry, and the construction industry, which has allowed the generation of a great number of direct and indirect jobs, contributing to the revitalization of the local and regional economy.

## Management in 2019

Today, Aldeas is much more than just homes; it is a program that contributes to making the projects and the territories viable through sustainable construction using wood, which includes tourist infrastructure, social and community equipment infrastructure (environmental classrooms, communal stalls, schools, playgrounds), and rods for fences.

### Achievements:

- In coordination with Antioquia Governor's Office and the municipalities, two indigenous rural schools were built in the municipality of Urrao, and the construction of other two started in the municipality of Murindó, which, due to security situations, could not be completed.
- A facility (12 La Pradera multifunctional modules) was built for the Emvarias affiliate in the municipality of Donmatías.
- A facility was built for four plant nurseries in the municipalities of Donmatías (La Montaña), Amalfi (Porce), San Rafael (Playas), and Guarne (Piedras Blancas).

- Investment of COP 1,196 million for 2019, which includes forest harvesting and construction.

**Challenges:**

- Hard-to-reach indigenous communities for the installation of rural schools, especially in the municipality of Murindó, because of security issues.
- Delays in the commissioning of electricity to homes in the most remote areas, due to various regulatory aspects of the Energy and Gas Regulatory Commission (abbreviated CREG in Spanish) for rural electrification programs.

**GRI standards disclosures and EPM indicators**

**203-1** Infrastructure investments and services supported.

**203-2** Significant indirect economic impacts.

**413-1** Operations with local community engagement, impact assessments, and development programs.

**413-2** Operations with significant actual and potential negative impacts on local communities.

**Scope and coverage**

**Company**

Empresas Públicas de Medellín – EPM

**Territory**

Colombia – Antioquia

**Business**

Electrical energy





# Intermediate projects

## Intermediate projects

These are the expansion, modernization, and growth projects in the energy, gas, water, and solid waste sectors that are currently being developed by Grupo EPM and that leverage the sustainable growth of the organization and the territories in which it operates.

In **power generation**: some of the most relevant projects include the restoration of the Playas power station, the modernization of the La Ayurá small power station, and the replacement of transformer banks at the Guadalupe IV and Troneras power stations.

In **transmission and distribution**: works were carried out to expand and replace the system, improve service quality, electrify homes with the Electrificación Rural Etapa III (Rural Electrification Stage III) project, connect customers and repower, reconfigure and modernize substations and regional project lines in EPM and its affiliates CENS, ESSA, and CHEC.

In **water and basic sanitation**: drinking water supply projects were carried out in the Valle de Aburrá as stated in the Water Provision Intervention Program (abbreviated PIPA in Spanish) and the Valle de San Nicolás and Habitación Viviendas (Habitable Homes) projects, while the SWMP include the following projects: maintenance of sewerage networks and infrastructure, Other Basins and Rodas-Piedras Blancas-El Salado. With regard to solid waste management, prefeasibility studies are being carried out for the transfer station project. Projects related to basic community sanitation are being carried out with the affiliates Aguas de Malambo and Aguas Regionales.

## Management in 2019

**Improving the quality of life of the communities where the Grupo EPM operates:** works were built to guarantee the supply of electricity, gas, drinking water, wastewater and solid waste management that improve coverage, continuity, and quality of service for customers. In addition, networks and infrastructure associated with public utilities were modernized and replaced.

## Achievements:

- Fulfillment of environmental and social management plans for public utilities infrastructure projects.
- Management of environmental procedures and permits required for the construction of works, such as request for or modification of environmental licenses permits for forest harvesting, riverbed occupation, dumping permits, as well as compliance with the obligations and management actions associated with said licenses or permits.
  - Filing: 95%. 80 out of the 84 permits, studies, procedures, or scheduled reports were filed.
  - Permitting: 87%. 75 out of the 86 requested environmental procedures or permits were obtained.
  - Procedures not foreseen: 18 due to changes in designs or the need to cut or prune new trees or request a deadline extension.
- Review and preparation of studies: 100%. The 56 studies planned during the year were completed. 41 were prepared with own resources; and 14, contracted.
- Requests, complaints, and claims (RCC), rights to petition, request for information, and others: 92.7%
  - Of the 831 RCC received, 825 correspond to water projects; and 6, to energy projects. 770 were closed to satisfaction, and the remaining 61 correspond to water and sanitation projects.
- Implementation of information and community involvement programs with the different stakeholders at regional and local levels.
- Implementation of communication strategies and engagement with different local, regional and national stakeholders that allowed establishing and strengthening a two-way communication and trust relationships for the viability and sustainability of the projects.
- Implementation of strategies with authorities, public and private entities and communities with the purpose of influencing the prioritization and obtaining of licenses and the feasibility of each project.
- Social assistance in the establishment of easements and property management.

## GRI standards disclosures and EPM indicators

- 203-1** Infrastructure investments and services supported.
- 203-2** Significant indirect economic impacts.
- 413-1** Operations with local community engagement, impact assessments, and development programs.
- 413-2** Operations with significant actual and potential negative impacts on local communities.

## Scope and coverage

### Companies

Empresas Públicas de Medellín – EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Empresas Varias de Medellín – Emvarias  
 Central Hidroeléctrica de Caldas – CHEC  
 Electrificadora de Santander – ESSA  
 Empresa de Energía del Quindío – EDEQ  
 Centrales Eléctricas del Norte de Santander – CENS

### Territory

Colombia – Antioquia  
 Colombia – Caldas  
 Colombia – Quindío  
 Colombia – Santander  
 Colombia – Norte de Santander  
 Colombia – Malambo, Atlántico

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas

The background of the entire page is a repeating pattern of small, light green icons. These icons represent various aspects of sustainability, including renewable energy (solar panels, wind turbines, water droplets), recycling (recycling symbols, paper, plastic), nature (trees, leaves, mountains), and social responsibility (hands holding a globe, people silhouettes).

# **Sustainable production and consumption**



## Sustainable production and consumption

This is the core aspect of the environmental planning of Grupo EPM, which defines, coordinates, implements, and monitors initiatives focused on efficient use and saving of energy and water (see Water and biodiversity), waste management, rational consumption of materials and input materials, sustainable public procurement, and best environmental practices.

These initiatives are part of the National Circular Economy Strategy that seeks a new economic development by the constant valuation of resources; the close of materials, water and energy cycles; and innovative business models to increase the efficiency on production and consumption of materials, as well as the reduction of the related impacts.

Sustainable production and consumption are a decisive opportunity to optimize the use of resources in the activities required for the provision of public utilities by the Grupo EPM People, to influence the production practices of goods and services carried out by its suppliers and contractors, and to guide habit changes in customers and users, so that the group contributes to business competitiveness and, as corporate citizen, encourages the responsible use of resources and the reduction of environmental pollution.

## Main achievements

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Energy consumption	Complete the implementation of the online monitoring of the EPM energy efficiency program in the processes of wastewater catchment, purification, primary distribution, and treatment.	EPM	Advance on the update of the online monitoring system by its implementation on three catchment pumping units, 20 primary-distribution pumping units, four micro-stations, 10 purification plants, and one EPM wastewater treatment plant. A partial accomplishment is stated as it has not been implemented on all programmed pumping. In 2019, this monitoring favored a reduction of 6.05 GWh in energy consumption, savings of COP 1,441 million, and a reduction in emissions of 994.50 tCO <sub>2</sub> e.	Partial
Energy consumption	Keep power generation using biogas in the EPM San Fernando and Aguas Claras wastewater treatment plants to self-supply at least 30% of each plant's internal demand.	EPM	Self-generation of 34.28% of the energy consumed in the San Fernando wastewater treatment plant in 2019. The power self-generation at the Aguas Claras wastewater treatment plant will begin in 2020.	Partial
Energy consumption	Sustain the increase in energy consumption at CHEC equal to or less than 10% with respect to the previous period.	CHEC	As a result of the implementation of energy-efficiency actions that favored the reduction of the consumption rate, the energy consumption in 2019 at the chosen facilities (storehouses, customer service offices, and 115 kV substations) increased only 4.71% compared with 2018 (2,825.38 kWh in 2019 vs 2,824.05 kWh in 2018).	Total

Program, project, initiative, or action	Challenges	Company	Achievements in 2019	Accomplishment
Energy consumption	Improve energy efficiency at the CENS facilities.	CENS	Execution of a power inventory or census on two administrative buildings which favored the identification of the equipment and places with high energy consumption. Connection of network analyzers on macrometers. In 2019, an increase of 13.26% was reported regarding the previous year, in spite of the increase of 29.09% on population at the analyzed sites.	Partial
Energy consumption	Conduct an energy efficiency study at the administrative offices of Eegsa.	Eegsa	This challenge was eliminated since it demanded an important economic investment and the environmental management had to be focused on licenses, environmental studies, and forest management plans.	Not accomplished
Other consumptions and efficient practices	Replace chlorine by sodium hypochlorite generated in situ, in the Aguas Frías, La Montaña, and Barbosa water purification plants.	EPM	Replacement of chlorine for the sodium hypochlorite system generated from mine salt, in the Aguas Frías, La Cascada, La Montaña, and Barbosa water purification plants.	Total
Waste management	Acquire between 450 and 500 vegetable oil transformers for ESSA, according to the needs generated in the system, due to failure or expansion.	ESSA	Acquisition of 644 vegetable oil transformers.	Total



## Challenges

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in management in 2019
			Company	Territory	Business	
Energy consumption	Keep power generation using biogas in the EPM San Fernando and Aguas Claras wastewater treatment plants to self-supply at least 30% of each plant's internal demand.	2020	Empresas Públicas de Medellín - EPM	Colombia - Antioquia	Sanitation	Self-generation of 34.28% of the energy required in the San Fernando wastewater treatment plant, based on the reclamation of 5.11 Mm <sup>3</sup> of biogas.
Waste management	Reclaim 10% of the generated ordinary waste to manufacture ecological bricks.	2020	Empresas Públicas de Medellín - EPM	Colombia - Antioquia	Water	Manufacturing of ecological bricks to be handed in to the Llena una Botella de Amor Foundation.
Other consumptions and efficient practices	Replace chlorine by sodium hypochlorite generated in situ, in the Villa Hermosa water purification plant.	2020	Empresas Públicas de Medellín - EPM	Colombia - Antioquia	Water	Implementation of the sodium hypochlorite system in the Aguas Frías, Barbosa, La Cascada, and La Montaña water purification plants.

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in management in 2019
			Company	Territory	Business	
Energy consumption	Maintain energy consumption at the EPM building below or equal to 99.23 kWh/m <sup>2</sup> -year.	2020	Empresas Públicas de Medellín - EPM	Colombia - Antioquia	All the businesses	Scheduled and gradual replacement of fluorescent lamps for light emitting diode (LED) technology. Modernization of the air conditioner system and increase of its efficiency, change of technological system timetables, substation modernization, and monitoring and control of electrical energy use. The energy consumptions (in kWh/m <sup>2</sup> -year) in the 2014-2019 period at the EPM building are as follows: 116.17 (2014), 113.87 (2015), 100.69 (2016), 97.89 (2017), 97.21 (2018), and 97.54 (2019).
Energy consumption	Sustain the increase in energy consumption at CHEC equal to or less than 2% with respect to the previous period.	2020	Central Hidroeléctrica de Caldas - CHEC	Colombia - Caldas	Electrical energy	Implementation of energy-efficiency actions at the main facility and the 115 kV substations. Increase by 4.71% in energy consumption with respect to 2018.
Energy consumption	Install solar panels for 220/110-V complementary services, at the San Francisco station.	2020	Central Hidroeléctrica de Caldas - CHEC	Colombia - Caldas	Electrical energy	Action to be started in 2020.

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in management in 2019
			Company	Territory	Business	
Energy consumption	Install solar panels at three facilities for power self-generation.	2021	Elektra Noreste - ENSA	Panama	Electrical energy	Quote request and installation proposal. Installation of 460 photovoltaic panels and solar heater at Arco Iris administrative office.
Energy consumption	Reduce the per capita energy consumption at each Delsur facility, without affecting operations and personnel's convenience.	2021	Distribuidora de Electricidad del Sur - Delsur	El Salvador	Electrical energy	Replacement of fluorescent lighting for LED. Monthly energy consumption quantification per each workplace. Participation on the El Salvador Ahorra Energía (El Salvador Saves Energy) program by the National Energy Council.
Waste management	Develop a plan for removing polychlorinated biphenyl (PCB).	2022	Empresa Eléctrica de Guatemala - Eegsa	Guatemala	Electrical energy	Approval of the project business plan for destruction and elimination of the equipment polluted with PCB by the year 2022. Execution of a visit to EPM to receive support on training for equipment handling. Monthly tracking of project progress. Submission of the annual expense report to be reviewed by the National Electrical Energy Commission (regulating body for the power sector in Guatemala) since it is a distribution added value project. Execution of chromatographs.

Program, project, initiative, or action	Challenges	Year in which it is achieved	Scope and coverage			Progress in management in 2019
			Company	Territory	Business	
Waste management	Remove stocks of PCB.	2022	Empresas Públicas de Medellín - EPM	Colombia - Antioquia	Electrical energy	Certification of 823 PCB-free equipment units directly with the manufacturers, equivalent to 19% of the certified equipment (4,389). 5,171 equipment units tested and labeled and 7,681 chromatographs taken, for a total of 55,300 tests and 64,600 analyses. Dechlorination of 23,155 liters. Renewal of the in-field contract for testing until December 2020. Contract with Lito to export frozen waste due to the lack of an environmental license for waste export.
Waste management	Produce, in EPM plant nursery, the organic fertilizer required for the maintenance of gardens and green areas in EPM offices.	2022	Empresas Públicas de Medellín - EPM	Colombia - Antioquia	All the businesses	Production of 240 t of organic fertilizer in 2019 from food waste composting, coffee leftovers, fruit skins, and gardening waste generated at the EPM building. A 29.17% of organic waste, equivalent to 99.18 t, was reclaimed instead of taken to final disposal.

## Related sustainable development goals



## Related stakeholders

Customers and users Grupo EPM people	Community Investors	State Suppliers and contractors
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## GRI standards and EPM indicators

- 103-1** Explanation of the material topic and its boundary.
- 103-2** The management approach and its components.
- 103-3** Evaluation of the management approach.
- 301-1** Materials used by weight or volume.
- 301-2** Recycled input materials used.
- 302-1** Energy consumption within the organization.
- 302-2** Energy consumption outside of the organization.
- 302-3** Energy intensity.
- 302-4** Reduction of energy consumption.
- 302-5** Reductions in energy requirements of products and services.
- 306-2** Waste by type and disposal method.
- 306-4** Transport of hazardous waste.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Risaralda  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas

The background of the entire page is a repeating pattern of small, light-colored icons. These icons represent various concepts related to energy, sustainability, and technology, including solar panels, wind turbines, light bulbs, gears, recycling symbols, and houses. The icons are arranged in a grid-like fashion, creating a dense and textured background.

# Energy consumption

## Energy consumption

It aims to optimize the use of energy (electricity, gasoline, diesel, natural gas, and other fuels) based on strategies to reduce or stabilize consumptions, supported on the comparative analysis of its behavior using historical figures.

Grupo EPM advances on the implementation and tracking of the energy saving and efficient-use program which comprises actions such as replacement of fluorescent lighting for LED; control of lighting use; enhancement of the air conditioner system programming; installation of solar panels for self-consumption energy at the administrative offices and other facilities; replacement of gasoline or diesel vehicles for electric vehicles; monitoring and analysis of the electrical energy consumption in all the offices, group's vehicles, and third-party vehicles; and the execution of awareness-raising campaign for saving and efficient use aimed at internal and external stakeholders.

The power distribution and water supply companies of the business group develop programs to reduce losses in their networks.

## Management in 2019

EPM conducted the change of lighting technology on strategic projects in Medellín, which consists of migrating from high-intensity discharge sodium lamps to LED. During the year, 2,151 lighting spots were installed, which contributed to saving 41.54 MWh of electrical energy.

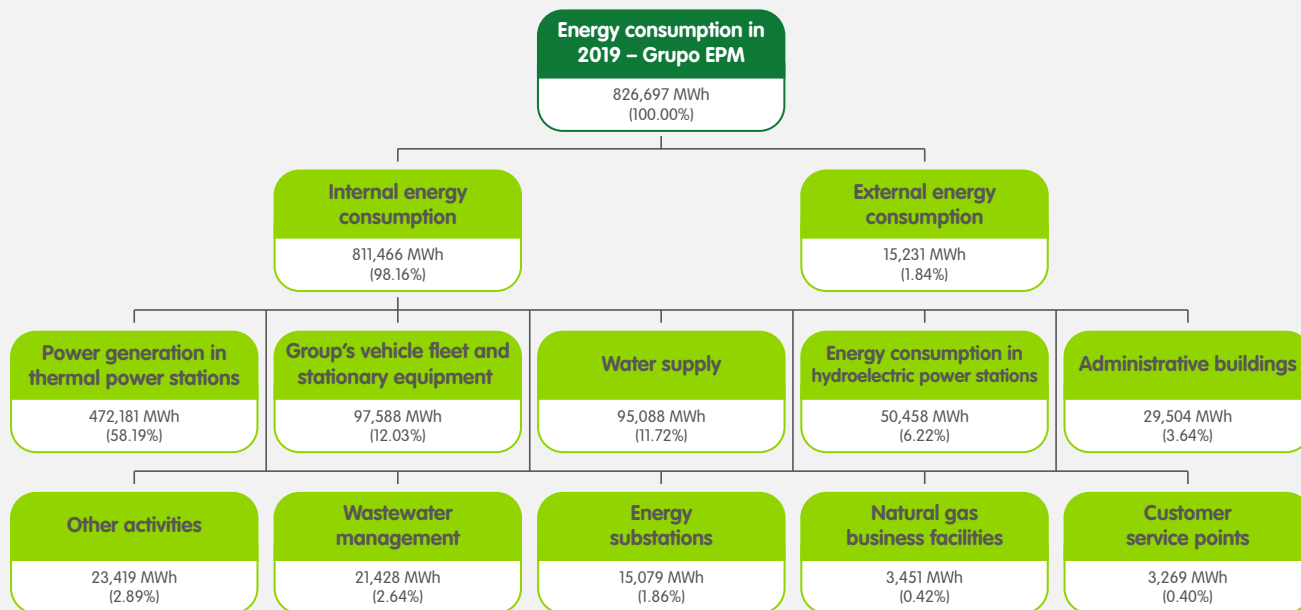
Grupo EPM requires energy for the development of its activities. 91.79% of the internal demand (744,819 MWh) corresponds to the energy required for the operation of the thermal power stations, the group's fleet and stationary equipment, the water supply, and the lighting in the power generation stations and administrative buildings.

The total energy consumption in Grupo EPM increased by 116.24% compared to 2018. In December, the operation of La Sierra thermal power station raised the demand since the power generating equipment required natural gas and electrical energy.

Fuels such as natural gas, diesel, liquefied petroleum gas, regular gasoline, and premium gasoline come from non-renewable sources. Biogas and self-supplied electrical energy come from renewable sources. The electrical energy consumed from the network has a renewable and non-renewable component, which depends on the participation of the thermal stations in the power generation of the country.



## Energy consumption in 2019 – Grupo EPM

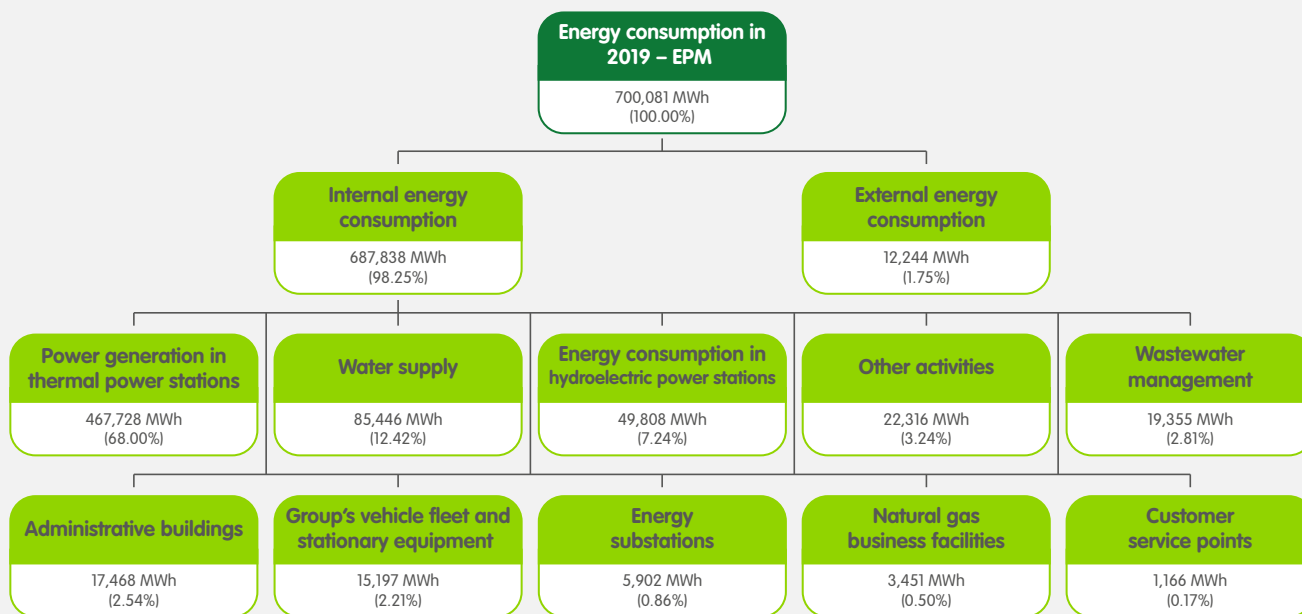


**Source:** Idsos application.

*Other activities include warehouses, storehouses, camps for power generation plants and technical centers.*

Power generation was the activity that required the most amount of energy at the thermal stations of Grupo EPM in 2019.

## Energy consumption in 2019 – EPM



**Source:** Idsos application.

*Other activities include warehouses, storehouses, camps for power generation plants and technical centers.*

68% of EPM's internal energy demand in 2019 corresponded to power generation at La Sierra thermal station.

Internal energy consumption – Grupo EPM (MWh)			
Source of energy	2017	2018	2019
Natural gas	35,900	56,942	453,197
Electrical energy	162,076	178,720	207,983
Diesel	55,574	54,421	59,957
Self-supplied electrical energy	46,585	40,070	44,222
Biogas	32,201	35,410	31,224
Vehicular natural gas	33,901	34,792	31,944
Fuel oil	13,032	0	7,155
Gasoline	6,500	5,612	5,688
Liquefied petroleum gas	2,514	1,266	1,320
<b>Total</b>	<b>356,082</b>	<b>371,823</b>	<b>811,466</b>

*Source: Idsos application.*

The internal energy consumption increased by 118.24%. The most used sources were natural gas (55.85%), electrical energy (25.63%), and diesel (7.39%). The self-supplied electrical energy (energy reclamation in power stations and biogas) supplies 5.45% of the energy demand.

97.90% of natural gas and 100% of fuel oil were used in Termosierra and 0.84% of natural gas was consumed in Termodorada. Both of them are support plants whose power generation responds to the system demand. This explains the 695.89% increase in natural gas and fuel oil.

The increase of 16.37% in electrical energy was mainly caused by the operation of water pumps at La Sierra thermal station, the installation of air conditioning, the installation of new equipment for substations, the expansion or construction of new infrastructure, and the increase of personnel hired and contractors.

Biogas is excluded from the total because it is considered in self-supplied energy. The electrical energy consumed by the leachate treatment plant of the La Pradera landfill was included for the first time; it represents 77.83% of the electrical energy demand of Emvarias and 0.68% of the electrical energy of Grupo EPM.

The electrical energy figures of 2017 and 2018 and the diesel, self-supplied electrical energy, natural gas, and gasoline figures of 2018 were corrected.

The solar panels installed at three administrative offices and one Eegsa substation generated 210.30 MWh, which correspond to 7.34% of the total electrical energy demand.

The solar panels of Delsur central station provided 23.90 MWh, which correspond to 2.81% of the electrical energy consumption in this infrastructure.

Internal energy consumption – EPM (MWh)			
Source of energy	2017	2018	2019
Natural gas	30,749	53,408	448,941
Electrical energy	126,915	139,178	171,236
Self-supplied electrical energy	46,585	39,258	43,988
Biogas	32,201	35,410	31,225
Diesel	15,471	20,182	10,929
Fuel oil	11,018	0	7,155
Gasoline	4,866	4,408	3,817
Liquefied petroleum gas	2,514	1,266	1,321
Vehicular natural gas	1,090	1,117	451
<b>Total</b>	<b>239,208</b>	<b>258,817</b>	<b>687,838</b>

*Source: Idsos application.*

EPM consumes 84.76% of the group’s energy. The internal energy consumption increased by 165.76%. Natural gas (65.27%) and electrical energy (24.89%) had the highest consumption rates. The self-supplied electrical energy (energy reclamation in power stations and biogas) supplies 6.40% of the energy demand.

The raise of 740.59% in natural gas and the fuel oil demand can be explained by the generation of 159.25 GWh at La Sierra thermal station in 2019, in comparison to 19.29 GWh generated in 2018, which had to operate due to the support offered to the power generation compromised by EPM as part of the Ituango hydroelectric project. Since the La Sierra thermal power station should generate energy on a continuous basis for the next three years, an increase in the Grupo EPM energy consumption and, thus, in emissions is expected.

The increase of 23.03% in electrical energy is caused, among other reasons, by the implementation of water pumps which use 10 m³/s from the Magdalena River to generate energy in the combined cycle of La Sierra, and by the information report of EPRio within EPM. EPRio has energy-demanding processes and technology in one of its purification plants (in 2018, it was presented separately).

The reduction in diesel and vehicle natural gas responds to a higher use of the contracted vehicle fleet instead of the EPM fleet.

The electrical energy figures of 2017 and 2018 and the self-supplied electrical energy figures of 2018 were corrected.

The small and micro-power stations of EPM's water supply system generated 14.77 GWh, which represents 17.29% of the electrical energy required for water supply.

### EPM's annual goal (2017–2019 period):

Non-renewable energy consumption  $\leq$  2,500 GWh (in a year with El Niño).

Non-renewable energy consumption  $\leq$  350 GWh (in a year without El Niño).

2019 EPM non-renewable energy consumption = 472.61 GWh. The goal was not met.

### Energy consumption in water supply – Grupo EPM

Company	Energy consumption (GWh)			Water treated (Mm <sup>3</sup> )			MWh consumed / Mm <sup>3</sup> of water treated		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
EPM	59.60	67.16	85.45	281.41	281.50	303.56	211.78	238.58	281.48
Aguas Regionales	4.96	4.51	4.45	23.87	27.48	25.87	207.80	163.93	171.94
Aguas de Malambo	4.63	4.93	5.00	7.89	8.59	8.49	586.20	573.88	588.49
Aguas del Oriente	0.19	0.17	0.19	0.74	0.80	0.85	250.64	207.36	228.55
EPRio	NDA	1.46	NA	NDA	7.92	NA	NDA	183.97	NA
Adasa	NDA	NDA	NDA	8.19	10.93	4.59	NDA	NDA	NDA
<b>Total</b>	<b>69.37</b>	<b>78.22</b>	<b>95.09</b>	<b>322.10</b>	<b>337.22</b>	<b>343.36</b>	<b>215.36</b>	<b>231.95</b>	<b>276.93</b>

*Source: Idsos application.*

This includes electrical energy in the water purification plants, tanks, pumping stations, wells, and collection stations.

Grupo EPM consumed 95,088 MWh (12.03% of the internal demand) for water supply; 85.446 MWh corresponded to EPM. The raise of 27.23% in EPM's energy consumption responds to the facts that the Valle San Nicolás purification plant (reported as part of EPRio until 2018) conducts processes of ozonation, hypochlorite generation in situ, and other technology requiring more energy; the increase in the system demand, jointly with the absence of rain, required increasing the continuity of pumping; and the operation of the UV disinfection system at one of the plants and the Unidos por el Agua (United for Water) program needed more water pumping to supply new connections.

The energy intensity at EPM increased by 17.98%, that is, more energy was required for each unit of drinking water. The tanks and pumping accounted for 89.60% of the demand for this process.

Energy consumption in wastewater management – Grupo EPM			
Company	Energy consumption (MWh)		
	2017	2018	2019
EPM	16,081	16,503	19,355
EPRio	NDA	931	NA
Aguas Regionales	591	301	285
Aguas de Malambo	64	56	65
Emvarias	NA	NA	1,724
<b>Total</b>	<b>16,736</b>	<b>17,791</b>	<b>21,428</b>

*Source: Idsos application.*

This includes the consumption of energy in the wastewater treatment plants and in the pumping stations.

The energy consumption for wastewater management in Grupo EPM was 21,428 MWh (2.64% of the internal energy demand). The raise of 20.44% with regard to 2018 is explained, among other reasons, by the inclusion, for the first time, of the electrical energy required for the leachate plant operation at the La Pradera landfill.

In 2019, the EPRio affiliate reported its information within EPM.

Aguas de Malambo made progress with the construction of a wastewater treatment plant, with an energy demand higher than that of 2018.

<b>Energy consumption in wastewater management – EPM</b>			
<b>Aspect</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Energy consumption (MWh)	16,081	16,503	19,355
Volume of wastewater treated (thousands of m <sup>3</sup> )	38,575	43,440	50,534
Renewable energy generated (MWh)	6,849	7,619	6,636
Amount of renewable energy compared to energy consumed	43%	46%	34%
<b>kWh consumed/thousands of m<sup>3</sup> of wastewater treated</b>	<b>417</b>	<b>380</b>	<b>383</b>

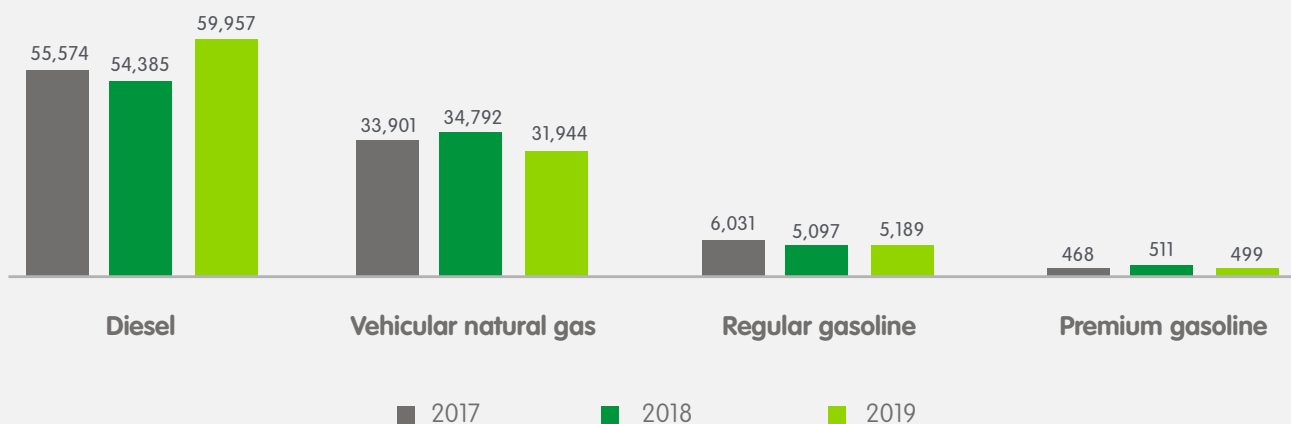
*Source: Idsos application.*

Data on energy consumption and wastewater treated correspond to two wastewater treatment plants and four pumping stations; power generation occurs in one of them from the capture of biogas.

The energy consumption for wastewater management was 19,355 MWh (2.81% of the internal energy demand). The raise of 17.28% can be explained by the expansion of two plants, the start of operations of Bardenpho biological system with an additional blower at San Fernando wastewater treatment plant, and the consumption report of EPRio within EPM.

With the methane produced in the anaerobic digestion of sludge, the company self-supplied 34.28% of the electrical energy required in the San Fernando wastewater treatment plant, where the heat of motor generators is used to heat up the sludge in the biodigesters. 5.11 Mm<sup>3</sup> of biogas were used (11.74% less than in 2018, due to operating causes at the beginning of the year).

Energy consumption in the vehicle fleet and stationary equipment – Grupo EPM (MWh)



Source: Idsos application.

The energy consumption by the group’s vehicle fleet was 97,588 MWh (12.03% of the internal demand). Diesel accounts for 61.44% of consumption, followed by vehicular natural gas (32.73%).

The natural gas used by Emvarias in its waste collection trucks accounted for 98.46% of this fuel consumption for the group, while diesel accounted for 58%. EPM is the second company with the highest diesel demand, as it consumes 36.64% of this fuel.

The diesel figure of 2018 was corrected.

The variations in fuel consumption related to the group’s and third-party vehicle fleet respond to numerous causes: amount and geographic location of failures or matters to be solved on the public utilities network, study and construction of projects, and particular transportation service demands, among others.

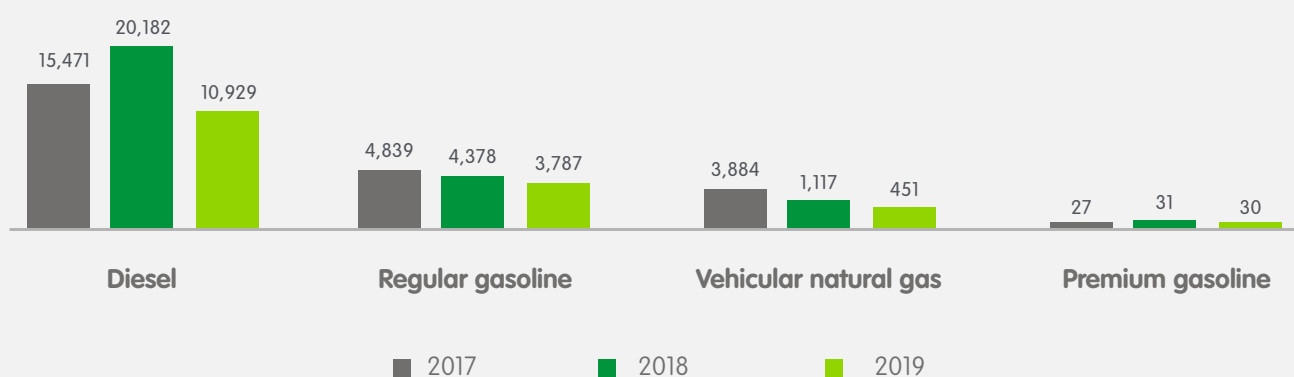
The affiliated companies Eegsa and Delsur are progressing with actions contributing to energy consumption optimization of the vehicle fleet: implementation of GPS applications for the failure support crews go through the most efficient route in terms of distance and transport time, seminars on ECO Drive, and training in efficient and safe driving.

CENS included a category to improve its fleet in the 2020–2023 investment plan, which comprises the purchase of two electric vehicles.



Egsa structured the distribution added value project as a response to the 2018–2023 costs document approved by the National Electrical Energy Commission (regulating body for the electrical sector in Guatemala). One of the project initiatives seeks for the efficiency by optimization, which includes actions to improve the vehicle management, achieve savings, and avoid costs.

Energy consumption in the vehicle fleet and stationary equipment – EPM (MWh)



Source: Idsos application.

The energy consumption by EPM’s vehicle fleet decreased by 40.88% compared to the previous year, among other reasons, because the third parties’ fleet, instead of the EPM’s fleet, was used for many trips. Total consumption was 15,197 MWh (2.21% of the internal energy demand). Diesel accounts for 71.92%, followed by regular gasoline (24.92%).

Natural gas had the greatest decrease (59.62%), followed by diesel (45.85%), compared to 2018.

The vehicular natural gas figure of 2017 was corrected.

## External energy consumption

Energy consumption of the vehicle fleet hired (MWh) – Grupo EPM			
Fuel	2017	2018	2019
Diesel	24,899	9,437	13,968
Regular gasoline	1,372	961	977
Vehicular natural gas	671	79	285
Premium gasoline	7	0	0
<b>Total</b>	<b>26,949</b>	<b>10,477</b>	<b>15,231</b>

*Source: Idsos application.*

The external energy demand is calculated based on fuel consumption by the vehicle fleet hired by Grupo EPM. In 2019, this consumption was 15,231 MWh (45.38% more than last year), equivalent to 1.84% of the total energy demand. Diesel accounts for 91.71% of fuel consumption.

The vehicular natural gas figure of 2017 was corrected.

Energy consumption of the vehicle fleet hired (MWh) – EPM			
Fuel	2017	2018	2019
Diesel	15,378	7,181	11,038
Regular gasoline	1,300	951	958
Vehicular natural gas	573	22	248
Premium gasoline	7	0	0
<b>Total</b>	<b>17,258</b>	<b>8,154</b>	<b>12,244</b>

*Source: Idsos application.*

The energy consumption by the vehicle fleet hired by EPM increased by 50.16%. The most significant increases were in vehicular natural gas and diesel. The latter accounts for 90.15% of fuel consumption.

The bid specifications of personal transport contracts for infrastructure projects under construction require that vehicles operate with diesel.

The vehicular natural gas figure of 2017 was adjusted.

## GRI standards and EPM indicators

- 302-1** Energy consumption within the organization.
- 302-2** Energy consumption outside of the organization.
- 302-3** Energy intensity.
- 302-4** Reduction of energy consumption.
- 302-5** Reductions in energy requirements of products and services.

## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Empresas Públicas de Rionegro - EPRio  
 Aguas de Malambo  
 Empresas Varias de Medellín - Emvarias  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 EPM Chile  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas



# Waste management

## Waste management

Integrated solid waste management includes preventive actions in the generation, minimization, valorization, reclamation, treatment, and disposal of waste. Grupo EPM classifies waste into recyclable, biodegradable, inert and ordinary, special, and hazardous.

Grupo EPM's companies implement and update integrated waste management plans that comprise the application of strategies such as the reduction in generation, the increase in reclamation, and the programs of education and training, to contribute to the appropriate management of waste in their facilities. In turn, they participate in activities led by other institutions of each country or region to collect certain waste such as plastic lids, electrical and electronic devices, pesticides, batteries, among others, generated by Grupo EPM people, customers and users, and other stakeholders.

## Management in 2019

The operation of the dechlorination plant with metallic sodium favors the removal of 100% of the PCB from the dielectric oils with a concentration over 50 ppm associated with the equipment. The materials delivered for reclamation or reuse meet the limit required by the standard. Through this process, the 98% is recovered and the remaining part is taken to final disposal.

EPM's laboratory retains the accreditation for dielectric oil management and extends its scope to PCB identification on solid surfaces. It is the first laboratory in Colombia to receive this accreditation by the Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM, as per its acronym in Spanish).

In 2019, waste generation in Grupo EPM was 54,436 t (amount excluding the 242 t that were stored in 2018). Biodegradable waste corresponds to 55.28% of the total generated, followed by hazardous waste corresponding to 28.86%.

The power distribution companies made progress with the sampling and inventory of transformers, the replacement of contaminated equipment, and the treatment of oils with PCB content of over 50 ppm; however, this waste has not been processed, which has increased waste stored.

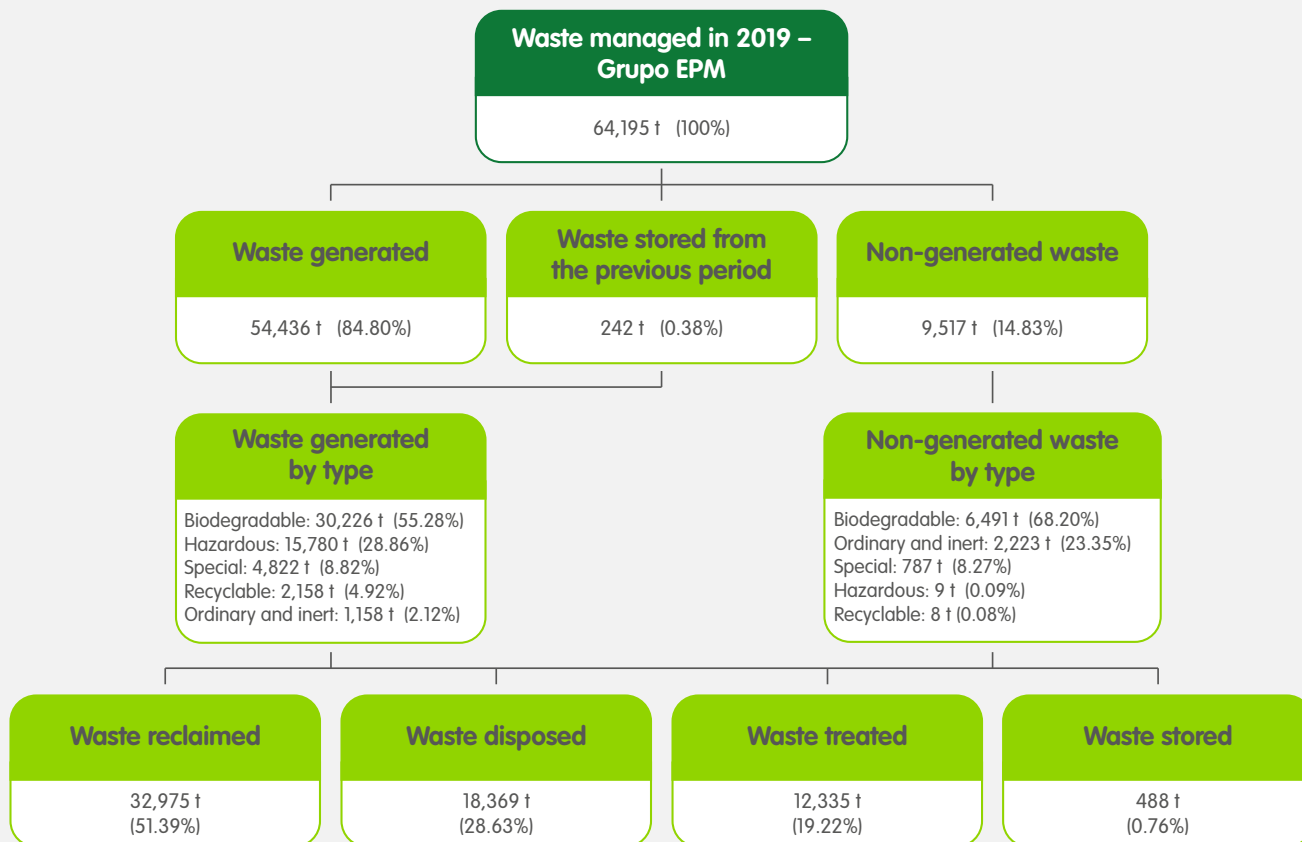
The waste generated by the construction of infrastructure projects is excluded from the total, as in this stage of the projects waste is produced in an amount and type different from the daily production. Therefore, they would alter the trend in the generation of waste from activities associated with the provision of services, and it wouldn't be possible to set realistic goals.

In addition to the waste generated by Grupo EPM, the organization also decided to manage that waste that reaches its reservoirs and the intake grids of the water purification and wastewater treatment plants, which amount to 14.83% of the waste managed.

In 2018 the Ituango hydroelectric project started recording and managing waste not generated by the company, from the structuring of the reservoir. Most of this waste includes pieces of wood that the Cauca River drags in its 850 km journey along 80 municipalities of Colombia to get to the dam. Some populations use the river to discharge their liquid effluents and dispose of their solid waste, which means that the volume of the material to be extracted from the reservoir is considerable.

The waste generated and managed by the Ituango hydroelectric project is analyzed separately.

## Waste managed in 2019 by Grupo EPM



Source: Idsos application.

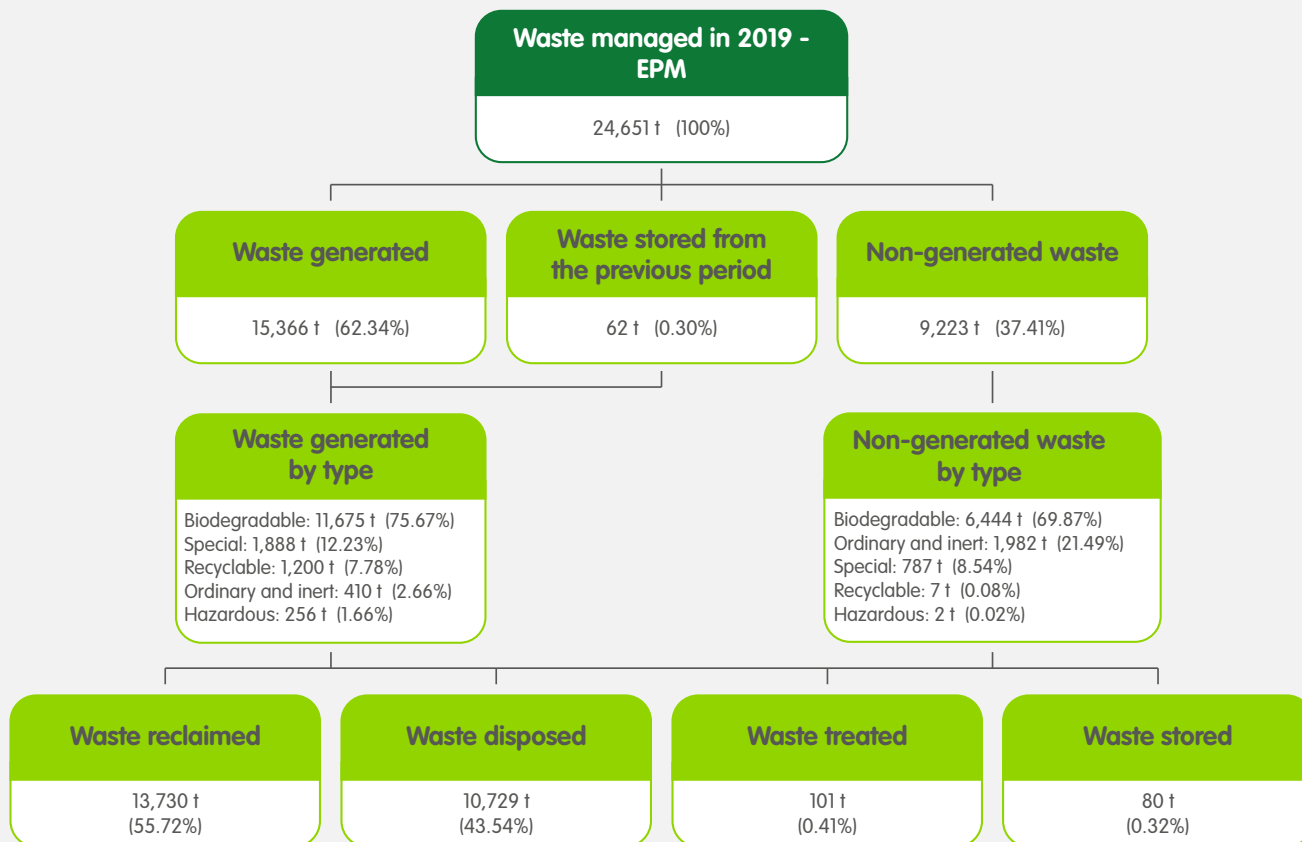
Non-generated waste refers to waste that, although managed by the organization, was not directly generated by it. For example, the floating solid waste that reaches the reservoirs, the invasive aquatic plants, or the waste that is collected in the intake grids in the wastewater treatment plants are non-generated waste.

Biodegradable waste represents 55.28% of the waste generated by Grupo EPM.

51.39% of the waste is reclaimed.

Grupo EPM managed 9,517 t of waste that reached its reservoirs and the intake grids of the water purification and wastewater treatment plants.

## Waste managed in 2019 by EPM



**Source:** Idsos application.

Non-generated waste refers to waste that, although managed by the organization, was not directly generated by it. For example, the floating solid waste that reaches the reservoirs, the invasive aquatic plants, or the waste that is collected in the intake grids in the wastewater treatment plants are non-generated waste.

Biodegradable waste accounts for 75.67% of the waste generated by EPM, while hazardous waste accounts for 1.66%.

Non-generated waste (which reached reservoirs or intake grids of water purification and wastewater treatment plants) accounts for 37.41% of the waste that EPM managed in 2019. Most of this waste should have been sent to final disposal as it is difficult to separate it and due to the considerable amounts collected.



Waste generated (t) – Grupo EPM			
Type of waste	2017	2018	2019
Biodegradable	19,570	18,429	30,226
Hazardous	1,278	4,141	15,780
Special	4,746	5,634	4,822
Recyclable non-hazardous	3,095	3,087	2,691
Ordinary and inert	675	779	1,158
<b>Total</b>	<b>29,364</b>	<b>32,070</b>	<b>54,677</b>

Source: Idsos application.

Waste generation increased by 70.50%.

The increase of 281.05% in hazardous waste can be mainly explained by the generation at the affiliated company Adasa of 14,518.72 t (amount that increased 355.53% with regard to the report of this company in 2018), due to the transport of higher-humidity percentage arsenical sludge because of the cleaning tasks performed on the occasion of the 2019 altiplanic winter.

The increase of 64.02% of the biodegradable group was mainly caused by the resulting vegetable waste (29,647.25 t). At EPM, the vegetable waste increased 40.87% as information about areas not previously reported was included; at Eegsa, the increase was 363.08% because the record of waste management was achieved during all year; and Delsur increased its generation in 50.43% for expansion projects, network enhancements, and maintenance tasks.

At Adasa, the raise of 48.62% in ordinary and inert waste is a result of the tare increase left at the Antofagasta municipal landfill and, at EPM, of the internal remodeling in the EPM building.

A mixer was acquired for the composting room of EPM plant nursery, where 21 t of organic fertilizer is produced per month, used for the maintenance of green zones and gardens of EPM premises.

ESSA treated 83.76 t of dielectric oil through the filter press system during 2019.

Waste generated (t) – EPM			
Type of waste	2017	2018	2019
Biodegradable	11,642	8,354	11,675
Special	2,164	3,040	1,888
Recyclable non-hazardous	1,129	1,198	1,200
Ordinary and inert	321	359	410
Hazardous	195	186	256
<b>Total</b>	<b>15,450</b>	<b>13,137</b>	<b>15,428</b>

Source: Idsos application.

EPM generated 15,428 t of waste, which is equivalent to 28.22% of the group’s waste generation.

Some problems in the systems, which stopped the process at the Manantiales and La Ayurá plants, were the cause for the reduction of 37.91% in the special waste. This implied the reduction of non-hazardous sludge for 2019.

The raise of 39.75% of the biodegradable type was mainly caused by felling and pruning waste generated by the expansion of the San Fernando wastewater treatment plant and the Villa Hermosa purification plant, as well as by the increase of installations reported on the energy distribution networks.

The increase of 37.28% of the hazardous type resulted from the raise in the generation of waste-containing packages due to maintenance of sludge treatment systems at the La Ayurá and Manantiales facilities; the report of 6,525 gallons of lubricants and diesel fuel (industrial grease trap) at the La Sierra thermal station; and the waste generated by modernization projects of generation stations in the Eastern Antioquia region.

For merging reasons, EPRio reports within EPM as of 2019.

The figures of 2017 and 2018 were adjusted due to involuntary typing errors.

Management of waste at Grupo EPM (t)			
Management	2017	2018	2019
Reclamation	25,041	20,944	32,975
Final disposal	9,219	17,398	18,369
Treatment	246	3,326	12,335
Storage	287	249	488
<b>Total</b>	<b>34,792</b>	<b>41,917</b>	<b>64,166</b>

**Source:** Idsos application.

*Reclamation includes reuse, recycling, and composting. Treatment involves incineration. Final disposal refers to landfill.*

**Note:** This management comprises only waste generated by Grupo EPM; therefore, differences may be found on the total amount of waste managed.

Grupo EPM managed 64,166 t of waste, including the 54,436 t generated by the activities of the organization, the 9,517 t that it did not produce, and the remaining that it had stored since the previous year.

The 51.39% of waste was reclaimed, 28.63% was sent to final disposal, and 19.22% was treated.

The waste reclaimed increased by 57.44%, among other reasons, because Eegsa, Delsur, and EPM increased their biodegradable waste and because 3,194.57 t of hazardous waste was generated among all the affiliated companies. The waste treated increased by 270.84% and corresponds to 11,987.01 t of arsenic sludge from water pre-treatment and treatment reported by Adasa.

The figures of 2017 and 2018 were adjusted due to involuntary typing errors.

<b>Management of waste generated by EPM (t)</b>			
<b>Management</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Reclamation	10,530	6,036	8,593
Final disposal	4,781	7,027	6,715
Storage	52	36	50
Treatment	89	37	64
<b>Total</b>	<b>15,452</b>	<b>13,137</b>	<b>15,421</b>

**Source:** Idsos application.

Reclamation includes reuse, recycling, and composting. Treatment involves incineration. Final disposal refers to landfill.

**Note:** This management comprises only waste generated by EPM; therefore, differences may be found on the total amount of waste managed.

Of the 24,640 t of waste managed by EPM, 15,421 t was generated directly by the company’s activities.

The waste reclaimed increased by 42.37%. The plan remains stable (reduction of 4.45%). The 58.57% of waste disposed is biodegradable and 23.37%, special.

The ideal management for biodegradable waste is reclamation, while for special waste, it may be reclamation or treatment. In both cases, final disposal is not the optimal eco-friendly alternative and, therefore, it becomes an improvement action to be implemented.

The figures of 2017 and 2018 were adjusted due to involuntary typing errors.

**EPM’s annual goal (2017–2019 period):**

- Waste to be disposed ≤ 4,000 t.
- Waste to be disposed ≤ 35% of waste generated.
- Waste reclaimed ≥ 60% of waste generated.

**Results in 2019:**

- Waste disposed by EPM = 6,715 t, equivalent to 43.54% of waste generated.
- Waste reclaimed by EPM = 8,593 t, equivalent to 55.72% of waste generated.
- These goals were not accomplished in 2019.

Waste management in the Ituango hydroelectric project (t)			
	2017	2018	2019
Waste stored from the previous period	0	3	133,690
Waste generated by the project	244	332	53,468
Waste not generated but managed by the project	0	133,688	89,974
<b>Total</b>	<b>244</b>	<b>134,022</b>	<b>277,132</b>

**Source:** Idsos application.

The Ituango hydroelectric project managed 277,132 t of waste in 2019, of which 32.47% was not generated from the project's activities. The 99.96% of waste not generated but managed corresponds to biodegradable material (wood and macrophytes). The 99.98% of the stored materials corresponds to non-generated biodegradable waste of 2018.

The increase in the materials generated is the result of the powerhouse recovery tasks.

A total of 11,418 t of this waste was reclaimed, 16 t was treated, 172,392 t was sent to final disposal, and the rest was stored for its proper management in 2020.

Management of hazardous waste generated by Grupo EPM (t)			
Type of management	2017	2018	2019
Treatment	167	3,296	12,152
Reclamation	797	643	3,195
Storage for later management	221	184	357
Final disposal	88	23	61
<b>Total</b>	<b>1,272</b>	<b>4,147</b>	<b>15,764</b>

**Source:** Idsos application.

**Note:** This management comprises only waste generated by Grupo EPM; therefore, differences may be found on the total amount of waste managed.

The 77.09% of hazardous waste generated was treated and the 20.26% was reclaimed. The main generating sources were Adasa (92.91%), Eegsa (2.77%), EPM (1.72%), and CENS (1.61%).

The generation of hazardous waste increased by 280.15%.

The figures of 2017 and 2018 were adjusted due to involuntary typing errors.

During 2019, at the affiliated company CHEC, solely hazardous waste, namely PCB-polluted transformers, was transported to inland regions of Colombia, from Manizales to the EPM treatment plant in Medellín.

### Management of hazardous waste generated by EPM (t)

Type of management	2017	2018	2019
Reclamation	57	117	140
Treatment	118	61	101
Storage for later management	4	4	5
Final disposal	10	4	6
<b>Total</b>	<b>188</b>	<b>187</b>	<b>252</b>

**Source:** *Idsos application.*

**Note:** *This management comprises only waste generated by EPM; therefore, differences may be found on the total amount of waste managed.*

Of the 252 t of hazardous waste, 55.47% was treated and 39.93% was reclaimed. The 2.37% out of the total was taken to final disposal.

The figures of 2017 and 2018 were adjusted due to involuntary typing errors.

#### EPM's annual goal (2017–2019 period):

Hazardous waste generated  $\leq 190$  t and  $\leq 1.5\%$  of the total waste generated.

#### Results in 2019:

Hazardous waste generated by EPM = 252 t, equivalent to 1.64% of the total.  
This goal was not accomplished in 2019.

Management of waste not generated by Grupo EPM (t)			
Type of management	2017	2018	2019
Reclamation	3,912	4,921	4,889
Final disposal	1,440	4,088	2,723
Storage for later management	45	58	72
Treatment	38	781	1,829
<b>Total</b>	<b>5,436</b>	<b>9,848</b>	<b>9,513</b>

**Source:** *Idsos application.*

EPM, CHEC, and ENSA provided information on the non-generated waste management for the three previous periods. In 2018, this information was also provided by Aguas Regionales and EPRio (merged with EPM as of 2019). Aguas de Malambo reports this year for the first time.

The 96.91% of this waste is reported by EPM. The reduction in non-generated waste is due especially to macrophytes extracted from the Porce II and Riogrande I reservoirs, which were taken to final disposal. In 2018, the Porce II reservoir had 92 hectares invaded, while in 2019 the largest area invaded corresponded to 27.6%. At Riogrande I, the invasion of macrophytes significantly decreased.

The 51.39% of non-generated waste was reclaimed, 28.63% was taken to final disposal, and 19.22% was treated.

The figures of 2017 and 2018 were adjusted due to involuntary typing errors.

CHEC sent to final disposal 229 t of waste that was collected in grids of water intakes, water bodies of the reservoirs, and riverbeds of the streams that supply the reservoirs.

## GRI standards and EPM indicators

**306-2** Waste by type and disposal method.

**306-4** Transport of hazardous waste.

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## Scope and coverage

### Companies

Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Centrales Eléctricas del Norte de Santander - CENS  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 EPM Chile  
 Hidroecológica del Teribe - HET  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Quindío  
 Colombia - Santander  
 Colombia - Norte de Santander  
 Colombia - Malambo, Atlántico  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water  
 Sanitation  
 Electrical energy  
 Natural gas





# Other consumptions and efficient practices

## Other consumptions and efficient practices

It includes actions focused on the optimization of consumption, the efficient use of materials and input materials, and the minimization of environmental effects caused by their use within Grupo EPM.

The most representative elements of consumption at Grupo EPM are the water purification input materials and the dielectric oil used in power generation, transmission, and distribution. Usually, the variation in the doses of chemical inputs that are required to purify water is associated with the quality of the water withdrawn.

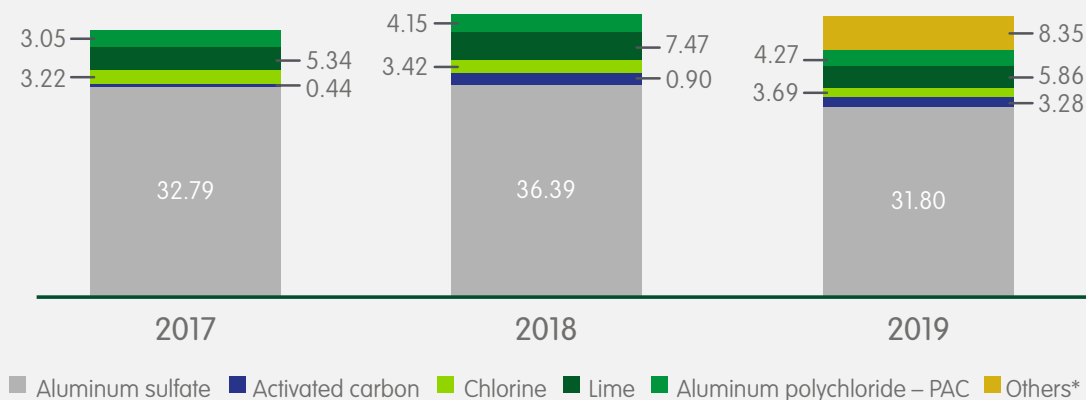
These actions seek to raise Grupo EPM people's awareness about reducing, reusing, and recycling different input materials, when feasible, as well as getting the optimal dosage of the chemicals used for water purification, without having an impact on the quality of the public utilities provided.

### Management in 2019

At EPM, the power transmission and distribution business regenerates 100% of the oil necessary for the operation of substations and lines, as well as the maintenance of network equipment.

In order to reduce chlorine emissions from EPM's purification plants, the company started replacing the chlorine system by a system of hypochlorite generated in situ from mine salt.

## Water purification input materials (t/Mm<sup>3</sup>) – Grupo EPM



**Source:** Idsos application

\* Others: acetic acid, sodium hypochlorite, sodium hydroxide, sodium metabisulfite, phosphoric acid 85%, EDTA, Praestol K144L, polymer, Praestol 2515, and nitric acid.

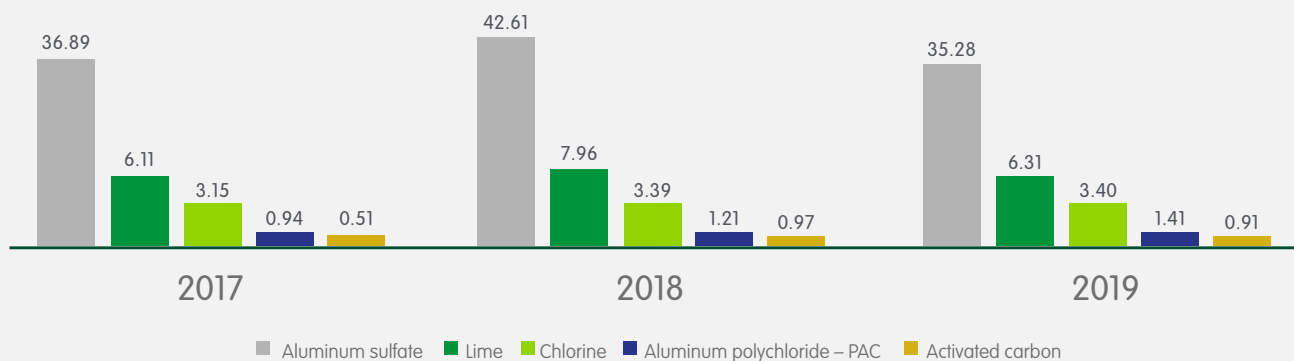
The total amount of input materials used for purification processes increased by 12.01%. Aluminum sulfate accounts for 55.22% of the total input materials used, followed by lime with 10.17%.

The element with the highest increase per unit of drinking water compared to 2018 was activated carbon (262.68%), which eliminates compounds providing smell, color, and taste. Lime presented a reduction of 21.53%.

To commence its monitoring and management, in 2019, the Chilean affiliated company Adasa started reporting purification input materials that have been used from previous years. Some of which are acetic acid, sodium hypochlorite, and sodium hydroxide. The two latter have been occasionally used by EPM as well.

The increase of different input materials is an indication of the increasing deterioration in the water quality of the sources.

Water purification input materials (t/Mm<sup>3</sup>) – EPM



Source: Idsos application.

Dielectric oil consumption at Grupo EPM (t)				
Concept		2017	2018	2019
Fresh oil required in	Existing infrastructure	165.99	140.98	122.19
	New projects or equipment	188.31	399.00	41.36
<b>Total</b>		<b>354.29</b>	<b>539.98</b>	<b>163.55</b>
Filtered oil reused		224.71	133.66	180.43
Reuse		63.43%	24.75%	110.32%

Source: Idsos application.

The total amount of dielectric oil required for new infrastructure or equipment in 2018 corresponds to the Ituango hydroelectric project. In 2019, given that there was no requirement from the mentioned project, the use of such oil in new projects or equipment decreased 89.63%.

Grupo EPM regenerates 180.43 t of oil, with regard to the 122.19 t required by the existing infrastructure, which represents a regeneration of 147.66% of the required oil.

Reused filtered oil increased in 34.99% in 2019. The affiliated company ESSA began its reports of dielectric oil consumption with an amount of 83.76 t reused (46.43% of the total reused by the group).

Dielectric oil consumption at EPM (t)				
Concept		2017	2018	2019
Fresh oil required in	Existing infrastructure	160.13	133.25	96.28
	New projects or equipment	188.31	399.00	35.81
<b>Total</b>		<b>348.44</b>	<b>532.25</b>	<b>132.09</b>
Filtered oil reused		220.72	132.15	96.66
Percentage of reuse		63.35%	24.83%	73.18%

*Source: Idsos application.*

EPM uses 80.76% of the dielectric oil required in the group.

Compared to 2018, EPM reduced by 91.03% dielectric oil consumption in new projects. The 98.47% of the fresh oil corresponds to the installation of transformers in the Bolombolo, Ancón Sur, and Villa Luz projects.

The transmission and distribution business reveals a decrease of 33% of the oil required by the existing infrastructure. The internal process of oil regeneration of this business favored the recovery of 73.18% of the oil required for the operation.

## GRI standards and EPM indicators

- 301-1** Materials used by weight or volume.
- 301-2** Recycled input materials used.

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## Scope and coverage

### Companies

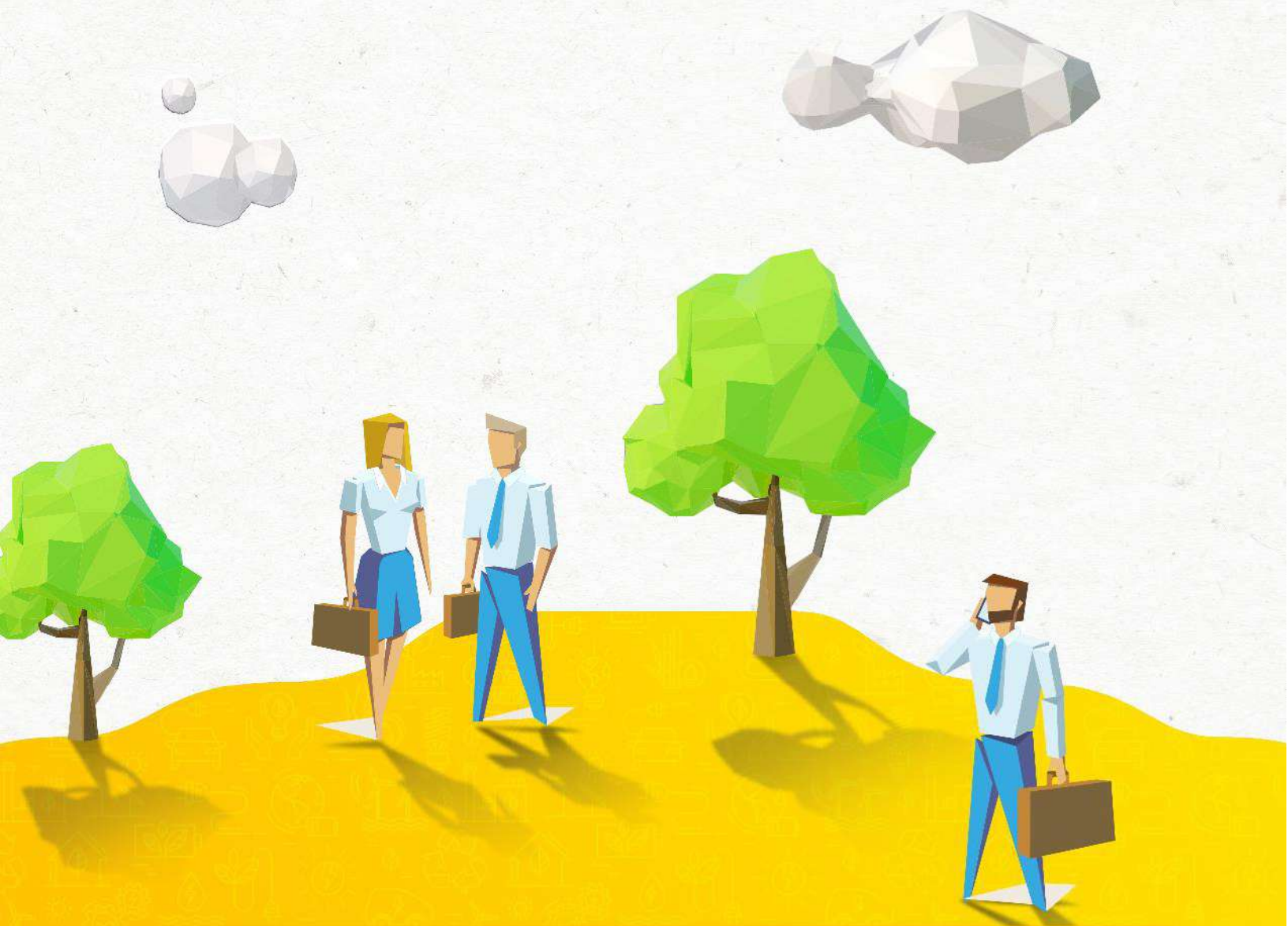
Empresas Públicas de Medellín - EPM  
 Aguas Regionales EPM  
 Empresa de Aguas del Oriente Antioqueño  
 Aguas de Malambo  
 Central Hidroeléctrica de Caldas - CHEC  
 Electrificadora de Santander - ESSA  
 Empresa de Energía del Quindío - EDEQ  
 Distribuidora de Electricidad del Sur - Delsur  
 Empresa Eléctrica de Guatemala - Eegsa  
 Elektra Noreste - ENSA  
 Aguas de Antofagasta - Adasa

### Territory

Colombia - Antioquia  
 Colombia - Caldas  
 Colombia - Malambo, Atlántico  
 Colombia - Quindío  
 Colombia - Santander  
 Chile  
 El Salvador  
 Guatemala  
 Panama

### Businesses

Water  
 Electrical energy



# Financial management

Grupo·epm

The background of the slide is a repeating pattern of small, light-colored icons. These icons include a variety of symbols such as lightbulbs, gears, hands holding objects, buildings, and abstract shapes, all arranged in a dense, grid-like fashion.

# **EPM's financial management**





**Empresas Públicas de Medellín E.S.P.**

**Separated financial statements and notes  
31 December 2019 and 2018**

EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P.  
SEPARATE STATEMENT OF FINANCIAL POSITION

As of December 31, 2019 and 2018

Amounts stated in millions of Colombian pesos



	Notes	2019	2018
<b>Assets</b>			
<b>Non-Current Assets</b>			
Property, plant and equipment, net	5	26,431,775	27,040,487
Investment property	6	126,822	77,829
Goodwill	7	260,950	260,950
Other intangible assets	7	537,497	477,315
Investments in subsidiaries	8	7,406,556	7,290,431
Investments in associates	9	2,434,417	2,434,417
Investments in joint ventures	10	99	99
Right of use assets	14	2,060,120	-
Trade and other receivables	12	1,513,822	2,012,782
Other financial assets	13	2,458,334	2,221,695
Cash and cash equivalents	18	17,787	-
Other assets	16	94,757	100,742
<b>Total non-current assets</b>		<b>43,342,936</b>	<b>41,916,747</b>
<b>Current assets</b>			
Inventories	17	118,871	117,334
Trade and other receivables	12	2,222,783	1,628,488
Current income tax assets	38	34,413	2,037
Other financial assets	13	557,208	990,676
Other assets	16	115,020	104,483
Cash and cash equivalents	18	861,236	835,779
<b>Total current assets</b>		<b>3,909,531</b>	<b>3,678,797</b>
<b>Total assets</b>		<b>47,252,467</b>	<b>45,595,544</b>
<b>Liabilities and Equity</b>			
<b>Equity</b>			
Issued capital		67	67
Reserves	19	1,704,818	1,961,034
Accumulated other comprehensive income	20	3,207,197	2,917,113
Accumulated profit	19	16,702,294	15,332,345
Net profit for the year	19	2,706,035	2,344,822
Other components of equity		64,390	49,944
<b>Total Equity</b>		<b>24,384,801</b>	<b>22,605,325</b>

**Álvaro Guillermo Rendón López**  
General Manager  
Certification Attached

**Jorge Andrés Tabares Ángel**  
Executive Vice-President Finances and Investments

**John Jaime Rodríguez Sosa**  
Director of Accounting and Costs  
Professional Card No. 144842-T  
Certification Attached

EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P.

## SEPARATE STATEMENT OF FINANCIAL POSITION

31 December, 2019 and 2018

Amounts stated in millions of Colombian pesos



	Notes	2019	2018
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Loans and borrowings	21	13,783,442	12,050,033
Trade and other payables	22	3,726	4,483
Other financial liabilities	23	2,447,689	2,054,762
Employee benefits	25	351,968	305,695
Income tax payable	38	30,331	30,331
Net deferred tax liabilities	38	2,002,164	2,156,828
Provisions	27	412,151	360,917
Other liabilities	28	31,774	32,136
<b>Total non-current liabilities</b>		<b>19,063,245</b>	<b>16,995,185</b>
<b>Current liabilities</b>			
Borrowings and Loans	21	1,409,169	3,794,580
Creditors and others payables	22	1,061,083	1,017,938
Other financial liabilities	23	337,205	285,867
Employee benefits	25	144,372	139,497
Income tax payable	38	140,636	25,697
Taxes contributions and rates payable	26	116,424	108,195
Provisions	27	334,691	489,052
Other liabilities	28	260,841	134,208
<b>Total current liabilities</b>		<b>3,804,421</b>	<b>5,995,034</b>
<b>Total liabilities</b>		<b>22,867,666</b>	<b>22,990,219</b>
<b>Total liabilities and equity</b>		<b>47,252,467</b>	<b>45,595,544</b>

The accompanying notes are an integral part of the financial statements

Álvaro Guillermo Rendón López

General Manager  
Certification Attached

Jorge Andrés Tabares Ángel  
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EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P.

SEPARATED STATEMENT OF COMPREHENSIVE INCOME

For the period from 1 January to 31 December, 2019 and 2018



Figures stated in millions of Colombian pesos

	Notes	2019	2018
<b>Continuing operations</b>			
Sale of goods	30	733	30
Rendering of services	30	8,448,933	7,849,388
Leases	30	51,520	47,536
Other income	31	348,207	236,655
<b>Income from ordinary activities</b>		<b>8,849,393</b>	<b>8,133,609</b>
Income for sale of assets	30	369	23,596
<b>Total income</b>		<b>8,849,762</b>	<b>8,157,205</b>
Costs of goods sold and services rendered	32	(4,548,376)	(4,462,036)
Administrative expenses	33	(902,731)	(1,138,953)
Impairment loss on trade receivables	12	(26,287)	(39,737)
Other expenses	34	(131,067)	(173,100)
Finance income	35.1	340,584	262,217
Finance costs	35.2	(1,103,798)	(817,548)
Net foreign exchange difference	36	(46,542)	(207,444)
Equity-accounted investees	9	866,903	809,606
Gain on equity	37	12,822	102,968
<b>Profit for the year, net of tax</b>		<b>3,311,270</b>	<b>2,493,178</b>
Income tax	38	(605,235)	(148,356)
<b>Profit for the year after taxes from continuing operations</b>	19	<b>2,706,035</b>	<b>2,344,822</b>
<b>Net profit for the year</b>	19	<b>2,706,035</b>	<b>2,344,822</b>
<b>Other comprehensive income</b>			
<b>Items that will not be reclassified to profit or loss</b>			
Remeasurement of defined benefit plans	20 y 38	(35,969)	372
Equity investments measured at fair value through equity	20 y 38	622,447	(24,810)
Income tax related to components that will not be reclassified	20 y 38	141,668	5,396
Equity accounted investees - share of OCI	20 y 38	(189,209)	(41,274)
		<b>538,937</b>	<b>(60,316)</b>
<b>Items that are or may be reclassified subsequently to profit or loss:</b>			
<b>Cash flow hedges</b>	20 y 38	<b>34,119</b>	<b>2,777</b>
Recognized profit for the year		(49,060)	171,076
Reclassification adjustment		83,179	(168,299)
<b>Impuesto sobre la renta relacionados con los componentes que pueden ser reclasificados</b>	20 y 38	<b>17,673</b>	<b>(67,764)</b>
Resultado reconocido en el periodo		33,643	(77,717)
Reclassification adjustment		(15,970)	9,953
<b>Equity accounted investees - share of OCI</b>	20 y 38	<b>(203,917)</b>	<b>115,586</b>
Recognized profit for the year		(203,917)	115,586
		(152,125)	50,599
<b>Other comprehensive income, net of taxes</b>	38	<b>386,812</b>	<b>(9,717)</b>
<b>Total comprehensive income for the year</b>		<b>3,092,847</b>	<b>2,335,105</b>

The accompanying notes are an integral part of the financial statements

Álvaro Guillermo Rendón López

General Manager  
Certification Attached

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Executive Vice-President Finances and Investments

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EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P.  
**SEPARATED STATEMENT OF CHANGES IN EQUITY**  
 For the years ended 31 December 2019 and 2018  
 Figures stated in millions of Colombian pesos

	Issued capital	Reserves (note 19)	Accumulated other comprehensive income (note 19)	Other components of equity	Other comprehensive income				Accumulated Share in other comprehensive income of subsidiaries (note 20)	Total
					Equity investments measured at fair value through equity (note 20)	Defined benefit plans (note 20)	Cash flow hedging (note 20)	Reclassification of properties, plant and equipment to investment property (note 20)		
<b>Balance at 1 January 2018</b>	<b>67</b>	<b>2,951,644</b>	<b>15,569,351</b>	<b>49,995</b>	<b>2,173,895</b>	<b>(7,357)</b>	<b>(8,669)</b>	<b>12,079</b>	<b>756,976</b>	<b>21,497,981</b>
Profit for the period	-	-	2,344,822	-	-	-	-	-	-	2,344,822
Other comprehensive income for the period, net of income tax	-	-	-	-	(21,431)	2,389	(64,987)	-	74,312	(9,717)
<b>Comprehensive income for the period</b>	<b>-</b>	<b>-</b>	<b>2,344,822</b>	<b>-</b>	<b>(21,431)</b>	<b>2,389</b>	<b>(64,987)</b>	<b>-</b>	<b>74,312</b>	<b>2,335,105</b>
Surpluses or dividends declared	-	-	(1,203,504)	-	-	-	-	-	-	(1,203,504)
Movement in reserves	-	(990,610)	990,610	-	-	-	-	-	-	-
Equity-accounted investees for changes in equity	-	-	(24,111)	(51)	-	-	-	-	(95)	(24,257)
<b>Balance at 31 December 2018</b>	<b>67</b>	<b>1,961,034</b>	<b>17,677,168</b>	<b>49,944</b>	<b>2,152,464</b>	<b>(4,968)</b>	<b>(73,656)</b>	<b>12,079</b>	<b>831,193</b>	<b>22,605,325</b>
<b>Balance at 1 January 2019</b>	<b>67</b>	<b>1,961,034</b>	<b>17,677,168</b>	<b>49,944</b>	<b>2,152,464</b>	<b>(4,968)</b>	<b>(73,656)</b>	<b>12,079</b>	<b>831,193</b>	<b>22,605,325</b>
Profit for the period	-	-	2,706,035	-	-	-	-	-	-	2,706,035
Other comprehensive income for the period, net of income tax	-	-	-	-	752,104	(23,958)	51,792	-	(393,126)	386,812
<b>Comprehensive income for the period</b>	<b>-</b>	<b>-</b>	<b>2,706,035</b>	<b>-</b>	<b>752,104</b>	<b>(23,958)</b>	<b>51,792</b>	<b>-</b>	<b>(393,126)</b>	<b>3,092,847</b>
Surpluses or dividends declared	-	-	(1,289,652)	-	-	-	-	-	-	(1,289,652)
Movement in reserves	-	(256,216)	256,216	-	-	-	-	-	-	-
Transfers to retained earnings	-	-	138,392	-	(138,392)	-	-	-	-	-
Equity-accounted investees for changes in equity	-	-	(79,830)	14,446	-	-	-	-	41,665	(23,719)
<b>Balance at 31 December 2019</b>	<b>67</b>	<b>1,704,818</b>	<b>19,408,329</b>	<b>64,390</b>	<b>2,766,176</b>	<b>(28,926)</b>	<b>(21,864)</b>	<b>12,079</b>	<b>479,732</b>	<b>24,384,801</b>

The accompanying notes are an integral part of the financial statements

**Álvaro Guillermo Rendón López**  
 General Manager  
 Certification Attached

**Jorge Andrés Tabares Ángel**  
 Executive Vice-President Finances and Investments

**John Jaime Rodríguez Soza**  
 Director of Accounting and Costs  
 Professional Card No. 144842-T  
 Certification Attached

EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P.  
**SEPARATED STATEMENT OF CASH FLOWS**  
 For the period from 1 January to 31 December, 2019 and 2018  
 Figures stated in millions of Colombian pesos



	Notes	2019	2018
<b>Cash from operating activities:</b>			
<b>Net profit for the year</b>		<b>2,706,035</b>	<b>2,344,822</b>
<b>Adjustments to reconcile the net profit for the year to the net cash flows used in operating activities:</b>		<b>1,200,765</b>	<b>1,053,594</b>
Depreciation and amortization of property, plant and equipment, right of use assets and intangible assets	5, 7 y 14	577,736	503,178
Impairment of accounts receivable	12	88,730	68,366
Reversal of loss for impairment of accounts receivable	12	(62,443)	(28,630)
Gain / loss due to exchange difference	36	46,542	207,444
Proceeds from valuation of investment property	6	(51,943)	(1,597)
Proceeds from valuation of financial instruments and hedge accounting		(36,413)	21,033
Provisions, post-employment and long term defined benefit plans		149,286	483,518
Government subsidies applied		-	(1,146)
Deferred income tax	38	4,678	(226,916)
Current income tax	38	600,558	375,272
Share of loss of equity-accounted investees	8	(866,903)	(809,606)
Proceeds from interest	35	(229,336)	(220,889)
Interest expenses	35	1,087,959	739,507
Proceeds from disposition of property, plant and equipment, right of use assets and intangible assets	5	(383)	(23,563)
Proceeds from disposition of financial instruments	13	47,534	-
Dividends from investments	8	(60,356)	(102,968)
Other adjustments		(94,481)	70,591
		<b>3,906,800</b>	<b>3,398,416</b>
<b>Net changes in operating assets and liabilities:</b>			
Change in inventories		(1,044)	(764)
Change in trade and other receivables		216,657	(53,717)
Change in other assets		(4,887)	166,810
Change in trade and other payables		12,473	(108,872)
Change in employee benefits		(1,947)	15,593
Change in provisions		(211,661)	(70,189)
Change in other liabilities		259,961	97,319
		<b>269,552</b>	<b>46,180</b>
Interest paid		(1,454,068)	(1,004,667)
Income tax paid		(517,659)	(448,757)
Income tax refund		-	308,895
<b>Net cash from operating activities</b>		<b>2,204,625</b>	<b>2,300,067</b>
<b>Net cash from investing activities:</b>			
Acquisition and capitalization of subsidiaries or ventures	8	(266,341)	(10,453)
Disposal of subsidiaries and business	8	782	15,000
Acquisition of property, plant and equipment	5	(2,370,622)	(2,626,682)
Disposal of property, plant and equipment	5	541	116,245
Acquisition of intangible assets	7	(40,888)	(49,372)
Disposal of intangible assets	7	-	154
Disposal of investment property	6	2,165	40,034
Acquisition of investments in financial instruments		(124,285)	(1,085,878)
Disposal of investments in financial instruments		808,731	139,623
Dividends received from subsidiaries, associates and joint ventures	8 y 9	697,521	383,796
Other dividends received	13	56,137	64,486
Loans to economic associates	39	317,989	(51,654)
compensation received	5	531,607	-
Other cash from investing activities		23,883	(8,906)
<b>Net cash used in investing activities</b>		<b>(362,780)</b>	<b>(3,073,607)</b>
<b>Cash from financing activities:</b>			
Obtaining of loans and borrowings	21	7,463,935	3,763,343
Payment of loans and borrowings	21	(8,067,058)	(856,594)
Transaction costs by issuance of debt instruments	21	(14,695)	(60,866)
Payment of finance lease liabilities	23	(10,010)	(987)
Dividends or surplus paid	19	(1,289,652)	(1,503,504)
Payments of capital of derivatives designated as cash flow hedge	24	156,514	-
	25	(19,515)	-
Other cash from financing activities		(30,898)	7,322
<b>Net cash used in financing activities</b>		<b>(1,811,379)</b>	<b>1,348,714</b>
<b>Net increase in cash and cash equivalents</b>		<b>30,466</b>	<b>575,174</b>
Effects of movements in exchange rates on cash and cash equivalents		12,778	26,079
Cash and cash equivalents at beginning of the year	18	835,779	234,526
<b>Cash and cash equivalents at end of the year</b>	<b>18</b>	<b>879,023</b>	<b>835,779</b>
Restricted resources	18	84,565	79,823

The accompanying notes are an integral part of the financial statements

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 Executive Vice-President Finances and Investments

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# Notes to the Separate Financial Statements of Empresas Públicas de Medellín E.S.P. for the years ended 31 December 2019 and 2018

(In millions of Colombian pesos, except when indicated otherwise)

## Note 1. Reporting Entity

Empresas Publicas de Medellín E.S.P. (hereinafter, "EPM" or "the company") is the holding company of a multi-latin Enterprise group; which has as of December 31, 2019 a consolidation perimeter made up of 45 companies and a structured entity<sup>1</sup>, that have presence in the provision of public utilities in Colombia, Chile, El Salvador, Guatemala, Mexico and Panama.

EPM is a municipal-order decentralized entity, created in Colombia through Resolution 58 of August 6, 1955 issued by the Administrative Council of Medellín, as an autonomous public institution. It was transformed into an industrial and commercial government company of municipal-order through Resolution 069 of December 10, 1997 of the Medellín Council. Due to its legal status, EPM is endowed with administrative and financial autonomy, and its own equity according to Article 85 of Law 489 of 1998. The share capital with which the company was constituted and currently operates, as well as its equity, is of public nature, being its only owner is the Municipality of Medellín. Its main corporate domicile is located at Carrera 58 No. 42-125 in Medellín, Colombia. It has not established a term of duration.

EPM offers its services through the following business units:

- Energy: comprised by the Electricity Generation, Electricity Transmission, Electricity Distribution and Natural Gas Distribution and Commercialization segments.
- Water: includes the Water Supply, Wastewater Management and Solid Waste Management segments.
- Others segment: Consisting of the investment vehicles, Distribución Eléctrica Centroamericana II S.A. (DECA II), EPM Capital Mexico S.A. de C.V., EPM Chile S.A., EPM Inversiones S.A., EPM Latam S.A., Inversiones y Proyectos Hidrosur SpA (former Inversiones y Asesorias South Water Services SpA)<sup>2</sup>, Panama Distribution Group S.A. (PDG). It additionally includes Maxseguros EPM Ltd., captive reinsurer established to negotiate, contract, and provide reinsurance services.
- Furthermore, EPM participates in the telecommunications business, in which it has significant influence since August 2014, through UNE EPM Telecomunicaciones S.A. and its affiliates: Edatel S.A. E.S.P, Orbitel Servicios Internacionales S.A. (OSI), Cinco Telecom Corporation (CTC) and Colombia Movil S.A.; and Inversiones Telco S.A.S. and its affiliate Emtelco S.A.; providing voice, data and Internet utilities, professional services, and data center, among others.

The separate financial statements of EPM corresponding to the year ended 31 December 2019, were authorized by the Board of Directors to be published on 26 March 2020.

### 1.1 Legal and Regulatory Framework

The activity of EPM, i.e., providing residential public utilities, is regulated in Colombia mainly by Law 142, Public Utilities Act, and Law 143 of 1994, Electricity Act.

<sup>1</sup> Autonomous Equity Social Funding. Under International Financial Reporting Standards (IFRS), it is considered a structured entity part of the consolidation perimeter of the financial statements of the EPM Group.

<sup>2</sup> It changed its company name on November 26, 2018, through public deed No. 34.861-2018 of Notary 27 of Santiago de Chile.

The functions of control, inspection and supervision of the entities that provide domiciliary public utilities are exercised by the Office of the Superintendent of Domiciliary Public Utilities (SSPD, for its Spanish initials).

Since the Company is an issuer of Bonds, it is subject to the control of the Superintendence of Finance of Colombia under Decree 2555 of 2015, by which the regulations of the financial, insurance sectors, and the stock market are collected and reissued, and other provisions are issued, establishes that the Integral System of Information of the Stock Market (SIMEV for its Spanish initials) is the set of human, technical and management resources that the Superintendence of Finance of Colombia shall use to allow and facilitate the supply of information to the market. Within these tools, there is the National Registry of Securities and Issuers (RNVE for its Spanish initials), which purpose is to keep a registry of securities issuers and their issues. EPM, when issuing bonds, is subject to control by this Superintendence and to the rules required for financial information purposes, especially to the External Circular Letter 038 of 2015 which reference is: Modification to the terms for the transmission of Quarterly and Year-End Intermediate Financial Statements under IFRS adopted in Colombia, Individual or Separate and Consolidated and their report in XBRL language (extensible Business Reporting Language) and unification of the instructions contained in External Circular Letters 007 and 011 of 2015.

Because of being a municipal decentralized entity, EPM is subject to the political control of the Council of Medellín, to the fiscal control of the Office of the General Comptroller of Medellín, and to the disciplinary control of the Office of the General Prosecutor.

## 1.2 Regulation commissions

Decree 1524 of 1994 delegates in the regulation commissions the presidential function of stating general policies of management and control of efficiencies in domiciliary public utilities.

These entities are:

- The Energy and Gas Regulatory Commission (CREG, for its Spanish initials), a technical body attached to the Ministry of Mines and Energy (MME), that regulates the rates for energy sales and the aspects related to the operation of the Wholesale Energy Market (MEM, for its Spanish initials) and to the provision of electric power and gas services.
- Regulatory Commission of Drinking Water and Sanitation (CRA, for its Spanish initials), regulates the rates of water, sewage and waste management, a technical body attached to the Ministry of Housing, City and Territory.

### 1.2.1 Regulation by sector

#### 1.2.1.1 Activities of the water, sewage and waste management sector

Law 142, Public Utilities Act, defined the water, sewage and waste management services:

**Water:** Also called drinking water domiciliary public utility. Activity consisting of the municipal distribution of water, which is fit for human consumption, including its connection and measurement. It includes supplementary activities such as water catchment and its processing, treatment, storage, conduction and transportation.

**Sewage:** Activity that consists of the municipal collection of waste, mainly liquid, through piping and conduits. It includes the supplementary activities of transportation, treatment, and final disposal of such waste.

**Waste management:** Activity that consists of the municipal collection of waste, mainly solid waste. It includes the supplementary activities of transportation, treatment, disposal, and final disposal of such waste.

For the Water and Sewage utilities, the rate framework is established in Resolutions CRA 688 of 2014 and CRA 735 of 2015 issued by the Potable Water and Sewage Regulation Commission (CRA, for its Spanish initials). For the Waste management public utility, in resolution CRA 720 of 2015. These rules establish quality and coverage indicators, provide incentives to meet targets and define remuneration mechanisms to guarantee the company's financial sufficiency.

#### 1.2.1.2 Electric sector activities

Law 143 of 1994 segmented the electric power service into four activities: generation, transmission, distribution, and commercialization, which may be developed by independent companies. The purpose of the

legal framework is to supply the demand of electricity under economic and financial feasibility criteria and to tend to an efficient, secure and reliable operation of the sector.

**Generation:** It consists of the production of electric power from different sources (conventional or non-conventional), developing this activity either exclusively or combined with another or other activities of the electric sector, regardless of which of them is the main activity.

**Transmission:** The national transmission activity is the transportation of energy in the National Transmission System (hereinafter STN, for its Spanish initials). It encompasses the set of lines, with its corresponding connection equipment that operate in voltages greater than or equal to 220 kV. The National Transmitter is the legal entity that operates and transports electric power in the STN or has incorporated a company the purpose of which is the development of such activity.

**Distribution:** It consists of transporting electric power through a set of lines and substations, with the associated equipment, that operate at voltages lower than 220 KV.

**Commercialization:** An activity that consists of the purchase of electric energy in the wholesale market and its sale to other market participants or to the final regulated and non-regulated users, developing this activity either exclusively or combined with other activities of the electric sector, regardless of which of them is the main activity.

### 1.2.1.3 Activities of the natural gas sector

Law 142 of 1994 defined the legal framework for the provision of domiciliary public utilities, field in which natural gas is defined as a public service (utility).

**Gas:** It is the set of activities targeted to the distribution of gas fuel, through pipes or another mean, from a place of collection of large volumes or from a central gas pipeline to the facilities of a final consumer, including their connection and measurement. This Law will also be applied to the supplementary activities of commercialization from the production and transportation of gas through a main gas pipeline, or through other means, from the generation site and to that where it connects to a secondary network.

## Note 2. Significant accounting policies

### 2.1 Basis for preparation of the consolidated financial statements

The Company's Separated Financial Statements have been prepared in accordance with the Accounting and Financial Reporting Standards accepted in Colombia (NCIF, for its Spanish initials) and adopted by the Nation's General Accounting Office through Resolution 037 of 2017 and Resolution 049 of 2019 (hereinafter "IFRS as adopted in Colombia"). These accounting and financial reporting standards are based on the International Financial Reporting Standards (hereinafter, IFRS) issued by the International Accounting Standards Board (hereinafter, IASB), as well as the interpretations issued by the International Financial Reporting Standards Committee (hereinafter, IFRIC). These financial statements are harmonized with the generally accepted accounting principles in Colombia as set forth in the Annex to Decree 2420 of 2015 and its subsequent amendments.

The presentation of financial statements in conformity with IFRS adopted in Colombia requires making estimates and assumptions that affect the amounts reported and disclosed in the financial statements, without undermining the reliability of the financial information. Actual results may differ from said estimates. Estimates and assumptions are constantly revised. Revision of accounting estimates is recognised for the period in which the estimates are revised if the revision affects such period or in the revision period and future periods, if it affects both the current and the future period. The estimates made by the Management, in applying the IFRS adopted in Colombia, that have a material effect on the financial statements, and those that imply significant judgments for the annual financial statements, are described in greater detail on Note 3. Significant accounting judgments, estimates, and causes of uncertainty in the preparation of financial statements.

EPM and each of its subsidiaries present separate or individual financial statements, as applicable, for compliance before the controlling entities and for internal administrative follow-up purposes and provide

information to the investors. Likewise, EPM as the main holding company presents consolidated financial statements under IFRS adopted in Colombia.

Assets and liabilities are measured at cost or amortized cost, with the exception of certain financial assets and liabilities and the investment properties that are measured at fair value. Finance assets and liabilities measured at fair value correspond to those that: are classified in the category of fair value assets and liabilities through profit, some equity investments at fair value through equity, as well as all finance derivatives, assets and liabilities recognised that are designated as hedged items in a fair value hedging, which value in records is adjusted with the changes in fair value attributed to the risks subject matter of the hedging.

Separated financial statements are presented in its functional currency Colombian pesos and their figures are stated in millions of Colombian pesos.

## 2.2 Classification of assets and liabilities into current and non-current

An asset is classified as current asset when it is mainly maintained for negotiation purposes or it is expected to be realized over a term not exceeding one year, after the period being reported or it is cash and cash equivalents that is not subject to restrictions for exchange or use in the cancellation of a liability over a term not to exceed one year after the period being reported. All other assets are classified as noncurrent assets.

A liability is classified as current liability when it is mainly kept for negotiation purposes or when it is expected to be settled over a term not exceeding one year after the period being reported, or when the company does not have an unconditional right to postpone its settlement for at least one year after the period being reported. All other liabilities are classified as non-current liabilities.

All derivative instruments for which the hedging accounting does not apply are classified as current or non-current, or are divided into current and non-current portions, based upon assessment of facts and circumstances (i.e., the underlying contractual cash flows):

- When the company keeps a derivative, for which the hedging accounting is not applied, during a term exceeding twelve (12) months as from the presentation date, the derivative is classified as non-current (or divided into current and non-current portions) for it to correspond with the classification of the underlying item
- Derivative instruments that are designated as hedging instruments and that are effective, are classified coherently with the classification of the underlying hedged item. The derivative instrument is divided into a current portion and another non-current only if such allocation can be made in a reliable manner.

## 2.3 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position and in the statement of cash flows include the money in cash and banks and the high-liquidity investments, easily convertible in a determined amount of cash and subject to a non-significant risk of changes in their value, with maturity of three months or less from their acquisition date. Callable bank overdrafts that are an integral part of the cash management of the company, represent a cash and cash equivalents component in the statement of cash flows.

## 2.4 Investments in subsidiaries, associates and joint ventures

A subsidiary is an entity controlled by EPM. The control is obtained when EPM controls the relevant activities of the subsidiary and is exposed, or has the right, to the variable returns of the subsidiary and has the capacity to influence said returns.

An associate is an entity on which EPM Group has significant influence over the financial and operation policy decisions, without getting to have their control or joint control.

A joint venture is an arrangement in which EPM has joint control, under which the Company has rights over the net assets of the arrangement, rather than rights over its assets and obligations for its liabilities.

On the acquisition date, the surplus of the acquisition cost over the share of the net fair value of the identifiable assets, liabilities and contingent liabilities assumed of the subsidiary is recognised as goodwill. Goodwill is included in the recorded value of the investment and is neither amortized nor individually subject to impairment tests of its value.

Investment in associates and joint ventures is measured in the consolidated financial statements by the Equity Method, except if the investment or a portion thereof is classified as held for sale, in which case it is accounted for in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations. Through this accounting methodology, the investment is initially recorded at cost and is later adjusted in terms of the changes experienced, after acquisition, by the portion of the net assets of the entity that corresponds to the investor. The profit or loss for the period for EPM includes its participation in the profit for the period of the investee and the other comprehensive income includes its participation in the other comprehensive income of the investee. When there are variations in the percentage of ownership in the subsidiary that do not imply a loss of control, the effect of these changes is recognised directly in equity. When ownership of the company in the loss of a subsidiary exceeds ownership of the company thereon (which includes any long-term ownership that, in substance, forms part of the net investment of the Group in the associate or joint venture), the company ceases to recognise its ownership in future losses. Additional losses are recognised provided that the company has contracted some legal or implied obligation or has made payments in the name of the subsidiary. When the subsidiary subsequently makes a profit, the company resumes recognition of its ownership therein only after its share in the aforementioned profit equals the share of unrecognised losses.

Investments in subsidiaries are accounted for using the equity method from the date when the entity in which the interest is held becomes a subsidiary.

Investments in associates and joint ventures are kept in the separate financial statements at cost.

Dividends received from the subsidiary, are recognised as reduction in the value of the investment, and those received from associate or joint venture are directly recognised in the profit for the period when the right of the company to receive payment is reestablished.

The Company analyzes periodically the existence of impairment indicators and if necessary, recognises losses for impairment in the investment of the subsidiary, associate or joint venture. Impairment losses are recognised in the profit for the period and are calculated as the difference between the recoverable value of the subsidiary, associate or joint venture, that being the higher between the value in use and its fair value less the necessary costs for its sale, and its recorded value.

When control over the subsidiary or significant influence over the associate or the joint control over the joint venture is lost, the company measures and recognises any residual investment that may keep in it its fair value. The difference between the recorded value of the subsidiary, associate or joint venture and the fair value of the retained residual investment, with the value coming from its sale, is recognised in the result for the period.

The Company discontinues the use of the equity method from the date on which the investment ceases to be a subsidiary, or the date on which the investment is classified as held for sale. Additionally, the company records all amounts previously recognised in other comprehensive income with relation to that subsidiary on the same basis that would have been required if said subsidiary had directly sold the financial assets or liabilities. Therefore, if a profit or loss previously recognised in other comprehensive income by the subsidiary had been reclassified into profits or losses at the moment of the sale of the related assets or liabilities, the company would reclassify the profit or loss from equity into profits or losses (as a reclassification adjustment) upon discontinuation of the usage of the equity method.

## 2.5 Joint Operations

Is a joint arrangement whereby the parties that have joint control of the arrangement have the right to the assets and obligations related to the liabilities, related to the arrangement.

In joint operations the Group recognises its share as follows: its assets, including its share in the assets jointly held; its liabilities, including its share in the liabilities jointly incurred in; its revenues from ordinary activities coming from the sale of its share in the product that arises from the joint operation; its share in revenues from ordinary activities coming from the sale of the product that is made by the joint operation; and its expenses, including its share in the jointly incurred in expenses. The Group records the assets, liabilities, revenues from ordinary activities, and expenses related to its ownership in a joint operation according to the guidelines applicable in particular to the assets, liabilities, revenues from ordinary activities, and expenses.

## 2.6 Functional and Foreign Currency

The functional currency of the Company is the Colombian peso, that is the currency of the main economic environment where it operates, i.e., where it generates and uses cash.

Transactions in foreign currency are initially recorded at the exchange rates of the functional currency in force and effect on the transaction date. Subsequently, the foreign-currency denominated monetary assets and liabilities are translated using the exchange rate of the functional currency, in force and effect as of the period's closing date, the non-monetary items that are measured at their fair value are translated using the exchange rates as of the date when their fair value is determined and the non-monetary items that are measured at historic cost are translated using the exchange rates in force and effect on the date of the original transactions.

All exchange differences are recognised in the statement of comprehensive income in the section profit or loss for the period, except for amendments arising from interest costs that are capitalizable and those arising from loans in foreign currency to the extent that they are considered as adjustments to interest costs and the exchange difference arising from the conversion of the financial statements of subsidiaries abroad for the application of the equity method, which is recognised in the other comprehensive income.

## 2.7 Income from ordinary activities

Income from ordinary activities basically corresponds to the result of the Group's main activity, which is the rendering of residential public utilities of electric power, natural gas, water supply and sewage, and are recognised when the service is rendered or at the time of the delivery of the goods, to the extent that they comply to the performance obligations of the Group. Income is measured at the value of the consideration received or to be received, excluding taxes and other obligations. Discounts, compensations to customers because of the quality of the service and financial components that are granted, are recorded as adjustments to revenue. The financing component is only recognised if the contract with customers has a duration longer than one year.

The most representative income from the power business in Colombia are the following:

**Reliability Charge:** remuneration paid to a generating agent for the availability of generation assets with the declared characteristics and parameters for the calculation of the steady power for reliability charge (ENFICC, for its Spanish initials), which guarantees compliance with the Steady Power Obligation (OEF, for its Spanish initials) assigned in auction for the assignment of steady power obligations or the mechanism replacing it.

**Long-Term Contracts:** a contract for the sale of power between traders and generators which is settled in the power exchange, under this modality of power contract generators and traders freely agree on quantities and prices for the purchase and sale of electric power for periods longer than one day.

For long-term power purchase contracts, with price lower than that of the market and whose intention is not to use the energy purchased in the operation but to resell it in a market to obtain revenue, it is considered that it does not comply with the Exception for own use.

**Secondary Market of Steady Power or Secondary Market:** A bilateral market in which generators negotiate among themselves a back-up contract to ensure, for a given period, partial or total compliance with the steady power obligations acquired by one of them.

**Non-Regulated Market Power Sales:** Is the power sold in the market to customers whose maximum demand exceeds a value in MW (megawatts) or a monthly minimum energy consumption in MWh (megawatt-hour), defined by the regulatory body, by legalized installation, from which it does not use public networks of electric power transport and uses it in the same property or in contiguous estates. Such electricity purchases are made at freely agreed prices between buyer and seller.

**Regulated Market Power Sales:** Is the power sold to customers whose monthly consumption is less than a predetermined value and is not entitled to negotiate the price paid for it, since both concepts are regulated; usually uses power for its own consumption or as an input for its manufacturing processes and not to undertake marketing activities with it.

**Automatic Generation Regulation (AGC):** is a system for the control of the secondary regulation, used to accompany the variations of load through electricity generation, to control the frequency within a range of

operation and the programmed exchanges. The AGC can be programmed in centralized, decentralized or hierarchical mode.

**Steady Power (or Firm Energy):** is the incremental contribution of a company's generation plants to the interconnected system, which is carried out with a 95% reliability and is calculated based on a methodology approved by the commission and the operational planning models used in the national interconnected system.

Natural gas revenue comes from the distribution and sale of natural gas to the regulated and non-regulated markets.

In the water business, revenue comes from the provision of water and sewage utilities.

At the time of recognition of income, the Company assesses, based on specific criteria, whether it acts as a principal or as a commission agent and thus determines whether gross or net income must be recognised for commercial activities.

## 2.8 Contracts with Customers

When contract results can be reliably measured, the company recognises the revenues and expenses associated to contracts with customers, measuring the advance level in the fulfilment of the performance requirements using the resource method, as a function of the ratio represented by the costs earned by the work conducted to that date and the estimated total costs up to its completion.

The incurred cost includes the costs, including loan costs directly related to the contract, until the work has been completed. Administrative costs are recognised in the profit or loss for the period.

On the other hand, the incremental costs incurred by the company to obtain or fulfill contracts with customers are recognised as an asset in the statement of financial position within the Other assets item and are amortized on a linear basis over the life of the contract, provided that the term of the contract is greater than one year. Otherwise, the company recognises it directly in the profit or loss for the period.

Payments received from customers before the corresponding work has been carried out, are recognised as a liability in the Statement of Financial Position as other liabilities.

The difference between the revenues recognised in the statement of income for the year and the billing is presented as asset in the statement of financial position denominated Trade and other receivables, or as liability denominated Other liabilities.

For the initial recognition of an account receivable from a contract with a customer, the difference between the measurement of the receivable and the value of the corresponding revenue is presented as an expense in the statement of comprehensive income called Impairment of receivables.

## 2.9 Government grants

Government grants are recognised at fair value when there is reasonable security that those grants shall be received and that all conditions linked to them shall be met. Grants that pretend to offset costs and expenses already incurred in, without subsequent related costs, are recognised in profit or loss for the period in which they become enforceable. When the grants related to an asset, it is recorded as deferred revenue and is recognised in the result for the period on a systematic basis throughout the estimated lifespan of the corresponding asset. The benefit of a government loan at an interest rate below market is treated as a government grant, measured as the difference between the amounts received and the fair value of the loan based upon the market interest rate.

## 2.10 Taxes

The fiscal structure of each country where the Group companies are located, the regulatory frameworks and the plurality of operations that companies undertake make each enterprise a tax passive subject, i.e., a payer of taxes, rates and contributions on a national and territorial basis. These are liabilities generated from the central government, the states/departments, municipal entities and other active subjects, once the conditions foreseen in the corresponding acts and laws issued are met.

Amongst the most relevant taxes the income tax, the value-added tax and the wealth tax are detailed.

## Income Tax

- **Current:** The current income tax assets and liabilities for the period are measured by the amounts that are expected to be recovered or paid to the fiscal authorities. The income tax expense is recognised in the current tax according to the cleaning made between the fiscal income and the recorded profit or loss affected by the income tax rate of the current year and pursuant to the provisions of the tax rules of the country. The tax rates and rules used for computing those values are those that are enacted or substantially approved at the end of the period being reported, in the countries where the company operates and generates taxable profits.

The fiscal profit differs from the profit disclosed in the statement of income for the period due to the revenue, and expense items that are imposable or deductible in other years, and items that shall not be taxable or deductible in the future.

Current Income tax assets and liabilities are also offset if they relate to the same fiscal authority and if there is the intention to settle them for the net value or to realize the asset and settle the liability simultaneously.

- **Deferred:** the deferred income tax is recognised using the balance sheet method calculated on the temporary differences between the fiscal bases of the assets and liabilities and their recorded values. The deferred tax liability is generally recognised for all imposable temporary differences, while the deferred tax asset is recognised for all deductible temporary differences and for the future offsetting of fiscal credits and unused fiscal losses to the extent that it is probable the availability of future tax gains against which they can be realized. Deferred taxes are not discounted.

The deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition of an asset or a liability in a transaction that is not a business combination and that, at the moment of the transaction, did not affected neither the book gain nor the fiscal profit or loss; and for the deferred tax liability case whenever it arises from the initial recognition of goodwill.

Deferred tax liabilities related to investments in subsidiaries, associates and participation in joint ventures, are not recognised when the revision opportunity of temporary differences can be controlled, and it is probable that those differences will not be reversed in the near future. Deferred tax assets related to investments in subsidiaries, associates and participation in joint ventures, shall be recognised only if a reversal in temporary differences for the near future is probable, and that availability of future taxable profits against which those deductible differences will be imputed is also probable.

The recorded value of the deferred tax assets is reviewed in each presentation date and is reduced to the extent that enough taxable profits available for use as a whole or in part of the deferred tax asset is no longer probable. The deferred tax assets that are not recognised are reassessed on each presentation report date and are recognised to the extent that it is probable that future taxable gains profits allow their recovery.

Deferred tax assets and liabilities are measured at the fiscal rates expected to be applied in the period when the asset is realized, or the liability is settled, based on fiscal rates and rules that were approved on the presentation date, or the approval procedure of which is about to be completed for such date. Measurement of deferred tax assets and liabilities will reflect the fiscal consequences to be derived from the manner in which the entity expects, at the end of the period being reported, to recover or settle the recorded value of its assets and liabilities.

The deferred tax assets and liabilities must be presented as non-current.

The deferred tax assets and liabilities are offset if there is a legally enforceable right for it and if they are related to the same tax authority.

The deferred tax is recognised in profit or loss for the period, except that related to items recognised outside profit or loss; in this latter case it will be presented in the other comprehensive income or directly in equity.

With the purpose of measuring the deferred tax liabilities and the deferred tax assets for investment properties that are measured using the fair value model, the recorded value of those properties is presumed that will be fully recovered through their sale, unless the presumption is challenged. The presumption is challenged when the investment property is depreciable and is kept within a business model which object is to consume,



substantially, all the economic benefits that are generated by the investment property through time, and not through sale. Management reviewed the company's investment property portfolio and concluded that none of the company's investment properties is kept under a business model which objective is to consume, substantially, all economic benefits generated by investment properties over time rather than through the sale. Therefore, the management have determined that the presumption of "sale" established in the modifications to IAS 12 Income tax, is applicable.

Whenever the current tax or deferred tax arises from the initial recording of the business combination, the fiscal effect is considered within the recording of the business combination.

#### Value-Added Tax - VAT

Are responsible for this tax in the common regime the companies of the Group located in Colombia that perform sales of movable assets and provides taxed services and obtains exempt revenue for imports. Currently, the power, water, sewage, and domiciliary gas utilities are excluded from this tax.

The general rate for this tax in Colombia is 19% and exists a differential rate of 5%.

In Colombia, the generation of revenue excluded in the particular case of residential public utilities, VAT paid on purchases is part of a higher cost value. Also, when taxable income is generated, that is to say when taxed goods or services are sold, VAT paid on the purchase or acquisition of inputs for these sales will be deductible from the payable tax value. When the company generates income that is excluded from VAT, but at the same time generates income that is exempt and taxed, in that case a proration of paid VAT must be performed to determine the percentage of VAT to be discounted.

The tax generated is recognised as a sum to be paid to the tax office, from which the tax paid is deducted. Income is recognised without considering the value of the tax.

#### 2.11 Property, Plant and Equipment

Property, plant and equipment are measured at cost, net of accrued depreciation and accrued impairment losses, if any. The cost includes the acquisition price; the costs directly related to putting the asset at the necessary place and conditions to operate in the way foreseen by the company, costs corresponding to loans of construction projects that take a substantial period to be completed, recognition requirements are complied with and the present value of the expected cost for the dismantlement of the asset after its use, if the criteria for recognition for a provision are met.

Constructions in progress are measured at cost less any impairment loss recognised and includes indispensable expenditure directly related to the construction of the asset, such as professional fees, work supervision, civil works and, in the case of those assets qualified, the borrowing costs are capitalized. Said constructions in progress are classified in the proper categories of property, plant and equipment at the time of their completion and when they are ready to use. The depreciation of these assets starts when they are ready to use in accordance with the same basis as in the case of other elements of property, plant and equipment.

The Company capitalizes as greater value of the assets, additions or improvements made thereof, provided that any of the following conditions is met: a) They increase their lifespan, b) They increase their productive capacity and operating efficiency thereof and c) They reduce costs to the Company. All other repair and maintenance costs are recognised in the statement of comprehensive income as incurred.

Inventory of spare parts for specific projects, which are expected to have no turnover in one year and meet the criteria to be capitalized, known as replacement assets, are presented in the other property, plant and equipment. They depreciate considering the permanence time in the storage and the technical lifespan of the asset once its use begins.

Depreciation begins when the asset is available for use and is calculated in a straight-line basis throughout the estimated lifespan of the asset as follows:

Plants, pipelines and tunnels	
Civil work	50 to 100 years
Equipment	10 to 100 years
Networks, lines and cables	
Electric transmission network	30 to 40 years
Electric distribution network	30 to 40 years
Water network	40 to 80 years
Sewerage network	30 to 80 years
Gas network	60 to 80 years
Buildings	50 to 100 years
Communication and computer equipment	5 to 40 years
Machinery and equipment	7 to 40 years
Furniture, fixtures and office equipment	10 to 15 years

Lifespans are determined considering, among others, the manufacturer's technical specifications, the knowledge of the technicians that operate and maintain the assets, the geographic location and the conditions to which it is exposed.

The Group calculates the depreciation by components, which implies depreciating individually the parts of the asset that should have different lifespans. The depreciation method used is the straight-line; the residual value calculated for the assets is not part of the depreciable amount.

A component of property, plant and equipment and any significant part initially recognised, is written off once disposed of or when it is not expected to obtain future economic benefits from its use or disposal. The gain or loss at the moment of writing the asset off, calculated as the difference between the net value of the disposal and the recorded value of the asset, is included in the statement of comprehensive income.

Assets temporarily classified as out-of-service continue to depreciate and are tested for impairment within the CGU to which they are assigned.

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted, appropriate.

## 2.12 Leases

The determination of whether an arrangement constitutes or contains a lease is based upon the essence of the arrangement at its initial date, if compliance with the agreement depends upon the use of a specific asset(s) and if it transfers the right of use of said asset for a timespan in exchange for a consideration.

At the initial date of the lease contract, the company acting as lessee recognises an asset for right of use and a liability for lease, except for leases with a duration of less than 12 months or those whose value at new of the underlying asset is less than 15 (fifteen) Current Monthly Minimum Legal Wage (SMMLV).

The company acting as lessor classifies the lease as operating or finance. A lease is classified as a finance lease when the risks and rewards incidental to ownership of the leased asset are substantially transferred to the lessee; otherwise, it is classified as an operating lease.

### EPM as a Lessee

Assets leased under finance leases are recognised and presented as assets in the statement of financial position at the beginning of the lease, for the fair value of the asset leased or the present value of the minimum lease payments, whichever is lower. The corresponding liability is included in the statement of financial position as a finance lease liability.

Lease payments are divided between financial expenses and debt amortization. Finance charges are recognised in profit or loss for the period unless directly attributable to qualifying assets, in which case they are capitalized according to the company's policy for borrowing costs. Variable lease payments, which depend on an index or rate, are included in the valuation of the lease liability. Leases with a duration of less than 12 months or those whose value at new value of the underlying asset is less than 15 (fifteen) SMMLV are recognised as operating leases in the profit or loss for the period over the term of the lease.

#### **EPM as a Lessor**

Assets leased under finance leases are not presented as property, plant and equipment since the risks associated with the property have been transferred to the lessee, instead a receivable is recognised for an amount equal to the net investment in the lease.

When a lease contract includes land and building components together, the company assesses the classification of each component separately as a finance or operating lease. If the lease payments cannot be allocated reliably between these two components, the entire lease is classified as a finance lease, unless it is clear that both components are operating leases, in which case the entire lease is classified as operating lease.

Revenue from variable leases, dependent on an index or rate, are included in the valuation of the net investment at lease.

Initial direct costs such as commissions, fees, legal, and internal costs that are incremental and directly attributable to negotiating and arranging the lease are included in the measurement of the net investment in the lease at inception and are reflected in the calculation of the implicit interest rate.

#### **2.13 Borrowing Costs**

Borrowing costs that are directly attributable to the acquisition, construction or production of an asset that necessarily takes substantial time to be prepared for their destined use or sale, are capitalized as part of the cost of the respective asset until the asset is ready for their intended use. Revenue from the temporary investment in specific loans pending to be consumed in qualified assets is deducted from the borrowing costs that qualify for their capitalization. All other borrowing costs are recorded as expenses in the period when incurred. Borrowing costs consists of interest and other costs incurred in by the company regarding to the loan of funds. To the extent that the funds derive from generic loans and are used to obtain a qualified asset, the value of the costs susceptible of capitalization is determined by applying a capitalization rate (weighted average cost of loans applicable to general loans outstanding during the period) to expenditure made in that asset.

Capitalization of borrowing costs begins on the date when the following conditions are met:

- Expenditure made in relation to the asset.
- Borrowing costs are incurred, and
- Necessary activities to prepare the asset for the intended use or for sale are carried out.

Capitalization of borrowing costs is suspended during periods in which the development of activities of a qualifying asset for periods of more than one year is interrupted. However, the capitalization of borrowing costs over a period is not interrupted if important technical or administrative actions are being undertaken. Neither is capitalization of borrowing costs suspended when a temporary delay is required as part of the process of preparing an asset qualified for its use or sale.

Capitalization of borrowing costs is terminated when all activities necessary to prepare the asset for its use or sale have been substantially completed. When the asset has components that can be used separately while construction continues, the capitalization of borrowing costs on such components is stopped.

#### **2.14 Investment Property**

Investment property, are lands or buildings or part of a building or both, held to obtain rentals or capital revaluations (including the investment property under construction for said purposes). Investment properties are initially measured at cost, including transaction costs. The recorded value includes the replacement or

substitution cost of one part of an existing investment property at the moment when the cost is incurred in, if all criteria for recognition are met; and they exclude the daily maintenance costs of the investment property.

After initial recognition, investment properties are measured at the fair value reflected by market conditions on the presentation date. All profits and losses arising from changes in the fair values of the investment properties are included in the statement of comprehensive income in profit or loss when they arise.

Investment properties are derecognised, either at the moment of disposal, or when they are retired from use on a permanent basis, and no future economic benefit is expected. The difference between the net value of disposal and the recorded value of the asset is recognised in the statement of comprehensive income in profit or loss in the period when it was derecognised.

Transfers to or from investment property are conducted only when there is a change in their use. In the case of a transfer from an investment property to property, plant and equipment, the cost considered for its subsequent posting is the fair value on the date of use change. If a property, plant and equipment become an investment property, it shall be recorded at its fair value, the difference between the fair value and the recorded value shall be recorded as revaluation surplus applying the IAS 16 Property, plant and equipment.

## 2.15 Intangible Assets

Intangible assets acquired separately are measured initially at their cost. The cost of the intangible assets acquired in business combinations is their fair value at the acquisition date. After their initial recognition, the intangible assets are recorded at cost less any accumulated amortization and any accumulated loss for impairment. Intangible assets generated internally are capitalized provided that they meet the criteria for their recognition as asset and the generation of the asset must be classified as: research phase and development phase; if it is not possible to distinguish the research phase from the development phase, expenditure must be reflected in the statement of comprehensive income in the period in which they incurred.

Lifespan of intangible assets are determined as finite or indefinite.

Intangibles assets with finite lifespans are amortized throughout their economic lifespan in a straight-line and assessed to determine if they presented any impairment, whenever there are indications that the intangible asset may have suffered such impairment. The amortization period and the amortization method for an intangible asset with a finite lifespan are reviewed at least at the end of each year. Changes in the expected lifespan or in the expected pattern of consumption of the future economic benefits of the asset are recorded if the amortization period or method changes, as applicable, and are treated as changes in accounting estimates. The amortization expense of intangible assets with finite lifespans is recognised in profit or loss in the statement of comprehensive income in the expense category that is find consistent with the function of the intangible asset.

Intangibles assets with indefinite lifespans are not amortized, but they are subject to annual tests to determine whether they suffer any impairment, either individually or at the cash-generating unit level (CGU). Assessment of the indefinite lifespan is revised on an annual basis to determine whether such indefinite lifespan continues to be valid. If that is not the case, the change of lifespan from indefinite to finite is made prospectively.

Lifespans of intangible assets are:

Concessions and similar rights	As contract effective term	
Easements	Indefinite - As contract effective term	
Capitalized development expenses	Indefinite	
Software and IT applications	Finite	3 to 5 years
Licenses	Finite	3 to 5 years
Rights	As contract effective term	
Other intangible assets	Finite	7 to 15 years

An intangible asset is derecognised upon disposal, or whenever future economic benefits are not expected from their use or disposal. The profits or losses arising when an intangible asset is derecognised are measured as the difference between the value obtained in the disposal and the recorded value of the asset, and it is recognised in profit or loss in the statement of comprehensive income.

### Research and Development Costs

Research costs are recorded as expenses as incurred. Development outlays in an individual project are recognised as intangible assets whenever the company can demonstrate:

- The technical feasibility of finalizing the intangible asset so that it is available for use or sale.
- Its intention of finalizing the asset and its capacity to use or sell the asset.
- How the asset will generate future economic benefits, considering, among others, the existence of a market for production that generates an intangible asset for the asset itself, or the profit of the asset for the entity.
- The availability of technical and financial resources to complete the asset and to use and sell it.
- The capacity of reliably measuring the expenditure during development.

In the statement of financial position, the development expenditure asset is recognised from the moment the element meets the aforementioned conditions for its recognition, and its cost less accrued amortization and the value impairment accrued losses are recorded.

When the development of an intangible asset related to a electricity generation project begins, costs are accumulated as constructions in progress.

Amortization of the asset starts when the development has been completed and the asset is available for use. It is amortized throughout the period of the expected future economic benefit. During the development period the asset is subject to annual tests to determine whether there is impairment of its value.

Research costs and development costs that do not qualify to capitalization are recorded as expenses in profit or loss in the statement of comprehensive income.

### Goodwill

Goodwill represents the difference between the cost of a business combination and the fair value at the moment of acquisition of the acquired assets, liabilities assumed, and contingent liabilities of the acquired party.

Goodwill represents the difference between the cost of a group of assets constituting a business over which control is acquired and the fair value at the time of acquisition of this group of acquired assets.

Goodwill is not amortized, it is measured at cost less any value impairment accrued loss and is subject to annual value impairment tests, or more frequently when there are impairment indicators. Value impairment losses are recognised in profit or loss in the statement of comprehensive income.

For the Cash Generating Units (CGU), which have been assigned goodwill, on an annual basis the Company verifies the value impairment, which implies the calculation of the value at use of the CGUs to which it is assigned. The value at use requires determining the future cash flows that must arise from the CGUs and an appropriate discount rate to calculate the current value. When the actual future cash flows are less than expected, an impairment loss may arise.

## 2.16 Financial Instruments

A financial instrument is a contract that gives rise to a financial asset in one entity and simultaneously to a financial liability or equity instrument in another entity.

Financial assets and liabilities are recognised in the statement of financial position when the company becomes a party according to the contractual conditions of the instrument.

### 2.16.1 Financial Assets

The company recognises its financial assets at fair value at the outset. Transaction costs directly attributable to the financial asset are added to or deducted from its fair value if subsequently measured at amortized cost or fair value through other comprehensive income or are recognised immediately in the statement of comprehensive income if the assets are measured at fair value through profit or loss.

For subsequent measurement, financial assets are classified at amortized cost or fair value (through other comprehensive income or through profit and loss) depending on the company's business model for managing the financial assets and the characteristics of the instrument's contractual cash flows.

#### – Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are assets whose contractual cash flows are highly liquid. The company classifies a financial asset in this category if it is acquired mainly for the purpose of being sold in the short term.

This includes investments made to optimize surplus liquidity, i.e. all those resources that are not immediately allocated to the development of the activities that constitute the company's corporate purpose. The investment of surplus liquidity is made under the criteria of transparency, security, liquidity and profitability, under the guidelines of adequate control and under market conditions without speculative purposes (EPM General Management Decree 2015-DECGGL-2059 of February 6, 2015). Profit or losses arising from changes in fair value are included in the statement of comprehensive income under the heading of financial income or expense, in the period in which the aforementioned changes in fair value occur.

Dividend income is recognised when the company's right to receive payment is established.

At the same time, the company can irrevocably allocate a financial asset as measured at fair value through profit or loss.

#### – Financial assets at fair value through other comprehensive income

Debt instruments are classified as assets measured at fair value through other comprehensive income if they are held under a business model whose objective is achieved by obtaining the contractual cash flows and selling the instruments and the instrument also provides, on specific dates, cash flows that correspond solely to payments of principal and interest on the outstanding principal value.

Changes in the fair value of the investment are recorded in other comprehensive income, except for impairment losses or recoveries, interest income and foreign exchange gains and losses which are recognised in profit or loss for the period.

The company has made an irrevocable decision to present subsequent changes in the fair value of certain investments in equity instruments that are not held for trading in other comprehensive income. Dividends from such investments are recognised in profit or loss when the right to receive payment is established.

On disposal of equity investments at fair value through other comprehensive income, the accumulated value of the gains or losses is transferred directly to retained earnings and is not reclassified to profit or loss for the period.

#### – Financial assets at amortized cost

A financial asset is subsequently measured at amortized cost using the effective interest rate<sup>3</sup> if the asset is held within a business model whose objective is to maintain it in order to obtain the contractual cash

<sup>3</sup> The effective interest rate method is a method of calculating the amortized cost of a financial asset and allocating the income over the relevant period. The effective interest rate is the discount rate that exactly matches the future cash flows of a financial asset (including all fees, commissions and points paid or received that are an integral part of the effective interest rate, transaction costs and other premiums and discounts) over the expected life of the instrument, or if appropriate, a shorter period, to its recorded value at initial recognition.

flows and contractual terms of the asset that provide, on specific dates, cash flows that are solely payments of principal and interest on the outstanding principal value.

### Impairment of financial instruments

At each reporting date, the Company recognises a correction in value for expected credit losses on financial assets measured at amortized cost or at fair value through changes in Other comprehensive income, including receivables from leases, contract assets or loan commitments and financial guarantee contracts to which the impairment requirements are applied over the life of the asset.

Expected credit loss is estimated considering the probability that an impairment loss by uncollectability may or may not occur and are recognised as profit or loss in profit or loss in the Statement of comprehensive income, reducing the value of the financial asset. The Group assesses the credit risk of accounts receivable on a monthly basis at the time of presenting the reports in order to determine the value correction for expected credit loss on financial assets-.

The Company assesses on a collective basis the expected losses for financial assets that are not individually relevant. When the collective assessment of expected losses is performed, receivables are gathered by similar credit risk characteristics, allowing identification of repayment capacity of the debtor, in accordance with the contractual terms of receivables.

The Company determines that a customer's credit risk increases significantly when there is any default event in the financial agreements by the counterpart, or when information, be it internal or obtained from external sources indicates that debtor's payment unlikely, without considering held securities.

Default in agreements is measured generally when having 2 past-due accounts, however, there are agreements or individual contracts that indicate default immediately when a payment or obligation is not met-.

The company determines that a financial asset exhibits credit impairment when:

- Evidences default in a customers' payment for two (2) or more accounts.
- It is known or there is evidence of the customer entering processes of corporate restructuring or in insolvency or liquidation.
- The rise of social turmoil, be it of public order or natural disasters, which according to experience are directly correlated with default of accounts.

Credit risk is affected when there are changes in financial assets, the policy of the Company to reassess the recognition of credit loss is basically supported on the customer or counterpart payment record. When there is evidence of an improvement in the historical record of a customer payments, a reduction in risk is recorded and, if there is an increase in the portfolio default age, an increment in the impairment of the asset is recorded.

The amortized financial assets may still be subject to collection execution activities under the recovery procedures of the company, considering judicial collection when appropriate. Recoveries performed are recognised in the profit for the period.

### Derecognition of Financial Assets

A financial asset or part of it, is derecognised from the statement of financial position whenever it is sold, transferred, expires or the company losses control on the contractual rights or on the cash flows of the instrument.

The company derecognises a financial asset when:

- Possesses information indicating that the counterpart is in severe financial difficulties and there are no realistic prospects of recovery.
- The counterpart has been put into liquidation or has initiated a bankruptcy process or, in the case of receivables.
- Amounts exceed two years due, whichever occurs earlier.

If the company does not transfer nor substantially retains all risks and advantages inherent to that property and continues to retain the control of the asset transferred, the company will recognise its share in the asset and the obligation associated for the amounts that it would have to pay, in the same way, if the company retains substantially all risks and advantages inherent to the ownership of a financial asset transferred, the company will continue to recognise the financial asset and will also recognise a guaranteed loan in the shape of a collateral for the received revenues.

In the total derecognition of a financial asset measured at fair value with changes in profit, the difference between the recorded value of the assets and the sum of the consideration received and to be received, is recognised in profit or loss in the Statement of comprehensive income. In case of financial assets measured at fair value with change in other comprehensive income, the difference between the recorded value of the asset and the sum of the consideration received and to be received is recognised in profit or loss in the Statement of comprehensive income and the profit or loss that would have been recognised in the Other comprehensive income will be reclassified to accumulated profit.

### Refinancing of loans

When the contractual cash flows of a financial asset are renegotiated or otherwise modified, and the renegotiation or modification does not result in derecognition of that financial asset in accordance with IFRS 9 adopted in Colombia, the company recalculates the gross recorded value of the financial asset and recognises a profit or loss due to modification in the profit or loss for the period. The gross recorded value of the financial asset is recalculated as the present value of the modified or renegotiated contractual cash flows that are discounted at the original effective interest rate of the financial asset (or effective interest rate adjusted for credit quality for financial assets with credit deterioration purchased or originated) or, when applicable, the revised effective interest rate. Any cost or commission incurred adjusts the recorded value of the modified financial asset and is amortized over the remaining term of the latter.

### 2.16.2 Financial liabilities

The company recognises its financial liabilities at fair value at the outset. Transaction costs directly attributable to the acquisition or obtainment of the financial liability are deducted from its fair value if they are subsequently measured at amortized cost or are recognised through profit or loss if the liabilities are measured at fair value. Subsequently, financial liabilities are measured as follows:

- **Financial liabilities at fair value through profit or loss**, include liabilities held for trading, financial liabilities designated on initial recognition as at fair value through profit or loss, and derivatives. Profit or loss on liabilities held for trading are recognised in profit or loss. At initial recognition, the company did not designate financial liabilities as at fair value through profit and loss.
- **Financial liabilities at amortized cost**, are measured using the effective interest rate. Profits and losses are recognised in profit and loss for the period.

### Compound instruments

Financial instruments that contain both a liability and an equity component (compound financial instruments) are recognised and accounted for separately. Therefore, for the initial measurement the liability component is determined by the fair value of the future cash flows and the residual value is assigned to the equity component.

For subsequent measurement, the liability component is measured at amortized cost including the effect of amortization costs, interests and dividends. The equity component retains the measurement of the initial recognition.

### Financial guarantee contracts

The financial guarantee contracts issued by the company are those contracts that require the making of a specific payment to reimburse the holder for the loss incurred when a specified debtor defaults their payment obligation, according to the conditions of a debt instrument. The financial guarantee contracts are initially recognised as a liability at fair value, adjusted by the transaction costs that are directly ascribable to the issuance of the guarantee. Subsequently, the liability is measured at: (i) the amount of the adjustment in value for the expected losses and (ii) the value initially recognised less, the accrued recognised profit.



### Derecognition of financial liabilities

A financial liability or part of it is derecognised from the statement of financial position when the contractual obligation has been settled or has expired.

Whenever an existing financial liability is replaced by another coming from the same lender under substantially different conditions, or if the conditions of an existing liability are substantially modified, such exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability and the difference in the respective recorded values is recognised through profit and loss.

In the event changes are not substantial the company recalculates the gross recorded value of the financial liability and recognises a profit or loss from changes in the profit or loss. The gross recorded value of the financial liability is recalculated as the current value of the modified or renegotiated contractual cash flows that are discounted at the original effective interest rate of the financial liability or, when applicable, the revised effective interest rate. Any cost or commission incurred adjusts the recorded value of the modified financial liability and is amortized over its remaining term.

### 2.16.3 Equity Instruments

An equity instrument consists of any contract showing a residual interest on an entity's assets, after deducting all its liabilities. Equity instruments issued by the company are recognised at the revenues received, net of direct issuance costs.

The repurchase of the company's own equity instruments is recognised and directly deducted in equity. No profit or loss is recognised in operations, coming from the purchase, sale, issuance, or cancellation of the company's own equity instruments.

### 2.16.4 Derivative Financial Instruments

A financial derivative is an instrument which value varies in response to changes in a variable such as an interest rate, exchange rate, the price of a financial instrument, credit rating or index. This instrument does not require an initial investment or is inferior than other financial instruments with a similar response to changes in market conditions and is generally settled at a future date.

The company uses derivative financial instruments, like term contracts (Forward), futures contracts, financial barter (Swaps) and options to hedge several financial risks, mainly the interest rate, exchange rate and commodities price risks. Such derivative financial instruments are initially recognised at their fair values on the date when the derivative contract is entered into, and subsequently they are measured again at their fair value. Derivatives are recorded in the statement of financial position as financial assets when their fair value is positive, and as financial liabilities when their fair value is negative.

Commodity contracts that meet the definition of a derivative, but that are entered into in conformity with the expected purchase requirements of the company, are recognised in the Statement of comprehensive income as cost of sales.

Any gain or loss that arises from the changes in derivatives' fair value is directly recognised in the Statement of comprehensive income in the section Statement of income, except for those that are under hedge accounting.

Generally, the derivatives embedded in host contracts are treated as separate derivatives whenever they meet the definition of a derivative and when their risks and characteristics are not closely related to those main contracts and the contracts are not measured at fair value with change in profit. However, derivatives embedded in contracts where the host is a financial asset in the scope of IFRS 9 are never split. Instead, the hybrid financial instrument as a whole is assessed for financial asset classification.

### Hedge Accounting

At the beginning of a hedging relationship, the company designates and formally documents the hedging relationship to which they want to apply hedging accounting, and the objective of the risk management and the strategy to carry out the hedging. The documentation includes the identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the company shall assess the effectiveness of the changes in fair value of the hedging instrument when offsetting the exposure to changes in

the fair value of the hedged item or in the cash flows, attributable to the risk hedged. Such hedges are expected to be highly efficient in achieving the offsetting of changes in the fair value or in the cash flows, and for this end they are permanently assessed throughout the information periods for which they were designated.

For hedging accounting purposes, hedges are classified and recorded as follows, once the criteria for their recording are complied with:

- **fair value hedging**, when they hedge the exposure to fair value changes of assets or liabilities recognised or of non-recognised firm commitments.

A change in the fair value of a derivative that is a hedging instrument is recognised in profit or loss in the statement of comprehensive income as finance cost or income. A change in the fair value of the item hedged attributable to the risk hedged is recorded as part of the recorded value of the hedged item and is also recognised in profit or loss in the statement of comprehensive income as finance cost or income.

For the fair value hedging related to items recorded at amortized cost, the adjustments to the recorded value are amortized in profit or loss in the statement of comprehensive income throughout the remaining term until their expiration. Amortization of the effective interest rate may begin as soon as there is an adjustment to the recorded value of the hedged item, but it must start at the latest when the hedged item is no longer adjusted for their fair value changes ascribable to the risk being hedged. Amortization of recorded value adjustments is based upon the effective interest rate recalculated on the amortization starting date. If the hedged item is derecognised, the non-amortized fair value is immediately recognised in profit or loss in the Statement of comprehensive income.

When a non-recognised firm commitment is designated as a hedged item, the subsequent accrued change in the fair value of the firm commitment attributable to the hedged risk shall be recognised as an asset or liability with their corresponding profit or loss recognised in the statement of comprehensive income.

- **Cash flow hedging**, when they hedge the attributed cash flow variations exposure, either to a particular risk associated to a recognised asset or liability or to a highly probable foreseen transaction, or to the exchange rate risk in a non-recognised firm commitment.

The purpose of cash flow hedge accounting is to recognise in other comprehensive income the fair value of variations of the hedging instrument in order to apply them to the statement of comprehensive income when and at the rate that the hedged item affects them.

The effective portion of the profit or loss for the measurement of the hedging instrument is immediately recognised in the Other comprehensive income, whereas the ineffective portion is immediately recognised in profit or loss in the Statement of comprehensive income period as finance cost.

Values recognised in the Other comprehensive income are reclassified into the profit or loss for the period when the hedged transaction affects the profit, as well as when the hedged financial revenue or financial expense is recognised, or when the foreseen transaction takes place. When the hedged item constitutes the cost of a non-financial asset or liability, the values recognised in the Other comprehensive income are reclassified at the initial recorded value of the no-financial asset or liability. If the foreseen transaction or the firm commitment is no longer expected to happen, the accrued profit or loss previously recognised in the Other comprehensive income is reclassified into the profit or loss for the period.

If the hedging instrument expires or is sold, it is resolved, or is exercised without a replacement or successive renovation of a hedging instrument for another hedging instrument, or if its designation as hedging is revoked, any accrued profit or loss previously recognised in other comprehensive income remains in the other comprehensive income until the foreseen operation or the firm commitment affects profit or loss.

- **Hedging of a net investment abroad**, when they hedge the exposure to the variations in the translation of foreign businesses into the presentation currency of the company associated to the exchange rate risk.

The objective of the foreign-currency net investment hedging, is to hedge the exchange rate risks that a Principal or Intermediate Parent Company having businesses abroad may have on the impact on the translation of financial statements from functional currency to presentation currency. The hedging of net

investment in foreign currency is a hedging to the exposure in foreign currency, not a hedging of the fair value due to changes in the investment value.

Profits or losses of the hedging instrument related to the effective portion of the hedging are recognised in other comprehensive income, whereas any other profit or loss related to the ineffective portion is recognised in the statement of comprehensive income. For the disposal of the business abroad, the accrued value of the profits or losses recorded in the Other comprehensive income are reclassified through profit or loss for the period.

#### 2.16.5 Off-setting of Financial Instruments

Finance assets and liabilities are subject to off-set in order to inform the net value in the Statement of financial position, only if (i) at the current time, there is a legally enforceable entitlement of off-set of recognised values; and (ii) there is the intention of settling them at their net value, or of simultaneously realizing the assets and cancelling the liabilities.

#### 2.17 Inventories

Goods acquired with the intention of selling them during the ordinary course of business or of consuming them in the service rendering process are classified as inventories.

Inventories are valued at cost or net realizable value, whichever is lower. The net realizable value is the estimated sale price in the normal course of business, less the estimated finalization costs and the estimated costs necessary to make the sale.

Inventories include merchandise in stock that do not require transformation, such as electricity, gas and water meters and procurement goods. They include materials such as minor spare parts and accessories for the rendering of services and the goods in transit and held by third parties.

Inventories are valued using the weighted average method and their cost includes the costs directly related to the acquisition and those incurred to give them their current conditions and location.

#### 2.18 Impairment loss of non-financial assets

As of every presentation date, the company assesses whether they have any indication that a tangible or intangible asset may be impaired. The company estimates the recoverable value of the asset or Cash Generating Unit (CGU), at the moment it detects an indication of impairment, or annually (as November 30 and it is reviewed if there are relevant or significant events presented for the month of December that merit analyzing and to be included in the calculation of impairment) for goodwill and intangible assets with indefinite lifespan and those that are still being developed.

The recoverable value of an asset is the greatest value between the fair value less the costs of sale, either of an asset or a Cash-Generating Unit (CGU), and its value in use is determined for an individual asset, unless the asset does not generate cash flows that are substantially independent of those of other assets or groups of assets, in which case the asset must be grouped to a CGU. When a reasonable and consistent basis for distribution is identified, common/corporate assets are also allocated to the individual CGUs or distributed to the smallest group of CGU for which a reasonable and consistent basis for distribution can be identified. When the recorded value of an asset or a CGU exceeds its recoverable value, the asset is considered impaired and its value is reduced to its recoverable amount.

When calculating the value in use, the estimated cash flows, either for an asset or a CGU, are discounted at their current value through a discount rate before taxes that reflects the market considerations of the temporary value of money and the specific risks of the asset. An adequate assessment model is used for determining the reasonable value less the costs of sale.

Losses for impairment of continuing operations are recognised in profit or loss in those expense categories corresponding to the function of the impaired asset. Losses for impairment attributable to a CGU are assigned proportionately based on the recorded value of each asset to the non-current assets of the CGU after exhausting goodwill. The CGU is the smallest identifiable group of assets, which generates cash inflows in favor of the company, which are largely, independent of cash flows derived from other assets or groups of assets. The company defined CGUs considering: 1) The existence of revenue and costs for each group of assets, 2) The

existence of an active market for the generation of cash flows and 3) the way in which its operations are managed and monitored. In order to assess impairment losses, the assets are grouped in the following CGU: Generation, Distribution, Wastewater management, Water supply, Gas and Transmission.

Impairment for goodwill is determined by assessing the recoverable value of each CGU (or group of CGUs) to which the goodwill relates. Impairment related to goodwill cannot be reverted in future periods.

For assets in general, excluding the goodwill, on each presentation date an assessment is conducted about whether there is any indication that the impairment losses previously recognised no longer exist or have decreased. If such indication exists, the company makes an estimate of the asset or CGU recoverable value. An impairment loss previously recognised only can be reverted if there was a change in the assumptions used for determining the recoverable value of an asset since the last time when it was recognised the last impairment loss. The reversal is limited in such a way that the recorded value of the asset neither exceeds its recoverable amount, nor exceeds the recorded value that would have been determined, net of depreciation, if no impairment loss had been recognised for the asset in the previous years. Such reversal is recognised in profit or loss in the Statement of comprehensive income.

## 2.19 Provisions

Provisions are recorded when the company has a current, legal or implicit obligation, as a result of a past event. It is probable that the company has to give off resources that incorporate economic benefit to settle the obligation, and a reliable estimate can be made for the value of the obligation. In cases in which the company expects the provision to be reimbursed as a whole or in part, the reimbursement is recognised as a separate asset, but only in the cases when such reimbursement is practically certain, and the asset value can be reliably measured. In the company, each provision is only used for dealing with disbursement for which it was initially recognised.

Provisions are measured with the best estimate from management of expenditure necessary to settle the present obligation, at the end of the period being reported, considering the risks and the corresponding uncertainties. When a provision is measured using the estimated cash flow to settle the present obligation, its recorded value corresponds to the present value of said cash flow, using for the discount a rate calculated with reference to market yields for the bonds issued by the National Government. In Colombia, the yield of TES Bonds (public debt securities issued by the General Treasury of the Nation) at the end of the reporting period must be used.

The expense corresponding to any provision is presented in profit or loss in the Statement of comprehensive income net of all reimbursement. The increase in provision due to the time elapsed is recognised as finance expense.

### Provisions for dismantling

The company recognises as part of the cost of a fixed asset in particular, to the extent that there is a legal or implicit obligation of dismantling or restoring, the estimation of the future costs in which the company expects to incur in to perform the dismantlement or restoring and its balancing entry is recognised as a provision for dismantling and restoring costs. The dismantling cost is depreciated over the estimated useful life of the fixed asset.

Dismantlement or restoring costs are recognised at the present value of the expected costs of cancelling out the obligation using estimated cash flows. Cash flows are discounted at a particular rate before taxes, that should be determined by taking as a reference the market yield of Bonds issued by the National Government. In Colombia, for risk-free rates, the yield of TES Bonds (public debt securities issued by the National Treasury) must be used.

Future estimated dismantlement or restoration costs are annually revised. Changes in the future estimated costs, on the estimated dates for expenditure, or on the discount rate applied are added or deducted from the asset cost, without exceeding the recorded value of the asset. Any surplus is immediately recognised in profit or loss. The change in the provision value associated to the time elapsed is recognised as financial expense in profit or loss in the Statement of comprehensive income.

### Onerous Contracts

The Group recognises as provisions the current obligations that are derived from an onerous contract, as provisions and its offsetting is in the Statement of comprehensive income in profit or loss. An onerous contract is the one in which the unavoidable costs of complying with the obligations it implies, exceed the economic benefits that are expected to receive therefrom.

### Contingent Liabilities

The possible obligations that arise from past events and the existence of which shall be only confirmed by the occurrence or non-occurrence of one or more uncertain future events that are not entirely under the Group's control or the current obligations, that arise from past events, but that it is not probable, but possible, that an outflow of resources including economic benefits shall be required to liquidate the obligation or the amount of the obligation cannot be measured with enough reliability, are not recognised in the Statement of financial position, they are rather disclosed as contingent liabilities. Contingent liabilities generated in a business combination are recognised at fair value on the acquisition date.

### Contingent Assets

Assets of a possible nature, that arise from past successes, the existence of which has to be confirmed only by the occurrence, or the non-occurrence, of one or more uncertain events in the future, that are not entirely under the Group control, are not recognised in the Statement of financial position, they are instead disclosed as contingent assets when their occurrence is probable. Whenever the contingent fact is true the asset and the revenue associated are recognised in the profit or loss for the period. Contingent assets acquired in a business combination are initially measured at their fair values, on the acquisition date. At the end of subsequent periods being reported, those contingent liabilities are measured at the greatest amount it would have been recognised and the amount initially recognised less the accrued amortization recognised.

## 2. 20 Employee Benefits

### 2.20.1. Post-Employment Benefits

#### Defined Contribution Plans

The contributions to the defined contribution plans are recognised as expenses in profit or loss in the Statement of comprehensive income at the moment when the employee has rendered the service that grants them the right to make the contributions.

#### Defined benefit plans

Post-employment benefit plans are those in which the company has the legal or implicit obligation to respond for the payments of the benefits that were left to their charge.

For the defined benefit plans, the difference between the fair value of the plan assets and the present value of the plan obligation, is recognised as asset or liability in the statement of financial position. The cost of giving benefits under the defined benefit plans is determined separately for each plan, through the actuarial assessment method of the projected credit unit, using actuarial assumptions on the date of the period being reported. Plan assets are measured at fair value, which is based upon the market price information and, in the case of quoted securities, it constitutes the published purchase Price.

The actuarial profits or losses, the yield of plan assets, excluding the values included in the net interest on the net defined benefits on the liabilities (assets), and the changes in the asset ceiling effect are recognised in other comprehensive income. The actuarial profits or losses include the effects of changes in the actuarial assumptions as well as adjustments due to experience.

The net interest on liabilities (assets) for net defined benefits includes the interest revenue for the plan assets, interest cost for the obligation for defined benefits and interests for the asset ceiling effect and is recognised in profit or loss.

The current service cost, the past service cost, any settlement or reduction of the plan are immediately recognised in profit or loss in the statement of comprehensive income when they arise.

### 2.20.2. Short-term benefits

The company classifies as short-term employee benefits those obligations with the employees that it expects to settle in the twelve months period following the closing of the accounting period when the obligation was generated, or the service was rendered. Some of these benefits are generated from the current labor legislation, from collective bargaining agreements, or from non-formalized practices that generate implicit obligations.

The company recognises the short-term benefits at the moment the employee has rendered their services, as the following:

A liability for an amount that shall be repaid to the employee, deducting the amounts already paid before, and its balancing entry as expense for the period, unless another chapter obliges or allows including the payments in the cost of an asset or inventory, for instance, if the payment corresponds to employees the services of whom are directly related to the construction of a work, it will be capitalized to that asset.

The amounts values already paid before corresponding, for instance, to advanced payments of salaries, advanced allowances, among others, if they exceed the corresponding liability, the company will have to recognise the difference as an asset in the prepaid expenses account, to the extent that the advanced payment gives place to a reduction in the payments to be made in the future or to a cash reimbursement.

According to the foregoing, the accounting recognition of short-term benefits is made upon occurrence of the transactions, regardless of when they are paid to the employee or to the third parties to which the company has entrusted the provision of certain services.

### 2.20.3. Long-term benefits

The company classifies as long-term employee benefits those obligations that it expects to settle after the twelve months following the closing of the accounting year or the period where employees provide the related services, i.e. from the thirteenth month forward; they are different from the short-term benefits, post-employment benefits, and contract termination benefits.

The company measures long-term benefits in the same way as post-employment defined benefit plans. Although their measurement is not subject to the same uncertainty level, the same following methodology will be applied for its measurement:

- The company should measure the surplus or deficit in a long-term employee benefit plan, using the technique applied for post-employment benefits both for estimating the obligation as well as for the plan assets.
- The company should determine the value of net long-term employee benefits (assets or liabilities) finding the deficit or surplus of the obligation and comparing the asset ceiling.

Benefits employees receive year after year throughout their working life should not be considered “long term” if at the accounting year closing each year the Group has fully delivered them.

### 2.20.4. Termination Benefits

The company recognises as termination benefits, the considerations granted to the employees, payable as result of the decision of the company to terminate the employment agreement to an employee before the normal retirement date or the decision of an employee to accept the voluntary resignation in exchange for such benefits.

## 2.21 Service concession arrangements

The company recognises the service concession arrangements pursuant to the interpretation requirements of the IFRIC 12 Service Concession Arrangements.

This interpretation is applicable to those concessions where:

- The grantor controls or regulates which services the operator with the infrastructure should provide, to whom and at what price.

- The grantor controls, through the ownership, the right of use, or otherwise, any significant residual ownership in the infrastructure at the end of the term of the arrangement.

The company does not recognise these infrastructures as property, plant and equipment, it recognises the consideration received in the contracts that meet the above conditions at its fair value, as an intangible asset to the extent that the company receives an entitlement to make charges to users of the service, provided that these entitlements are conditioned to the service use level, or as a financial asset, to the extent that there is an unconditional contractual right to receive cash or other financial asset, either directly from the assignor or from a third party. In those cases where the company receives payment for the construction services, partly through a financial asset and partly through an intangible asset, each component of the consideration is recorded separately.

Financial assets of service concession arrangements are recognised in the statement of financial position and subsequently are measured at amortized cost, using the effective interest rate. Assessment of impairment of these financial assets is made according to the value impairment policy of the financial assets.

Intangible assets of service concession arrangements are recognised in the Separate statement of financial position as intangible assets denominated “intangible assets for service concession agreements” and are amortized on a linear basis within the term of duration thereof.

Income from ordinary activities and costs related to the operating services are recognised according to the accounting policy of ordinary income and the services related to construction or improvement services according to the accounting policy of construction contracts. Contractual obligations assumed by the company for maintenance of the infrastructure during its operation, or for its return to the assignor at the end of the concession arrangement in the conditions specified therein, to the extent that it does not assume a revenue-generating activity, is recognised following the provisions accounting policy.

## 2.22 Fair Value

The fair value is the price that would be received when selling an asset or that would be paid when transferring a liability in an orderly transaction between market participants on the measurement date, regardless of whether that price is directly observable or estimated using another assessment technique.

When estimating the fair value, the company considers the characteristics of the asset or liability in the same way market participants will consider them when setting the value of the asset or liability on the measurement date. Fair value for measurement and disclosure purposes in the present financial statements is determined on that basis, except for the transactions of stock-based payments, lease transactions, and measurements that have certain similarities with fair value but that are not fair value, such as the net realizable value or the value at use.

The fair value of all financial assets and liabilities is determined on the date of presentation of the financial statements, for recognition or disclosure in the notes to the financial statements.

Fair value is determined:

- Based on prices quoted in assets or liabilities markets identical to those the company can access on the measurement date (level 1).
- Based on inputs applied on valuation methodologies commonly used by market participants, which are different from observable quoted prices for assets or liabilities, directly or indirectly (level 2).
- Based on internal valuation techniques of cash flow discounts or other valuation models, using variables estimated by the company that are non-observable for the asset or liability, in the absence of variables observed in the market (level 3).

Note 42 Measurement of fair value on a recurring and non-recurring basis provides an analysis of the fair values of financial instruments and non-financial assets and liabilities and more detail of their measurement.

### 2.23 Cash dividends distributed to the owner of the company

The company recognises a liability to make the distributions to the owner of the company in cash when the distribution is authorized, and it is no longer at the company's discretion. The corresponding amount is recognised directly in the net equity.

### 2.24 Changes in accounting policies

During 2019, the company implemented changes to IFRS (new standards, amendments or interpretations), issued by the International Accounting Standards Board (IASB) and adopted in Colombia that are compulsory for the annual period beginning on January 1, 2019:

**IFRS 16 Leases.** Issued in January 2016, this new standard introduces a comprehensive model for identifying leases and accounting treatments for lessors and lessees. It will replace the current standards for the accounting treatment of leases included in IAS 17 Leases and related interpretations, such as IFRIC 4 Determining whether an arrangement contains a lease, SIC-15 Operating leases—Incentives and SIC-27 Evaluating the substance of transactions taking the legal form of a lease.

The distinction between leases and service contracts is based on the customer's control over the identified asset. For the lessee, the distinction between operating leases (off-balance sheet) and finance leases (on the balance sheet) is removed and replaced by a model in which an asset (right of use) and corresponding liability must be recognised for all leases (i.e. everything in the statement of financial position) except short-term leases and leases of low-value assets.

Assets (rights of use) are initially measured at cost and are subsequently measured at cost (with certain exceptions) less accumulated depreciation and impairment losses, adjusted for any revaluation of the lease liability. Lease liability is initially measured at the present value of future lease payments. Subsequently, the lease liability is adjusted for interest and lease payments and the impact of lease modifications, among other things. In addition, the classification of cash flows is also affected because operating lease payments under IAS 17 are presented as operating cash flows; whereas under IFRS 16, lease payments will be divided into liability amortization and an interest portion that is presented as cash flow from financing and operating activities, respectively.

Unlike lessee accounting, IFRS 16 includes the same accounting requirements for a lessor as IAS 17, i.e. it continues to require a lessor to classify a lease as either an operating or a finance lease.

After completion of the inventory and lease valuation, the company adopted IFRS 16 retrospectively with cumulative effect from initial application, recognised on 1 January 2019, without using restatement of comparative information as required by paragraph C7 of this IFRS. Accordingly, the 2018 financial information has not been restated and continues to be reported in accordance with IAS 17.

The initial cumulative effect recognised as opening adjustments considering the indicative rates currently being used for the financing of the company, applied to the lease liabilities is: Net assets from right of use: \$292,567, Total financial liabilities from lease: \$292,567, no net deferred taxes and retained earnings.

Additionally, \$1,737,744 was reclassified from property, plant and equipment to the assets for right of use corresponding to financial leases that had been recognised under IAS 17.

There is no effect on retained earnings, since the option taken for the valuation of the asset is to match the adjusted liability for prepaid or accrued (earned) leases recognised in the Statement of Financial Position immediately prior to the initial application. In EPM, no pre-paid or accrued lease payments were identified.

Short-term leases not exceeding 12 months or relating to low value underlying assets are not recognised as right of use assets, instead the Company uses the practical record and recognises such leases in the statement of comprehensive income.



### Note 3. Significant accounting judgments, estimates, and causes of uncertainty in the preparation of financial statements.

The following are the significant judgments and assumptions, including those that involve accounting estimates that the Group management used in the application of the accounting policies under IFRS adopted in Colombia, and that have significant effect on the values recognised in the separated financial statements.

Estimates are based upon historic experience and as a function of the best information available on the facts analyzed by the cut-off date. These estimates are used for determining the value of the assets and liabilities in the separated financial statements, when it is not possible to obtain such value from other sources. The Group assesses its estimates on a regular basis. Actual results may differ from those estimates.

The significant estimates and judgments made by the company are described below:

– **Assessment of the existence of impairment indicators for the assets, goodwill and assessment of assets for determining the existence of value impairment losses.**

The condition of the assets is revised on each report presentation date, in order to determine whether there are indications that any of them has suffered an impairment loss. If there is impairment loss, the recoverable amount of the asset is affected, if the estimated recoverable amount is lower, its value is reduced to its recoverable value and impairment loss is immediately recognised in profit or loss for the period.

The assessment of the existence of value impairment indicators is based on external and internal factors, and in turn on quantitative and qualitative factors. Assessment are based on financial results, the legal, social and environmental settings, and the market conditions; significant changes in the scope or way in which the asset or CGU is used or expected to be used and evidence about obsolescence or physical deterioration of and asset or CGU, among others.

Determining whether goodwill has suffered impairment implies the calculation of the value at use of the CGUs to which it has been assigned. The calculation of the value at use requires that the entity determines future cash flows that should arise from CGUs and a discount rate appropriate to calculate the current value. When the actual future cash flows are lower than expected, an impairment loss may arise.

– **Assumptions used in the actuarial estimate of the post-employment obligations with employees.**

The assumptions used in the actuarial studies include: demographic assumptions and financial assumptions, the former refer to the characteristics of the current and past employments, and relate to the mortality rate, employee turnover rates, the latter relate to the discount rate, the increases in future salaries, and the changes in future benefits.

– **Lifespan and residual values of property, plant and equipment and intangibles.**

In the assumptions used for determining the lifespans, technical aspects such as the following are considered: periodical maintenances and inspections made to the assets, failure statistics, environmental conditions and operating environment, protection systems, replacement processes, obsolescence factors, recommendations of manufacturers, climate and geographical conditions, and experience of the technicians that know the assets. Aspects such as market values, reference magazines, and historic sales data are considered for determining the residual value.

– **Assumptions used for calculating the fair value of financial instruments including the credit risk.**

The company discloses the fair value corresponding to each class of financial instrument in such a way it allows comparing it with the recorded values. Macro-economic projections calculated within every company of the company are used. Investment portfolio is valued at market price. In its absence, a similar one is looked for in the market and if not, assumptions are used, so:

- Derivatives are estimated at fair value.
- Receivables are estimated at the market rate in force and effect for similar credits.
- Receivables from employees are valued in a similar way as massive debtors, except for mortgage credits.

- For equity investments, the methodology is cash flow; it is estimated at the market price for those listed.
- **Likelihood of occurrence and value of contingent or uncertain-value liabilities.**

The assumptions used for uncertain or contingent liabilities include the classification of the legal process by the “expert judgment” of the area professionals, the type of contingent liability, the possible legislative changes, and the existence of high-court rulings that applies to the concrete case, the existence of similar cases in the company, the study and analysis of the substance of the issue, the guarantees existing at the time of the events. The company shall disclose and not recognised in the financial statements those obligations classified as possible; obligations classified as remote are not disclosed nor recognised.

- **Future expenditure for asset dismantlement and retirement obligations.**

In the assumptions used for determining future expenditure for asset dismantlement and retirement obligations, aspects such as the following were considered: estimate of future outlays in which the company must incur for the execution of those activities associated to asset dismantlement on which legal or implicit obligations have been identified, the initial date of dismantlement or restoration, the estimated date of finalization and the discount rates.

- **Determination of existence of finance or operating leases based on risk transfer and benefits of the leased assets.**

The significant assumptions considered to determine the existence of a lease include the assessment of the conditions if the right to control the use of the asset is transmitted for a period of time in exchange for a consideration, i.e., the existence of an identified asset is assessed; the right to obtain substantially all economic benefits from the use of the asset over the period of use; the right to direct how and for what purpose the asset is used throughout the period of use; the right to operate the asset over the period's use without any changes in the operating instructions.

- **Recoverability of deferred tax assets.**

Deferred tax asset has been generated by the temporary differences that generate future fiscal consequences in the financial position of the company. These differences are essentially represented in fiscal assets that exceed the assets under IFRS adopted in Colombia, and in fiscal liabilities, lower than the liabilities under IFRS adopted in Colombia, such as it is the case of the pension liability components, the amortized cost of bonds, financial leasing, and other sundry provisions and contingency provisions.

The company's deferred tax asset is recovered in the net income taxed on the current income tax generated.

- **Assessment of portfolio deterioration**

For the calculation of the expected credit loss, each obligation is assigned an individual probability of non-payment that is calculated from a probability model involving sociodemographic, product and behavior variables.

The model will be applied based on the Scorecard developed considering the information of the company. The models are defined according to the information available and the characteristics of the population groups for each one. Even though the methodology applies to all accounts with balance, some exclusions must be considered, such as: derecognised accounts; self-consumptions; contributions; public lighting and in general charges from third parties. For its calculation, it is previously defined the moment from which it is considered that an obligation was defaulted and will not be recovered.

To calculate the credit loss of trade and other receivables (except accounts receivable among economically related parties), the following formula is used:

$$PE = \text{Exposed balance} * PD * LGD$$

Where, the PD component (probability of default) is derived from the result of a statistical model that provides the probability that each account will default on the following twelve months. This individual probability is located within a range found in order to attenuate fluctuations in the value of the general provision from one month to the next and stabilize its behavior, resulting in a standard PD by rank.

The loss given the default (LGD) is defined as the economic deterioration that the entity would incur in the event of any of the situations of default. It is a percentage obtained from a table taken from the current regulations of the Superintendencia Financiera de Colombia (Superintendence of Finance of Colombia), Chapter II of External Circular 100 of 1995.

#### - Revenue estimates

The company recognises income from the sale of goods and the rendering of services to the extent that the performance requirements for the company are met, regardless of the date on which the corresponding invoice is issued, to carry out this estimate information from contracts or agreements with customers is taken and so the value to be recognised in revenue is established.

When the moment at which revenue should be recognised is uncertain, the company determines to recognise the revenue at the moment in which the performance obligation is satisfied, for those performance obligations that are satisfied over time it is common to use the method of the measured resource as the actually executed costs compared to the estimated costs.

For other concepts different from the supply of residential public utilities, the company estimates and recognises the value of revenues from sales of goods or rendering of services based on the terms or conditions of interest rate, period, etc., of each contract that causes the sale.

In the month after recording the estimated revenue, its value is adjusted by the difference between the value of the actual revenue already known against the estimated revenue.

## Note 4. Significant transactions and other relevant aspects during the period

The significant transactions and other relevant aspects that occurred during the period, different from those of the normal business of the company, are related to the contingencies of the Ituango Hydroelectric Project, that took place on April 28, 2018 due to a geological event that blocked the diversion tunnel of the Cauca River with approximately 160 thousand cubic meters of rock and soil, which caused the occluding and flooding of the dam. As a result, EPM has led its decisions prioritizing the protection of communities and the environment in the first place and after that the infrastructure of the project. Therefore, on May 7, 2018, the decision was made to drain the dammed water through the powerhouse of the future electricity generation plant for rechanneling it to its traditional flow into the Cauca River and thus lower the water level of the dam. On January 16 and February 5, 2019, the intake gates No. 2 and No. 1, respectively, were closed, thus cutting the waterflow through the powerhouse. From February 8, 2019, the recovery of the flow of the Cauca River began through the flow of water through the tailrace. On March 1, 2019: Skava Consulting delivers the results of the root cause analysis indicating the most likely hypothesis that could have generated the Auxiliary Deviation Gallery plugging, which consequently caused the contingency of the Ituango hydroelectric project. On March 7, 2019: At the powerhouse, work is concentrated on water drainage activities. In the dam the construction of the plastic concrete screen (bentonite screen) was concluded and the tailgate operates in an optimal way evacuating the waters of the Cauca river that arrive at the dam.

On May 29, 2019, the closure of one of the two gates of the Auxiliary Deviation Gallery (GAD) was completed, a new milestone in the project's risk mitigation work. With the closure of the first gate, on the left, the work of nearly three months was completed. After the closure of the left GAD gate, the following work focused on the closure of the right gate to complete the full closure, milestone reached on December 18, 2019, when the second gate of the Auxiliary Deviation Gallery (GAD) was closed. The pre-positioning of the GAD, with its two gates duly closed, reduces the risks for the communities downstream of the works and means the continuation of the project's recovery process. Subsequently, a 22-meter plug will be built downstream of the floodgate chamber in the axis of the dam.

On June 11, 2019, the insurance company Mapfre made a first payment of compensation for the protection of extra-contractual civil liability (RCE) for \$6,169 corresponding to the affectations caused to third parties. This

indemnification is given in the terms and conditions of the RCE policy, clarifying that according to estimates they have made, indemnifications for the affectations to third parties may exceed \$15,000.

On July 19, 2019, the construction work on the dam was completed, allowing this structure to be brought to the height of 435 meters above sea level, that is, the maximum established in the original designs. As a consequence, the other technical advances achieved in the Ituango hydroelectric project and the capacities installed by EPM in the communities to react to a possible eventuality, allowed that on July 26, 2019, the National System of Disaster Risk Management (SNGRD) modified the state of alert for the evacuation of the populations located downstream of the future power generation plant. Determining that no locality remained on red alert, which means permanent preventive evacuation.

On September 16, 2019, Mapfre Seguros Generales de Colombia S.A. indicated its decision to grant coverage under the all-risk construction and assembly policy for the contingency in the Ituango Hydroelectric Project. Said insurance company appointed a series of national and international experts (engineers, geologists and geotechnical specialists in dams and underground works, lawyers, among others) to review the technical information of the main work fronts of the project; including tunnels, caverns, dam and tailgate. They also reviewed the designs, plans, technical specifications, construction processes, construction logs, risk matrix, pre and post-contingency studies. In this way, they concluded that the cause of the contingency, which occurred on April 28, 2018, is framed in the terms and conditions of the policy, thus confirming the coverage.

The insurance policy issued by Mapfre in favor of EPM covers damages to the infrastructure, civil works, project equipment and loss of profit due to the delay in the start of operations. Subsequently, the insurance company will quantify the value of the loss and, following the limits and conditions established in the insurance policy, will reimburse EPM for the resources needed to enter the financial statements of the Ituango Hydroelectric Project.

The insurance policy establishes an insured limit of USD 2,556 million for coverage of material damage to infrastructure and equipment. It also has coverage for delay in starting operations (money not received for damages derived from the contingency) for US\$628 million, amounts that set the maximum responsibility of the insurance company. The amount to be recognised by the insurer and its corresponding payment schedule will be the result of a rigorous analysis of damage quantification, whose results will be linked to the policy conditions such as deductibles, limits, additional coverage, among others.

September 27, 2019: By this date, a detailed exploration of 80% of the machine cavern, transformers, beacons, tunnels and adjacent galleries has been carried out. Damage from civil works was found in about 30% of the areas that could be directly inspected. By June 30, 2020 it is expected to have explored 100% of the cave complex and the dimensioning of the damages in order to define and start the activities of total repair of the cave complex

On November 8, 2019, the urban planning work was completed and the road over the top of the project's dam was handed over to the community of the municipality of Ituango, so that its inhabitants can have continuous mobility to and from their town.

On December 4, 2019, the insurance company Mapfre made a first payment for material damage in civil works, for \$525,438 (USD 150 million).

On December 18, 2019: EPM performed the closing maneuver of the right branch of the Auxiliary Deviation Gallery (GAD). This closure ensures the pre-plugging of the Auxiliary Deviation System (SAD) through the gates and allows reaching optimal conditions for the final plugging.

On March 3, 2020, the National Environmental Licensing Authority (ANLA) authorized EPM to continue works on the Ituango hydroelectric project, which will enable the company to carry out the work to dissipate in an optimal manner, through the turbines that will be housed in the powerhouse, the energy of the water contained in the dam. The decision of the ANLA is based on the provisions of Resolution 0820 (June 2018) of that entity, a preventive measure that does not involve the suspension of "...activities, works, engineering and civil works to be executed by the company to ensure the integrity of the project, and prevent and mitigate risks associated with the contingency presented ...", so that it can preserve the life of communities downstream of the project as a priority.

The company and the relevant control and surveillance bodies continue to assess the root causes of the above-mentioned events.

In relation to the contingency, EPM has recognised the next items in its separated financial statements as of 31 December 2019:

- Cost and progress of construction of the Ituango hydroelectric project for \$9,961,227 (see note 5).
- Receivables from the insurance company Mapfre for \$456,914 for impairment of civil works and total loss of machinery and equipment covered by the all-risk and construction policy and \$8,831 for non-contractual civil liability (see note 12).
- Total provision of \$45,676, of which \$6,799 was recognised in 2019 (2018: \$38,877) for the attention of those affected in Puerto Valdivia, for compensation of emergent damage, lost profits and moral damage, due to the increase in the waters of the Cauca River as a consequence of the occluding of the project on April 28, 2018. During 2019, payments of \$9,741 (2018: \$62) were made for a balance in liabilities in the provision account of \$35,873 (2018: \$38,815). (see note 27.1.6).
- Total provision of \$48,375 of which \$5,459 was recognised in 2019 (2018: \$42,917) for the attention of persons who had to be evacuated as a result of the event. During 2019, payments of \$20,420 (2018: \$23,700) were made for a balance in liabilities in the provision account of \$4,256 (2018: \$19,217). (see note 27.1.6).
- Total provision of \$151,401 of which \$14,083 was recognised in 2019 (2018: \$137,318) as guarantee for the reliability charge that covers the construction and commissioning of the Pescadero Ituango Hydroelectric Power Plant. At December 31, 2019, payments of \$151,401 (2018: \$-) were made. (see note 27.1.5).
- Total provision of \$69,897 of which \$38,509 was recognised in 2019 (2018: \$31,388) for environmental and social contingencies, established by the specific action plan for the recovery of the parties affected by the events of the occluding of the Cauca River diversion tunnel that the project had on April 28, 2018 and by the closure of floodgates that reduced the flow of the river downstream of the project. During 2019, payments of \$15,043 (2018: \$-) were made for a balance in liabilities in the provision account of \$54,854 (2018: \$31,388). (see note 27.1.1).
- Total provision of \$108,630 of which \$6,833 was recognised in 2019 (2018: \$101,797) between estimated expense and interest as a result of the valuation, from January to October 2021, for the default to the Intercolombia transporter for the months subsequent to the entry into operation of the connection infrastructure of the Ituango project. As of December 31, 2019, and 2018 no payments were made for this concept. (see note 27.1.5).
- Total provision of \$14,284 of which \$11,864 was recognised in 2019 (2018: \$2,420) for environmental sanctions filed by the National Environmental Licensing Authority (ANLA). During 2019, payments of \$2,420 (2018: \$-) were made for a balance in liabilities in the provision account of \$11,864 (2018: \$2,420). (see note 27.1.6).
- Additionally, other expenses of \$24,929 (December 2018: \$45,639) were recognised in the Statement of Comprehensive Income for the attention of the community affected by the contingency (see note 34).

## Note 5. Property, plant and equipment, net

The breakdown of the recorded value for property, plant and equipment is as follows:

Property, plant and equipment	2019	2018
Cost	30,657,277	30,963,801
Accrued depreciation and impairment loss	(4,225,502)	(3,923,314)
<b>Total</b>	<b>26,431,775</b>	<b>27,040,487</b>

*Figures stated in millions of Colombian pesos*

The following is the breakdown of the recorded value for temporarily idle property, plant and equipment:

Temporarily idle property, plant and equipment	2019	2018
Networks, lines and cables	248	-
Plants, pipelines and tunnels	4,463	29,833
Land and buildings	15,231	21,508
Machinery and equipment	313	105
Other property, plant and equipment	277	-
<b>Total temporarily idle property, plant and equipment</b>	<b>20,532</b>	<b>51,446</b>

*Figures stated in millions of Colombian pesos*

The most significant variation is due to the commissioning of Dolores generation plant and the decommissioning of the Rio Abajo plant.

The company possesses property, plant and equipment that have been removed from use and have not been classified yet as non-current assets held for sale, corresponding to the Rio Piedras power plant that was transferred from the generation business to the water supply business, which has to recover the mini power plant as a business strategy, the cucarachos los naranjos pumping station that is expected to be modernized, and the land of the Porce IV project that was not executed out and about which the company has not yet made any decisions, and the land of the Espíritu Santo project that has not yet been put into operation; the recorded value of these assets is as follows: for 2019 the cost amounts to \$20,532 (2018 \$51,446), accrued depreciation is \$2,806 (2018 \$6,474) and accrued impairment is \$923 (2018 \$22).

The following is the movement of cost, depreciation and impairment of property, plant and equipment:

2019	Networks, lines and cables	Plants, pipelines and tunnels	Construction in progress <sup>1</sup>	Land and buildings	Machinery and equipment	Communication and computer equipment	Furniture, fixtures and office equipment	Other property, plant and equipment <sup>2</sup>	Total
Initial balance	5,632,717	9,102,206	10,271,370	5,192,549	223,493	216,411	85,850	239,204	30,963,800
Additions <sup>3</sup>	34,825	16,780	2,580,289	6,173	10,492	37,186	582	36,254	2,722,581
Advanced payments (amortized) made to third parties	-	-	(28,149)	-	-	-	-	(1,804)	(29,953)
Transfers (-/+)	419,988	293,686	(831,072)	53,236	4,119	1,503	2,245	(23,530)	(79,825)
Disposals (-)	-	-	-	-	(60)	-	-	(1,037)	(1,097)
Withdrawals (-)	(352)	(130,941)	(904,057)	(4,156)	(3,008)	(18,785)	(93)	(1,519)	(1,062,911)
Impact due to adoption of IFRS 16 As of January 2019 <sup>4</sup>	-	(1,610,257)	1,886	(204,500)	-	-	-	-	(1,812,871)
Other changes	2,466	(771)	(40,804)	2,571	(2,916)	(2,344)	-	(649)	(42,447)
<b>Cost final balance</b>	<b>6,089,644</b>	<b>7,670,703</b>	<b>11,049,463</b>	<b>5,045,873</b>	<b>232,120</b>	<b>233,971</b>	<b>88,584</b>	<b>246,919</b>	<b>30,657,277</b>
<b>Accrued depreciation and impairment loss</b>									
Initial balance of accrued depreciation and impairment loss	(1,416,949)	(1,558,401)	-	(628,223)	(98,268)	(126,552)	(34,004)	(60,916)	(3,923,313)
Depreciation for the period	(164,059)	(186,109)	-	(56,102)	(11,097)	(23,328)	(8,767)	(6,808)	(456,270)
Disposals (-)	-	-	-	-	21	-	-	917	938
Withdrawals (-)	51	55,192	-	1,162	2,607	15,746	89	1,347	76,194
Impact due to adoption of IFRS 16 As of January 2019 <sup>4</sup>	-	-	-	77,013	-	-	-	-	77,013
Other changes	113	309	-	(3,085)	1,278	1,425	(32)	(72)	(64)
<b>Final balance accrued depreciation and impairment loss</b>	<b>(1,580,844)</b>	<b>(1,689,009)</b>	<b>-</b>	<b>(609,235)</b>	<b>(105,459)</b>	<b>(132,709)</b>	<b>(42,714)</b>	<b>(65,532)</b>	<b>(4,225,502)</b>
<b>Total final net balance property, plant and equipment</b>	<b>4,508,800</b>	<b>5,981,694</b>	<b>11,049,463</b>	<b>4,436,638</b>	<b>126,661</b>	<b>101,262</b>	<b>45,870</b>	<b>181,387</b>	<b>26,431,775</b>
<b>Advanced payments made to third parties</b>									
Initial balance	-	-	66,553	-	-	-	-	2,302	68,855
Movement (+)	-	-	26,946	-	-	-	-	7,014	33,960
Movement (-)	-	-	(55,095)	-	-	-	-	(8,818)	(63,913)
<b>Final balance</b>	<b>-</b>	<b>-</b>	<b>38,404</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>498</b>	<b>38,902</b>

Figures stated in millions of Colombian pesos

2018	Networks, lines and cables	Plants, pipelines and tunnels	Construction in progress <sup>1</sup>	Land and buildings	Machinery and equipment	Communication and computer equipment	Furniture, fixtures and office equipment	Other property, plant and equipment <sup>2</sup>	Total
Initial balance	5,060,448	7,322,713	8,450,022	5,111,232	206,506	197,597	68,430	227,233	26,644,181
Additions <sup>3</sup>	19,864	1,632,750	2,791,105	15,448	7,150	32,717	1,002	17,969	4,518,005
Advanced payments (amortized) made to third parties	-	-	28,243	-	-	-	-	1,106	29,349
Transfers (-/+)	484,528	247,388	(900,642)	19,385	11,875	8,979	17,643	(546)	(111,390)
Disposals (-)	(377)	(26,626)	(80,117)	(1,549)	(1,942)	(22,885)	(1,225)	(1,604)	(136,325)
Assets classified as held for sale	-	-	-	-	-	-	-	-	-
<b>Final balance</b>	<b>5,632,717</b>	<b>9,102,206</b>	<b>10,271,370</b>	<b>5,192,549</b>	<b>223,493</b>	<b>216,411</b>	<b>85,850</b>	<b>239,204</b>	<b>30,963,800</b>
<b>Accrued depreciation and impairment loss</b>									
Initial balance of accrued depreciation and impairment loss	(1,255,981)	(1,386,950)	-	(569,441)	(89,290)	(124,339)	(28,365)	(56,306)	(3,510,672)
Depreciation for the period	(160,573)	(188,192)	-	(58,272)	(10,782)	(24,636)	(6,835)	(5,969)	(455,259)
Impairment for the period	-	-	-	-	-	-	-	-	-
Disposals (-)	238	16,278	-	79	1,853	22,569	1,225	1,402	43,644
Other changes	(633)	463	-	(589)	(49)	(146)	(29)	(43)	(1,026)
<b>Final balance accrued depreciation and impairment loss</b>	<b>(1,416,949)</b>	<b>(1,558,401)</b>	<b>-</b>	<b>(628,223)</b>	<b>(98,268)</b>	<b>(126,552)</b>	<b>(34,004)</b>	<b>(60,916)</b>	<b>(3,923,313)</b>
<b>Total final balance property, plant and equipment</b>	<b>4,215,768</b>	<b>7,543,805</b>	<b>10,271,370</b>	<b>4,564,326</b>	<b>125,225</b>	<b>89,859</b>	<b>51,846</b>	<b>178,288</b>	<b>27,040,487</b>
<b>Advanced payments made to third parties</b>									
Initial balance	-	-	38,310	-	-	-	-	1,195	39,505
Movement (+)	-	-	81,684	-	-	-	-	1,524	83,208
Movement (-)	-	-	(53,441)	-	-	-	-	(417)	(53,858)
<b>Final balance</b>	<b>-</b>	<b>-</b>	<b>66,553</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,302</b>	<b>68,855</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Includes capitalization of borrowing costs for \$366,052 (2018: \$310,419), the weighted average effective rate used to determine the amount of borrowing costs was 8.28% in Colombian pesos (2018 7.85%) and 5.19% in USA dollars (2018: 5.73%). Additionally, it includes assets for rights of use associated with constructions in progress amounting to \$3,053.



The following are the main projects under construction:

Project	2019	2018
Ituango building project	9,961,227	9,368,040
Playas recovery project	86,876	63,781
Interconex Caldas - La Estrella	68,093	10,278
Distribution network restoration	66,851	-
Distribution network expansion	59,807	-
Cadena de occidente	40,469	9,381
San Nicolas Valley	35,426	17,002
Measurement code	27,827	17,103
Santo Domingo project	27,634	25,926
La Iguana Basin	25,529	16,389
Mobile Substations	18,889	11,332
Convenio Unidos por el Agua Sanitation	16,654	6,316
Rural Electrification	16,282	11,104
Modernization small Ayura plant	15,250	3,493
Envigado, Capiro sector Expansion	14,156	5,898
Control Centers Consolidation	13,718	4,215
Guatapé plant restoration	13,313	3,455
Calizas substation - Associated Lines	13,176	11,496
Unidos por el Agua Agreement Water supply	13,062	11,740
Medium Voltage Quality Improvement	13,014	-
Modernization Ayura plant	12,985	3,604
Modernisation of El Buey collection	12,976	1,619
Other projects	476,249	669,198
<b>Total</b>	<b>11,049,463</b>	<b>10,271,370</b>

*Figures stated in millions of Colombian pesos*

• As of December 31, 2019, the Ituango hydroelectric project presented a physical progress of 76.7% (31 December 2018: 88.2%), the physical progress presented as of the date of the period on which the separate financial statements are reported, corresponds to the new version of the recovery and commissioning program. As a result of the contingency that occurred on April 28, 2018, caused by a geological event that occluded the Cauca River diversion tunnel with approximately 160 thousand cubic meters of rock and soil, which generated an unscheduled damming, it was necessary to execute additional activities not contemplated in the schedule. Due to the above, a new schedule was made which includes recovery activities and longer terms. For this, the percentage of progress decreases both in what was programmed and what was executed. This new schedule is susceptible to changes and/or modifications, since the actual state of the underground works is not yet known, and it has not yet been possible to inspect it directly. It is estimated that the first power generation unit could enter into operation by the end of the last quarter of 2021. However, this commissioning date is very dynamic, due to changes in technical variables and the evolution and efficiency of the measures implemented to deal with the contingency.

As a consequence of the above, EPM has prioritized its decisions to protect firstly the communities and the environment and secondly the project infrastructure. Therefore, on May 7, 2018, the decision was made to evacuate the dammed water through the powerhouse of the future power generation plant so that it would be

channeled back into the Cauca River, and thus return to its traditional flow and the water level of the dam would drop. On January 16 and February 5, 2019, the water intake gates #2 and #1, respectively, were closed, thus suspending the flow of water through the powerhouse, which allowed the inspection of the main cavern where the powerhouse is located, the transformer areas and beacon 1. With this, the cleaning and water pumping activities began in order to determine the severity of the works, the condition of the powerhouse and the work that must be done for its recovery. Consequently, at the date of the financial statements, although it is true that a large part of the project's works have been explored, some directly and others indirectly, for example through drilling and geophysical tests, as with the southern area of the cave complex, it is not yet possible to have a precise estimate of the total and exact value of the damages associated with the civil works; However, equipment and civil works have been written off for a value of \$456,914; additionally, the project has been tested for impairment, considering the provisions of IAS 36 and no impairment has been evidenced.

Once the above activities are completed, adjusted estimates can be made regarding the time of the interventions, the recovery engineering and the works to be implemented to fully recover the project, using up to date information. With regard to compensation for the damage that occurred, on December 4, 2019, that Mapfre insurance company made a first payment for material damage in civil works, for \$525,438 (USD 150 million), which implied the cancellation of civil works for this amount.

According to the above, total of write-offs 31 December 2019 amounts to \$ 982,352, of which \$ 904,057 correspond to 2019.

On May 29, 2019, the closure of one of the two gates of the Auxiliary Deviation Gallery (GAD) was completed, in a new milestone in the project's risk mitigation work. With the closure of the first gate, on the left, the work of nearly three months was completed. After closure of the left GAD gate, the next work will focus on the closure of the right gate to complete the full closure. Subsequently, a 22-meter plug will be built downstream of the tailgate chamber in the axis of the dam.

In July 2019, dam construction was completed, which translates into risk reduction for downstream populations. During September, the dam wall was built on reinforced earth between units 2 and 3 and the material filling in 3A, in units 1 and 2 of the powerhouse cavern; also, heavy equipment was brought into the powerhouse to clean and remove materials from the assembly room to the south sector of the powerhouse, the rehabilitation of the access tunnel to the powerhouse was completed and the road between the north portal of the road tunnel and the road leading to Puerto Valdivia, up to km 13+610, began to be levelled.

On November 8, 2019, urban planning work was completed and the road over the top of the project's dam was handed over to the community of the municipality of Ituango, so that its inhabitants can have continuous mobility to and from their town.

On December 18, 2019, the second gate of the Auxiliary Deviation Gallery (GAD) was closed. The pre-positioning of the GAD, with its two gates duly closed, reduces risks for communities downstream of the works and means the continuation of the project's recovery process.

• Other projects: refers to other projects of the company, among these the most significant is merchandise for projects for \$77,298.

<sup>2</sup>Includes fleet equipment and vehicles, medical and scientific equipment, property, plant and equipment being assembled, property, plant and equipment in transit and replacement assets, equipment, catering, kitchen, pantry and hotel equipment.

<sup>3</sup>Includes purchases, capitalizable disbursements that meet recognition criteria, assets received from third parties and costs for dismantling and removal of property, plant and equipment.

<sup>4</sup>Corresponds to property, plant and equipment that as of January 1, 2019 under IFRS 16 were reclassified as rights of use for \$1,737,744 and as a result of the first-time adoption of IFRS 16 are \$1,886 for construction in progress.

Withdrawals for sale of assets were recognised in income for \$369.

Additions to property, plant and equipment of \$2,722,581 are taken as effective items, less the movement of advances of \$-29,953, capitalized interest of \$366,052, additions of right of use of \$3,053 and the environmental and decommissioning provisions of \$47,206.

At the closing of the period, all assets associated with electricity Generation, Distribution, Transmission, Gas, Water Supply and Wastewater management Cash Generating Units, which have intangible assets with an indefinite useful life, were tested for impairment, which showed no evidence of impairment.

As of December 31, 2019, there are restrictions on the realization of property, plant and equipment, associated with some equipment of the vehicle fleet for a net book value of \$2 (2018 \$2). These restrictions are given for theft and have been affected as a guarantee for the fulfillment of obligations.

The most significant commitments for the acquisition of property, plant and equipment of the Company at December 31, 2019 amount to \$ 2,290,755 (2018 \$3,452,179).

The following is the historical cost of the fully depreciated property, plant and equipment that continue in operation as of December 31, 2019 and 2018.

Group	2019	2018
Communication and computer equipment	20,345	19,507
Machinery and Equipment	11,703	10,617
Plants, ducts and tunnels	15,225	12,602
Networks, lines and cables	5,386	5,219
Furniture, fixtures and office equipment	3,281	3,015
Other properties, plant and equipment	3,153	2,971
Buildings	1,601	962
<b>Total</b>	<b>60,694</b>	<b>54,893</b>

Figures stated in millions of Colombian pesos

## Note 6. Investment property

The fair value of investment property is based on an appraisal made by experts with recognised professional capacity and recent experience in the category of real estate investments subject to assessment; this value has been determined by *Corporación Avalúos Lonja Inmobiliaria, Ingeniería y Avalúos S.A.S and Activos e Inventarios Limitada*. This activity is performed at least once a year. To determine the fair value of investment property, the comparative or market method is used, which consists of deducting the price by comparing transactions, supply and demand and valuations of similar or comparable properties, previous time adjustments, conformation and location; the residual method, which applies only to buildings and is based on the determination of the updated cost of the construction less the depreciation for age and state of conservation; and the rent method, which is used to determine the possible value of a good according to its capacity to generate revenue, taking into account the probable monthly rental fee that tenants would be willing to pay in the lease market. See Note 42. Fair value measurement on a recurring and non-recurring basis.

Investment property	2019	2018
<b>Initial Balance</b>	77,829	116,823
Net income or loss due to adjustment of fair value <sup>1</sup>	51,651	1,125
Dispositions (-)	(2,165)	(40,034)
Transfers <sup>2</sup> (-/+)	(493)	(85)
<b>Total</b>	<b>126,822</b>	<b>77,829</b>

Figures stated in millions of Colombian pesos

<sup>1</sup> See detail in Note 31. Other Income and Note 34. Other Expenses.

<sup>2</sup> Includes transfers to property, plant and equipment from investment properties.

As of December 31, 2019, net income from investment properties for the period amounted to \$679 (2018: \$657) and direct expenses for the period related to investment properties amounted to \$63 (2018: \$61).

## Note 7. Goodwill and other intangible assets

The breakdown of the recorded value for Goodwill and other intangible assets is as follows:

Intangibles	2019	2018
<b>Cost</b>	<b>1,197,682</b>	<b>1,080,395</b>
Goodwill	260,950	260,950
Concessions and franchises	452,743	381,251
Rights	7,984	7,984
Licenses	85,491	70,180
Software	186,842	168,556
Easements	167,172	164,516
Disbursements Development Phases	33,522	23,980
Other intangibles	2,978	2,978
<b>Accrued amortization and impairment</b>	<b>(399,235)</b>	<b>(342,130)</b>
Concessions and franchises	(251,226)	(226,552)
Rights	(1,727)	(1,419)
Licenses	(41,015)	(31,854)
Software	(102,039)	(79,396)
<b>Easements</b>	<b>(1,237)</b>	<b>(1,238)</b>
Other intangibles	(1,991)	(1,671)
<b>Total</b>	<b>798,447</b>	<b>738,265</b>

Figures stated in millions of Colombian pesos

The movement of cost, amortization and impairment of intangible assets is detailed below:

2019	Goodwill	Concessions and similar rights	Capitalized development expenses	Software and IT applications	Licenses	Rights	Other intangible assets <sup>1</sup>	Total
Initial balance cost	260,950	381,251	23,980	168,556	70,180	7,984	167,494	1,080,395
Additions <sup>2</sup>	-	3,020	9,444	17,920	9,955	-	548	40,887
Transfers (-/+)	-	68,472	-	2,182	7,116	-	2,057	79,827
Disposals (-)	-	-	-	(1,469)	(2,020)	-	-	(3,489)
Other changes	-	-	98	(347)	260	-	51	62
<b>Final balance cost</b>	<b>260,950</b>	<b>452,743</b>	<b>33,522</b>	<b>186,842</b>	<b>85,491</b>	<b>7,984</b>	<b>170,150</b>	<b>1,197,682</b>
Initial balance accrued amortization and impairment	-	(226,551)	-	(79,396)	(31,855)	(1,418)	(2,910)	(342,130)
Amortization for the period <sup>3</sup>	-	(24,633)	-	(24,268)	(10,341)	(309)	(1,211)	(60,762)
Disposals (-)	-	-	-	1,332	1,528	-	-	2,860
Other changes	-	(42)	-	293	(347)	-	893	797
<b>Final balance accrued amortization and impairment</b>	<b>-</b>	<b>(251,226)</b>	<b>-</b>	<b>(102,039)</b>	<b>(41,015)</b>	<b>(1,727)</b>	<b>(3,228)</b>	<b>(399,235)</b>
<b>Final balance intangible assets net</b>	<b>260,950</b>	<b>201,517</b>	<b>33,522</b>	<b>84,803</b>	<b>44,476</b>	<b>6,257</b>	<b>166,922</b>	<b>798,447</b>

Figures stated in millions of Colombian pesos

2018	Goodwill	Concessions and similar rights	Capitalized development expenses	Software and IT applications	Licenses	Rights	Other intangible assets <sup>1</sup>	Total
Initial balance cost	260,950	302,217	56,676	115,570	52,918	50,003	124,534	962,868
Additions <sup>2</sup>	-	3,571	15,098	18,349	8,715	-	3,639	49,372
Transfers (-/+)	-	75,662	(47,794)	37,124	10,834	-	35,562	111,388
Disposals (-)	-	-	-	(2,487)	(2,304)	-	(77)	(4,868)
Other changes	-	(199)	-	-	17	(42,018)	3,836	(38,364)
<b>Final balance cost</b>	<b>260,950</b>	<b>381,251</b>	<b>23,980</b>	<b>168,556</b>	<b>70,180</b>	<b>7,985</b>	<b>167,494</b>	<b>1,080,396</b>
Initial balance accrued depreciation and impairment loss	-	(211,233)	-	(61,117)	(23,888)	(1,111)	(2,589)	(299,938)
Amortization for the period <sup>3</sup>	-	(15,509)	-	(20,727)	(10,161)	(307)	(1,212)	(47,916)
Disposals (-)	-	-	-	2,450	2,263	-	-	4,713
Other changes	-	191	-	(2)	(69)	-	891	1,011
<b>Final balance accrued depreciation and impairment loss</b>	<b>-</b>	<b>(226,551)</b>	<b>-</b>	<b>(79,396)</b>	<b>(31,855)</b>	<b>(1,418)</b>	<b>(2,910)</b>	<b>(342,130)</b>
<b>Final balance intangible assets net</b>	<b>260,950</b>	<b>154,700</b>	<b>23,980</b>	<b>89,160</b>	<b>38,325</b>	<b>6,567</b>	<b>164,584</b>	<b>738,266</b>

Figures stated in millions of Colombian pesos

<sup>1</sup> includes easements, intangibles related to customers and other intangibles corresponding to premiums at gas service stations.

<sup>2</sup> includes purchases, capitalizable expenditure that meets the recognition criteria and concessions. In 2019, the purchases associated with capitalized development expenditure were earmarked for IT projects: EAM Asset Management, Sentinel Project (*Proyecto centinela*), Treasury Project (*Proyecto Tesorería*).

<sup>3</sup> see note 32 Costs of services rendered and note 33 Administrative expenses.

At the end of the periods, impairment testing was performed on assets for those intangibles with an indefinite lifespan.

The amortization of intangible assets is recognised as costs and expenses in the statement of comprehensive income, section profit or loss for the period, in the lines Costs for services rendered and Administrative expenses.

The historical cost at the presentation date and the remaining amortization period for significant intangibles is:

Relevant intangible assets	Lifespan	Remaining depreciation period	2019	2018
Ituango Generation Plant Project	Indefinite	-	177,667	177,667
Espíritu Santo	Indefinite	-	82,980	82,980
Easement lines corridor 53	Indefinite	-	63,040	63,040
Distribution circuit network Bello	Indefinite	105	54,558	27,419

Figures stated in millions of Colombian pesos

The following intangible assets have an indefinite lifespan: goodwill and easements, the latter are agreed in perpetuity. By definition, an easement is the real, perpetual or temporary right over another property, under which it can be used, or exercise certain rights of disposal, or prevent the owner from exercising some of their property rights (Art. 2970 of the Colombian Civil Code). In EPM, easements are not treated individually, since they are constituted for public utility projects, where the general interest prevails over the individual, considering that the objective is to improve the quality of life of the community; the aforementioned projects do not have a definite temporality, that is why they are constituted in perpetuity supported in their use. However, there are some easements with a definite useful life, because they are tied to the useful life of the main asset required by the easement.

As of 31 December 2019, have a recorded value of \$428,122 and 2018 for \$425,271.

Intangible assets with indefinite lifespan	2019	2018
<b>Goodwill</b>		
Ituango Generation Plant Project	177,667	177,667
Espíritu Santo	82,980	82,980
Surtigás Necoclí	303	303
<b>Subtotal goodwill</b>	<b>260,950</b>	<b>260,950</b>
<b>Other intangible assets</b>		
Easements	167,172	164,321
<b>Subtotal other intangible assets</b>	<b>167,172</b>	<b>164,321</b>
<b>Total intangible assets with indefinite lifespan</b>	<b>428,122</b>	<b>425,271</b>

Figures stated in millions of Colombian pesos

## Note 8. Investment in subsidiaries

The breakdown of the subsidiaries of the Group at the date of the reporting period is the following:

Name of subsidiary	Location (Country)	Main Activity	Percentage of participation and voting rights		Date of establishment
			2019	2018	
Empresa de energía del Quindío S.A. E.S.P. EDEQ	Colombia	Provides public utilities of electrical energy, purchase, sale, and distribution of electrical energy.	19.26%	19.26%	12/22/1988
Central Hidroeléctrica de Caldas S.A. E.S.P. CHEC	Colombia	Provides public energy utilities, operating electricity generating plants, transmission and sub-transmission lines and distribution networks, as well as the marketing, import, distribution and sale of electricity.	24.44%	24.44%	09/09/1950
Electrificadora de Santander S.A. E.S.P. ESSA	Colombia	Provides public electricity utilities buys, sells, markets and distributes electric energy.	0.28%	0.28%	9/16/1950
Centrales Eléctricas del Norte de Santander S.A. E.S.P. CENS	Colombia	Provides public utilities for electrical energy, purchase, export, import, distribution and sale of electrical energy, construction and operation of generating plants, substations, transmission lines and distribution networks.	12.54%	12.54%	10/16/1952
Hidroecológica del Teribe S.A. HET <sup>1</sup>	Panama	Finances the construction of the Bonyic hydroelectric project, required to satisfy the growth in energy demand in Panama.	99.68%	99.18%	11/11/1994
Gestión de Empresas Eléctricas S.A. GESA	Guatemala	Provides advisory and consulting services to electric power distribution, generation and transportation companies.	99.98%	99.98%	12/17/2004
Aguas Nacionales EPM S.A. E.S.P.	Colombia	Provides domestic public utilities of water, sewerage and solid waste management, treatment and use of solid waste, complementary activities, and engineering utilities propper of those public utilities.	99.97%	99.97%	11/29/2002
Aguas Regionales EPM S.A. E.S.P.	Colombia	Guarantees the provision of domestic public utilities of water supply, sewerage and solid waste management, and compensates for the lack of infrastructure for these utilities in the partner municipalities.	67.25%	67.25%	1/18/2006
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P. <sup>3</sup>	Colombia	Provides domestic public utilities of water and sewerage, as well as other complementary activities typical of each of these public utilities.	56.01%	56.00%	11/22/1999
Aguas de Malambo S.A. E.S.P. <sup>4</sup>	Colombia	Dedicated to guarantee the provision of public domestic utilities of water, sewerage and solid waste management in the jurisdiction of the municipality of Malambo, department of Atlántico.	98.03%	97.46%	11/20/2010
Empresas Públicas de Rionegro S.A. E.S.P. - EP RIO	Colombia	Provision of public domestic utilities, including water and sewerage, as well as complementary and related activities to them, specifically the administration, operation, maintenance and investment of water and sewerage systems in the municipality of Rionegro, the implementation of programs and projects on the environment and renewable and non-renewable natural resources, to promote sustainable development. In addition, the company will provide the service of maintenance for the public lighting network in the Municipality of Rionegro.	100.00%	100.00%	12/9/1996
Empresas Varias de Medellín S.A. E.S.P.	Colombia	Subsidiary dedicated to the provision of public solid waste management utility within the framework of integrated solid waste management.	64.98%	64.98%	1/11/1964
EPM Inversiones S.A.	Colombia	Dedicated to capital investment in national or foreign companies organized as public utility companies.	99.99%	99.99%	8/25/2003
Maxseguros EPM Ltd	Bermuda	Negotiating, contracting and managing of reinsurance for policies covering equity.	100.00%	100.00%	4/23/2008
Panamá Distribution Group S.A. PDG	Panama	Capital investment in companies.	100.00%	100.00%	10/30/1998
Distribución Eléctrica Centroamericana DOS S.A. DECA II	Guatemala	Makes capital investments in companies that are dedicated to the distribution and commercialization of electrical energy, and provides telecommunications utilities.	99.99%	99.99%	3/12/1999
EPM Capital México S.A. de CV <sup>2</sup>	Mexico	Develops infrastructure projects related to electricity, lighting, natural gas, telecommunications, sanitation, drinking water plants, sewerage, wastewater treatment, buildings, as well as their operation and utilities.	51.28%	39.36%	04/05/2012
EPM Chile S.A.	Chile	Develops electric energy, lighting, natural gas, telecommunications, sanitation, water potabilization plants, sewage and waste water treatment plants projects, as well as providing these utilities and participating in all types of tenders.	99.99%	99.99%	2/22/2013
patrimonio Autónomo Financiación Social	Colombia	Administers the resources and payments of the social financing program created to facilitate the purchase of electrodomestics, gas appliances and information technology products by users.	100.00%	100.00%	4/14/2008

<sup>1</sup>In December 2019 EPM capitalized Hidroecológica del Teribe S.A. for \$178,469

<sup>2</sup> In September 2019, EPM capitalized EPM Capital México S.A. de C.V. for \$74,661

<sup>3</sup> In July 2019 EPM capitalized Empresa de Aguas del Oriente Antioqueño S.A. E.S.P. for \$1,211

<sup>4</sup> In June 2019, EPM capitalized Aguas de Malambo S.A. E.S.P. for \$12,000 and in November 2018 for \$8,000.

Subsidiaries in which less than 50% of direct participation, control is obtained through the indirect participation that the other companies of the EPM Group have.

The value of investments in subsidiaries at reporting date was:

Subsidiary	31 December 2019					31 December 2018				
	Investment value				Total	Investment value				Total
	Cost	Equity method	Impairment	Dividends <sup>2</sup>		Cost	Equity method	Impairment	Dividends	
EPM Inversiones S.A.	1,561,331	94,126	-	(195,513)	1,459,944	1,561,331	14,117	-	(139,714)	1,435,734
Aguas Nacionales EPM S.A. E.S.P.	1,552,115	100,135	-	(8,578)	1,643,672	1,552,115	(46,953)	-	-	1,505,162
EPM Chile S.A.	1,044,935	59,062	-	-	1,103,997	1,044,935	(667)	-	-	1,044,268
Distribución Eléctrica Centroamericana DOS S.A. DECA II	1,009,257	926,266	-	(356,353)	1,579,170	1,009,257	1,009,464	-	(171,850)	1,846,871
Hidrocológica del Teribe S.A. HET	524,536	(191,769)	(86,963)	-	245,804	346,067	(196,050)	(86,963)	-	63,054
Panama Distribution Group S.A. PDG	238,116	275,838	-	(21,657)	492,297	238,116	284,791	-	(28,401)	494,506
EPM Capital México S.A. de C.V. <sup>3</sup>	177,436	(177,436)	-	-	-	102,774	(37,257)	-	-	65,517
Central Hidroeléctrica de Caldas S.A. E.S.P. CHEC	140,663	42,153	-	(34,941)	147,875	140,663	32,960	-	(20,677)	152,946
Aguas de Malambo S.A. E.S.P.	70,718	(32,181)	(1,641)	-	36,896	58,718	(26,904)	(1,641)	-	30,173
Maxseguros EPM Ltd.	63,784	107,955	-	(2,944)	168,795	63,784	97,024	-	-	160,808
Patrimonio Autónom Financiaci3n Social <sup>1</sup>	61,914	87,359	-	-	149,273	69,414	67,325	-	-	136,739
Centrales Eléctricas del Norte de Santander S.A. E.S.P. CENS	57,052	(16,735)	-	-	40,317	57,052	(21,927)	-	(2,418)	32,707
Aguas Regionales EPM S.A. E.S.P.	47,228	19,390	-	-	66,618	47,228	15,106	-	-	62,334
EMPRESAS PUBLICAS DE RIONEGRO SAS ESP	46,905	25,587	-	-	72,492	46,905	9,829	-	-	56,734
Empresas Varias de Medellín S.A. E.S.P.	32,967	106,949	-	(21,444)	118,472	32,967	93,179	-	-	126,146
Empresa de Energía del Quindío S.A. E.S.P. EDEQ	28,878	13,038	-	(5,938)	35,978	28,878	10,638	-	(4,401)	35,115
Gesti3n de Empresas Eléctricas S.A. GESA	25,782	15,912	-	(3,704)	37,990	25,782	14,766	-	(3,841)	36,707
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P.	2,774	1,759	-	-	4,533	1,564	1,022	-	-	2,586
Electrificadora de Santander S.A. E.S.P. ESSA	2,514	287	-	(368)	2,433	2,514	48	-	(238)	2,324
<b>Total</b>	<b>6,688,905</b>	<b>1,457,695</b>	<b>(88,604)</b>	<b>(651,440)</b>	<b>7,406,556</b>	<b>6,430,064</b>	<b>1,320,511</b>	<b>(88,604)</b>	<b>(371,540)</b>	<b>7,290,431</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Decrease in the cost of the investment in the autonomous equity *financiación social* is due to a return of contributions in 2019 for \$7,500 and in 2018 for \$15,000.

<sup>2</sup>Dividends for \$654,583 (2018 \$383,796) have been received.

<sup>3</sup> the decrease in EPM Capital México investment corresponds to a subsidiary's implicit obligation derived from the application of the equity method.



The breakdown of the equity method recognised in the profit or loss and in other comprehensive income is as follows:

Subsidiary	31 December 2019			31 December 2018		
	Equity method for the period		Total	Equity method for the period		Total
	Profit or loss for the period	Other comprehensive income		Profit or loss for the period	Other comprehensive income	
EPM Inversiones S.A.	287,285	(38,225)	249,060	225,280	41,391	266,671
Aguas Nacionales EPM S.A. E.S.P.	147,088	-	147,088	(24,308)	-	(24,308)
EPM Chile S.A.	200,747	(114,982)	85,765	284,995	(11,855)	273,140
Distribución Eléctrica Centroamericana DOS S.A. DECA II	176,756	(112,332)	64,424	176,749	6,495	183,244
Hidroecológica del Teribe S.A. HET	6,386	(1,969)	4,417	(816)	11,790	10,974
Panamá Distribution Group S.A. PDG	53,457	(26,014)	27,443	45,905	8,312	54,217
Central Hidroeléctrica de Caldas S.A. E.S.P. CHEC	30,125	(255)	29,870	29,057	27	29,084
EPM Capital México S.A. de CV	(120,257)	(95,534)	(215,791)	1,648	6,430	8,078
Maxseguros EPM Ltd	9,674	1,257	10,931	10,711	13,308	24,019
Centrales Eléctricas del Norte de Santander S.A. E.S.P. CENS	8,153	(543)	7,610	5,283	(226)	5,057
Aguas de Malambo S.A. E.S.P.	(5,228)	-	(5,228)	(1,330)	-	(1,330)
Aguas Regionales EPM S.A. E.S.P.	4,284	-	4,284	5,642	-	5,642
Empresas Públicas de Rionegro S.A. E.S.P. - EP RIO	15,758	-	15,758	8,967	-	8,967
Empresas Varias de Medellín S.A. E.S.P.	18,139	(4,369)	13,770	11,588	(1,945)	9,643
Empresa de Energía del Quindío S.A. E.S.P. EDEQ	6,903	(101)	6,802	6,489	232	6,721
Gestión de Empresas Eléctricas S.A. GESA	5,111	(124)	4,987	4,334	297	4,631
Electrificadora de Santander S.A. E.S.P. ESSA	410	66	476	385	55	440
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P.	736	-	736	326	1	327
Patrimonio Autónomo Financiación Social	21,376	-	21,376	18,702	-	18,702
<b>Total</b>	<b>866,903</b>	<b>(393,125)</b>	<b>473,778</b>	<b>809,606</b>	<b>74,312</b>	<b>883,918</b>

Figures stated in millions of Colombian pesos

The financial information of the company's subsidiaries as of the date of the reporting period is as follows. All subsidiaries are accounted for by the equity method in the separated financial statements:

31 December 2019	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Income from ordinary activities	Profit or loss for the period	Other comprehensive income	Total comprehensive income
						Continuing operations		
Empresa de energía del Quindío S.A. E.S.P. EDEQ	77,132	211,633	43,155	71,474	245,074	35,822	(525)	35,297
Central Hidroeléctrica de Caldas S.A. E.S.P. CHEC	244,733	944,416	261,482	383,707	766,819	123,470	(1,045)	122,425
Electrificadora de Santander S.A. E.S.P. ESSA	321,713	1,558,855	335,156	850,594	1,195,556	148,540	24,105	172,645
Centrales Eléctricas del Norte de Santander S.A. E.S.P. CENS	229,499	964,992	231,573	672,756	777,880	65,033	(4,330)	60,703
Hidroecológica del Teribe S.A. HET	14,295	464,143	28,752	185,252	54,851	5,600	(2,442)	3,158
Gestión de Empresas Eléctricas S.A. GESA	15,403	-	152	-	7,282	5,112	(124)	4,988
Aguas Nacionales EPM S.A. E.S.P.	116,091	1,748,771	82,936	102,902	302,546	178,228	-	178,228
Aguas Regionales EPM S.A. E.S.P.	25,534	143,830	34,000	32,754	56,210	9,932	-	9,932
Empresas Públicas de Rionegro S.A. E.S.P. - EP RIO	16,243	91,013	16,202	16,243	40,114	18,076	-	18,076
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P.	5,100	4,553	1,163	396	3,541	1,314	-	1,314
Aguas de Malambo S.A. E.S.P.	5,122	49,756	6,221	7,091	10,850	(3,264)	-	(3,264)
Empresas Varias de Medellín S.A. E.S.P.	176,084	208,296	144,087	175,979	249,064	28,321	(6,724)	21,597
EPM Inversiones S.A.	17,418	1,448,161	505	5,971	-	265,866	18,219	284,085
Maxseguros EPM Ltd	389,840	-	221,045	-	15,148	9,674	1,257	10,931
Panamá Distribution Group S.A. PDG	676,302	2,068,197	1,148,316	889,845	2,426,283	103,801	4,936	108,737
Distribución Eléctrica Centroamericana DOS S.A. DECA II	1,044,381	2,974,486	1,306,273	1,151,393	3,470,986	212,206	36	212,242
EPM Capital México S.A. de CV	237,476	558,959	165,201	330,019	384,764	156,673	(208,337)	(51,664)
EPM Chile S.A.	243,613	3,322,551	139,033	2,300,790	541,346	198,845	(89,805)	109,040

Figures stated in millions of Colombian pesos

31 December 2018	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Income from ordinary activities	Profit or loss for the period	Other comprehensive income	Total comprehensive income
						Continuing operations		
Empresa de energía del Quindío S.A. E.S.P. EDEQ	66,422	193,750	51,399	39,098	233,114	33,665	1,203	34,868
Central Hidroeléctrica de Caldas S.A. E.S.P. CHEC	190,884	864,688	151,124	339,943	681,783	118,901	111	119,012
Electrificadora de Santander S.A. E.S.P. ESSA	312,774	1,427,035	293,144	790,896	1,115,338	139,738	19,994	159,732
Centrales Eléctricas del Norte de Santander S.A. E.S.P. CENS	173,048	909,308	231,845	621,052	688,659	42,141	(1,800)	40,340
Hidroecológica del Teribe S.A. HET	15,858	475,835	39,035	369,859	50,082	(1,553)	7,349	5,797
Gestión de Empresas Eléctricas S.A. GESA	14,114	-	146	-	6,477	4,335	297	4,632
Aguas Nacionales EPM S.A. E.S.P.	124,446	1,612,669	161,103	66,635	32,806	(21,698)	0	(21,698)
Aguas Regionales EPM S.A. E.S.P.	19,311	120,376	23,964	23,044	50,942	8,383	0	8,383
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P.	1,544	3,543	255	215	2,219	582	1	583
Aguas de Malambo S.A. E.S.P.	11,223	31,027	3,934	5,484	11,549	(1,375)	-	(1,375)
Empresas Públicas de Rionegro S.A. E.S.P. - EP RIO	36,751	62,810	9,989	32,837	26,617	8,967	-	8,967
Empresas Varias de Medellín S.A. E.S.P.	173,838	149,178	102,784	144,515	227,427	17,916	(2,994)	14,922
EPM Inversiones S.A.	9,317	1,374,403	7,568	5,620	0	225,240	41,375	266,615
Maxseguros EPM Ltd	398,372	-	237,564	-	8,765	10,711	13,308	24,019
Panama Distribution Group S.A. PDG	690,582	1,946,017	948,649	1,036,858	2,017,192	92,800	8,438	101,238
Distribución Eléctrica Centroamericana DOS S.A. DECA II	1,006,976	2,701,475	1,130,243	839,050	2,862,252	220,476	6,669	227,145
EPM Capital Mexico S.A. de CV	257,728	561,087	261,457	358,434	250,583	4,180	17,186	21,366
EPM Chile S.A.	336,736	3,784,868	188,725	2,889,541	556,070	286,314	(14,690)	271,623

Figures stated in millions of Colombian pesos

### 8.1 Changes in Participation of Subsidiaries that did not result in Loss of Control

During 2019, there were changes in participation of the following subsidiaries:

The percentage of participation in Hidroecológica del Teribe S.A. increased to 99.68%, due to the capitalization of EPM. This variation had an effect on the application of the equity method, reducing the investment by \$144 directly recognised in equity.

The percentage of participation in EPM Capital Mexico S.A. de C.V. increased to 51.28%, due to the capitalization of EPM. This variation had an effect on the application of the equity method, decreasing the investment by \$4,010, directly recognised in equity.

The percentage of participation in Empresa de Aguas del Oriente Antioqueño S.A. E.S.P. increased to 56.01%, due to the capitalization of EPM. This variation did not have an effect on the application of the equity method, since the municipality of El Retiro also capitalized this company.

The percentage of ownership in Aguas de Malambo S.A. E.S.P. increased to 98.03%, due to the capitalization of EPM. This variation had an effect on the application of the equity method, reducing the investment by \$49 recognised directly in equity.

## Note 9. Investments in associates

The breakdown of Investment in Associates of EPM at the date of the reporting period is:

Name of the associate	Location (country)	Main activity	Percentage of participation and voting rights		Date of establishment
			2019	2018	
Hidroeléctrica Ituango S.A. E.S.P.	Colombia	Promotion, design, construction operation, maintenance and electric energy sales at the national and international scale from the Ituango Hydroelectric Power Plant.	46.33%	46.33%	12/29/1997
Hidroeléctrica del Río Aures S.A. E.S.P.	Colombia	Generation and sale of electricity through a hydroelectric plant located in the municipalities of Abejorral and Sonson, in the Department of Antioquia.	32.99%	32.99%	5/14/1997
UNE EPM Telecomunicaciones S.A.	Colombia	Renders telecommunications and ITC utilities, information services and complementary activities.	50.00%	50.00%	6/29/2006
Inversiones Telco S.A.S.	Colombia	Invest in companies whose corporate purpose is the provision of telecommunications utilities, TIC, information services and complementary activities, as well as in companies that render services of business processes outsourcing.	50.00%	50.00%	11/5/2013

The amount of investment in associates at the reporting date was:

Associate	2019				2018			
	Investment value			Dividends <sup>1</sup>	Investment value			Dividends <sup>1</sup>
	Cost	Impairment	Total		Cost	Impairment	Total	
Hidroeléctrica Ituango S.A. E.S.P.	34,227	-	34,227	-	34,227	-	34,227	-
Hidroeléctrica del Río Aures S.A. E.S.P.	2,478	-	2,478	-	2,478	-	2,478	-
UNE EPM Telecomunicaciones S.A.	2,342,488	-	2,342,488	-	2,342,488	-	2,342,488	38,483
Inversiones Telco S.A.S.	55,224	-	55,224	3,103	55,224	-	55,224	3,442
<b>Total investment in associates</b>	<b>2,434,417</b>	<b>-</b>	<b>2,434,417</b>	<b>3,103</b>	<b>2,434,417</b>	<b>-</b>	<b>2,434,417</b>	<b>41,925</b>

Figures stated in millions of Colombian pesos

<sup>1</sup> In 2019 dividends for \$38,483 from UNE EPM Telecomunicaciones S.A. decreed in 2018 were received

## Note 10. Investment in joint ventures

The breakdown of joint ventures of EPM at the reporting date is as follows:

Name of the joint venture	Location (Country)	Main Activity	Percentage of participation and voting rights		Date of establishment
			2019	2018	
Parques del Río S.A.S. <sup>1</sup>	Medellín	Construction, operation, management and sustainment of the Parques del Río Medellín project, as well as acting as urban project manager.	33%	33%	12/26/2015

<sup>1</sup> Joint Venture established on November 26, 2015, in which the Municipality of Medellín, Interconexión Eléctrica S.A. E.S.P. (ISA), Empresa de Transporte Masivo del Valle de Aburrá Ltda. (Metro) y EPM participate. The Entity seeks promote the next urban developments in the city, the department and the country, taking advantage of synergies in the infrastructure, mobility, environmental and social areas, among others.

The value of investments in joint Ventures at the reporting date was:

Name of the joint venture	2019				2018			
	Investment value			Dividends	Investment value			Dividends
	Cost	Impairment	Total		Cost	Impairment	Total	
Parques del Río S.A.S.	99	-	99	-	99	-	99	-
<b>Total investment in joint ventures</b>	<b>99</b>	<b>-</b>	<b>99</b>	<b>-</b>	<b>99</b>	<b>-</b>	<b>99</b>	<b>-</b>

Figures stated in millions of Colombian pesos

## Note 11. Asset impairment loss

### 11.1 Impairment of investments in subsidiaries, associates and joint ventures

At the presentation date, no impairment loss was recognised in the statement of comprehensive income, related to investments in subsidiaries, associates and joint Ventures.

The following shows the accrued effect for the recognised impairment:

Investment	Recorded value	
	2019	2018
<b>Subsidiary</b>		
Hidroecológica del Teribe S.A. HET	86,963	86,963
Aguas de Malambo S.A. E.S.P.	1,641	1,641
<b>Total subsidiaries</b>	<b>88,604</b>	<b>88,604</b>

Figures stated in millions of Colombian pesos

The following are the key assumptions used by the company for the assessment of the value in use/fair value less selling costs:

Concept	Key assumption
Business Plan Update	A general update of the business plan was made, which is part of the process of reviewing the company's strategy and management scheme, enabling the new capital requirements of the company to be estimated.
Income	<p>Tariff aspects: the tariff applied corresponds to one denominated by the regulation as "reduced costs" that is not directly associated with the company's real investments and costs, what generates an imbalance and causes revenues to be lower than expected.</p> <p>Commercial aspects: improvement in the portfolio has been difficult due to the low payment culture in the region.</p>
Costs and expenses	<p>It has been necessary to purchase water in bloc from the sociedad de acueducto, alcantarillado y aseo de Barranquilla S.A. E.S.P. - AAA for longer than estimated, since it was initially considered that the neighborhoods served by this means would be interconnected to the system. Similarly, by resolution of the Water Regulation Commission the price was increased by three times its initial value.</p> <p>The company paid obligations generated before the entry of EPM that by shareholder agreement should be covered by the previous owner. These costs and expenses are being recovered.</p>
Investment	<p>Master Plan: A master plan is required for the main water and wastewater projects, which diagnoses the current infrastructure, identifies needs, and proposes solutions over time for a population both in terms of investment and operation. The contract for their preparation was added in time to include a wider range of customers. Similarly, there were delays due to problems in the networks that did not allow the studies to performed, in addition to the fact that the length of the networks exceeded the contract's estimates. The fact that we did not have a definitive master plan until the end of 2013 meant a delay in the investment plan, fewer users were connected and service continuity was not improved.</p>

## 11.2 Impairment of cash generating units (CGU)

The recorded value of goodwill and intangible assets with indefinite useful life associated with each CGU is broken down below:

Cash Generating Unit	Recorded value	
	2019	2018
<b>Segment Electricity generation</b>		
Goodwill	260,647	260,647
Easements	444	444
<b>CGU - Electricity Generation-</b>	<b>261,091</b>	<b>261,091</b>
<b>Segment Electricity Transmission</b>		
Easements	127,059	127,023
<b>CGU - Electricity Transmission-</b>	<b>127,059</b>	<b>127,023</b>
<b>Segment Electricity Distribution</b>		
Easements	29,433	28,906
<b>CGU - Electricity Distribution-</b>	<b>29,433</b>	<b>28,906</b>
<b>Gas Segment</b>		
Goodwill	303	303
Easements	3,692	3,679
<b>CGU - Natural Gas-</b>	<b>3,995</b>	<b>3,982</b>
<b>Water supply segment</b>		
Easements	4,713	2,919
<b>CGU - Water Supply-</b>	<b>4,713</b>	<b>2,919</b>
<b>Sanitation segment</b>		
Easements	594	1,350
<b>UGE - Sanitation-</b>	<b>594</b>	<b>1,350</b>

Figures stated in millions of Colombian pesos

Description of the CGUs is broken down below:

- CGU Electricity Generation, which activity consists of electricity generation and the commercialization of large electric power blocks, based on the acquisition or development of a portfolio of power proposals for the market.
- CGU Electricity Distribution, which activity consists of transporting electric power through a set of lines and substations, with their associated equipment, operating at voltages below 220 KV, the commercialization of power to the end user of the regulated market and the development of related and complementary activities. Includes the Regional Transmission System (STR), the Local Distribution System (SDL), the public lighting utility and the rendering of associated services.
- CGU Electricity Transmission, which activity consists of the transporting of energy in the National Transmission System (STN), composed of the set of lines, with their corresponding connection equipment, which operate at voltages equal to or greater than 220 KV. The National Transmitter (TN) is the legal entity

that operates and transports electric power in the STN or has established a company whose purpose is the development of said activity.

- CGU Natural Gas, which activity consists of driving combustible natural gas from the city gate to the end user, through medium and low-pressure pipes. It includes the sale of natural gas by different systems, including distribution by network, vehicular natural gas, compressed natural gas and service stations.
- CGU Water, which activity consists in conceptualizing, structuring, developing and operating systems for supplying water. It includes carrying out the commercial management of the portfolio of services related to the water supply for different uses, in addition to the use of the productive chain, specifically in the electricity generation, and the supply of raw water.
- CGU Sanitation, includes the activities of conceptualizing, structuring, developing and operating Sewage and Waste Management systems.

Goodwill is assigned mainly to the segment/CGU Electricity Generation, which presented a balance as of 31 December 2019 for \$260,647 generated as a result of the liquidation of the subsidiary EPM Ituango S.A E.S.P. and Espiritu Santo whose assets were transferred to EPM, additionally, goodwill in the CGU Natural Gas for the business combination with the *Surtidora de Gas del Caribe S.A. E.S.P.* in the municipality of Necocli for \$303.

The intangible easement with indefinite lifespan is assigned to the CGUs: Electricity Generation, Electricity Transmission, Electricity Distribution, Natural Gas, Water and Sanitation, which present a balance of \$165,935 (2018: \$164,321).

As of 31 December 2019 and 2018, impairment testing was performed on the CGUs with associated intangible assets with indefinite lifespan, and no associated impairment was found.

The value in use and recorded value of CGUs at the end of 2019 with indefinite lifespan is detailed below:

CGU	Value in use	Recorded value
Generation	23,458,487	17,880,484
Distribution	6,073,939	4,249,358
Trasmission	1,029,410	847,163
Natural Gas	1,370,182	844,236
Water supply	3,470,608	2,619,466
Sanitation	1,742,237	1,113,710
<b>Total CGU</b>	<b>37,144,864</b>	<b>27,554,417</b>

*Figures stated in millions of Colombian pesos*

## Note 12. Trade and other receivables

The breakdown of trade and other receivables as of the dates of the periods being reported is as follows:

Trade and other receivables	2019	2018
<b>Non-current</b>		
Public utilities debtors	343,524	319,038
Impairment loss public utilities	(103,022)	(93,776)
Economic associates	1,135,512	1,652,922
Employee loans	92,525	89,353
Impairment loss employee loans	(2)	(11)
Other debtors receivable	45,285	46,166
Impairment loss other debtors	-	(910)
<b>Total non-current</b>	<b>1,513,822</b>	<b>2,012,782</b>
<b>Current</b>		
Public utilities debtors	1,708,935	1,410,316
Impairment loss public utilities	(204,529)	(193,238)
Economic associates	27,797	120,601
Employee loans	30,958	29,519
Dividends and participations receivable <sup>1</sup>	5,000	46,687
Impairment loss employee loans	(291)	(321)
Construction contracts	246	782
Compensations <sup>2</sup>	465,959	15,013
Other services	7,983	7,657
Other loans	243,862	250,499
Impairment loss other debtors	(63,137)	(59,027)
<b>Total current</b>	<b>2,222,783</b>	<b>1,628,488</b>
<b>Total</b>	<b>3,736,605</b>	<b>3,641,270</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>The non-current portion shows a decrease of \$498,960, mainly explained by related parties due to settlement of credits for EPM Chile and EPM Transmisión Chile.

<sup>2</sup>Increase for \$594,299 is mainly explained by the payment of the receivable from MAPFRE Seguros as compensation for the Ituango project.

### Portfolio Impairment

The company measures portfolio impairment for expected losses using the simplified approach, which consists in taking the present value of credit loss arising from all possible default events at any time during the lifetime of the operation.

This alternative is taken given that the volume of customers is very high and the measurement and control of the risk by stages can lead to errors and to an underassessment of impairment.



The expected loss model corresponds to a forecasting tool that projects the probability of portfolio default in the next twelve months. Each obligation is assigned an individual probability of default calculated from a probability model that involves sociodemographic, product and behavioral variables.

Although the forecast of impairment for the annual period is obtained based on payment behavior data of customers during the period under consideration; it is not the same when the monthly records that comprise the annual period register impairment. In the latter case, impairment recorded for the month under assessment is obtained with the payment behavior data of the previous month.

At the cut-off date, the ageing analysis of accounts receivable at the end of the reporting period that are impaired is:

	2019		2018	
	Gross recorded value	Lifetime expected credit losses value	Gross recorded value	Lifetime expected credit losses value
<b>Public utilities debtors</b>				
Not past due nor impaired	1,730,479	(113,726)	1,433,607	(106,629)
Less than 30 days	102,654	(6,989)	94,207	(7,074)
30-60 days	22,675	(4,280)	16,339	(2,242)
61-90 days	7,658	(3,759)	8,114	(2,497)
91-120 days	5,409	(3,119)	5,857	(2,597)
121-180 days	7,353	(5,299)	7,284	(4,578)
181-360 days	14,413	(12,077)	11,783	(10,555)
Greater than 360 days	161,818	(158,302)	152,164	(150,842)
<b>Total public utilities debtors</b>	<b>2,052,459</b>	<b>(307,551)</b>	<b>1,729,354</b>	<b>(287,014)</b>
<b>Other debtors</b>				
Not past due nor impaired	1,969,088	(10,117)	2,186,064	(4,688)
Less than 30 days	14,657	(2,611)	7,130	(1,266)
30-60 days	2,722	(823)	9,491	(3,634)
61-90 days	2,125	(524)	2,172	(588)
91-120 days	6,232	(645)	1,152	(483)
121-180 days	1,605	(1,210)	14,530	(13,880)
181-360 days	17,112	(6,461)	11,272	(8,576)
Greater than 360 days	41,586	(41,039)	27,390	(27,155)
<b>Total other debtors</b>	<b>2,055,127</b>	<b>(63,430)</b>	<b>2,259,201</b>	<b>(60,270)</b>
<b>Total debtors</b>	<b>4,107,586</b>	<b>(370,981)</b>	<b>3,988,555</b>	<b>(347,284)</b>

Figures stated in millions of Colombian pesos

Impairment of receivables for public utility displays an increase of \$20,537, mainly explained by the recognition of the higher expected loss in the portfolio with age of more than 360 days. During 2019, the amounts provisioned for receivables were also impacted by higher sales, situation that reflected in an increase for the present portfolio impairment, which is also considered in the expected credit loss model.

Portfolio impairment of balances associated with other debtors also presented an increase of \$3,160 explained by the recognition of the greater expected loss for the portfolio with arrears greater than 360 days.

Reconciliation of the expected credit losses in the portfolio is as follows:

Asset lifetime expected credit losses	2019	2018
Initial balance	(347,284)	(310,174)
Changes in impairment of receivables held at the beginning of the period	-	(25,757)
Financial assets not derecognised during the period	2,570	2,677
New financial assets originated or purchased	(264,315)	(83,701)
Write-offs	238,028	69,721
Other movements	20	(51)
<b>Final balance</b>	<b>(370,981)</b>	<b>(347,284)</b>

Figures stated in millions of Colombian pesos

Portfolio reconciliation is as follows:

Portfolio balance	2019	2018
Initial balance	3,988,555	3,840,047
New financial assets originated or purchased	18,120,105	11,790,763
Financial assets write-offs	(17,414,648)	(10,983,903)
Derecognition of financial assets	(2,571)	(2,677)
Other movements	(583,855)	(655,675)
<b>Final balance</b>	<b>4,107,586</b>	<b>3,988,555</b>

Figures stated in millions of Colombian pesos

The Group derecognises, against impairment recognised in a corrective account, the values of impaired financial assets when it becomes evident there are obligations that cannot be recovered by executive, coercive or ordinary means, actions of which the supports must be attached to the files where the request for derecognition is documented.

The grounds for requesting approval of portfolio derecognition in EPM are the following:

- Recorded receivables do not represent certain rights, assets or obligations for EPM.
- Rights or obligations do not have the proper documents and support to advance the relevant procedures for collection or settlement.
- It is not possible to collect the right or obligation, by coercive or judicial collection, once the pre-legal collection stage has been exhausted.
- When it is impossible to identify and individualize the natural or legal entity to carry out portfolio collection.
- When the cost-benefit ratio is assessed and established, it is more onerous to advance the collection process than the value of the obligation.
- Upon prescription of the security and executive title or expiration of the right.
- When once the enforcement process has been advanced and there are no assets to settle the obligation.
- When the process of liquidation of the natural or legal entity has been advanced in legal terms, and the assets received as dation in payment do not cover the total debt; in this case the unpaid balance is derecognised.

#### Bodies responsible for derecognising

Derecognition in EPM is approved by the Portfolio Derecognition Committee which is chaired by the Accounting and Financial Services Manager, assisted by the Director of Financial Transactions and the head of the Credit and Portfolio Management Unit. The Committee meets periodically or when a particular situation calls for it.

## Note 13. Other financial assets

The breakdown of other financial assets at the closing of the period is as follows:

Other financial assets	2019	2018
<b>Non-current</b>		
<b>Derivatives designated as hedging instruments under hedge accounting</b>		
Swap contracts	33,336	173,989
<b>Total derivatives designated as hedging instruments under hedge accounting</b>	<b>33,336</b>	<b>173,989</b>
<b>Financial assets measured at fair value through changes in profit for the period</b>		
Variable income securities	98,348	64,547
Fiduciary rights	404,365	402,067
<b>Total financial assets measured at fair value through profit or loss</b>	<b>502,713</b>	<b>466,614</b>
<b>Financial assets designated at fair value through other comprehensive income</b>		
Equity instruments	1,922,285	1,581,092
<b>Total financial assets designated at fair value through other comprehensive income</b>	<b>1,922,285</b>	<b>1,581,092</b>
<b>Total other non-current financial assets</b>	<b>2,458,334</b>	<b>2,221,695</b>
<b>Current</b>		
<b>Derivatives designated as hedging instruments under hedge accounting</b>		
Swap contracts	11,727	12,241
<b>Total derivatives designated as hedging instruments under hedge accounting</b>	<b>11,727</b>	<b>12,241</b>
<b>Financial assets measured at fair value through profit or loss</b>		
Fixed income securities	539,511	972,788
Pledged investments	5,970	5,647
<b>Total financial assets measured at fair value through profit or loss</b>	<b>545,481</b>	<b>978,435</b>
<b>Total other current financial assets</b>	<b>557,208</b>	<b>990,676</b>
<b>Total other financial assets</b>	<b>3,015,542</b>	<b>3,212,371</b>

Figures stated in millions of Colombian pesos

Conventional purchases and sales of financial assets are accounted for by applying the trade date.

### 13.1 Financial assets measured at fair value through other comprehensive income

#### 13.1.1 Other financial assets measured at fair value through other comprehensive income

The breakdown of other financial assets measured at fair value through other comprehensive income, different from equity investments, is:

Equity Investment	2019	2018
Interconexion Electrica S.A. E.S.P. <sup>1</sup>	1,915,398	1,574,226
Other investments	6,887	6,866
<b>Total</b>	<b>1,922,285</b>	<b>1,581,092</b>
Cumulative gain (loss) through changes in fair value transferred to retained earnings/loss for the period <sup>3</sup>	(47,620)	
Dividends recognised during the period related to investments that are recognised at the end of the period <sup>2</sup>	60,356	102,968
<b>Dividends recognised during the period</b>	<b>12,736</b>	<b>102,968</b>

Figures stated in millions of Colombian pesos

<sup>1</sup> As of 31 December 2018, the market price of *Interconexión Eléctrica S.A. E.S.P.* closed at \$19,600 (2017: \$13,980) Colombian pesos per share.

<sup>2</sup> In 2019 *Interconexión Eléctrica S.A. E.S.P.* declared dividends for \$53,944 and *Inversiones telco* declared dividends for \$3,103.

<sup>3</sup> In the month of July 2019, 14,881,134 ISA shares were sold, generating a loss of \$47,620 due to the difference in the value of the share between the sale price and the valuation of the share on the day of sale, resulting in loss on the sale of the investment. (15,700/share - 18,900/share = 3,200) and in November 2019 the sale of the total *gasoriente* shares generated a profit of \$86.

The equity investments indicated in the table above are not held for trading purposes, but rather are held for strategic medium- and long-term purposes. Management believes that the classification for these strategic investments provides more reliable financial information, reflecting changes in their fair value immediately in the results of the period.

## Note 14. Leases

### 14.1. Asset-originating lease for rights of use as a lessee

At the cut-off date, the recorded value of assets with rights of use is as follows (excluding assets with rights of use associated with construction in progress, which are included in note 5 Property, plant and equipment):

2019	Right of use land	Right of use buildings	Right of use plants, ducts and tunnels	Right of use networks, lines and cables	Right of use machinery and equipment	Right of use communication and computer equipment	Right of use transport, traction and lifting equipment	TOTAL
Cost opening balance								
Additions <sup>1</sup>	653	7,800	86,292	7	34	30	(186)	94,630
Re-expression by policy change	5,595	458,210	1,610,257	17,056	1,763	1,596	10,961	2,105,438
Disposals (-)	-	(293)	-	-	-	-	-	(293)
Other changes	(879)	(4,443)	-	(1,080)	2,063	2,380	-	(1,959)
<b>Cost final balance</b>	<b>5,369</b>	<b>461,274</b>	<b>1,696,549</b>	<b>15,983</b>	<b>3,860</b>	<b>4,006</b>	<b>10,775</b>	<b>2,197,816</b>
Accrued amortization and impairment								
Amortization of the period	(288)	(13,486)	(41,975)	(806)	(160)	(226)	(3,761)	(60,702)
Re-expression by policy change	-	(77,013)	-	-	-	-	-	(77,013)
Disposals (-)	-	27	-	-	-	-	-	27
Other changes	-	2,751	-	-	(1,164)	(1,587)	(8)	(8)
Final balance accrued amortization and impairment	(288)	(87,721)	(41,975)	(806)	(1,324)	(1,813)	(3,769)	(137,696)
<b>Total final balance assets for net right of use</b>	<b>5,081</b>	<b>373,553</b>	<b>1,654,574</b>	<b>15,177</b>	<b>2,536</b>	<b>2,193</b>	<b>7,006</b>	<b>2,060,120</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Corresponds to the subsequent measurement of the liability for finance leasing, which generates increases each time there are changes in the tariff in its component Average Cost of Investment in pesos per cubic meter charged by *Aguas Nacionales* to EPM, this increase is regulated every time the Consumer Price Index (CPI) accumulates 3% and additional on the dates when the increases by tariff are applied.

At the cut-off date, future minimum payments and the present value of the minimum lease liability payments are distributed as follows:

Financial lease	2019		2018	
	Minimum payments	Present value of minimum payments	Minimum payments	Present value of minimum payments
One year	185,942	177,241	131,283	124,557
More than one year and up to five years	688,252	517,512	533,935	398,745
More than five years	16,333,712	1,547,936	15,521,706	1,282,275
<b>Total leases</b>	<b>17,207,906</b>	<b>2,242,689</b>	<b>16,186,924</b>	<b>1,805,577</b>
Less - value of unearned interest	14,965,217	-	14,381,347	-
<b>Present value of minimum lease payments</b>	<b>2,242,689</b>	<b>2,242,689</b>	<b>1,805,577</b>	<b>1,805,577</b>

Figures stated in millions of Colombian pesos

The most relevant finance lease arrangements are:

**Contrato de Interconexión de Alcantarillado (Sewer Interconnection Contract)** CT- 2013-002297-A421 of 26 November 2018, held between EPM (THE BENEFICIARY) and Aguas Nacionales EPM (THE SUPPLIER), regulates the conditions of interconnection to the wastewater transport and treatment subsystems owned by Aguas Nacionales, for the rendering of service by EPM of the public sewerage utility to the users of the interconnected system of the Aburrá Valley. This interconnection will also allow for the drying and final disposal of biosolids resulting from the treatment of wastewater from the entire interconnected system.

Termination of the contract is on 1 July 2021, date on which the tariff formula ends, in accordance with Article 113 of Resolution CRA 688 of 2014, modified by Article 41 of Resolution CRA 735 of 2015. If, in accordance with the provisions of the last paragraph of Article 126 of Law 142 of 1994, the validity of the tariff formula is extended, the contract shall be understood to be in effect until the Water and Basic Sanitation Regulation Commission determines a new formula.

Before the expiring of the term of the contract, the parties may by mutual agreement extend the term of the contract by means of a written document, it being understood that there will be no automatic extension of the term of the contract.

EPM does not intend to financially acquire the Aguas Claras wastewater treatment plant (WTP) or to enter into any purchase option for said asset.

Lease payments of the contract paid by EPM to Aguas Nacionales EPM are per Average Investment Cost, determined in pesos per cubic meter of treated wastewater and are updated as indicated in the following paragraph and Annex No. 4 of the Contract:

**Paragraph first.** THE SUPPLIER will apply to the reference costs an update factor per Average Investment Cost every time the Consumer Price Index, reported by National Administrative Department of Statistics (DANE, by its Spanish initials) accumulates a variation of at least three percent (3%).

**According to Annex No. 4 of the contract:** the increases per tariff path are as follows:

January 2019: 5.75%

January 2020: 2.40%

January 2021: 2.16%

January 2022: 1.63%

**Contrato arrendamiento Edificio Empresas Públicas de Medellín (Empresas Públicas de Medellín Building lease contract)** CT-085 of 12 February 2002, held between EPM (THE COMPANIES) and the MUNICIPALITY OF MEDELLIN (MUNICIPALITY), the MUNICIPALITY agrees to lease to THE COMPANIES, and the latter agree to receive

on the same basis, the use and enjoyment of the real estate owned by them called "Edificio Empresas Públicas de Medellín", with all its constructions and improvements.

The term of the contract is 50 years from 21 December 2001, date on which the MUNICIPALITY OF MEDELLIN became the owner of the property.

Contract lease payments are adjusted each year by a percentage equal to the national Consumer Price Index certified by DANE for the immediately preceding year.

Lease liabilities are included in Other financial liabilities in the statement of financial position.

Interest on lease liability amounts to \$209,584 (see note 35 Finance income and expense).

Total cash outflows from leases during the period are \$168,066.

#### 14.2 Operating lease as lessee

The most significant operating lease agreements are for the electrical infrastructure for the installation of networks by telecommunications operators. The contingent payments of these leases are determined based on the updating of the producer price index (PPI) and consumer price index (CPI) variables as well as the updating of the lease payments and these contracts can be renewed.

The value of non-cancellable operating lease payments is as follows:

Operating leases	2019	2018
Year one	46,873	47,656
Year two	6,458	5,940
Year three	3,412	2,986
Year four	1,722	1,562
Year five	1,722	1,562
More that five years	13,775	16,768
<b>Total leases</b>	<b>73,962</b>	<b>76,474</b>

*Figures stated in millions of Colombian pesos*

Income from contingent leases recognised in the income statement for the period is \$22,699 (2018: \$23,576).

The company, as a lessor, does not have contracts that take the legal form of a lease and that in essence do not constitute a.

#### 14.3 Leases that do not generate assets by right of use as a lessee

The most significant operating lease agreements are for spaces for the installation and operation of antennas in weather stations, shift management system, user printing infrastructure, among others, which have no restrictions. The contingent payments of these leases are determined based on the consumer price index (CPI) as well as the updating of the lease payments and these contracts can be renewed.

At the cut-off date, future commitments for short-time lease are \$8143.

The total future minimum non-cancellable sublease payments on assets acquired under operating leases is \$54. Contingent lease expense recognised in income for the period is \$2.

Lease payments recognised as expense for the period are \$5,047.

Total cash outflows from leases during the period are \$1,678.

## Note 15. Warranties

The company has not granted warranties in which the third party is authorized to sell or pledge without default by the company.

The company has not received warranties in which it is authorized to sell or pledge without default by the owner of the warranty.

The company has not granted warranties in which a third party is authorized to sell or pledge without a breach by the company.

The company has not received warranties in which it is authorized to sell or pledge without a breach by the owner of the guarantee.

## Note 16. Other assets

The breakdown of other assets at the end of the periods being reported is as follows:

Concept	2019	2018
<b>Non-current</b>		
Advance payments <sup>1</sup>	10,820	14,892
Employee benefits	42,047	42,414
Advance payments to suppliers <sup>2</sup>	18,995	19,868
Deferred loss from leaseback	21,610	22,283
Goods received as dation in payment	1,285	1,285
<b>Total other non-current assets</b>	<b>94,757</b>	<b>100,742</b>
<b>Current</b>		
Advance payments <sup>1</sup>	67,852	59,569
Advance payments to suppliers <sup>2</sup>	46,053	43,422
Other recoverables due to other taxes	1,000	1,400
Withheld industry and Commerce Tax	18	-
Other advance payments or recoverables due to taxes and contributions	97	92
<b>Total other current assets</b>	<b>115,020</b>	<b>104,483</b>
<b>Total other assets</b>	<b>209,777</b>	<b>205,225</b>

*Figures stated in millions of Colombian pesos*

<sup>1</sup>The non-current portion includes insurance for \$2,249 (2018: \$5,381) corresponding to the all-risk policies of the Ituango Hydroelectric Project (2018: \$5,349), effective until March 2021, which are being amortized; the premium on legal stability contracts for \$7,357 (2018: \$8,249) and leases for \$1,214 (2018: \$1,262).

The current portion includes insurance for \$59,233 (2018: \$52,823), comprised primarily of all-risk policies for \$36,865 (2018: \$29,740), of which \$5,620 (2018: \$9,150) is from the Ituango Hydroelectric Project, and other insurance for \$22,368 (2018: 23,083) of which \$14,990 (2018: \$12,985) correspond to climate change insurance; goods and services for \$4,423 (2018: \$2,941) and leases and maintenance for \$4,195 (2018: \$3,804).

<sup>2</sup>Corresponds to advances and resources given in administration, mainly from agreements with: *Empresa de Desarrollo Urbano - EDU* for \$18,749 (2018: \$18,407) and *Corporación Parque Arví* for \$387 (2018: \$1,544). During the term, an advance was paid to the subsidiary *Aguas Regionales* for \$5,000.

## Note 17. Inventories

Inventories at the end of the period were represented as follows:

Inventories	2019	2018
Materials for the rendering of services	114,131	113,983
Goods in stock	3,922	2,956
Goods in transit	818	395
<b>Total inventories at cost or at net realizable value, whichever is less</b>	<b>118,871</b>	<b>117,334</b>

*Figures stated in millions of Colombian pesos*

<sup>1</sup> Includes materials for the rendering of services held by third parties, which are those delivered to contractors that perform activities related to the rendering of services.

<sup>2</sup> Includes goods in stock that do not require transformation, such as electricity, gas and water meters, and supply goods, as well as those held by third parties.

Inventories were recognised for \$92,124 (2018: \$92,222) as the cost of the merchandise sold or cost to provide the service during the period. The inventory decline recognised as an expense during the period amounted to \$84 (2018: \$3).

The company has not generated any impairment losses when comparing the net realizable value with the average cost of the inventories.

The company has no committed inventories as liability guarantee.

## Note 18. Cash and cash equivalents

The composition of cash and cash equivalents at the end of the period is as follows:

Cash and cash equivalents	2019	2018
Cash on hand and in banks	305,910	537,618
Other cash equivalents	573,113	298,161
<b>Total cash and cash equivalents reported in the statement of financial position</b>	<b>879,023</b>	<b>835,779</b>
<b>Cash and cash equivalents reported in the statement of cash flows</b>	<b>879,023</b>	<b>835,779</b>
<b>Restricted cash<sup>1</sup></b>	<b>84,565</b>	<b>79,823</b>

*Figures stated in millions of Colombian pesos*

<sup>1</sup>Of this \$17,787 (2018: \$-) corresponds to non-current restricted cash.

Cash investments mature within three months from their date of acquisition and bear market interest rates for this type of investment.

The company has restrictions on cash and cash equivalents detailed below. At 31 December 2019, the fair value of restricted cash equivalents is \$84,565 (2018: \$79,823).



Fund or convention	Intent	2019	2018
Fondo de Vivienda Sinpro	Contribute to the acquisition of housing and improvement of the same, of the servants who are beneficiaries of the conventional agreement signed between EPM and the unions.	21,319	17,936
Fondo de Vivienda Sintraemdes	Contribute to the acquisition of housing and improvement of the same, of the servants beneficiaries of the conventional agreement signed between EPM with the unions.	19,199	17,002
Convenio firmado entre el Área Metropolitana del valle de aburra y Empresas Públicas de Medellín E.S.P., Acta de ejecución N°4 del convenio marco No. CT 2015-000783 de 2015	Support the construction of the southern interceptor of the Aburra River - Medellín	10,760	8,006
Ministerio de Minas y Energía - Fondo Especial Cuota Fomento	Co-financing agreement for the construction, distribution infrastructure and connection to lower income users in the municipalities of Amagá, Santafé de Antioquia, Sopetrán, San Jerónimo and Ciudad Bolívar. Compressed Natural Gas and connection to users in Don Matías, Entrerriós, San Pedro, Santa Rosa and Yarumal. Agreement No 106: construction of infrastructure to connect users in Valle de Aburrá, La Ceja, La Unión and El Retiro. Agreement No. 179: includes the municipality of Sonsón.	5,635	5,443
Transacciones internacionales de energía	Guarantee corresponding to the "compensation" that must be made between the invoice for stock exchange transactions and the advance payments, seeking the actual payment to XM.	5,274	1,636
Departamento de Antioquia, Convenio construcción vía el Aro - Municipio de Ituango	Manage the resources provided by the Government of Antioquia to co-finance the construction of the El Aro Road - Puerto Valdivia Road Connection Dam Site - Municipality of Ituango	2,721	2,605
Fondo de Educación Sinpro	Promote the welfare of the servers to meet the needs of payment of tuition, texts and equipment required to advance their own studies and those of the family group.	2,392	2,258
Fondo de Educación Sintraemdes	Promote the welfare of the servants to attend to the needs of payment of matriculation, texts and equipment that are required to advance their own studies and those of the family group.	2,274	2,107
Cuenca Verde	Manage resources assigned for compliance with the objectives of the Corporación CuencaVerde	2,167	40

Figures stated in millions of Colombian pesos

Fund or convention	Intent	2019	2018
Contrato No. CT-2019-001105	Contract for the supply of energy and power for the unregulated market and support of contracts of the energy distributor and marketer S.A. E.S.P, DICEL S.A. E.S.P.	2,000	-
Convenio puntos SOMOS	Provision of services for the operation of the key capacities associated with the Points element of the Large Scale Loyalty Program for the EPM Group.	1,727	1,651
Fondo de Calamidad Sintraemdes	Promote the well-being of your servants to meet their urgent and unforeseen needs or those of their primary family group.	1,674	1,613
Fondo de Calamidad Sinpro	Promote the welfare of their servants to meet their urgent and unforeseen needs or those of their primary family group.	1,448	1,310
CONTRATO INTERADMINISTRATIVO Número Pc-2017-001532 De 2017,	Construction and intervention of water and sewage networks in the Pepe Sierra I, Barrios de Jesús, el Progreso and Cañada del Niño neighborhoods.	1,438	494
Convenio 5 Esc. Indígenas 2019-20	Co-finance the development of indigenous educational centres within the framework of the villages programme, for the improvement of the quality of life of the indigenous communities in the department of Antioquia	995	-
Programa Aldeas	To take advantage of the wood that completes its maturation cycle in the forests planted by EPM around its reservoirs, to build social interest housing in the municipalities of Antioquia outside the Aburrá Valley and deliver it to low-income families, preferably in a situation of forced or voluntary displacement.	731	732
Municipio de Medellín - Aguas	Integrated management of water for human consumption by the inhabitants of the municipality of Medellín.	509	382
Municipio de Guatapé y Cornare	Join efforts to improve technical, economic and social conditions for the implementation of phase 1 of the project to improve the environmental and landscape infrastructure of the Malecón San Juan del Puerto, for the development of sustainable tourism in the municipality of Guatapé	448	1,994

Figures stated in millions of Colombian pesos

Fund or convention	Intent	2019	2018
Fondo de Reparación de motos	To promote the welfare of official workers who work in the regional market and use motorcycles owned by them to carry out their work.	426	406
Crédito BID 2120	Disbursement for the construction of the Bello wastewater treatment plant (PTAR)	335	2,289
Corporación Autónoma de Guatapé	Join efforts to improve the technical, economic, and social conditions for the execution of phase 1 of the project to improve the environmental and landscape infrastructure of the San Juan del Puerto boardwalk, for the development of sustainable tourism in the municipality of Guatapé	311	1,742
CONVENIO INTERADMINISTRATIVO CT -2017-001388 (460007009)	Agreement for the construction of 7 indigenous schools in 5 municipalities	253	1,057
Fondo Entidad Adaptada de Salud y Fondo Fosyga	Control and monitoring mechanism for the collection of contributions from the General Social Security Health Contribution System.	152	1,857
Administración de recursos para la construcción de infraestructura en Madera para Emvarias en el relleno sanitario La Pradera.	Administration of resources for the construction of infrastructure in wood for Emvarias in the La Pradera landfill.	114	124
Depósitos Ley 820	Guarantee demanded by the landlord to the tenant, for the payment of public services. According to Article 15 of Law 820 of 2003 and Regulatory Decree 3130 of 2003.	68	59
Espíritu Santo	EPM - Liquidation Espiritu Santo	62	60
Municipio de Medellín - Terrenos	Acquisition of land identified and characterized within the watershed protection zones that supply water systems in the municipality of Medellín.	61	58

Figures stated in millions of Colombian pesos

Fund or convention	Intent	2019	2018
Convenios tasas de alumbrado público y de aseo con los municipios	Agreement to manage the resources of the territorial entities for the payment to the municipalities with agreements of collection of the rates of public lighting and cleanliness, they are exempt resources of the 4x1000.	51	1,572
Bogota Galeria Bolivar	Adapting the 51 (Bolívar) race between 44th (San Juan) and 57th (La Paz) streets and converting this segment of the road into what will be called the Boívar Gallery.	15	23
Municipio de Medellín - Moravia	Construction, repair and replacement of aqueduct and sewerage networks and the paving in the municipality of Medellín of the roads affected by these works in the Moravia neighborhood.	3	3
IDEA convenio 4600003912	Inter-administrative agreement to join efforts for the design and construction of electrical energy generation and distribution systems in rural areas in the Department of Antioquia.	2	2
IDEA Convenio 4600003283	To join efforts for the construction of home gas connections in the different sub-regions of the Department of Antioquia under the "Gas without Borders" program.	1	1
Aporte Municipios de Pueblorrico y Ciudad Bolívar	Agreement for the construction of seven rural indigenous schools	-	90
Banco Bogota INCODER	Join efforts and resources between EPM and INCODER to carry out the project "feasibility study for the construction of the irrigation and drainage district in part of the Urabáantioqueño region" with multipurpose scope.	0	4,791
Bogotá Convenio parques del rio	Relocation of the public service networks for the development of the project called Parques del Rio Medellín,	-	1
Convenio Marco Municipio Medellín No. 4600049285	Construction by EPM of platforms and other road elements in the city centre, taking advantage of the Centro Parrilla project, i.e. the renovation of water and sewage networks.	-	39
Distrito Térmico	Agreement with the Ministry of the Environment and Sustainable Development for the development of activities in the La Alpujarra Thermal District.	-	71
Ministerio de Minas y Energía	Contributions from the Ministry of Mines and Energy in accordance with the provisions of the FAER GGC 430 contract of 2015 for rural electrification works in the Municipality of Ituango	-	191
Municipio de Barbosa - Subsidios	Agreement to partially subsidize the connection of users in strata 1 and 2	-	62
Municipio de Caldas	To manage and administer the resources allocated by the municipality of Caldas for the development of the project: Construction, replacement and modernization of water and sewerage networks and their complementary works, in the urban area of the municipality of Caldas	-	116
<b>Total restricted resources</b>		<b>84,565</b>	<b>79,823</b>

Figures stated in millions of Colombian pesos

## Note 19. Equity

### 19.1 Capital

The company does not have its capital divided into shares and has not had any increase or decrease in capital in the period reported.

### 19.2 Reserves

Of the items that conform equity, the reserves at the cut-off date were constituted by:

Reserves	2019	2018
<b>Legal reserves</b>		
Initial balance	1,379,435	2,370,045
Release	(256,216)	(990,610)
<b>Final balance of legal reserves</b>	<b>1,123,219</b>	<b>1,379,435</b>
<b>Occasional reserves</b>		
Initial balance	574,008	574,008
<b>Final balance of occasional reserves</b>	<b>574,008</b>	<b>574,008</b>
<b>Other reserves</b>		
Initial balance	7,591	7,591
<b>Final balance of other reserves</b>	<b>7,591</b>	<b>7,591</b>
<b>Total reserves</b>	<b>1,704,818</b>	<b>1,961,034</b>

*Figures stated in millions of Colombian pesos*

The nature and purpose of the company's equity reserve are described below:

#### Legal Reserves

The company has constituted legal reserves, in compliance with the tax provisions of Colombia that were contained in Articles 130 of the Tax Code, which was repealed by Law 1819 of 2016 (reserve of 70% for the excess of tax depreciation over the accountable) and Decree 2336 of 1995 (for revenue incorporated to income or loss in the application of the equity method applied under local regulation).

#### Occasional Reserves

In accordance with article 211 of the Tax Code, the company has created the reserves in order to enjoy the special tax treatment and obtain cuts in the income and complementary taxes.

#### Other Reserves

Includes equity funds (resources appropriated prior to 1999 for granting housing loans to workers, *Plan Financiación, Fondo autoseguros*, housing fund).

The Board of Directors, at its meetings of 24 March 2019 and 20 March 2018, approved:

- Release reserves of \$256,216 (2018: \$990,610) appropriate in prior periods, by authorization of the Board of Directors.

### 19.3 Accrued profit or loss

Movement of accrued profit or loss during the period was:

Retained profit	2019	2018
Initial balance	17,677,167	15,569,351
movement of reserves	256,216	990,610
Surpluses or dividends decreed	(1,289,652)	(1,203,504)
Transfer from other comprehensive income	138,395	-
Equity method for changes in equity	(79,832)	(24,112)
<b>Total cumulative profit before net income or loss for the year</b>	<b>16,702,294</b>	<b>15,332,345</b>
<b>Net profit for the period</b>	<b>2,706,035</b>	<b>2,344,822</b>
<b>Total retained profit</b>	<b>19,408,329</b>	<b>17,677,167</b>

Figures stated in millions of Colombian pesos

Surplus paid during the year was \$1,289,652 (2018: \$1,503,504), \$703,447 (2018: \$656,457) ordinary and \$586,205 (2018: \$547,047) extraordinary and in 2018: \$300,000 from the sale of ISAGEN.

## Note 20. Accumulated other comprehensive income

The breakdown of each component of the other comprehensive income for the separated statement of financial position and the corresponding tax effect is as follows:

Accumulated other comprehensive income	2019			2018		
	Gross	Tax effect	Net	Gross	Tax effect	Net
Reclassification of property, plant and equipment and other assets to investment property	13,439	(1,360)	12,079	13,439	(1,360)	12,079
new measurements of defined benefit plans	(47,962)	19,036	(28,926)	(11,995)	7,027	(4,968)
Equity investments measured at fair value through equity	2,764,339	1,837	2,766,176	2,280,287	(127,822)	2,152,465
participation in other comprehensive income of subsidiaries	460,679	19,053	479,732	826,024	5,169	831,193
cash flow hedges	8,016	(29,880)	(21,864)	(26,103)	(47,553)	(73,656)
<b>Total</b>	<b>3,198,511</b>	<b>8,686</b>	<b>3,207,197</b>	<b>3,081,652</b>	<b>(164,539)</b>	<b>2,917,113</b>

Figures stated in millions of Colombian pesos

During 2019, net gains from changes in fair value of hedging instruments were reclassified to profit or loss for \$83,179.

A reconciliation of the opening and closing balances at the cut-off date is presented below for each component of comprehensive income:

### 20.1 Component: reclassification of property, plant and equipment to investment property

The component of reclassification of property, plant and equipment to investment property of other comprehensive income corresponds to transfers from property, plant and equipment to investment property, which are measured at fair value. changes in fair value do not reclassify to profit or loss for the period.

Reclassification of property, plant and equipment to investment property	2019	2018
Initial balance	12,079	12,079
<b>Total</b>	<b>12,079</b>	<b>12,079</b>

Figures stated in millions of Colombian pesos

## 20.2 Component: new measurements of defined benefit plans

The component of new measurements of defined benefit plans represents the accrued value of actuarial profits or losses, the return on plan assets and changes in the effect of the asset ceiling, excluding the values included in the net interest on the liability (asset) of net defined benefits. The net value of the new measurements is transferred to retained profit and does not reclassify to the results of the period.

Component new measurements of defined benefit plans	2019	2018
Initial balance	(4,968)	(7,357)
Profit or loss for the period due to new measurements of defined benefit plans	(35,969)	372
Associated income tax (or equivalent)	12,011	2,017
<b>Total</b>	<b>(28,926)</b>	<b>(4,968)</b>

Figures stated in millions of Colombian pesos

## 20.3 Component: equity investments measured at fair value through equity

The component of other comprehensive income from equity investments measured at fair value through equity represents the accumulated value of the profits or losses from the assessment at fair value less the values transferred to retained profit when these investments have been sold. Changes in fair value do not reclassify to the result of the period.

Equity investments measured at fair value through equity	2019	2018
Initial balance	2,152,465	2,173,895
Net earnings due to changes in the fair value of investment property	622,447	(24,810)
Associated income tax (or equivalent)	129,657	3,380
Accumulated income transferred to the accumulated income for the period	(138,393)	-
<b>Total</b>	<b>2,766,176</b>	<b>2,152,465</b>

Figures stated in millions of Colombian pesos

## 20.4 Component: participation in other comprehensive income of subsidiaries

The component of other comprehensive income from participation in other comprehensive income of subsidiaries represents the accumulated value of applying the equity method to profits and losses of other comprehensive income of subsidiaries. The accrued value of the profits or losses will be reclassified to the profit or loss for the period or to the accrued profit or loss, depending on the items that originated the equity method, when these investments have been sold.

Participation in other comprehensive income of subsidiaries	2019	2018
Initial balance	831,193	756,976
New measurements of defined benefit plans	(31,836)	(2,215)
Equity investments measured at fair value through equity	(169,196)	(38,347)
Hedging operations	(1,916)	137
Result from translation of foreign operations	(203,267)	115,502
Assets held for sale or distribution to owners	(51)	-
Associated income tax (or equivalent)	13,140	(765)
<b>Total other comprehensive income for the period</b>	<b>(393,126)</b>	<b>831,288</b>
Cumulative gain (loss) transferred to retained earnings/loss for the period - Reclassification of property, plant and equipment and other assets	-	-
Accumulated gains (losses) transferred to retained earnings/losses for the period -New defined benefit plan measures	(728)	133
Gains transferred to retained earnings of the period -Equity investments measured at fair value through equity	41,348	29
Cumulative gain (loss) transferred to retained earnings/loss for the period - Hedging transactions	281	-
Accumulated losses transferred to retained earnings for the period - Result from translation of foreign operations	21	23
Associated income tax (or equivalent) - Accumulated gains (losses) transferred to the accumulated profits/losses of the period	743	(280)
<b>Total accumulated other comprehensive income</b>	<b>41,665</b>	<b>(95)</b>
<b>Total</b>	<b>479,732</b>	<b>831,193</b>

Figures stated in millions of Colombian pesos

## 20.5 Component: cash flow hedges

The component of other comprehensive income from cash flow hedges represents the accumulated value of the effective portion of the gains or losses that arise from changes in the fair value of hedged items in a cash flow hedge. The accumulated value of the profits or losses will reclassify to the profit or loss for the period only when the hedged transaction affects the profit or loss for the period or the highly probable transaction is not expected to occur, or is included, as part of its recorded value, in a heading non-financial item.

Cash flow hedges	2019	2018
Initial balance	(73,656)	(8,669)
Losses due to changes in the fair value of hedging instruments	(49,060)	171,076
Associated income tax (or equivalent)	33,643	(77,717)
Cumulative losses due to changes in the fair value of hedging instruments reclassified as profit/loss for the period	83,179	(168,299)
Associated income tax (or equivalent)	(15,970)	9,953
<b>Total</b>	<b>(21,864)</b>	<b>(73,656)</b>

Figures stated in millions of Colombian pesos



## Note 21. Loans and borrowings

The following is the breakdown of the recorded value of loans and borrowings:

	2019	2018
<b>Loans and borrowings</b>		
<b>Non-current</b>		
Commercial banks loans	530,908	844,579
Multilateral banks loans	3,326,049	3,249,965
Development banks loans	775,412	1,778,009
Other bonds and securities issued	9,151,073	6,177,480
<b>Total other loans and borrowings non-current</b>	<b>13,783,442</b>	<b>12,050,033</b>
<b>Current</b>		
Commercial banks loans	40,162	559,344
Multilateral banks loans	268,895	615,310
Development banks loans	210,402	175,734
Bonds and securities issued	392,585	374,717
Other bonds and securities issued	497,125	2,029,387
Loans to economic associates	-	40,088
<b>Total other loans and borrowings current</b>	<b>1,409,169</b>	<b>3,794,580</b>
<b>Total other loans and borrowings</b>	<b>15,192,611</b>	<b>15,844,613</b>

*Figures stated in millions of Colombian pesos*

During 2019, the following disbursements of credits were received:

### January

- Received new loan for COP 165 billion from Colpatría.
- Received new loan for COP 300 billion from BBVA.

### February

- Received new loan for COP 1 trillion from Bancolombia.
- Received new loan for USD 500 million from HSBC.

### July

- Voluntary partial pre-payment for COP 300 billion to Bancolombia.
- Received new loan for USD 1.9 million from BNDES.

- EPM performed a debt exchange / roll-over consisting of:
  - Early repurchase of COP 1,100 billion, corresponding to the international bond issue whose maturity was scheduled for January 2021, with a balance of COP 1,250 billion, under a "Tender Offer" scheme. This repurchase corresponded to 89.5% of the balance for this financial obligation.
  - Issuance of two tranches of bonds in the international capital market, for an amount equivalent to USD1,382 million: USD 1 billion at a term of 10 years and reopening of global peso bond, with maturity in 2027, for COP 1.23 billion.
  - Voluntary prepayment of USD 1.035 billion, for the loans of Club Deal International for USD 235 million, HSBC for USD 500 million and EDC for USD 300 million.

#### August

- Voluntary partial pre-payment of COP 250 billion to Bancolombia.

#### September

- New loan for USD 5.6 million from BNDES.

#### October

- Voluntary partial pre-payment of COP 265 billion to Colpatría.
- - Voluntary partial pre-payment of COP 35 billion to BBVA.

#### December

- - Voluntary partial pre-payment of COP 300 billion to BBVA.

The breakdown of loans and borrowings is as follows:

Subseries	Original currency	Initial date	Term	Nominal interest rate	2019				2018			
					IRR	Nominal value	Amortized cost value	Total amount	IRR	Nominal value	Amortized cost value	Total amount
2218 BID 800- RELIQUIDATED	USD	7/14/1994	25	LIBOR + 1.43%	0.00%	-	-	-	2.43%	26,312	827	27,139
1665 BID-1664-1	COP	12/9/2005	20	7.8%	9.14%	284,769	3,938	288,707	9.24%	332,231	4,367	336,598
2179 BANK OF TOKYO-MITSUB	USD	9/29/2008	15	LIBOR + 0.95%	1.24%	218,441	9,037	227,478	2.07%	270,782	14,372	285,154
1257 BONDS CPI II TRENCH	COP	1/22/2009	10	CPI + 5.8%	0.00%	-	-	-	9.16%	138,600	2,366	140,966
1259 BONDS TF II TRENCH	COP	1/22/2009	10	10.8%	0.00%	-	-	-	10.79%	74,700	7,558	82,258
1220 BID 2120	USD	3/25/2009	25	LIBOR + 0%	2.83%	353,055	-5,661	347,394	3.62%	374,249	(1,614)	372,635
2021 BID 2120-1	COP	3/25/2009	25	6.272%	7.49%	190,295	-2,750	187,545	7.25%	190,295	(2,591)	187,704
2022 BID 2120-2	COP	3/25/2009	25	7.5%	8.23%	363,057	-679	362,378	8.06%	388,096	1,624	389,702
2023 BID 2120-3	COP	3/25/2009	25	6.265%	6.71%	180,750	825	181,575	6.56%	193,216	2,134	195,350
1261 BONDS CPI III TRENCH	COP	4/21/2009	15	CPI + 6.24%	10.24%	198,400	4,321	202,721	9.63%	198,400	4,260	202,660
1262 BONDS INTERNACIONALE	USD	7/29/2009	10	7.625%	0.00%	-	-	-	8.25%	1,624,875	49,306	1,674,181
1264 BONDS CPI IV TRENCH 2	COP	12/14/2010	12	CPI + 4.2%	8.18%	119,900	513	120,413	7.58%	119,900	515	120,415
1265 BONDS CPI IV TRENCH 3	COP	12/14/2010	20	CPI + 4.94%	8.99%	267,400	634	268,034	8.40%	267,400	548	267,948
1266 GLOBAL 2021 COP	COP	1/31/2011	10	8.375%	14.03%	130,822	2,998	133,820	8.70%	1,250,000	88,210	1,338,210
1013 AFD	USD	8/10/2012	14	4.311%	4.47%	738,875	12,333	751,208	4.47%	824,287	13,588	837,875
1268 BONDS CPI V TRENCH II	COP	12/4/2013	10	CPI + 4.52%	8.80%	96,210	-206	96,004	8.17%	96,210	(311)	95,899
1269 BONDS CPI V TRENCH III	COP	12/4/2013	20	CPI + 5.03%	9.24%	229,190	-1,560	227,630	8.62%	229,190	(1,541)	227,649
5765 AGRARIO	COP	5/20/2014	16	CPI + 4.7%	8.94%	116,000	-862	115,138	8.38%	116,000	(1,234)	114,766
1270 BONDS CPI VI TRENCH I	COP	7/29/2014	6	CPI + 3.57%	7.98%	125,000	1,289	126,289	7.36%	125,000	740	125,740
1271 BONDS CPI VI TRENCH II	COP	7/29/2014	12	CPI + 4.17%	8.39%	125,000	409	125,409	7.78%	125,000	166	125,166
1272 BONDS CPI VI TRENCH III	COP	7/29/2014	20	CPI + 4.5%	8.68%	250,000	219	250,219	8.08%	250,000	(100)	249,900
1273 GLOBAL 2024 COP	COP	9/3/2014	10	7.625%	7.74%	965,745	17,919	983,664	7.74%	965,745	17,243	982,988
1274 BONDS CPI V TRENCH IV	COP	3/20/2015	10	CPI + 3.65%	8.64%	130,000	369	130,369	8.01%	130,000	362	130,362
1275 BONDS CPI VII TRENCH I	COP	3/20/2015	5	CPI + 2.72%	6.81%	120,000	217	120,217	6.13%	120,000	167	120,167
1276 BONDS CPI VII TRENCH II	COP	3/20/2015	12	CPI + 3.92%	7.94%	120,000	132	120,132	7.34%	120,000	146	120,146
1277 BONDS CPI VII TRENCH III	COP	3/20/2015	20	CPI + 4.43%	8.43%	260,000	886	260,886	7.83%	260,000	949	260,949
2015 CLUB DEAL BANK OF TOKYO	USD	12/29/2015	5	LIBOR + 1.4%	0.00%	-	-	-	4.94%	763,691	6,548	770,239
2016 BNDES	USD	4/26/2016	24	4.887%	5.42%	158,247	-4,503	153,744	5.22%	132,517	(4,144)	128,373
1014 EDC	USD	8/4/2016	6	LIBOR + 1.4%	0.00%	-	-	-	4.65%	974,925	10,059	984,984
1015 CAF	USD	10/3/2016	18	LIBOR + 3.1%	5.26%	655,428	3,432	658,860	6.28%	649,950	5,285	655,235
1278 GLOBAL 2027 COP	COP	10/31/2017	10	8.375%	8.45%	3,530,000	28,768	3,558,768	8.46%	2,300,000	15,626	2,315,626
1230 IDB INVEST TRENCH 12 years	USD	12/29/2017	12	Libor 6M + 2.75%	5.66%	1,228,928	-44,316	1,184,612	6.37%	1,218,656	(36,582)	1,182,074
1231 IDB INVEST TRENCH 8 years	USD	12/29/2017	8	Libor 6M + 2.125%	5.26%	245,786	-8,528	237,258	5.88%	243,731	(7,346)	236,385
6017 POPULAR	COP	1/15/2018	1	IBR + 1.8%	0.00%	-	-	-	6.06%	100,000	1,312	101,312
6018 Bancolombia	COP	1/22/2018	1	IBR + 1.59%	0.00%	-	-	-	5.87%	100,000	1,110	101,110
6019 Bancolombia	COP	1/29/2018	1	IBR + 1.59%	0.00%	-	-	-	5.87%	70,000	697	70,697
6020 Bancolombia	COP	2/19/2018	1	IBR + 1.59%	0.00%	-	-	-	5.89%	130,000	873	130,873
1016 EMVARIAS	COP	11/8/2018	1	IBR + 2.1%	0.00%	-	-	-	6.38%	40,000	88	40,088
1018 BANCOLOMBIA	COP	11/22/2018	3	IBR S.V. + 3.5%	7.12%	450,000	9,404	459,404	0.00%	-	-	-
1017 HSBC	USD	11/26/2018	3	Libor 6M + 2.75%	0.00%	-	-3,471	-3,471	0.00%	-	-	-
1019 COLPATRIA	COP	12/19/2018	1	IBR + 1.78%	0.00%	-	-	-	6.06%	100,000	199	100,199
1020 BBVA	COP	12/20/2018	10	8.375%	0.00%	-	-	-	6.07%	35,000	59	35,059
1023 1023 BONDS USD	USD	7/11/2019	10	4.25%	4.39%	3,277,140	39,066	3,316,206	0.00%	-	-	-
<b>Total</b>						<b>15,128,438</b>	<b>64,173</b>	<b>15,192,611</b>		<b>15,668,958</b>	<b>195,841</b>	<b>15,864,799</b>

Figures stated in millions of Colombian pesos

Transaction costs for undisbursed loans were \$-0 (2018: \$20,186).  
 Interest paid on loan transactions was \$1,243,709 (2018: \$925,980).  
 The net foreign exchange loss (gain) was \$58,707 (2018: \$503,317).

### Bonds and securities issued

Subseries	Original currency	Initial date	Term	Nominal interest rate	2019				2018				Amount awarded						
					IRR	Nominal value	Amortized cost value	Total amount	IRR	Nominal value	Amortized cost value	Total amount	Amount awarded 2018	Amount awarded 2017	Amount awarded 2016	Amount awarded 2015	Amount awarded 2014	Amount awarded 2013	
A10a	COP	1/22/2009	10	CPI + 5.8%	0.00%	0	0	0	9.16%	138,600	2,366	140,966	138,600	138,600	138,600	138,600	138,600	138,600	138,600
A10a	COP	12/4/2013	10	CPI + 4.52%	8.80%	96,210	(206)	96,004	8.17%	96,210	(311)	95,899	96,210	96,210	96,210	96,210	96,210	96,210	96,210
A10a	COP	3/20/2015	10	CPI + 3.65%	8.64%	130,000	369	130,369	8.01%	130,000	362	130,362	130,000	130,000	130,000	130,000	130,000	130,000	130,000
A12a	COP	12/14/2010	12	CPI + 4.2%	8.18%	119,900	513	120,413	7.58%	119,900	515	120,415	119,900	119,900	119,900	119,900	119,900	119,900	119,900
A12a	COP	7/29/2014	12	CPI + 4.17%	8.39%	125,000	409	125,409	7.78%	125,000	166	125,166	125,000	125,000	125,000	125,000	125,000	125,000	-
A12a	COP	3/20/2015	12	CPI + 3.92%	7.94%	120,000	132	120,132	7.34%	120,000	146	120,146	120,000	120,000	120,000	120,000	120,000	120,000	-
A15a	COP	4/21/2009	15	CPI + 6.24%	10.24%	198,400	4,321	202,721	9.63%	198,400	4,260	202,660	198,400	198,400	198,400	198,400	198,400	198,400	198,400
A20a	COP	12/14/2010	20	CPI + 4.94%	8.99%	267,400	634	268,034	8.40%	267,400	548	267,948	267,400	267,400	267,400	267,400	267,400	267,400	267,400
A20a	COP	12/4/2013	20	CPI + 5.03%	9.24%	229,190	(1,560)	227,630	8.62%	229,190	(1,541)	227,649	229,190	229,190	229,190	229,190	229,190	229,190	229,190
A20a	COP	7/29/2014	20	CPI + 4.5%	8.68%	250,000	219	250,219	8.08%	250,000	(100)	249,900	250,000	250,000	250,000	250,000	250,000	250,000	-
A20a	COP	3/20/2015	20	CPI + 4.43%	8.43%	260,000	886	260,886	7.83%	260,000	949	260,949	260,000	260,000	260,000	260,000	260,000	260,000	-
A5a	COP	3/20/2015	5	CPI + 2.72%	6.81%	120,000	217	120,217	6.13%	120,000	167	120,167	120,000	120,000	120,000	120,000	120,000	120,000	-
A6a	COP	7/29/2014	6	CPI + 3.57%	7.98%	125,000	1,289	126,289	7.36%	125,000	740	125,740	125,000	125,000	125,000	125,000	125,000	125,000	-
C10a	COP	1/22/2009	10	10.8%	0.00%	0	0	0	10.79%	74,700	7,558	82,258	74,700	74,700	74,700	74,700	74,700	74,700	74,700
International bond	USD	7/29/2009	10	7.625%	0.00%	0	0	0	8.25%	1,624,875	49,306	1,674,181	1,624,875	1,492,000	1,500,355	1,574,735	1,196,230	963,415	
International bond	COP	1/31/2011	10	8.375%	14.03%	130,822	2,998	133,820	8.70%	1,250,000	88,210	1,338,210	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	
International bond	COP	9/3/2014	10	7.625%	7.74%	965,745	17,919	983,664	7.74%	965,745	17,243	982,988	965,745	965,745	965,745	965,745	965,745	965,745	
International bond	COP	10/31/2017	10	8.375%	8.45%	3,530,000	28,768	3,558,768	8.46%	2,300,000	15,626	2,315,626	2,300,000	2,300,000	-	-	-	-	
International bond	USD	7/11/2019	10	4.25%	4.39%	3,277,140	39,066	3,316,206	0.00%	-	-	-	-	-	-	-	-	-	
<b>TOTAL</b>						<b>9,944,807</b>	<b>95,974</b>	<b>10,040,781</b>		<b>8,395,020</b>	<b>186,210</b>	<b>8,581,230</b>	<b>8,395,020</b>	<b>8,262,145</b>	<b>5,970,500</b>	<b>4,925,702</b>	<b>3,917,197</b>	<b>2,218,637</b>	

Figures stated in millions of Colombian pesos, the exchange rate used was the MRR at the closing of each period

### Debt/EBITDA Covenant

On 29 December 2017, EPM entered into a credit agreement for USD 1 billion ("IDB Invest Loan") with the Inter-American Investment Corporation ("IDB Invest"), the private sector division of the Inter-American Development Bank. The IDB Invest Loan has an A/B structure in which the IDB group funds tranche A and a group of international commercial banks and institutional investors from North America, Europe and Asia (CDPQ, KfW IPEX, BNP Paribas, ICBC, Sumitomo Mitsui, BBVA and Banco Santander) funds tranche B. Additionally, the IDB Invest Loan includes resources from the China Fund - China co-financing fund managed by IDB Invest. Tranche A and the portion financed by the China Fund have a total term of 12 years, and tranche B has terms of 8 and 12 years. Interest on the IDB Invest Loan accrued at a LIBOR rate plus 2.125% or LIBOR + 2.75% according to the term, payable semi-annually. The proceeds will be disbursed gradually over a 4-year disbursement period. EPM may voluntarily prepay the IDB Invest Loan at any time and payment obligations qualify as *pari passu* regarding payment priority with all other present and future unsecured and unsubordinated External Indebtedness of EPM. The IDB Invest Loan provides for certain financial covenants, what indicates that it shall not allow the net debt to Adjusted EBITDA ratio be greater than 4.0 and the interest coverage ratio be less than 3.0. On December 12, 2018, IDB Invest granted EPM a waiver for its non-compliance with certain environmental covenants under the loan agreement caused by of the Ituango Contingency. Currently EPM and IDB Invest are negotiating an amendment to this loan agreement to revise the environmental covenants.

EPM has entered into several loan agreements with the IDB, certain of which are guaranteed by Colombia (the "IDB Loans"). Generally, these loans have been entered into in connection with certain of EPM's infrastructure projects, including the expansion of water and sewage infrastructure in Medellín, the Medellín river clean-up program and the Porce III hydroelectric project. In relation to the Medellín river clean-up program, on March 25, 2009, EPM and the IDB entered into a 25-year credit facility for up to USD 450 million.

These loans provide for an interest rate of (i) LIBOR plus a fixed rate and/or (ii) the IDB lending spread, semi-annual interest payments, cross-defaults in respect of other indebtedness with the IDB and voluntary prepayments. Also, under certain loan agreements, EPM is (i) prohibited from incurring new indebtedness with maturities longer than one year, as a result of which EPM's total financial indebtedness/consolidated Adjusted EBITDA ratio exceeds 3.5, and (ii) required to maintain a long-term indebtedness/net worth ratio not to exceed 1.5. Other restrictive covenants include limitations on liens, limitations on the sale of assets and limitations on investments.

The IDB Loans allow EPM to convert the currency of the outstanding balance, with the authorization of Colombia, the loan's guarantor. On 27 May 2014, EPM converted a tranche of IDB Loan 2120 for an aggregate principal amount of USD 98.6 million to COP 190,295 million, with a fixed interest rate of 6.2716%. On 31 March 2016, EPM converted IDB Loan 1664 for an aggregate principal amount of USD 153.8 million to COP 474,615 million, with a fixed interest rate of 7.80%. On 23 August 2016, EPM converted a tranche of IDB Loan 2120 for an aggregate principal amount of USD 154.3 million to COP 450,692 million, with a fixed interest rate of 7.50%.

On 8 December 2017, EPM converted a tranche of IDB Loan 2120 for an aggregate principal amount of USD 68.3 million to COP 205,681 million, with a fixed interest rate of 6.265%.

Under IDB Loan contract 1664, EPM is required to maintain a total financial indebtedness/consolidated Adjusted EBITDA ratio of 3.5 which is measured and reviewed annually. On December 2018 IDB confirmed that would grant the waiver, in the official communication on 17 January 2019, the IDB granted EPM a waiver for its non-compliance with such ratio for the period ending 31 December 2018 and 2019.

On 29 September 2008, EPM entered into a syndicated loan agreement with The Bank of Tokyo-Mitsubishi UFJ, LTD acting as joint lead arranger and facility and collection agent, and Banco Bilbao Vizcaya Argentaria, S.A., Tokyo Branch, acting as joint lead arranger (the "Japan Bank Loan"). The Japan Bank Loan is guaranteed by the Japan Bank for International Cooperation. The Japan Bank Loan bears interest at LIBOR plus 0.95% per annum. EPM may voluntarily prepay the Japan Bank Loan at any time, without premium or penalty (except for mandatory prepayment break funding costs in case prepayments are made on a date other than on an interest payment date). Amounts prepaid or repaid under the Japan Bank Loan cannot be re-borrowed. All payment obligations under the Japan Bank Loan rank *pari passu* with all of EPM's unsecured and unsubordinated External Indebtedness. The Japan Bank Loan contains both affirmative and negative covenants and provides for certain cross default events, including defaults under agreements guaranteed by the Japan Bank for International Cooperation or defaults under any of EPM's External Indebtedness. On May 29, 2013, EPM and the Japan Bank for International Cooperation entered into an Indemnity Agreement, which provides for certain financial covenants, including covenants pursuant to which EPM may not allow its long-term financial debt to shareholders' equity ratio to exceed 1.5:1.0 or its total financial debt to consolidated Adjusted EBITDA ratio to exceed 3.5:1.0, measured quarterly.

On 24 May 2019, the JBIC granted EPM a waiver for non-compliance with the consolidated Total Financial Debt/Adjusted EBITDA ratio for the period ending December 31, 2018.

On 28 June 2019, the JBIC granted EPM a waiver for non-compliance with the consolidated Long-Term Financial Debt to EBITDA ratio as during the period ended 31 March 2019, the ratio was 4.0:1.0. This waiver also covers the quarters ended 30 June 2019, 30 September 2019 and 31 December 2019, provided that the ratio does not exceed 4.0:1.0.

On 10 August 2012, EPM entered into a credit facility with *Agence Française de Développement* ("AFD" - French Agency of Development), this loan matures in July 2027 and, after 31 January 2016, EPM may voluntarily prepay the AFD loan at any time, without premium or penalty (except for mandatory prepayment *Break Funding Costs* in case prepayments are made on a date other than on the interest payment date). All payment obligations

under the AFD loan rank at least *pari passu* with all EPM's unsecured and unsubordinated External Indebtedness obligations.

The AFD loan provides for certain financial covenants, including covenants pursuant to which EPM shall maintain an interest coverage ratio of no less than 3.0 and a total financial indebtedness to consolidated Adjusted EBITDA ratio of no more than 3.5, which are reviewed semi-annually. Other restrictive covenants include limitations on liens and limitations on the sale of assets. On 14 December 2018, the AFD granted EPM with a waiver for its non-compliance with the total financial indebtedness to consolidated Adjusted EBITDA ratio as of 31 December 2018 and as of 30 June 2019.

Contractually, one of the management schemes to avoid non-compliance with this type of commitment is the issuance of waivers by creditors.

It is worth mentioning that the fact that EPM exceeds the agreed Debt/EBITDA covenant does not generate a direct activation of default declaration by the banks nor of advance payment, as exercising or not such declaration is a contractual action at the banks' discretion, additional to having remedial periods agreed in the contracts to attend an eventual default.

EPM must report compliance with the Long-Term Financial Debt/EBITDA indicator as follows: to the Japan Bank for International Cooperation -JBIC- on a quarterly basis, to the French Development Agency -AFD- on a semi-annual basis and to the Inter-American Development Bank -IADB on an annual basis. Currently, the waivers granted by the above-mentioned banks are valid for 2019.

JBIC established a new monitoring indicator from June, Net Financial Debt / EBITDA including cash and transitional credits.

Regard the HSBC credit, the Net Financial Debt/EBITDA indicator has been agreed and is inactive, since EPM has two credit risk ratings at investment grade level.

#### Default events

During the reporting period, the company has not defaulted on any principal or interest payment of its loans.

## Note 22. Trade and other payables

Trade and other payables are measured at amortized cost and consist of:

Trade and other payables	2019	2018
<b>Non-current</b>		
Acquisition of goods and services	628	628
Deposits received as collateral	2,049	43
Resources received for management	998	3,224
Construction contracts	51	588
<b>Total trade and other payables non-current</b>	<b>3,726</b>	<b>4,483</b>
<b>Current</b>		
Acquisition of goods and services	565,920	529,266
Creditors	459,065	462,460
Allocated grants	17,206	6,961
Deposits received as collateral	14,950	22,422
Received advanced payments	2,110	2,110
Resources received for management	655	853
Other accounts payable	506	506
Construction contracts	361	(6,950)
Deposits received as collateral	310	310
<b>Total trade and other payables current</b>	<b>1,061,083</b>	<b>1,017,938</b>
<b>Total trade and other payables</b>	<b>1,064,809</b>	<b>1,022,421</b>

Figures stated in millions of Colombian pesos

## Note 23. Other financial liabilities

The other financial liabilities consist of:

Other financial liabilities	2019	2018
<b>Non-current</b>		
Financial leases (see note 14)	2,218,947	1,804,509
Pension bonds <sup>1</sup>	228,742	250,253
<b>Total other financial liabilities non-current</b>	<b>2,447,689</b>	<b>2,054,762</b>
<b>Current</b>		
Financial leases (see note 14)	23,741	1,070
Pension bonds <sup>1</sup>	313,464	284,797
<b>Total other financial liabilities current</b>	<b>337,205</b>	<b>285,867</b>
<b>Total other financial liabilities</b>	<b>2,784,894</b>	<b>2,340,629</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Variation in current liabilities is due to the payment of pension bonds in EADE and EPM, adjustment of pension liabilities and the amortized cost of the installments. For non-current liabilities, adjustment of pension liabilities and the amortized cost of the installments of EADE.

## Note 24. Derivatives and hedging

The Company has a cash flow hedge that consists of hedging the variation in future cash flows attributable to certain risks, such as interest rate and foreign exchange rate risks that may impact results, whose fair values at the end of the reporting period amount to a right of \$45,062 (2018: \$186,230 Right). The risks hedged in these transactions are:

Hedge classification	Description	Risk Covered	Trench	Hedged item	Recorded value of hedged item	Recorded value of hedging instrument	Changes in fair value of the hedging instrument for the period	Changes in fair value of the hedged item for the period	Hedge effectiveness recognized in the profit or loss for the period	Hedge effectiveness recognized in the other comprehensive income	Reclassification of other comprehensive income to profit for the period <sup>1</sup>
<b>Cash flow hedging</b>											
Swaps	Cross Currency Swap	USD/COP Exchange rate and LIBOR/fixed rate for debt services	Part of the Club Deal and AFD credits	Credit in U.S. dollars	751,208	(45,062)	(10,737)	(7,735)	N.A	(10,737)	(2,302)
Futures	Derivex	Sale price of electricity in the stock market	N.A.	Sales of power: highly probable item	N.A	-	23	N.A	N.A	23	23

*Figures stated in millions of Colombian pesos*

<sup>1</sup>Reclassification of other comprehensive income to profit or loss for the period, for swap instruments, affected the interest item, difference in exchange, difference in interest and capital of the right; and for the instrument futures contracts affected the item of electricity sales in the stock market. Additionally, \$10,322 were capitalized as borrowing costs mainly to the Ituango Project.

### Hedging cash flow

The characteristics of the main cash flow hedging instruments that are under hedge accounting are the following:



Characteristics					
Hedged underlying	Loan AFD	Loan AFD	Loan AFD	Loan AFD	Loan AFD
Trench No.	1	2	3	4	5
Closing date	3-Feb-17	6-Feb-17	10-Feb-17	24-Mar-17	30-Mar-17
Derivative type	CCS	CCS	CCS	CCS	CCS
Counterpart	BNP Paribas	BNP Paribas	BNP Paribas	CITI BANK	CITI BANK
Nominal amount (USD)	64,750,000	47,381,250	85,312,500	13,164,375	85,312,500
Spot exchange rate	2,850	2,855	2,850	2,899	2,878
Obligation (COP)	184,537,500,000	135,273,468,750	243,140,625,000	38,163,523,125	245,529,375,000
EPM pays	IBR + 0,83	IBR + 0,33	IBR + 0,69	IBR + 0,379	IBR + 0,479
	IBR OIS Compound 1 day	IBR OIS Compound 1 day	IBR OIS Compound 1 day	IBR OIS Compound 1 day	IBR OIS Compound 1 day
EPM receives	Fixed rate 4,50%	Fixed rate 4,04%	Fixed rate 4,32%	Fixed rate 4,25%	Fixed rate 4,32%
	Back starting	Back starting	Back starting	Back starting	Back starting
Expiring date	31-Jul-22	31-Jul-22	31-Jul-22	31-Jul-22	31-Jul-22
Initial exchange	No	No	No	No	No
Final exchange	No	No	No	No	No
Modality	Non Delivery	Non Delivery	Non Delivery	Non Delivery	Non Delivery

\* CCS : Cross Currency Swap

## Early termination of hedging

The characteristics of the canceled operations in July 2019 are as follows:

Characteristics	Trench 2	Trench 3	Trench 8	Trench 9	Trench 14	Trench 12	Trench 1	Trench 2	Trench 3
Contract date	24-May-16	26-May-16	20-Jun-16	8-Jul-16	21-Jul-16	8-Aug-16	23-Mar-18	3-Apr-18	11-May-18
Hedged underlying	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan EDC	Loan EDC	Loan EDC
Derivative type	CCS	CCS	CCS	CCS	CCS	CCS	CCS	CCS	CCS
Counterpart	JP Morgan	JP Morgan	Bank of America Merrill Lynch	BNP Paribas	BNP Paribas	BNP Paribas	Goldman Sachs	Goldman Sachs	Goldman Sachs
Nominal amount (USD)	50,000,000	50,000,000	60,000,000	40,000,000	5,000,000	30,000,000	110,000,000	100,000,000	90,000,000
Spot exchange rate	\$ 3,058	\$ 3,053	\$ 2,976	\$ 2,965	\$ 2,924	\$ 2,990	\$ 2,847	\$ 2,776	\$ 2,816
Obligation (COP)	152,900,000,000	152,650,000,000	178,560,000,000	118,600,000,000	14,620,000,000	89,700,000,000	313,170,000,000	277,600,000,000	253,440,000,000
	IBR + 2.17	IBR + 2.17	0.093	0.0842	0.0848	0.0844	IBR + 0,432	IBR + 0,4071	IBR + 0,3286
EPM pays	IBR OIS Compound 1 day	IBR OIS Compound 1 day					IBR OIS Compound 1 day	IBR OIS Compound 1 day	IBR OIS Compound 1 day
EPM receives	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	Labor +0%	Labor +0%	Labor +0%
Periodicity	Semi-annual	Semi-annual	Semi-annual	Semi-annual	Semi-annual	Semi-annual	Semi-annual	Semi-annual	Semi-annual
Expiring date	29-Dec-20	29-Dec-20	29-Dec-20	29-Dec-20	29-Dec-20	29-Dec-20	4-Aug-22	4-Aug-22	4-Aug-22
Initial exchange	No	No	No	No	No	No	No	No	No
Final exchange	Si	Si	Si	Si	Si	Si	Si	Si	Si
Cancellation date	22-Jul-19	22-Jul-19	24-Jul-19	23-Jul-19	23-Jul-19	23-Jul-19	18-Jul-19	19-Jul-19	19-Jul-19
Cancellation exchange rate	\$ 3,172	\$ 3,172	\$ 3,186	\$ 3,181	\$ 3,182	\$ 3,182	\$ 3,180	\$ 3,163	\$ 3,166
EPM (Pays / Receives)	Receives	Receives	Receives	Receives	Receives	Receives	Receives	Receives	Receives
Amount of reported liquidity (USD)	USD 1,476,071	USD 1,557,150	USD 1,037,079	USD 1,309,385	USD 229,134	USD 731,855	USD 10,547,947	USD 11,343,857	USD 9,360,428

## Note 25. Employee benefits

The item of employee benefits recognised at the reporting date have the following composition:

Employee benefits	2019	2018
<b>Non-current</b>		
Post-employment benefits	305,919	262,950
Long-term benefits	46,049	42,745
<b>Total employee benefits non-current</b>	<b>351,968</b>	<b>305,695</b>
<b>Current</b>		
Short-term benefits	90,764	89,285
Post-employment benefits	53,608	50,212
<b>Total employee benefits current</b>	<b>144,372</b>	<b>139,497</b>
<b>Total</b>	<b>496,340</b>	<b>445,192</b>

Figures stated in millions of Colombian pesos

### 25.1 Post-employment benefits

Consists of the defined benefit plans and the defined contribution plans detailed below:

#### 25.1.1. Defined benefit plans

Defined benefit plans	Pensions <sup>1</sup>		Retroactive severances <sup>2</sup>		Educational Assistance Plan <sup>3</sup>		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
<b>Current value of liabilities due to defined benefits</b>								
Initial balance	443,415	446,297	89,675	99,348	81	71	533,171	545,716
Current service cost	-	-	2,954	3,471	-	-	2,954	3,471
Profit (or loss) due to interests cost	29,316	29,529	5,444	6,105	3	3	34,763	35,637
Assumptions by experience	21,805	4,820	4,524	(7,886)	14	39	26,342	(3,027)
Financial assumptions	10,666	450	2,662	1,214	-	-	13,329	1,664
Cost of past service	(4,670)	-	-	-	-	-	(4,670)	-
Payments made by the plan <sup>4</sup>	(39,593)	(37,754)	(12,206)	(12,644)	(32)	(32)	(51,831)	(50,430)
Other changes	-	73	-	67	-	-	(67)	140
<b>Current value of liabilities as of 31 December</b>	<b>460,939</b>	<b>443,415</b>	<b>93,053</b>	<b>89,675</b>	<b>66</b>	<b>81</b>	<b>553,991</b>	<b>533,171</b>
<b>Fair value of plan assets</b>								
Initial balance	220,010	253,899	-	-	-	-	220,010	253,899
Payments made by the plan <sup>4</sup>	(43,048)	(48,522)	-	-	-	-	(43,048)	(48,522)
Profit due to interests	13,884	15,622	-	-	-	-	13,884	15,622
Expected plan yields (excluding profits due to interests)	3,685	(989)	-	-	-	-	3,685	(989)
<b>Fair value of plan assets as of 31 December</b>	<b>194,531</b>	<b>220,010</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>194,531</b>	<b>220,010</b>
<b>Surplus or (deficit) of the defined benefit plan</b>	<b>266,408</b>	<b>223,405</b>	<b>93,053</b>	<b>89,675</b>	<b>66</b>	<b>81</b>	<b>359,460</b>	<b>313,161</b>
Adjustment to surplus per asset limit								
<b>Net assets (or liabilities) of the defined benefit plan</b>	<b>266,408</b>	<b>223,405</b>	<b>93,053</b>	<b>89,675</b>	<b>66</b>	<b>81</b>	<b>359,460</b>	<b>313,161</b>
Otras partidas de beneficios definidos								
<b>Total defined benefits</b>	<b>266,408</b>	<b>223,405</b>	<b>93,053</b>	<b>89,675</b>	<b>66</b>	<b>81</b>	<b>359,460</b>	<b>313,161</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Includes a retirement pension plan recognised prior to the effective date of the General Pension System of Law 100 of 1993 with its respective replacements, which are distributed in the actuarial calculation by groups, differentiating between life annuities, those shared with *Colpensiones*, pension replacements and those that generate part of the retirement quota. The plan is made up of EPM retirees, and retirees belonging to the pension commutation by the liquidation of *Empresa Antioqueña De Energía EADE*. It includes contributions to social security and funeral assistance. The retirement pensions are of the legal under the parameters of Law 6 of 1945 and Law 33 of 1985. No risks have been identified for EPM, generated by the plan. During the period, the plans have not undergone modifications, reductions or settlements that represent a reduction in the present value of the obligation.

<sup>2</sup>Includes a retroactive severance plan, it is a post-employment benefit that applies to approximately 8% of EPM employees, consisting of the recognition of an average monthly salary multiplied by the years of service, payable through advances and at the time of contract termination. The source that gives rise to the plan is the "Sixth Law of 1945, by which some provisions are issued on labor conventions, professional associations, collective conflicts and special labor jurisdiction" and the National Decree 1160 of 1989, which partially regulates Law 71 of 1988, which issues rules on pensions and other provisions. For the retroactive severance plan, no possible risks or significant modifications are identified during the period.

<sup>3</sup>It includes an educational assistance plan that is provided for each of the children of eligible EPM retirees, including assistance for secondary, technical or university studies. It originates in Article 9 of Law 4 of 1976, which establishes rules on pension matters in the public, official, semi-official and private sectors and provides that companies or employers shall grant scholarships or aid for secondary, technical or university studies to the children of their retired personnel, under the same conditions as they grant or establish for the children of active workers.

<sup>4</sup>Includes \$51,831 (2018: \$50,430) of values paid for plan settlements, corresponding to pensions, retroactive layoffs and educational assistance plan.

The company has no restrictions on the current realization of defined benefit plan surplus.

The company made no defined benefit contributions during 2019 and does not expect to make contributions for the next annual period.

The weighted average duration, in years, of the defined benefit plan obligations at the cut-off date is as follows:

Benefit	2019		2018	
	From	To	From	To
EPM Pension	8.5	11.5	8.4	11.4
Educationla assistance EPM	1.2	1.2	1.6	1.6
Retroactive severances	5.7	5.7	6.1	6.1

Fair value of the plan assets is composed as follows:

Assets that support the plan	2019		2018	
	Participation %	Fair value	Participation %	Fair value
Cash and cash equivalents	1.17%	2,276	0.40%	873
Equity instruments				
Industry type 1 - Include -	0.00%	0	0.00%	0
Industry Type 2 - Include -	0.00%	0	0.00%	0
Industry Type 3 - Include -	0.00%	0	0.00%	0
<b>Total equity instruments</b>	<b>0.00%</b>	<b>2,276</b>	<b>0.00%</b>	<b>873</b>
Debt instruments				
AAA	89.67%	174,426	89.84%	197,649
AA	6.14%	11,949	6.80%	14,950
A	0.00%	0	0.00%	0
BB and less	0.00%	0	0.00%	0
Without rating	0.00%	0	0.00%	0
Investment funds <sup>1</sup>	3.02%	5,880	2.97%	6,538
<b>Total debt instruments</b>	<b>98.83%</b>	<b>192,255</b>	<b>99.60%</b>	<b>219,137</b>
Other assets		0	0.00%	0
<b>Total assets that support the plan</b>	<b>100.00%</b>	<b>194,531</b>	<b>100.00%</b>	<b>220,010</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Includes a collective investment fund with a conservative profile, with immediate availability of resources called *Rentalíquida*, managed by *Fiduciaria Davivienda*, with a balance of COP 1.576 billion pesos (2018: COP 1.522 billion) and an Exchange Trade Fund (ETF), which follows the behavior of *Colcap*, with a balance of COP 4.304 billion pesos (2018: COP 5.016 billion).

The main actuarial assumptions used to determine the obligations under the defined benefit plans are as follows:

Assumptions	Post-employment benefits	
	2019	2018
Discount rate (%)	6.60 - 4.70	6.90 - 5.00
Yearly salary increase rate (%)	4.6	4.6
Real rate of return on plans assets	4.83	3.14
Future yearly pension increase rate	3.5	3.5
Yearly inflation rate (%)	3.5	3.5
Mortality rate table	Valid rentiers 2008 table	

The following table shows the effect of a variation for more than 1% and less than 1% in salary increase, discount rate and an increase in benefit over the obligation for post-employment defined benefit plans:

Assumptions	Increase in discount rate by +1%	Decrease in discount rate by -1%	Salary increase by +1%	Salary decrease by -1%	Increase in benefit increment by +1%	Decrease in benefit increment by -1%
EPM Pension	319,642	375,030	-	-	-	0
Social security contributions EPM	22,779	26,418	-	-	-	0
Educationl assistance EPM	65	67	-	-	66	65
EADE Pension	80,881	100,637	-	-	-	0
Social security contributions EADE	796	939	-	-	-	0
Retroactive severances	88,619	97,728	101,148	85,313	-	0
<b>Total post-employment benefits</b>	<b>512,782</b>	<b>600,819</b>	<b>101,148</b>	<b>85,313</b>	<b>66</b>	<b>65</b>

Figures stated in millions of Colombian pesos

The methods and assumptions used to prepare the sensitivity analysis for the Present Value of Defined Benefit Obligations (DBO) were made using the same methodology that for actuarial calculation as of December 31, 2019: Projected Unit of Credit (PUC) Method. The sensibility does not present neither limitations nor changes in the methods or assumptions used to prepare the current period analysis.

**pension liabilities and commutations calculation according to current fiscal requirements in Colombia**

Resolution 037 of 2017 issued by the General Accountancy of the Nation established the obligation to disclose the calculation of pension liabilities in accordance with the parameters established in Decree 1625 of 2016 and Decree 1833 for pension commutations; therefore, the figures presented below do not correspond to the requirements of IFRS adopted in Colombia.

**Pension liabilities**

The actuarial calculation of pensions was prepared with the following technical bases:

Actuarial assumptions - Pension obligation	2019	2018
Real technical interest rate	4.8	4.8
Salary increase rate	3.91	5.09
Pension increase rate	3.91	5.09
Mortality rate table	Valid rentiers 2008 table	

The Company's policy is to prepare actuarial calculations for the annual closing of the period, therefore, the estimated data for 2019 are presented.

The following table is the calculation of Pension Liabilities with the previous parameters:

Description	2019		2018	
	Number of people	Amount of the obligation	Number of people	Amount of the obligation
Personnel pensioned entirely by the company	643	159,241	652	161,125
Personnel pensioned with amounts shared with Colpensiones (state pension system)	437	62,414	439	65,322
Personnel benefit shared with Colpensiones	468	61,161	457	61,614
Personnel pensioned with amounts shared with other institutions	356	39,119	271	34,489
<b>Total</b>	<b>1904</b>	<b>321,934</b>	<b>1,819</b>	<b>322,549</b>

Figures stated in millions of Colombian pesos

Below are Pension Bonuses related to Pension Obligations:

Description	2019		2018	
	Number of people	Amount of the reserve	Number of people	Amount of the reserve
Retirement payment type A modality 1	244	2,707	246	2,524
Retirement payment type A modality 2	4,113	175,568	4,210	172,172
Retirement payment type B	2,248	309,734	2,324	305,588
Retirement payment type T	5	277	5	340
Other - Contributions Law 549	176	5,175	178	4,925
<b>Difference</b>	<b>6,786</b>	<b>493,460</b>	<b>6,963</b>	<b>485,549</b>

Figures stated in millions of Colombian pesos

Following, the differences between the pension liabilities calculated under IFRS adopted in Colombia and the fiscal pension liabilities are shown:

	2019	2018
Pension liabilities	370,311	359,774
Fiscal pension liabilities	815,394	808,098
<b>Difference</b>	<b>(445,084)</b>	<b>(448,324)</b>

Figures stated in millions of Colombian pesos

**Pension commutation liabilities**

The actuarial calculation of pension commutation was prepared with the following technical basis:

Actuarial assumptions - Pension commutation	2019	2018
Real technical interest rate	4.8	4.8
Salary increase rate	3.91	5.09
Pension increase rate	3.91	5.09
Mortality rate table	Valid rentiers 2008 table	

The following table is the calculation of the pension commutation with the previous parameters:

Description	2019		2018	
	Number of people	Amount of the obligation	Number of people	Amount of the obligation
Personnel pensioned entirely by the company	92	25,716	109	23,558
Personnel pensioned with amounts shared with Colpensiones	346	44,513	340	42,781
Personnel benefit shared with Colpensiones	37	3,167	34	2,757
Personnel pensioned with amounts shared with other institutions	31	3,693	44	3,576
<b>Total</b>	<b>506</b>	<b>77,089</b>	<b>527</b>	<b>72,672</b>

Below are the pension bonuses related to pension commutation liabilities:

Description	2019		2018	
	Number of people	Amount of the reserve	Number of people	Amount of the reserve
Retirement payment type A modality 1	12	38	12	35
Retirement payment type A modality 2	255	10,803	262	10,398
Retirement payment type B	219	21,928	226	21,795
Retirement payment type T	3	84	3	149
Other - Include type of pension bond-	3	115	3	107
<b>Difference</b>	<b>492</b>	<b>32,968</b>	<b>506</b>	<b>32,484</b>

*Figures stated in millions of Colombian pesos*

differences between pension commutation liability as calculated under IFRS adopted in Colombia, and the tax pension commutation liability are shown below:

	2019	2018
Pension commutation liabilities	90,694	83,240
Fiscal pension commutation liabilities	110,055	105,157
<b>Difference</b>	<b>(19,361)</b>	<b>(21,916)</b>

*Figures stated in millions of Colombian pesos*

The Company's policy is to prepare actuarial calculations for the annual closing of the period, therefore, the estimated data for 2018 are presented.

### 25.1.2. Defined contribution plans

The company made contributions to defined contribution plans for \$53,999 (2018: \$54,462), recognised in profit or loss for the period as an expense \$17,336 (2018: \$15,731), cost \$29,428 (2018: \$31,846) and investment projects \$7,234 (2018: \$6,886).

### 25.2 Long-term employee benefits

Long-term benefits	Seniority premium <sup>1</sup>	
	2019	2018
<b>Current value of liabilities due to other long-term benefits</b>		
Initial balance	42,745	38,971
Present service cost	4,369	4,218
Profit (or expenses) due to interests	2,835	2,613
Assumptions by experience	886	588
Financial assumptions	874	433
Payments made by the plan	(5,660)	(4,078)
<b>Final balance of current value of liabilities</b>	<b>46,049</b>	<b>42,745</b>
<b>Net liabilities due to long-term benefits</b>	<b>46,049</b>	<b>42,745</b>

Figures stated in millions of Colombian pesos

For these benefits the company has no assets to support the plan.

<sup>1</sup>Includes a seniority premium plan. It is a long-term benefit granted to employees through the collective labour agreement, in EPM it is granted in relation to years of continuous or discontinued service. It is recognised and paid once in the respective period and according to the established terms: every 5 years, 12, 17, 23, 30, 35 and 40 days of basic salary will be paid, respectively. The form of payment may be in money, in time off or a combination of the two at the employee's choice. For personnel who resign from the company to access the old-age or disability pension, they are entitled to proportional payment for the time of service, if they are less than one year away from completing the next five-year period at the time of resignation. For the Seniority Bonus plan, no possible risks were identified.

The weighted average duration in years, of the obligations for long-term benefit plans at the report date, is as follows:

Benefit	2019		2018	
	From	To	From	To
Seniority premium	6.8	6.8	6.6	6.6



The company does not expect to make contributions to the plan for the next year period. The main actuarial assumptions used to determine the obligations for long-term employee benefit plans are the following:

Assumptions	Concept	
	2019	2018
Discount rate (%)	6.4	6.7
Yearly salary increase rate (%)	4.85	4.85
Yearly inflation rate (%)	3.5	3.5
Mortality rate tables	Valid rentiers 2008 table	

The following table shows the effect of a variation of plus 1% and less 1% in the Salary Increase, in the discount rate and in the increase in the benefit over the obligation for long-term benefit plans:

Assumptions	Increase in discount rate by +1%	Decrease in discount rate by -1%	Salary increase by +1%	Salary decrease by -1%
seniority premium	43,254	49,210	49,462	42,983
<b>Total long-term benefits</b>	<b>43,254</b>	<b>49,210</b>	<b>49,462</b>	<b>42,983</b>

*Figures stated in millions of Colombian pesos*

The methods and assumptions used to prepare the sensitivity analysis for the present value of defined benefit obligations (DBO) were made using the same methodology that for actuarial calculation as of 31 December 2019: Projected Unit of Credit (PUC). The sensibility does not present neither limitations nor changes in the methods or assumptions used to prepare the current period analysis.

### 25.3 Short-term employee benefits

The composition of the short-term benefits is as follows:

Short-term benefits	2019	2018
Payroll payable	3	6,745
Severances	37,395	34,325
Interests on severances	4,356	4,062
Vacations	15,613	14,053
Vacations bonus	31,455	28,363
Prima de servicios	(6)	-
Holidays (Christmas) bonus	18	25
Bonuses	1,899	1,712
Other bonuses, salaries and legal benefits	31	-
<b>Total short-term benefits</b>	<b>90,764</b>	<b>89,285</b>

*Figures stated in millions of Colombian pesos*

## Note 26. Taxes, contributions and rates

The detail of taxes, contributions and rates, other than income tax, is as follows:

Taxes, contributions and rates	2019	2018
<b>Current</b>		
Withholding tax on income and stamp duty	65,392	60,051
Industry and commerce tax	20,832	21,884
Appreciation tax	64	136
Custom tax and charges	1,431	1,126
Contributions	7,689	4,866
Rates	15,788	15,545
National consumption tax	5	4
Other national taxes	696	696
Other municipal taxes	85	8
Value added tax (VAT)	4,442	3,879
<b>Total taxes, contributions and rates current</b>	<b>116,424</b>	<b>108,195</b>
<b>Total taxes, contributions and rates</b>	<b>116,424</b>	<b>108,195</b>

Figures stated in millions of Colombian pesos

## Note 27. Provisions, contingent assets and liabilities

### 27.1 Provisions

The reconciliation of provisions is as follows:

Concept	dismantling and restoration <sup>1</sup>	Onerous contracts	Lawsuits <sup>2</sup>	Contingent consideration	Implied subsidiary obligations <sup>3</sup>	Warranties <sup>4</sup>	Other provisions	Total
Initial balance	44,831	61,051	253,527	153,669	-	239,115	97,776	849,969
Additions	24,010	-	9,514	-	60,008	-	58,449	151,981
Uses	(16,961)	(28,085)	(4,611)	(3,674)	-	(151,401)	(87,163)	(291,895)
Unused amounts reversed (-)	-	(2,394)	(14,618)	(21,210)	-	-	(2,192)	(40,414)
Adjustment for changes in estimates	37,408	-	(66,516)	152	-	20,916	18,256	10,216
Capitalizable decommissioning	47,099	-	-	-	-	-	-	47,099
Exchange difference	-	-	695	1,308	-	-	-	2,003
Other changes _Financial expenses_	1,292	1,674	9,781	3,101	-	-	2,035	17,883
<b>Final balance</b>	<b>137,679</b>	<b>32,246</b>	<b>187,772</b>	<b>133,346</b>	<b>60,008</b>	<b>108,630</b>	<b>87,161</b>	<b>746,842</b>
Non-current	67,840	-	17,958	126,509	60,008	108,630	31,206	412,151
Current	69,839	32,246	169,814	6,837	-	-	55,955	334,691
<b>Total</b>	<b>137,679</b>	<b>32,246</b>	<b>187,772</b>	<b>133,346</b>	<b>60,008</b>	<b>108,630</b>	<b>87,161</b>	<b>746,842</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Increase for the compulsory provisions made at the request of the National Authority of Environmental Licenses (ANLA); and, creation of provision for the dismantling of the Jepirachi Wind Farm. (detail in numeral 27.1.1).

<sup>2</sup>Decrease is due to the downward adjustment in the intention of some EADE processes in December 2019.

<sup>3</sup>Corresponds to the implicit obligation of the Subsidiary EPM Capital México S.A. de CV derived from the application of the equity method.

<sup>4</sup>Decrease in provisions derived from the payment execution of the warranty that covers the construction and commissioning of the Ituango Hydroelectric Project, in accordance with Standby Letter of Credit No. 04156826 issued by BNP Paribas Bank. (detail in numeral 27.1.6).

### 27.1.1. Dismantling or environmental restoration

EPM is obliged to incur costs for dismantling or restoring its facilities and assets. Currently EPM keeps five provisions for dismantling or restoring:

- Recall of transformers containing PCBs (Polychlorinated Biphenyls). EPM has committed to the dismantling of these assets from 2014 to 2026, covered by Resolution 222 of 15 December 2011 of the Ministry of Environment and Sustainable Development and the Stockholm Convention of 22 May 2008. The provision is recognised at the present value of the expected costs to settle the obligation using estimated cash flows. The main assumptions considered in the calculation of the provision are estimated costs, CPI and fixed rate TES. To date, it has been shown that the provision will be affected given that it is planned to complete the dismantling in a shorter time than estimated, while the estimated costs decrease since the dismantling peak has already passed. As of 31 December 2019, this item closed in \$289.
- Amagá coal mine: with Resolution 130 AS-1106242 of 21 October 2011 issued by the competent environmental authority (CORANTIOQUIA), approving the environmental component of the plan to close the coal mines of the mining title and to this end, contracts for the construction of miscellaneous civil works, urban planning and monitoring in the coal mines of the mining title, code RPP 434 of the Amagá area.

The main assumptions considered in the calculation of the provision are estimated costs, CPI and fixed rate TES. In 2019 the company is in the final stages of the actions contemplated in the aforementioned resolution and in the last quarter of 2019 no payment for the Amagá coal mine was disbursed and decision was made to stop provisioning, given that the possibility of selling the title through this subsidiary was arranged with the subsidiary PROMOBILIARIA; this issue was taken to the board of directors of EPM and approved on 16 December 2019. For this reason, it was not considered for future budgets and the provision was cancelled.

- Jepírachi: Due to non-compliance with the technical standard issued by resolution CREG 060 of 2019, it was determined that the Jepírachi Wind Farm should be removed from the National Interconnected System and the respective dismantling should be carried out. The main assumptions considered in the calculation of the provision are estimated costs, CPI and TES fixed rate. As of 31 December 2019, the provision was recorded for \$8,722.
- Environmental provision in the construction of infrastructure projects: this arises as legal obligation derived from the granting of the environmental license to compensate for the loss of biodiversity during the construction phase, as well as compensation for the subtraction of reserve areas, affectation of prohibited species and forest exploitation; obligations that are formalized through resolutions of the ANLA (National Environmental Licensing Authority), CAR - Regional Autonomous Corporation and/or MADS - Ministry of Environment and Sustainable Development.

The executions of the biotic environmental compensations of the project extend beyond the time in which the asset begins to operate technically, being necessary to implement the figure of the provision with the intention that these expenditures remain as a greater value of the construction in progress. The company is committed to compensate the loss of biodiversity, subtraction and closures from 2016 to 2019 according to resolutions: Res. 1313/2013 ANLA, Res. 519/2014 ANLA, Res. LA. 0882/04/08/2014 ANLA, Res. 1166/2013 MADS, Res. 1852/2013 CAR, Res. 2135/2014 CAR, Resolution 1189/22/07/2104 MADS, Res. 1120907/17-03-

2015 CORNARE, Res. 141011206/16-10-2014 CORANTIOQUIA, Res LA. EIA1-9872 21/04/2014 CVS, among others. The provision is recognised by the present value of the expected costs to settle the obligation using estimated cash flows. The main assumptions considered in the calculation of the provision are estimated costs, CPI and fixed rate TES.

- Environmental compensation and compulsory investment of 1%: Law 99 of 1993, established the mandatory nature of environmental licensing for the development of any activity that could cause serious damage to renewable natural resources or the environment, or introduce considerable or noticeable modifications to the landscape and depending on the type of activity, the size and location of the project, and assigned the powers in relation to environmental licensing to the National Environmental Licensing Authority, the Regional Autonomous Corporations, or the metropolitan areas.

Article 321 of Law 1955 of 2019 indicates that all holders of an environmental license who have investments pending as of 25 May 2019 may benefit from the percentage increase in the value of the liquidation basis of the compulsory investment of not less than 1%, according to the year of commencement of activities authorized in the environmental license and defined the requirements and procedures to update pending investments and benefit from new terms of execution subject to the approval of the ANLA.

For EPM, the relative obligations for the use of water taken directly from natural sources, in the projects carried out in La Sierra, Porce II, Porce III and Hidroitungo are contemplated. In accordance with the law, the values of 1% executed are Porce II for \$4,525, Porce III for \$9,755, La Sierra for \$470, and Hidroitungo for \$47,100.

- As a result of the Hidroitungo project contingency, caused by the rising waters of the Cauca River as a consequence of the collapse and subsequent uncovering of the project's diversion tunnel, which occurred between April and May 2018, a provision of \$31,388 was created in the same year to attend to the recovery of the affected infrastructure in the municipalities located downstream of the project, which ended at \$54,854 as of 31 December 2019. It also includes the environmental restoration caused by the closure of the floodgates of the tunnel in 2019, which reduced the flow of the Cauca River and the events that could arise from the technical milestones to be reached, typical of the contingency, as well as the execution of the project itself.

The specific action plan for recovery should consider three framework programs:

- Recovery of affected bogs
- Recovery of affected fish fauna
- Re-establishment of the aquatic habitats located in the affected area

These three programs correspond to the environmental component as a response to the identifying of the caused damage, as well as the discretionary actions. Also included are social programs, economic activities, infrastructure, and risk management, among others.

The different actions are to be developed between the municipalities of Valdivia to Nechí, however, if they are identified in the municipalities that are part of La Mojana, will also be the subject of intervention.

### 27.1.2. Onerous Contracts

As of 31 December 2018, \$32,246 have been recognised for the contract of fuel supply and transportation signed with TGI-Transportadora de Gas Internacional S.A. E.S.P., with the objective of supporting the Termosierra plant and obtaining the income from the reliability charge established by the Energy and Gas Regulatory Commission.

The main assumptions considered for calculating the provision are the costs associated to the contract with the conditions stated each quarter, utilization factor or suspension of payments for contract maintenance, LIBOR rate, fixed rate in Colombian pesos TES for the quarter and macroeconomic environment.

The main assumptions used for future events are: to maintain the following assumptions in 2020: Suspension of the contract for 30 days every year and its benefit rights for 15 days each year for generation of the Termosierra plant and the rest of the time would be paid without using the contract (only fixed costs).

### 27.1.3. Lawsuits

This provision covers the estimated probable losses related to labour, administrative, civil and tax lawsuits arising in the operations of EPM. The main assumptions considered for calculating the provision are: Average CPI to actual data in previous years and projected data in future years, fixed rate TES in Colombian pesos to discount, estimated value to be paid, and the estimated payment date for those lawsuits rated as probable. As of today, no future events have been foreseen that may affect the calculation of the provision.

In order to minimize the uncertainty that may arise regarding estimated dates of payment and values to be paid in a lawsuit rated as probable, the company uses business rules based on statistic studies to obtain the average length of processes per action as well as case law to estimate the maximum amounts the law defines for the value of the extra-economic or intangible claims when they exceed their amount, as described below:

Average duration of processes per action

Administrative and tax processes

Type of legal action or procedure	Average length (in years)
Abbreviated	4
Petition for compliance	4
Group action	6
Representative actions	4
Conciliation (pre-trial)	2
Partie civile proceedings	4
Contractual (Breach of contract)	13
Survey and demarcation	5
Executive	5
Singular executive	3
Expropriation	4
Comprehensive reparation incident (criminal)	2
Imposition of easements	4
Nullification of administrative acts	5
Nullification and reinstatement of rights	10
Nullification and reinstatement of labour rights	11
Ordinary litigation	7
Ordinary of membership	5
Accusatorial criminal (Law 906 of 2004)	4
Division's lawsuit	4
Protection of consumer rights	6
Police Grievance	3
Right to reclaim	7
Direct compensation	12
Oral	5

Labor processes

Type of legal action or procedure	Average length (in years)
Labor Solidarity	3.5
Pension	3.5
Extra hours	3.5
Job reinstatement	4
Salary scale equalization	3.5
Unfair dismissal compensation	3.5
Reassessment of social benefits	3.5
Compensation work accident	4
Refund of the health/pension contribution	4

### Application of case law

**Typology:** the values of claims for compensation of extra-patrimonial damages will be recorded according to the following typology:

- Non-material damage.
- Damage to health (physiological or biological damage), derived from a physical or psychophysical injury.
- Damage to relationship life.
- Damage to constitutional and conventional property.

The values of other extra-matrimonial claims not recognised by the jurisprudence will not be recorded, unless it can be inferred from the claim that, despite its name, it corresponds to one of the accepted typologies. Nor shall claims for extra-patrimonial compensation for damage to property be recorded.

**Quantification:** The amounts of extra-patrimonial damage claims will be recorded uniformly as follows, regardless of its typology:

Direct victim compensation	100 Monthly Minimum Legal Wage Enforced (MMLWE)
Indirect victim compensation	50 Monthly Minimum Legal Wage Enforced (MMLWE)

The following are the recognised lawsuits:

Third party (Plaintiff)	Complaint	Amount
Oscar Elias Arboleda Lopera	Solidarity. The shareholders claim to have worked for Empresa Antioqueña de Energía S.A. E.S.P., performing different tasks, all the plaintiffs worked for more than 10 years; they state that upon the dissolution and liquidation of said company there was a substitution of employers with Empresas Públicas de Medellín E.S.P., since it carried out the same activities without continuity, it was the owner of the entire EADE upon its liquidation and all the labor claims were obligated. In total, there are 173 plaintiffs.	102,190
Dragados Porce II Consortium	To pay the plaintiffs, among others, the sums of money resulting from the return of all the compensation illegally deducted by EPM in the hiring process No. CD002376.	28,006
Various labour	Other proceedings for amounts less than \$1,036.	12,411
Various Administrative	Other proceedings for amounts less than \$1,070.	10,524
Fiduciaria Colpatría S.A.	Issue a payment order against EPM and in favor of Fiduciaria Colpatría S.A. acting as spokesperson for Patrimonio Autónomo FC - Enertotal.	6,077
Municipio de Yumbo (Valle)	Industry and commerce and its complementary notices and boards and public lighting.	4,756
John Walter Jaramillo	That the dismissal be declared null and void, with the respective salaries and increases, the social benefits during all the time that they remain untied; in the same way it will be on behalf of the claiming party the contributions to the social security until it is effectively reintegrated.	4,153
Dragados Porce II Consortium	That EPM be ordered to recognize and pay the amount of the damages caused in the good name of the companies that constituted the CONSORTIUM DRAGADOS CONCRETOS PORCE II.	4,107
Oliver Antonio Aguirre Soto	That the nullity of the conciliation act signed due to a defect in the consent is decreed and consequently, the reestablishment of the work contract, the reimbursement, the payment of all the salaries and benefits not received, in the same way that the contributions to the social security are cancelled from the moment of the dismissal and until the moment when the plaintiff is effectively reimbursed.	3,165
Unión Temporal Energía Solar S.A. y Estructuras Arbi Ltda.	Declare that the tender submitted by the applicants to the tender No ES-2043-GI called by EPM was legally capable of being taken into account at the time of the award of the respective contract under tender No ES-2043-GI	1,922

Figures stated in millions of Colombian pesos

Third party (Plaintiff)	Complaint	Amount
Construcciones Píco y Pala Ltda.	Que son nulas las resoluciones 95070 del 05/04/1999, emanadas de EPM, por medio de la cual se liquidó unilateralmente el contrato 1/DJ-682/15 celebrado entre EPM y el Consorcio Trainco S.A. y la 113701 del 15/03/2000, proferida igualmente por EPM, por medio de la cual se resolvió negativamente el recurso de reposición interpuesto en contra de la resolución 95070 del 05/04/1999.	1,838
Humberto Hernando Gómez Franco	Declarar a administrativa y patrimonialmente responsable a EPM, por las lesiones que sufrió el señor HUMBERTO HERNANDO GÓMEZ FRANCO, cuando fue electrocutado por cables de alta tensión de propiedad de la entidad demandada, el pasado 23/10/2013, en la finca la Playa de propiedad del señor Antonio Lopera, ubicada en el sector la Virgen, de la Vereda Hoyorrico jurisdicción del Municipio de Santa Rosa de Osos.	1,651
Francisco Javier Muñoz Usman	Que se decrete la nulidad del acta de conciliación suscrita por vicio en el consentimiento y consecuentemente se ordene el restablecimiento del contrato de trabajo, el reintegro, el pago de todos los salarios y prestaciones dejadas de percibir, de la misma manera que sea cancelados los aportes a la seguridad social desde el momento del despido y hasta cuando el actor efectivamente este reintegrado.	1,620
Varios fiscales	Otros procesos fiscales con cuantía inferior a \$4,756.	1,286
Carlos Olimpo Cardona	Que se reintegre a los accionantes al mismo cargo u oficio o otro de igual o superior categoría que venían desempeñando, que como consecuencial a título de indemnización se deben de cancelar todos los salarios y prestaciones sociales legales dejados de percibir, además de ello todas las cotizaciones causadas a favor del Sistema de Seguridad Social Integral.	1,283
Accesorios y Sistemas S.A.	Declarar la nulidad de la resolución 3077 del 11/12/200, expedida por el Gerente General de EPM, por medio de la cual se resolvió declarar la realización del riesgo de calidad y correcto funcionamiento de los vehículos objeto del contrato 090321557.	1,207
TRAINCO S.A.	Que se dedare nulidad de las resoluciones 161052 del 05/03/2001, emanada de EPM, por medio de la cual se liquidó unilateralmente el contrato 2101870 celebrado entre EPM y Trainco S.A. y la 178702 del 07/06/2001.	1,070
Omar Augusto Lugo Hoyos	Que se decrete la nulidad del acta de conciliación suscrita por vicio en el consentimiento y consecuentemente se ordene el restablecimiento del contrato de trabajo, el reintegro, el pago de todos los salarios y prestaciones dejadas de percibir, de la misma manera que sea cancelados los aportes a la seguridad social desde el momento del despido y hasta cuando el actor efectivamente este reintegrado.	1,036
Consorcio Dragados Porce II	Registro diferencia en cambio Cuenta 271005 Litigio N° 14000857	210
Pagos	Procesos laborales que se han cancelado parcialmente, en 2019, y aún no terminan por \$740.	(740)
<b>Total recognized lawsuits</b>		<b>187,772</b>

Figures stated in millions of Colombian pesos

#### 27.1.4. Contingent consideration - on business combination

Corresponds to contingent considerations mainly related to the acquisition of the following group of assets that constitute a business: Espiritu Santo Energy S. de R.L. subsidiary and Empresas Varias de Medellín S.A. E.S.P. - EMVARIAS subsidiary, the balance as of 31 December 2019 is \$133,346.

The main assumptions considered in the calculation of the contingent consideration related to the acquisition of Espiritu Santo are: the estimated date of occurrence of the milestones associated with the contingent payment, the associated probability of occurrence and additionally, the discount of the payment flows was considered by applying a discount rate (LIBOR rate) in accordance with the risk of the liability. To date, no future events that could affect the calculation of the provision have been evidenced.

The main assumption used in the future events of the contingent consideration related to the acquisition of EMVARIAS are: ongoing lawsuits against EMVARIAS at the date of the transaction, definition of the year of materialization of each lawsuit, definition of the related amount to each of the disputes, estimate of future contingent outlays related to the estimated lawsuits for each year and discount rate (TES fixed rate) to discount future contingent expense flows. To date, there have been no future events that could affect the calculation of the provision.

#### 27.1.5. Implicit subsidiary obligations

Corresponds to the implicit obligation of the subsidiary EPM Capital México S.A. de CV derived from the application of the equity method.



### 27.1.6. Warranties

Constitution, in June 2018, of the provision for guarantee No. 10090002278 - Reliability charge of USD 41.5 million (\$121,633) to cover the construction and commissioning of the Hydroelectric Plant and its monthly adjustments. In accordance with Resolution CREG 061 of 2017, the warranties of the reliability charge for the entry of new electricity generation projects are executed when the entry into commercial operation of the plant is delayed by more than one year. The contingencies presented in the diversion tunnel cause the Ituango Hydroelectric Project to incur in this type of delay and, therefore, under the current regulations, this guarantee must be executed.

EPM managed before the Energy and Gas Regulatory Commission (CREG, by its Spanish initials) and the Government in general, an amendment to the regulation of guarantees of the charge for reliability that would provide some opportunity to continue with the obligations of steady energy and in turn prevent the execution of the guarantee in question. However, through Resolution 154 of 2019, CREG confirmed its Resolution 101 of 2019 in which it had declared the loss of Hidroituango's energy obligations with a starting date of 1 December 2018. The consequence of this decision is the loss of income associated with these obligations and the execution of a guarantee in the amount of USD 43.1 million.

In December 2018 EPM created a provision for \$107,797 (approximately USD 3.5 million per month) for the default that would be incurred from January to October 2021 to the transportador Intercolombia for the months following the entry into operation of the connection infrastructure for the Ituango project. The balance as of 31 December 2019 is \$108,630.

### 27.1.7. Other provisions

- **Other miscellaneous provisions \_ Contingency assistance for Ituango:** Provision of \$25,794 for the attention of the affected people of Puerto Valdivia who were evacuated and sheltered, and who were recognised as being compensated for emergent damage, loss of earnings and moral damage; the recovery of the affected families for the total or partial loss of their homes and economic activities caused by the Hidroituango Project as a result of the opening of the project's diversion tunnel on 12 May 2018. The balance as of 31 December 2019 is \$4,256.
- **Environmental sanctioning procedure:** Corresponds to sanctions imposed on EPM for not implementing environmental management measures for the execution of works or executing them without the respective authorization or modification of the environmental license. As of December 2019, there is a record of \$12,169 for four fines imposed by the ANLA and one by Corantioquia. From the ANLA, the first for having obstructed the course of the "Quebrada Tenche" water source by filling it with stone material; the second for building or modifying a tunnel without prior authorization and disposing of excess material on the road to San Andrés de Cuerquia; The third related to the adaptation of the slopes on which the geomembrane was installed and the waterproofing of the soil surrounding the solid waste disposal cell in the "BOLIVIA" landfill; and the fourth for having initiated activities related to the construction of the Auxiliary Deviation System (SAD) and its associated infrastructure within the Ituango Project without having previously processed and obtained the modification of the environmental license. For its part, Corantioquia declared EPM environmental liable for carrying out intervention in natural forests in March 2014 in Village (Vereda) las Palmas in the municipality of Envigado without having applied The balance as of 31 December 2019 is \$12,169.
- **Sanctions:** Fines imposed by the competent authority for not applying the law or regulation indicated by the respective body. As of December 2019, there is a provision of \$1,656 to be charged to the Superintendence of Public Services for sanctions within the investigation of the Guatapé plant incident that occurred on 15 February 2016.
- EPM keeps other provisions oriented to the welfare and quality of life of its employees and family group, such as: employer policy, multiplier points, *Somos* program, technical reserve and provision for high cost and catastrophic diseases.

The main assumptions considered for the calculation of welfare and quality of life provisions are:

**Employer policy:** Awarded to EPM workers as an extralegal benefit. An aggregate deductible was taken out from 1 July 2019 through 31 July 2020, for \$4,000. The main assumptions considered in the calculation for each type of provision are fixed rate TES discount rate, estimated value to be paid and estimated date of payment. To date, no future events that could affect the calculation of the provision have been evidenced.

**Multiplier points:** Points obtained during the year must be recognised at the request of the interested party or by decision of the Directorate of Human Talent Development and each accounting closure of the period must be paid through payroll. The value of each point is equivalent to 1% of the minimum wage (SMMLV) and point accumulation is not to be allowed from one year to the other, so all points must be exchanged every year.

**Somos program:** This program works under the point accumulation modality. According to the behavior of the statistics the points are counted with a probability of 80% of redemption.

**High cost and catastrophic diseases:** The basis for calculating this provision is that corresponding to the analysis of the entire population of members and beneficiaries of the Adapted Health Entity (EAS) of EPM, who suffer from any of the authorized pathologies.

- **Technical reserve:** The basis for calculating the reserve is that corresponding to all service authorisations issued and which on the cut-off date have not been redeemed, except those corresponding to authorisations with more than twelve months of issue or those which, at least four months after they have been issued, are known not to have been used.
- **Other provisions for contingency:** Provision of \$38,877 created for the reconstruction of community infrastructure destroyed by the rising waters of the Cauca River, which was caused by the opening of the Ituango project's diversion tunnel on 12 May 2018. For adjustments and payments this provision ended, in December 2019, at \$35,873.

### 27.1.8. Estimated payments

The estimate of the dates on which the company may have to disburse payments related to contingent liabilities included in the statement of financial position of EPM at the cut-off date, is the following:

Estimated payments	Dismantling and restoration	Onerous contracts	Lawsuits	Contingent consideration	Warranties	Other provisions	Total
2020	64,626	32,246	173,944	6,837	-	60,868	338,521
2021	39,121	-	4,832	1,197	108,630	7,768	161,548
2022	24,928	-	5,927	3	-	4,026	34,884
2023 and others	24,544	-	11,436	125,309	-	9,340	170,629
<b>Total</b>	<b>153,219</b>	<b>32,246</b>	<b>196,139</b>	<b>133,346</b>	<b>108,630</b>	<b>82,002</b>	<b>705,582</b>

Figures stated in millions of Colombian pesos

### 27.2 Contingent assets and liabilities

The composition of contingent assets and liabilities is as follows:

Description	Contingent liabilities	Contingent assets	Net
Lawsuits	817,938	255,517	(562,421)
<b>Total</b>	<b>817,938</b>	<b>255,517</b>	<b>(562,421)</b>

Figures stated in millions of Colombian pesos

The company has lawsuits or procedures currently in progress before jurisdictional, administrative and arbitral bodies. Considering the reports of the legal advisors, it is reasonable to appreciate that such lawsuits will not significantly affect the financial situation or solvency, even in the event of an unfavorable conclusion of any of them.

The main pending lawsuits and judicial and extrajudicial disputes to which the company is party as of the court date are indicated below:

### Contingent liabilities

Third party (Plaintiff)	Complaint	Amount
ISAGEN S.A. E.S.P.	Order EPM to compensate ISAGEN for the damages it suffered as a result of the fire and the consequent unavailability of the Guatapé plant.	290,981
Various administrative	327 lawsuits under \$5,931 with an average of \$645.	210,915
Hidroeléctrica Ituango S.A.	Value of the execution for the fines of constraint at the date of filing of the lawsuit. Such amount will be increased by interest on arrears, and for each day of delay.	106,158
Aura De Jesús Salazar Mazo	They request 100 SMLMV for the effects on the mining activity; and, for moral damages which are valued at the equivalent of 200 SMLMV for each of the persons in the group, approximately 113.	39,211
Aura De Jesús Salazar Mazo	Collective right, approximately 113 persons, each claiming \$1,133,400 for consolidated loss of earnings and \$78,753,854 for future loss of earnings for destroying, interrupting and cutting the ancestral horseshoe roads that lead from the Alto Chiri trail in the municipality of Briceño to the village of Valle de Toledo.	29,569
Obras Civiles E Inmobiliarias S.A - Oceisa	Declare that EPM's failure to comply with its main obligation to deliver studies and designs prevented the execution of the contract by OCEISA and that it is not contractually liable for those portions of the work that could not be executed by third parties due to events beyond the control of the parties that prevented the normal execution of the contract.	16,614
Various labour	201 lawsuits under \$784 with an average of \$73	14,634
Luis Fernando Anchico Indaburo	Declare EPM administratively liable, as the cause of the anti-legal damage due to the destruction of the fishing resource of the Montecristo swamp complex, which is due to the construction of the PHI (Hydroelectric Project Ituango) and requests the recognition and payment of a minimum wage for each family nucleus from February 2019 until the sentence is issued, this is denominated by the defendants as consolidated lost profits.	13,680
Luis Fernando Anchico Indaburo	Declare EPM administratively liable, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo marshes complex, which is due to the construction of the PHI (Ituango Hydroelectric Project); that a minimum wage be recognized and paid for each family nucleus from February 2019 until the sentence is issued and the recognition of a future loss of profit that goes from the moment of the sentence until the probable life span of each of the plaintiffs.	13,668
Yalida Maria Madrigal Ochoa	For the eleven defendants, it is estimated that they suffered damages to their family and social environment as a result of the death of Nicolás Alberto Moreno Trujillo.	10,356
Maikol Arenales Chaves	Declare EPM administratively liable, as the cause of the anti-legal damage due to the destruction of the fishing resource of the Montecristo swamp complex, which is due to the construction of the PHI (Hydroelectric Project Ituango) and requests the recognition and payment of a minimum wage for each family nucleus from February 2019 until the sentence is issued, this is denominated by the defendants as consolidated loss of earnings.	10,204
Maikol Arenales Chaves	Declare EPM administratively liable, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo marshes complex, which is due to the construction of the PHI (Ituango Hydroelectric Project); that a minimum wage be recognized and paid for each family nucleus from February 2019 until the sentence is issued and the recognition of a future loss of profit that goes from the moment of the sentence until the probable life span of each of the plaintiffs.	10,204

Figures stated in millions of Colombian pesos

Third party (Plaintiff)	Complaint	Amount
Javier Maure Rojas	Declare EPM administratively liable, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo swamp complex, which is due to the construction of the PHI (Hydroelectric Project Ituango) and requests the recognition and payment of a minimum wage for each family nucleus from February 2019 until the sentence is issued, this is called by the defendants as consolidated loss of earnings.	8,605
Javier Maure Rojas	Declare EPM administratively liable, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo marshes complex, which is due to the construction of the PHI (Ituango Hydroelectric Project); that a minimum wage be recognized and paid for each family nucleus from February 2019 until the sentence is issued and the recognition of a future loss of profit that goes from the moment of the sentence until the probable life span of each of the plaintiffs.	8,605
INMEL Ingeniería S.A.S.	Order EPM to compensate Consorcio Línea BGA for the damages suffered, in proportion to its participation in the contractor consortium (80%), after the submission of the offer, execution and completion of contract CT 2016 001695, where unforeseen situations and circumstances not attributable to the contractor occurred that substantially varied the defined execution conditions and made compliance more onerous for the contractor and which the contractor failed to comply with while refusing to restore the financial or economic balance of the contract.	7,626
CONINSA RAMÓN H S.A.	That EPM, failed to comply with contract No. 2/DJ-2183/43 and its additional agreements, (bilateral modification acts) signed with EL CONSORCIO CONINSA S.A.- CONSTRUCCIONES E COMERCIO CAMARGO CORRÁ S.A., due to the non payment of the damages suffered by El Consorcio Contratista, during the execution and development of the contract.	6,801
Alejandra Betancur Giraldo	To declare that EPM, the Municipality of Girardota and INGEELE are liable for the occupation of the plaintiffs' property and to pay them the damages, jointly and severally, in the amount of \$6,102,004,043.	6,111
VELPA SOLUCIONES INTEGRALES S.A.	EPM is ordered to pay the damages suffered by Velpa Soluciones Integrales, with its respective update and moratorium interests, due to the rejection of its proposal within the 2009-0927 contracting process and its award to the firms ELECTROLUMEN Ltda and MELEC S.A., as well as the amount of the sums that VELPA SOLUCIONES INTEGRALES S.A. will no longer receive, due to the impossibility of contracting with the State for a period of 5 years, as a result of the decision adopted by EPM.	5,931
Moraine Olave De Larios	Relatives of a former Integral worker who died in Ituango, claiming full compensation for damages, for moral damages caused. Solidarity.	5,121
HERNANDO DIAZ CORREA	Plaintiff requests compensation for work accident.	924
Aldo Adrian Gutierrez Posada	Employer substitution exEADE.	788
Juliana Urrea Giraldo	Plaintiff requests that it be declared that the death of the former Mincivil worker occurred due to the employer's fault. It is intended to declare the MISPE Consortium guilty and EPM jointly and severally, for the payment of patrimonial and extra patrimonial damages.	784
Ciudadela Comercial Unicentro Medellín PH	Declare the nullity of the administrative act issued by EPM with filed 20190130037817 of February 27, 2019. Order the reinstatement of the plaintiffs' rights by ceasing the collection of the electric energy tax contemplated by Law 142 of 1994, Law 143 of 1994 and Law 223 of 1995; and, make the refund of the amounts paid for such concept from January 1, 2017 and until the date of judicial notification that ends the process.	282
Jesús Evelio Garcés Franco	It requests that the nullity of the resolutions that resolve the Appeal for Replacement by EPM, and of the SSPPD be declared; that EPM be declared administratively liable for restoring the rights of the plaintiff due to the undue collection of alleged works in connection with the water supply.	166
<b>Total contingent liabilities</b>		<b>817,938</b>

Figures stated in millions of Colombian pesos

Regarding the uncertainty of the estimated payment date and the estimated value payable, the same business rules indicated in note 27.1.3 apply to contingent liabilities.

EPM also has as a contingent liability, Environmental Sanctioning Procedures, with the following information:

Third party (Plaintiff)	Complaint	Amount
Área Metropolitana del Valle de Aburrá	Discharge of waste water from San Fernando WWTP in violation of the minimum 80% removal level for the parameters BOD5_Biochemical Oxygen Demand_, TSS_Total Suspended Solids_, fats and oils established in article 72, new user, of Decree 1594 of 1984 _ Metropolitan Resolution No. S.A. 000415 of April 28, 2014	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	Construction of a mini-plant without authorization and use of the ecological flow to generate energy without being authorized in the environmental field (hydroelectric plant Porce III)_Auto 4335 of December 17, 2013.	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	Charge against EPM for having impeded the contribution of the ecological flow, when closing the bottom discharge valves of the Porce III Hydropower Plant, to advance the activities of repairing the slopes of the spillway dissipation basin, the dam and the discharge of the ecological flow without having the pronouncement of the competent environmental authority. Order 04260 of September 26, 2017.	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	Termosierra 1. For performing the air quality sampling reported in the EQ 13, 14 and 15, without the periodicity established by the Industrial Air Quality Monitoring System, authorized in the environmental instrument corresponding to the present project. 2. For performing environmental noise monitoring reported in ICA 13, 14 and 15, with an Environmental Laboratory not accredited by IDEAM _Auto 350 of February 5, 2018.	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	Use of explosives in the construction of the Nueva Esperanza tower. The environmental license granted by this resolution does not cover any type of work or activity different from those described in the Environmental Impact Study, the Environmental Management Plan, and in this administrative act. Auto 02574 of June 27, 2017 ANLA_	Not possible to know the sanction to be imposed
Área Metropolitana del Valle de Aburrá	Discharge of domestic waste water from the rupture of the sewerage pipe that carries this water, over a paddock and then over the Doña María stream, a property called Torremolino.	Not possible to know the sanction to be imposed

Third party (Plaintiff)	Complaint	Amount
Autoridad Nacional de Licencias Ambientales "ANLA"	For having disposed of material left over from the excavation activities of the construction of the Via Puerto Valdivia (Site of the Dam - Ituango) on the bed and protection strip of the "Quebrada Tamara"; and, for having replaced the bridges located along the Via Puerto Valdivia to build two (2) Box Culverts without the authorization to do so; and, for having discharged waste water to an infiltration field in the	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	Having occupied the bed of the "Rio Ituango", for the installation of a pumping system without the respective authorization; and, having made the collection of water resource from the source "Rio Ituango" by pumping without having obtained prior modification of the environmental license. (SAN0047-00-2019_Auto 2919 of 2015).	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	Not having implemented the environmental management measures established in the Environmental License granted for the development of the project "Construction and Hydroelectric Operation Pescadero - Ituango" related to the management and proper disposal of excess material from the excavation of the Puerto Valdivia road, throwing it on the slopes of the road and the water sources "Rio Cauca" and "Quebrada la Guamera"; and, having formed the deposits "La Planta" and "Cacharimé" less than thirty meters (30 meters) from the water source "Rio Cauca". (SAN0046-2019_Auto 0523 of 2016).	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	<p>"For having carried out inadequate practices with respect to the surface water sources in the project's area of influence; to have carried out the collection of water resources from the "El Roble", "Burundá", "Bolivia" and "Guacimal" streams, at flows higher than those granted in concession and/or authorized for the development of the project; Not having implemented in each one of the water bodies under concession, the infrastructure that would allow the monitoring of the remaining flows, in order to be presented in the environmental compliance reports; not having carried out and delivered the water quality and hydrobiological community monitoring in the "Cauca River", under the conditions established in the environmental license.</p> <p>For not having carried out the reformation and recovery of the channel of the "San Andres River" and its flood zone to its natural conditions, within the granted term; for having carried out the use of petreous materials coming from the "San Andres River", without the updated environmental permits; for not having delivered the results of the sediment monitoring of the "Cauca River", for the purpose of establishing the comparison base line at the time of initiating the operation phase of the project.</p> <p>Exceeding the maximum permissible levels of PST (particulate matter) and atmospheric pollutants in the asphalt plant located in the "El Valle" Industrial Zone; for not having built the necessary facilities and infrastructure in the asphalt plant's chimney to monitor emissions from fixed sources; for not complying with the management measures in the "Management and Disposal Plan for Materials and Dumping Zones" for disposing of plant material mixed with inert material inside the deposits and for not signaling the disposal zones for material that remain active.</p> <p>All this in the area of influence of the project "construction, filling and operation of the Pescadero - Ituango Hydroelectric Project..." (SAN0033-00-2019_Auto 2920 of 2015).</p>	Not possible to know the sanction to be imposed
Dirección de Bosques, Biodiversidad y Servicios Ecosistémicos del Ministerio de Ambiente y Desarrollo Sostenible	For having intervened 100 HAS that contained forest species subject to national closure without the previous Resolution authorizing their removal and that were in the area of the Ituango Hydroelectric Project reservoir (SAN027 (Minambiente)_Resolución 835 de 2017).	Not possible to know the sanction to be imposed
Autoridad Nacional de Licencias Ambientales "ANLA"	To have initiated the activities related to the construction of the Auxiliary Deviation System (SAD) and its associated infrastructure, within the Project "Construction, filling and operation of the Pescadero - Ituango Hydroelectric Project", without having previously processed and obtained the modification of the environmental license (SAN0210-00-2018_Auto 6880 of 2018).	Not possible to know the sanction to be imposed
Third party (Plaintiff)	Complaint	Amount
Autoridad Nacional de Licencias Ambientales "ANLA"	<p>" * The process is in the preliminary investigation phase due to the contingency associated with the Auxiliary Deviation System.</p> <p>*No charges have been filed; however, a request for cessation of the sanctioning procedure has been presented through File No. 2018064395-1-000 of May 24, 2018 (SAN0097-00-2018_Auto 02021 of 2018)".</p>	Without charges it is considered by the lawyer as possible.
Autoridad Nacional de Licencias Ambientales "ANLA"	<p>*Initiation of an administrative environmental procedure of a sanctioning nature for having carried out forest exploitation activities outside the authorized industrial area for the execution of the works that are part of the construction of the Puerto Valdivia - Presa road (Zona Organi).</p> <p>*No charges have been filed. (SAN0013-2017_Auto 04965 of 2018)</p>	Without charges it is considered by the lawyer as possible.
Autoridad Nacional de Licencias Ambientales "ANLA"	<p>*Initiation of sanctioning procedure for not guaranteeing downstream of the dam of the project "Construction and operation of the Pescadero - Ituango hydroelectric project" the ecological flow to assure the integrity of the ecosystemic services and the environmental protection goods that are part of the "Rio Cauca" water source.</p> <p>*No charges have been made. (SAN0001-2019_Auto 0060 of 2019)</p>	Without charges it is considered by the lawyer as possible.
Autoridad Nacional de Licencias Ambientales "ANLA"	<p>1. Intermittent dry run discharge coordinates X=1157241 and Y=1281506</p> <p>2. Discharge to the rainwater channel from the mixer washing system located in the industrial zone of the main works</p> <p>The ANLA opened a sanctioning file but this has not been formally initiated.</p> <p>By Resolution No. 1222 of December 3, 2013 the ANLA imposed a preventive measure of suspension of the dumping. By Resolution No. 1363 of October 31, 2017, the ANLA lifted the preventive measure in question. By means of Order No. 01282 of March 22, 2019, the ANLA broke down the proceedings related to this preventive measure from the license file LAM2233 so that they are in the file SAN0031-2019.</p>	Without charges it is considered by the lawyer as possible.
Autoridad Nacional de Acuicultura y Pesca_"AUNAP"	<p>*Preliminary investigation for effects on the fishing activity during the closing of the engine house doors.</p> <p>*No charges have been filed. (without file AUNAP_Auto 002 of February 14, 2019).</p>	Without charges it is considered by the lawyer as possible.
Autoridad Nacional de Licencias Ambientales "ANLA"	<p>Repeated failure to comply with imposed obligations. Order 11359 of December 19, 2019.</p> <p>SAN0284-00-2018 _December 19, 2019_.</p>	Unresolved situation. No charges have been filed to date.

## Contingent assets

Third party (Plaintiff)	Complaint	Amount
Municipality of Bello	Integral nullity of the complex administrative act contained in Resolutions 2717 of 2009 and 0531 of 2010 WTP Bello.	117,972
Municipality of Bello	Reimbursement of monies paid by EPM, for the determination and liquidation of the capital gain effect, WTP Bello.	114,820
La Nación Ministerio de Salud y Protección Social	MINSALUD has the legal and constitutional obligation to recognize and cancel the value of the services rendered to members in relation to medicines and/or procedures, interventions or elements not included in the Compulsory Health Plan (CHP).	7,079
Other administrative	Processes for amounts less than \$867.	4,589
Interconexión Eléctrica S.A. E.S.P. ISA	To declare that Interconexión Eléctrica S.A. E.S.P., ISA is civilly responsible for not recognizing to EPM the value that corresponds to it, of the remuneration that ISA received between the years 1995 to 1999, for the line modules that correspond to assets of use of the STN in the Playas and Guatapé substations represented by it, in which there is shared property, a value that to date has not been realized, generating an enrichment without cause by increasing the patrimony of the defendant at the expense and to the detriment of the patrimony of the plaintiff	3,577
Poblado Club Campestre Ejecutivo S.A.	Declare the Poblado Club Campestre Ejecutivo S.A., Optima S.A. Vivienda y Construcción and the Municipality of Envigado responsible for the damage to the collector owned by EPM, which collects and transports the wastewater from the sanitary basin of the Honda stream in the Municipality of Envigado, and indemnify EPM for the value of all the patrimonial damages that are proven for the damage to the collector that collects and transports the wastewater from said sanitary basin.	3,369
Other Fiscal	Processes with a value of less than \$114,820.	2,321
Fiduciaria Bogotá S.A. - FIDUBOGOTÁ S.A.	TO IMPOSE in favor of EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P. a electricity transmission easement, on the lot of land or property called LA BOCA DEL PANTANO, with real estate registration No. 50 C-1497258 located in a rural area of the Municipality of Madrid (Cundinamarca) for the 500 Kv transmission lines, and for one (1) tower point (with its landings) of the Transmisión Nueva Esperanza project.	923
Municipality of Envigado	To declare the nullity of the administrative act contained in Resolutions 2656 of August 13, 2007 and 4176 of October 26 corresponding to the sanction imposed for the alleged violation of Municipal Decree 259 of August 14, 2002; to declare the inapplicability of Decree 259 of August 14, 2002 of the Municipality of Envigado (Antioquia), "By means of which urbanistic sanctions are established", for being contrary to the Political Constitution, the Law and the Regime of Public Home Services. Order by way of restoration of rights, that EPM be refunded \$655'460,000 for the sanction imposed on administrative acts whose nullity is requested.	867
<b>Total contingent assets</b>		<b>255,517</b>

Figures stated in millions of Colombian pesos

As of 30 December 2019, the amount determined by the experts to compensate is \$255,517.

## Estimated payments and collections

The estimated dates on which the company expects to make payments related to the contingent liabilities or receive collections related to the contingent assets included in this note to the statement of financial position of EPM at the cut-off date are as follows:

Year	Contingent liabilities	Contingent assets
2020	70,667	125,855
2021	8,913	9,239
2022	41,715	128,027
2023 and others	1,181,871	9,338
<b>Total</b>	<b>1,303,166</b>	<b>272,459</b>

Figures stated in millions of Colombian pesos

## Note 28. Other liabilities

The composition of other liabilities is as follows:

Other liabilities	2019	2018
<b>Non-current</b>		
Payments received in advance	2,685	2,892
Assets received from customers or third parties	7,990	8,076
Other deferred credits	21,089	21,159
Collection in favour of third parties <sup>1</sup>	10	9
<b>Subtotal other liabilities non-current</b>	<b>31,774</b>	<b>32,136</b>
<b>Current</b>		
Payments received in advance	102,411	51,956
Collection in favour of third parties <sup>1</sup>	158,430	82,252
<b>Subtotal other liabilities current</b>	<b>260,841</b>	<b>134,208</b>
<b>Total</b>	<b>292,615</b>	<b>166,344</b>

*Figures stated in millions of Colombian pesos*

<sup>1</sup>Obeys to the collection of the sanitation fee from Emvarias, public lighting from the different municipalities of Antioquia and the commercial representation contract that EPM has with ESSA and CHEC.

<sup>2</sup>Corresponds to the collection associated with the Comprehensive Solar and Energy Solution Offer, which was invoiced in the ERP JDEdwards.

## 28.1 Payment received in advance

The breakdown of payment received in advance as of the cut-off date was:

Payment received in advance	2019	2018
<b>Non-current</b>		
Leases	2,030	2,203
Sale of energy utility	655	689
<b>Total non-current payment received in advance</b>	<b>2,685</b>	<b>2,892</b>
<b>Current</b>		
Leases	173	173
Sales	70,947	8,674
Sale of energy utility	13,040	40,862
Sale of fuel gas utility	10,277	5,406
Other payment received in advance	7,974	(3,159)
<b>Total current payment received in advance</b>	<b>102,411</b>	<b>51,956</b>
<b>Total payment received in advance</b>	<b>105,096</b>	<b>54,848</b>

Figures stated in millions of Colombian pesos

## Note 29. Changes in liabilities due to financing activities

The reconciliation of liabilities due to financing activities is as follows:

Reconciliation of liabilities due to financing activities 2019	Initial balance	Cash flows	Changes other than cash		Other changes <sup>1</sup>	Total
			Foreign exchange	Changes in fair value		
Loans and borrowings (see note 21)	15,844,613	(617,818)	98,879	-	(133,062)	15,192,612
Lease liabilities (see notes 14 and 23)	1,805,579	(10,010)	-	-	432,219	2,227,788
Pension bonds (see note 25)	535,050	(19,515)	-	-	26,672	542,207
Hedging instruments (see notes 13, 23 and 24)	(186,230)	(92,131)	-	47,249	186,050	45,062
Dividends or surpluses paid (see note 19)	-	(1,289,652)	-	-	1,289,652	-
Other financing flows	-	143,447	-	-	(143,447)	-
<b>Total liabilities from financing activities</b>	<b>17,999,012</b>	<b>(1,885,679)</b>	<b>98,879</b>	<b>47,249</b>	<b>1,658,084</b>	<b>17,917,545</b>

Figures stated in millions of Colombian pesos

Reconciliation of financing activities 2018	Initial balance	Cash flows	Changes other than cash		Other changes	Total
			Foreign exchange	Changes in fair value		
Loans and borrowings (See note 20)	12,447,331	2,845,884	281,444	-	269,954	15,844,613
Lease liabilities (See notes 12 and 22)	196,310	(987)	-	-	1,610,257	1,805,580
Hedging instruments and derivatives (See notes 12, 22 and 23)	51,891	-	-	(162,670)	(75,451)	(186,230)
Dividends or surpluses paid (see note 18)	300,000	(1,503,504)	-	-	1,203,504	-
Other financing flows	-	7,324	-	-	(7,324)	-
<b>Total liabilities from financing activities</b>	<b>12,995,532</b>	<b>1,348,717</b>	<b>281,444</b>	<b>(162,670)</b>	<b>3,000,940</b>	<b>17,463,963</b>

Figures stated in millions of Colombian pesos



<sup>1</sup> Includes interest paid during the year for \$ 1,232,367 (2018: \$1,002,253), that by company's policy are classified as operating activities in the statement of cash flows; the variation in the measurement at amortized cost of loans and borrowings \$ 794,754 (2018: \$919,927); loans to economic associates in 2018 for \$40,088, which are classified as investment activities in the statements of cash flows; and dividends caused and not paid during the year.

## Note 30. Income from ordinary activities

For presentation purposes, the company breaks down its income from the services it provides according to the lines of business in which it participates and the way in which management analyses them. The detail of income from ordinary activities is as follows:

Income from ordinary activities	2019	2018
<b>Sales of goods</b>	733	30
<b>Rendering of services</b>		
Electricity generation service	2,959,949	3,002,126
Electricity transmission service	172,786	151,184
Electricity distribution service <sup>1</sup>	3,382,717	2,975,226
Fuel gas service	869,777	851,597
Sewage service <sup>2</sup>	507,461	419,580
Water service <sup>2</sup>	643,799	571,677
IT Services	7,679	7,172
Construction contracts	501	22,899
Other services	56,789	42,216
Refunds	(152,525)	(194,289)
<b>Total rendering of services</b>	<b>8,448,933</b>	<b>7,849,418</b>
Leases	51,520	47,536
Gain in sale of assets <sup>3</sup>	369	23,596
<b>Total</b>	<b>8,501,555</b>	<b>7,920,550</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Income from the energy distribution service increased due to the application of Resolution 015 of 2018 and higher income from marketing due to higher unit costs and increased consumption.

<sup>2</sup>The increase is explained by higher discharges and consumption, users and tariffs.

<sup>3</sup>The decrease is due to the sale of land that the company made to the subsidiary *Promobiliaria S.A.* for the development of a real estate project in 2018.

The company recognised the following values in the period, for the contracts in effect at the cut-off date described in the previous paragraph:

## Other contracts with customers

2019	Contract asset balance at the beginning of the period	Contract asset balance at the end of the period	Contract liability balance at the beginning of the period	Contract liability balance at the end of the period
Contract of uniform conditions for regulated utilities <sup>1</sup>	352,720	504,423	14,086	13,875
Non-regulated market - (NRM) or large customers <sup>2</sup>	136,800	126,680	34,642	10,098
<b>Total</b>	<b>489,520</b>	<b>631,103</b>	<b>48,728</b>	<b>23,973</b>

Figures stated in millions of Colombian pesos

2018	Contract asset balance at the beginning of the period	Contract asset balance at the end of the period	Contract liability balance at the beginning of the period	Contract liability balance at the end of the period
Contract of uniform conditions for regulated utilities <sup>1</sup>	316,578	352,720	18,883	14,086
Non-regulated market - (NRM) or large customers <sup>2</sup>	115,837	136,800	25,575	34,642
<b>Total</b>	<b>432,415</b>	<b>136,800</b>	<b>44,458</b>	<b>48,728</b>

Figures stated in millions of Colombian pesos

<sup>1</sup> The purpose of this contract is to define the uniform conditions by which Empresas Públicas de Medellín E.S.P., identified with TIN 890904996-1, hereinafter EPM, provides public residential utilities of water and/or sewage in exchange for a price in money, which will be fixed according to the current rates, and according to the use given to the service by the users, subscribers or owners of properties, hereinafter the USER, who by benefiting from the water and/or sewage utilities provided by EPM, accepts and abides by all the provisions defined herein

<sup>2</sup> Resolution 131 of 23 December 1998 of the Energy and Gas Regulation Commission (CREG) establishes the conditions for the supply of energy and power to large consumers and indicates in Article 2 the power or energy limits for a user to contract for the supply of energy in the competitive market; The aforementioned resolution allows the conclusion of contracts with large consumers to establish by common agreement the prices for the supply of energy and power; the object of the contract is to supply energy and power to the consumer, as an unregulated user, to meet its own demand.

Another important contract is the XM representation contract, which is not disclosed since there are no balances in assets and liabilities.

In contracts with customers, no income was recognised during the period from performance obligations satisfied in previous periods.

For these contracts it is not possible to identify the outstanding value of unmet performance obligations considering that they are contracts without a termination date.

## Note 31. Other income

The detail of other income, which forms part of income from ordinary activities, is as follows:

Other income	2019	2018
Recoveries <sup>1</sup>	145,613	65,819
Compensation for asset damage	78,295	-
Valuation of investment properties <sup>2</sup>	51,942	1,596
Compensation	25,792	105,932
Commissions	29,604	28,995
Fees	6,267	5,060
Other ordinary income <sup>3</sup>	5,748	21,913
Benefit rights	4,857	6,106
Contracts for the management of public utilities	89	89
Government grants	-	1,145
<b>Total</b>	<b>348,207</b>	<b>236,655</b>

*Figures stated in millions of Colombian pesos*

<sup>1</sup>Includes recovery of provisions of \$88,084, mainly from labor lawsuits for \$75,019; from the Espiritu Santo contingent consideration for \$21,211, due to the modification of the estimated payment dates from 2020 to 2036; other recoveries of \$20,150, mainly associated with the provision of the industrial and commercial tax after the filing of the returns and recoveries for obligations that were extinguished for \$15,729.

<sup>2</sup>This increase obeys the valuation of some properties due to urban developments in the sectors around these.

<sup>3</sup>Decreasing occurred because in 2018 Natural Gas received income from reconciliations with ENERCOR.

## Note 32. Costs of goods sold and services rendered

The detail of the costs of services rendered is as follows:

Costs of Services Rendered	2019	2018
Use of lines, networks and ducts <sup>1</sup>	963,668	923,324
Block purchases	636,795	667,949
Stock market purchase	558,725	665,907
Natural gas distribution and/or marketing costs	349,249	347,205
Connection costs <sup>2</sup>	50,091	5,392
Commercial and financial management of the service	25,021	22,780
Liquefied natural gas	4,979	2,171
Other	1,103	870
Costs associated with transactions in the wholesale market	943	556
Personal Services	488,261	484,878
Depreciations	422,584	425,876
Orders and contracts for other services	293,716	277,371
Others	147,266	125,637
Maintenance and repair orders and contracts	149,194	127,275
Licenses, contributions and royalties	143,737	135,845
Materials and other operating costs	107,363	107,793
Insurance	99,135	81,786
General	58,788	59,421
Amortization of rights of use	47,758	-
<b>Total</b>	<b>4,548,376</b>	<b>4,462,036</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Increase obeys increased service provision in the Electricity Distribution and Natural Gas segments.

<sup>2</sup>Growth in the Wastewater Management segment due to the Aguas Claras plant interconnection contract.

## Note 33. Administrative expenses

The breakdown of administrative expenses is as follows:

Administrative expenses	2019	2018
<b>Personnel expenses</b>		
Payroll expenses	239,794	201,611
Social security expenses	88,418	74,720
Pension expenses	15,450	14,101
Other post-employment benefit plans different from pension	1,676	1,354
Other long-term benefits	3,248	2,466
Benefits in interest rates to employees	6,563	6,183
<b>Total personnel expenses</b>	<b>355,149</b>	<b>300,435</b>
Taxes, contributions and rates	103,314	103,197
Provision for dismantling, decommissioning or restoring.	60,880	31,388
Commissions, fees and services	59,692	54,139
Maintenance	46,609	42,286
Intangibles	38,214	33,059
Other miscellaneous provisions <sup>1</sup>	37,275	310,230
Depreciation of property, plant and equipment	33,687	29,384
Other general expenses	27,561	36,911
Amortization of intangibles	20,270	18,175
Studies and projects	19,753	15,386
Contingency provision	17,444	121,646
Provision of guarantees	15,756	-
Amortization of rights of use	12,944	-
Advertising and publicity	12,000	6,780
General insurance	10,935	7,544
Christmas Lighting	10,925	9,681
Promotion and publications	8,380	6,792
surveillance and private security	6,376	6,695
Services of cleaning, cafeteria, restaurant and laundry	5,567	5,225
<b>Total general expenses</b>	<b>547,582</b>	<b>838,518</b>
<b>Total</b>	<b>902,731</b>	<b>1,138,953</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Decrease obeyed the lower provisions for the Ituango project contingency recorded in 2018: \$137,318 for the guarantee covering the construction and commissioning of the Pescadero Ituango Hydroelectric Plant, \$101,797 for the *Conexión Ituango*, \$42,917 to continue assistance to evacuees due to the project contingency and \$31,388 for the environmental contingency.

## Note 34. Other expenses

The detail of other expenses is as follows:

Other expenses	2019	2018
Loss on asset disposal	85,096	91,325
Other ordinary expenses <sup>1</sup>	27,815	54,461
Contributions to non-corporate entities	14,947	15,024
Arbitral Awards and Extrajudicial Conciliations <sup>2</sup>	2,565	11,737
Court rulings	353	82
Loss due to changes in fair value in investment property	291	471
<b>Total</b>	<b>131,067</b>	<b>173,100</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Decrease obeys lower expenses executed for the attention of the community affected by the contingency of the Ituango project.

<sup>2</sup>2018 includes arbitral awards with Rio Piedras for \$10,316.

## Note 35. Finance income and expense

### 35.1 Finance income

The breakdown of finance income is as follows:

Financial income	2019	2018
<b>Interest revenue:</b>		
Interests by debtors and arrears	211,944	205,119
Gains from valuation of financial instruments at fair value <sup>1</sup>	79,240	17,132
Gains from trust rights	29,949	21,631
Bank deposits	17,391	15,769
Others	2,060	2,566
<b>Total financial income</b>	<b>340,584</b>	<b>262,217</b>

Figures stated in millions of Colombian pesos

<sup>1</sup>Corresponds to the valuation of the temporary investment portfolio. The variation with respect to the previous period obeys the increase in the amount invested in said portfolio.

### 35.2 Finance expenses

The breakdown of finance expenses is as follows:

Financial expenses	2019	2018
<b>Interest income:</b>		
Lease contracts <sup>1</sup>	209,583	39,570
Other interests	441	3,227
<b>Total interest</b>	<b>210,024</b>	<b>42,797</b>
Long-term internal public credit operations	158,318	148,410
Long-term external public credit operations	605,971	546,463
Short-term internal financing operations	30,464	1,756
Total interest expense on other financial liabilities not measured at fair value through profit or loss	-	79
<b>Other financial costs</b>		
Commissions	2,114	575
Interest on financial liabilities and losses on valuation of investments and other assets	96,907	77,468
<b>Total financial expenses</b>	<b>1,103,798</b>	<b>817,548</b>
<i>Figures stated in millions of Colombian pesos</i>		

<sup>1</sup>Increase associated with the implementation of IFRS 16 - Leases, from January 2019.

<sup>2</sup>Increase related to new loan disbursements received in the period.

## Note 36. Net foreign exchange difference

The effect of transactions in foreign currency is the following:

Foreign exchange difference	2019	2018
<b>Foreign exchange difference gains</b>		
<b>Own position</b>		
For goods and services and others	32,820	4,163
For liquidity	12,777	52,933
Receivables	292,368	119,941
<b>Total Own position</b>	<b>337,965</b>	<b>177,037</b>
<b>Financial</b>		
Gross income	62,519	5,249
Debt hedging	(40,312)	(42)
<b>Total Financial</b>	<b>22,207</b>	<b>5,207</b>
<b>Total foreign exchange difference gains</b>	<b>360,172</b>	<b>182,244</b>
<b>Foreign exchange difference expenses</b>		
<b>Own position</b>		
For goods and services and other	11,115	12,852
Por liquidez	18,459	-
Receivables	254,050	77,055
Other adjustments in foreign exchange difference	2,003	13,130
<b>Total Own position</b>	<b>285,627</b>	<b>103,037</b>
<b>Financial</b>		
Gross expenditure	121,287	508,566
Debt hedging	(200)	(221,915)
<b>Total Financial</b>	<b>121,087</b>	<b>286,651</b>
<b>Total foreign exchange difference expenses</b>	<b>406,714</b>	<b>389,688</b>
<b>Foreign exchange difference, net</b>	<b>(46,542)</b>	<b>(207,444)</b>

Figures stated in millions of Colombian pesos



The rates used for the conversion of foreign currency in the separated financial statements are:

Currency	Numeric code	Exchange to USD as of 31 December		Exchange rate as of 31 December		Average exchange rate	
		2019	2018	2019	2018	2019	2018
		United States Dollar	USD	1.00	1.37	3277.14	3249.75
Guatemalan quetzal	GTQ	7.70	7.74	425.67	420.03	426.21	393.01
Mexican peso	MXN	18.88	19.69	173.54	165.01	170.45	153.78
Chilean peso	CLP	751.95	694.00	4.36	4.68	4.67	4.61
Euro	EUR	0.89	0.87	3678.59	3714.95	3671.66	3486.87
Japanese yen	JPY	108.67	109.72	30.16	29.62	30.11	26.77
Pound sterling	GBP	0.75	0.79	4341.39	4138.88	4188.11	3941.13
Swiss franc	CHF	0.97	0.99	3384.25	3296.56	3302.52	3021.12

## Note 37. Gain on equity investments

The Participation on Equity Investments is as follows:

Participation on equity investment	2019	2018
Dividends and participations <sup>1</sup>	60,356	102,968
Profit or loss on sales of equity investments <sup>2</sup>	(47,534)	-
<b>Total</b>	<b>12,822</b>	<b>102,968</b>

*Figures stated in millions of Colombian pesos*

<sup>1</sup> Includes dividends of investments classified in Financial Instruments for \$60,356 (2018: \$102,968) See note 13. Other financial assets.

<sup>2</sup> Corresponds to the loss generated in July 2019 on the sale of 14,881,134 ISA shares, arising from the difference between sale price and share valuation on the day of the transaction (\$15,700 COP/share - \$18,900 COP/share = \$-3,200 COP/share) and the sale of all the *Gasoriente* shares, generating a profit of \$86.

## Note 38. Income tax

### 38.1 Tax Provisions

Tax Provisions applicable and in effect, establish the following:

- The nominal income tax rate is 33%.
- Tax income from occasional income tax is taxed at 10% rate.
- Public domestic utilities provider companies in Colombia are excluded from determining income tax by the presumptive income system calculated on the basis of fiscal liquid assets of the immediately preceding year.

### Ley de Financiamiento Colombia (Financing Law Colombia)

During 2019, Law 1943 of 2018 "By which financing rules are issued for the reestablishment of the balancing of the national budget and other provisions", was the subject of lawsuits filed with the Constitutional Court, seeking a declaration of unconstitutionality due to procedural defects in its formation.

Thus, through Ruling C - 481 of 16 October 2019, the Constitutional Court accepted the claims of one of the lawsuits and declared that the articles contained in the financing law are unconstitutional, stating: "THIRD. TO PROVIDE that (i) the declaration of unconstitutionality provided for in the second resolution shall take effect as from the first (1st) of January of two thousand and twenty (2020), so that Congress, within its own power to configure it, may issue the regime that ratifies, repeals, modifies or subrogates the contents of Law 1943 of 2018; (ii) the effects of the present ruling shall only be produced towards the future and, consequently, in no case shall they affect the consolidated legal situations". Thus, the rules contained in Law 1943 of 2018, remain in force during the taxable period 2019, since the ruling of the Constitutional Court was made with deferred effect, that is, maintaining the validity of the law until 31 December 2019.

According to the above, the Congress of the Republic had a limited term to issue a regime to ratify, repeal, modify or subrogate the contents of the law that was declared unconstitutional.

### **Ley de Crecimiento Económico 2019 Colombia (Economic Growth Act 2019 Colombia)**

During the last quarter of 2019, the National Government submitted to Congress a bill on economic growth, in order to comply with the Constitutional Court's ruling.

Under this scenario and after exhausting the stages required by the Colombian legal system for the creation of the law, on 27 December 2019, Law 2010 of 2019 was passed "By means of which regulations are adopted for the promotion of economic growth, employment, investment, the strengthening of public finances and the progressiveness, equity and efficiency of the tax system, in accordance with the objectives that Law 1943 of 2018 promoted on this matter, and other provisions are issued".

Thus, among the main modifications, we can highlight:

General rate of income and supplementary taxes:

**The income tax rate will have the following modification:**

Year 2020: will be 32%

Year 2021: will be 31%

Year 2022: will be 30%

#### **Presumptive Income**

Year 2020: will be 0.5%

Year 2021 and following: will be 0%

#### **Sales tax (VAT)**

- The general rate of 19% is conserved.
- The 5% rate is maintained for electric vehicles and their components, parts and accessories, as well as for the components and spare parts of the natural gas vehicle plan.
- The VAT rule of Article 192 of Law 1819 of 2016 remains, according to which, the VAT rate of contracts in which a public entity is a contracting party will be the one corresponding to the date of the resolution or awarding act, or subscription of the respective contract, the rate is increased once they are added.

#### **Other elements**

- Tax deductions on income tax is kept as on VAT paid in the acquisition, import, construction and forming of real productive fixed assets, including the required services to put the good in use conditions, and those assets acquired through leasing.
- The possibility of taking as a tax deduction of 50% of the payed industry and commerce tax is kept. It is expected that, starting in 2022, this discount will be 100%.

- The tax on dividends received by national companies continues in effect to the general rate of 7.5% by way of withholding tax on income, that will be transferable and imputable to the resident natural person or investor resident abroad.
- The sale of electricity generated from wind energy, biomass or agricultural waste, solar, geothermal or sea energy by electricity generating companies, as defined in Law 1715 of 2014 and Decree 2755 of 2003, will continue to be exempt of income tax for a period of 15 years as from 2017, as defined by Law 1715 of 2014 and Decree 2755 of 2003.
- The Colombian Holding Companies (CHC) framework is ratified as an instrument to promote foreign investment in the country.
- The requirements to access the tax benefits through the figure of Mega Investments are updated with the possibility of accessing a tax stability regime.
- The amendments made by Law 1943 of 2018 to the sub-capitalisation rule in Article 118-1 of the Tax Code remain in force, limiting the deductibility of interest paid when there is over-indebtedness, specifying that such limitations only apply to debts incurred between economic associates.
- Article 117 of Law 2010 of 2019 modified the term of finality for income tax returns in which tax losses are liquidated or compensated, or which are subject to the transfer pricing regime, to 5 years.

It should be clarified that this term of firmness contained in Article 714 of the tax code was modified by Law 1819 of 2016 to 6 years. For this reason, tax returns filed by EPM as of 2017 will be covered by the above-mentioned provision, but the 2019 return to be filed in 2020 will be subject to the change established in law 2010.

### 38.2 Effective rate Reconciliation

Reconciliation between the applicable tax rate and the effective rate and the composition of income tax expense for the periods 2019 and 2018 is as follows:

Income tax and complementary	2019	%	2018	%
<b>Profit before tax</b>	3,311,270		2,493,178	
<b>Nominal income rate</b>		33%		37%
<b>Income tax nominal rate</b>	1,092,719		922,476	
Effects of changes in tax rates	-		(217,950)	-9%
Effect of permanent tax differences:	<b>(340,691)</b>	<b>-10%</b>	<b>(320,251)</b>	<b>-13%</b>
Dividend Income	249,911	8%	145,018	6%
Tax-only income	194,444	6%	27,518	1%
Special deduction refund	118,768	4%	11,588	0%
Non-deductible provisions	43,612	1%	179,356	7%
Loss of assets	28,082	1%	33,073	1%
Equity method	(328,122)	-10%	(309,342)	-12%
Untaxed dividends	(147,548)	-4%	(114,876)	-5%
Compensation for consequential damage	(173,991)	-5%	(33,207)	-1%
Exempt income	(138,605)	-4%	(14,236)	-1%
Special deduction for productive real assets	(196,923)	-6%	(289,015)	-12%
Net result other permanent differences	9,681	0%	43,872	2%
Rate difference adjustment (impto cte/deferred)	(67,136)	-2%	(132,965)	-5%
Tax discounts	(39,146)	-1%	(5,570)	0%
Occasional Earnings	133	0%	539	0%
Income adjustments from previous years	(40,644)	-1%	(97,923)	-4%
<b>Income tax at effective rate</b>	<b>605,235</b>	<b>18%</b>	<b>148,356</b>	<b>6%</b>
<b>Details of current and deferred expenditure</b>				
Current tax	600,557	18%	375,273	15%
Deferred tax	4,678	0%	(226,917)	-9%
<b>Income Tax</b>	<b>605,235</b>	<b>18%</b>	<b>148,356</b>	<b>6%</b>

Figures stated in millions of Colombian pesos

The best indicator to measure the tax burden is the effective tax rate. This directly measures the total tax burden imposed by national regulations on companies, in proportion to the profits they make from their activities.

In accordance with the above, to arrive from the tax calculated from the nominal rate, to the effective tax that will affect the profit or loss of the company, fiscal depositions are executed in conformity to the regulations in force and the result obtained is the tax to be paid by the Entity.

Thus, in the years 2019 and 2018 it can be observed in the amendment that there are several items that reduce the tax calculated at the nominal rate and that make the theoretical tax to be modified as a result of application of tax provisions.

### 38.3 Income tax recognised through profit or loss

The most significant components of income tax expense at the cut-off date are:

Income tax	2019	2018
<b>Current income tax</b>		
Expenses (revenue) due to current income tax	680,347	478,766
Adjustments recognized in the current period related to the current income tax of previous periods	(40,645)	(97,923)
Tax benefits for tax losses, tax credits or temporary differences used in the period	(39,145)	(5,570)
<b>Total Current income tax</b>	<b>600,557</b>	<b>375,273</b>
<b>Deferred tax</b>		
Net expenses (revenue) due to deferred tax related to the origin and reversal of temporary differences	4,678	(8,966)
Net expenses (revenue) due to deferred tax related to changes in income tax or regulations		(217,951)
<b>Total deferred tax</b>	<b>4,678</b>	<b>(226,917)</b>
<b>Income tax</b>	<b>605,235</b>	<b>148,356</b>

Figures stated in millions of Colombian pesos

The rates used to determine deferred tax are:

Year	2019	2020	2021	2022
Income	33%	32%	31%	30%
<b>Total rate</b>	<b>33%</b>	<b>32%</b>	<b>31%</b>	<b>30%</b>

### 38.4 Income tax assets and liabilities

The balance in favor (balance payable) of income and supplementary tax for the years 2017 and 2018 is:

Description	2019	2018
<b>Asset (or liability) for current income tax</b>		
<b>Total Asset current income tax</b>	<b>34,413</b>	<b>2,037</b>
Recoverable balances of income tax	34,413	2,037
<b>Total Asset (or liability) for income tax</b>	<b>34,413</b>	<b>2,037</b>

Figures stated in millions of Colombian pesos

Description	2019	2018
<b>Income tax liability</b>		
<b>Total construction tax liabilities</b>	<b>56,027</b>	<b>56,027</b>
Current liabilities	140,636	25,696
Non-current liabilities	30,331	30,331
<b>Total income tax liability</b>	<b>170,967</b>	<b>56,027</b>

Figures stated in millions of Colombian pesos

### 38.5 Income tax through other comprehensive income

The breakdown of the tax effect corresponding to each component of "other comprehensive income" in the separated statement of comprehensive income is as follows:

Other accumulated comprehensive income	2019			2018		
	Gross	Tax effect	Net	Gross	Tax effect	Net
<b>Items that will not be reclassified after profit for the period</b>						
New measurements of defined benefit plans	(35,969)	12,011	(23,958)	372	2,017	2,389
Equity investments measured at fair value through equity	622,447	129,657	752,104	(24,810)	3,380	(21,430)
Participation in other comprehensive income of subsidiaries	(201,032)	11,823	(189,209)	(40,562)	(712)	(41,274)
<b>Items that can be reclassified after profit for the period</b>						
Cash flow hedges	34,119	17,673	51,792	2,777	(67,764)	(64,987)
Participation in other comprehensive income of subsidiaries	(205,235)	1,317	(203,918)	115,639	(53)	115,586
<b>Total</b>	<b>214,330</b>	<b>172,482</b>	<b>386,812</b>	<b>53,416</b>	<b>(63,132)</b>	<b>(9,716)</b>

Figures stated in millions of Colombian pesos

### 38.6 Deferred tax

The breakdown of deferred tax is as follows:

Deferred tax	2019	2018
Deferred tax asset	509,907	656,975
Deferred tax liability	2,512,071	2,813,803
<b>Total net deferred tax</b>	<b>(2,002,164)</b>	<b>(2,156,828)</b>

Figures stated in millions of Colombian pesos

#### 38.6.1. Deferred tax asset

Deferred tax assets	Initial balance 2018	Net changes included in profit or loss 2018	Changes included in other comprehensive income 2018	Final balance 2018	Net changes included in profit or loss 2019	Changes included in other comprehensive income 2019	Final balance 2019
<b>Assets</b>	<b>479,335</b>	<b>(295,873)</b>	<b>-</b>	<b>183,462</b>	<b>31,251</b>	<b>1,836</b>	<b>216,549</b>
Property, plant and equipment	241,226	(200,666)	-	40,560	(40,558)	-	2
Intangibles	16,494	(9,375)	-	7,119	(7,119)	-	-
Investment property	2,594	(2,594)	-	-	-	-	-
Right of use assets	-	-	-	-	51,801	-	51,801
Investments and derivative instruments	15,187	(15,187)	-	-	-	1,836	1,836
Receivables	189,939	(70,058)	-	119,881	4,926	-	124,807
Inventories	6	(6)	-	-	-	-	-
Other assets	13,889	2,013	-	15,902	22,201	-	38,103
<b>Liabilities</b>	<b>921,384</b>	<b>(449,887)</b>	<b>2,017</b>	<b>473,514</b>	<b>(192,167)</b>	<b>12,011</b>	<b>293,358</b>
Loans and borrowings	77,177	135,500	-	212,677	(115,300)	-	97,377
Payables	52,471	(52,471)	-	-	6,031	-	6,031
Employee benefits	275,138	(258,994)	2,017	18,161	8,347	12,011	38,519
Derivatives	24,985	(24,762)	-	223	(223)	-	-
Provisions	158,560	(528)	-	158,032	(18,278)	-	139,754
Other liabilities	333,053	(248,632)	-	84,421	(72,744)	-	11,677
<b>Deferred tax asset</b>	<b>1,400,719</b>	<b>(745,760)</b>	<b>2,017</b>	<b>656,976</b>	<b>(160,916)</b>	<b>13,847</b>	<b>509,907</b>

Figures stated in millions of Colombian pesos

In 2019, the deferred tax recognised for the investment in ISA will be reversed, due to the partial sale of the investment, which will reduce EPM's participation in that entity from 10.16% to 8.82%. In the eventual sale of the total investment, there are no future tax consequences since it is not income or occasional profit in accordance with Article 36-1 of the Tax Code.

## 38.6.2. Deferred tax liability

Deferred tax liabilities	Initial balance 2018	Net changes included in profit or loss 2018	Changes included in other comprehensive income 2018	Final balance 2018	Net changes included in profit or loss 2019	Changes included in other comprehensive income 2019	Final balance 2019
<b>Assets</b>	<b>3,102,764</b>	<b>(484,616)</b>	<b>64,384</b>	<b>2,682,532</b>	<b>(94,930)</b>	<b>(97,942)</b>	<b>2,489,660</b>
Property, plant and equipment	2,726,203	(311,302)	-	2,414,901	10,967	-	2,425,868
Intangibles	44,424	(20,481)	-	23,943	5,459	-	29,402
Investment property	7,459	(6,099)	-	1,360	10,910	-	12,271
Investments and derivative instruments	218,155	(83,475)	64,384	199,064	(87,113)	(97,942)	14,009
Receivables	93,352	(60,051)	-	33,301	(33,301)	-	-
Inventories	7	(7)	-	-	-	-	-
Other assets	13,164	(3,201)	-	9,963	(1,852)	-	8,110
<b>Liabilities</b>	<b>619,331</b>	<b>(488,059)</b>	<b>-</b>	<b>131,272</b>	<b>(61,308)</b>	<b>(47,553)</b>	<b>22,411</b>
Loans and borrowings	8,774	(8,774)	-	-	316	-	316
Payables	124,652	(55,396)	-	69,256	(50,011)	-	19,245
Employee benefits	232,857	(228,570)	-	4,287	(1,437)	-	2,850
Derivatives	-	57,729	-	57,729	(10,176)	(47,553)	-
Provisions	5,318	(5,318)	-	-	-	-	-
Other liabilities	247,730	(247,730)	-	-	-	-	-
<b>Deferred tax liabilities</b>	<b>3,722,095</b>	<b>(972,675)</b>	<b>64,384</b>	<b>2,813,804</b>	<b>(156,238)</b>	<b>(145,495)</b>	<b>2,512,071</b>
<b>Total deferred tax assets/liabilities</b>	<b>2,321,376</b>	<b>(226,915)</b>	<b>62,367</b>	<b>2,156,828</b>	<b>4,678</b>	<b>(159,342)</b>	<b>2,002,164</b>

Figures stated in millions of Colombian pesos

## 38.6.3 Temporary differences

Temporary differences associated with investments in subsidiaries, associates and joint ventures, for which no deferred tax liabilities have been recognised, amount to \$4,661,434 (2018: \$4,884,192).

In assets, the greatest impact on deferred taxes arises from temporary differences in property, plant and equipment, in receivables related to portfolio provisions due to differences in the cleansing of the portfolio provision under the tax standard and portfolio impairment under IFRS and due to the effect of valuation at amortized cost and implicit interest of the accounts receivable. The unrealized exchange difference of the receivables is another representative item in the temporary differences, concept introduced by Law 1819/2016.

Regarding liabilities, the items that most impact the calculation of deferred tax are actuarial accounting and tax calculation, valuation at amortized cost of bonds, securities issued, loans and borrowings, unrealized exchange difference of credits and payables.

The temporary differences on which no deferred tax was generated included investments in subsidiaries, associates and joint ventures, in accordance with paragraph 39 of IAS 12, and items that do not have future tax consequences, such as tax liabilities and finance income generated on plan assets, for being exempt.

The approval of dividends after the presentation date and before the financial statements were authorized for publication, does not generate income tax consequences since it is an established policy for national subsidiaries to distribute only non-taxed profits and reserves. Tax effects that could be generated by dividends declared by the foreign subsidiaries, with the entry into force of Article 69 of Law 1943/2018, will be considered exempt income from capital in application of the Colombian Holding Companies (CHC) regime.

## Note 39. Information to be disclosed on related parties

EPM is a decentralized municipal entity, whose sole owner is the Municipality of Medellín. The capital with which it was constituted and operates, as well as its assets, is of a public nature. The Mayor of Medellín chairs EPM's Board of Directors.

Related parties of EPM are subsidiaries, associates and joint ventures, including subsidiaries of associates and joint ventures, key management personnel, as well as entities over which key management personnel may exercise control or joint control and post-employment benefit plans for the benefit of employees.

The total value of the transactions performed by the company with its related parties during the corresponding period is presented below:

Transactions and balances with related parties	Income <sup>1</sup>	Costs/Expenses <sup>2</sup>	Amounts receivable <sup>3</sup>	Amounts payable <sup>4</sup>	Guarantees received
<b>Subsidiaries:</b>					
2019	566,511	406,004	1,230,790	89,002	-
2018	438,352	250,162	1,575,289	89,870	-
<b>Associates:</b>					
2019	67,377	30,926	6,539	4,411	-
2018	57,912	32,760	44,831	12,176	-
<b>Key management personnel from the company or its controller:</b>					
2019	-	8,675	627	2,380	521
2018	-	8,181	894	1,065	317
<b>Other related parties:</b>					
2019	49,517	63,479	16,997	2,846	-
2018	23,231	67,728	9,805	214,522	-

*Figures stated in millions of Colombian pesos*

Transactions between EPM and its related parties are performed under conditions equivalent to those existing in transactions between independent parties, in terms of their purpose and conditions.



<sup>1</sup>The breakdown of income obtained from the company's related parties is as follows:

	Income	2019	2018
Subsidiaries	Sale of goods and rendering of services	414,478	298,512
	Interests	116,767	108,475
	Professional fees	8,035	8,730
	Other	27,223	22,636
<b>Total Subsidiaries</b>		<b>566,503</b>	<b>438,353</b>
Associates	Sale of goods and rendering of services	46,365	14,691
	Other	21,012	43,221
<b>Total Associates</b>		<b>67,377</b>	<b>57,912</b>
Other related parties	Sale of goods and rendering of services	45,724	22,465
	Intereses	-	351
	Honorarios	34	23
	Other	3,759	393
<b>Total Other related parties</b>		<b>49,517</b>	<b>23,232</b>

Figures stated in millions of Colombian pesos

<sup>2</sup>The breakdown of costs and expenses incurred by the company with its related parties is as follows:

	Costs and expenses	2019	2018
Subsidiaries	Purchase of goods and services	402,964	173,911
	Interests	4	-
	Professional fees	753	797
	Other	2,284	75,454
<b>Total Subsidiaries</b>		<b>406,005</b>	<b>250,162</b>
Associates	Purchase of goods and services	28,861	29,035
	Professional fees	2,048	3,725
	Other	17	-
<b>Total Associates</b>		<b>30,926</b>	<b>32,760</b>
Other related parties	Purchase of goods and services	41,741	42,553
	Interests	1	2
	Professional fees	1,143	907
	Other	20,594	24,266
<b>Total Other related parties</b>		<b>63,479</b>	<b>67,728</b>

Figures stated in millions of Colombian pesos

<sup>3</sup>The breakdown of loans made by the company to its related parties is as follows:

	Granted loans	Original currency	Term	Nominal interest rate	2019			2018		
					Nominal value	Amortized cost value	Total amount	Nominal value	Amortized cost value	Total amount
Hidroecológica del Teribe S.A. HET	Loan 1	USD	23 years	Libor 3M + 4.43	195,179	14,800	209,979	375,160	30,959	406,119
EPM Chile S.A.	Loan 1	USD	15.7 years	Libor 6M + 3.80	-	-	-	258,333	307	258,640
HIDROSUR	Loan 1	CLP	8,5 years	0.072	952,214	1,116	953,330	1,091,371	(690)	1,090,681
EPM Chile Transmisión	Loan 1	USD	8 years	Libor 6M + 3.40	-	-	-	18,076	7	18,083

*Figures stated in millions of Colombian pesos*

<sup>4</sup>The breakdown of the loans received by the company from its related parties is as follows:

	Received loans	Original currency	Term	Nominal interest rate	2019			2018		
					Nominal value	Amortized cost value	Total amount	Nominal value	Amortized cost value	Total amount
Empresas Varias de Medellín S.A.	Préstamo 2	COP	1 AÑO	IBR + 2.1%	-	-	-	40,000	88	40,088

*Figures stated in millions of Colombian pesos*

<sup>5</sup>Transactions between the company and its related parties are performed under conditions equivalent to those existing in transactions between independent parties, in terms of their purpose and conditions.

#### Transactions and balances with government- related entities

The total financial surplus paid to the Municipality of Medellín as of December 2019 was \$1,289,652 (2018 \$1,503,504).

#### Compensation to the Board of Directors and key Personnel of the company:

The members of the Key management personnel of the company includes:

Description	2019	2018
Wages and other short-term employee benefits	6,936	7,335
Other long-term employee benefits	918	856
<b>Compensation to key management personnel</b>	<b>7,854</b>	<b>8,191</b>

*Figures stated in millions of Colombian pesos*

Amounts disclosed are those recognised as Costs or Expenses during the period report for compensation to key management personnel.

## Note 40. Capital management

Capital of the company includes indebtedness through the Capital Market, Commercial Banks, Development Banks, Development Agencies and Multilateral Banks, at national and international level.

The company manages its capital in order to plan, manage and assess the attainment of financial resources in the national and international financial markets, for strategic investments, and investment projects, through different options that optimize costs, that guarantee the stability of adequate financial indicators and adequate credit rating, and minimize financial risk. For this, the following capital management policies and processes have been defined:

**Financing Management:** financing management comprises the performance of all long-term credit operations, in order to guarantee the timely availability of the resources required for the normal operation of the company and to materialize the investment and growth decisions, striving to optimizing financing costs.

The company has not made any changes to its capital financing management objectives, policies and processes during the period ended as of 31 December 2019 and December 2018.

In order to face the changes in the economic conditions, the company implements proactive management mechanisms for its financing, enabling as far as it is feasible, different financing alternatives, so that at the time performance of any long-term credit operation is required, there will be access to the source that each time has availability of competitive market conditions at the necessary time.

Below are presented the values that the company manages as capital:

	2019	2018
Bonds and loans	16,431,715	15,844,613
Commercial bank loans	571,071	1,403,923
Multilateral bank loans	3,594,944	3,865,275
Development bank loans	985,814	1,953,743
Bonds and securities issued	10,040,782	8,581,584
Other loans	-	40,088
<b>Total debt</b>	<b>15,192,611</b>	<b>15,844,613</b>

*Figures stated in millions of Colombian pesos*

## Note 41. Financial risk management objectives and policies

The company is exposed to the financial risk, which is defined as the possibility of occurrence of an event that affects negatively the financial results, among which are price risk, liquidity risk, credit risk and operating risk.

Price risk refers to the changes or volatility of market variables that can generate economic losses. Market variables refer to exchange rates, interest rates, securities, commodities, among others; and their changes may impact, for example, the financial statements, cash flow, financial indicators, contracts, project viability and investments.

Credit risk refers to the possible default of payment obligations by third parties derived from contracts or financial transactions performed.

Liquidity risk is the scarcity of funds and the inability to obtain the resources at the time they are required to cover the contractual obligation and execute investment strategies. The scarcity of funds leads to the need to sell assets or to contract financing operations in unfavorable market conditions.

Finally, operating risk, from a financial standpoint, is defined as deficiencies or failures in the processes, technology, infrastructure, human resources or occurrence of unforeseen external events.

### 41.1 Price risk

Price risk is the risk that the fair value of the future cash flows of a financial instrument may fluctuate because of changes in market prices. The company has identified that the financial instruments affected by price risk include:

- Cash and cash equivalents
  - o Fiduciary assignment
- Other financial assets:
  - o Fixed income securities
  - o Investments pledged as collateral
  - o Swaps

The methods and assumptions used in developing the sensitivity analysis consist of:

- For cash and cash equivalents, fixed income securities and investments pledged as collateral: the methodology used for measuring price risk is Value at Risk (VaR), which consists of quantifying the maximum loss that the portfolio could present in a month with a 95% reliability level. For the quantification of VaR, an own methodology defined within the EPM Group is used.
- For swaps, the sensitivity analyses were performed under the assumption of maintaining constant the hedges contracted according to their indexation rates.

#### 41.2. Interest rate risk

Interest Rate Risk is the risk that the fair value or future cash flows of a financial instrument may fluctuate as a result of changes in market interest rates. EPM has identified that financial instruments affected by interest rate risk include:

- Cash and cash equivalents
  - Fiduciary assignment
- Other financial assets:
  - Fixed income securities
  - Investments pledged as collateral
  - Swaps
- Loans and borrowings
- Trade and other receivables

Concentration of Interest Rate Risk materializes when there are large individual exposures and significant exposures to counterparties whose probability of default is determined by factors such as the economic sector, currency and credit ratings. Interest rate risk management seeks to preserve capital and maintain or increase profitability. EPM has defined policies on risk in interest rates through the identification of risks, the determination of the position of rates and the simulation of possible hedging strategies. This assist decision making, oriented to maintaining the position to hedge it, and later the results of the executed strategies are assessed.

## Analysis of sensitivity to interest rates

The following table indicates the sensitivity to a possible reasonable change in the interest rates of financial instruments exposed to this risk, without considering the effect of hedge accounting. Keeping all other variables constant, the pre-tax income or loss and the equity of EPM would be affected by changes in variable interest rates as follows:

	Increase/decrease in basic points	Financial effect	
		In earnings before taxes	In equity
<b>2019</b>			
<b>Financial assets measured at fair value through change in profit or loss</b>			
Investments at fair value with change in profit or loss	100	(1,407)	(1,126)
	(100)	1,407	1,126
<b>Financial assets measured at amortized cost</b>			
Receivables in foreign currency	100	2,100	1,680
	(100)	(2,100)	(1,680)
<b>Financial liabilities measured at amortized cost</b>			
Loans and borrowings	100	54,287	43,430
	(100)	(54,287)	(43,430)
<b>Financial liabilities measured at fair value through change in other comprehensive income</b>			
Derivative instruments	100	(6,451)	(5,160)
	(100)	6,451	5,160
<b>2018</b>			
<b>Financial assets measured at fair value through change in profit or loss</b>			
Investments at fair value with change in profit or loss	100	(14,054)	(11,243)
	(100)	14,054	11,243
<b>Financial assets measured at amortized cost</b>			
Accounts receivable in foreign currency	100	6,828	5,463
	(100)	(6,828)	(5,463)
<b>Financial liabilities measured at amortized cost</b>			
Credits and loans	100	(38,243)	(30,594)
	(100)	38,243	30,594
<b>Financial liabilities measured at fair value through change in other comprehensive income</b>			
Derivative instruments	100	(3,991)	(3,193)
	(100)	3,991	3,193

Figures stated in millions of Colombian pesos

The company considers that the sensitivity analysis is representative in respect to the exposure of the interest rate risk.

### 41.3. Foreign exchange risk

Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

EPM has identified that financial instruments affected by foreign exchange risk include:

- Cash and cash equivalents
- Other financial assets:
  - Fixed income securities
  - Swaps
- Loans and borrowings
- Trade and other receivables
- Loans to economic associates

The exposure to foreign exchange rate risk relates, firstly, to financing activities in a currency other than the functional currency and to contracted hedging operations. The company manages its foreign exchange rate risk by means of hedging operations on a medium-term horizon. It is EPM's policy not to close speculative hedging transactions, so the terms of the hedging derivative instruments replicate the terms of the underlying in order to maximize the effectiveness of the hedge. EPM covers its exposure to exchange rate fluctuations by using different hedging instruments, among which are Swaps, Forwards and Options at different terms.

#### Analysis of sensitivity to foreign exchange rates

The following table indicates the sensitivity to a possible reasonable change in foreign exchange rates for \$100 pesos in the currency against the U.S. dollar without considering the effect of hedge accounting. The impact is caused by the change in monetary and non-monetary assets. Holding all other variables constant, pre-tax income or loss and equity would be affected by changes in foreign exchange rates as follows:

	Increase/decrease in COP	Financial effect	
		In earnings before taxes	In equity
<b>2019</b>			
<b>Financial assets measured at fair value through change in profit or loss</b>			
Other financial assets - fixed income securities	100	1,176	941
	(100)	(1,176)	(941)
Cash and cash equivalents	100	15,192	12,154
	(100)	(15,192)	(12,154)
<b>Financial assets measured at amortized cost</b>			
Receivables in foreign currency	100	2,477	1,981
	(100)	(2,477)	(1,981)
<b>Financial liabilities measured at amortized cost</b>			
Loans and borrowings	100	(228,458)	(182,766)
	(100)	228,458	182,766
<b>Financial liabilities measured at fair value with change in other comprehensive income</b>			
Derivative instruments	100	(8,455)	(6,764)
	(100)	8,455	6,764
<b>2018</b>			
<b>Financial assets measured at fair value through change in profit or loss</b>			
Other financial assets - fixed-rate bonds	100	28,773	23,019
	(100)	(28,773)	(23,019)
Cash and cash equivalents	100	(8,244)	6,595
	100	(8,224)	(6,595)
<b>Financial assets measured at amortized cost</b>			
Receivables in foreign currency	100	3,799	3,039
	(100)	(3,799)	(3,039)
<b>Financial liabilities measured at amortized cost</b>			
Loans and borrowings	100	482,159	385,727
	(100)	(482,159)	(385,727)
<b>Financial liabilities measured at fair value through change in other comprehensive income</b>			
Derivative instruments	100	64,773	51,819
	(100)	(64,773)	(51,819)

Figures stated in millions of Colombian pesos

The company considers that the sensitivity analysis is representative in respect to the exposure of the foreign Exchange Risk.

#### 41.4 Credit Risk

Credit Risk is the risk that one of the counterparts does not comply with the obligations derived from a financial instrument or purchase contract and that this will translate in a financial loss. EPM has identified that the financial instruments affected by credit risk include:

- Cash and cash equivalents
- Other financial assets:
  - Fixed income securities
  - Investments pledged as collateral
  - Swaps
- Trade and other receivables

Credit Risk Management by type of financial instrument is detailed below:

- **Cash and cash equivalents, fixed income securities and investments pledged as collateral:** For credit risk management in EPM, quotas are assigned per issuer, per counterparty and intermediary, taking into account the financial, risk and fundamental analysis of the entities, emphasizing shareholder support. The methodology considers the characteristics of the investment portfolio and applicable regulations. Credit risk concentration is limited since it obeys the provisions of the business rules manual for treasury operations. The description of the factors that define risk concentration is as follows:
  - Quotas are updated quarterly based on the latest available financial statements of the entities analyzed.
  - When the value of the consolidated portfolio of temporary investments exceeds the equivalent of 10,000 minimum wages (SMMLV), no more than 20% of this value must be concentrated in the same issuer, counterparty or intermediary, with the exception of securities issued by governments that comply with current regulations.
  - Securities market intermediaries, other than supervised banking establishments, may act as counterparties for transactions but cannot be considered as eligible issuers.
  - Brokerage firms acting as counterparties to treasury operations must have at least the second risk rating in strength or quality of portfolio management.
  - Stockbrokerage companies backed by banks, i.e. banked counterparties, must have a minimum net worth of 30,000 minimum wages (SMLMV).

Finally, efforts to avoid the concentration of risk are aimed at establishing, analysing, monitoring and controlling quotas, for which purpose the current quotas and their occupation status are controlled. Justifications related to the need to temporarily exceed the quotas are submitted for approval.

Investments referred to are constituted with banking establishments that have the following risk rating, according to the term of the investment:

- For investments with a term equal to or less than one (1) year, the banking establishment must have a current rating corresponding to the maximum category for the short term in accordance with the rating scheme used by the rating companies that grant it and must have at least the second best current rating for the long term used by the respective companies;



- For investments with a term greater than one (1) year, the banking establishment must have the maximum rating in force for the long term according to the rating scheme used by the rating companies and the maximum rating for the short term according to the scale used for this term.
- Swaps: EPM is exposed to the risk that a counterparty will not recognise the right and to mitigate this risk, the level of risk of each of the entities with which it intends to execute a transaction is assessed beforehand.
- Trade and other receivables: EPM is exposed to the risk that users of residential public utilities may default on payment for such services. Receivables from public sector debtors are classified into two major groups: those arising from arrears in payment and the other group relates to financing or payment agreements with customers as a portfolio recovery strategy or for the linking of new customers.

EPM evaluates at the end of each period the behavior and value of receivables to determine if there is objective evidence that the portfolio is impaired and to identify its possible impact on future cash flows. The criteria used to determine objective evidence of an impairment loss are:

- Evidences default in a customers' payment for two (2) or more accounts.
- It is known or there is evidence of the customer entering processes of corporate restructuring or in insolvency or liquidation.
- The rise of social turmoil, be it of public order or natural disasters, which according to experience are directly correlated with default of accounts.

In order to avoid excessive concentration of risk, EPM has developed and implemented various strategies to mitigate the risk of default in the portfolio, including:

- Persuasive collection by making phone calls and sending letters to customers with the support of specialized collection agencies.
- Segmentation of customers to identify those of greater risk, due to their value, in order to carry out personalized collection activities with them.
- Possibility of making payment agreements or partial payments that lead to the recovery of the exposed capital.
- Offsetting of receivables against payables for EPM with customer-suppliers.
- When the above strategies do not generate satisfactory results, coercive collection actions are taken by suspending and disconnecting the service.
- If the above strategies do not produce satisfactory results, the portfolio is collected through legal proceedings.

Similarly, we seek expansion of the product portfolio to customers in a way that facilitates debt repayment, e.g. prepaid energy and water.

As mentioned above, EPM makes payment or financing agreements, which are executed as a portfolio recovery strategy or for the acquiring of new customers. These agreements give right to fixed or determinable payments and are included in current assets, except for those with a maturity of more than 12 months from the date of generation of the balance, in which case they are classified in non-current assets.

In general terms, to guarantee debt settlement of customers, blank promissory notes with letters of instruction are constituted, and when the value of the financing exceeds pre-established amounts in the internal regulations, real or bank guarantees are requested, and in cases where the customer is a state entity, resources are pledged which EPM, by prior agreement, collects from the customer.

For credit risk management of accounts receivable in its different stages (risk cycle), methodologies, procedures, guidelines and business rules are incorporated, complying with commercial and financial policies, in order to achieve an integral and sustainable vision of customers.

In order to leverage the stages of the credit risk cycle, there are different statistical methodologies that allow obtaining an estimate of future payment behavior of the accounts. These methodologies are described below:

- CREDIT SCORING

Allows to obtain the risk profile of a customer from its payment behavior and own characteristics, which helps in the segmentation of the population, suggesting the optimal candidates for offers of assignment of basic services and/or added value.

- APPROVAL SCORING FOR VALUE-ADDED PRODUCTS

Profiles customers who apply for value-added credit, assigns a level of risk to the applicants and according to established business rules contributes to making the final decision of approval or denial.

- PORTFOLIO CLASSIFICATION MODEL

Assigns the probability of short-term (2 months) default of subscribed services, in order to design collection prioritization strategies.

- MODEL FOR CALCULATING EXPECTED LOSS

Allows finding the probability that the subscribed services may go into default within 12 months, which is used to calculate the expected loss of the accounts.

The company considers that the value that best represents its exposure to credit risk at the end of the period, without considering any collateral taken or other credit enhancements is:

Description	2019	2018
Cash and cash equivalents	879,024	835,779
Investments in debt instruments	545,481	978,435
Investments in equity instruments	1,922,285	1,581,092
Receivables	(307,551)	(287,014)
Other receivables	(63,430)	(60,270)
<b>Maximum exposure to credit risk</b>	<b>2,975,809</b>	<b>3,048,022</b>

*Figures stated in millions of Colombian pesos*

#### 41.5 Liquidity Risk

Refers to the possibility of insufficient resources for the timely payment of operations and commitments of the entity, and thus EPM would be forced to obtain liquidity in the market or to liquidate investments in an onerous manner. It is also understood as the possibility of not finding buyers for offered bonds.

EPM has identified that the financial instruments affected by liquidity risk include:

- Cash and cash equivalents
- Other financial assets:
  - Fixed income securities
  - Investments pledged as collateral
  - Swaps

- Trade and other debtors

To control liquidity risk, time comparisons of figures, benchmarks and liquidity levels are made over different time horizons. From this analysis, investment strategies that do not affect the liquidity of the Companies are developed, considering the cash budget and market risk analyses to assess the diversification of the sources of funds, the capacity to sell assets and the creation of contingency plans.

Generally, the main aspects considered in the analysis are:

- Liquidity of the securities: the characteristics of the issuer, the amount of the issue and the trading volume are analyzed.
- Market liquidity: the general behavior of the market is analysed and rate forecasts are made to infer its future behavior.
- Portfolio liquidity: cash flows are coordinated in order to determine investment strategies according to future liquidity requirements, and diversification is sought to avoid concentration of securities by issuer, rate, and/or terms.

The following table shows the remaining contractual maturity analysis for non-derivative financial assets and liabilities:

	Average effective interest rate	Less than 1 year	From 1 to 2 years	From 2 to 3 years	From 3 to 4 years	More than 4 years	Total contractual obligation
<b>2019</b>							
Non-derivative financial liabilities with variable interest rate	6.67%	214,480	794,760	99,446	1,188,808	4,080,673	6,378,167
Non-derivative financial liabilities with fixed interest rate	6.62%	42,483	177,325	308,147	177,325	8,998,657	9,703,937
Non-derivative financial assets	4.80%	813,053	1,250	8,000		6,100	828,403
Non-derivative financial assets - portfolio	7.62%	96,563	200,568	257,323	258,691	1,592,506	2,405,651
<b>Total</b>		<b>1,166,579</b>	<b>1,173,903</b>	<b>672,916</b>	<b>1,624,824</b>	<b>14,677,936</b>	<b>19,316,158</b>
<b>2018</b>							
Non-derivative financial liabilities with variable interest rate	7.94%	1,876,128	176,553	1,426,553	176,553	4,487,658	8,143,445
Non-derivative financial liabilities with fixed interest rate	6.17%	818,213	1,092,793	93,483	1,455,151	4,065,843	7,525,483
Non-derivative financial assets	7.39%	953,136	12,500	8,000	1,100	-	974,736
Non-derivative financial assets - portfolio	7.39%	141,611	201,399	264,558	265,406	1,610,953	2,483,927
<b>Total</b>		<b>3,789,088</b>	<b>1,483,245</b>	<b>1,792,594</b>	<b>1,898,210</b>	<b>10,164,454</b>	<b>19,127,591</b>

Figures stated in millions of Colombian pesos

Values included in the above tables for non-derivative financial assets and liabilities may change as a result of fluctuations in the variable interest rate relative to the estimated interest rate at the end of the reporting period. The Company believes that cash flows may not occur earlier than indicated above.

The following table shows the analysis of contractual maturity of remaining derivative financial liabilities:

	Less than 1 year	From 1 to 2 years	From 2 to 3 years	From 3 to 4 years	More than 4 years	Total contractual obligation
<b>2019</b>						
Swap Contracts	(13,699)	(14,592)	(17,561)			(45,853)
<b>Total</b>	<b>(13,699)</b>	<b>(14,592)</b>	<b>(17,561)</b>	<b>-</b>	<b>-</b>	<b>(45,853)</b>
<b>2018</b>						
Swap Contracts	21,520	(45,843)	12,165	(192,984)	-	(205,142)
Future contracts	-					-
<b>Total</b>	<b>21,521</b>	<b>(45,843)</b>	<b>12,165</b>	<b>(192,984)</b>	<b>-</b>	<b>(205,141)</b>

Figures stated in millions of Colombian pesos

The main method for measuring and monitoring liquidity is cash flow forecasting which is carried out in EPM and consolidated in the cash budget. As a result, its cash position is monitored daily and projections are made on an ongoing basis in order to:

- Monitor liquidity needs related to operating and investing activities associated with the acquisition and disposal of long-term assets.
- Pay, pre-pay, refinance and/or obtain new loans, according to cash flow generation capacity in EPM.

These projections consider EPM's debt financing plans, compliance with ratios, compliance with organizational objectives and applicable regulations.

## Note 42. Measurement of fair value on a recurring and non-recurring basis

The methodology established in IFRS 13 -Fair value measurement specifies a hierarchy in the assessment techniques based on whether the variables used in the determination of the fair value are observable or not. The company determines the fair value on a recurring and non-recurring basis, as well as for disclosure purposes:

- Based on prices quoted in assets or liabilities markets identical to those the company can access on the measurement date (level 1).
- Based on inputs applied on valuation methodologies commonly used by market participants, which are different from observable quoted prices for assets or liabilities, directly or indirectly (level 2).
- Based on internal valuation techniques of cash flow discounts or other valuation models, using variables estimated by the company that are non-observable for the asset or liability, in the absence of variables observed in the market (level 3).

During 2019 and 2018 in EPM no transfers have been made between the fair value hierarchy levels, either for transfers in or out of the levels.

### Assessment techniques and variables used in the company for measurement of fair value for recognition and disclosure:

**Cash and cash equivalents:** include cash and banks and highly liquid investments, easily convertible into a specified amount of cash and subject to an insignificant risk of changes in value, with a maturity of three months or less from the date of acquisition. EPM uses the market approach as a valuation technique for this item, these items are classified in Level 1 of the fair value hierarchy.

**Fair value investments through profit or loss and through equity:** includes investments made to optimise surplus liquidity, i.e. all those resources that are not immediately allocated to the development of the activities that constitute the corporate purpose of the companies. EPM uses the market approach as a valuation technique, these items are classified in level 1 of the fair value hierarchy.

**Derivative instruments - Swaps:** EPM uses derivative financial instruments such as forward contracts, futures contracts, swaps and options to hedge various financial risks, primarily interest rate, foreign exchange and commodity price risks. Such derivative financial instruments are initially recognised at fair value on the date the derivative contract is entered into and are subsequently remeasured at fair value. EPM uses as a valuation technique for swaps the discounted cash flow, in an income approach. The variables used are: Interest rate swap curve for dollar-denominated rates, to discount dollar flows; and external interest rate swap curve for Colombian peso-denominated rates, to discount flows in Colombian pesos. These items are classified in level 2 of the fair value hierarchy.

The following table shows for each level of the fair value hierarchy, the company's assets and liabilities measured at fair value on a 2019 and 2018 recurring basis:

2019	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
Cash and cash equivalents	488,548	-	-	488,548
	488,548	-	-	488,548
<b>Other investments in debt titles</b>				
Fixed income securities	539,511	-	-	539,511
Variable income securities	98,348	-	-	98,348
Investments pledged as collateral	5,970	-	-	5,970
	643,829	-	-	643,829
<b>Other equity investments</b>				
Variable income securities	1,915,552	-	6,733	1,922,285
	1,915,552	-	6,733	1,922,285
<b>Trust rights</b>				
Trust in management	404,365	-	-	404,365
	404,365	-	-	404,365
<b>Derivatives</b>				
Swap contracts	-	45,062	-	45,062
	-	45,062	-	45,062
<b>Investment property</b>				
Urban and rural land	-	-	110,116	110,116
Buildings and houses	-	-	16,706	16,706
	-	-	126,822	126,822
<b>Contingent considerations</b>				
Provisions-business combination	-	-	133,346	133,346
	-	-	133,346	133,346
<b>Total</b>	<b>3,452,294</b>	<b>45,062</b>	<b>209</b>	<b>3,497,565</b>

Figures stated in millions of Colombian pesos

99%

1%

0%

2018	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
<b>Negotiable or designated at fair value</b>				
Cash and cash equivalents	218,338	-	-	218,338
	218,338	-	-	218,338
<b>Other investments in debt titles</b>				
Fixed income securities	972,788	-	-	972,788
Variable income securities	64,547	-	-	64,547
Investments pledged as collateral	5,647	-	-	5,647
	1,042,982	-	-	1,042,982
<b>Other equity investments</b>				
Variable income securities	1,574,359	-	6,733	1,581,092
	1,574,359	-	6,733	1,581,092
<b>Trust rights</b>				
Trust in management	402,067	-	-	402,067
	402,067	-	-	402,067
<b>Derivatives</b>				
Contratos de futuros	-	-	-	-
Swap contracts	-	186,230	-	186,230
	-	186,230	-	186,230
<b>Investment property</b>				
Urban land	-	70,040	-	70,040
Buildings and houses	-	7,789	-	7,789
	-	77,829	-	77,829
<b>Derivatives</b>				
Swaps	-	-	-	-
	-	-	-	-
<b>Contingent considerations</b>				
Provisions-business combination	-	192,484	-	192,484
Disaggregation level 2	-	-	-	-
	-	192,484	-	192,484
<b>Total</b>	<b>3,237,746</b>	<b>71,575</b>	<b>6,733</b>	<b>3,316,054</b>

Figures stated in millions of Colombian pesos

98%

2%

0%

Recorded value and estimated fair value of the company's assets and liabilities that are not recognised at fair value in the separate statement of financial position, but require disclosure at fair value, as of 31 December 2019 and 2018 are as follows:

Description	2019			2018	
	Recorded value	Estimate fair value		Estimate fair value	
		Level 2	Total	Level 2	Total
<b>Assets</b>					
Public utilities receivables	1,744,908	1,753,485	1,753,485	1,449,122	1,449,122
Employee loans	123,190	125,990	125,990	121,740	121,740
Associates	1,163,309	1,163,309	1,163,309	1,773,524	1,773,524
Other receivables	705,198	704,482	704,482	307,956	307,956
<b>Total assets</b>	<b>3,736,605</b>	<b>3,747,266</b>	<b>3,747,266</b>	<b>3,652,342</b>	<b>3,652,342</b>
<b>Liabilities</b>					
Other Issued bonds and securities	9,648,197	9,648,197	9,648,197	8,206,866	8,206,866
Commercial bank loans	571,071	571,071	571,071	1,403,924	1,403,924
Multilateral bank loans	3,594,944	3,594,944	3,594,944	3,865,274	3,865,274
Development bank loans	985,814	985,814	985,814	1,953,742	1,953,742
Issued bonds and securities	392,585	392,585	392,585	374,719	374,719
Loans to economic associates	-	-	-	40,088	40,088
<b>Total liabilities</b>	<b>15,192,611</b>	<b>15,192,611</b>	<b>15,192,611</b>	<b>15,844,613</b>	<b>15,844,613</b>
<b>Total</b>	<b>(11,456,006)</b>	<b>(11,445,345)</b>	<b>(11,445,345)</b>	<b>(12,192,271)</b>	<b>(12,192,271)</b>

Figures stated in millions of Colombian pesos

100%

100%

As of 31 December 2019, and 2018, there were no items in levels 1 and 3.

## Note 43. Service concession arrangements

At 31 December 2019, the company manages as operator various concessions that contain provisions for the construction, operation and maintenance of facilities, as well as the provision of public services such as water supply and wastewater collection and treatment, in accordance with applicable regulations.

The remaining period of the concessions where the company acts as an operator is detailed below:

Entity/Agreement	Contract No.	Signing date	Activity	Country	Concession period	Initial remaining period
Empresas públicas de Medellín - Municipality of Caldas	1401288	No date	The Municipality undertakes to put layout and facilitate the use of the networks and other infrastructure for the provision of water services and sewerage.	Colombia	30 years (extendable)	9 years
Empresas públicas de Medellín - Municipality of Sabaneta	1/DJ/-7885/19	03/10/1984	The Municipality undertakes to put layout and facilitate the use of the networks and other infrastructure for the provision of water services and sewerage.	Colombia	10 years (extendable)	5 years
Empresas públicas de Medellín - Municipality of La Estrella	1/DJ/-7835/17	10/09/1984	Execution of works and provision of water supply services drinking water and sewage.	Colombia	10 years (extendable)	5 years
Empresas públicas de Medellín - Municipality of Envigado	1/DJ/-5941/30 1/DJ/-7982/5	03/08/1977 27/02/1985	Provision of water and sewerage and construction of works for the provision of water and sewage services.	Colombia	10 years (extendable)	8 years
Empresas públicas de Medellín - Municipality of Itagüí	1/DJ/-6199/10 2/DJ/-1190/33 1/DJ/-2079/58 2801799	06/09/1978 10/10/1994 04/07/1996 02/09/1998	Construction of the aqueduct networks and sewers for the provision of the service of the assigned neighborhoods. Construction of a collector parallel to the La Justa stream and a sewerage system on 36th Street at the Ditaires Park. Construction of the collector parallel to the coverage of the La Muñoz stream. Handing over of hydraulic structures to provide the sewage service in the municipality and provide sanitation to the Medellín River.	Colombia	30 years (extendable)	28 years
Empresas públicas de Medellín - Municipality of Bello	1/DJ/-6208/11	05/09/1978	Execution of works and provision of the water and sewage service.	Colombia	10 years (extendable)	4 years
Empresas públicas de Medellín - Municipality of Copacabana	1/DJ-9994/9	31/10/1990	Execution of works for the drinking water supply, sewerage and the provision of such services.	Colombia	20 years (extendable)	11 years
Empresas públicas de Medellín - Municipality of Girardota	1/JD-591/2	12/04/1993	Provision of water service and sewerage.	Colombia	20 years (extendable)	13 years
Empresas públicas de Medellín - Municipality of Barbosa	1401287	02/10/1997	The Municipality undertakes to put layout and facilitate the use of the networks and other infrastructure for the provision of water services and sewerage.	Colombia	30 years (extendable)	8 years

As of the cut-off date, no income and costs incurred for construction services have been recognised in exchange for a financial asset or an intangible asset.



### Service concession arrangements

The concession arrangements between EPM and the municipalities establish the conditions under which the water and sewerage networks are managed, operated, and maintained to provide drinking water and wastewater treatment services to their inhabitants, under the terms, conditions, and rates established by the Commission for the Regulation of Drinking Water and Basic Sanitation (CRA).

The user is charged via tariffs according to the intervention of replacement, expansion or interventions in the networks with the execution of the projects under construction (Construction in progress). Following the parameters and conditions established by the C.R.A (Water Regulation Commission).

The agreements indicate the following rights and obligations for EPM as an operator in the service concession arrangement:

- The right to receive from the municipality the totality of the water and sewage networks and to have exclusivity as system operator.
- Obligation to make exclusive use of the water and sewage networks for the purposes for which they are intended, maintain and return them under the use conditions in which they were received.
- Some concession agreements have the option to be renewed automatically for equal periods unless one of the parties expresses the intention not to continue.
- The concession agreements do not establish the obligation of construction of property, plant and equipment elements.

Upon termination of the concession, EPM must return the water and sewage networks without any consideration to the municipalities. No changes have occurred in the terms of the concession agreements during the period.

The intangible asset model applies to these arrangements. See Note 7 Goodwill and other intangible assets.

## Note 44. Facts occurred after the period being reported

### Main impacts COVID19, oil trade war and representative market rate (TRM):

Following the situation caused by the coronavirus, the oil trade war and representative market exchange rate (TRM, for its Spanish initials), EPM is analyzing the financial impacts considering changes in the macroeconomic scenario:

TRM is identified as a variable that presents a high risk in its behaviour mainly due to:

- Lower oil prices in the face of lower global demand due to the impact of the Coronavirus on value chains and the disagreement between OPEC and Russia on the possibility of prolonging the agreement to cut oil production, with the risk of a possible price war. The Markets Directorate estimates a downward trend in the next four years with an average of 42.85 USD/barrel.
- Increased risk aversion in the global financial markets represented by the spread of COVID-19 (coronavirus). If the global volatility scenario continues, there will be a strong demand for safe haven assets such as US Dollar.

- Risk of downward revision of investment grade for Colombia, associated with the fall in oil prices due to higher current account and fiscal.
- Geopolitical and commercial tension.
- Financial market volatility associated with the U.S. election process in the second half of 2020.

For the purposes of financial results, there is a natural hedge, since the company has companies whose functional currency is the dollar.

As for the results in Colombia, the greatest risk is in the difference in foreign exchange rate for the debt contracted in dollars, which could generate an increase in the debt balances.

EPM's Electricity Generation business does not foresee major impacts, as it is highly contracted in 2020 and in the following years, its income will not significantly depend on what happens in the stock market. In addition, many of the effects that push down revenues on the stock market are mitigated by countervailing economic effects.

While the effect of the increase in TRM could increase the cost of inputs and investments, measures to eliminate tariffs for some products associated with the provision of public services could offset this increase.

Likewise, the CPI is another of the variables that are mainly impacted by:

- Stress caused by high depreciation that is transferred to prices.
- Increase in the price of raw materials from China due to shortages.
- Price indexation due to wage increases.
- Supply shocks that generate higher than expected increases in agricultural prices. If the annual devaluation is maintained, greater exchange rate pass-through strains are expected due to the increase in the price of imported goods.
- Increased cost of raw materials from China and other trading partners affected by the pandemic.
- Supply shocks associated with a shortage of supplies due to the effects on production chains of the coronavirus, which will push up food prices.
- The expectations of economic agents are no longer anchored to the goal.
- The effect of tariff indexation represents an upward risk for the basket of non-tradable and regulated services.

What is expected to impact this variable is associated with the main components of the income, the commercial operation and the investment plan for all businesses, as well as the costs and expenses of operation, maintenance and management that depend on the behavior of this variable.

In addition to the macroeconomic scenario, the government has been announcing some measures that will directly impact companies in Colombia, among them we have identified the following:

- The demand for reconnections to users in energy and water utilities.
- The non-application of real indexation to the tariff in the Water business.
- Generalized social isolation policies.
- Elimination of tariffs for certain goods and materials associated with the provision of public utilities.

In the framework of the COVID-19 crisis, EPM aims to mitigate the impact on the company's finances through measures to address the crisis such as, reviewing the investment plan for the year 2020 in order to identify what can be optimized or postponed, without putting at risk the provision of public utilities. Additionally, a thorough review of the business' operating costs is initiated to identify what can be optimized without putting the operation at risk.

In addition, in order to ensure liquidity, EPM currently has approved credit lines and quotas, which would be managed for disbursement if necessary.

**Award of one of the two companies resulting from the exit of *Electricaribe* from the market:**

On 20 March 2020, EPM was awarded to operate CaribeMar, one of the two auction processes in which the markets of Electricaribe were separated by the National Government.

As the operator of the electrical energy utility in the Caribbean Region, the company is committed to growth with sustainability in the electricity sale and distribution market in Colombia, as a contribution to the growth of the country and the quality of life of the inhabitants of the departments of Bolívar, Cesar, Córdoba and Sucre. When it starts operating in the Caribbean Region, EPM Group will reach a 35% share in the energy distribution and sale market in Colombia, extending its services to a population of 19 million people. CaribeMar will have 1.5 million new customers in the Caribbean Region in the coming months. This new business will include investments of around \$4 billion over the next five years.

After the award of CaribeMar, the National Government must close the financial transaction to purchase 100% of the shares, incorporate the new company and prepare and deliver the assets and liabilities included. Only, until that moment, EPM will take control of the operation.

With this operation, the Group becomes the main operator of the national electricity system, both in electricity distribution and sales and assumes the challenge and commitment to contribute to the quality of life of the community, through the improvement of the energy utility, the care for the environment and the contribution to the growth and competitiveness of the Caribbean Region.

After the date of presentation of the separate financial statements and before the date of authorization of their publication, no other relevant facts were presented that would imply adjustments to the figures.



# **EPM's certifications**

## Certificación del Representante Legal y del Contador de EPM

26 de marzo de 2020

**A la Junta Directiva de  
Empresas Públicas de Medellín E.S.P.**


Los suscritos, en sus calidades de Representante Legal y Contador de Empresas Públicas de Medellín E.S.P., certificamos que los saldos de los Estados financieros separados de Empresas Públicas de Medellín E.S.P. a 31 de diciembre de 2019 y 2018, fueron tomados fielmente de los libros de contabilidad, los cuales están elaborados de conformidad con las Normas de contabilidad y de información financiera aceptadas en Colombia (NCIF) y adoptadas por la Contaduría General de la Nación a través de la Resolución 037 de 2017 y Resolución 049 de 2019. Estas normas de información contable y financiera se basan en las Normas Internacionales de Información Financiera adoptadas en Colombia y emitidas por el Consejo de Normas Internacionales de Contabilidad (International Accounting Standards Board, IASB), así como las interpretaciones emitidas por el Comité de Interpretaciones.

Se hace constar que, para su elaboración se verificaron las afirmaciones contenidas en los mencionados Estados financieros separados, con relación a:

- a) Todos los hechos económicos que han ocurrido durante el periodo de corte se han registrado adecuadamente en atención a su debido reconocimiento en las cantidades y cuentas apropiadas, y medidos por los importes razonables y revelados adecuadamente.
- b) Que los hechos económicos se clasifican, presentan y revelan conforme a lo establecido en las Normas de contabilidad y de información financiera aceptadas en Colombia (NCIF) y adoptadas por la Contaduría General de la Nación a través de la Resolución 037 de 2017 y Resolución 049 de 2019.
- c) Todos los activos, pasivos y patrimonio neto de los Estados financieros separados representan la existencia de bienes, derechos y obligaciones a cargo de Empresas Públicas de Medellín E.S.P. y se han valorado por los importes apropiados.
- d) Las revelaciones o notas contables están elaboradas con claridad y conforme a las Normas de contabilidad y de información financiera aceptadas en Colombia (NCIF) y adoptadas por la Contaduría General de la Nación a través de la Resolución 037 de 2017 y Resolución 049 de 2019.

Los estados financieros separados no contienen vicios, imprecisiones o errores que impidan conocer la verdadera situación financiera y el rendimiento financiero de la Entidad.

  
**Álvaro Guillermo Rendón López**  
Representante Legal

  
**John Jaime Rodríguez Sosa**  
Contador Público  
T.P. 144842-T

*estamos ahí.*



## **INFORME DE LOS AUDITORES INDEPENDIENTES**

Señores Junta Directiva  
Empresas Públicas de Medellín E.S.P.:

### **Opinión**

Hemos auditado los estados financieros separados de Empresas Públicas de Medellín E.S.P. (la Compañía), los cuales comprenden el estado separado de situación financiera al 31 de diciembre de 2019, y los estados separados de resultados y otro resultado integral, de cambios en el patrimonio y de flujos de efectivo por el año que terminó en esa fecha y sus respectivas notas, que incluyen las políticas contables significativas y otra información explicativa.

En nuestra opinión, los estados financieros separados que se mencionan y adjuntos a este informe, presentan razonablemente, en todos los aspectos de importancia material, la situación financiera separada de la Compañía al 31 de diciembre de 2019, los resultados separados de sus operaciones y sus flujos separados de efectivo por el año que terminó en esa fecha, de acuerdo con Normas de Contabilidad y de Información Financiera aceptadas en Colombia adoptadas por la Contaduría General de la Nación mediante resolución 037 de 2017 y resolución 049 de 2019, aplicadas de manera uniforme con el año anterior.

### **Bases para la opinión**

Efectuamos nuestra auditoría de conformidad con las Normas Internacionales de Auditoría aceptadas en Colombia (NIAs). Nuestras responsabilidades de acuerdo con esas normas son descritas en la sección “Responsabilidades de los auditores en relación con la auditoría de los estados financieros separados” de nuestro informe. Somos independientes con respecto a la Compañía, de acuerdo con el Código de Ética para profesionales de la Contabilidad emitido por el Consejo de Normas Internacionales de Ética para Contadores (Código IESBA - International Ethics Standards Board for Accountants, por sus siglas en inglés) incluido en las Normas de Aseguramiento de la Información aceptadas en Colombia junto con los requerimientos éticos que son relevantes para nuestra auditoría de los estados financieros separados establecidos en Colombia y hemos cumplido con nuestras otras responsabilidades éticas de acuerdo con estos requerimientos y el Código IESBA mencionado. Consideramos que la evidencia de auditoría que hemos obtenido es suficiente y apropiada para fundamentar nuestra opinión.

### **Párrafo de énfasis**

Llamamos la atención sobre la nota 4 a los estados financieros separados, la cual describe los eventos que ocurrieron en el Proyecto Hidroeléctrico Ituango y su impacto en los estados financieros. Las causas fundamentales de los eventos mencionados aún están siendo evaluadas por la Compañía y por los organismos de control y vigilancia pertinentes, por lo cual el resultado final no puede determinarse actualmente y en consecuencia no se ha previsto ningún efecto



adicional sobre los estados financieros separados de la Compañía. Nuestra opinión no es modificada en relación con este asunto.

### Asuntos Clave de Auditoría

Asuntos clave de auditoría son aquellos que, según nuestro juicio profesional, fueron de la mayor importancia en la auditoría de los estados financieros separados del periodo corriente.

Estos asuntos fueron abordados en el contexto de nuestra auditoría de los estados financieros separados como un todo y al formarnos nuestra opinión al respecto no proporcionamos una opinión separada sobre estos asuntos.

<b>Evaluación del Deterioro de la Unidad Generadora de Efectivo- Generación de Energía (Ver notas 2.18 y 11.2 de los estados financieros separados)</b>	
<b>Asunto clave de auditoría</b>	<b>Como se abordó este asunto clave de auditoría</b>
<p>El estado de situación financiera separado de la Compañía incluye en el activo no corriente propiedades, planta y equipo, neto e Intangibles por \$17.880.484 millones de pesos asociados a la unidad generadora de efectivo (UGE) de Generación de Energía.</p> <p>La evaluación del deterioro de la UGE es calculada por la Dirección de Planeación Financiera mediante el aplicativo HSF- Oracle configurado; la información base para la determinación de las proyecciones financieras de los negocios es aprobada por la respectiva Vicepresidencia y anualmente se lleva a la Junta directiva para ratificación. Al cierre del año se genera el reporte de Valor en Uso de los activos no financieros y se compara con el valor en libros de la UGE para determinar si se debe reconocer un deterioro en los estados financieros.</p> <p>Consideré la evaluación de la Unidad Generadora de Efectivo – Generación de Energía como un asunto clave de auditoría, porque involucra elementos de juicio complejos por parte de la Compañía para la evaluación del deterioro, y hubo juicio significativo y un esfuerzo de auditoría para evaluar la evidencia de auditoría obtenida</p>	<p>Nuestros procedimientos de auditoría para determinar la correcta evaluación del deterioro de la unidad generadora de efectivo - Generación de Energía incluyeron, entre otros, los siguientes:</p> <ul style="list-style-type: none"> <li>- Verificación de la aprobación de las cifras financieras proyectadas por el Vicepresidente de cada negocio.</li> <li>- Revisión de la aprobación por parte de la Junta Directiva de las proyecciones financieras de los negocios.</li> <li>- Evaluación del diseño, la implementación y efectividad operativa de los controles clave establecidos por la Compañía para determinar los supuestos clave utilizados en la prueba de deterioro, con el involucramiento de profesionales con experiencia y conocimiento en valoración. Esto incluyó controles relacionados con la determinación de las hipótesis y variables macroeconómicas utilizadas para la estimación de las tasas de descuento aplicadas en la determinación del valor recuperable de la unidad generadora de efectivo.</li> <li>- Los profesionales con conocimiento en valoración nos asistieron en (i) evaluar la metodología de valor en uso; (ii) efectuar</li> </ul>



<p>relacionada con (i) la metodología de valor en uso; (ii) los cálculos sobre el valor de los activos y (iii) los principales datos de entrada y supuestos utilizados en el modelo tales como: (1) cifras históricas base para la proyección; (2) cifras proyectadas sobre cambios en volúmenes, precios y márgenes; (3) indemnización por parte de las aseguradoras (4) tasas aplicadas para descontar los flujos de efectivo futuros y (5) gradiente tasa de crecimiento a perpetuidad.</p>	<p>recálculos independientes; y (iii) analizar y evaluar los principales datos de entrada utilizados en el modelo tales como: (1) cifras históricas base para la proyección; (2) variables de cambios en volúmenes, precios y márgenes; (3) sensibilizar el modelo de la indemnización por parte de las aseguradoras, eliminando los montos estimados por recibir en el año 2021, (4) evaluar las tasas aplicadas para descontar los flujos de efectivo futuros, (5) el rango de tasas de descuento para la unidad generadora de efectivo con parámetros de mercado y (6) retar el gradiente tasa de crecimiento a perpetuidad comparando las tasas utilizadas por la Compañía con fuentes públicas de mercado.</p>
<p><b>Evaluación de la suficiencia de las Provisiones por Litigios y adecuada evaluación de los pasivos contingentes (Ver notas 27.1.3 y 27.2 de los estados financieros separados)</b></p>	
<p><b>Asunto clave de auditoría</b></p>	<p><b>Como se abordó este asunto clave de auditoría</b></p>
<p>El estado de situación financiera separado de la Compañía incluye provisiones por Litigios por valor de \$ 187.772 millones de pesos y pasivos contingentes por \$817.938 millones de pesos.</p> <p>La valoración de estas provisiones y pasivos contingentes requiere de la realización por parte de la Compañía, de estimaciones complejas, así como la aplicación de determinados juicios e hipótesis sobre la probabilidad de fallo desfavorable del proceso legal y con ello determinar y reconocer la obligación de pago, la estimación del valor a pagar con base en las pretensiones de la demanda y la fecha estimada de pago.</p> <p>Hemos considerado la evaluación de la suficiencia de las provisiones para litigios y contingencias como un asunto clave de auditoría debido a la complejidad en la asignación del valor a las hipótesis clave consideradas y porque la valoración de tales asunciones podría tener un impacto material en los estados financieros separados de</p>	<p>Nuestros procedimientos de auditoría para la evaluación de la suficiencia de las provisiones sobre los pasivos contingencias y por litigios incluyeron, entre otros, los siguientes:</p> <ul style="list-style-type: none"> <li>- Entendimiento de los procesos establecidos por la Compañía para la estimación de las provisiones y pasivos contingentes incluyendo la evaluación del diseño e implementación y efectividad de los controles relevantes, lo que incluyó controles relacionados con: definición de probabilidad, clasificación en laborales, administrativos, civiles, y fiscales, promedio de duración, aplicación de jurisprudencia y uniformidad en criterio de estimación de valor.</li> <li>- Lectura de las actas de Junta Directiva para verificar el seguimiento y aprobación de las decisiones de la Dirección Jurídica sobre los procesos de la Compañía.</li> <li>- Obtención de la relación de litigios elaborada por la Dirección Jurídica de la</li> </ul>





<p>situación financiera y de resultados y otro resultado integral.</p>	<p>Compañía y verificación de los importes registrados y revelados en los estados financieros separados.</p> <ul style="list-style-type: none"> <li>- Obtención de confirmaciones de los asesores legales internos y externos de la Compañía sobre las probabilidades de fallo y el estado actual del proceso.</li> <li>- Selección de una muestra de los principales litigios para analizar la documentación soporte con el involucramiento de nuestros profesionales con experiencia y conocimiento en derecho laboral y administrativo que nos asistieron en:             <ul style="list-style-type: none"> <li>• Análisis legal de los documentos soportes de las demandas, la probabilidad de fallo en contra indicada por la Compañía y el monto estimado.</li> <li>• Análisis de la posibilidad para la Compañía de interponer un recurso en contra de la decisión judicial, según la situación actual de cada uno de los casos seleccionados.</li> </ul> </li> <li>- Revisión de las revelaciones incluidas en las notas a los estados financieros separados de conformidad con el marco normativo de información financiera aplicable.</li> </ul>
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**Responsabilidad de la administración y de los encargados del gobierno corporativo de la Compañía en relación con los estados financieros separados.**

La administración es responsable por la preparación y presentación razonable de estos estados financieros separados de acuerdo de acuerdo con Normas de Contabilidad y de información Financiera aceptadas en Colombia adoptadas por la Contaduría General de la Nación mediante resolución 037 de 2017 y resolución 049 de 2019. Esta responsabilidad incluye: diseñar, implementar y mantener el control interno que la administración considere necesario para permitir la preparación de estados financieros separados libres de errores de importancia material, bien sea



por fraude o error; seleccionar y aplicar las políticas contables apropiadas, así como establecer los estimados contables razonables en las circunstancias.

En la preparación de los estados financieros separados, la administración es responsable por la evaluación de la habilidad de la Compañía para continuar como un negocio en marcha, de revelar, según sea aplicable, asuntos relacionados con la continuidad de la misma y de usar la base contable de negocio en marcha a menos que la administración pretenda liquidar la Compañía o cesar sus operaciones, o bien no exista otra alternativa más realista que proceder de una de estas formas.

Los encargados del gobierno corporativo son responsables por la supervisión del proceso de reportes de información financiera de la Compañía.

#### **Responsabilidades de los auditores en relación con la auditoría de los estados financieros separados.**

Nuestros objetivos son obtener una seguridad razonable sobre si los estados financieros separados considerados como un todo, están libres de errores de importancia material bien sea por fraude o error, y emitir un informe de auditoría que incluya nuestra opinión. Seguridad razonable significa un alto nivel de aseguramiento, pero no es una garantía de que una auditoría efectuada de acuerdo con NIAs siempre detectará un error material, cuando este exista. Los errores pueden surgir debido a fraude o error y son considerados materiales si, individualmente o en agregado, se podría razonablemente esperar que influyan en las decisiones económicas de los usuarios, tomadas sobre la base de estos estados financieros separados.

Como parte de una auditoría efectuada de acuerdo con NIAs, ejercemos nuestro juicio profesional y mantenemos escepticismo profesional durante la auditoría. También:

- Identificamos y evaluamos los riesgos de error material en los estados financieros separados, bien sea por fraude o error, diseñamos y realizamos procedimientos de auditoría en respuesta a estos riesgos y obtenemos evidencia de auditoría que sea suficiente y apropiada para fundamentar nuestra opinión. El riesgo de no detectar un error material resultante de fraude es mayor que aquel que surge de un error, debido a que el fraude puede involucrar colusión, falsificación, omisiones intencionales, representaciones engañosas o la anulación o sobrepaso del control interno.
- Obtenemos un entendimiento del control interno relevante para la auditoría con el objetivo de diseñar procedimientos de auditoría que sean apropiados en las circunstancias, pero no con el propósito de expresar una opinión sobre la efectividad del control interno de la entidad.
- Evaluamos lo apropiado de las políticas contables utilizadas y la razonabilidad de los estimados contables y de las revelaciones relacionadas, realizadas por la administración.
- Concluimos sobre lo adecuado del uso de la hipótesis de negocio en marcha por parte de la administración y, basado en la evidencia de auditoría obtenida, sobre si existe o no una incertidumbre material relacionada con eventos o condiciones que puedan indicar dudas significativas sobre la habilidad de la Compañía para continuar como negocio en marcha. Si



concluimos que existe una incertidumbre material, debemos llamar la atención en nuestro informe a la revelación que describa esta situación en los estados financieros separados o, si esta revelación es inadecuada, debemos modificar nuestra opinión. Nuestras conclusiones están basadas en la evidencia de auditoría obtenida hasta la fecha de nuestro informe. No obstante, eventos o condiciones futuras pueden causar que la Compañía deje de operar como un negocio en marcha.

- Evaluamos la presentación general, estructura y contenido de los estados financieros separados, incluyendo las revelaciones, y si los estados financieros separados presentan las transacciones y eventos subyacentes para lograr una presentación razonable.
- Obtenemos evidencia de auditoría suficiente y apropiada respecto de la información financiera de las entidades o actividades de negocios dentro del Grupo para expresar nuestra opinión sobre los estados financieros consolidados. Somos responsables por la dirección, supervisión y realización de la auditoría del Grupo. Somos los únicos responsables por nuestra opinión de auditoría.

Comunicamos a los encargados del gobierno de la Compañía, entre otros asuntos, el alcance planeado y la oportunidad para la auditoría, así como los hallazgos de auditoría significativos, incluyendo cualquier deficiencia significativa en el control interno que identificamos durante nuestra auditoría.

También proporcionamos a los encargados del gobierno corporativo la confirmación de que he cumplido con los requerimientos éticos relevantes de independencia y que les hemos comunicado todas las relaciones y otros asuntos que razonablemente se pueda considerar que influyen en nuestra independencia y, cuando corresponda, las salvaguardas relacionadas.

A partir de los asuntos comunicados con los encargados del gobierno corporativo, determinamos los asuntos que fueron de la mayor importancia en la auditoría de los estados financieros separados del período actual y, por lo tanto, son los asuntos clave de auditoría. Describimos estos asuntos en nuestro informe de los auditores a menos que la ley o regulación impida la divulgación pública sobre el asunto o cuando, en circunstancias extremadamente excepcionales, determinamos que un asunto no debe ser comunicado en nuestro informe porque las consecuencias adversas de hacerlo serían razonablemente mayores que los beneficios al interés público de tal comunicación.

A handwritten signature in black ink, appearing to read 'Gonzalo Alonso Ochoa Ruiz'.

Gonzalo Alonso Ochoa Ruiz  
Socio  
26 de marzo de 2020  
Medellín

KPMG S.A.S.

The background of the entire page is a repeating pattern of small, light-colored icons. These icons include a wide variety of symbols such as lightbulbs, gears, wind turbines, solar panels, water droplets, recycling symbols, and industrial buildings, all arranged in a dense, non-repeating grid.

# **Grupo EPM's financial management**



# **Empresas Públicas de Medellín E.S.P. and Subsidiaries**

**Consolidated Financial Statements and Notes  
31 December 2019 and 2018**

EMPRESAS PUBLICAS DE MEDELLIN E.S.P. AND SUBSIDIARIES  
**CONSOLIDATED STATEMENT OF FINANCIAL POSITION**

As of 31 December 2019 and 2018

Figures stated in millions of Colombian pesos

	Notes	2019	2018
<b>Assets</b>			
<b>Non-Current Assets</b>			
Property, plant and equipment, net	5	35,605,655	34,488,599
Investment property	6	140,354	91,382
Goodwill	7	2,895,451	3,032,267
Other intangible assets	7	2,350,612	2,315,958
Right-of-use assets	14	609,412	-
Investments in associates	10	1,758,462	1,746,487
Investments in joint ventures	11	82	82
Deferred tax assets	39	220,026	249,700
Trade and other receivables	12	1,013,685	929,475
Other financial assets	13	2,541,567	2,312,368
Other assets	16	106,914	112,192
Cash and cash equivalents (restricted)	18	46,415	22,343
<b>Total non-current assets</b>		<b>47,288,635</b>	<b>45,300,853</b>
<b>Current assets</b>			
Inventories	17	391,244	409,665
Trade and other receivables	12	4,072,661	3,284,742
Current income tax assets	39	169,185	118,400
Other financial assets	13	867,998	1,234,305
Other assets	16	438,592	453,411
Cash and cash equivalents	18	1,664,151	1,576,039
<b>Total current assets</b>		<b>7,603,831</b>	<b>7,076,562</b>
<b>Total assets</b>		<b>54,892,466</b>	<b>52,377,415</b>
Debit balances of deferred regulatory accounts	30	-	111,868
Deferred tax assets related to deferred regulatory account balances	30	7,683	-
<b>Total assets and debit balances of deferred regulatory accounts</b>		<b>54,900,149</b>	<b>52,489,283</b>
<b>Equity</b>			
Issued capital	19	67	67
Treasury shares		(41)	-
Reserves	19	2,337,862	2,560,657
Accumulated other comprehensive income	20	3,304,761	2,894,627
Accumulated profit	19	14,518,224	13,392,190
Net profit for the year	19	2,985,182	2,258,293
Other components of equity		68,333	(23,323)
<b>Equity attributable to owners of the company</b>		<b>23,214,388</b>	<b>21,082,511</b>
Non-controlling interests	19	964,572	953,707
<b>Total equity</b>		<b>24,178,960</b>	<b>22,036,218</b>

  
**Álvaro Guillermo Rendón López**  
 General Manager  
 Certification Attached

  
**Jorge Andrés Tabares Angel**  
 Executive Vice-President Finances and Investments

  
**John Jaime Rodríguez Sosa**  
 Director of Accounting and Costs  
 Professional Card No. 144842-T  
 Certification Attached

EMPRESAS PUBLICAS DE MEDELLIN E.S.P. AND SUBSIDIARIES  
**CONSOLIDATED STATEMENT OF FINANCIAL POSITION**

As of 31 December 2019 and 2018

Figures stated in millions of Colombian pesos

	Notes	2019	2018
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Loans and borrowings	21	17,671,539	16,029,141
Trade and other payables	22	601,393	502,769
Other financial liabilities	23	916,917	491,571
Employee benefits	25	931,492	858,515
Income tax payable	39	33,701	33,701
Deferred tax liabilities	39	2,243,327	2,556,008
Provisions	27	491,930	474,148
Other liabilities	28	116,440	119,527
<b>Total non-current liabilities</b>		<b>23,006,739</b>	<b>21,065,380</b>
<b>Current liabilities</b>			
Loans and borrowings	21	2,984,466	4,805,659
Trade and other payables	22	2,534,254	2,698,694
Other financial liabilities	23	416,661	347,100
Employee benefits	25	247,466	251,260
Income tax payable	39	363,584	91,264
Taxes, contributions and rates	26	222,368	191,281
Provisions	27	589,977	778,219
Other liabilities	28	330,064	190,648
<b>Total current liabilities</b>		<b>7,688,840</b>	<b>9,354,125</b>
<b>Total liabilities</b>		<b>30,695,579</b>	<b>30,419,505</b>
<b>Credit balances of deferred regulatory accounts</b>	30	25,610	-
<b>Deferred tax liabilities related to balances of deferred regulatory accounts</b>	30	-	33,560
<b>Total liabilities and credit balances of deferred regulatory accounts</b>		<b>30,721,189</b>	<b>30,453,065</b>
<b>Total liabilities and equity</b>		<b>54,900,149</b>	<b>52,489,283</b>

The accompanying notes are an integral part of the financial statements.

  
**Álvaro Guillermo Rendón López**  
 General Manager  
 Certification Attached

  
**Jorge Andrés Ibares Angel**  
 Executive Vice-President Finances and Investments

  
**John Jaime Rodríguez Sosa**  
 Director of Accounting and Costs  
 Professional Card No. 144842-T  
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**EMPRESAS PUBLICAS DE MEDELLIN E.S.P. AND SUBSIDIARIES  
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME**

For the period from 1 January to 31 December, 2019 and 2018

Figures stated in millions of Colombian pesos

	Notes	2019	2018
<b>Continuing operations</b>			
Sale of goods	31	24,222	18,266
Rendering of services	31	17,612,673	15,834,371
Leases	31	111,824	83,110
Other income	32	609,319	325,878
<b>Income from ordinary activities</b>		<b>18,358,038</b>	<b>16,261,625</b>
Profit on sale of assets	31	1,576	7,311
<b>Total income</b>		<b>18,359,614</b>	<b>16,268,936</b>
Costs of and services rendered	33	(11,557,807)	(10,689,982)
Administrative expenses	34.1	(1,596,792)	(1,720,698)
Impairment loss on trade receivables	34.2	(77,801)	(69,461)
Other expenses	35	(157,467)	(197,647)
Finance income	36.1	370,837	270,836
Finance expenses	36.2	(1,290,282)	(1,049,793)
Net foreign exchange difference	37	(55,883)	(264,117)
Equity-accounted investees	10 y 11	11,793	(18,017)
Gain on equity	38	9,727	65,167
<b>Income for the year before tax</b>		<b>4,015,939</b>	<b>2,595,223</b>
Income tax	39	(810,199)	(210,606)
<b>Profit for the year after taxes from continuing operations</b>		<b>3,205,740</b>	<b>2,384,616</b>
Discontinued operations, net of income tax	40	48,245	(4,034)
<b>Net profit for the year before net movement in balances of deferred regulatory accounts</b>		<b>3,253,985</b>	<b>2,380,582</b>
Net movement in balances of net regulatory accounts related to profit for the year	30	(139,997)	52,884
Net movement in deferred tax related to deferred regulatory accounts related to profit for the year	30	41,988	(15,928)
<b>Net profit for the year and net movement in balances of deferred regulatory accounts</b>		<b>3,155,976</b>	<b>2,417,538</b>
<b>Other comprehensive income</b>			
<b>Items that will not be reclassified to profit or loss:</b>			
Remeasurement of defined benefit plans	20	(72,364)	(2,422)
Equity investments measured at fair value through equity	20	465,395	(3,990)
Income tax related to components that will not be reclassified	20 y 39	149,678	8,567
Equity accounted investees - share of OCI	10 y 20	(243)	(444)
		<b>542,466</b>	<b>1,711</b>
<b>Items that may be reclassified subsequently to profit or loss:</b>			
Cash flow hedges	20	28,841	3,283
Recognized profit for the year		(54,338)	171,581
Reclassification adjustment		83,179	(168,299)
Exchange differences on translation of foreign operations	20	(216,050)	100,380
Income taxes related to components that can be reclassified	20 y 39	19,268	(67,928)
Equity accounted investees - share of OCI	10 y 20	(55)	(615)
		<b>(167,996)</b>	<b>35,120</b>
<b>Other comprehensive income, net of taxes</b>		<b>374,470</b>	<b>36,831</b>
<b>Total comprehensive income for the year</b>		<b>3,530,446</b>	<b>2,454,369</b>
<b>Profit for the period attributable to:</b>			
Owners of the company		2,985,182	2,258,293
Non-controlling interest		170,794	159,245
		<b>3,155,976</b>	<b>2,417,538</b>
<b>Total comprehensive income attributable to:</b>			
Owners of the company		3,358,619	2,288,787
Non-controlling interest		171,827	165,582
		<b>3,530,446</b>	<b>2,454,369</b>

The accompanying notes are an integral part of the financial statements

**Álvaro Guillermo Rendón López**  
General Manager  
Certification Attached

**Jorge Andrés Tabares Ángel**  
Executive Vice-President Finances and Investments

**John Jaime Rodríguez Sosa**  
Director of Accounting and Costs  
Professional Card No. 144842-T  
Certification Attached



## EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

For the period from 1 January to 31 December 2019 and 2018

Figures stated in millions of Colombian pesos

	Other comprehensive income												Total	
	Issued capital	Treasury shares	Reserves	Accumulated other comprehensive income	Other components of equity	Equity investments	Defined benefit plans	Cash flow hedging	Exchange differences on translation of foreign operations	Reclassification of properties, plant and equipment to investment property	Accumulated share of other comprehensive income of associates and joint ventures	Attributable to owners of the company		Non-controlling interests
	Note 19.1		Note 19.2	Note 19.3		Note 20.3	Note 20.2	Note 20.5	Note 20.6	Note 20.1	Note 20.4			Note 19.4
<b>Balance at 1 January 2018</b>	67	-	3,479,283	13,692,151	(25,118)	2,173,346	(29,557)	(5,789)	716,674	12,079	(2,581)	20,010,555	857,654	20,868,209
Profit for the period	-	-	-	2,258,293	-	-	-	-	-	-	-	2,258,293	159,245	2,417,538
Other comprehensive income for the period, net of income tax	-	-	-	-	-	(5,111)	1,032	(64,714)	100,377	-	(1,059)	30,525	6,306	36,831
<b>Comprehensive income for the period</b>	-	-	-	2,258,293	-	(5,111)	1,032	(64,714)	100,377	-	(1,059)	2,288,818	165,551	2,454,369
Surpluses or dividends declared	-	-	-	(1,203,504)	-	-	-	-	-	-	-	(1,203,504)	(106,956)	(1,310,460)
Movement in reserves	-	-	(918,626)	918,626	-	-	-	-	-	-	-	-	-	-
Purchase and sale of non-controlling interests	-	-	-	2	(35)	-	-	-	-	-	-	(33)	33	-
Transfers to retained earnings	-	-	-	(51)	-	69	-	-	-	-	-	18	-	18
Income tax related to transactions with owners	-	-	-	(341)	-	-	-	-	-	-	-	(341)	(326)	(667)
Equity-accounted investees for changes in equity	-	-	-	-	1,837	-	-	-	-	-	-	1,837	-	1,837
Other movement of the period	-	-	-	(14,693)	(7)	-	144	-	-	(283)	-	(14,839)	37,751	22,912
<b>Balance at 31 December 2018</b>	67	-	2,560,657	15,650,483	(23,323)	2,168,304	(28,381)	(70,503)	817,051	11,796	(3,640)	21,082,511	953,707	22,036,218
<b>Balance at 1 January 2019</b>	67	-	2,560,657	15,650,483	(23,323)	2,168,304	(28,381)	(70,503)	817,051	11,796	(3,640)	21,082,511	953,707	22,036,218
Profit for the period	-	-	-	2,985,182	-	-	-	-	-	-	-	2,985,182	170,794	3,155,976
Other comprehensive income for the period, net of income tax	-	-	-	-	-	587,736	(48,637)	48,116	(213,480)	-	(298)	373,437	1,033	374,470
<b>Comprehensive income for the period</b>	-	-	-	2,985,182	-	587,736	(48,637)	48,116	(213,480)	-	(298)	3,358,619	171,827	3,530,446
repurchase of shares	-	(41)	-	-	-	-	-	-	-	-	-	(41)	(40)	(81)
Surpluses or dividends declared	-	-	-	(1,289,652)	-	-	-	-	-	-	-	(1,289,652)	(139,590)	(1,429,242)
Movement in reserves	-	-	(222,651)	222,651	-	-	-	-	-	-	-	-	-	-
Purchase and sale of non-controlling interests	-	-	(144)	(40,216)	14,926	(1,090)	(107)	803	(2,806)	-	-	(28,634)	(31,561)	(60,195)
Transfers to retained earnings	-	-	-	(8,994)	-	8,477	537	-	-	-	-	20	-	20
Income tax related to transactions with owners	-	-	-	1,955	-	-	-	-	-	-	-	1,955	1,866	3,821
Equity-accounted investees for changes in equity	-	-	-	(162)	3,752	-	-	-	-	-	24	3,614	-	3,614
Other movement of the period	-	-	-	(17,841)	72,978	30,978	(557)	-	-	438	-	85,996	8,363	94,359
<b>Balance at 31 December 2019</b>	67	(41)	2,337,862	17,503,406	68,333	2,794,405	(77,145)	(21,584)	600,765	12,234	(3,914)	23,214,388	964,572	24,178,960

The accompanying notes are an integral part of the financial statements

**Álvaro Guillermo Rendón López**  
General Manager  
Certification Attached

**Jorge Andrés Tabares Ángel**  
Executive Vice-President Finances and Investments

**John Jaime Rodríguez Sosa**  
Director of Accounting and Costs  
Professional Card No. 144842-T  
Certification Attached

EMPRESAS PUBLICAS DE MEDELLIN E.S.P. AND SUBSIDIARIES  
 CONSOLIDATED STATEMENTS OF CASH FLOWS  
 For the period from 1 January to 31 December 2019 and 2018  
 Figures stated in millions of Colombian pesos

	Notes	2019	2018
<b>Cash flows from operating activities:</b>			
<b>Net profit for the period</b>		<b>3,155,976</b>	<b>2,417,538</b>
<b>Adjustments to reconcile the net profit for the period to the net cash flows used in operating activities:</b>			
Depreciation and amortization of property, plant and equipment, right-of-use assets and intangible assets	33 and 34	1,140,099	992,108
Impairment of property, plant and equipment, right of use assets and intangible assets	8	2,254	6,052
Impairment of receivables	34.2	230,343	122,614
Reversal of loss of ts receivable	34.2	(152,542)	(53,153)
Net foreign exchange difference gains	37	55,883	264,117
Proceeds from valuation of investment property	32	(51,808)	(4,352)
Proceeds from valuation of financial instruments and hedge accounting	36.1 and 36.2	(33,066)	24,479
Provisions, post-employment and long-term defined benefit plans	34	240,896	541,557
Government subsidies applied	32	(1,023)	(2,091)
Deferred income tax	39.3	(233,502)	(357,497)
Current income tax	39.3	1,043,701	574,890
Share of loss of equity-accounted investees	10	(11,793)	18,017
Proceeds from interest	36.1	(248,044)	(214,351)
Interest expenses	36.2	1,214,993	929,969
Proceeds from disposition of property, plant and equipment, right-of-use assets and intangible assets	31 and 35	(1,538)	(3,148)
Proceeds from disposition of financial instruments	38	47,534	3,043
Dividends from investments	38	(57,262)	(68,209)
Other non-cash income and expenses, net	32 and 35	(167,844)	38,816
		<b>6,173,257</b>	<b>5,230,399</b>
<b>Net changes in operating assets and liabilities:</b>			
Change in inventories		18,878	2,386
Change in trade and other receivables		(217,220)	(514,522)
Change in other assets		99,965	105,108
Change in trade and other payables		(139,144)	197,318
Change in employee benefits		(53,052)	(32,979)
Change in provisions		(368,479)	(38,476)
Change in other liabilities		376,587	(21,268)
Interest paid		(1,612,421)	(1,268,260)
Income tax paid		(804,930)	(741,178)
Income tax refund		1,255	374,974
<b>Net cash from operating activities</b>		<b>3,474,696</b>	<b>3,293,502</b>
<b>Net cash from investing activities:</b>			
Acquisition and capitalization of subsidiaries or ventures		(20)	-
Disposal of subsidiaries and business		471,808	-
Acquisition of property, plant and equipment	5	(3,260,864)	(3,704,438)
Disposal of property, plant and equipment	5	18,589	138,953
Acquisition of intangible assets	7	(316,068)	(90,759)
Disposal of intangible assets	7	44,096	19,433
Disposal of investment property	6	2,165	-
Acquisition of investments in financial instruments		(452,875)	(1,604,528)
Disposal of investments in financial instruments		1,074,060	612,789
Interest received		3,335	4,498
Dividends received from subsidiaries		(92)	-
Dividends received from associates and joint ventures	10	41,600	-
Other dividends received	13	56,132	64,488
compensation received	4	531,607	-
Other cash from investing activities		(64,517)	95,823
<b>Net cash used in investing activities</b>		<b>(1,851,044)</b>	<b>(4,463,741)</b>
<b>Cash from financing activities</b>			
Acquisition of own shares		(81)	-
Obtaining of loans and borrowings	21	9,297,603	6,700,282
Payment of loans and borrowings	21	(9,425,148)	(3,455,320)
Transaction costs by issuance of debt instruments		(13,146)	(65,212)
Payment of finance lease liabilities		(40,883)	(1,040)
Dividends or surpluses paid to owners (Municipio de Medellín)	19.3	(1,289,652)	(1,503,504)
Dividends or surplus paid to non-controlling interests	7	(103,162)	(126,389)
Capital grants		154	353
Payments of capital of derivatives designated as cash flow hedge	24	156,514	-
Net purchases from non-controlling interests		(60,197)	-
Payment of pension bonds		(26,091)	-
Other cash from financing activities		43,570	83,899
<b>Net cash used in financing activities</b>		<b>(1,460,519)</b>	<b>1,633,069</b>
<b>Net increase in cash and cash equivalents</b>		<b>163,133</b>	<b>462,830</b>
Effects of movements in exchange rates on cash and cash equivalents		(50,948)	(55,663)
Cash and cash equivalents at beginning of the year	18	1,598,381	1,191,214
<b>Cash and cash equivalents at end of the year</b>		<b>1,710,566</b>	<b>1,598,381</b>
Restricted resources	18	196,072	173,375

The accompanying notes are an integral part of the financial statements

**Álvaro Guillermo Rendón López**  
 General Manager  
 Certification Attached

**Jorge Andrés Ibares Angel**  
 Executive Vice-President Finances and Investments

**John Jaime Rodríguez Sosa**  
 Director of Accounting and Costs  
 Professional Card No. 144842-T  
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## Notes to the consolidated financial statements of the EPM Group for the years ended 31 December 2019 and 2018

(In millions of Colombian pesos, except when indicated otherwise)

### Note 1. Reporting Entity

Empresas Públicas de Medellín E.S.P. and subsidiaries (hereinafter, "EPM Group") is the holding company of a multi-latin Enterprise group made up of 45 companies and a structured entity<sup>1</sup>, that have presence in the provision of public utilities in Colombia, Chile, El Salvador, Guatemala, Mexico and Panama.

Empresas Públicas de Medellín E.S.P. (hereinafter EPM), holding of the EPM Group, is a municipal decentralized entity, created in Colombia through Decision 58 dated August 6, 1955 issued by the Administrative Council of Medellín, as an autonomous public institution. It was transformed into an industrial and commercial government company of municipal order through Decision 069 of December 10, 1997 of the Medellín Council. Due to its legal status, EPM is endowed with administrative and financial autonomy, and its own equity according to Article 85 of Law 489 of 1998. The share capital with which the company was constituted and currently operates, as well as its equity, is of public nature, being its only owner is the Municipality of Medellín. Its main corporate domicile is located at Carrera 58 No. 42-125 in Medellín, Colombia. It has not established a term of duration.

EPM provides domiciliary public utilities of water, sewage electricity and natural gas distribution. It can also provide the domiciliary public utility of waste management, treatment and disposal of solid waste, as well as the supplementary activities related to each and every one of the mentioned public utility services.

The EPM Group offers its services through the following business units:

- Energy: comprised by the Electricity Generation, Electricity Transmission, Electricity Distribution and Natural Gas Distribution and Commercialization segments.
- Water: includes the Water Supply, Wastewater Management and Solid Waste Management segments.
- Others segment: Consisting of the investment vehicles, Distribución Eléctrica Centroamericana II S.A. (DECA II), EPM Capital Mexico S.A. de C.V., EPM Chile S.A., EPM Inversiones S.A., EPM Latam S.A., Inversiones y Proyectos Hidrosur SpA (former Inversiones y Asesorias South Water Services SpA)<sup>2</sup>, Panama Distribution Group S.A. (PDG). It additionally includes Maxseguros EPM Ltd., captive reinsurer established to negotiate, contract, and provide reinsurance services.
- Furthermore, EPM participates in the telecommunications business, in which it has significant influence since August 2014, through UNE EPM Telecomunicaciones S.A. and its affiliates: Edatel S.A. E.S.P, Orbitel Servicios Internacionales S.A. (OSI), Cinco Telecom Corporation (CTC) and Colombia Movil S.A.; and Inversiones Telco S.A.S. and its affiliate Emtelco S.A.; providing voice, data and Internet utilities, professional services, and data center, among others.

The consolidated financial statements of the Group corresponding to the year ended 31 December 2019, were authorized by the Board of Directors to be published on 26 March 2020. The main activities of the Group are described in Note 46 Operating segments.

<sup>1</sup> Autonomous Equity *Financiación Social*. Under International Financial Reporting Standards -IFRS, it is considered a structured entity that is part of the consolidation perimeter of the EPM Group's financial statements.

<sup>2</sup> It changed its company name on November 26, 2018, through public deed No. 34.861-2018 of Notary 27 of Santiago de Chile.

## Legal and Regulatory Framework

The activities developed by the EPM Group, i.e. domiciliary public utilities, are regulated in Colombia, Chile, El Salvador, Guatemala, Mexico, and Panama. The most significant regulatory matters that apply are:

### 1. Legislation for Colombia

The rendering of public home utilities is regulated in Colombia mainly by Law 142, Public Utilities Act, and Law 143 of 1994, Electricity Act.

The functions of control, inspection and supervision of the entities that provide public home utilities are exercised by the Office of the Superintendent of Domiciliary Public Utilities (SSPD, for its Spanish initials).

Because of being a municipal decentralized entity, EPM is subject to the political control of the Council of Medellín, to the fiscal control of the Office of the General Comptroller of Medellín, and to the disciplinary control of the Office of the General Prosecutor.

#### 1.1 Regulation commissions

Decree 1524 of 1994 delegates in the regulation commissions the presidential function of stating general policies of administration and control of efficiencies in public home utilities.

These entities are:

- The Energy and Gas Regulatory Commission (CREG, for its Spanish initials), a technical body attached to the Ministry of Mines and Energy (MME), that regulates the rates for energy sales and the aspects related to the operation of the Wholesale Energy Market (MEM, for its Spanish initials) and to the provision of electric power, natural gas and liquid fuel services.
- Regulatory Commission of Drinking Water and Sanitation (CRA, for its Spanish initials), regulates the rates of water, sewage and solid waste management, a technical body attached to the Ministry of Housing, City and Territory.

#### 1.2 Regulation by sector

##### 1.2.1 Activities of the water, sewage and waste management sector

Law 142, Public Utilities Act, defined the water, sewage and waste management services:

**Water:** Also called drinking water domiciliary public utility. Activity consisting of the municipal distribution of water, which is fit for human consumption, including its connection and measurement. It includes supplementary activities such as water catchment and its processing, treatment, storage, conduction and transportation.

**Sewage:** Activity that consists of the municipal collection of waste, mainly liquid, through piping and conduits. It includes the supplementary activities of transportation, treatment, and final disposal of such waste.

**Waste management:** Activity that consists of the municipal collection of waste, mainly solid waste. It includes the supplementary activities of transportation, treatment, disposal, and final disposal of such waste.

For the Water and Sewage utilities, the rate framework is established in Resolutions CRA 688 of 2014 and CRA 735 of 2015 issued by the Drinking Water and Sewage Regulation Commission (CRA, for its Spanish initials). For the Waste management public utility, in resolution CRA 720 of 2015. These rules establish quality and coverage indicators, provide incentives to meet targets and define remuneration mechanisms to collateral the company's financial sufficiency.

##### 1.2.2 Electric sector activities

Law 143 of 1994 segmented the electric power utility into four activities: generation, transmission, distribution, and commercialization, which may be developed by independent companies. The purpose

of the legal framework is to supply the demand of electricity under economic and financial feasibility criteria and to tend to an efficient, secure and reliable operation of the sector.

**Generation:** It consists of the production of electric power from different sources (conventional or non-conventional), developing this activity either exclusively or combined with another or other activities of the electric sector, regardless of which of them is the main activity.

**Transmission:** The national transmission activity is the transportation of energy in the National Transmission System (hereinafter STN, for its Spanish initials). It encompasses the set of lines, with its corresponding connection equipment that operate in voltages greater than or equal to 220 kV. The National Transmitter is the legal entity that operates and transports electric power in the STN or has incorporated a company the purpose of which is the development of said activity.

**Distribution:** It consists of transporting electric power through a set of lines and substations, with the associated equipment, that operate at voltages lower than 220 KV.

**Commercialization:** An activity that consists of the purchase of electric energy in the wholesale market and its sale to other market participants or to the final regulated and non-regulated users, developing this activity either exclusively or combined with other activities of the electric sector, regardless of which of them is the main activity.

### 1.2.3 Activities of the natural gas sector

Law 142 of 1994 defined the legal framework for the provision of domiciliary public utilities, field in which natural gas is defined as a public utility.

**Gas:** It is the set of activities targeted to the distribution of gas fuel, through pipes or another mean, from a place of collection of large volumes or from a central gas pipeline to the facilities of a final consumer, including their connection and measurement. This Law will also be applied to the supplementary activities of commercialization from the production and transportation of gas through a main gas pipeline, or through other means, from the generation site and to that where it connects to a secondary network.

## 2. Legislation for Chile

### 2.1 Electric sector activities

The activities of generation, transmission and distribution regulated by the Electric Services General Act (LGSE, for its Spanish initials) are identified in the Chilean electric market.

There are four interconnected electrical systems in Chile: two small systems serving the south of the country, the Aysén System and the Magallanes System, which concentrate 0.29% and 0.62% of the country's installed capacity respectively, and two large systems, the Sistema Interconectado Norte Grande (SING) and the Sistema Interconectado Central (SIC) which concentrate 28.06% and 71.03% of the installed capacity respectively and have a coordinated load dispatch operating since 2017.

The reforms in the Chilean electric sector started in 1978 with the creation of the National Energy Commission and were formalized with the approval of the Electric Act in 1982. Due to the privatization of the sector in Chile, as from 1980, there has been no Government involvement.

### 2.2 Sanitation service activities

The Sanitation Sector is made up by the group of entities which functions relate to the services of production and distribution of drinking water and collection and disposal of wastewater, that is, the companies in charge of providing those services and the Superintendence of Sanitation Utilities, regulatory and overseeing entity of this sector.

### 2.3 Regulatory framework

**Electric:** According to the Electric Services General Act (“Ley General de Servicios Eléctricos - LGSE”), the National Energy Commission is the competent authority to calculate the rates through the technical reports of “knot price setting” (fijación de precio de nudo) that are subsequently established by decree of the Ministry of Economy, Promotion and Reconstruction. Current legislation establishes as a basic

premise that the rates must represent the actual costs of electricity generation, transmission and distribution so that an optimal development of the electric systems can be obtained.

The legal framework of the Chilean electric sector mainly consists of:

- Decree with Force of Law (DFL) No. 1 of 1982. The Electric Services General Act establishes the fundamental norms for the development of the economic activity in the electric industry. It may only be modified at the National Congress and its most relevant modifications are those that are applied through Law No. 19.940 of 2004 (Short Act I “Ley Corta I”), that reformed the regulatory framework of the Transmission, and Law No. 20.018 of 2005 (Short Act II “Ley Corta II”), that reformed the commercialization regime between generators and distributors for the supply of regulated clients. The bylaws, in turn, are elaborated by the sectorial bodies of the Executive Power and must be submitted to the norms established in the Law.
- Decree with Force of Law (DFL) No. 4 DFL of 2007. Approves modifications to the Decree with Force of Law No. 1 of 1982, Electric Services General Act, on the subject of electric power.
- Law No 20.257 of 2008. It introduces modifications to the Public Utilities General Act (LGPS) in respect to the generation of electric energy with renewable non-conventional energy sources.
- Law No. 20.402 of 2009. Creates the Ministry of Energy, establishing modifications to Decree Law No. 2.224 and to other legal bodies.
- Law No. 20,936 of 2016. Amends Law No. 20,018 of 2005, establishes a new electricity transmission system and creates an independent coordinating body for the national electricity system.

**Sanitation:** In the regulation scheme in effect, where the regulatory and monitoring function of the State is separated from the producing function, the Superintendence of Sanitation Utilities is created, which is the regulating and monitoring body of the sector. This body is a decentralized entity that has its legal status and own equity, subject to the supervision of the President of the Republic through the Ministry of Public Works. It performs the regulatory and monitoring functions of the activity of companies that operate in this sector.

The regulatory model emphasizes two crucial aspects to introduce the economic rationality in the operation of the sector: the rates and the concessions regime, both aspects are contained in the legal framework under which the operation of the sector is regulated, being function of the Superintendence of Sanitation Utilities applying and enforcing the provisions for the respective legal bodies: Decree with Force of Law No. 70 of 1988, Rates Act and Decree with Force of Law No. 382 of 1988, Sanitation Utilities General Act.

The legal framework of the Chilean sanitation sector mainly composed of:

- Law of the Superintendence of Sanitation Utilities - Law 18.902 of 1990 (Modified by Law No. 19.549 of 1998 and Law No. 19.821 of 2002): creates the Superintendence of Sanitation Utilities as a functionally decentralized service, with legal status and its own equity, subject to the supervision of the President of the Republic through the Ministry of Public Works.

To the Superintendence of Sanitation Utilities will correspond the monitoring of the providers of sanitation utilities, of the compliance with rules related to sanitation utilities and the control of industrial liquid waste connected to the rendering of services of sanitation companies, capable of, either officially or at the request of any interested party inspecting the sanitation infrastructure works made by the providers.

- Regulations of the Sanitation Utilities General Act, Supreme Decree (D.S.) of the Ministry of Public Works (M.O. P.) No. 1199, Dec/2004 Published in the Official Diary on November 9, 2005: approves the regulations of sanitation concessions of production and distribution of drinking water and collection and disposal of wastewater and the regulations on the customer service quality to the users.
- Sanitation Utilities Rates Act: Decree with Force of Law MOP No. 70 of 1988 - Published in the Official Diary on March 30, 1988.
- Waters Code and its modifications: the Decree with Force of Law No. 1.122 regulates the property and the right-of-use of water. The latest modifications are: Law No. 20.017 of 2005 and Law No 20.099 of 2006.



- Regulation of the Sanitation Utilities General Act- Supreme Decree MOP No. 1199, Dec/2004: approves the regulations of the sanitation concession of production and distribution of drinking water and of collection and disposal of wastewater and of the regulations on the customer services quality to the users.

## 2.4 Regulatory entities

Some of the main regulatory entities for the energy service in Chile are:

- **Ministry of Energy:** It is the higher body of collaboration to the President of the Republic in the functions of governance and administration of the energy sector. This public body is responsible for determining the plans, policies and norms for the development of the electric sector. Further, it grants concessions for hydro-electrical centrals, transmission lines, substations, and electric distribution zones. The National Energy Commission (“Comisión Nacional de Energía - CNE”) is attached to the Ministry of Energy.
- **National Energy Commission (“Comisión Nacional de Energía - CNE”):** The National Energy Commission (CNE) is a public decentralized entity with its own equity and full capacity to acquire and exercise rights and obligations that relate to the President of the Republic through the Ministry of Energy. In particular, the National Energy Commission leads the rates setting processes to the electricity and gas companies of the network. It is responsible for designing technical standards and calculating the regulated prices established in the Law. Likewise, it monitors and projects the current and expected operation of the energy sector, through the issuance of the works scheme that constitutes an indicative guide for a ten-year expansion of the system. It also proposes to the Ministry of Energy the legal and regulatory norms that are required in the matters of its competence.
- **Superintendence of Electricity and Fuels (“Superintendencia de Electricidad y Combustibles - SEC”):** It is the public body whose mission is to watch over the adequate operation of the electricity, natural gas and fuels utilities, in terms of their safety, quality and price. In addition to fixing technical standards, the SEC’s objective is to audit and oversee compliance with the legal and regulatory norms for generation, production, storage, transportation and distribution of liquid fuels, natural gas and electricity, to verify the quality of services provided to users is the one stated in those decisions and technical norms and that the operations and use of the energy resources do not constitute a hazard to the people or their property. The institutional framework of SEC is Law 18.410 of 1985, modified by Law 20.402 of 2009.
- **Independent Coordinator of the National Electricity System (Coordinador Independiente del Sistema Eléctrico Nacional):** Law 20.936 created this coordinator, who is responsible for preserving the safety of the service in the electric system, guaranteeing economic operation, guaranteeing open access to the transmission systems, and coordinating and determining economic transfers between companies. The Coordinator is an autonomous, non-profit entity and its board of directors is elected by the Essential Nominating Committee; its members are independent of the coordinated companies.
- **The Panel of Experts (Panel de Expertos):** is an autonomous collegiate body created in 2004 by Law No. 19.940, whose function is to rule on differences of understanding, conflicts or disagreements resulting from the application of the electricity legislation between electricity companies and other entities and which the latter submit to its consideration. The rulings of this entity are binding on the parties.

Some of the main regulatory bodies for the sanitation sector (drinking water and sewage) in Chile are:

- **Ministry of Public Works (“Ministerio de Obras Públicas - MOP”):** grants the concessions and promotes the supply of water and the sanitation in rural zones through its Sanitation Programs Department. Besides to its proper functions, in respect to the sanitation sector it is charged with the administration of legislation on the subject of water resources, the assignment of water rights and the approval of the concession rights to establish, construct and exploit sanitation utilities.
- **Superintendence of Sanitary Service (“Superintendencia de Servicios Sanitarios - SISS”):** Chilean State entity that regulates and monitors the companies that render the drinking water supply and the collection and treatment of wastewater utilities to the urban population.

- Ministry of Health: monitors water quality in the sanitation utilities not under jurisdiction of the Superintendence (which are not public sanitation utilities) and officializes the quality standards studied under the provisions of the National Standardization Institute.
- Ministry of Economy, Development and Reconstruction (Ministerio de Economía, Fomento y Reconstrucción): designs and monitors the implementation of public policies that affect the competitiveness of the country; It promotes and monitors the activities in the sectors of industry, services and commerce. Its major lines of action are related to the design and promotion of Innovation and Entrepreneurship Policies. Regarding the sanitation sector its main function is the setting of regulated prices, at the proposal from the Superintendence.

### 3. Legislation for El Salvador

A restructuring process of the electrical sector was developed in El Salvador, which materialized in a juridical and institutional framework that aims to promote the competition and necessary conditions to assure the availability of an efficient energetic supply, capable of supplying the demand under technical, social, economic, environmental and financial feasibility criteria.

In the 90's, El Salvador pushed a process of reforms in the energetic sector that consisted of the restructuring of the hydrocarbons and electricity sectors, the privatization of most government companies that provided energetic goods or services and the deregulation of the markets.

#### 3.1 Regulatory framework

The legal framework of the Salvadorian electric sector is comprised by the General Superintendence of Electricity and Telecommunications (“Superintendencia General de Electricidad y Telecomunicaciones” -SIGET”) Creation Act, issued through Legislative Decree 808 of September 12, 1996, that gave juridical life to the regulatory entity; as well as the Electricity General Act (“Ley General de Electricidad - LGE”), issued through Legislative Decree 843 of October 10, 1996, and by the Bylaws of the Electricity General Act, established through Executive Decree 70 of July 25, 1997, including its modifications.

As a result of the restructuring process of the electrical sector the Transaction Unit (“Unidad de Transacciones S.A. - UT”), that manages the Wholesale Market of Electric Energy, and the Empresa de Transmisión de El Salvador (ETESAL) were created, at the same time that the electricity distribution and thermal generation companies were privatized. Further, the hydro-electrical and geothermal generation activities were separated.

#### 3.2 Regulatory entities

Some of the main regulatory entities at energetic level in El Salvador are:

- Ministry of Economy (MINEC): Central government institution which purpose is the promotion of the economic and social development through the increase of production, productivity, and the rational use of resources. Among its responsibilities it has to define the commercial policy of the country, the follow-up and promotion to the Central American economic integration, and to lead the Energy National Council (Consejo Nacional de Energía). It also contributes to the development of competition and competitiveness of productive activities, both for the domestic and external markets.
- General Superintendence of Electricity and Telecommunications (“Superintendencia General de Electricidad y Telecomunicaciones - SIGET”): It is a not-for-profit public service autonomous institution. Its autonomy includes administrative and financial matters, and it is the competent entity to apply the norms contained in international treaties on electricity and telecommunications in force and effect in El Salvador, as well as in the laws that rule the electricity and telecommunications sectors and its bylaws, in addition to knowing about the non-compliance therewith.
- Transactions Unit (“Unidad de Transacciones - UT”): Has among its functions the transparent and efficient managing of the wholesale electrical energy market and operating the transmission system, maintaining its security and quality, and providing market operators with satisfactory responses for the development of its activities. Likewise, it coordinates with the Regional Operator Entity (“Ente Operador Regional - EOR”) the energy transactions that El Salvador carries out with other countries at

the Central American and international levels. Finally, it determines responsibilities in case of failures in the systems.

- National Energy Council (“Consejo Nacional de Energía - CNE”): is the superior, governing and regulatory authority for energy policy, whose objectives are to draw up the National Energy Policy and short-, medium- and long-term energy planning; to foster the existence of regulatory frameworks to promote investment and development in the energy sector; to monitor the proper functioning of energy markets; to promote rational energy use; to develop and expand renewable energy resources; and to promote the integration of regional energy markets.

#### 4. Legislation for Guatemala

The Political Constitution of the Republic of Guatemala of 1985 declared the electrification of the country as national urgency, based upon plans formulated by the State and the municipalities, in a process that could count on the interest of the private initiative.

##### 4.1 Regulatory framework

With the Political Constitution as a legal handle, in 1996 the General Electricity Act was declared (Decree No. 93-96), through which the fundamental juridical norms to facilitate the acting of the different sector of the electrical system were established.

##### 4.2 Regulatory entities

Some of the main energy regulatory entities in Guatemala are:

- Ministry of Energy and Mines: The Ministry of Energy and Mines is the most important Guatemalan government entity of the electric sector. It is responsible for enforcing the General Electricity Act and related regulations, as well as for coordinating policies between the National Commission of Electric Energy (CNEE) and the Manager of the Wholesale Market (AMM). This government office also has the authority to grant authorization permits for the operation of the distribution, transmission and generation companies.
- National Electrical Power Commission (“Comisión Nacional de Energía Eléctrica - CNEE”): The Guatemalan electric sector is regulated by the CNEE, a regulatory entity created pursuant to the General Electricity Act, as a technical body of the Ministry of Energy and Mines and subordinated to it. It consists of three members appointed by the President of the Republic from groups of three proposed by the Principals of universities, the Ministry of Energy and Mines and the Wholesale Market agents. The duration of each directorate is five years.
- Wholesale Market Administrator (“Administrador del Mercado Mayorista - AMM”): is the entity in charge of managing the Guatemalan wholesale market, a private entity created by the General Electricity Act, that coordinates operation of generating facilities, international interconnections, and the transmission lines that conform the national electricity system. Likewise, it is responsible for the system’s safety and operation conducting an economically efficient dispatch and managing the electricity resources, in such a way that it minimizes the operating costs, including failure costs, within the restrictions imposed by the transmission system and the service quality requirements. Likewise, the AMM is in charge of the scheduling of the supply and dispatch of electricity. AMM’s bylaws are subject to the CNEE’s approval. If a generation, transmission or distribution company, or an electricity agent or large user does not operate their facilities in conformity with the regulations established by the AMM, the CNEE has the capacity to sanction it with penalties and, in the case of a severe violation, it may require to be disconnected from the national electricity system.

#### 5. Legislation for Mexico

##### 5.1 Regulatory framework for water and sanitation

In the government environment, each of the 32 federative entities has their respective water laws, with sensibly equal purposes in spite of the diverse denominations. The modifications to the government legislation associated to the provision of water and sewage utilities are mainly derived from a series of

initiatives promoted by the National Water Commission (“Comisión Nacional de Aguas - CONAGUA”) in the 90’s.

The National Water Commission (CONAGUA) is a decentralized administrative agency of the Ministry of the Environment and Natural Resources, created in 1989, whose responsibility is to manage, regulate, control, and protect national water resources in Mexico.

A summary of the evolution from then and until the beginning of this decade that the legal state regime has experienced with respect to water and sewage is:

- Reforms in 1983 to Article 115 of the constitution, with which the municipal character of the water and sewage utilities was ratified and strengthened, which forced to channel the state authorities’ role in this matter to charge them with a subsidiary and somehow regulatory role.
- Government policies established to promote the creation of decentralized bodies (creation decrees) of the Municipal Administration, with the technical capacity and with the administrative and financial autonomy necessary for the efficient provision of utilities, together with the introduction of participatory schemes for the private sector.
- Greater involvement of the state authorities in the management of national water resources, through agreements that, pursuant to the provisions of Article 116 of the constitution, can be entered into by the federation with the state governments so that the latter can undertake or exercise different tasks or attributions, of exclusive competence of the federal government. This possibility was reinforced even more with the amendments and additions to the National Water Act that entered into force and effect in 2004.

## 5.2 Regulatory entities

Some of the main sanitation regulatory entities in Mexico are:

- Secretariat of the Environment and Natural Resources (“Secretaría de Medio Ambiente y Recursos Naturales - SEMARNAT”): in the different environments of society and public function, it incorporates criteria and instruments that assure the optimal protection, preservation, and use of the country’s natural resources, thus forming an integral and inclusive environmental policy that allows achieving sustainable development, provided that they are not expressly entrusted to another office; likewise, in matters of ecology, environmental sanitation, water, environmental regulation of the urban development and the fishing activity, with the involvement that shall correspond to other offices and entities.
- National Water Commission (“Comisión Nacional del Agua - CONAGUA”): With the interest of the society, it manages and preserves the national water resources to achieve the sustainable use of the resource with the co-responsibility of the three orders of the government and the society in general. It is the authority with technical quality and promoter of the government orders in the integrated management of the water resource and its inherent public goods and protects the water bodies to guarantee a sustainable development and the preservation of the environment.
- Social Development Secretariat (“Secretaría de Desarrollo Social - SEDESOL”): Defines the commitments of the management to advance in the achievement of an effective social development. Formulates and coordinates the solidary and subsidiary social policy of the federal government, targeted to the common good, and executes it in a co-responsible way with the society.

## 6. Legislation for Panama

The electrical sector in Panama is divided into three activity areas: generation, transmission and distribution. The country has established a regulatory structure for the electrical industry, based upon the legislation that was approved between 1996 and 1998. This framework creates an independent regulator, the Public Utilities National Authority (“Autoridad Nacional de los Servicios Públicos - ASEP”), and also creates a transparent process for setting the tariffs for energy sale to regulated clients.

## 6.1 Regulatory framework

The regulatory regime mainly consists of the following norms:

- Law 6 of February 3, 1997: dictates the regulatory and institutional framework for the provision of the electricity public utility. It establishes the regime to which the electrical energy distribution, generation, transmission and commercialization activities shall be subject.
- Law 57 of October 13, 2009 makes several modifications to Law 6 of 1997, among them there are: the obligation for the generating companies to participate in the energy or power purchase processes, the compulsoriness for Empresa de Transmisión Eléctrica S.A. (ETESA) for buying energy in representation of the distributing companies, and the increase in fines that the regulator may impose of up to \$20 million Balboas, and at the same time establishes the right of the clients to refrain from paying for the portion they may claim and grants a 30-day term to claim before the regulator in case of not being satisfied with the answer given by the distributing company.
- Law 58 of May 30, 2011 modifies the articles related to rural electrification, among which are: the modification of the calculation of subsidy that the Rural Electrification Office (“Oficina de Electrificación Rural - OER”) must pay to distributors for a 4-year period (formerly it was paid to 20 years) and the creation of a rural electrification fund for 4 years, which shall be comprised by the contributions of market agents selling electric energy and shall not exceed 1% of their net profit before taxes.

## 6.2 Regulatory entities

Some of the main energy regulatory entities in Panama are:

- The Energy Secretariat (“Secretaría de Energía”): its mission is to formulate, propose and promote the national energy policy with the purpose of assuring supply safety, the rational and efficient use of the resources and energy in a sustainable way, according to the National Development Plan (“Plan de Desarrollo Nacional”). Currently, it is processing before the Electrical Transmission Company (“Empresa de Transmisión Eléctrica - ETESA”) the formation of an energetic grid with greater and more varied renewable and clean resources (wind, gas, among others).
- The National Authority for Public Utilities (“Autoridad Nacional de los Servicios Públicos - ASEP”): Established according to the law of the regulatory entity of public utilities of 1996. It is an autonomous Government entity responsible of regulating, controlling, and auditing the provision of the water and sewage, telecommunications, radio and television, electricity and natural gas utilities.

On February 22, 2006, through Decree Law 10, the Public Utilities Regulatory Entity (“Ente Regulador de los Servicios Públicos - ERSP”) was restructured and changed its name; for that reason, since April 2006 it is known as the ASEP, with the same responsibilities and functions of the regulatory entity but with a general manager and an executive director, each designated by the President of the Republic of Panama and ratified by the National Assembly. Likewise, it has three national directors under the authority of the general administrator: one for the electricity and water sector, one for the telecommunications sector, and one for the user service sector. The national directors are responsible for issuing resolutions related to their respective industries and the appeals thereto are solved by the general administrator as final stage of the administrative process.

- The Planning Unit of the Electric Transmission Company (“Unidad de Planificación de la Empresa de Transmisión Eléctrica - ETESA”): develops the reference expansion plans and projects the global requirements of energy and the means to satisfy those requirements, including the development of alternative sources and establishing programs to preserve and optimize the use of energy. The public utilities companies are called to prepare and present their expansion plans to ETESA.
- The National Dispatching Center (“Centro Nacional de Despacho - CND”): operated by ETESA, plans, supervises and controls the integrated operation of the National Interconnected System (“Sistema Interconectado Nacional”). Receives offers from generators who participate in the energy sale market (spot), determines the spot prices of energy, manages the transmission network, and provides the settlement values between suppliers, producers, and consumers, among others.

- The Rural Electrification Office (“Oficina de Electrificación Rural - OER”): is responsible for promoting the electrification in unserved, unprofitable and non-concessional rural areas.

## Note 2. Significant accounting policies

### 2.1 Basis for preparation of financial statements

The EPM Annual Consolidated Financial Statements were prepared in accordance with the Accounting and Financial Reporting Standards accepted in Colombia (NCIF, for its Spanish initials) and adopted by the Nation's General Accounting Office through Resolution 037 of 2017 and Resolution 049 of 2019 (hereinafter “IFRS adopted in Colombia”). These accounting and financial reporting standards are based on the International Financial Reporting Standards (hereinafter “IFRS adopted in Colombia”) issued by the International Accounting Standards Board (hereinafter, IASB), as well as the interpretations issued by the International Financial Reporting Standards Committee (hereinafter, IFRIC). These financial statements are harmonized with the generally accepted accounting principles in Colombia as set forth in the Annex to Decree 2420 of 2015 and its subsequent amendments.

The Group's consolidated financial statements are prepared in accordance with the current International Financial Reporting Standards (hereinafter “IFRS”) issued by the International Accounting Standards Board (hereinafter “IASB”) and the interpretations issued by the International Financial Reporting Interpretations Committee (“IFRIC”).

The presentation of financial statements in conformity with IFRS adopted in Colombia requires making estimates and assumptions that affect the amounts reported and disclosed in the financial statements, without undermining the reliability of the financial information. Actual results may differ from said estimates. Estimates and assumptions are constantly revised. Revision of accounting estimates is recognised for the period in which the estimates are revised if the revision affects such period or in the revision period and future periods. The estimates made by the Management when applying the IFRS adopted in Colombia, that have a material effect on the financial statements, and those that imply significant judgments for the annual financial statements, are described in greater detail on Note 3. Significant accounting judgments, estimates, and causes of uncertainty in the preparation of financial statements.

EPM and each of its subsidiaries present separate or individual financial statements, as applicable, for compliance before the controlling entities and for internal administrative follow-up purposes and provide information to the investors.

Assets and liabilities are measured at cost or amortized cost, with the exception of certain financial assets and liabilities and the investment properties that are measured at fair value. Financial assets and liabilities measured at fair value correspond to those that: are classified in the category of fair value assets and liabilities through profit, some equity investments at fair value through equity, as well as all finance derivatives, assets and liabilities recognised that are designated as hedged items in a fair value hedging, which recorded value is adjusted with the changes in fair value attributed to the risks object of the hedging.

Consolidated financial statements are presented in Colombian pesos and their figures are stated in millions of Colombian pesos.

### 2.2 Consolidation Principles

The consolidated financial statements include the financial statements of EPM and of its subsidiaries as of 31 December 2019 and 2018. Using the global integration method, EPM consolidates the financial results of the companies on which control is exercised, which are detailed in Note 9. Investment in subsidiaries.

Control is obtained when any of the companies of the Group controls the relevant activities of the subsidiary, generally operating and financing activities, it is exposed, or has the right, to the variable returns of the subsidiary and has the capacity to leverage its power over the subsidiary to influence its returns.

The general presumption is that a majority of voting rights results in taking control. To support this presumption, and when the Group has less than the majority of the voting or similar rights on an investee, the Group considers all the pertinent facts and circumstances to evaluate whether it has the power over an investee, including contractual agreements with other vote holders in the investee, rights arising from other contractual agreements, and voting rights of the Group as potential voting rights. If the facts and circumstances suggest that one or more of the three control elements change, the Group must reassess whether it controls the investee.

The consolidated financial statements of the Group are presented in Colombian pesos, which is the functional and presentation currency of EPM, holding of the Group. Each subsidiary of the Group determines their own functional currency and includes the items in their financial statements using that functional currency.

The information of all companies of the Group was prepared using the same Group's accounting policies, under IFRS adopted in Colombia.

For consolidation purposes, the financial statements of the subsidiaries are prepared under the Group accounting policies and are included in the consolidated financial statements from the acquisition date to the date when the Group loses control.

Intragroup assets, liabilities, equity, revenue, costs, expenses and cash flows are eliminated in the preparation of the consolidated financial statements; i.e., those related to transactions between the Group Companies, including unrealized internal profits and losses, which are eliminated in their entirety.

The consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ends when the Group loses control. Specifically, the income and expenses of a subsidiary acquired or sold during the year are included in the consolidated statement of comprehensive income from the date the Group obtains control until the date on which it ceases to control the subsidiary.

When the Group loses control over a subsidiary, the assets (including goodwill), liabilities, non-controlling interests, and other components of the net equity are derecognised; any residual participation it may retain is measured at fair value, the profit or loss that arise from this measurement are recognised through profit or loss for the period.

Non-controlling interests in the consolidated net assets of subsidiaries are presented separately from the Group's equity. The profit or loss for the period and the other comprehensive income are also attributed to the non-controlling and controlling interests.

Changes in the participation share of the Group in subsidiaries that do not result in the loss of control, are recorded as equity transactions. The recorded value of the Group's non-controlling and controlling interests are adjusted to reflect the changes in their relative participation in the subsidiaries. Any difference between the amount for which the controlling interest, the non-controlling interest, and the fair value of the consideration paid or received are adjusted, and directly recognised in net equity.

Whenever the Group loses control over a subsidiary, the profit or loss is recognised and is calculated as the difference between: the sum of the fair value of the received consideration and the fair value of any retained participation, and the previous recorded value of assets (including goodwill) and liabilities of the subsidiary and any non-controlling participation. All amounts related to the subsidiary, previously recognised through other comprehensive income are recorded as if the Group had directly disposed the assets or liabilities related to it (i.e., reclassified into profit or loss or transferred to another equity category). The fair value of the retained investment in the previous subsidiary on the date when control is lost is considered as the fair value in the initial recognition for its subsequent measurement, either as an investment made in a financial instrument or an investment made in a joint venture or in an associate.

### 2.3 Classification of assets and liabilities into current and non-current

An asset is classified as current asset when it is mainly held for negotiation purposes or it is expected to be realized over a term not exceeding one year, after the period being reported or it is cash and cash equivalents that is not subject to restrictions for exchange or use in the cancellation of a liability over a term not to exceed one year after the period being reported. All other assets are classified as non-current assets.

A liability is classified as current liability when it is mainly held for negotiation purposes or when it is expected to be settled over a term not exceeding one year after the period being reported, or when the Group does not have an unconditional right to postpone its settlement for at least one year after the period being reported. All other liabilities are classified as non-current liabilities.

All derivative instruments for which the hedging accounting does not apply are classified as current or non-current, or are divided into current and non-current portions, based upon assessment of facts and circumstances (i.e., the underlying contractual cash flows):

- When the Group keeps a derivative, for which the hedging accounting is not applied, during a term exceeding twelve (12) months as from the presentation date, the derivative is classified as non-current (or divided into current and non-current portions) for it to correspond with the classification of the underlying item.
- Derivative instruments that are designated as hedging instruments and that are effective, are classified coherently with the classification of the underlying hedged item. The derivative instrument is divided into a current portion and another non-current only if such allocation can be made in a reliable manner.

#### 2.4 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position and in the statement of cash flows include the money in cash and banks and the high-liquidity investments, easily convertible in a determined amount of cash and subject to a non-significant risk of changes in their value, with maturity of three months or less from their acquisition date. Callable bank overdrafts that are an integral part of the cash management of the Group, represent a cash and cash equivalents component in the statement of cash flows.

#### 2.5 Business Combinations

Business combinations are recorded by the acquisition method. The acquisition cost is measured as the addition of the consideration transferred measured on the acquisition date at fair value and the amount of minority interest in the acquired entity. For each business combination, the Group decides whether the non-controlling interests in the acquired entity should be measured at their fair value or for the proportional part of the identifiable net assets of the acquired entity. All costs related to the acquisition are recognised as expenses when incurred and are included in administrative expenses.

Identifiable acquired assets and assumed liabilities are recognised at fair value on the acquisition date, except that:

- Deferred tax assets or liabilities and assets or liabilities related to employee benefit arrangements shall be recognised and measured in conformity with IAS 12 Income taxes adopted in Colombia and IAS 19 Employee Benefits adopted in Colombia, respectively.
- Liabilities or equity instruments related to payment arrangement based on shares of the acquired entity or payment arrangement based on the Group's shares made as replacement of the arrangements with payment based on shares of the acquired entity are measured in conformity with IFRS 2 Share-based payment at the date of acquisition.
- The assets (or group of assets for disposal) that are classified as held for sale in conformity with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations are measured in conformity with such Standard.

When EPM Group acquires a business, the financial assets acquired and liabilities assumed for the classification and appropriate designation in conformity with contractual terms, the economic circumstances, and the pertinent conditions on the acquisition date are measured. This includes the separation of implicit derivatives in contracts hosted by the acquired entity.

The Group recognises an intangible asset acquired in a business combination, regardless of goodwill, provided that such intangible asset meets the recognition criteria, is identifiable, or arises from contractual and legal rights; it measures the value of a reacquired right recognised as an intangible asset



based on the remaining contractual term of the related contract, regardless of whether the market participants would consider potential contractual renewals to determine the fair value.

If a business combination is carried by stages, any prior participation is reevaluated as of their acquisition date at fair value and any resulting profit or loss is recognised. The accounting treatment of what is recorded in the Other comprehensive income (OCI), at the moment of the new purchase, i.e., the amounts resulting from the previous interest in the acquired entity as of the acquisition date that had been previously recognised in other comprehensive income, are reclassified into the profit or loss for the period, provided that such treatment were appropriate in case such interest were sold.

If the initial recording of a business combination is not finalized at the end of the presentation period of the financial statements when the combination takes place, the Group reports the provisional amounts of the items for which recording is incomplete. During the measurement period, the acquiring entity recognised adjustments to the provisional amounts or recognises additional assets or liabilities necessary to reflect the new information obtained on facts and circumstances that existed on the acquisition date and, had been known, would have affected the measurement of the amounts recognised on that date.

The transferred consideration is measured at fair value, on the acquisition date, of the delivered assets, the incurred in or assumed liabilities and the equity instruments issued by the Group, including any contingent consideration, to gain control of the acquired entity.

Goodwill is measured as the excess of the consideration amount transferred, the value of any non-controlling interest, and whenever applicable, the fair value of any interest previously maintained in the acquired entity, over the net value of the assets acquired, liabilities and contingent liabilities assumed on the acquisition date. The resulting profit or loss on the measurement of the participation previously maintained is recognised in the profit or loss for the period or in the other comprehensive income. When the transferred consideration is lower than the fair value of the net assets of the acquired entity, the corresponding gain is recognised in the results for the period, on the acquisition date.

Any contingent consideration from a business combination is classified as asset, liability or equity and is recognised at fair value on the acquisition date and is included as part of the consideration transferred in a business combination. Changes to fair value after the measurement period of a contingent consideration, classified as financial asset or liability, are recognised in the profit or loss for the period, or in the case of concrete liabilities designated at fair value through changes in profit and loss, the amount of change in fair value that is attributable to changes in the credit risk of the liability are recognised in the other comprehensive income; it will not be remeasured when classified as equity and its subsequent settlement is recognised within equity. If the consideration does not classify as a financial liability it is measured in conformity with the applicable IFRS adopted in Colombia: an asset or liability is remeasured on its reporting date in conformity with IFRS 9 Financial instruments or IAS 37 Provisions, contingent liabilities and contingent assets whenever appropriate.

The accounting policy established to record changes at fair value of the contingent consideration during the measurement period is as follows: all changes at fair value of the contingent consideration that classify as measurement period adjustments, are retrospectively adjusted, with the corresponding adjustments against goodwill. The measurement period adjustments are adjustments that arise from the additional information obtained during the “measurement period” (which may not exceed one year as from the acquisition date) on facts and circumstances that existed on the acquisition date.

Goodwill acquired in a business combination is assigned, on the acquisition date, to the Cash Generating Units (CGU) of the Group expected to benefit from the combination, regardless of whether other assets or liabilities of the acquired entity are assigned to those units. Goodwill that arises from a business acquisition is recorded at cost on the acquisition date less the accumulated impairment losses, if any.

For impairment assessment purposes, goodwill is assigned to each CGU (or groups of CGUs) of the Group that expects benefit from the synergies of that combination.

CGUs that are assigned the goodwill are subject to annual impairment assessments, or with higher frequencies if there is indication that the unit may have suffered impairments. If the recoverable amount of the CGU is less than the carrying amount of the unit, the impairment loss is assigned first in order to reduce the carrying amount of goodwill assigned to the unit and then to the other assets of the unit, proportionately, based on the carrying amount of each asset in the unit. Any impairment loss for goodwill

is directly recognised in profits or losses. The impairment loss recognised for goodwill purposes cannot be reverted in the following period.

When goodwill is part of a CGU and a portion of the operation within that unit is sold, goodwill associated to the operation sold is included in the recorded value of the transaction when determining the gain or loss for the disposal of the operation. Derecognised goodwill is determined based on the sold portion of the operation, which is the ratio between the carrying value of the sold operation and the carrying value of the CGU.

If the initial recognition of a business combination is incomplete at the end of the accounting period when the combination takes place, the Group discloses the provisional values of the items with incomplete recording. These provisional values are adjusted during the measurement period and additional assets and liabilities are recognised, to reflect the new information obtained on facts and circumstances that existed on the date of acquisition that would have affected the values recognised on that date.

Business combinations under common control are recorded using the pooling-of-interest method as a reference. Under this method, assets and liabilities involved in the transaction are reflected at the same values used in the consolidation of the financial statements of the controlling entity of the companies under common control, any difference between the paid amount and the recorded value of the assets acquired and transferred liabilities is recognised as an equity transaction; revenue, costs and expenses of the combined companies (after Elimination of Inter-Segment Transactions) are combined from the beginning of the period in which the combination occurs until the date the combination of entities under common control takes place.

## 2.6 Investments in associates and joint ventures

An associate is an entity on which the Group has significant influence over the financial and operation policy decisions, without getting to have their control or joint control.

A joint venture is an arrangement in which the Group has joint control, under which the Group has rights over the net assets of the arrangement, rather than rights over its assets and obligations for its liabilities.

On the acquisition date, the surplus of the acquisition cost over the share of the net fair value of the identifiable assets acquired, liabilities and contingent liabilities assumed of the subsidiary is recognised as goodwill. Goodwill is included in the recorded value of the investment and is neither amortized nor individually subject to value impairment testing.

Investment in associates and joint ventures is measured in the consolidated financial statements by the Equity Method, except if the investment or a portion thereof is classified as held for sale, in which case it is accounted for in accordance with IFRS 5 Non-current assets held for sale and discontinued operations. Through this accounting methodology, the investment is initially recorded at cost and is later adjusted in terms of the changes experienced, after acquisition, by the portion of the net assets of the entity that corresponds to the investor. The profit or loss for the period for the Group includes its participation in the profit for the period of the investee and the other comprehensive income includes its participation in the other comprehensive income of the investee. When there are variations in the percentage of ownership in the subsidiary that do not imply a loss of control, the effect of these changes is recognised directly in equity. When ownership of the Group in the loss of an associate or joint venture exceeds ownership of the Group thereon (which includes any long-term ownership that, in substance, forms part of the net investment of the Group in the associate or joint venture), the Group ceases to recognise its ownership in future losses. Additional losses are recognised provided that the Group has contracted some legal or implied obligation or has made payments in the name of the associate or joint venture. When the associate or joint venture subsequently makes a profit, the company resumes recognition of its ownership therein only after its share in the aforementioned profit equals the share of unrecognised losses.

Investments in associates and joint ventures are accounted for using the equity method from the date on which the investee becomes an associate or joint venture.

All dividends received from the associate or joint venture are recognised as a reduction in the value of the investment when the right of the company to receive payment is established.

The Group periodically analyses the existence of impairment indicators and if necessary, recognises losses for impairment in the investment of the associate or joint venture. Impairment losses are recognised through profit or loss for the period and are calculated as the difference between the recoverable value of the associate or joint venture, the latter being the higher between the value in use and its fair value less the necessary costs for its sale, and its recorded value.

When significant influence over the associate or the joint control over the joint venture is lost, the Group measures and recognises any residual investment that may keep in it its fair value. The difference between the recorded value of the associate or joint venture and the fair value of the retained residual investment, with the value resulting from its sale, is recognised in the profit or loss for the period.

The Group discontinues the use of the Equity Method from the date on which the investment ceases to be an associate or joint venture, or the date on which the investment is classified as held for sale. Additionally, the Group records all amounts previously recognised in other comprehensive income with relation to that associate or joint venture on the same basis that would have been required if said associate or joint venture had directly sold the financial assets or liabilities. Therefore, if a profit or loss previously recognised in other comprehensive income by the associate or joint venture had been reclassified into profits or losses at the moment of the sale of the related assets or liabilities, the Group would reclassify the profit or loss from equity into profits or losses (as a reclassification adjustment) upon discontinuation of the usage of the Equity Method.

## 2.7 Joint operations

Is a joint arrangement whereby the parties that have joint control of the arrangement have the right to the assets and obligations related to the liabilities, related to the arrangement.

In joint operations the Group recognises its share as follows: its assets, including its share in the assets jointly held; its liabilities, including its share in the liabilities jointly incurred in; its income from the sale of its share in the product that arises from the joint operation; its share in income from the sale of the product that is made by the joint operation; and its expenses, including its share in the jointly incurred in expenses. The Group records the assets, liabilities, income, and expenses related to its ownership in a joint operation according to the guidelines applicable in particular to the assets, liabilities, income and expenses.

## 2.8 Functional and foreign Currency

The financial statements of the Group are presented in Colombian pesos, the functional and presentation currency of the holding.

Transactions in foreign currency are initially recorded at the exchange rates of the functional currency in force and effect on the transaction date. Subsequently, the foreign-currency denominated monetary assets and liabilities are translated using the exchange rate of the functional currency, in force and effect as at the period's closing date, non-monetary items that are measured at their fair value are translated using the exchange rates as of the date when their fair value is determined and the non-monetary items that are measured at historic cost are translated using the exchange rates in force and effect on the date of the original transactions.

All exchange differences are recognised in profit or loss, except for amendments arising from capitalizable interest costs and those arising from loans in foreign currency to the extent that they are considered as adjustments to interest costs.

For the presentation of the consolidated financial statements of the Group, the assets and liabilities of the businesses overseas, including goodwill and any adjustment to the fair value of the assets and liabilities that arose from the acquisition, are translated into Colombian pesos using the exchange rate in force and effect as of the closing date of the period being reported. Income, costs and expenses and cash flows are translated using the average exchange rates of the period.

Foreign exchange differences that arise from the conversion of businesses overseas are recognised in other comprehensive income, as well as the exchange differences of the long-term receivables or payables that are part of the net investment made abroad. In the disposition of foreign business, the item

of other comprehensive income that relates to the foreign business is recognised through profit or loss for the period.

Adjustments corresponding to goodwill and fair value over identifiable assets acquired and liabilities assumed that are generated in the acquisition of a foreign business are considered as assets and liabilities of such transaction and are translated using the exchange rate in force and effect at the end of each period being reported. Any foreign exchange difference that may arise shall be recognised in other comprehensive income.

Additionally, regarding the partial disposition of a subsidiary (which includes a business overseas), the entity will again attribute the proportional part of the accumulated amount of the exchange differences to the non-controlling interests, and they are not recognised in profit or loss. In any other partial disposition (i.e., partial disposition of associates of joint agreements that do not involve the loss of significant influence and joint control by the Group), the entity shall reclassify into profit or loss only the proportional part of the accumulated amount for foreign exchange differences.

## 2.9 Revenue

Revenue basically corresponds to the result of the Group's main activity, which is the rendering of public home utilities of electric power, natural gas, water supply and sewage, and is recognised when the service is rendered or at the time of the delivery of the goods, to the extent that the Group's performance obligations are met. When the service has been provided and not invoiced, revenue is recognised as an estimate. Revenue is measured at the value of the consideration received or receivable, excluding taxes and other obligations. Discounts, compensations for quality of service and financial components granted are recorded as adjustments to revenue. The financing component is only recognised if the contract with customers has a duration longer than one year.

The most representative revenue from the electric power business in Colombia are the following:

**Reliability charge:** remuneration paid to a generating agent for the availability of generation assets with the declared characteristics and parameters for the calculation of the steady power for reliability charge (ENFICC, for its Spanish initials), which guarantees compliance with the Steady Power Obligation (OEF, for its Spanish initials) assigned in auction for the assignment of steady power obligations or the mechanism replacing it.

**Long-term contracts:** a contract for the sale of electric energy between traders and generators which is settled in the energy exchange market, under this modality of energy contract generators and traders freely agree on quantities and prices for the purchase and sale of electric energy for periods longer than one day. For long-term power purchase contracts, with price lower than that of the market and whose intention is not to use the energy purchased in the operation but to resell it in a market to obtain profit, it is considered that it does not comply with the Exception for own use.

**Secondary market of steady power or secondary market:** A bilateral market in which generators negotiate among themselves a back-up contract to ensure, for a given period, partial or total compliance with the steady power obligations acquired by one of them.

**Non-regulated market energy sales:** Is the electric energy sold in the market to customers whose maximum demand exceeds a value in MW (megawatts) or a monthly minimum energy consumption in MWh (megawatt-hour), defined by the regulatory body, by legalized installation, from which it does not use public networks of electric energy transport and uses it in the same property or in contiguous estates. Such electricity purchases are made at freely agreed prices between buyer and seller.

**Regulated market energy sales:** Is the electric energy sold to customers whose monthly consumption is less than a predetermined value and is not entitled to negotiate the price paid for it, since both concepts are regulated; usually uses power for its own consumption or as an input for its manufacturing processes and not to undertake marketing activities with it.

**Automatic generation regulation (AGC):** is a system for the control of the secondary regulation, used to accompany the variations of load through electricity generation, to control the frequency within a range of operation and the programmed exchanges. The AGC can be programmed in centralized, decentralized or hierarchical mode.

Steady Power (or Firm Energy): is the incremental contribution of a company's generation plants to the interconnected system, which is carried out with a 95% reliability and is calculated based on a methodology approved by the commission and the operational planning models used in the national interconnected system.

Natural gas revenue comes from the distribution and sale of natural gas to the regulated and non-regulated markets.

In the water business, revenue comes from the provision of water and sewage utilities.

Each other countries where the Group renders services, including energy, have their own regulation, which is described for each country in Legal and regulatory framework of note 1.

At the time of income recognition, the Group assesses, based on specific criteria, whether it acts as a principal or as a commission agent and thus determines whether gross or net income must be recognised for marketing activities.

### 2.10 Contracts with Customers

When contract results can be reliably measured, the Group recognises revenue and expenses associated to contracts with customers, measuring the advance level in the fulfilment of the performance requirements using the resource method, as a function of the ratio represented by the costs earned by the work conducted to that date and the estimated total costs up to its completion.

The incurred cost includes the costs, including borrowing costs directly related to the contract, until the work has been completed. Administrative costs are recognised through profit or loss for the period.

Incremental costs incurred by the Group to obtain or fulfill contracts with customers are recognised as an asset in the statement of financial position within the Other assets item and are amortized on a linear basis over the life of the contract, provided that the term of the contract is greater than one year. Otherwise, the Group recognises it directly in the profit or loss for the period.

Payments received from customers before the corresponding work has been performed, are recognised as a liability in the Statement of financial position as other liabilities.

The difference between revenue recognised in the statement of income for the period and the billing is presented as asset in the statement of financial position named Trade and other receivables, or as liability named Other liabilities.

For the initial recognition of a receivable from a contract with a customer, the difference between the measurement of the receivable and the value of the corresponding revenue is presented as an expense in the statement of comprehensive income called Impairment of receivables.

### 2.11 Written premiums and acquisition cost

Written premiums comprise the total premiums receivable for the period of coverage. Income from written premiums is recognised proportionally, throughout the duration of the coverage; income from these premiums is reduced by cancellations and nullifications; for cancellations, it corresponds to the amount of the premium accrued up to the time of cancellation due to expiration of the payment deadline.

Income from premiums accepted in reinsurance is incurred at the time of receiving the corresponding account statements of the reinsurers.

Unearned premiums are calculated separately for each individual policy to cover the remaining part of the written premiums.

### 2.12 Deferred reinsurance commission Income

In the Group, deferred commissions are recorded from undertaking its reinsurance activity, where income collected from commissions is deferred to the reinsurers by the premium cessions made each month. The reinsurer pays the transferor a commission on the premiums it receives in order to offset the costs of capturing the business and maintaining the portfolio, the value of the commission is established as a percentage of the premium and will depend on the negotiation made.

### 2.13 Reinsurance

The Group considers reinsurance as a contractual relationship between an insurance company and a reinsurance company (reinsurer), in which the insurance company relinquishes, totally or partially, to the reinsurer, the risks assumed with its insureds.

Premiums corresponding to the ceded reinsurance are recorded according to the conditions of the reinsurance contracts and under the same criteria of the direct insurance contracts.

All receivables and payables generated in the relationship with the reinsurer are managed independently and are not subject to compensation.

### 2.14 Government grants

Government grants are recognised at fair value when there is reasonable certainty of the grants being collected and that all the conditions laid down shall be met. Grants that pretend to offset costs and expenses already incurred in, without subsequent related costs, are recognised through profit or loss for the period in which they become enforceable. When the grants relate to an asset, it is recorded as deferred income and is recognised through profit or loss for the period on a systematic basis throughout the estimated lifespan of the corresponding asset. The benefit of a government loan at an interest rate below market is treated as a government grant, measured as the difference between the amounts received and the fair value of the loan based upon the market interest rate.

### 2.15 Taxes

The fiscal structure of each country where the Group companies are located, the regulatory frameworks and the plurality of operations that the companies undertake make each enterprise a taxable entity, i.e. a payer of taxes, rates and contributions on a national and territorial basis. These are liabilities generated from the central government, the states/departments, municipal entities and other active subjects, once the conditions foreseen in the corresponding acts and laws issued are met.

Amongst the most relevant taxes the income tax and the value-added tax are detailed.

#### Income Tax

- **Current:** current income tax assets and liabilities for the period are measured by the amounts that are expected to be recovered or paid to the fiscal authorities. The income tax expense is recognised through current tax according to the cleaning made between the fiscal income and the recorded profit or loss affected by the income tax rate of the current year and pursuant to the provisions of the tax rules of the country. Tax rates and rules used for computing those values are those enacted or substantially approved at the end of the period being reported, in the countries where the Group operates and generates taxable profits.

Tax income differs from profit for the period as income and expense items imposable or deductible in other years, and items that shall not be taxable or deductible in the future.

Current Income tax assets and liabilities are also offset if they relate to the same tax authority and if there is the intention to settle them for the net value or to realize the asset and settle the liability simultaneously.

- **Deferred:** deferred income tax is recognised using the balance sheet method calculated on the temporary differences between the fiscal bases of the assets and liabilities and their recorded values. Deferred tax liabilities are generally recognised for all imposable temporary differences, while deferred tax assets are recognised for all deductible temporary differences and for the future offsetting of fiscal credits and unused fiscal losses to the extent that it is probable the availability of future tax gains against which they can be realized. Deferred taxes are not discounted.

Deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition of an asset or a liability in a transaction that is not a business combination and that, at the moment of the transaction, did not affect neither the book gain nor the tax income or loss; and for deferred tax liabilities, whenever it arises from the initial recognition of goodwill.

Deferred tax liabilities related to investments in subsidiaries, associates and participation in joint ventures, are not recognised when the revision opportunity of temporary differences can be controlled, and it is probable that said differences will not be reversed in the near future. Deferred tax assets related to investments in subsidiaries, associates and participation in joint ventures, shall be recognised only if a reversal in temporary differences for the near future is probable, and that availability of future taxable profit against which those deductible differences will be imputed is also probable.

The recorded value of deferred tax assets is reviewed in each presentation date and is reduced to the extent that enough taxable profits are available for use as a whole or in part of the deferred tax asset is no longer probable. Deferred tax assets that are not recognised are reassessed on each presentation date and are recognised to the extent that it is probable that future taxable gains profits allow their recovery.

Deferred tax assets and liabilities are measured at the fiscal rates expected to be applied in the period when the asset is realized, or the liability is settled, based on tax rates and rules that were approved on the presentation date, or which approval procedure is close to completion for such date. Measurement of deferred tax assets and liabilities will reflect the tax consequences to be derived from the way in which the entity expects, at the end of the period being reported, to recover or settle the recorded value of its assets and liabilities.

Deferred tax assets and liabilities must be presented as non-current.

Deferred tax assets and liabilities are offset if there is a legally enforceable right for it and if they are related to the same tax authority.

Deferred tax is recognised through profit or loss for the period, except that related to items recognised outside profit or loss; in the latter case it will be presented in the other comprehensive income or directly in equity.

With the purpose of measuring deferred tax assets and liabilities for investment properties measured using the fair value model, the recorded value of those properties is presumed to be fully recovered through their sale, unless that presumption is challenged. The presumption is challenged when the investment property is depreciable and is kept within a business model which object is to consume, substantially, all the economic benefits that are generated by the investment property through time, and not through sale. Management reviewed the Group's investment property portfolio and concluded that none of the Group's investment properties is kept under a business model which objective is to consume, substantially, all economic benefits generated by investment properties over time rather than through the sale. Therefore, management have determined that the presumption of "sale" established in the modifications to IAS 12 Income tax, is applicable.

Whenever current tax or deferred tax arises from the initial recording of business combination, the tax effect is considered within the recording of the business combination.

#### Value-Added Tax - VAT

The companies of the Group located in Colombia, which sell tangible movable goods and some real estate; sell or transfer rights on intangibles associated with industrial property; provide services in Colombia or from abroad; import goods; operate gambling services or sell tickets to gambling games, are responsible for the common regime of this tax. The tax generated is recognised as a value to be paid to the tax administration, from which the tax paid on the purchase or acquisition of inputs is discounted; but when the company generates both income excluded from VAT and income that is exempt and taxed, it must make an apportionment of the tax paid to determine what percentage of this is to be discounted.

Currently, in Colombia the provision of energy, water, sewage and domestic natural gas utilities are excluded from this tax; therefore, the VAT paid on purchases is part of the cost.

The general rate for this tax in Colombia is 19% and exists a differential rate of 5% and some goods and services exempt (0%).

In Panama the Tax on the Transfer of Material Goods and Services (ITBMS, for its Spanish initials), is generated by the transfer of movable tangible goods and the rendering of services in Panama. The general rate of the tax is 7%, but there are also rates of 10% and 15%.

In Guatemala, the sale of personal property, the rendering of services, imports, leasing of personal and real estate property, dation in payment of personal and real estate property, self-consumption of goods and other operations with real estate property, such as the first sale of those, generate Value Added Tax. The general rate is 12%; but it is reduced to 5% in the sales of small taxpayers, there are exempt goods with 0% rate and in the sale of used vehicles a fixed amount is charged. The tax period is monthly, and its effect is translational to the final consumer.

The value added tax in El Salvador has a general rate of 13% and there are exempted goods (0% rate); the tax is levied on the transfer of tangible personal property and the provision of services; the import of services; the import and export of tangible personal property; and the self-consumption of inventories or the transfer of tangible property for promotional purposes. However, the transfer of fixed assets that have been used for four years or more is not subject to the tax.

In Mexico, the Value Added Tax is caused in its territory by acts or activities such as sale of goods, provision of independent services, temporary use or enjoyment of goods and import of goods and services. The general rate is 16%; however, there are acts that are taxed at 0%, exempt and not subject to the tax.

Value added tax (VAT) in Chile is levied on sales and other transfer operations of tangible personal property and real estate, except land; on the rendering of services, provided or used in the country; on the import of goods; on withdrawals of inventory, contributions in kind and leasing of personal property; and on the recurrent or habitual sale of real estate, but land is exempt, so that it must be subtracted from the taxable base for VAT purposes. The general tax rate is 19%.

## 2.16 Assets classified as held for sale and discontinued operations

Non-current assets and groups of assets for disposition are classified as held for sale if their recorded value will be recovered through a sale transaction rather than through continuing use. These assets or groups of assets are presented separately as current assets and liabilities in the statement of financial position at the lower between the recorded value or the fair value less selling costs and are not depreciated or amortized from the date of classification.

This condition is met if the asset or group of assets is available, in its current condition, for immediate sale, the sale transaction is highly probable and is expected to be completed within one year from the date of classification.

When the Group is committed to a plan of sale that involves the sale of an investment, or a portion of an investment, in an associate or joint venture, the investment or the portion of the investment to be sold is classified as held for sale when the criteria described above are met, and the Group discontinues the use of the equity method in relation to the portion that is classified as held for sale. Any retained portion of an investment in an associate or joint venture that is not classified as held for sale continues to be accounted using the equity method. The Group discontinues the use of the equity method at the time of sale when the sale results in the Group losing significant influence over the associate or joint Venture.

After the sale is made, the Group accounts for any retained interest in the associate or joint venture in accordance with IFRS 9 Financial Instruments, unless the retained interest is still an associate or joint venture, in which case the Group uses the equity method.

Income, costs and expenses from a discontinued operation are presented separately from those from continuing operations, in a single item after income tax, in the consolidated statement of comprehensive income for the current period and the comparative period of the previous year, even when the Group retains a non-controlling interest in the company that was once a subsidiary after the sale.

## 2.17 Property, Plant and Equipment

Property, plant and equipment are measured at cost, net of accrued depreciation and accrued impairment losses, if any. The cost includes the acquisition price; the costs directly related to putting the asset at the necessary place and conditions to operate in the way foreseen by the Group, borrowing



costs for projects under construction that take a substantial period to complete, if the recognition requirements are met, and the present value of the expected cost of decommissioning the asset after use, if the recognition criteria for a provision are met.

Constructions in progress are measured at cost less any impairment loss recognised and includes indispensable expenditure directly related to the construction of the asset, such as professional fees, work supervision, civil works and, in the case of those assets qualified, the borrowing costs are capitalized. Said constructions in progress are classified in the proper categories of property, plant and equipment at the time of their completion and when they are ready to use. The depreciation of these assets starts when they are ready to use in accordance with the same basis as in the case of other elements of property, plant and equipment.

The Group capitalizes as greater value of the assets, additions or improvements made thereof, provided that any of the following conditions is met: a) They increase their lifespan, b) They increase their productive capacity and operating efficiency thereof and c) They reduce costs to the Group. All other repair and maintenance costs are recognised through the statement of comprehensive income as incurred.

Inventory of spare parts for specific projects, which are expected to have no turnover in one year and meet the criteria to be capitalized, known as replacement assets, are presented in the other property, plant and equipment. They depreciate considering the permanence time in the storage and the technical lifespan of the asset once its use begins.

Depreciation begins when the asset is available for use and is calculated in a straight-line basis throughout the estimated lifespan of the asset as follows:

Plants, pipelines and tunnels	
Civil work	50 to 100 years
Equipment	10 to 100 years
Networks, lines and cables	
Electric transmission network	30 to 40 years
Electric distribution network	30 to 40 years
Water network	40 to 80 years
Sewerage network	30 to 80 years
Gas network	60 to 80 years
Buildings	50 to 100 years
Communication and computer equipment	5 to 40 years
Machinery and equipment	7 to 40 years
Furniture, fixtures and office equipment	10 to 15 years
Land <sup>(1)</sup>	10 to 20 years

<sup>(1)</sup> Corresponds to the affiliate Emvarias that depreciates the land on which it performs the final disposal activity due to the detriment it suffers with the disposal of solid waste, environmental degradation and period of recovery that goes beyond 20 years.

Lifespans are determined considering, among others, the manufacturer's technical specifications, the knowledge of the technicians that operate and maintain the assets, the geographic location and the conditions to which it is exposed.

The Group calculates the depreciation by components, which implies depreciating individually the parts of the asset that should have different lifespans. The depreciation method used is the straight-line; the residual value calculated for the assets is not part of the depreciable amount.

A component of property, plant and equipment and any significant part initially recognised, is derecognised once disposed of or when it is not expected to obtain future economic benefits from its use

or disposition. Profit or loss at the moment of derecognising the asset, calculated as the difference between the net value of the disposition and the recorded value of the asset, is included in the statement of comprehensive income.

Assets temporarily classified as idle or out-of-service continue to depreciate and are tested for impairment within the CGU to which they are assigned.

Depreciation methods, useful lives and residual values, are reviewed at each reporting date and adjusted if appropriate.

## 2.18 Leases

Determination of whether an arrangement constitutes or contains a lease is based upon the essence of the arrangement at its initial date, if compliance with the agreement depends upon the use of a specific asset and if it transfers the right-of-use of said asset for a timespan in exchange for a consideration.

At the initial date of the lease contract, the Group acting as lessee recognises an asset for right-of-use and a lease liability, except for leases with a duration of less than 12 months or those which value at new of the underlying asset is less than 15 (fifteen) Current Monthly Minimum Legal Wage (SMMLV).

The Group acting as lessor classifies the lease as operating or finance. A lease is classified as a finance lease when the risks and rewards incidental to ownership of the leased asset are substantially transferred to the lessee; otherwise, it is classified as an operating lease.

### EPM Group as a Lessee

Assets delivered under finance lease are recognised and presented as assets in the statement of financial position at the beginning of the lease, for the fair value of the leased asset or the present value of the minimum lease payments, whichever is lower. The corresponding liability is included in the statement of financial position as a finance lease liability.

Right-of-use assets are recognised and presented as assets in the statement of financial position at the beginning of the lease, at cost. The corresponding liability is included in the statement of financial position as a lease liability.

Right-of-use assets are amortized over the lifespan of the asset using the straight-line method, if ownership of the underlying asset is transferred at the end of the contract or if a purchase option is exercised. If ownership of the underlying asset is not transferred at the end of the lease term or if no purchase option on the asset is exercised, the asset is depreciated only up to the end of its lifespan or the lease term, whichever comes first.

Lease payments are divided between financial expenses and debt amortization. Finance charges are recognised through profit or loss for the period unless directly attributable to qualifying assets, in which case they are capitalized according to the Group's policy for borrowing costs. Variable lease payments, which depend on an index or rate, are included in the valuation of the lease liability. Leases with a duration of less than 12 months or those whose value at new of the underlying asset is less than 15 (fifteen) SMMLV are recognised as operating leases in the profit or loss for the period over the term of the lease.

### EPM Group as a Lessor

Assets leased under finance leases are not presented as property, plant and equipment since the risks associated with the property have been transferred to the lessee, instead a receivable is recognised for an amount equal to the net investment in the lease.

When a lease contract includes land and building components together, the Group assesses the classification of each component separately as a finance or operating lease. If the lease payments cannot be allocated reliably between these two components, the entire lease is classified as a finance lease, unless it is clear that both components are operating leases, in which case the entire lease is classified as operating lease.

Income from variable leases, dependent on an index or rate, are included in the valuation of the net investment at lease.

Initial direct costs such as commissions, fees, legal, and internal costs that are incremental and directly attributable to negotiating and arranging the lease are included in the measurement of the net investment in the lease at inception and are reflected in the calculation of the implicit interest rate.

### 2.19 Borrowing Costs

Borrowing costs that are directly attributable to the acquisition, construction or production of an asset that necessarily takes substantial time to be prepared for their destined use or sale, are capitalized as part of the cost of the respective asset until the asset is ready for their intended use. Income from the temporary investment in specific loans pending to be consumed in qualified assets is deducted from the borrowing costs that qualify for their capitalization. All other borrowing costs are recorded as expenses in the period when incurred. Borrowing costs consists of interest and other costs incurred in by the Group regarding to the loan of funds. To the extent that the funds derive from generic loans and are used to obtain a qualified asset, the value of the costs susceptible of capitalization is determined by applying a capitalization rate (weighted average cost of loans applicable to general loans outstanding during the period) to expenditure made in that asset.

Capitalization of borrowing costs begins on the date when the following conditions are met:

- Expenditure made in relation to the asset.
- Borrowing costs are incurred, and
- Necessary activities to prepare the asset for the intended use or for sale are performed.

Capitalization of borrowing costs is suspended during periods in which the development of activities of a qualifying asset for periods of more than one year is interrupted. However, the capitalization of borrowing costs over a period is not interrupted if relevant technical or administrative actions are being undertaken. Neither is capitalization of borrowing costs suspended when a temporary delay is required as part of the process of preparing an asset qualified for its use or sale.

Capitalization of borrowing costs is terminated when all activities necessary to prepare the asset for its use or sale have been substantially completed. When the asset has components that can be used separately while construction continues, the capitalization of borrowing costs on such components is stopped.

### 2.20 Investment property

Investment property, are lands or buildings or part of a building or both, held to obtain rentals or capital revaluations (including the investment property under construction for said purposes). Investment properties are initially measured at cost, including transaction costs. The recorded value includes the replacement or substitution cost of one part of an existing investment property at the moment when the cost is incurred in, if all criteria for recognition are met and they exclude the daily maintenance costs of the investment property.

After initial recognition, investment properties are measured at fair value reflected by market conditions on the presentation date. All profit or loss arising from changes in the fair values of the investment properties are included in the statement of comprehensive income in profit or loss when they arise.

Investment properties are derecognised, either at the moment of disposition, or when they are retired from use on a permanent basis, and no future economic benefit is expected. The difference between the net value of disposition and the recorded value of the asset is recognised in the statement of comprehensive income in profit or loss in the period when it was derecognised.

Transfers to or from investment property are conducted only when there is a change in their use. In the case of a transfer from an investment property to property, plant and equipment, the cost considered for its subsequent posting is the fair value on the date of use change. If a property, plant and equipment become an investment property, it shall be recorded at its fair value, the difference between the fair value and the recorded value shall be recorded as revaluation surplus applying the IAS 16 Property, plant and equipment.

## 2.21 Intangible Assets

Intangible assets acquired separately are measured initially at their cost. The cost of the intangible assets acquired in business combinations is their fair value at the acquisition date. After their initial recognition, intangible assets are recorded at cost less any accumulated amortization and any accumulated loss for impairment. Intangible assets generated internally are capitalized provided that they meet the criteria for their recognition as asset and the generation of the asset must be classified as: research phase and development phase; if it is not possible to distinguish the research phase from the development phase, expenditure must be reflected in the statement of comprehensive income in the period in which they incurred.

Lifespans of intangible assets are determined as finite or indefinite. Intangibles assets with finite lifespans are amortized throughout their economic lifespan in a straight-line and assessed to determine if they presented any impairment, whenever there are indications that the intangible asset may have suffered such impairment. The amortization period and the amortization method for an intangible asset with a finite lifespan are reviewed at least at the end of each year. Changes in the expected lifespan or in the expected pattern of consumption of the future economic benefits of the asset are recorded if the amortization period or method changes, as applicable, and are treated as changes in accounting estimates. The amortization expense of intangible assets with finite lifespans is recognised through profit or loss in the statement of comprehensive income in the expense category consistent with the function of the intangible asset.

Intangibles assets with indefinite lifespans are not amortized, but they are subject to annual tests to determine whether they suffer any impairment, either individually or at the cash-generating unit level (CGU). Assessment of the indefinite lifespan is revised on an annual basis to determine whether such indefinite lifespan continues to be valid. If that is not the case, the change of lifespan from indefinite to finite is made prospectively.

Lifespans of intangible assets are:

Concessions and similar rights	As contract effective term
Easements	Indefinite
Capitalized development expenses	Indefinite
Software and IT applications	Indefinite/ finite 3 to 5 years
Licenses	Indefinite/ finite 3 to 5 years
Rights	As contract effective term
Other intangible assets	Indefinite/ finite 7 to 15 years

An intangible asset is derecognised upon disposition, or whenever future economic benefits are not expected from their use or disposition. Arising profits or losses are measured as the difference between the value obtained in the disposition and the recorded value of the asset, and it is recognised through profit or loss in the statement of comprehensive income.

### Research and development costs

Research costs are recorded as expenses as incurred. Development outlays in an individual project are recognised as intangible assets whenever the Group can demonstrate:

- The technical feasibility of completing the intangible asset so that it is available for use or sale.
- Its intention of completing the asset and its capacity to use or sell the asset.
- How the asset will generate future economic benefits, considering, among others, the existence of a market for production that generates an intangible asset for the asset itself, or the profit of the asset for the entity.
- The availability of technical and financial resources to complete the asset and to use and sell it.

- The capacity of reliably measuring the expenditure during development.

In the statement of financial position, the development expenditure asset is recognised from the moment the element meets the aforementioned conditions for its recognition, and its cost less accrued amortization and the value impairment accrued losses are recorded.

When the development of an intangible asset related to an electricity generation project begins, costs are accumulated as constructions in progress.

Amortization of the asset starts when the development has been completed and the asset is available for use. It is depreciated throughout the period of the expected future economic benefit. During the development period the asset is subject to annual tests to determine whether it has experienced impairment of its value.

Research costs and development costs that do not qualify to capitalization are recorded as expenses through profit or loss in the statement of comprehensive income.

### Goodwill

Goodwill represents the difference between the cost of a business combination and the fair value at the moment of acquisition of the assets acquired, liabilities assumed, and contingent liabilities of the acquired party.

Goodwill is not depreciated, it is measured at cost less any value impairment accrued loss and is subject to annual impairment testing, or more frequently when impairment indicators exist. Impairment losses are recognised in profit or loss in the statement of comprehensive income.

For the Cash Generating Units (CGU), which have been assigned goodwill, impairment is assessed annually, which implies the calculation of the value at use of the CGUs to which it is assigned. The value at use requires determining the future cash flows that must arise from the CGUs and an appropriate discount rate to calculate the current value. When the actual future cash flows are less than expected, an impairment loss may arise.

## 2.22 Financial Instruments

A financial instrument is a contract that gives rise to a financial asset in one entity and simultaneously to a financial liability or equity instrument in another entity.

Financial assets and liabilities are recognised in the statement of financial position when the Group becomes a party according to the contractual conditions of the instrument.

### 2.22.1 Financial Assets

The Group recognises its financial assets at fair value at the outset. Transaction costs directly attributable to the financial asset are added to or deducted from its fair value if subsequently measured at amortized cost or fair value through other comprehensive income or are recognised immediately in the statement of comprehensive income if the assets are measured at fair value through profit or loss.

For subsequent measurement, financial assets are classified at amortized cost or fair value (through other comprehensive income or through profit and loss) depending on the Group's business model for managing the financial assets and the characteristics of the instrument's contractual cash flows.

- **Financial assets at fair value through profit or loss**

Financial assets at fair value through profit or loss are assets whose contractual cash flows are highly liquid. The Group classifies a financial asset in this category if it is acquired mainly for the purpose of being sold in the short term.

This includes investments made to optimize surplus liquidity, i.e. all those resources that are not immediately allocated to the development of the activities that constitute the company's corporate purpose. The investment of surplus liquidity is made under the criteria of transparency, security, liquidity and profitability, under the guidelines of adequate control and under market conditions

without speculative purposes (EPM General Management Decree 2015-DECGGL-2059 of February 6, 2015). Profit or losses arising from changes in fair value are included in the statement of comprehensive income under the heading of financial income or expense, in the period in which the aforementioned changes in fair value occur.

Dividend income is recognised when the Group's right to receive payment is established.

At the same time, the Group can irrevocably allocate a financial asset as measured at fair value through profit or loss.

– **Financial assets at fair value through other comprehensive income**

Debt instruments are classified as assets measured at fair value through other comprehensive income if they are held under a business model whose objective is achieved by obtaining the contractual cash flows and selling the instruments and the instrument also provides, on specific dates, cash flows that correspond solely to payments of principal and interest on the outstanding principal value.

Changes in the fair value of the investment are recorded in other comprehensive income, except for impairment losses or recoveries, interest income and foreign exchange gains and losses which are recognised in profit or loss for the period.

The Group has made an irrevocable decision to present subsequent changes in the fair value of certain investments in equity instruments that are not held for trading in other comprehensive income. Dividends from such investments are recognised in profit or loss when the right to receive payment is established.

On disposition of equity investments at fair value through other comprehensive income, the accumulated value of gains or losses is transferred directly to retained earnings and is not reclassified to profit or loss for the period.

– **Financial assets at amortized cost**

A financial asset is subsequently measured at amortized cost using the effective interest rate<sup>3</sup> if the asset is held within a business model whose objective is to maintain it in order to obtain the contractual cash flows and contractual terms of the asset that provide, on specific dates, cash flows that are solely payments of principal and interest on the outstanding principal value.

**Impairment of financial instruments**

At each reporting date, the Group recognises a correction in value for expected credit losses on financial assets measured at amortized cost or at fair value through changes in Other comprehensive income, including receivables from leases, contract assets or loan commitments and financial guarantee contracts to which the impairment requirements are applied over the lifespan of the asset.

Expected credit loss is estimated considering the probability that an impairment loss by uncollectability may or may not occur and is recognised as profit or loss in profit or loss in the Statement of comprehensive income, reducing the value of the financial asset. The Group assesses the credit risk of accounts receivable on a monthly basis at the time of presenting the reports in order to determine the value correction for expected credit loss on financial assets.

The Group assesses on a collective basis the expected losses for financial assets that are not individually relevant. When the collective assessment of expected losses is performed, receivables are gathered by similar credit risk characteristics, allowing identification of repayment capacity of the debtor, in accordance with the contractual terms of receivables.

<sup>3</sup> The effective interest rate method is a method of calculating the amortized cost of a financial asset and allocating income over the relevant period. The effective interest rate is the rate that exactly discounts future cash flows from a financial asset (including all fees, commissions and points paid or received that are an integral part of the effective interest rate, transaction costs and other premiums and discounts) over the expected life of the instrument, or if appropriate, a shorter period, to its carrying amount at initial recognition.

The Group determines that a customer's credit risk increases significantly when there is any default event in the financial agreements by the counterparty, or when information, be it internal or obtained from external sources indicates that debtor's payment unlikely, without considering held securities.

Default in agreements is generally measured according to the service contracts and rules for each subsidiary own country, however, there are agreements or individual contracts that indicate default immediately when a payment or obligation is not met.

The Group determines that a financial asset is impaired when there is a breach of financial covenants by the counterparty, or when information, be it internal or obtained from external sources, indicates payment by the debtor is unlikely, without considering held guarantees.

Credit risk is affected when there are changes in financial assets, the Group's policy to reassess the recognition of credit losses is: whenever the counterparty defaults in a financial agreement; or the information developed internally or obtained from external sources indicates that it is unlikely that the debtor will pay its creditors, in full, without considering held guarantees. The Group derecognises the financial asset when there is information indicating that the counterparty is in severe financial difficulties and there are no realistic prospects of recovery, for example, when the counterparty has been put into liquidation or has initiated bankruptcy proceedings or, in the case of receivables, when the amounts exceed two years past due, whichever occurs first.

Impaired financial assets may still be subject to collection execution activities under the recovery procedures of the Group, considering judicial collection when appropriate. Recoveries performed are recognised through profit for the period.

#### **Derecognition of Financial Assets**

A financial asset or part of it, is derecognised from the statement of financial position whenever it is sold, transferred, expires or the Group loses control on the contractual rights or on the cash flows of the instrument.

The Group derecognises a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, when the counterparty has been put into liquidation or has initiated bankruptcy proceedings or, in the case of receivables, when the amounts exceed two years past due, whichever is earlier.

If the Group does not transfer nor substantially retains all risks and advantages inherent to that property and continues to retain control of the transferred asset, the Group will recognise its share in the asset and the obligation associated for the amounts that it would have to pay. If the Group substantially retains all risks and advantages inherent to the ownership of a transferred financial asset, the Group will continue to recognise the financial asset and will also recognise a loan guaranteed as a collateral for the received income.

In the total derecognition of a financial asset measured at fair value through changes in profit or loss, the difference between the recorded value of the assets and the sum of the consideration received and to be received, is recognised through profit or loss in the Statement of comprehensive income. In case of financial assets measured at fair value with change in Other comprehensive income, the difference between the recorded value of the asset and the sum of the consideration received and to be received is recognised through profit or loss in the Statement of comprehensive income and the profit or loss that would have been recognised in the Other comprehensive income will be reclassified to accumulated income.

#### **Refinancing of loans**

When the contractual cash flows of a financial asset are renegotiated or otherwise modified, and the renegotiation or modification does not result in derecognition of that financial asset in accordance with IFRS 9 adopted in Colombia, the Group recalculates the gross recorded value of the financial asset and recognises a profit or loss due to modification in the profit or loss for the period. The gross recorded value of the financial asset is recalculated as the present value of the modified or renegotiated contractual cash flows that are discounted at the original effective interest rate of the financial asset (or effective interest rate adjusted for credit quality for financial assets with credit deterioration purchased or originated) or, when applicable, the revised effective interest rate. Any cost or commission incurred

adjusts the recorded value of the modified financial asset and is depreciated over the remaining term of the latter.

### 2.22.2 Financial liabilities

The Group recognises financial liabilities at their fair value at the outset. Transaction costs directly attributable to the acquisition or obtainment of the financial liability are deducted from its fair value if they are subsequently measured at amortized cost or are recognised through profit or loss if the liabilities are measured at fair value. Subsequently, financial liabilities are measured as follows:

- **Financial liabilities at fair value through profit or loss**, include liabilities held for trading, financial liabilities designated at fair value at the outset through profit or loss, and derivatives. Profit or loss on liabilities held for trading are recognised through profit or loss. At the outset, the Group allocated financial liabilities as at fair value through profit and loss.
- **Financial liabilities at amortized cost**, are measured using the effective interest rate. Profits and losses are recognised through profit and loss for the period.

#### Compound instruments

Financial instruments that contain both a liability and an equity component (compound financial instruments) are separately recognised and accounted for. Therefore, for the outset measurement the liability component is determined by the fair value of the future cash flows and the residual value is assigned to the equity component.

For subsequent measurement, the liability component is measured at amortized cost including the effect of depreciation costs, interests and dividends. The equity component retains the measurement of the initial recognition.

#### Financial guarantee contracts

The financial guarantee contracts issued by the Group are those contracts that require the making of a specific payment to reimburse the holder for the loss incurred when a specified debtor defaults their payment obligation, according to the conditions of a debt instrument. Financial guarantee contracts are initially recognised as a liability at fair value, adjusted by the transaction costs that are directly ascribable to the issuance of the guarantee. Subsequently, the liability is measured at: (i) the amount of the adjustment in value for the expected losses and (ii) the value initially recognised less, the recognised accumulated income.

#### Derecognition of financial liabilities

A financial liability or part of it is derecognised from the statement of financial position when the contractual obligation has been settled or has expired.

Whenever an existing financial liability is replaced by another coming from the same lender under substantially different conditions, or if the conditions of an existing liability are substantially modified, such exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability and the difference in the respective recorded values is recognised through profit and loss.

In the event changes are not substantial the Group recalculates the gross recorded value of the financial liability and recognises a profit or loss from changes in the profit or loss. The gross recorded value of the financial liability is recalculated as the current value of the modified or renegotiated contractual cash flows that are discounted at the original effective interest rate of the financial liability or, when applicable, the revised effective interest rate. Any cost or commission incurred adjusts the recorded value of the modified financial liability and is amortized over its remaining term.

### 2.22.3 Equity Instruments

An equity instrument consists of any contract showing a residual interest on an entity's assets, after deducting all its liabilities. Equity instruments issued by the Group's companies are recognised through income received, net of direct issuance costs.



Repurchase of the Group's companies own equity instruments is recognised and directly deducted in equity, which indicates that no profit or loss is recognised from the purchase, sale, issuance, or cancellation of the Group's companies own equity instruments.

#### 2.22.4 Derivative Financial Instruments

A financial derivative is an instrument which value varies in response to changes in a variable such as an interest rate, exchange rate, the price of a financial instrument, credit rating or index. This instrument does not require an initial investment or is inferior than other financial instruments with a similar response to changes in market conditions and is generally settled at a future date.

The Group uses derivative financial instruments, like Forward contracts, Future contracts, financial barbers (Swap contracts) and Option contracts to hedge several financial risks, mainly the interest rate, exchange rate and commodities price risks. Such derivative financial instruments are initially recognised at their fair values on the date when the derivative contract is entered into, and subsequently they are measured again at their fair value. Derivatives are recorded in the statement of financial position as financial assets when their fair value is positive, and as financial liabilities when their fair value is negative.

Commodity contracts that meet the definition of a derivative, but that are entered into in conformity with the expected purchase requirements of the Group, are recognised in the Statement of comprehensive income as cost of sales.

Any gain or loss that arises from the changes in derivatives' fair value is directly recognised in the Statement of comprehensive income in the section Statement of income, except for those that are under hedge accounting.

Generally, the derivatives embedded in host contracts are treated as separate derivatives whenever they meet the definition of a derivative and when their risks and characteristics are not closely related to those main contracts and the contracts are not measured at fair value with change in profit. However, derivatives embedded in contracts where the host is a financial asset in the scope of IFRS 9 are never split. Instead, the hybrid financial instrument as a whole is assessed for financial asset classification.

#### Hedge Accounting

At the beginning of a hedging relationship, the Group designates and formally documents the hedging relationship to which they want to apply hedging accounting, and the objective of the risk management and the strategy to carry out the hedging. The documentation includes the identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the Group shall assess the effectiveness of the changes in fair value of the hedging instrument when offsetting the exposure to changes in the fair value of the hedged item or in the cash flows, attributable to the risk hedged. Such hedges are expected to be highly efficient in achieving the offsetting of changes in the fair value or in the cash flows, and for this end they are permanently assessed throughout the information periods for which they were designated.

For hedging accounting purposes, hedges are classified and recorded as follows, once the strict criteria for their recording are complied with:

- **Fair value hedging**, when they hedge the exposure to fair value changes of assets or liabilities recognised or of non-recognised firm commitments.

A change in the fair value of a derivative that is a hedging instrument is recognised in profit or loss in the statement of comprehensive income as finance cost or income. A change in the fair value of the item hedged attributable to the risk hedged is recorded as part of the recorded value of the hedged item and is also recognised in profit or loss in the statement of comprehensive income as finance cost or income.

For the fair value hedging related to items recorded at amortized cost, the adjustments to the recorded value are amortized in profit or loss in the statement of comprehensive income throughout the remaining term until their maturity. Amortization of the effective interest rate may begin as soon as there is an adjustment to the recorded value of the hedged item, but it must start at the latest when the hedged item is no longer adjusted for their fair value changes ascribable to the risk being

hedged. Amortization of recorded value adjustments is based upon the effective interest rate recalculated on the amortization starting date. If the hedged item is derecognised, the non-amortized fair value is immediately recognised through profit or loss.

When a non-recognised firm commitment is designated as a hedged item, the subsequent accrued change in the fair value of the firm commitment attributable to the hedged risk shall be recognised as an asset or liability with their corresponding profit or loss recognised in the statement of comprehensive income.

- **Cash flow hedging**, when they hedge the attributed cash flow variations exposure, either to a particular risk associated to a recognised asset or liability or to a highly probable foreseen transaction, or to the exchange rate risk in a non-recognised firm commitment.

The purpose of cash flow hedge accounting is to recognise in other comprehensive income the fair value of variations of the hedging instrument in order to apply them to the statement of comprehensive income when and at the rate that the hedged item affects them.

The effective portion of the profit or loss for the measurement of the hedging instrument is immediately recognised in Other comprehensive income, whereas the ineffective portion is immediately recognised in profit or loss in the Statement of comprehensive income period as finance expense.

Values recognised in the Other comprehensive income are reclassified into the profit or loss for the period when the hedged transaction affects profit or loss, as well as when the hedged financial income or financial expense is recognised, or when the foreseen transaction takes place. When the hedged item constitutes the cost of a non-financial asset or liability, the values recognised in the Other comprehensive income are reclassified at the initial recorded value of the no-financial asset or liability. If the foreseen transaction or the firm commitment is no longer expected, the accrued profit or loss previously recognised in Other comprehensive income is reclassified into the profit or loss for the period.

If the hedging instrument expires or is sold, it is resolved, or is exercised without a replacement or successive renovation of a hedging instrument for another hedging instrument, or if its designation as hedging is revoked, any accumulated profit or loss previously recognised in other comprehensive income remains in the other comprehensive income until the foreseen operation or the firm commitment affects profit or loss.

- **Hedging of a net investment abroad**, when the instrument hedges the exposure to the variations in the translation of foreign businesses into the presentation currency of the Group associated to the exchange rate risk.

The objective of the foreign-currency net investment hedging is to hedge the foreign exchange rate risks that a Principal or Intermediate Parent Company having businesses abroad may have on the impact on the translation of financial statements from functional currency to presentation currency. The hedging of net investment in foreign currency is a hedging to the exposure in foreign currency, not a hedging of the fair value due to changes in the investment value.

Profit or loss of the hedging instrument related to the effective portion of the hedging are recognised through other comprehensive income, whereas any other profit or loss related to the ineffective portion is recognised through the statement of comprehensive income. For the disposition of the business abroad, the accrued value of the profits or losses recorded in the Other comprehensive income are reclassified through profit or loss for the period.

#### 2.22.5 Off-setting of financial instruments

Financial assets and liabilities are subject to off-set in order to inform the net value in the Statement of financial position, only if (i) at the current time, there is a legally enforceable entitlement of off-set of recognised values; and (ii) there is the intention of settling them at their net value, or of simultaneously realizing the assets and cancelling the liabilities.

### 2.23 Inventories

Goods acquired with the intention of selling them during the ordinary course of business or of consuming them in the service rendering process are classified as inventories.

Inventories are valued at cost or net realizable value, whichever is lower. The net realizable value is the estimated sale price in the normal course of business, less the estimated finalization costs and the estimated costs necessary to sale them.

Inventories include merchandise in stock that do not require transformation, such as electricity, gas and water meters and procurement goods. They include materials such as minor spare parts and accessories for the rendering of services and the goods in transit and held by third parties.

Inventories are valued using the weighted average method and their cost includes the costs directly related to the acquisition and those incurred to give them their current conditions and location.

### 2.24 Impairment loss of non-financial assets

As of every presentation date, the Group assesses whether they have any indication that a tangible or intangible asset may be impaired. The Group estimates the recoverable value of the asset or Cash Generating Unit (CGU), at the moment it detects an indication of impairment, or annually (as November 30 and it is reviewed if there are relevant or significant events presented for the month of December that merit analysing and to be included in the calculation of impairment) for goodwill and intangible assets with indefinite lifespan and those that are still being developed.

The recoverable value of an asset is the greatest value between the fair value less the costs of sale, either of an asset or a Cash-Generating Unit (CGU), and its value in use is determined for an individual asset, unless the asset does not generate cash flows that are substantially independent of those of other assets or groups of assets, in which case the asset must be grouped to a CGU. When a reasonable and consistent basis for distribution is identified, common/corporate assets are also allocated to the individual CGUs or distributed to the smallest group of CGU for which a reasonable and consistent basis for distribution can be identified. When the recorded value of an asset or a CGU exceeds its recoverable value, the asset is considered impaired and its value is reduced to its recoverable amount.

When calculating the value in use, the estimated cash flows, either for an asset or a CGU, are discounted at their current value through a discount rate before taxes that reflects the market considerations of the temporary value of money and the specific risks of the asset. An adequate assessment model is used for determining the reasonable value less the costs of sale.

Losses for impairment of continuing operations are recognised in profit or loss in those expense categories corresponding to the function of the impaired asset. Losses for impairment attributable to a CGU are assigned proportionately based on the recorded value of each asset to the non-current assets of the CGU after exhausting goodwill. The CGU is the smallest identifiable group of assets, which generates cash inflows in favor of the Group, which are largely, independent of cash flows derived from other assets or groups of assets. The Group defined CGUs considering: 1) The existence of revenue and costs for each group of assets, 2) The existence of an active market for the generation of cash flows and 3) the way in which its operations are managed and monitored. In order to assess impairment losses, the assets are grouped in the following CGU:

Subsidiary	CGU
Central Hidroeléctrica de Caldas S.A. E.S.P. (CHEC)	Generation
Electrificadora de Santander S.A. E.S.P. (ESSA)	
Empresas Públicas de Medellín E.S.P. (EPM)	
Hidroecológica del Teribe S.A. (HET)	

Subsidiary	CGU
Central Hidroeléctrica de Caldas S.A. E.S.P. (CHEC)	Transmission
Centrales Eléctricas del Norte de Santander S.A. E.S.P. (CENS)	
Electrificadora de Santander S.A. E.S.P. (ESSA)	
Empresas Públicas de Medellín E.S.P. (EPM)	
Transportista Eléctrica Centroamericana S.A. (TRELEC)	
Almacenaje y Manejo de Materiales Eléctricos S.A. (AMESA)	Distribution
Central Hidroeléctrica de Caldas S.A. E.S.P. (CHEC)	
Centrales Eléctricas del Norte de Santander S.A. E.S.P. (CENS)	
Comercializadora Eléctrica de Guatemala S.A. (COMEGSA)	
Crediegsa S.A. (CREDIEGSA)	
Distribuidora de Electricidad del Sur (DELSUR)	
Electrificadora de Santander S.A. E.S.P. (ESSA)	
Elektra Noreste S.A. (ENSA)	
Empresa de Energía del Quindío S.A. E.S.P. (EDEQ)	
Empresa Eléctrica de Guatemala S.A. (EEGSA)	
Empresas Públicas de Medellín E.S.P. (EPM)	
Enérgica S.A. (ENERGICA)	
ENSA Servicios S.A.	
Inmobiliaria y Desarrolladora Empresarial de América S.A. (IDEAMSA)	
Empresas Públicas de Medellín E.S.P. (EPM)	Natural Gas
EV Alianza Energética S.A.	
Aguas de Antofagasta S.A.	Water supply
Aguas de Malambo S.A. E.S.P.	
Aguas Regionales EPM S.A. E.S.P.	

Subsidiary	CGU	
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P.		
Empresas Públicas de Medellín E.S.P. (EPM)		
Empresas Públicas de Rionegro S.A. E.S.P. (EP RIO)		
Aguas de Antofagasta S.A.	Wastewater management	
Aguas de Malambo S.A. E.S.P.		
Aguas Nacionales EPM S.A. E.S.P.		
Aguas Regionales EPM S.A. E.S.P.		
Aquasol Morelia S.A. de C.V.		
Corporación de Personal Administrativo S.A. de C.V.		
Desarrollos Hidráulicos de Tampico S.A. de C.V.		
Ecoagua de Torreón S.A. de C.V.		
Ecosistema de Ciudad Lerdo S.A. de C.V.		
Ecosistemas de Celaya S.A. de C.V.		
Ecosistemas de Colima S.A. de C.V.		
Ecosistemas de Tuxtla S.A. de C.V.		
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P.		
Empresas Públicas de Medellín E.S.P. (EPM)		
Empresas Públicas de Rionegro S.A. E.S.P. (EP RIO)		
Empresas Varias de Medellín S.A. E.S.P.		
Proyectos de Ingeniería Corporativa S.A. de C.V.		
Tecnología Intercontinental S.A. de C.V. TICSA		
Gestión de Empresas Eléctricas S.A. (GESA)		Others
Innova Tecnología y Negocios S.A. de C.V.		
Maxseguros EPM Ltd.		
Promobiliaria S.A.		

Impairment for goodwill is determined by assessing the recoverable value of each CGU (or group of CGUs) to which the goodwill relates. Impairment related to goodwill cannot be reverted in future periods.

For assets in general, excluding the goodwill, on each presentation date an assessment is conducted about whether there is any indication that the impairment losses previously recognised no longer exist or have decreased. If such indication exists, the Group makes an estimate of the asset or CGU recoverable value. An impairment loss previously recognised can only be reverted if there was a change in the assumptions used for determining the recoverable value of an asset since the last time impairment was recognised. Reversal is limited in such a way that the recorded value of the asset neither exceeds its recoverable amount, nor exceeds the recorded value that would have been determined, net of depreciation, if no impairment loss had been recognised for the asset in the previous years. Such reversal is recognised through profit or loss in the Statement of comprehensive income.

## 2.25 Provisions

Provisions are recorded when the Group has a current, legal or implicit obligation, as a result of a past event. It is probable that the Group has to give off resources that incorporate economic benefit to settle the obligation, and a reliable estimate can be made for the value of the obligation. In cases in which the Group expects the provision to be reimbursed as a whole or in part, the reimbursement is recognised as a separate asset, but only in the cases when such reimbursement is practically certain, and the asset value can be reliably measured. In the Group, each provision is only used for dealing with disbursement for which it was initially recognised.

Provisions are measured with the best estimate from management of expenditure necessary to settle the present obligation, at the end of the period being reported, considering the risks and the corresponding uncertainties. When a provision is measured using the estimated cash flow to settle the present obligation, its recorded value corresponds to the present value of said cash flow, using for the discount a rate calculated with reference to market yields for the bonds issued by the National Government. In Colombia, the yield of TES Bonds (public debt securities issued by the General Treasury of the Nation) at the end of the reporting period must be used.

Expense corresponding to any provision is presented in profit or loss in the Statement of comprehensive income net of all reimbursement. The increase in provision due to the time elapsed is recognised as finance expense.

### Provisions for decommissioning

The Group recognises as part of the cost of a fixed asset in particular, to the extent that there is a legal or implicit obligation of decommissioning or restoring, the estimation of the future costs in which the Group expects to incur in to perform the decommissioning or restoring and its balancing entry is recognised as a provision for decommissioning and restoring costs. The decommissioning cost is depreciated over the estimated useful life of the fixed asset.

Decommissioning or restoring costs are recognised at the present value of the expected costs of cancelling out the obligation using estimated cash flows.

Cash flows are discounted at a pre-tax rate, which should be determined by reference; for subsidiaries in Colombia, for risk-free rates, the yield of TES bonds (public debt securities issued by the National Treasury) is used; for subsidiaries in Panama, market yields on bonds issued by the National Government are used and in El Salvador, yields on NOTASV27 (notes of the Republic of El Salvador maturing in 2027) are used.

Future estimated decommissioning or restoration costs are annually revised. Changes in the future estimated costs, on the estimated dates for expenditure, or on the discount rate applied are added or deducted from the asset cost, without exceeding the recorded value of the asset. Any surplus is immediately recognised through profit or loss. The change in the provision value associated to the time elapsed is recognised as financial expense in profit or loss in the Statement of comprehensive income.

### Onerous Contracts

The Group recognises as provisions the current obligations that are derived from an onerous contract, as provisions and its offsetting is in the Statement of comprehensive income in profit or loss. An onerous

contract is the one in which the unavoidable costs of complying with the obligations it implies, exceed the economic benefits that are expected to receive therefrom.

### **Contingent Liabilities**

The possible obligations that arise from past events and the existence of which shall be only confirmed by the occurrence or non-occurrence of one or more uncertain future events that are not entirely under the Group's control or the current obligations, that arise from past events, but that it is not probable, but possible, that an outflow of resources including economic benefits shall be required to settle the obligation or the amount of the obligation cannot be measured with enough reliability, are not recognised in the Statement of financial position, they are rather disclosed as contingent liabilities. Contingent liabilities generated in a business combination are recognised at fair value on the acquisition date.

### **Contingent Assets**

Assets of a possible nature, that arise from past successes, the existence of which has to be confirmed only by the occurrence, or the non-occurrence, of one or more uncertain events in the future, that are not entirely under the Group control, are not recognised in the Statement of financial position, they are instead disclosed as contingent assets when their occurrence is probable. Whenever the contingent fact is true the asset and the income associated are recognised in the profit or loss for the period. Contingent assets acquired in a business combination are initially measured at their fair values, on the acquisition date. At the end of subsequent periods being reported, those contingent liabilities are measured at the greatest amount it would have been recognised and the amount initially recognised less the accrued depreciation recognised.

## **2.26 Employee Benefits**

### **2.26.1 Post-Employment Benefits**

#### **Defined Contribution Plans**

The contributions to the defined contribution plans are recognised as expenses in profit or loss in the Statement of comprehensive income at the moment when the employee has rendered the service that grants them the right to make the contributions.

#### **Defined benefit plans**

Post-employment benefit plans are those in which the Group has the legal or implicit obligation to respond for the payments of the benefits that were left to their charge.

For the defined benefit plans, the difference between the fair value of the plan assets and the present value of the plan obligation, is recognised as asset or liability in the statement of financial position. The cost of giving benefits under the defined benefit plans is determined separately for each plan, through the actuarial assessment method of the projected credit unit, using actuarial assumptions on the date of the period being reported. Plan assets are measured at fair value, which is based upon the market price information and, in the case of quoted securities, it constitutes the published purchase price.

The actuarial profits or losses, the yield of plan assets, excluding the values included in the net interest on the net defined benefits on the liabilities (assets), and the changes in the asset ceiling effect are recognised in other comprehensive income. The actuarial profits or losses include the effects of changes in the actuarial assumptions as well as experience adjustments.

The net interest on liabilities (assets) for net defined benefits includes the interest income for the plan assets, interest cost for the obligation for defined benefits and interests for the asset ceiling effect and is recognised in profit or loss.

The current service cost, the past service cost, any settlement or reduction of the plan are immediately recognised through profit or loss in the statement of comprehensive income when they arise.

### **2.26.2 Short-term benefits**

The Group classifies as short-term employee benefits those obligations with the employees that it expects to settle in the twelve months period following the closing of the accounting period when the obligation

was generated, or the service was rendered. Some of these benefits are generated from the current labor legislation, from collective bargaining agreements, or from non-formalized practices that generate implicit obligations.

The Group recognises the short-term benefits at the moment the employee has rendered their services, as the following:

A liability for an amount that shall be repaid to the employee, deducting the amounts already paid before, and its balancing entry as expense for the period, unless another chapter obliges or allows including the payments in the cost of an asset or inventory, for instance, if the payment corresponds to employees the services of whom are directly related to the construction of a work, it will be capitalized to that asset.

Amounts already paid before corresponding, for instance, to advanced payments of salaries, advanced allowances, among others, if they exceed the corresponding liability, the Group will have to recognise the difference as an asset in the prepaid expenses account, to the extent that the advanced payment gives place to a reduction in the payments to be made in the future or to a cash reimbursement.

According to the foregoing, the accounting recognition of short-term benefits is made upon occurrence of the transactions, regardless of when they are paid to the employee or to the third parties to which the Group has entrusted the provision of certain services.

### 2.26.3 Long-term benefits

The Group classifies as long-term employee benefits those obligations that it expects to settle after the twelve months following the closing of the accounting year or the period where employees provide the related services, i.e. from the thirteenth month forward; they are different from the short-term benefits, post-employment benefits, and contract termination benefits.

The Group measures long-term benefits in the same way as post-employment defined benefit plans. Although their measurement is not subject to the same uncertainty level, the same following methodology will be applied for its measurement:

- The Group should measure the surplus or deficit in a long-term employee benefit plan, using the technique applied for post-employment benefits both for estimating the obligation as well as for the plan assets.
- The Group should determine the value of net long-term employee benefits (assets or liabilities) finding the deficit or surplus of the obligation and comparing the asset ceiling.

Benefits employees receive year after year throughout their working life should not be considered “long term” if at the accounting year closing each year the Group has fully delivered them.

### 2.26.4 Termination Benefits

The Group recognises as termination benefits, the considerations granted to the employees, payable as result of the decision of the company to terminate the labour contract to an employee before the normal retirement date or the decision of an employee to accept the voluntary resignation in exchange for such benefits.

## 2.27 Reinsurance activity reserves

Assets and liabilities under reinsurance contracts represent for the Group the best estimate of future collections and payments to be made for the risks assumed and ceded in reinsurance obligations; these are measured and recognised through technical reserves:

### 2.27.1 Unearned premium reserve (UPR)

Set aside for the fulfillment of future obligations derived from the assumed and ceded obligations from the current policies. They correspond to the portion of the premium that, at the date of calculation, has not yet been recognised as income or expense by the reinsurer. Its purpose is to adjust the result so that the profit is assigned to the period in which the premium was earned, regardless of when it was issued.



This reserve is calculated policy by policy, as the result of the total premium assumed between the number of days of the policy's validity, multiplied by the number of days corresponding to the time not running the risk at the date of calculation. The portion of the reserve corresponding to the reinsurer is also calculated, considering the ceded premium.

### 2.27.2 Certain loss reserve

This reserve is a provision of money that the Group must pay by claims already notified and pending of payment. Its purpose is to establish adequate reserves to guarantee the payment of incidents that have not been paid during the accounting period. This reserve is constituted per claim, on the date on which the insurer is aware of the occurrence of the loss and corresponds to the best technical estimate of the cost thereof. The amount of the constituted reserve is readjusted to the extent that more information is available and whether there are reports of internal or external settlers. The reserve includes the settlement expenses incurred to meet the claim, such as expenses due to attorney's fees for claims in judicial processes.

### 2.27.3 Incurred but not reported (IBNR) reserves

Represents an estimate of the amount of resources that the Group must allocate to meet future claim payments that have already occurred as of the date of calculation of this reserve but have not yet been notified or for which not enough information is available.

The following methodologies are used to calculate this reserve, the Bonesetter-Ferguson method and the Chain-ladder method. The Bornhuetter-Ferguson method is a standard actuarial method used to estimate final claims costs. The technique combines; (a) an initial benchmark or market estimate of final losses; and (b) an estimate of final losses based on actual claims experience to date. The former is based on a measure of exposure, such as premiums or number of policies. The latter is based on claims paid or incurred to date. The two estimates are combined using a formula that gives more weight to the estimate based on experience over time. The chain ladder method is a standard actuarial method that can be applied to premiums, claims paid, reserves for claims outstanding or claims incurred, or number of claims. The method involves analysis of historical claims development factors (the proportion of amounts accumulated in a development period to the previous development period). Based on this analysis, a development pattern is selected and then used to estimate future claims/premium development.

### 2.27.4 Liability adequacy test

Technical provisions recorded by the Group are regularly subject to proof of reasonableness to determine its sufficiency. If the result of the test shows that the provisions are insufficient, they are adjusted with a charge to profit or loss.

## 2.28 Service concession arrangements

The Group recognises the service concession arrangements pursuant to the interpretation requirements of the IFRIC 12 Service Concession Arrangements.

This interpretation is applicable to those concessions where:

- The grantor controls or regulates which services the operator with the infrastructure should provide, to whom and at what price.
- The grantor controls, through ownership, the right-of-use, or otherwise, any significant residual ownership in the infrastructure at the end of the term of the arrangement.

The Group does not recognise these infrastructures as property, plant and equipment, it recognises the consideration received in the contracts that meet the above conditions at its fair value, as an intangible asset to the extent that the Group receives an entitlement to make charges to users of the service, provided that these entitlements are conditioned to the service use level, or as a financial asset, to the extent that there is an unconditional contractual entitlement to receive cash or other financial asset, either directly from the assignor or from a third party. In cases where the Group receives payment for

the construction services, partly through a financial asset and partly through an intangible asset, each component of the consideration is recorded separately.

Financial assets of service concession arrangements are recognised in the statement of financial position and subsequently are measured at amortized cost, using the effective interest rate. Assessment of impairment of these financial assets is made according to the value impairment policy of the financial assets.

Intangible assets of service concession arrangements are recognised in the Separate statement of financial position as intangible assets denominated “intangible assets for service concession agreements” and are amortized on a linear basis within the term of duration thereof.

Revenue and costs related to the operating services are recognised according to the accounting policy of revenue and the services related to construction or improvement services according to the accounting policy of construction contracts. Contractual obligations assumed by the Group for maintenance of the infrastructure during its operation, or for its return to the assignor at the end of the concession arrangement in the conditions specified therein, to the extent that it does not assume an income-generating activity, is recognised following the provisions accounting policy.

## 2.29 Fair Value

Fair value is the price that would be received when selling an asset or that would be paid when transferring a liability in an orderly transaction between market participants on the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique.

When estimating the fair value, the Group considers the characteristics of the asset or liability in the same way market participants will consider them when setting the value of the asset or liability on the measurement date. Fair value for measurement and disclosure purposes in financial statements is determined on that basis, except for transactions of stock-based payments, lease transactions, and measurements that have certain similarities with fair value but that are not fair value, such as the net realizable value or the value at use. The fair value of all financial assets and liabilities is determined at the financial statements' presentation dates, for recognition and disclosure in the notes to the financial statements.

Fair value is determined:

- Based on prices quoted in assets or liabilities markets identical to those the Group can access on the measurement date (level 1).
- Based on inputs applied on valuation methodologies commonly used by market participants, which are different from observable quoted prices for assets or liabilities, directly or indirectly (level 2).
- Based on internal valuation techniques of cash flow discounts or other valuation models, using variables estimated by the Group that are non-observable for the asset or liability, in the absence of variables observed in the market (level 3).

Note 44 Measurement of fair value on a recurring and non-recurring basis provides an analysis of the fair values of financial instruments and non-financial assets and liabilities and more detail of their measurement.

## 2.30 Operating segments

An operating segment is a component of the Group that develops business activities from which it can obtain revenue and incur in costs and expenses, on which there is financial information and the operating results of which are revised on a regular basis by the Group's highest chief operation decision maker, which is the Management Board, to decide on the resource allocation to the segments and the Management Committee to evaluate their performance.

The financial information of operating segments is prepared under the same accounting policies used in the elaboration of these consolidated financial statements.

### 2.31 Cash dividends and surpluses distributed to shareholders and owner of the Group

The Group recognises a liability to make the distributions to the owner of the Group in cash when distribution is authorized, and it is no longer at the Group's discretion. The corresponding amount is recognised directly through net equity.

### 2.32 Changes in accounting policies

During 2019, the Group implemented changes to IFRS (new standards, amendments or interpretations), issued by the International Accounting Standards Board (IASB) and adopted in Colombia that are compulsory for the annual period beginning on January 1, 2019.

**IFRS 16 Leases.** Issued in January 2016, this new standard introduces a comprehensive model for identifying leases and accounting treatments for lessors and lessees. It will replace the current standards for the accounting treatment of leases included in IAS 17 Leases and related interpretations, such as IFRIC 4 Determining whether an arrangement contains a lease, SIC-15 Operating leases—Incentives and SIC-27 Evaluating the substance of transactions taking the legal form of a lease.

The distinction between leases and service contracts is based on the customer's control over the identified asset. For the lessee, the distinction between operating leases (off-balance sheet) and finance leases (on the balance sheet) is removed and replaced by a model in which an asset (right-of-use) and corresponding liability must be recognised for all leases (i.e. everything in the statement of financial position) except short-term leases and leases of low-value assets.

Assets (right-of-use) are initially measured at cost and are subsequently measured at cost (with certain exceptions) less accumulated depreciation and impairment losses, adjusted for any revaluation of the lease liability. Lease liability is initially measured at the present value of future lease payments. Subsequently, the lease liability is adjusted for interest and lease payments and the impact of lease modifications, among other things. In addition, the classification of cash flows is also affected because operating lease payments under IAS 17 are presented as operating cash flows; whereas under IFRS 16, lease payments will be divided into liability amortization and an interest portion that is presented as cash flow from financing and operating activities, respectively.

Unlike lessee accounting, IFRS 16 includes the same accounting requirements for a lessor as IAS 17, i.e. it continues to require a lessor to classify a lease as either an operating or a finance lease.

After completion of the inventory and lease valuation, the company adopted IFRS 16 retrospectively with cumulative effect from initial application, recognised on 1 January 2019, without using restatement of comparative information as required by paragraph C7 of this IFRS. Accordingly, the 2018 financial information has not been restated and continues to be reported in accordance with IAS 17.

The initial cumulative effect recognised as opening adjustments considering the indicative rates currently being used for the financing of the Group, applied to the lease liabilities is: Net assets from right-of-use: \$662,122, Total financial liabilities from lease: \$662,122, no net deferred taxes and accumulated income.

Additionally, \$127,487 was reclassified from property, plant and equipment to the assets for right-of-use corresponding to finance leases that had been recognised under IAS 17.

There is no effect on retained earnings, since the option taken for the valuation of the asset is to match the adjusted liability for prepaid or accrued (earned) leases recognised in the Statement of financial position immediately prior to the initial application. In the Group, no pre-paid or accrued lease payments were identified.

Short-term leases not exceeding 12 months or relating to low value underlying assets are not recognised as right-of-use assets, instead the Group uses the practical record and recognises such leases in the statement of comprehensive income.

### Note 3. Significant accounting judgments, estimates, and causes of uncertainty in the preparation of financial statements

The following are the significant judgments and assumptions, including those that involve accounting estimates that the Group management used in the application of the accounting policies under IFRS adopted in Colombia, and that have significant effect on the values recognised in the consolidated financial statements.

Estimates are based upon historic experience and as a function of the best information available on the facts analysed by the cut-off date. These estimates are used for determining the value of the assets and liabilities in the separated financial statements, when it is not possible to obtain such value from other sources. The Group assesses its estimates on a regular basis. Actual results may differ from those estimates.

The significant estimates and judgments made by the Group are described below:

– **Assessment of impairment indicators for assets, goodwill and asset valuation for determining impairment.**

The condition of the assets is revised on each report presentation date, in order to determine whether there are indications that any of them has suffered an impairment loss. If there is impairment loss, the recoverable amount of the asset is affected, if the estimated recoverable amount is lower, its value is reduced to its recoverable value and impairment loss is immediately recognised in profit or loss for the period.

Assessment of impairment indicators is based on external and internal factors, and in turn on quantitative and qualitative factors. Assessment is based on financial results, on the legal, social and environmental settings, and on market conditions; significant changes in the scope or in the way in which the asset or CGU is used or expected to be used and evidence of obsolescence or physical deterioration of an asset or CGU, among others.

Determining whether goodwill has suffered impairment implies the calculation of value at use for the CGUs to which it has been assigned. The calculation of the value at use requires that the entity determines future cash flows that should arise from CGUs and a discount rate appropriate to calculate the current value. When the actual future cash flows are lower than expected, an impairment loss may arise.

– **Assumptions used in the actuarial estimate of post-employment obligations with employees.**

The assumptions used in the actuarial studies include: demographic assumptions and financial assumptions, the former refer to the characteristics of the current and past employments, and relate to the mortality rate, employee turnover rates, the latter relate to the discount rate, the increases in future salaries, and the changes in future benefits.

– **Lifespan and residual values of property, plant and equipment and intangibles.**

In the assumptions used for determining the lifespans, technical aspects such as the following are considered: periodical maintenances and inspections made to the assets, failure statistics, environmental conditions and operating environment, protection systems, replacement processes, obsolescence factors, recommendations of manufacturers, climate and geographical conditions, and experience of the technicians that know the assets. Characteristics as market values, reference magazines, and historic sales data are considered for determining the residual value.

– **Assumptions used for calculating the fair value of financial instruments including credit risk.**

The Group discloses the fair value corresponding to each class of financial instrument in such a way it allows comparing it with the recorded values. Macro-economic projections calculated within every company of the Group are used. Investment portfolio is valued at market price. In its absence, a similar one is looked for in the market and if not, assumptions are used.

- Derivatives are estimated at fair value.
- Receivables are estimated at the market rate in force and effect for similar credits. Receivables from employees are valued as to mass debtors, except for housing loans.
- For equity investments, the methodology is cash flow; it is estimated at the market price for those offered in the stock market.
- **Likelihood of occurrence and value of contingent or uncertain-value liabilities.**

The assumptions used for uncertain or contingent liabilities include the classification of the legal process by the “expert judgment” of the area professionals, the type of contingent liability, the possible legislative changes, and the existence of high-court rulings that applies to the concrete case, the existence of similar cases within the Group, the study and analysis of the substance of the issue, the guarantees existing at the time of the events. The Group shall disclose and not recognise in the financial statements those obligations classified as possible; obligations classified as remote are not disclosed nor recognised.

- **Future expenditure for asset decommissioning and retirement obligations.**

In the assumptions used for determining future expenditure for asset decommissioning and retirement obligations, aspects such as the following were considered: estimate of future outlays in which the Group must incur for the execution of those activities associated to asset decommissioning on which legal or implicit obligations have been identified, the initial date of decommissioning or restoration, the estimated date of finalization and the discount rates.

- **Determination of existence of finance or operating leases based on risk transfer and benefits of the leased assets.**

The significant assumptions considered to determine the existence of a lease include the assessment of the conditions if the right to control the use of the asset is transmitted for a period of time in exchange for a consideration, i.e., assessment of the existence of an identified asset; the right to obtain substantially all economic benefits from the use of the asset over the period of use; the right to direct how and for what purpose the asset is used throughout the period of use; the right to operate the asset over the period's use without any changes in the operating instructions.

- **Recoverability of deferred tax assets.**

Deferred tax asset has been generated by the temporary differences that generate future fiscal consequences in the financial position of the Group. These differences are essentially represented in fiscal assets that exceed the assets under IFRS adopted in Colombia, and in fiscal liabilities, lower than the liabilities under IFRS adopted in Colombia, such as it is the case of the pension liability components, the amortized cost of bonds, finance lease, and other sundry provisions and contingency provisions.

The Group's deferred tax asset is recovered in the liquid income taxed on the current income tax generated in each company of the Group.

- **Determination of whether a pool of assets qualifies as a discontinued operation.**

Significant assumptions for a pool of assets to be classified as a discontinued operation include being a component of an entity that has been disposed, or classified as held for sale, and represents a line of business or a geographical area that is significant and can be considered separate from the rest and is part of a single coordinated plan for its sale.

The Group classifies a non-current asset (or a disposition pool) as held for sale when its carrying amount will be recovered principally through a sale transaction rather than through continuing use.

To apply the above classification, the asset (or disposition pool) must be available, in its current condition, for immediate sale, subject only to the usual and customary terms for the sale of such assets (or disposition pool), and its sale must be highly probable.

- **Determination of Control, Significant Influence or Joint Control over an Investee.**

#### **Significant influence on VE Servicios de Eficiencia Energética S.A.S.**

As of December 31, 2019, the Group, through its subsidiary EPM Latam S.A., holds 2.1% of the equity instruments of VE Servicios de Eficiencia Energética S.A.S. However, due to contractual agreements and representation on the Board of Directors of the entity with 2 of 5 members, the Group exercises significant influence over the financial and operating policy decisions of VE Servicios de Eficiencia Energética S.A.S. and, therefore, is included in the Group's consolidated financial statements as an investment in an associate measured by the equity method.

- **Assessment of portfolio impairment**

For calculating expected credit loss, each obligation is assigned an individual probability of non-payment that is calculated from a probability model involving sociodemographic, product and behavior variables.

The model will be applied based on the Scorecard developed considering the information of each company of the Group. The models are defined according to the information available and the characteristics of the population groups for each one. Even though the methodology applies to all accounts with balance, some exclusions must be considered, such as: derecognised accounts; self-consumptions; contributions; public lighting and in general charges from third parties. For its calculation, it is previously defined the moment from which it is considered that an obligation was defaulted and will not be recovered.

To calculate the credit loss of trade and other receivables (except accounts receivable among economically related parties), the following formula is used:

$$PE = \text{Exposed balance} * PD * LGD$$

Where, the PD component (probability of default) is derived from the result of a statistical model that provides the probability that each account will default on the following twelve months. This individual probability is located within a range found in order to attenuate fluctuations in the value of the general provision from one month to the next and stabilize its behavior, resulting in a standard PD by rank.

The loss given the default (LGD) is defined as the economic deterioration that the entity would incur in the event of any of the situations of default. It is a percentage obtained from a table taken from the current regulations of the Superintendencia Financiera de Colombia (Superintendence of Finance of Colombia), Chapter II of External Circular 100 of 1995.

- **Revenue estimates**

The Group recognises revenue from the sale of goods and the rendering of services to the extent that the performance requirements for the Group are met, regardless of the date on which the corresponding invoice is issued, to carry out this estimate information from contracts or agreements with customers is taken and so the value to be recognised in revenue is established.

If the moment at which revenue should be recognised is uncertain, the Group determines to recognise revenue at the moment in which the performance obligation is satisfied, for those performance obligations satisfied over time it is common to use a method of the measured resource as executed costs compared to estimated costs.

For other concepts different from the supply of public home utilities, the Group estimates and recognises the value of revenue from sales of goods or rendering of services based on the terms or conditions of interest rate, period, etc., of each contract that causes the sale.

In the month after recording the estimated revenue, its value is adjusted by the difference between the value of the actual revenue already known against the estimated revenue.

#### – Operating Segments

The determination of the operating segments is done using information that is regularly provided to the highest decision-making authority in the Group and the segmentation of said information is identified. Once these segments have been identified, the capacity to generate income and incur costs and expenses of the identified groups is analysed. Likewise, it is verified whether the maximum decision-making authority reviews the returns and allocates resources based on this segmentation. Finally, it is examined whether disaggregated financial information is available to support this segmentation. In addition to the above factors, the Group's approach and management are analysed, in order to consider current possible segments that may arise in the future, according to its strategy.

### Note 4. Significant transactions and other relevant aspects during the period

Significant transactions and other relevant aspects that occurred during the period, different from those of the normal business of the Group, are related to the contingencies of the Ituango Hydroelectric Project (*proyecto Hidroeléctrico Ituango*), that took place on April 28, 2018 due to a geological event that blocked the diversion tunnel of the Cauca River with approximately 160 thousand cubic meters of rock and soil, which caused a non-programmed occluding and flooding of the dam. As a result, EPM has led its decisions prioritizing the protection of communities and the environment in the first place, and after that the infrastructure of the project. Therefore, on May 7, 2018, the decision was made to drain the dammed water through the powerhouse of the future electricity generation plant for rechanneling it to its traditional flow into the Cauca River and thus lower the water level of the dam.

On January 16 and February 5, 2019, the intake gates No. 2 and No. 1, respectively, were closed, thus cutting the waterflow through the powerhouse. From February 8, 2019, the recovery of the stream of the Cauca River began with the flow of water through the tailgate.

On March 1, 2019: Skava Consulting delivers the results of the root cause analysis indicating the most likely hypothesis that could have generated the Auxiliary Deviation Gallery plugging, which consequently caused the contingency of the Ituango hydroelectric project.

On March 7, 2019: At the powerhouse, work is concentrated on water drainage activities. In the dam the construction of the plastic concrete screen (bentonite screen) was concluded and the tailgate operates at its optimal, evacuating the waters of the Cauca river that arrive at the dam.

On May 29, 2019, closure of one of the two gates of the Auxiliary Deviation Gallery (GAD) was completed, a new milestone in the project's risk mitigation work. With the closure of the first gate, the left gate, the work of nearly three months was completed. After closure of the left GAD gate, the following work focused on the closure of the right gate to complete the full closure, milestone reached on December 18, 2019, when the second gate of the Auxiliary Deviation Gallery (GAD) was closed. The pre-positioning of the GAD, with its two gates duly closed, reduces risks for the communities downstream of the works and means the continuation of the project's recovery process. Subsequently, a 22-meter plug will be built downstream of the floodgate chamber in the axis of the dam.

On June 11, 2019, the insurance company Mapfre made a first payment of compensation for the protection of extra-contractual civil liability (RCE) for \$6,169 corresponding to the affectations caused to third parties. This indemnification is given in the terms and conditions of the RCE policy, clarifying that according to estimates they have made, indemnifications for the affectations to third parties may exceed \$15,000.

On July 19, 2019, the construction work on the dam was completed, allowing this structure to be brought to the height of 435 meters above sea level, i.e., the maximum established in the original designs. As a consequence, the other technical advances achieved in the Ituango hydroelectric project and the capacities installed by EPM in the communities to react to a possible eventuality, allowed that on July

26, 2019, the National System of Disaster Risk Management (SNGRD) modified the state of alert for the evacuation of the populations located downstream of the future power generation plant. Determining that no locality remained on red alert, which means permanent preventive evacuation.

On September 16, 2019, Mapfre Seguros Generales de Colombia S.A. indicated its decision to grant coverage under the all-risk construction and assembly policy for the contingency in the Ituango Hydroelectric Project. Said insurance company appointed a series of national and international experts (engineers, geologists and geotechnical specialists in dams and underground works, lawyers, among others) to review the technical information of the main work fronts of the project; including tunnels, caverns, dam and tailgate. They also reviewed the designs, plans, technical specifications, construction processes, construction logs, risk matrix, pre and post-contingency studies. In this way, they concluded that the cause of the contingency, which occurred on April 28, 2018, is framed in the terms and conditions of the policy, thus confirming the coverage.

The insurance policy issued by Mapfre in favor of EPM covers damages to the infrastructure, civil works, project equipment and loss of profit due to the delay in the start of operations. Subsequently, the insurance company will quantify the value of the loss and, following the limits and conditions established in the insurance policy, will reimburse EPM for the resources needed to enter the financial statements of the Ituango Hydroelectric Project.

The insurance policy establishes an insured limit of USD 2,556 million for coverage of material damage to infrastructure and equipment. It also has coverage for delay in starting operations (money not received for damages derived from the contingency) for US\$628 million, amounts that set the maximum responsibility of the insurance company. The amount to be recognised by the insurer and its corresponding payment schedule will be the result of a rigorous analysis of damage quantification, whose results will be linked to the policy conditions such as deductibles, limits, additional coverage, among others.

September 27, 2019: By this date, a detailed exploration of 80% of the machine cavern, transformers, beacons, tunnels and adjacent galleries has been carried out. Damage from civil works was found in about 30% of the areas that could be directly inspected. By June 30, 2020 it is expected to have explored 100% of the cave complex and the dimensioning of the damages in order to define and start the activities of total repair of the cave complex.

On November 8, 2019, the urban planning work was completed and the road over the top of the project's dam was handed over to the community of the municipality of Ituango, so that its inhabitants can have continuous mobility to and from their town.

On December 4, 2019, the insurance company Mapfre made a first payment for material damage in civil works, for \$525,438 (USD 150 million).

On December 18, 2019, EPM performed the closing maneuver of the right branch of the Auxiliary Deviation Gallery (GAD). This closure ensures the pre-plugging of the Auxiliary Deviation System (SAD) through the gates and allows reaching optimal conditions for the final plugging.

On March 3, 2020, the National Environmental Licensing Authority (ANLA) authorized EPM to continue works on the Ituango hydroelectric project, which will enable the company to carry out the work to dissipate in an optimal manner, through the turbines that will be housed in the powerhouse, the energy of the water contained in the dam. The decision of the ANLA is based on the provisions of Resolution 0820 (June 2018) of that entity, a preventive measure that does not involve the suspension of "...activities, works, engineering and civil works to be executed by the company to ensure the integrity of the project, and prevent and mitigate risks associated with the contingency presented ...", so that it can preserve the life of communities downstream of the project as a priority.

EPM and the relevant control and surveillance bodies continue to assess the root causes of the above-mentioned events.



Regarding the contingency, the EPM Group has recognised the next items in its consolidated financial statements as of 31 December 2019:

- Cost and progress of construction of the Ituango hydroelectric project for \$9,961,227 (see note 5).
- Receivables from the insurance company Mapfre for \$456,914 for impairment of civil works and total loss of machinery and equipment covered by the all-risk and construction policy and \$8,831 for non-contractual civil liability (see note 12).
- Total provision of \$45,676, of which \$6,799 was recognised in 2019 (2018: \$38,877) for the attention of those affected in Puerto Valdivia, for compensation of emergent damage, lost profits and moral damage, due to the increase in the waters of the Cauca River as a consequence of the occluding of the project on April 28, 2018. During 2019, payments of \$9,741 (2018: \$62) were made for a balance in liabilities in the provision account of \$35,873 (2018: \$38,815). (see note 27.1.6).
- Total provision of \$48,375 of which \$5,459 was recognised in 2019 (2018: \$42,917) for the attention of persons who had to be evacuated as a result of the event. During 2019, payments for \$20,420 (2018: \$23,700) were made for a balance in liabilities in the provision account of \$4,256 (2018: \$19,217). (see note 27.1.6).
- Total provision of \$151,401 of which \$14,083 was recognised in 2019 (2018: \$137,318) as collateral for the reliability charge that covers the construction and commissioning of the Pescadero Ituango Hydroelectric Power Plant. At December 31, 2019, payments of \$151,401 (2018: \$-) were made. (see note 27.1.5).
- Total provision of \$69,897 of which \$38,509 was recognised in 2019 (2018: \$31,388) for environmental and social contingencies, established by the specific action plan for the recovery of the parties affected by the events of the occluding of the Cauca River diversion tunnel that the project had on April 28, 2018 and by the closure of floodgates that reduced the flow of the river downstream of the project. During 2019, payments of \$15,043 (2018: \$-) were made for a balance in liabilities in the provision account of \$54,854 (2018: \$31,388) (see note 27.1.1).
- Total provision of \$108,630 of which \$6,833 was recognised in 2019 (2018: \$101,797) between estimated expense and interest as a result of the valuation, from January to October 2021, for the default to the Intercolombia transporter for the months subsequent to the entry into operation of the connection infrastructure of the Ituango project. As of December 31, 2019, and 2018 no payments were made for this concept. (see note 27.1.5).
- Total provision of \$14,284 of which \$11,864 was recognised in 2019 (2018: \$2,420) for environmental sanctions filed by the National Environmental Licensing Authority (ANLA). During 2019, payments of \$2,420 (2018: \$-) were made for a balance in liabilities in the provision account of \$11,864 (2018: \$2,420). (see note 27.1.6).
- Additionally, other expenses of \$24,929 (December 2018: \$45,639) were recognised in the Statement of Comprehensive Income for the attention of the community affected by the contingency (see note 35).

## Note 5. Property, plant and equipment, net

The breakdown of the recorded value for property, plant and equipment is as follows:

Property, plant and equipment	2019	2018
Cost	43,603,770	42,120,534
Accrued depreciation and impairment loss	(7,998,115)	(7,631,935)
<b>Total</b>	<b>35,605,655</b>	<b>34,488,599</b>

*Figures stated in millions of Colombian pesos*

The following is the breakdown of the recorded value for temporarily idle property, plant and equipment:

Temporarily idle property, plant and equipment	2019	2018
Networks, lines and cables	9,196	34,572
Plants, pipelines and tunnels	15,231	21,508
Land and buildings	2,377	1,489
Machinery and equipment	546	105
Other property, plant and equipment	314	33
<b>Total temporarily idle property, plant and equipment</b>	<b>27,664</b>	<b>57,707</b>

*Figures stated in millions of Colombian pesos*

The most significant variation is due to the commissioning of Dolores generation plant and the decommissioning of the Rio Abajo plant.

The Group possesses property, plant and equipment that have been removed from use and have not been classified yet as non-current assets held for sale, corresponding to the Rio Piedras power plant that was transferred from the generation business to the water supply business, which has to recover the mini power plant as a business strategy, the cucarachos los naranjos pumping station that is expected to be modernized, and the land of the Porce IV project that was not executed, and the land of the Espíritu Santo project that has not yet been commissioned; the recorded value of these assets is as follows: for 2019 the cost amounts to \$27,663 (2018 \$57,707).

The following is the movement of cost, depreciation and impairment of property, plant and equipment:

2019	Networks, lines and cables	Plants, pipelines and tunnels	Construction in progress <sup>(1)</sup>	Land and buildings	Machinery and equipment	Communication and computer equipment	Furniture, fixtures and office equipment	Other property, plant and equipment <sup>(2)</sup>	Total
Initial balance	11,001,434	11,719,710	11,398,786	6,226,917	803,664	436,703	131,663	401,657	42,120,535
Additions <sup>3</sup>	41,666	42,666	3,440,154	14,722	20,567	45,121	2,160	46,972	3,654,027
Advanced payments (amortized) made to third parties	502	-	(17,417)	-	-	-	-	(1,804)	(18,720)
Transfers (-/+)	835,602	408,160	(1,636,803)	208,666	40,044	9,580	2,983	(14,853)	(146,621)
Dispositions (-)	(9,961)	(4,276)	(6,450)	(1,281)	(1,030)	(5,859)	(133)	(3,091)	(32,079)
Withdrawals (-)	(11,350)	(112,133)	(909,800)	(4,453)	(9,213)	(21,999)	(281)	(21,109)	(1,090,338)
Re-statement due to change of policies <sup>(4)</sup>	346	-	2,229	(204,286)	51	46	18	68	(201,527)
Effect of changes in foreign exchange	36,702	41,534	5,143	3,606	(795)	94	60	(1,155)	85,188
Effect on loss of control of subsidiary	-	(613,662)	(34,205)	(45,762)	(327)	(34)	-	-	(693,990)
Other changes	49,110	66,607	(64,404)	(46,480)	(67,532)	(6,354)	1,685	(5,337)	(72,704)
<b>Cost final balance</b>	<b>11,944,051</b>	<b>11,548,606</b>	<b>12,177,233</b>	<b>6,151,651</b>	<b>785,430</b>	<b>457,299</b>	<b>138,155</b>	<b>401,345</b>	<b>43,603,770</b>
<b>Accrued depreciation and impairment loss</b>									
Initial balance of accrued depreciation and impairment loss	(3,216,290)	(2,859,219)	(1,039)	(824,201)	(295,444)	(252,556)	(53,790)	(129,397)	(7,631,935)
Depreciation for the period	(401,843)	(291,275)	-	(78,785)	(45,831)	(46,222)	(13,360)	(16,630)	(893,945)
Impairment for the period	-	(1,386)	-	(784)	(39)	(5)	(9)	(20)	(2,243)
Dispositions (-)	3,807	2,711	-	255	712	5,191	57	2,297	15,029
Withdrawals (-)	7,848	55,216	-	1,232	6,175	18,806	262	1,999	91,538
Transfers (-/+)	1	(0)	-	(11)	10	163	116	-	279
Re-statement due to change of policies <sup>(4)</sup>	(34)	-	-	77,001	(15)	(7)	(13)	(28)	76,904
Effect of changes in foreign exchange	(14,616)	(22,836)	(48)	(1,290)	1,230	64	117	393	(36,986)
Effect on loss of control of subsidiary	-	359,575	1,086	25,399	167	29	-	17	386,274
Other changes	(11,615)	(16,635)	-	3,970	17,863	3,871	(596)	115	(3,029)
<b>Final balance accrued depreciation and impairment loss</b>	<b>(3,632,741)</b>	<b>(2,773,850)</b>	<b>-</b>	<b>(797,216)</b>	<b>(315,173)</b>	<b>(270,668)</b>	<b>(67,215)</b>	<b>(141,253)</b>	<b>(7,998,115)</b>
<b>Total final net balance property, plant and equipment</b>	<b>8,311,311</b>	<b>8,774,756</b>	<b>12,177,233</b>	<b>5,354,434</b>	<b>470,257</b>	<b>186,631</b>	<b>70,940</b>	<b>260,092</b>	<b>35,605,655</b>
<b>Advanced payments made to third parties</b>									
Initial balance	859	-	52,458	-	-	-	-	2,302	55,619
Movement (+)	477	-	38,809	-	-	-	-	7,014	46,301
Movement (-)	25	-	(56,227)	-	-	-	-	(8,819)	(65,020)
Difference in foreign exchange rate translation adjustment	76	-	(119)	-	-	-	-	-	(43)
<b>Final balance</b>	<b>1,437</b>	<b>-</b>	<b>34,922</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>498</b>	<b>36,857</b>

Figures stated in millions of Colombian pesos

2018	Networks, lines and cables	Plants, pipelines and tunnels	Construction in progress <sup>(1)</sup>	Land and buildings	Machinery and equipment	Communication and computer equipment	Furniture, fixtures and office equipment	Other property, plant and equipment <sup>(2)</sup>	Total
Initial balance	9,750,271	9,910,586	10,824,257	6,083,884	728,530	385,321	130,617	375,900	38,189,366
Additions <sup>3</sup>	33,100	35,300	3,938,568	19,680	19,834	47,031	2,260	30,360	4,126,133
Advanced payments (amortized) made to third parties	318	-	19,093	-	-	(86)	-	1,106	20,431
Transfers (-/+)	988,873	1,757,066	(3,060,750)	38,290	42,242	16,843	18,971	(8,937)	(207,402)
Dispositions (-)	(21,331)	(40,108)	(81,212)	(3,789)	(16,720)	(28,161)	(2,031)	(5,278)	(198,630)
Effect of changes in foreign exchange	180,742	144,889	25,885	35,965	38,040	6,205	1,395	3,383	436,504
Effect on loss of control of subsidiary	-	-	(27,129)	-	8	(11)	-	-	(27,132)
Other changes	69,462	(88,023)	(239,925)	52,888	(8,270)	9,561	(19,550)	5,121	(218,736)
<b>Cost final balance</b>	<b>11,001,435</b>	<b>11,719,710</b>	<b>11,398,787</b>	<b>6,226,918</b>	<b>803,664</b>	<b>436,703</b>	<b>131,662</b>	<b>401,655</b>	<b>42,120,534</b>
<b>Accrued depreciation and impairment loss</b>									
Initial balance of accrued depreciation and impairment loss	(2,784,511)	(2,546,524)	(1,074)	(731,260)	(249,969)	(225,501)	(54,765)	(115,666)	(6,709,270)
Depreciation for the period	(370,797)	(261,731)	-	(80,647)	(44,727)	(46,113)	(10,775)	(14,397)	(829,187)
Dispositions (-)	5,402	21,861	-	127	2,462	26,620	1,886	4,468	62,826
Transfers (-/+)	-	6,122	-	(6,292)	168	6	19	4	27
Effect of changes in foreign exchange	(73,417)	(83,373)	(93)	(6,430)	(13,111)	(4,688)	(584)	(2,372)	(184,068)
Effect on loss of control of subsidiary	-	-	-	-	-	11	-	-	11
Other changes	7,032	4,427	128	302	9,733	(2,892)	10,431	(1,435)	27,726
<b>Final balance accrued depreciation and impairment loss</b>	<b>(3,216,291)</b>	<b>(2,859,218)</b>	<b>(1,039)</b>	<b>(824,200)</b>	<b>(295,444)</b>	<b>(252,557)</b>	<b>(53,788)</b>	<b>(129,398)</b>	<b>(7,631,935)</b>
<b>Total final net balance property, plant and equipment</b>	<b>7,785,144</b>	<b>8,860,492</b>	<b>11,397,748</b>	<b>5,402,718</b>	<b>508,220</b>	<b>184,146</b>	<b>77,874</b>	<b>272,257</b>	<b>34,488,599</b>
<b>Advanced payments made to third parties</b>									
Initial balance	518	-	33,305	-	-	86	-	1,196	35,105
Movement (+)	318	96	75,280	-	-	-	-	1,524	77,219
Movement (-)	-	(96)	(56,187)	-	-	(86)	-	(418)	(56,787)
Difference in foreign exchange rate translation adjustment	23	-	60	-	-	-	-	-	83
<b>Final balance</b>	<b>859</b>	<b>-</b>	<b>52,458</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,302</b>	<b>55,619</b>

Figures stated in millions of Colombian pesos

- (1) Includes capitalization of borrowing costs for \$381,123 (2018: \$326,689), the weighted average effective rate used to determine the amount of borrowing costs was 8.28% (2018 7.85%) and 5.19% in USA dollars (2018: 5.73%). Additionally, it includes right-of-use assets associated with constructions in progress amounting to \$3,282.
- (2) Includes fleet equipment and vehicles, medical and scientific equipment, property, plant and equipment in assembly, property, plant and equipment in transit and replacement assets, dining room, kitchen, pantry and hotel equipment.
- (3) Includes purchases, capitalizable disbursements that meet recognition criteria, assets received from third parties and costs for decommissioning and removal of property, plant and equipment.
- (4) Corresponds to property, plant and equipment that as of January 1, 2019 under IFRS 16 were recognised as rights of use.

The following are the main projects under construction:

Project	2019	2018
Ituango <sup>(1)</sup>	9,961,227	9,368,040
Other projects	915,877	880,664
Construction, extension and maintenance of substations, networks, lines and cables of DECA subsidiaries	497,566	435,911
Substations, networks, lines and loss control ESSA	339,088	227,104
Substations, lines and network growth ENSA	229,828	181,109
Expansion of STN, STR, networks, lines and CENS loss control	93,083	103,773
Empresas públicas de Rionegro projects	42,717	23,017
Substations, networks, lines and loss control CHEC	34,960	67,163
Water and sewerage networks Regional waters EPM	21,640	26,709
Distribution networks and GIS implementation, Delsur	17,491	14,893
Expansion and repositioning of EDEQ plants, networks, lines and cables	9,234	14,079
EMVARIAS Projects - Vaso Altair (phase 3)	6,987	22,962
Hidrosur Projects	3,678	280
Projects Aguas de Malambo- Water and sewage networks	2,995	8,479
Aguas de Oriente Projects	858	273
Ticsa Group water treatment plants	2	5,003
Transmission Projects Chile	-	16,510
Los Cururos Wind Farm Projects	-	1,778
<b>Total</b>	<b>12,177,233</b>	<b>11,397,748</b>

Figures stated in millions of Colombian pesos

<sup>(1)</sup> As of 31 December 2019, the Ituango hydroelectric project presented a physical progress of 76.7% (31 December 2018: 88.2%), the physical progress presented as of the date of the period on which the separated financial statements are reported, corresponds to the new version of the recovery and commissioning program. As a result of the contingency that occurred on April 28, 2018, caused by a geological event that occluded the Cauca River diversion tunnel with approximately 160 thousand cubic meters of rock and soil, which generated an unscheduled damming, it was necessary to execute additional activities not contemplated in the schedule. Due to the above, a new schedule was made which includes recovery activities and longer terms. For this, the percentage of progress decreases both in what was programmed and what was executed. This new schedule is susceptible to changes and/or modifications, since the actual state of the underground works is not yet known, and it has not yet been possible to inspect it directly. It is estimated that the first power generation unit could enter into operation by the end of the last quarter of 2021. However, this commissioning date is very dynamic, due to changes in technical variables and the evolution and efficiency of the measures implemented to deal with the contingency.

As a consequence of the above, EPM has prioritized its decisions to protect firstly the communities and the environment and secondly the project infrastructure. Therefore, on May 7, 2018, the decision was made to evacuate the dammed water through the powerhouse of the future power generation plant so that it would be channeled back into the Cauca River, and thus return to its traditional flow and the water level of the dam would drop. On January 16 and February 5, 2019, the water intake gates #2 and #1, respectively, were closed, thus suspending the flow of water through the powerhouse, which allowed the inspection of the main cavern where the powerhouse is located, the transformer areas and beacon 1. With this, the cleaning and water pumping activities began in order to determine the severity of the works, the condition of the powerhouse and the work that must be done for its

recovery. Consequently, at the date of the financial statements, although it is true that a large part of the project's works have been explored, some directly and others indirectly, for example through drilling and geophysical tests, as with the southern area of the cave complex, it is not yet possible to have a precise estimate of the total and exact value of the damages associated with the civil works; However, equipment and civil works have been written off for a value of \$456,914; additionally, the project has been tested for impairment, considering the provisions of IAS 36 and no impairment has been evidenced.

Once the above activities are completed, adjusted estimates can be made regarding the time of the interventions, the recovery engineering and the works to be implemented to fully recover the project, using up to date information. With regard to compensation for the damage that occurred, on December 4, 2019, that Mapfre insurance company made a first payment for material damage in civil works, for \$525,438 (USD 150 million), which implied the cancellation of civil works for this amount.

According to the above, total of write-offs 31 December 2019 amounts to \$ 982,352, of which \$ 904,057 correspond to 2019.

On May 29, 2019, the closure of one of the two gates of the Auxiliary Deviation Gallery (GAD) was completed, in a new milestone in the project's risk mitigation work. With the closure of the first gate, on the left, the work of nearly three months was completed. After closure of the left GAD gate, the next work will focus on the closure of the right gate to complete the full closure. Subsequently, a 22-meter plug will be built downstream of the tailgate chamber in the axis of the dam.

In July 2019, dam construction was completed, which translates into risk reduction for downstream populations. During September, the dam wall was built on reinforced earth between units 2 and 3 and the material filling in 3A, in units 1 and 2 of the powerhouse cavern; also, heavy equipment was brought into the powerhouse to clean and remove materials from the assembly room to the south sector of the powerhouse, the rehabilitation of the access tunnel to the powerhouse was completed and the road between the north portal of the road tunnel and the road leading to Puerto Valdivia, up to km 13+610, began to be levelled.

On November 8, 2019, urban planning work was completed and the road over the top of the project's dam was handed over to the community of the municipality of Ituango, so that its inhabitants can have continuous mobility to and from their town.

On December 18, 2019, the second gate of the Auxiliary Deviation Gallery (GAD) was closed. The pre-positioning of the GAD, with its two gates duly closed, reduces risks for communities downstream of the works and means the continuation of the project's recovery process.

Additions to property, plant and equipment of \$3,654,027 are taken as effective items, less the movement of advances of \$18,720, capitalized interest of \$421,543, and environmental and decommissioning provisions of \$47,100.

At the closing of the period, all assets associated with electricity Generation, Distribution, Transmission, Natural Gas, Water Supply and Wastewater management Cash Generating Units, which have intangible assets with an indefinite useful life, were tested for impairment, resulting in impairment of certain components of the ESSA subsidiary in the amount of \$2,243.

As of December 31, 2019, there are restrictions on the realization of property, plant and equipment, associated with some equipment of the vehicle fleet for a net book value of \$2 (2018 \$2). These restrictions are given for theft and have been affected as a collateral for the fulfillment of obligations.

The most significant commitments for the acquisition of property, plant and equipment of the Group at the cut-off date amount to 2,487,972; (2018: \$3,667,414).

The following is the historical cost of the fully depreciated property, plant and equipment that continue in operation as at 31 December 2019 and 2018:

Group	2019	2018
Communication and computer equipment	57,438	51,411
Buildings	1,655	20,085
Plants, ducts and tunnels	17,103	12,602
Machinery and Equipment	13,662	12,312
Other properties, plant and equipment	8,991	9,572
Networks, lines and cables	10,738	5,713
<b>Total</b>	<b>109,587</b>	<b>111,695</b>

Figures stated in millions of Colombian pesos

## Note 6. Investment property

The fair value of investment property is based on an appraisal made by experts with recognised professional capacity and recent experience in the category of real estate investments subject to assessment; this value has been determined by officials of the EPM Group, appraisal specialists and valuation companies as *Corporación Avalúos Lonja Inmobiliaria* and *Ingeniería y Avalúos S.A.S.* To determine the fair value of investment property, the comparative or market method is used, which consists of deducting the price by comparing transactions, supply and demand and valuations of similar or comparable properties, previous time adjustments, conformation and location; the residual method, which applies only to buildings and is based on the determination of the updated cost of the construction less the depreciation for age and state of conservation; and the rent method, which is used to determine the possible value of a good according to its capacity to generate income, taking into account the probable monthly rental fee that tenants would be willing to pay in the lease market. See Note 44. Fair value measurement on a recurring and non-recurring basis.

Investment property	2019	2018
<b>Initial balance</b>	91,382	126,740
Net income or loss due to adjustment of far value <sup>(1)</sup>	51,517	3,873
Effect of changes in foreign exchange	115	889
Transfers <sup>(2)</sup> (-/+)	(2,660)	(40,120)
<b>Final balance</b>	<b>140,354</b>	<b>91,382</b>

Figures stated in millions of Colombian pesos

<sup>(1)</sup> See detail in Note 32. Other Income and Note 35. Other Expenses.

<sup>(2)</sup> Includes transfers to inventories.

Lease income from investment property for the period amounted \$694 (2018: \$657). Direct expenses related to investment property was \$74 (2018: \$61).

As of 31 December 2019 and 2018, there were no contractual obligations to acquire, construct or develop investment property or for repair, maintenance or improvements to investment property.

As at 31 December 2019, there are no contractual restrictions on investment property.

## Note 7. Goodwill and other intangible assets

The breakdown of the recorded value for intangible assets is as follows:

Intangibles	2019	2018
<b>Cost</b>		
Goodwill	3,102,023	3,325,834
Concessions and franchises	2,395,253	2,274,306
Rights	23,049	12,204
Licenses	140,714	142,853
Software	409,232	329,599
Easements	199,999	195,685
Disbursements Development Phases	34,070	40,076
Intangibles related to customers	420,771	462,876
Other intangibles	16,692	48,752
<b>Impairment</b>		
Crédito mercantil	(206,572)	(293,567)
<b>Accrued amortization and impairment</b>		
Concessions and franchises	(859,119)	(807,989)
Rights	(2,477)	(2,057)
Licenses	(76,791)	(80,243)
Software	(205,463)	(151,016)
Easements	(4,976)	(4,901)
Disbursements Development Phases	-	(6,675)
Intangibles related to customers	(117,227)	(101,978)
Other intangibles	(23,116)	(35,534)
<b>Total</b>	<b>5,246,063</b>	<b>5,348,225</b>

Figures stated in millions of Colombian pesos



The movement of cost, amortization and impairment of intangible assets is detailed below:

2019	Goodwill	Concessions and similar rights	Capitalized development disbursements	Software y aplicaciones informáticas	Licences	Rights	Other intangible assets <sup>(1)</sup>	Total
<b>Initial balance cost</b>	3,325,834	2,274,306	40,076	329,598	142,853	12,203	707,313	6,832,183
Additions(2)	-	263,482	9,991	19,159	11,094	12,106	838	316,670
Advance payments delivered to third parties	-	(602)	-	-	-	-	-	(602)
Transfers (-/+)	-	84,259	-	47,958	7,436	-	3,360	143,013
Dispositions (-)	-	(44,092)	-	-	(360)	(90)	-	(44,542)
Retreats	-	-	-	(1,469)	(2,067)	-	-	(3,536)
Effect of loss of control in subsidiary	(13,538)	-	(16,835)	-	(5,038)	-	(32,622)	(68,033)
Other changes	(80,248)	(5,639)	97	13,470	(13,303)	-	(204)	(85,827)
Effect in foreign exchange translation	(130,025)	(176,461)	741	516	99	(1,170)	(41,222)	(347,522)
<b>Final balance cost</b>	<b>3,102,023</b>	<b>2,395,253</b>	<b>34,070</b>	<b>409,232</b>	<b>140,714</b>	<b>23,049</b>	<b>637,463</b>	<b>6,741,804</b>
<b>Initial balance accumulated depreciation and impairment</b>	(293,567)	(807,989)	(6,674)	(151,016)	(80,243)	(2,056)	(142,412)	(1,483,957)
Depreciation for the period <sup>(3)</sup>	-	(101,900)	1	(41,835)	(14,558)	(382)	(32,543)	(191,217)
Capitalized Depreciation	-	(1,770)	-	-	-	-	1,769	(1)
Provisions (-)	-	(3)	-	1	359	90	-	447
Transfers (-/+)	-	-	-	-	4	-	-	4
Retreats	-	-	-	1,332	1,547	-	-	2,879
Effect of loss of control in subsidiary	12,519	-	7,001	-	1,996	-	16,830	38,346
Effect in foreign exchange translation	(4,419)	52,924	(328)	(483)	255	(5)	10,767	58,711
Other changes	78,895	(381)	-	(13,462)	13,849	(124)	270	79,047
<b>Final balance of accumulated depreciation and impairment</b>	<b>(206,572)</b>	<b>(859,119)</b>	<b>-</b>	<b>(205,463)</b>	<b>(76,791)</b>	<b>(2,477)</b>	<b>(145,319)</b>	<b>(1,495,741)</b>
<b>Final balance of net intangible assets</b>	<b>2,895,451</b>	<b>1,536,134</b>	<b>34,070</b>	<b>203,769</b>	<b>63,923</b>	<b>20,572</b>	<b>492,144</b>	<b>5,246,063</b>

#### Advance payments delivered to third parties

Initial balance		856						856
Advances movement +		200						200
Advance movement -		(803)						(803)
Business combination								-
Effect in foreign exchange translation		(53)						(53)
<b>Final Balance</b>		<b>200</b>						<b>200</b>

Figures stated in millions of Colombian pesos

2018	Goodwill	Concessions and similar rights	Capitalized development disbursements	Software y aplicaciones informáticas	Licences	Rights	Other intangible assets <sup>(1)</sup>	Total
<b>Initial balance cost</b>	3,349,147	1,899,895	71,454	243,145	115,548	53,964	712,723	6,445,876
Additions(2)	-	25,762	15,100	27,936	13,624	-	7,478	89,900
Advance payments delivered to third parties	-	860	-	-	-	-	-	860
Transfers (-/+)	-	101,489	(47,794)	49,565	10,932	-	37,333	151,525
Dispositions (-)	-	(18,236)	-	(2,487)	(2,353)	(83)	(1,040)	(24,199)
Retreats	-	-	-	-	(7)	-	(356)	(363)
Effect of loss of control in subsidiary	(23,313)	(53,761)	1,316	8,569	4,831	342	(11,516)	(73,532)
Other changes	-	318,297	-	2,871	278	(42,019)	(37,309)	242,118
<b>Final balance cost</b>	<b>3,325,834</b>	<b>2,274,306</b>	<b>40,076</b>	<b>329,599</b>	<b>142,853</b>	<b>12,204</b>	<b>707,313</b>	<b>6,832,185</b>
<b>Initial balance accumulated depreciation and impairment</b>	(288,476)	(702,567)	(5,623)	(116,523)	(64,806)	(1,615)	(129,141)	(1,308,751)
Depreciation for the period(3)	-	(81,724)	(506)	(31,448)	(13,622)	(485)	(35,136)	(162,921)
Capitalized Depreciation	-	6,052	-	-	-	-	-	6,052
Provisions (-)	-	-	-	2,450	2,316	-	-	4,766
Transfers (-/+)	-	2,750	-	-	-	-	(2,753)	(3)
Retreats	-	-	-	-	-	-	356	356
Effect in foreign exchange translation	(5,091)	13,659	(551)	(3,537)	(3,282)	(56)	(1,544)	(402)
Other changes	-	(46,158)	5	(1,959)	(849)	99	25,805	(23,057)
<b>Final balance of accumulated depreciation and impairment</b>	<b>(293,567)</b>	<b>(807,988)</b>	<b>(6,675)</b>	<b>(151,017)</b>	<b>(80,243)</b>	<b>(2,057)</b>	<b>(142,413)</b>	<b>(1,483,960)</b>
<b>Final balance of net intangible assets</b>	<b>3,032,267</b>	<b>1,466,318</b>	<b>33,401</b>	<b>178,582</b>	<b>62,610</b>	<b>10,147</b>	<b>564,900</b>	<b>5,348,225</b>

### Advance payments delivered to third parties

Initial balance								-
Advances movement +		860						860
Advance movement -								-
Business combination								-
Effect in foreign exchange translation		(4)						(4)
<b>Final Balance</b>		<b>856</b>						<b>856</b>

Figures stated in millions of Colombian pesos

- (1) Includes easements, intangible assets related to customers and other intangibles corresponding to premiums at gas service stations.
- (2) Includes purchases, capitalizable expenditure that meets the recognition criteria and concessions. In 2019, purchases associated with capitalized development expenditure were earmarked for IT projects: EAM Asset Management, Sentinel Project (Proyecto Centinela), Treasury Project (Proyecto Tesorería).
- (3) See note 33 Costs of services rendered and note 34 Administrative expenses.

At the end of the periods, impairment testing was performed on assets for those intangibles with an indefinite lifespan. The breakdown of recognised impairment in the statement of comprehensive income is in Note 8. Impairment of assets.

Lifespans of intangible assets are:

Concessions and similar rights	As contract effective term
Easements	Indefinite
Disbursements for capitalized development	Indefinite
Software and computer applications	Indefinite / finite 3 to 5 years
Licenses	Indefinite / finite 3 to 5 years
Rights	As contract effective term
Other intangible assets	Indefinite / finite 7 to 15 years

Depreciation of intangibles is recognised as costs and expenses through profit or loss in the Statement of comprehensive income, in the item Costs of services rendered and administrative expenses.

As of 31 December 2019 and 2018 no restrictions on the realization of intangible assets were identified and no contractual commitments were identified for the acquisition of said assets.

The recorded value at the cut-off date and the remaining amortization period for significant assets is:

Significant intangible assets	Lifespan	Remaining amortization period - years	2019	2018
Goodwill	Indefinite	-	2,895,451	3,032,267
Concession Chile	Defined	14	922,785	914,472
Easements lines corridor 53	Indefinite	-	63,041	63,040
Distribution Network Circuito Bello	Defined	9	52,227	25,089
Elektra Northeast S.A. - Sales and Distribution Management System	Defined	9	47,337	39,532
Deca-Intelligent Measurement System	Defined	5	15,511	-
Distribución Eléctrica del Sur - SAP Business Management System	Defined	8	12,818	14,976

Figures stated in millions of Colombian pesos

Depreciation of intangible assets is recognised as costs for \$155,773 (2018: \$137,180) and as expenses for \$35,444 (2018: \$25,740) in the statement of comprehensive income, section profit for the period, in the lines of Costs of Services Rendered (Note 33) and Administrative Expenses (Note 34).

The following intangible assets have an indefinite lifespan: goodwill and easements, the latter are agreed in perpetuity.

By definition, an easement is the real, perpetual or temporary right over another's property, under which it can be used, or exercise certain disposition rights, or prevent the owner from exercising some of their property rights. In the Group, easements are not treated individually, since they are constituted for public utility projects, where the general interest prevails over the individual, considering that the objective is to improve the quality of life of the community; the aforementioned projects do not have a definite temporality, that is why they are constituted in perpetuity supported in their use. However, there are some easements with a definite useful life, because they are tied to the lifespan of the main asset required by the easement.

As of December 2019, and 2018 the intangible assets with indefinite lifespans have a recorded value of \$3,090.474 and 3,218,138 respectively.

Intangible assets with indefinite lifespan	2019	2018
<b>Goodwill</b>		
Aguas de Antofagasta	1,464,940	1,611,530
Empresa eléctrica de Guatemala S.A.	966,326	955,695
Proyecto Central Generación Ituango	177,667	177,667
Elektra Noreste S.A.	119,447	119,041
Espíritu Santo	82,981	82,981
Empresas Varias de Medellín S.A. E.S.P	78,642	78,642
Empresa de Energía del Quindío S.A. E.S.P.	5,135	5,135
Tecnología Intercontinental S.A. de C.V.	-	1,263
Surtigás Necoclí	303	303
Central Hidroeléctrica de Caldas S.A. E.S.P	10	10
<b>Subtotal goodwill <sup>(1)</sup></b>	<b>2,895,451</b>	<b>3,032,267</b>
<b>Other intangible assets</b>		
Easements	195,023	185,871
<b>Subtotal other intangible assets</b>	<b>195,023</b>	<b>185,871</b>
<b>Total intangible assets with indefinite lifespan</b>	<b>3,090,474</b>	<b>3,218,138</b>

*Figures stated in millions of Colombian pesos*

<sup>(1)</sup> The variation presented in easements is mainly due to the effect in foreign exchange translation in Goodwill of Aguas de Antofagasta.

## Note 8. Impairment of assets

### 8.1 Impairment of investments in associates and joint ventures

At the date of presentation of the financial statements no impairment losses were recognised in the Statement of comprehensive income, related to investments in subsidiaries, associates and joint Ventures.

## 8.2 Impairment of cash generating units (CGU)

The recorded value of goodwill and intangible assets with indefinite lifespans associated with each CGU are broken down below:

Cash Generating Unit	Recorded value		Impairment (reversion)	
	2019	2018	2019	2018
<b>Energy generation segment</b>				
Goodwill	260,647	260,647	-	-
Easements	892	770	-	-
Land			104	-
Buildings			680	-
Plants, ducts and tunnels			1,386	-
Machinery and equipment			39	-
Furniture, fixtures and office equipment			9	-
Communication and computer equipment			5	-
Transport, traction and lifting equipment			9	-
Replacement assets			11	-
Rights-of-use Pulling and lifting transport equipment			11	-
<b>Generation</b>	<b>261,539</b>	<b>261,417</b>	<b>2,254</b>	<b>-</b>
<b>Energy transmission segment</b>				
Easements	127,094	127,058	-	-
<b>Transmission</b>	<b>127,094</b>	<b>127,058</b>	-	-
<b>Energy distribution segment</b>				
Goodwill	1,090,919	1,079,883	-	-
Easements	56,182	54,373	-	-
<b>Distribution</b>	<b>1,147,101</b>	<b>1,134,256</b>	-	-
<b>Natural gas segment</b>				
Goodwill	303	303	-	-
Easements	3,692	3,680	-	-
<b>Natural gas</b>	<b>3,995</b>	<b>3,983</b>	-	-
<b>Water supply segment</b>				
Goodwill	1,333,095	1,466,492	-	-
Easements	4,951	2,994	-	-
<b>Water supply</b>	<b>1,338,046</b>	<b>1,469,486</b>	-	-
<b>Wastewater management segment</b>				
Goodwill	131,845	146,300	-	-
Easements	1,362	1,052	-	-
Concessions and franchises			-	6,052
<b>Wastewater management</b>	<b>133,207</b>	<b>147,352</b>	-	<b>6,052</b>
<b>Solid waste management segment</b>				
Goodwill	78,642	78,642	-	-
<b>Solid waste management</b>	<b>78,642</b>	<b>78,642</b>	-	-
<b>Total</b>	<b>3,010,982</b>	<b>3,143,552</b>	<b>2,254</b>	<b>6,052</b>

Goodwill is allocated mainly to the segments or CGUs listed below:

Cash generating unit	2019	2018	Generated by
Generation EPM	260,647	260,647	Liquidation of the subsidiary EPM Ituango S.A. E.S.P. and Espíritu Santo whose assets were transferred to EPM
Distribution EDEQ	5,135	5,135	Business combination in the acquisition made by EPM Inversiones
Distribution CHEC	10	10	Business combination in the acquisition made by EPM Inversiones
Distribution EEGSA	966,327	955,696	Business combination in the acquisition of the Deca II Group by EPM
Distribution ENSA	119,447	119,042	Business combination in the acquisition of the PDG Group by EPM
Natural gas EPM	303	303	Business combination with Surtidora de Gas del Caribe S.A. E.S.P. by EPM
Water supply Adasa	1,433,966	1,580,556	Business combination in the acquisition of Aguas de Antofagasta by Inversiones Hanover
Wastewater management Adasa	30,974	30,974	Business combination in the acquisition of Aguas de Antofagasta by Inversiones Hanover
Wastewater management Ticsa	-	1,262	Business combination in the acquisition of Grupo Ticsa by EPM Mexico
Solid waste management Emvarias	78,642	78,642	Business combination in the acquisition by EPM
<b>Total</b>	<b>2,895,451</b>	<b>3,032,267</b>	

The intangible Easements is mainly assigned to the segments or CGUs detailed below:

Cash Generating Unit	2019	2018
Generation EPM	444	444
Generation CHEC	177	58
Hydro-ecological Generation of the Teribe	271	269
Transmission EPM	127,059	127,023
Transmission ESSA	35	35
Distribution EPM	29,433	28,945
Distribution EDEQ	256	254
Distribution CHEC	7,022	6,080
Distribution CENS	5,337	5,130
Distribution ESSA	7,178	7,152
Distribution EEGSA	593	501
Distribution ENSA	6,364	6,311
Natural gas EPM	3,692	3,680
Water supply Adasa	238	261
Water supply EPM	4,713	2,733
Wastewater Management EPM	593	454
Wastewater Management Aguas nacionales	597	597
Wastewater Management Aguas de Malambo	172	-
<b>Total</b>	<b>194,174</b>	<b>189,927</b>

#### Impairment of assets and intangibles - CGU Generation ESSA

ESSA calculated the impairment of its assets on the basis of IAS 36, seeking to ensure that the value of the assets recognised as cut-off at 31 December 2019 reflects their recoverable value through use or sale.

Value in use: estimates of the future cash flows the company expects to obtain on the assets were made; considering the expectations on possible changes in value, in addition it was based on the most recent financial projections, the cash flow was calculated at 20 years with continuity value given the useful life of the assets. The discount rate used for the valuation reflects the capital structure of the company, which considers the return that the owner would require from this type of investment.

Based on this, the value of the assets' impairment as of 31 December 2018 amounts to \$2,254,009,110 and results from:

Value in use:	\$12,102,554,783	Colombian pesos
CGU Recorded Value:	\$14,356,563,893	Colombian pesos
Value of Impairment:	\$2,254,009,110	Colombian pesos

The key assumptions used by the Group in the determination of the value in use/fair value less selling costs are as follows:

Description	Key Assumption
Revenue	The amount of energy sold would be given by the average generation and 75% would be marketed in the long-term in bilateral contracts and 25% in the stock exchange. It is estimated that energy prices will decrease in the long term due to the market's behavior, given the strong entry of non-conventional renewable energy projects - NCRE such as wind and solar farms.
Costs and Expenses	Costs and expenses are estimated according to the requirements of the plants in operation.
Investment	The replacement of the small hydroelectric plant Palmas is considered.

The value in use and the recorded value of the CGU at the end of 2019 that have intangible assets with indefinite lifespans is detailed below:

Cash Generating Unit	Functional Currency	Value in Use	Recorded Value
Water supply EPM	Colombian Pesos	3,470,608	2,619,466
Sanitation EPM	Colombian Pesos	1,742,237	1,113,710
Generation EPM	Colombian Pesos	23,458,487	17,880,484
Transmission EPM	Colombian Pesos	1,029,410	847,163
Distribution EPM	Colombian Pesos	6,073,939	4,249,358
Natural gas EPM	Colombian Pesos	1,370,182	844,236
Transmission CENS	Colombian Pesos	13,679	5,105
Distribution CENS	Colombian Pesos	1,210,303	953,775
Generation CHEC	Colombian Pesos	337,124	300,750
Distribution CHEC	Colombian Pesos	745,115	590,213
Distribution EDEQ	Colombian Pesos	337,754	191,129
Generation ESSA	Colombian Pesos	12,103	14,357
Distribution ESSA	Colombian Pesos	1,846,518	1,369,316
Distribution EEGSA	Guatemalan Quetzals	5,988	4,532
Distribution ENSA	Dólares americanos	756	510
Wastewater management Ticsa	Mexican pesos	545	(119)
Solid waste management Emvarias	Colombian Pesos	301,619	187,544
Water supply Adasa	Chilean Pesos	847,143	649,674
Wastewater management Adasa	Chilean Pesos	83,783	62,025
Wastewater Management Aguas de Malambo	Colombian Pesos	23,207	15,474
Generation Hidrogeológica del Teribe	US Dollar	146	143

## Note 9. Investment in subsidiaries

The breakdown of the subsidiaries of the Group at the date of the reporting period is the following:

Name of the Subsidiary	Location (country)	Main Activity	Percentage of participation and voting rights		Percentage of participation of the non-controlling interest		Date of establishment
			2019	2018	2019	2018	
Empresa de Energía del Quindío S.A. E.S.P. (EDEQ)	Colombia	Provides electrical energy utilities purchase, sale and distribution of electrical energy.	92.85%	92.85%	7.15%	7.15%	22/12/1988
Central Hidroeléctrica de Caldas S.A. E.S.P. (CHEC)	Colombia	Provides public energy utilities, operating electricity generating plants, transmission and sub-transmission lines and distribution networks, as well as the marketing, import, distribution and sale of electricity.	80.10%	80.10%	19.90%	19.90%	09/09/1950
Electrificadora de Santander S.A. E.S.P. (ESSA)	Colombia	Provides public electricity utilities and purchases, sells and distributes electricity.	74.05%	74.05%	25.95%	25.95%	16/09/1950
Centrales Eléctricas del Norte de Santander S.A. E.S.P. (CENS)	Colombia	Provides public utilities for electrical energy, purchase export, import, distribution and sale of electrical energy. Construction and operation of generating plants, transmission lines and substations and distribution networks.	91.52%	91.52%	8.48%	8.48%	16/10/1952
Elektra Noreste S.A. (ENSA)	Panama	Purchases energy, transports, distributes to customers, transforms voltage, installs, operates and maintains public lighting, and is authorised to generate energy up to a limit of 15% of the maximum demand in the concession area.	51.16%	51.16%	48.84%	48.84%	19/01/1998
Hidroecológica del Teribe S.A. (HET)	(1) Panama	Finances the construction of the Bonyic hydroelectric project required to satisfy the growth in energy demand in Panama.	99.68%	99.18%	0.32%	0.82%	11/11/1994
Empresa Eléctrica de Guatemala S.A. (EEGSA)	Guatemala	Provides electrical energy distribution services.	80.90%	80.90%	19.10%	19.10%	05/10/1939
Gestión de Empresas Eléctricas S.A. (GESA)	Guatemala	Provides advisory and consulting services to electricity distribution, generation and transportation companies.	100.00%	100.00%	-	-	17/12/2004



Name of the Subsidiary	Location (country)	Main Activity	Percentage of participation and voting rights		Percentage of participation of the non-controlling interest		Date of establishment
			2019	2018	2019	2018	
Almacenaje y Manejo de Materiales Eléctricos S.A. (AMESA)	Guatemala	Provides outsourcing services in the area of materials management.	99.94%	99.94%	0.06%	0.06%	23/03/2000
Comercializadora Eléctrica de Guatemala S.A. (COMEGSA)	Guatemala	Provides electrical energy commercialization services.	80.52%	80.52%	19.48%	19.48%	05/11/1998
Transportista Eléctrica Centroamericana S.A. (TRELEC)	Guatemala	Provides electricity transmission services.	80.90%	80.90%	19.10%	19.10%	06/10/1999
Energica S.A. (ENERGICA)	Guatemala	Provides construction and maintenance services for projects and goods in the electrical sector.	78.19%	78.19%	21.81%	21.81%	31/08/1999
Crediegsa S.A. (CREDIEGSA)	Guatemala	Provides personnel hiring and other administrative services	80.90%	80.90%	19.10%	19.10%	01/12/1992
Distribuidora de Electricidad del Sur (DELSUR)	El Salvador	Transformation, distribution and commercialization of electricity that supplies energy to the south-central zone of El Salvador in Central America.	86.41%	86.41%	13.59%	13.59%	16/11/1995
Innova Tecnología y Negocios S.A. de C.V.	El Salvador	Provision of specialized services in electrical engineering and sale of electrical appliances to the users of electrical energy of the company Delsur.	86.41%	86.41%	13.59%	13.59%	19/10/2010
Parque Eólico Los Cururos SpA.	(2) Chile	Generation of electricity through all types of fuels and renewable energies such as wind, photovoltaic and biomass, transmission, purchase, sale and marketing of electricity.	-	100.00%	-	-	26/08/2011
Aguas Nacionales EPM S.A. E.S.P.	Colombia	Provides public home utilities as water supply, sewerage and sanitation, solid waste treatment and use, complementary activities and engineering services for these public utilities.	99.99%	99.99%	0.01%	0.01%	29/11/2002
Aguas Regionales EPM S.A. E.S.P.	Colombia	Guarantee the provision of public home utilities of water, sewage and sanitation and to compensate for the lack of infrastructure for these services in partner municipalities.	69.76%	69.76%	30.24%	30.24%	18/01/2006

Name of the Subsidiary		Location (country)	Main Activity	Percentage of participation and voting rights		Percentage of participation of the non-controlling interest		Date of establishment
				2019	2018	2019	2018	
Empresa de Aguas del Oriente Antioqueño S.A. E.S.P.	(9)	Colombia	Provides public home utilities of water supply and sewerage, as well as other complementary activities typical of each of these public utilities.	56.02%	56.01%	43.98%	43.99%	22/11/1999
Aguas de Malambo S.A. E.S.P.	(3)	Colombia	Guarantee the provision of public home water, sewage and sanitation utilities in the jurisdiction of the Municipality of Malambo, Department of Atlántico.	98.52%	98.09%	1.48%	1.91%	20/11/2010
Ecosistemas de Colima S.A. de C.V.	(4)	Mexico	Dedicated to developing the executive project for the wastewater treatment plant, its construction, equipment and operation, conservation and maintenance of sludge stabilization in municipalities of the State of Colima.	100.00%	80.00%	-	20.00%	14/02/2006
Ecosistemas de Tuxtla S.A. de C.V.	(4)	Mexico	Dedicated to the construction, equipment, commissioning, operation and maintenance of a wastewater treatment system with the modality of total recoverable private investment. Develop drinking water and water treatment plant projects.	100.00%	80.00%	-	20.00%	17/11/2006
Ecosistema de Ciudad Lerdo S.A. de C.V.	(4)	Mexico	Subsidiary dedicated to the construction, equipment, commissioning, operation and maintenance for 20 years of a wastewater treatment system in the city of Lerdo Durango, with the total private recoverable investment modality.	100.00%	80.00%	-	20.00%	24/04/2007
Aquasol Morelia S.A. de C.V.	(4)	Mexico	Subsidiary dedicated to the construction of a wastewater treatment plant, as well as the equipment and operation of this plant located in the town of Atapaneo in the Municipality of Morelia Michoacán.	100.00%	80.00%	-	20.00%	13/11/2003
Ecosistemas de Celaya S.A. de C.V.	(4)	Mexico	Dedicated to the development of the executive project for the wastewater treatment plant, as well as the treatment, transportation and final disposal of solid waste and sludge in the plant in the city of Celaya, state of Guanajuato.	100.00%	80.00%	-	20.00%	05/12/2008
Desarrollos Hidráulicos de Tampico S.A. de C.V.	(4)	Mexico	Dedicated to the construction, equipment, expansion, improvement, conservation, maintenance and operation of water supply and sewerage services, collection, drainage and wastewater treatment works.	100.00%	80.00%	-	20.00%	25/08/1995

Name of the Subsidiary		Location (country)	Main Activity	Percentage of participation and voting rights		Percentage of participation of the non-controlling interest		Date of establishment
				2019	2018	2019	2018	
Ecoagua de Torreón S.A. de C.V.	(4)	Mexico	Dedicated to providing operational services for the treatment of wastewater from any source, whether municipal or domestic, as well as the activity related to wastewater treatment.	100.00%	80.00%	-	20.00%	25/10/1999
Proyectos de Ingeniería Corporativa S.A. de C.V.	(4)	Mexico	Provision of design services, engineering in general or construction, professional and technical services to operate, manage, direct and generally carry out all activities that are necessary for the development of activities of any commercial, industrial or service company, in its mode of natural or legal entity.	100.00%	80.00%	-	20.00%	01/08/2008
Corporación de Personal Administrativo S.A. de C.V.	(4)	Mexico	Provision of professional services tending to operate, manage, direct and in general perform all necessary activities for the development of any company of commercial, industrial or services type in its modality of natural or legal entity, as well as the management, selection, hiring and exchange of personnel that carries out functions within the facilities of applicant companies.	100.00%	80.00%	-	20.00%	01/08/2008
Aguas de Antofagasta S.A.		Chile	Construction, and operation of the public utilities of production and distribution of drinkable water and of collection and disposition of served waters through the operation of the sanitation concessions of the Empresa de Servicios Sanitarios de Antofagasta S.A. (now Econssa Chile S.A.), and the provision of other services related to such activities, all in the form and under the conditions established in Decrees with Force of Law numbers 382 and 70, both of 1998, of the Ministry of Public Works, and other relevant regulations. To this end, on 29 December 2003, Aguas de Antofagasta S.A. signed with Empresa de Servicios Sanitarios de Antofagasta S.A. (currently Empresa Concesionaria de Servicios Sanitarios S.A. - Econssa S.A.) the "Agreement for the transfer of the right to operate sanitary concessions" (Contrato de transferencia del derecho de explotación de concesiones sanitarias), for a total period of 30 years from the date of its signing.	100.00%	100.00%	-	-	28/11/2003
Empresas Varias de Medellín S.A. E.S.P.		Colombia	Subsidiary dedicated to the provision of solid waste management utility within the framework of integrated solid waste management.	99.93%	99.93%	0.07%	0.07%	11/01/1964
EPM Inversiones S.A.		Colombia	Dedicated to capital investment in national or foreign companies organized as public utilities companies.	99.99%	99.99%	0.01%	0.01%	25/08/2003

Name of the Subsidiary		Location (country)	Main Activity	Percentage of participation and voting rights		Percentage of participation of the non-controlling interest		Date of establishment
				2019	2018	2019	2018	
Maxseguros EPM Ltd.		Bermuda	Negotiation, contracting and management of reinsurance for policies covering assets.	100.00%	100.00%	-	-	23/04/2008
Panamá Distribution Group S.A. - PDG		Panama	Capital investment in companies.	100.00%	100.00%	-	-	30/10/1998
Distribución Eléctrica Centroamericana DOS S.A. - DECA II		Guatemala	Makes capital investments in companies engaged in the distribution and marketing of electrical energy and in providing telecommunications services.	100.00%	100.00%	-	-	12/03/1999
Inmobiliaria y Desarrolladora Empresarial de América S.A. (IDEAMSA)		Guatemala	Subsidiary dedicated to making investments in real estate.	80.90%	80.90%	19.10%	19.10%	15/06/2006
Promobiliaria S.A.	(5)	Panama	Purchasing, selling, building, modifying, managing, leasing and in general entering into any contract for the disposal, improvement, use and usufruct of real estate not required for the operation owned by the companies that make up the EPM Group.	100.00%	100.00%	-	-	08/09/2015
EPM Latam S.A.		Panama	Make capital investments in companies.	100.00%	100.00%	-	-	17/05/2007
EPM Capital México S.A. de C.V.	(6)	Mexico	Develop infrastructure projects related to energy, lighting, natural gas, telecommunications, sanitation, drinking water plants, wastewater treatment, buildings, as well as their operation, studies and services.	100.00%	100.00%	-	-	04/05/2012
EPM Chile S.A.		Chile	Develops energy, lighting, natural gas, telecommunications, sanitation, drinking water, sewage and wastewater treatment plants projects, as well as providing these services and participating in all types of public or private tenders and auctions.	100.00%	100.00%	-	-	22/02/2013

Name of the Subsidiary		Location (country)	Main Activity	Percentage of participation and voting rights		Percentage of participation of the non-controlling interest		Date of establishment
				2019	2018	2019	2018	
Inversiones y Proyectos Hidrosur SpA		Chile	Participate in all types of tenders, bids, auctions whether public and/or private in the purchase of shares in national or foreign companies. Make strategic alliances, joint ventures and sign business collaboration agreements to bid for tenders, obtain concessions and / or authorizations. To provide all types of advice and services directly or indirectly related to the activities it carries out and in which the company is involved.	100.00%	100.00%	-	-	16/12/2014
Tecnología Intercontinental S.A. de C.V. TICSA	(4)	Mexico	Dedicated to the study, development, promotion and execution of industrial projects, design, manufacture, assembly and installation of machinery, development of technology including commercial representation and trade in general.	100.00%	80.00%	-	20.00%	28/07/1980
Autonomous equity (Patrimonio Autónomo) Financiación Social		Colombia	Manage the resources and payments of the social financing program created to facilitate the purchase of household appliances, gas appliances and products related to information technology.	100.00%	100.00%	-	-	14/04/2008
EV Alianza Energética S.A.	(7)	Panama	Provision of energy efficiency services and all related services, such as environmental services, marketing and financing of efficiency projects, as well as the provision of energy and technological solutions, production, transformation, purchase, sale and supply of energy, gas and related products such as biogas; consulting services, the performance of studies, reports and projects relating to the above operations and services, as well as those related to the environment and energy saving.	51.00%	51.00%	49.00%	49.00%	22/01/2016

Name of the Subsidiary		Location (country)	Main Activity	Percentage of participation and voting rights		Percentage of participation of the non-controlling interest		Date of establishment
				2019	2018	2019	2018	
EPM Transmisión Chile S.A.	(2)	Chile	Operation, development of electrical systems for the transport, transmission and transformation of electrical energy, either within the country or abroad, and the acquisition of the same. For such purposes, it may obtain, acquire or enjoy the respective concessions, permits and authorizations, as well as exercise the rights and powers conferred by the legislation in force on electricity companies. Likewise, the commercialization of the transmission capacity of lines and the transformation of the substations and equipment associated with them, so that the generating plants, both national and foreign, can transmit the electrical energy they produce and reach their consumption centers.	-	100.00%	-	-	02/02/2017
Empresas Públicas de Rionegro S.A.S. E.S.P. - EP RIO	(8)	Colombia	Provision of public home utilities, including water supply and sewerage, as well as complementary and related activities to them, specifically the management, operation, maintenance and investment of water supply and sewerage systems in the Municipality of Rionegro, the implementation of programs and projects on the environment and renewable and non-renewable natural resources, to promote sustainable development. In addition, the company will provide maintenance services for the public lighting network in the Municipality of Rionegro.	100.00%	100.00%	-	-	09/12/1996
ENSA Servicios S.A.		Panama	Provision of technical, commercial and any other complementary services to the provision of the electricity service, without limiting the other analogous, related and/or compatible services that constitute an added value to the activities described.	51.16%	51.16%	48.84%	48.84%	29/11/2017

- (1) On 20 December 2019, EPM capitalized Hidroecológica del Teribe S.A. (HET) for \$178,469 (USD\$ 53,717,349.84)
- (2) On 16 September 2019, the EPM Group, through its subsidiary EPM Chile S.A., entered into a share purchase agreement with AES Gener S.A. and its subsidiary Norgener Renovables SpA for the sale of 100% of the shares it holds in Parque Eólico Los Cururos SpA. and EPM Transmisión Chile S.A. Subsequently, on November 27, 2019, the transfer by way of sale of the shares held in these companies was formalized. (see note 9.3.1)
- (3) On 14 June 2019, EPM capitalized Aguas de Malambo S.A. E.S.P. for \$12,000.

- (4) On 15 July 2019, the EPM Group, through its subsidiary Tecnología Intercontinental S.A. de C.V. TICSA, reimburses and cancels the shares subscribed by non-controlling interests, retaining 100% ownership and voting rights.
- (5) On 16 December 2019, EPM Latam S.A. capitalized Promobiliaria S.A. for USD\$ 1,400,000.
- (6) On 2 September 2019, EPM capitalized EPM Capital Mexico S.A. de C.V. for \$74,661.
- (7) On 19 December 2018, the Shareholders' Meeting of EV Alianza Energética S.A. unanimously approved the dissolution of the Company. Consequently, during 2019 the procedures corresponding to this act were initiated and will be continued in 2020.
- (8) On 30 December 2019, in accordance with public deed No. 4641 of the Second Notary Office of Rionegro - Antioquia, registered at the Cámara de Comercio de Oriente Antioqueño Chamber of Commerce on 31 December 2019, the approval of the merger by absorption by which EPM absorbs Empresas Públicas de Rionegro S.A.S. E.S.P. - EP RIO was protocolized. Based on the merger commitment, it was established that, for accounting purposes, the final operation is perfected based on the figures shown in the accounts of the two companies, as of the last day of the month in which the respective deed is executed, i.e. 31 December 2019. Consequently, the operations of Empresas Públicas de Rionegro S.A.S. E.S.P. - EP RIO. (absorbed company) are carried out by EPM (absorbing company) from 1 January 2020.
- (9) In July 2019 EPM capitalized Empresa de Aguas del Oriente Antioqueño S.A. E.S.P. \$1,211.

The financial information of the Group's subsidiaries that have significant non-controlling interests as of the date of the reporting period is as follows:

2019	Current Assets	Non-Current Assets	Current Liabilities	Non-Current Liabilities	Revenue	Profit or loss for the Continuing Operations	Other Comprehensive Income	Total Comprehensive Income	Cash Flows
Elektra Noreste S.A. (ENSA)	659,340	1,960,812	1,138,014	889,124	2,417,021	107,816	6,352	114,168	69,466
Empresa Eléctrica de Guatemala S.A. (EEGSA)	549,658	1,611,453	395,863	835,322	2,060,200	100,390	32,968	133,358	18,644
Electrificadora de Santander S.A. E.S.P. (ESSA)	321,713	1,558,855	335,156	850,594	1,195,556	148,540	24,105	172,645	133,587
Centrales Eléctricas del Norte de Santander S.A. E.S.P. (CENS)	229,499	964,992	231,573	672,756	777,880	65,033	(4,330)	60,703	47,534
Distribuidora Eléctrica del Sur S.A. de C.V. (DELSUR)	172,535	385,611	236,994	178,658	1,040,346	44,112	(4,424)	39,688	23,028
Central Hidroeléctrica de Caldas S.A. E.S.P. (CHEC)	244,733	944,416	261,482	383,707	766,819	123,470	(1,045)	122,425	19,874
Comercializadora Eléctrica de Guatemala S.A. (COMEGSA)	95,011	1,262	25,132	1,122	329,092	12,695	539	13,234	3,479
Empresa de Energía del Quindío S.A. E.S.P. (EDEQ)	77,132	211,633	43,155	71,474	245,074	35,822	(525)	35,297	19,782
Transportista Eléctrica Centroamericana S.A. (TRELEC)	114,663	897,312	580,416	(24,302)	108,379	45,789	2,633	48,422	3,362
Aguas Regionales EPM S.A. E.S.P.	25,534	143,830	34,000	32,754	56,210	9,932	-	9,932	10,469
Other interests <sup>(1)</sup>	499,893	3,957,809	387,610	486,967	722,615	517,524	7,972	525,496	230,789

Figures stated in millions of Colombian pesos

2018	Current Assets	Non-Current Assets	Current Liabilities	Non-Current Liabilities	Revenue	Profit or loss for the	Other Comprehensive Income	Total Comprehensive Income	Cash Flows
						Continuing Operations			
Elektra Noreste S.A. (ENSA)	689,117	1,882,980	953,049	1,066,721	2,022,376	96,603	42,148	138,751	19,468
Empresa Eléctrica de Guatemala S.A. (EEGSA)	490,858	1,475,679	453,823	598,840	1,668,797	136,965	35,396	172,361	23,165
Electrificadora de Santander S.A. E.S.P. (ESSA)	312,774	1,427,035	293,144	790,896	1,115,338	139,738	19,994	159,732	129,198
Centrales Eléctricas del Norte de Santander S.A. E.S.P. (CENS)	173,048	909,308	231,845	621,052	688,659	42,141	(1,800)	40,341	21,866
Distribuidora Eléctrica del Sur S.A. de C.V. (DELSUR)	216,165	354,490	197,559	229,937	884,840	43,475	10,656	54,131	30,143
Central Hidroeléctrica de Caldas S.A. E.S.P. (CHEC)	190,884	864,688	151,124	339,943	681,783	118,901	111	119,012	14,059
Comercializadora Eléctrica de Guatemala S.A. (COMEGSA)	88,905	581	28,568	76	278,900	4,598	2,014	6,612	5,446
Empresa de Energía del Quindío S.A. E.S.P. (EDEQ)	66,422	193,750	51,399	39,098	233,114	33,665	1,203	34,868	22,472
Tecnología Intercontinental S.A. de C.V. (TICSA)	121,894	412,125	182,200	114,578	152,372	11,539	22,347	33,886	16,479
Transportista Eléctrica Centroamericana S.A. (TRELEC)	255,562	773,821	579,335	667	88,945	27,777	15,617	43,394	245
Aguas Regionales EPM S.A. E.S.P.	19,311	120,376	23,964	23,044	50,942	8,383	-	8,383	4,392
Other interests <sup>(1)</sup>	735,582	4,301,341	640,185	1,161,602	527,918	242,886	58,463	301,349	193,213

Figures stated in millions of Colombian pesos

- <sup>(1)</sup> Corresponds to investments in subsidiaries where the non-controlling interest is not significant in terms of equity participation and/or the amount of financial figures of each entity, and includes the following subsidiaries: Hidroecológica del Teribe S.A., Energica S.A., Credieegsa S.A., Aguas Nacionales EPM S.A. E.S.P., Empresa de Aguas del Oriente Antioqueño S.A. E.S.P., Aguas de Malambo S.A. E.S.P., Ecosistemas de Colima S.A. de C.V., Empresas Varias de Medellín S.A. E.S.P, EPM Inversiones S.A., Inmobiliaria y Desarrolladora Empresarial de América S.A., Innova Tecnología y Negocios S.A. de C.V., Ecosistemas de Tuxtla S.A. de C.V., Ecosistema de Ciudad Lerdo S.A. de C.V., Aquasol Morelia S.A. de C.V., Ecosistemas de Celaya S.A. de C.V, Desarrollos Hidráulicos de TAM S.A. de C.V., Ecoagua de Torreón S.A. de C.V., Proyectos de Ingeniería Corporativa S.A. de C.V., Corporación de Personal Administrativo S.A. de C.V., EV Alianza Energética S.A. and ENSA Servicios S.A.



Profit or loss for the period, the dividends paid, and the assets allocated to non-controlling interests at the date of the reporting period are as follows:

Non-controlling interests	2019			
	Equity	Profit or loss for the period	Other comprehensive income	Dividends paid
ELEKTRA NORESTE S.A.	289,364	52,704	(431)	10
Electrificadora de Santander S.A. E.S.P. (ESSA)	180,326	38,551	6,256	35,048
Empresa Electrica de Guatemala S.A. (EEGSA)	177,597	19,172	(1,435)	16,008
Central Hidroelectrica de Caldas S.A. E.S.P. (CHEC)	108,243	24,569	(208)	28,450
Transportista Electrica Centroamericana S.A. (TRELEC)	87,060	8,745	-	8,137
Centrales Electricas del Norte de Santander S.A. E.S.P.	24,609	5,515	(367)	-
Distribuidora de Electricidad del Sur S.A. de C.V. (DELSUR)	19,319	5,973	(164)	7,853
Aguas Regionales S.A. E.S.P.	31,029	3,003	-	-
Comercializadora Electrica de Guatemala S.A. (COMEGSA)	13,372	2,424	-	777
Empresa de Energia del Quindio S.A. E.S.P. (EDEQ)	12,442	2,560	(38)	2,188
Other non-controlled interests <sup>(1)</sup>	21,039	7,547	(4)	4,691

Figures stated in millions of Colombian pesos

Non-controlling interests	2018			
	Equity	Profit or loss for the period	Other comprehensive income	Dividends paid
Elektra Noreste S.A. (ENSA)	270,575	46,894	125	33,341
Electrificadora de Santander S.A. E.S.P. (ESSA)	170,192	36,266	5,189	22,455
Empresa Electrica de Guatemala S.A. (EEGSA)	174,531	26,157	374	24,502
Central Hidroelectrica de Caldas S.A. E.S.P. (CHEC)	112,332	23,660	22	16,844
Transportista Electrica Centroamericana S.A. (TRELEC)	85,823	5,305	-	1,490
Tecnologia Intercontinental S.A. de C.V. (TICSA)	32,304	(46)	861	-
Centrales Electricas del Norte de Santander S.A. E.S.P.	19,460	3,574	(153)	1,636
Distribuidora de Electricidad del Sur S.A. de C.V. (DELSUR)	19,432	5,885	(200)	4,435
Aguas Regionales S.A. E.S.P.	28,025	2,535	-	-
Comercializadora Electrica de Guatemala S.A. (COMEGSA)	11,620	878	-	1,685
Empresa de Energia del Quindio S.A. E.S.P. (EDEQ)	12,124	2,405	86	15,791
Other non-controlled interests <sup>(1)</sup>	17,289	5,730	2	4,210

Figures stated in millions of Colombian pesos

<sup>(1)</sup> Corresponds to investments in subsidiaries where the non-controlling interest is not significant and includes the following companies: Inmobiliaria y Desarrolladora Empresarial de América S.A., Enérgica S.A, Aguas de Malambo S.A. E.S.P., Empresa de Aguas del Oriente Antioqueño S.A. E.S.P., Hidroecológica del Teribe S.A., Crediegsa S.A., Aguas Nacionales EPM S.A. E.S.P., Empresas Varias de Medellín S.A. E.S.P. and E.V. Alianza Energética S.A.

### 9.1 Significant restrictions

As of 31 December 2019, and 2018, the Group does not have any significant restriction to access or use the assets, settle Group liabilities, nor do the non-controlling interests have protective rights that could restrict the Group's ability to access or use the assets and settle liabilities of the subsidiaries or restrict dividends and other capital distributions.

### 9.2 Consolidated structured entities

As of 31 December 2019 and 2018, the Group has as a consolidated structured entity the *Patrimonio Autónomo Financiación Social* Autonomous equity. The participation in this entity is 100%, the value of the total assets amounts to \$167,272 (2018: \$149,322), the total liabilities to \$17,998 (2018: \$12,583) and the net profit for the period to \$21,376 (2018: \$18,702).

The Group has no obligation to provide financial support to the entity.

### 9.3 Loss of Control of Subsidiaries

9.3.1 On 27 November 2019, the EPM Group, through its subsidiary EPM Chile S.A., disposed of its investments in:

- Parque Eólico Los Cururos SpA. which carries out electricity generation activities through all types of fuels and renewable energies such as wind, photovoltaic and biomass, transmission, purchase, sale and marketing of electricity and,
- EPM Transmisión Chile S.A., which carries out activities of operation, development of electrical systems for the transport, transmission and transformation of electrical energy, either within the country or abroad, and the acquisition of these. It also markets the transmission capacity of lines and the transformation capacity of substations and associated equipment so that generating plants, both domestic and foreign, can transmit the electricity they produce to their consumption centers.

The effect of the transaction on the profit or loss for the period is as follows:

Consideration value transferred	495,402
Value of net assets of the subsidiary	(474,313)
Cost of sales	(4,813)
Reclassification of component of other comprehensive income from conversion of financial statements	8,222
Realisation of capitalised interest	27,148
Loss on valuation of previously held investments	(3,401)
<b>Profit on disposal of subsidiaries (see note 40)</b>	<b>48,245</b>

*Figures stated in millions of Colombian pesos*

The net effect at the date of the transaction in the consolidated statement of cash flows represents a decrease corresponding to cash and cash equivalents held in subsidiaries of \$6,915.

9.3.2 On October 9, 2018, the subsidiaries TICSА and Proyectos de Ingeniería Corporativa S.A. de C.V. entered into a share purchase agreement, where they sold and transferred 95,941 shares and 1 share, respectively, they held in the company Ecosistema de Uruapan S.A. de C.V., to the companies Terrabrio S.A.P.I. de C.V. and Ecosistema de Sonora S.A.P.I. de C.V. The effect of the transaction on profit or loss for the period is as follows:

Exchange value	4,488
Value of net assets of the subsidiary	7,531
<b>Loss on disposal of subsidiary (see note 38)</b>	<b>(3,043)</b>

Figures stated in millions of Colombian pesos

The net effect as at the date of the transaction in the consolidated statement of cash flows represents a decrease corresponding to the cash and cash equivalents held in the subsidiary Ecosistema de Uruapan S.A. de C.V. for COP \$10.

## Note 10. Investments in associates

The breakdown of Investment in associates of the Group as at the date of the reporting period is:

Name of the associate	Location (country)	Main Activity	Percentage of participation and voting rights		Date of establishment
			2019	2018	
Hidroeléctrica Ituango S.A. E.S.P.	Colombia	Promotion, design, construction, operation, maintenance and marketing of energy at national and international level of the Pescadero Hituango Hydroelectric Power Plant	46.45%	46.45%	8/06/1998
Hidroeléctrica del Rio Aures S.A. E.S.P.	Colombia	Generation and commercialization of electrical energy through a hydroelectric plant, located in the jurisdiction of the municipalities of Abejorral and Sonsón. of the Department of Antioquia	32.99%	32.99%	14/05/1997
UNE EPM Telecomunicaciones S.A.	Colombia	Provision of telecommunications services information and communication technologies information services and complementary activities.	50.00%	50.00%	23/06/2006
Inversiones Telco S.A.S.	Colombia	Investing in companies whose corporate purpose is based on the provision of business process outsourcing (BPO) services for companies, especially but not limited to telecommunications companies.	50.00%	50.00%	5/11/2013
VE Servicios de Eficiencia Energética S.A.S. <sup>(1)</sup>	Colombia	To carry out all activities, works and services, either its own or those related to the installation, operation and production of energy of each of the energy efficiency projects developed by EV Alianza Energética S.A., such as the provision of energy and technological solutions, production, transformation, purchase, sale and supply of energy, natural gas and related products such as biogas; consulting services.	2.1%	49.00%	21/02/2017

(1) At 31 December 2019, the Group continues to have significant influence on the financial policy and operating decisions of this company (see note 3).

The value of investments in associates at the date of the reporting period is as follows:

Associate	2019				2018			
	Value of investment				Value of investment			
	Cost	Equity method	Dividends	Total	Cost	Equity method	Dividends	Total
UNE EPM Telecomunicaciones S.A.	2,342,488	(682,523)	-	1,659,965	2,342,488	(692,453)	-	1,650,035
Inversiones Telco S.A.S.	55,224	17,238	-	72,462	55,224	15,578	-	70,802
Hidroeléctrica Ituango S.A. E.S.P.	34,313	(11,134)	-	23,179	34,313	(11,134)	-	23,179
Hidroeléctrica del Río Aures S.A. E.S.P.	2,478	294	-	2,772	2,478	(232)	-	2,246
VE Servicios de Eficiencia Energética S.A.S.	83	1	-	84	83	142	-	225
<b>Total value of investment in associates</b>	<b>2,434,586</b>	<b>(676,124)</b>	<b>-</b>	<b>1,758,462</b>	<b>2,434,586</b>	<b>(688,099)</b>	<b>-</b>	<b>1,746,487</b>

Figures stated in millions of Colombian pesos

The breakdown of the equity method recognised in profit or loss for the period and in other comprehensive income for the period is as follows:

Associate	2019			2018		
	Equity-accounted investees for the period		Total	Equity-accounted investees for the period		Total
	Resultado del periodo	Other comprehensive income		Resultado del periodo	Other comprehensive income	
UNE EPM Telecomunicaciones S.A.	7,186	(300)	6,886	(25,243)	(1,039)	(26,282)
Inversiones Telco S.A.S.	4,782	-	4,782	6,896	-	6,896
Hidroeléctrica Ituango S.A. E.S.P.	-	-	-	223	-	223
Hidroeléctrica del Río Aures S.A. E.S.P.	(179)	-	(179)	-	-	-
VE Servicios de Eficiencia Energética S.A.S.	4	2	6	107	(20)	87
<b>Total</b>	<b>11,793</b>	<b>(298)</b>	<b>11,495</b>	<b>(18,017)</b>	<b>(1,059)</b>	<b>(19,076)</b>

Figures stated in millions of Colombian pesos

The financial information of the Group's significant associates at the date of the reporting period is as follows. All associates are accounted for using the equity method in the consolidated financial statements:

2019	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Revenue	Profit or loss for the period	Other comprehensive income	Total comprehensive income	Dividends <sup>(1)</sup>
						Continuing operations			
UNE EPM Telecomunicaciones S.A.	1,776,297	6,163,823	1,874,908	4,287,090	4,927,143	519	(147)	372	-
Inversiones Telco S.A.S.	163,965	125,474	88,519	55,996	428,756	9,420	-	9,420	3,103
Hidroeléctrica Ituango S.A. E.S.P.	5,209	111,606	924	65,987	-	-	-	-	-
VE Servicios de Eficiencia Energética S.A.S.	2,861	7,424	6,280	-	1,763	195	-	195	-
Hidroeléctrica del Río Aures S.A. E.S.P.	2,308	12,967	6,652	-	-	(276)	168	(108)	-

Figures stated in millions of Colombian pesos

<sup>(1)</sup> In 2019, dividends of \$38,483 were received from UNE EPM Telecomunicaciones S.A. declared in 2018.

2018	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Revenue	Profit or loss for the period	Other comprehensive income	Total comprehensive income	Dividends
						Continuing operations			
UNE EPM Telecomunicaciones S.A.	1,539,706	5,560,423	1,459,007	3,868,853	4,810,880	(62,056)	(2,151)	(64,207)	38,483
Inversiones Telco S.A.S.	154,831	53,169	66,262	133	400,866	13,791	-	13,791	3,442
Hidroeléctrica Ituango S.A. E.S.P.	5,209	111,606	924	65,987	-	480	-	480	-
VE Servicios de Eficiencia Energética S.A.S.	928	39	507	-	1,378	201	-	201	-
Hidroeléctrica del Río Aures S.A. E.S.P.	454	4,978	37	-	-	(906)	-	(906)	-

Figures stated in millions of Colombian pesos

The financial information of these companies, the basis for applying the equity method, is prepared under IFRS and adjusted to the Group's accounting policies.

### Significant restrictions

As at 31 December 2019 and 2018, the Group has no significant restrictions on investments in associates relating to the transfer of funds to the Group in the form of cash dividends, or repayment of loans or advances made by the Group, except in the case of UNE EPM Telecomunicaciones S.A. in which at least fifty percent (50%) of the net profit for the period must be distributed as a dividend after appropriation and/or legal, statutory and occasional reserves, provided that the level of consolidated financial debt does not exceed twice the EBITDA for the same period.

## Note 11. Investment in joint ventures

The breakdown of joint ventures of the Group at the reporting date is as follows:

Name of the joint venture	Location (Country)	Main Activity	Percentage of participation and voting rights		Date of establishment
			2019	2018	
Parques del Río S.A.S. <sup>(1)</sup>	Colombia	Construction, operation, management and sustainment of the Parques del Río Medellín project, as well as acting as urban project manager.	33%	33%	26/11/2015

<sup>(1)</sup> Joint venture constituted on November 26, 2015, with the participation of the Municipality of Medellín, Intervial Colombia S.A.S., Empresa de Transporte Masivo del Valle de Aburrá Ltda. (Metro) and EPM. The strategic support of EPM's participation in this company is based on the following aspects:

- Apply EPM expertise to large-scale infrastructure developments.
- EPM is entitled to participate by the territorial ordinance plan.

The value of investments in joint Ventures at the reporting date was:

Joint venture	2019			2018		
	Value of investment			Value of investment		
	Cost	Equity method	Total	Cost	Equity method	Total
Parques del Río S.A.S.	99	(17)	82	99	(17)	82
<b>Total</b>	<b>99</b>	<b>(17)</b>	<b>82</b>	<b>99</b>	<b>(17)</b>	<b>82</b>

Figures stated in millions of Colombian pesos

The financial information of the Group's significant joint ventures at the date of the reporting period is as follows. All joint ventures are accounted for using the equity method in the consolidated financial statements:

2019	Current assets	Current liabilities	Profit or loss for the period	Total comprehensive income	Dividends received
			Continuing operations		
Parques del Río S.A.S.	254	6	-	-	-

*Figures stated in millions of Colombian pesos*

2018	Current assets	Current liabilities	Profit or loss for the period	Total comprehensive income	Dividends received
			Continuing operations		
Parques del Río S.A.S.	254	6	(32)	(32)	-

*Figures stated in millions of Colombian pesos*

As of December 31, 2019 and 2018, Parques del Río S.A.S. entity is in a pre-operational stage, does not require capitalization and in case it is required, it will have to be authorized by the Board of Directors. Consequently, because it is in a pre-operational stage, it does not have operating income.

The financial information of this company, which is the basis for applying the equity method, is prepared under IFRS and adjusted to the Group's accounting policies.

#### Significant restrictions

At 31 December 2019 and 2018, the Group has no significant restrictions on investments in joint ventures relating to the transfer of funds to the Group in the form of cash dividends, or repayment of loans or advances made by the Group.

## Note 12. Trade and other receivables

The breakdown of trade and other receivables of the Group as of the dates of the periods being reported is as follows:

Trade and other receivables	2019	2018
<b>Non-current</b>		
Public utilities debtors	405,894	362,866
Impairment loss public utilities	(129,544)	(118,283)
Employee loans <sup>(1)</sup>	118,360	113,918
Impairment loss employee loans	(2)	(11)
Contracts for the management of public utilities	546,117	503,063
Other services	1,021	1,218
Other loans	90,813	83,679
Impairment other loans	(18,973)	(16,975)
<b>Total non-current</b>	<b>1,013,686</b>	<b>929,475</b>
<b>Current</b>		
Public utilities debtors	3,380,165	2,985,110
Impairment loss public utilities	(401,684)	(341,978)
Employee loans <sup>(1)</sup>	46,976	44,395
Impairment loss employee loans	(291)	(322)
Construction contracts	2,001	1,689
Dividends and participations receivable	-	38,533
Compensations <sup>(2)</sup>	466,037	21,426
Other services	244,316	238,640
Other loans	531,091	494,702
Impairment other loans	(195,949)	(197,452)
<b>Total current</b>	<b>4,072,662</b>	<b>3,284,743</b>
<b>Total</b>	<b>5,086,348</b>	<b>4,214,218</b>

Figures stated in millions of Colombian pesos

- (1) As part of the employee benefit plan, the company makes loans for home, car, motorcycle, tourism, health and education purchases. Receivables for employee loans are non-interest bearing or have a lower-than-market interest rate for similar loans. Fair value is the present value of all cash flows discounted using the market rate. The difference between the fair value of an employee receivable and the amount paid is recorded as a prepaid expense, which is amortized on a straight-line basis over the term of the credit, recognising a salary expense.
- (2) Includes receivables from Mapfre insurance company for \$456,914 in respect of civil works and total loss of machinery and equipment covered by the all-risk and construction policy and \$8,831 in respect of non-contractual civil liability.

The increase in the non-current portion of accounts receivable is mainly explained by higher balances in the utility portfolio of EPM, ESSA and CHEC and also by increased balances of contracts for the



management of public services at HidroSur. In addition, concession contracts of Mexican subsidiaries, recognised as financial instruments.

Non-current receivables include portfolio balances that are expected to be recovered after the next twelve months. generally, corresponds to financing granted to users to facilitate access to public utilities.

The current portion of the Group's trade receivables presents a higher value mainly due to the increase in the balance of the public utilities of EPM, Chec and Cens and the increase in the receivables for compensation that the insurance company MAPFRE recognised to the Parent company on the occasion of the Ituango Project.

Receivables from utility debtors are non-interest bearing and the term for collection is generally 10 days after invoice is generated. Individual contracts with large customers or in the energy sector provide for terms agreed upon in particular negotiations. In the latter case the term is usually 30 days.

### Impairment of portfolio

The Group measures the value correction for expected losses during the lifespan of the asset using the simplified approach, which consists in taking the present value of credit loss arising from all possible default events at any time during the lifetime of the operation.

This alternative is taken given that the volume of customers is very high and the measurement and control of the risk by stages can lead to errors and to an underassessment of impairment.

The expected loss model corresponds to a forecasting tool that projects the probability of portfolio default in the next twelve months.

Each obligation is assigned an individual probability of default calculated from a probability model that involves sociodemographic, product and behavioral variables.

At the cut-off date, the ageing analysis of receivables at the end of the reporting period that are impaired is:

	2019		2018	
	Gross recorded value	Lifetime expected credit loss value	Gross recorded value	Lifetime expected credit loss value
<b>Public utilities debtors</b>				
Not past due nor impaired	2,801,324	(128,856)	2,292,536	(121,164)
Less than 30 days	482,585	(22,265)	410,664	(17,614)
30-60 days	85,575	(10,631)	103,257	(7,959)
61-90 days	38,994	(7,417)	90,817	(5,669)
91-120 days	12,447	(5,765)	59,822	(5,366)
121-180 days	25,134	(12,015)	48,355	(11,195)
181-360 days	67,612	(51,225)	91,552	(44,540)
Greater than 360 days	272,388	(293,053)	250,972	(246,755)
<b>Total public utilities debtors</b>	<b>3,786,059</b>	<b>(531,228)</b>	<b>3,347,975</b>	<b>(460,261)</b>
<b>Other debtors</b>				
Not past due nor impaired	1,141,173	(96,378)	1,221,464	(15,622)
Less than 30 days	90,926	(6,782)	123,418	(54,197)
30-60 days	13,088	(1,983)	17,360	(4,873)
61-90 days	6,756	(1,564)	6,405	946
91-120 days	85,116	(64,395)	4,330	(1,594)
121-180 days	6,886	(3,020)	22,352	(16,549)
181-360 days	72,256	(14,302)	22,027	(12,331)
Greater than 360 days	630,529	(26,792)	123,908	(110,541)
<b>Total other debtors</b>	<b>2,046,730</b>	<b>(215,215)</b>	<b>1,541,264</b>	<b>(214,761)</b>
<b>Total debtors</b>	<b>5,832,789</b>	<b>(746,443)</b>	<b>4,889,239</b>	<b>(675,022)</b>

Figures stated in millions of Colombian pesos

The variation in the provision for receivables in the EPM Group amounts to \$71,422, mainly concentrated in an increase in the provision associated with the energy utility portfolio in the subsidiaries ENSA, EPM parent company, ESSA and CENS.

The reconciliation of the expected credit losses of the portfolio is as follows:

Asset lifetime Expected Credit Losse	2019	2018
Initial balance	(675,021)	(599,473)
Changes in impairment of receivables held at the beginning of the period	-	(54,457)
Financial Assets Not derecognised during the Period	20,281	69,576
New financial assets originated or purchased	(408,945)	(114,556)
Cancellations	362,458	99,521
Changes in models/risk parameters	43,992	32
Difference in change and other movements	(89,208)	(75,664)
<b>Final balance</b>	<b>(746,443)</b>	<b>(675,021)</b>

Figures stated in millions of Colombian pesos

Portfolio reconciliation is as follows:

Portfolio balance	2019	2018
Initial balance of financial assets	4,889,239	4,227,137
New financial assets originated or purchased	33,184,954	34,394,939
Financial assets derecognition	(31,991,406)	(31,859,679)
Derecognised financial assets	(20,281)	(52,747)
Changes due to changes that did not result in derecognition	32,187	3,165
Other changes	(261,904)	(1,823,577)
<b>Final balance</b>	<b>5,832,789</b>	<b>4,889,238</b>

Figures stated in millions of Colombian pesos

The Group derecognises, against the impairment of recognised value in a corrective account the values of impaired financial assets when:

- Recorded receivable do not present any certain rights, assets or obligations for the entity.
- Rights or obligations lack documents and suitable support to advance the relevant procedures for their collection or payment.
- It is not possible to collect the right or obligation, due to coercive or judicial jurisdiction.
- It is not possible to legally charge any natural or legal entity for the value of the portfolio.
- When the cost-benefit relationship has been evaluated and established, it is more expensive to advance the collection process than the value of the obligation.

#### Bodies responsible for derecognising

Within the framework of group governance, approval bodies have been defined for the derecognition of assets from the financial statements, in order to maintain control over the assets to be written-off.

## Note 13. Other financial assets

The breakdown of other financial assets at the closing of the period is as follows:

Other financial assets	2019	2018
<b>Non-current</b>		
<b>Derivatives designated as hedging instruments under hedge accounting</b>		
Swap contracts	34,422	180,224
<b>Total derivatives designated as hedging instruments under hedge accounting</b>	<b>34,422</b>	<b>180,224</b>
<b>Financial assets measured at fair value through profit or loss</b>		
Fixed-income securities	2,406	1,855
Variable-income securities	59,005	64,784
Pledged investments	47,830	-
Trust rights	431,973	433,618
<b>Total financial assets measured at fair value through profit or loss</b>	<b>541,214</b>	<b>500,257</b>
<b>Financial assets designated at fair value through other comprehensive income</b>		
Equity instruments (1)	1,963,081	1,628,874
<b>Total financial assets designated at fair value through other comprehensive income</b>	<b>1,963,081</b>	<b>1,628,874</b>
<b>Financial assets measured at amortized cost</b>		
Fixed-income securities	1,619	3,013
<b>Total financial assets measured at amortized cost</b>	<b>1,619</b>	<b>3,013</b>
Finance leasing	1,231	-
<b>Total other non-current financial assets</b>	<b>2,541,567</b>	<b>2,312,368</b>
<b>Current</b>		
<b>Derivatives designated as hedging instruments under hedge accounting</b>		
Swap contracts	11,727	12,240
<b>Total derivatives designated as hedging instruments under hedge accounting</b>	<b>11,727</b>	<b>12,240</b>
<b>Financial assets measured at fair value through profit or loss</b>		
Fixed-income securities	811,865	1,176,831
Variable-income securities	-	28,824
Pledged investments	5,970	5,647
Trust rights		5,379
<b>Total financial assets measured at fair value through profit or loss</b>	<b>817,835</b>	<b>1,216,681</b>
<b>Financial assets measured at amortized cost</b>		
Fixed-income securities	34,261	3,240
Pledged investments	126	126
<b>Total financial assets measured at amortized cost</b>	<b>34,387</b>	<b>3,366</b>
Finance lease	4,049	2,018
<b>Total other assets current</b>	<b>867,998</b>	<b>1,234,305</b>
<b>Total other assets</b>	<b>3,409,565</b>	<b>3,546,673</b>

Figures stated in millions of Colombian pesos

Conventional purchases and sales of financial assets are accounted for by applying the trade date.

(1) Financial assets designated at fair value through other comprehensive income

The breakdown of equity investments designated at fair value through other comprehensive income is:

Equity investment	2019	2018
Interconexión Eléctrica S.A. E.S.P. <sup>(1)</sup>	1,915,398	1,574,226
Gasorient S.A. <sup>(2)</sup>	-	35,099
Promioriente S.A. E.S.P.	39,566	11,459
Reforestadora Industrial de Antioquia S.A.	4,947	4,947
Electrificadora del Caribe S.A. E.S.P.	1,385	1,385
Gensa S.A. E.S.P.	594	608
Other <sup>(3)</sup>	1,191	1,009
<b>Total</b>	<b>1,963,081</b>	<b>1,628,874</b>
Accumulated loss for the period <sup>(4)</sup>	(47,620)	-
Dividends recognized during the period related to investments that remain recognized at the end of the period <sup>(5)</sup>	57,262	71,601
<b>Dividends recognized during the period</b>	<b>9,642</b>	<b>71,601</b>

Figures stated in millions of Colombian pesos

- (1) As of 31 December 2019, the market price of Interconexión Eléctrica S.A. E.S.P. closed at \$19,600 Colombian pesos (2018: \$13,980 Colombian pesos) per share.
- (2) During the second half of 2019, 12,263,565 shares of Gasorient S.A. were sold for \$35,479.
- (3) Includes investments in: Gestión Energética S.A., Unidad de Transacciones S.A. de C.V., Terminal de Transporte de Bucaramanga S.A., Sin Escombros S.A.S., Duke Energy Guatemala y Cia. S.A., Organización Terpel S.A., Concentra Inteligencia en Energía S.A.S, Banco Davivienda S.A., Emgesa S.A. E.S.P., Hotel Turismo Juana Naranjo, Compañía de Alumbrado Eléctrico de San Salvador S.A., Fosfonorte S.A., Central de Abastos de Cúcuta, Acerías Paz del Río S.A., Cenfer S.A.
- (4) Corresponds to loss generated in July 2019 on the sale of 14,881,134 ISA shares, arising from the difference between the sale price and the valuation of the share on the day of the transaction, (\$15,700 pesos/share - \$18,900 pesos/share = \$-3,200 Colombian pesos/share).
- (5) In 2019 includes dividends declared by Interconexión Eléctrica S.A. E.S.P. for \$53,944.

Equity investments indicated in the table above are not held for trading purposes but are rather held for strategic medium- and long-term purposes. The Group Management believes that the classification for these strategic investments provides more reliable financial information, reflecting changes in their fair value immediately in the results of the period.

## Note 14. Leases

### 14.1. Finance lease as a lessor

The most significant finance lease agreements are: the facilities for the offices of the Grupo Tecnología Intercontinental, S.A.P. de C.V. TICSA company. The lease period of the office is 7 years, with an option to renew the lease after that date. The lease payments are modified each year based on inflation. For certain leases, the Company has restrictions on entering into sublease agreements.

At the cut-off date, future minimum payments and net investment in finance leases are distributed as follows:

Finance lease	2019	
	Gross investment	Net investment
Year one	2,031	-
Year two	1,231	-
More than five years	2,018	2,018
<b>Total leases</b>	<b>5,280</b>	<b>2,018</b>
<b>Present value of minimum lease payments receivable</b>	<b>5,280</b>	<b>2,018</b>

Figures stated in millions of Colombian pesos

The Group, as the lessor, does not have any contracts that take the legal form of a lease and which do not in essence constitute a lease.

### 14.2. Asset-originating lease for right-of-use as a lessee

At the cut-off date, the recorded value of assets for right-of-use is as follows (excluding assets with right-of-use associated with construction in progress, which are included in note 5 Property, plant and equipment):

2019	Right-of-use land	Right-of-use buildings	Right-of-use land networks, lines and cables	Right-of-use land machinery and equipment	Right-of-use furniture and fixtures	Right-of-use communication and computer equipment	Right-of-use transport, traction and lifting equipment	TOTAL
Initial balance of cost	-	-	-	-	-	-	-	-
Additions	1,778	8,637	38	70	644	380	1,172	12,719
Re-expression by policy change	17,785	500,616	105,132	20,811	432	7,472	86,274	738,522
Withdrawals (-)	-	(1,064)	(805)	-	(16)	-	(57)	(1,942)
Dispositions	-	-	-	-	-	-	(4)	(4)
Transfers	-	17	-	-	-	-	-	17
Effect of loss of control in subsidiary	(6,802)	-	-	-	-	-	-	(6,802)
Effect in foreign exchange translation	307	323	223	-	3	23	25	904
Other changes	(896)	(4,262)	(1,081)	2,063	-	2,380	(7)	(1,803)
<b>Final balance of cost</b>	<b>12,172</b>	<b>504,267</b>	<b>103,507</b>	<b>22,944</b>	<b>1,063</b>	<b>10,251</b>	<b>87,407</b>	<b>741,611</b>
Accumulated amortization and impairment losses								
Initial balance of accumulated amortization and impairment losses	-	-	-	-	-	-	-	-
Amortization for the period	(605)	(19,422)	(5,755)	(5,380)	(111)	(1,090)	(22,574)	(54,937)
Deterioration for the period	-	-	-	-	-	-	(11)	(11)
Re-expression by policy change	-	(77,013)	-	-	-	-	-	(77,013)
Withdrawals (-)	-	170	15	-	17	-	21	223
Effect in foreign exchange translation	1	(311)	5	-	(1)	-	(1)	(307)
Other changes	-	2,871	(2)	(1,164)	(117)	(1,734)	(8)	(154)
<b>Ending balance cumulative amortization and impairment</b>	<b>(604)</b>	<b>(93,705)</b>	<b>(5,737)</b>	<b>(6,544)</b>	<b>(212)</b>	<b>(2,824)</b>	<b>(22,573)</b>	<b>(132,199)</b>
<b>Total ending balance assets per right of net use</b>	<b>11,568</b>	<b>410,562</b>	<b>97,770</b>	<b>16,400</b>	<b>851</b>	<b>7,427</b>	<b>64,834</b>	<b>609,412</b>

Figures stated in millions of Colombian pesos

The most significant finance lease agreement is:

**Contrato arrendamiento Edificio Empresas Públicas de Medellín (Empresas Públicas de Medellín Building lease contract)** CT-085 of 12 February 2002, held between EPM (THE COMPANIES) and the MUNICIPALITY OF MEDELLIN (MUNICIPALITY), the MUNICIPALITY agrees to lease to THE COMPANIES, and the latter agree to receive on the same basis, the use and enjoyment of the real estate owned by them called "Edificio Empresas Públicas de Medellín", with all its constructions and improvements.

The term of the contract is 50 years from 21 December 2001, date on which the MUNICIPALITY OF MEDELLIN became the owner of the property.

Contract lease payments are adjusted each year by a percentage equal to the national Consumer Price Index certified by DANE for the immediately preceding year.

Lease liabilities are included in Other financial liabilities in the statement of financial position.

Interest on lease liability amounts to \$209,584.

Total cash outflows from leases during the period are \$168,066.

At the cut-off date, future minimum payments and the present value of the minimum lease liability payments are distributed as follows:

Finance lease	2019		2018	
	Minimum payments	Present value of minimum payments	Minimum payments	Present value of minimum payments
One year	77,713	72,654	18,077	17,287
More than one year and up to five years	305,746	243,814	72,049	55,667
More than five years	1,257,692	366,291	504,002	122,528
<b>Total leases</b>	<b>1,641,151</b>	<b>682,760</b>	<b>594,128</b>	<b>195,482</b>
Less - value of unearned interest	(958,391)	-	(398,646)	-
<b>Present value of minimum lease payments</b>	<b>682,760</b>	<b>682,760</b>	<b>195,482</b>	<b>195,482</b>

Figures stated in millions of Colombian pesos

### 14.3 Operating lease as lessee

The most significant operating lease agreements are for the electrical infrastructure for the installation of networks by telecommunications operators. The contingent payments of these leases are determined based on the updating of the producer price index (PPI) and consumer price index (CPI) variables as well as the updating of the lease payments. Leases agreements provide for an option to be renewed by mutual agreement between the parties and do not provide for a purchase option.

The value of non-cancellable operating lease payments is as follows:

Operating lease	2019	2018
Year one	85,401	66,315
Year two	93,893	40,327
Year three	16,447	-
Year four	5,696	-
Year five	4,873	-
More that five years	30,340	22,637
<b>Total leases</b>	<b>236,650</b>	<b>129,279</b>

Figures stated in millions of Colombian pesos

The Group, as a lessor, does not have contracts that take the legal form of a lease and that in essence do not constitute one.

#### 14.4 Leases that do not generate assets by right-of-use as a lessee

The most significant operating lease agreements are in EPM for spaces for the installation and operation of antennas in weather stations, shift management system, user printing infrastructure, among others, with no restrictions. The contingent payments of these leases are determined based on the consumer price index (CPI) as well as the updating of the lease payments and these contracts can be renewed.

At the cut-off date, future commitments for short-time lease are \$8,233 (2018: \$36,627).

Lease payments recognised as expense for the period are \$25,893.

### Note 15. Warranties

The Group has granted the following financial assets as collateral:

- Letters of credit, performance bonds and other securities for \$223,327 (2018: 267,767) granted by the subsidiary ENSA to guarantee: fulfillment of the obligations for the concession contract with the National Authority of Public Utilities of Panama (Autoridad Nacional de los Servicios Públicos de Panamá); for electricity purchase contracts to generating and transmission companies.
- Deposits to Fixed Term Certificate (CDT) which recorded value is \$ 133 (2018: \$ 133). The conditions for the use of the collateral are to cover contingencies for lawsuits against the Municipality of Bucaramanga by the subsidiary ESSA S.A. This collateral is constituted and granted to Seguros del Estado.
- Premium withheld for \$19,454 (2018: \$13,718) to the subsidiary Maxseguros by the ceding insurance company, complying with Colombian regulations.
- The Group has received as a collateral from the subsidiary Maxseguros the premium withheld to reinsurance companies for \$8,253 (2018: \$6,232).

The Group has not withheld collaterals as of 31 December 2019 and 2018, authorizing it to sell or pledge them without a default by the owner of the collateral.

## Note 16. Other assets

The breakdown of other assets at the end of the periods being reported is as follows:

Description	2019	2018
<b>Non-current</b>		
Employee benefits(1)	53,387	51,947
Deferred loss from leaseback	21,608	22,283
Advance payments to suppliers(2)	18,962	20,558
Advance payments(3)	11,491	15,966
Goods received as dation in payment	1,466	1,466
Other advances or balances in favour of taxes and contributions	-	(28)
<b>Total other non-current assets</b>	<b>106,914</b>	<b>112,192</b>
<b>Current</b>		
Reinsurance activities(4)	209,229	232,865
Advance payments(3)	94,298	85,991
Value added tax	64,759	70,244
Advance payments to suppliers(2)	64,581	59,325
Other recoverables due to other taxes	2,928	3,851
Advance payment of industry and commerce tax	1,951	5
Withheld industry and Commerce Tax	438	831
Advance payment special contribution	282	-
Other advances or balances in favour of taxes and contributions	127	299
<b>Total other current assets</b>	<b>438,593</b>	<b>453,411</b>
<b>Total other assets</b>	<b>545,507</b>	<b>565,603</b>

Figures stated in millions of Colombian pesos

- (1) Corresponds to Loans to employees at below-market rates for \$53,387 (2018: \$51,947).
- (2) The non-current portion corresponds to resources given for management for \$18,996 (2018: \$19,869) and Other advance payments for -\$34 (2018: \$689).

The current portion includes Other advance payments for \$59,157 (2018: \$48,488); resources given for management for \$4,537 (2018: \$10,042); advance payments on covenants and agreements and advance payments for travel expenses for \$887 (2018: \$796).

- (3) The non-current portion includes insurance for \$3,284 (2018: \$6,141) mainly corresponding to the all-risk policies of the Ituango Hydroelectric Project, effective until March 2021, which are being amortized; premium on legal stability contracts for \$7,357 (2018: \$8,249); maintenance for \$763 (2018: \$511); leases for \$87 (2018: \$349) and other goods and services paid in advance in (2018 for \$716).

The current portion includes insurance for \$74,906 (2018: \$66,874), comprised primarily of the all-risk policies for the Ituango Hydroelectric Project; printed matter, publications, fees, goods and services paid in advance for \$14,264 (2018: \$11,916); leases and maintenance for \$5,128 (2018: \$7,201).



(4) Corresponds to the technical reserves to be covered by reinsurers, which detail is as follows:

Description	2019	2018
Loss reserves receivable	91,231	129,491
Non-reported loss reserves recoverable	62,918	49,803
Deferred permium - Reinsurer part	35,626	39,853
Retained funds	19,454	13,718
<b>Total</b>	<b>209,229</b>	<b>232,865</b>

*Figures stated in millions of Colombian pesos*

## Note 17. Inventories

Inventories at the end of the period were represented as follows:

Inventories	2019	2018
Materials for the rendering of services <sup>(1)</sup>	334,283	355,865
Goods in stock <sup>(2)</sup>	54,374	53,051
Goods in transit	2,587	749
<b>Total inventories</b>	<b>391,244</b>	<b>409,665</b>

*Figures stated in millions of Colombian pesos*

(1) Includes materials for the rendering of services held by third parties, which are those delivered to contractors that perform activities related to the rendering of services.

(2) Includes goods in stock that do not require transformation, such as electricity, gas and water meters, and supply goods, as well as those held by third parties.

Inventories were recognised for \$254,822 (2018: \$234,436) as the cost for the rendering of service or cost of goods sold. The inventory decline recognised as an expense during the period amounted to \$36 (2018: \$308).

As at 31 December 2019, the Group did not have any inventories committed to liability collateral.

## Note 18. Cash and cash equivalents

The composition of cash and cash equivalents at the end of the period is as follows:

Cash and cash equivalents	2019	2018
Cash on hand and in banks	884,703	964,553
Other cash equivalents <sup>(1)</sup>	825,863	633,829
<b>Total cash and cash equivalents reported in the statement of financial position</b>	<b>1,710,566</b>	<b>1,598,382</b>
<b>Cash and cash equivalents reported in the statement of cash flows</b>	<b>1,710,566</b>	<b>1,598,382</b>
Restricted cash <sup>(2)</sup>	196,072	173,375

*Figures stated in millions of Colombian pesos*

(1) Includes funds in transit \$- (2018: \$15,374), restricted funds \$196,072 (2018: \$173,375) and cash equivalents \$629,791 (2018: \$445,085).

(2) Of this \$46,415 (2018: \$22,344) corresponds to non-current restricted cash.

Cash investments mature within three months from their date of acquisition and bear market interest rates for this type of investment.

the Group has restrictions on cash and cash equivalents as detailed below: As of 31 December 2019 the fair value of restricted cash equivalents is \$196,072 (2018: \$173,375).

Fund or agreement EPM	Destination	2019	2018
Sinpro Housing Fund	Contribute to the acquisition of housing and house improvement of the workers who are beneficiaries of the conventional agreement signed between EPM and the unions.	21,319	17,936
Sintraemdes Housing Fund	Contribute to the acquisition of housing and house improvement of the workers who are beneficiaries of the conventional agreement signed between EPM and the unions.	19,199	17,002
Agreement signed between the Metropolitan Area of Valle de Aburra and Empresas Públicas de Medellín E.S.P., Execution Act No. 4 of Framework Agreement No. CT 2015-000783 of 2015	Support the construction of the southern interceptor of the Aburra River - Medellín	10,760	8,006
Ministry of Mines and Energy - Special Fund <i>Cuota Fomento</i>	Co-financing agreement for the construction, distribution infrastructure and connection to lower income users in the municipalities of Amagá, Santa fé de Antioquia, Sopetrán, San Jerónimo and Ciudad Bolívar. Compressed Natural Gas and connection to users in Don Matías, Entrerrios, San Pedro, Santa Rosa and Yarumal. Agreement No 106: construction of infrastructure to connect users in Valle de Aburrá, La Ceja, La Unión and El Retiro. Agreement No. 179: includes the municipality of Sonsón.	5,635	5,443
International energy transactions	Collateral corresponding to the "compensation" that must be made between the invoice for stock exchange transactions and the advance payments, seeking the actual payment to XM.	5,274	1,636
Department of Antioquia, Construction Agreement via El Aro - Municipality of Ituango	Manage the resources provided by the Government of Antioquia to co-finance the construction of the El Aro Road - Puerto Valdivia Road Connection Dam Site - Municipality of Ituango	2,721	2,605
Sinpro Education Fund	Promote the welfare of the workers to meet the needs of payment of tuition, texts and equipment required to advance studies for themselves or their family members.	2,392	2,258
Sintraemdes Education Fund	Promote the welfare of the workers to attend to the payment needs of registration, texts and equipment required to advance studies for themselves or their family members.	2,274	2,107
Cuenca Verde (Green Basin)	Manage resources assigned for compliance with the objectives of the <i>Corporación CuencaVerde</i> .	2,167	40
Contract No. CT-2019-001105	Contract for the supply of energy and power for the unregulated market and support of contracts of the energy distributor and marketer S.A. E.S.P, DICEL S.A. E.S.P.	2,000	-
Agreement <i>puntos SOMOS</i> (points)	Provision of services for the operation of the key capabilities associated with the Points element of the Large-Scale Loyalty Program for the EPM Group.	1,727	1,651
Sintraemdes Calamity Fund	Promoting the well-being of workers to meet urgent and unforeseen needs for themselves or their nuclear family group.	1,674	1,613

Fund or agreement EPM	Destination	2019	2018
Sinpro Calamity Fund	Promoting the well-being of workers to meet urgent and unforeseen needs for themselves or their nuclear family group.	1,448	1,310
INTERADMINISTRATIVE CONTRACT Number Pc-2017-001532 From 2017	Construction and intervention of water and sewerage networks in the Pepe Sierra I, Barrios de Jesús, el Progreso and Cañada del Niño neighborhoods	1,438	494
5 Esc. Indígenas (Indigenous Peoples') 2019-20 Agreement	Co-finance the development of indigenous educational centres within the framework of the Aldeas (village) program, for the improvement of the quality of life of indigenous communities in the department of Antioquia	995	-
Aldeas (Villages) Program	Use wood that completes its maturation cycle in the forests planted by EPM around its reservoirs, to build social interest housing in the municipalities of Antioquia outside the Aburrá Valley and deliver it to low-income families, preferably in a situation of forced or voluntary displacement.	731	732
Municipality of Medellín - Water	Integrated management of water for human consumption by the inhabitants of the municipality of Medellín.	509	382
Municipality of Guatapé and Cornare	Join efforts to improve technical, economic and social conditions for the implementation of phase 1 of the project to improve the environmental and landscape infrastructure of the Malecón San Juan del Puerto Malecón (harbor), for the development of sustainable tourism in the municipality of Guatapé.	448	1,994
Motorcycle Repair Fund	Promote welfare of workers who work in the regional market and use motorcycles to perform their work.	426	406
IDB Credit 2120	Disbursement for the construction of the Bello wastewater treatment plant (WTP).	335	2,289
Guatapé Autonomous Corporation	Join efforts to improve the technical, economic and social conditions for the execution of phase 1 of the project to improve the environmental and landscape infrastructure of the Malecón San Juan del Puerto (harbor), for the development of sustainable tourism in the municipality of Guatapé.	311	1,742
INTER-ADMINISTRATIVE AGREEMENT CT -2017-001388 (460007009)	Agreement for the construction of 7 indigenous schools in 5 municipalities	253	1,057
Adapted Health Entity Fund and Fosyga Fund	Control and monitoring mechanism for the collection of contributions from the General Social Security Health Contribution System (Régimen Contributivo del Sistema General de Seguridad Social en Salud).	152	1,857
Resource management for the construction of infrastructure in the Madera neighborhood for Emvarias in the La Pradera landfill.	Administration of resources for the construction of infrastructure in wood for Emvarias in the La Pradera landfill.	114	124
Deposits Law 820	Guarantee required by the landlord to the tenant, for the payment of public services. According to Article 15 of Law 820 of 2003 and Regulatory Decree 3130 of 2003.	68	59
Espíritu santo	EPM - Settlement Espiritu Santo	62	60
Municipality of Medellín - Land	Acquisition of land identified and characterized within the watershed protection zones that supply water systems in the municipality of Medellín.	61	58
Agreements with municipalities on public lighting and cleaning rates	Agreement to manage the resources of the territorial entities for the payment to the municipalities with agreements of collection of the rates of public lighting and solid waste collection, resources exempt of the 4x1000 levy.	51	1,572
Bogotá Bolivar Gallery	Adapting Carrera 51 (Bolívar) between 44th (San Juan) and 57th (La Paz) streets and converting this road segment into what will be called La Galería Bolívar.	15	23
Municipality of Medellín - Moravia	Construction, repair and replacement of water and sewerage networks and paving in the municipality of Medellín of the roads affected by these works in the Moravia neighborhood.	3	3

Fund or agreement EPM	Destination	2019	2018
IDEA agreement 4600003912	Inter-administrative agreement to join efforts for the design and construction of electricity generation and distribution systems in rural areas in the Department of Antioquia.	2	2
IDEA Agreement 4600003283	Join efforts for the construction of household gas connections in the different sub-regions of the Department of Antioquia under the <i>Gas sin Fronteras</i> (Natural Gas without Borders) program.	1	1
Contribution of the municipalities of Pueblorrico and Ciudad Bolivar	Agreement for the construction of seven rural indigenous schools	-	90
Bogotá INCODER Bank	Join efforts and resources between EPM and INCODER to carry out the project "feasibility study for the construction of the irrigation and drainage district in part of the Urabá Antioqueño region" with multipurpose scope.	-	4,791
Bogota <i>Parques del río</i> (River Parks) Agreement	Relocation of the public service networks for the development of the project called <i>Parques del Río Medellín</i> ,	-	1
Framework Agreement Municipality of Medellín No. 4600049285	Construction by EPM of platforms and other road elements in the city downtown, taking advantage of the Centro Parrilla project, i.e. the renovation of water and sewage networks.	-	39
Thermal District	Agreement with the Ministry of the Environment and Sustainable Development for the development of activities in the La Alpujarra Thermal District.	-	71
Ministry of Mines and Energy	Contributions from the Ministry of Mines and Energy in accordance with the provisions of the FAER GGC 430 contract of 2015 for rural electrification works in the Municipality of Ituango	-	191
Municipality of Barbosa - Grants	Agreement to partially subsidize the connection of users in strata 1 and 2	-	62
Municipality of Caldas	To manage and administer the resources allocated by the municipality of Caldas for the development of the project: Construction, replacement and modernization of water and sewerage networks and their complementary works, in the urban area of the municipality of Caldas	-	116
<b>Total restricted resources EPM</b>		<b>84,565</b>	<b>79,823</b>

Figures stated in millions of Colombian pesos

Fund or agreement Aguas Nacionales	Destination	2019	2018
Savings Account ITAU 153148929	Ministerio (Ministry) project	18,973	25,212
Current account Bancolombia 536423	Aguas de Atrato	416	183
Caja general	Aguas de Atrato	1	1
Savings account remuneración ITAU	PTAR (WTP) Project	-	5,853
<b>Total restricted resources Aguas Nacionales</b>		<b>19,390</b>	<b>31,250</b>

Figures stated in millions of Colombian pesos

Fund or agreement CENS	Destination	2019	2018
BBVA -Miniminas 756	Execution of rural electrification works in the municipalities of the Norte de Santander department	2,900	-
BBVA -Miniminas 757	Execution of rural electrification works in the municipalities of the Norte de Santander department	2,742	-
BBVA -Miniminas 761	Execution of rural electrification works in the municipalities of the Norte de Santander department	2,445	-
BBVA -Miniminas 764	Execution of rural electrification works in the municipalities of the Norte de Santander department	2,429	-
BBVA -Miniminas 767	Execution of rural electrification works in the municipalities of the Norte de Santander department	2,417	-
BBVA XM Custody Account Bank Guarantees	Warranty and TIES of compliance to cover energy purchase projects.	1,470	711
Housing Rotary Fund	Housing loans for CENS S.A. employees	1,132	1,008
BBVA -Miniminas 717	Execution of rural electrification works in the municipalities of the Norte de Santander department	821	-
BBVA -Miniminas 718	Execution of rural electrification works in the municipalities of the Norte de Santander department	659	-
BBVA -Miniminas 720	Execution of rural electrification works in the municipalities of the Norte de Santander department	656	-
Convenio Ecopetrol-Bogotá	Join technical, administrative and financial efforts to execute the rural electrification works in the municipalities of Tibú and El Carmen, Norte de Santander department, in accordance with the activities contemplated in the Expansion of Coverage Plan OR CENS - PECOR, and the Rural Electrification Program for the Catatumbo Area and the Province of Ocaña III.	508	469

FAER Catatumbo III	Execution of rural electrification works in the municipalities of Convención, San Calixto, Cáchira, Hacarí, Ocaña, La Playa, Villa Caro, Teorama and La Esperanza in the department of Norte de Santander	189	221
AOM Agreement	Management operation, maintenance and replacement of the rural electrification assets built with the resources of the project "Programa de electrificación rural zona del Catatumbo y Provincia de Ocaña, etapa 1, Norte de Santander".	65	65
Ecopetrol-Davivienda Agreement	Join technical, administrative and financial efforts to execute the rural electrification works in the municipalities of Tibú and El Carmen, Norte de Santander department, according to the activities contemplated within the Coverage Expansion Plan OR CENS - PECOR, and the Rural Electrification Program for the Catatumbo Zone and Ocaña Province III.	42	249
Gobernación-Davivienda Agreement	Join technical, administrative and financial efforts between Norte de Santander department and Norte de Santander power plants - C.E.N.S. S.A. E.S.P., execute the rural electrification works, of Norte de Santander department.	29	-
Fundescat	Execution of the rural electrification works in the municipalities of Tibú and Tarra, Norte de Santander department	-	9
Gobernación Agreement	Join technical, administrative and financial efforts between the Norte de Santander department and Norte de Santander power plants - C.E.N.S. S.A. E.S.P., execute the rural electrification works in the municipalities of Ábrego, El Carmen and El Tarra, in the Norte de Santander department.	-	98
<b>Total restricted resources CENS</b>		<b>18,504</b>	<b>2,831</b>

Figures stated in millions of Colombian pesos

Fund or agreement EPM CHILE S.A	Destination	2019	2018
AES GENER S.A.	COLLATERAL OF 5.000.000	16,293	-
<b>Total restricted resources EPM CHILE S.A</b>		<b>16,293</b>	<b>-</b>

Figures stated in millions of Colombian pesos

Fund or agreement Grupo Ticsa México	Destination	2019	2018
TRUST BANCO DEL BAJÍO 15892649	Restricted resources ECOSISTEMAS DE COLIMA S.A. DE C.V. - Mexico	4,954	4,204
TRUST BANCO DEL BAJÍO/MULTIVA	Restricted resources ECOSISTEMAS DE TUXTLA S.A. DE C.V. - Mexico	4,847	2,554
TRUST BANCO NACIONAL DE OBRAS Y S	Restricted resources AQUASOL MORELIA S.A. DE C.V. - Mexico	3,493	-
TRUST BANCO DEL BAJÍO 15892649	Restricted resources AQUASOL MORELIA S.A. DE C.V. - Mexico	1,646	6,786
TRUST BANCO DEL BAJÍO 15892649	Restricted resources ECOSISTEMAS DE CELAYA S.A. DE C.V. - Mexico	930	1,295
TRUST BANCO NACIONAL DE OBRAS Y S	Restricted resources ECOSISTEMAS DE CELAYA S.A. DE C.V. - Mexico	365	-
<b>Total restricted resources Grupo Ticsa México</b>		<b>16,235</b>	<b>14,839</b>

Figures stated in millions of Colombian pesos

Fund or agreement Empresas Varias	Destination	2019	2018
ENCARGO FID 919301039524 - Pradera	Resources for Pradera Payments	12,209	12,454
ENCARGO FID 919301039524 - Pradera	Resources for Pradera Payments	1,987	2,219
FL BBVA 423 Pruning-Felling Agreement (Convenio Poda-Tala)	Delegated management contract with the Municipality of Medellin for the service of green area cutting and tree pruning and felling	32	31
Convenio 18-897796-47 EDU	Agreement with the municipality of Medellin for the collection of temporary debris gathering centers	23	319
FL Occidente INDER	Agreement with INDER for washing bridges and stadium roofs	3	8
Encargo 919301039523 - Pradera	Resources for Pradera Payments	2	388
FL Convenio green areas (zonas verdes) 400054603	Agreement for the service of Green Areas	-	2
FL Bancolombia 6093-Closure (Clausura)	Resources allocated for the payment of the closing, closure and post-closure of Pradera.	-	1
<b>Total restricted resources Empresas Varias</b>		<b>14,257</b>	<b>15,422</b>

Figures stated in millions of Colombian pesos

Fund or agreement Empresas Públicas de Rionegro	Destination	2019	2018
Collateral for Historical Centre works	Deposit in guarantee for the purchase EPRIO Municipality of Rionegro	8,736	8,388
Christmas Lighting Agreement	Contracts 194-545 Municipality of Rionegro	-	382
Agreement on water supply and sewerage works	Delegated management contract 073-2017 Municipality of Rionegro	-	11
Christmas Lighting Agreement	Delegated management contract 198-2017 Municipality of Rionegro	-	10
Agreement on water supply and sewerage works	Agreement 094-2017 Municipality of Rionegro	-	4
Agreement on water supply and sewerage works	Delegated management contract 180-2017 Municipality of Rionegro	-	1
<b>Total restricted resources Empresas Públicas de Rionegro</b>		<b>8,736</b>	<b>8,797</b>

Figures stated in millions of Colombian pesos

Fund or agreement ESSA	Destination	2019	2018
BBVA Guarantees 0408	XM Bank Account	3,221	3,366
FAER GGC Agreement 411	Rural electrification agreement signed with the Ministry of Mines and Energy	1,275	-
FAER GGC Agreement 413	Rural electrification agreement signed with the Ministry of Mines and Energy	935	-
FAER GGC Agreement 416	Rural electrification agreement signed with the Ministry of Mines and Energy	903	-
Agreement Line 115 Pto Wilches	Rural electrification agreement Pto Wilches - Barrancabermeja line	856	589
Gobernación - ESSA Phase V Agreement	Agreement on rural electrification	448	444
San Gil Public Lighting Agreement	San Gil Public Lighting Agreement	333	494
FAER GGC Agreement 381	Rural electrification agreement signed with the Ministry of Mines and Energy	100	521
FAER GGC Agreement 382	Rural electrification agreement signed with the Ministry of Mines and Energy	23	965
FAER GGC Agreement 377	Rural electrification agreement signed with the Ministry of Mines and Energy	3	5,042
Public hearings resources agreement Convenio Recursos audiencias públicas	Rural electrification agreement signed with the Ministry of Mines and Energy	1	1
Inter-administrative Agreement	Relocation of power line section	-	844
FAER Resources	Rural electrification agreement management resources	-	41
<b>Total restricted resources ESSA</b>		<b>8,098</b>	<b>12,307</b>

Figures stated in millions of Colombian pesos

Fund or agreement Aguas Regionales	Destination	2019	2018
Execution Act No.1 Framework Convention CT_2019_001417 (Acta de ejecución No.1 Convenio Marco CT_2019_001417)	Elaboración de estudio de factibilidad para nuevas fuentes de captación de agua para el abastecimiento de agua potable en la zona central de la región de Urabá.	5,000	-
Sintraesmdes housing fund agreement	Préstamos de vivienda a los funcionarios que cumplan con los requisitos	88	56
<b>Total restricted resources Aguas Regionales</b>		<b>5,088</b>	<b>56</b>

Figures stated in millions of Colombian pesos

Fund or agreement EDEQ	Destination	2019	2018
FL Davienda Housing fund 136270148986 FL- Fiducrdicorp Housing fund 919301005560	Resources aimed at improving the quality of life of workers through the granting of credits for the purchase and improvement of housing.	2,582	1,559
FL Fiduciaria Occidente 1101031000001 FL Dav Cart Colect 608136200000618 FL Dav Fond Bien soc cap 136270162219	Resources allocated to facilitate workers and their families' access to higher education, health, welfare and recreation.	240	229
FL Davienda Motorcycle fund 136270167200	Resources allocated to provide workers with loans to purchase and replace motorcycles for their work.	16	16
FL Davi Calamity fund 136000742868	Resources allocated for events caused by serious and unforeseen situations affecting workers or their families.	4	7
<b>Total restricted resources EDEQ</b>		<b>2,842</b>	<b>1,811</b>

Figures stated in millions of Colombian pesos



Fund or agreement CHEC	Destination	2019	2018
Special housing fund	Fund created to provide housing loans to CHEC employees, in accordance with the procedure and conditions established in the Collective Labour Convention in force - CCTV, signed between the company's union SINTRAELECOL and CHEC	501	2,421
XM Custody and Management Account	A fund created to provide guarantees for the operations of energy transactions on the stock exchange, which is managed and controlled by the XM market manager	352	98
CONFA Special Fund	Special fund created for the attention of social programs and cultural extension for CHEC employees; through a contract of delegated administration with the company CONFA	200	198
Building Maintenance Fund	Fund created to attend the maintenance of CHEC buildings, through delegated management contract	150	159
Environmental Management Administration Fund	Fund to execute the environmental management plans in the area of influence of the CHEC power plants.	100	99
Special property fund	Fund created for the management of forest conservation properties in the company's watersheds; through a delegated management contract.	65	24
Generation plant maintenance fund	Fund created to attend the civil maintenance of the CHEC minor generation plants, through a delegated management contract.	16	240
Special Funds <i>Plan de Financiación Social</i> (Social Financing)	A fund created to attend to microcredits made to users in the company's market, with collection through the energy bill; these credits have more favorable rates and conditions than those offered by the market. This programme was created by the company's Board of Directors.	10	1,037
Special Learning Agreement Fund	Fund created to serve the programs of the annual training agenda of CHEC employees; through a delegated management contract.	7	30
<b>Total restricted resources CHEC</b>		<b>1,399</b>	<b>4,307</b>

Figures stated in millions of Colombian pesos

Fund or agreement HET	Destination	2019	2018
Deposits - ETESA - Occasional market and rural electrification (OER)	ENERGY	337	334
Certificate of deposit - ETESA contract	ENERGY	297	335
Other services	Other services	31	26
Certificate of deposit - Anam contract	Right-of-use	-	1,168
Deposits - Sura	Management	-	69
<b>Total restricted resources HET</b>		<b>665</b>	<b>1,931</b>

Figures stated in millions of Colombian pesos

Fund or agreement Aguas de Malambo	Destination	2019	2018
Restricted resource agreement Vida	For the <i>Fuente de Vida</i> agreement of the Micromeditation Program	-	1
<b>Total restricted resources Aguas de Malambo</b>		<b>-</b>	<b>1</b>

Figures stated in millions of Colombian pesos

<b>Total restricted resources EPM Group</b>		<b>196,072</b>	<b>173,375</b>
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Figures stated in millions of Colombian pesos

## Note 19. Equity

### 19.1 Issued capital

The Group does not have its Capital divided in Shares.

Capital	2019	2018
Initial balance	67	67
Movement of the period	-	-
<b>Total</b>	<b>67</b>	<b>67</b>

*Figures stated in millions of Colombian pesos*

### 19.2 Reserves

Of the items that conform equity, the reserves at the cut-off date were constituted by:

Reserves	2019	2018
<b>Legal reserves <sup>(1)</sup></b>		
Initial balance	1,656,754	2,587,163
Establishment	101,167	56,358
Release	(256,714)	(986,767)
Other movements	(144)	-
<b>Final balance of legal reserves</b>	<b>1,501,063</b>	<b>1,656,754</b>
<b>Occasional reserves</b>		
Initial balance	598,394	579,717
Establishment	4,071	18,677
Release	(21,717)	-
Other movements	580,748	-
<b>Final balance of occasional reserves</b>	<b>577,529</b>	<b>598,394</b>
<b>Other reserves</b>		
Initial balance	305,510	312,403
Establishment	16,133	2,244
Release	(65,590)	(9,139)
Other movements	3,219	-
<b>Final balance of other reserves</b>	<b>259,272</b>	<b>305,508</b>
<b>Total reserves</b>	<b>2,337,862</b>	<b>2,560,657</b>

*Figures stated in millions of Colombian pesos*

The nature and purpose of the Group's equity reserve are described:

- **Legal Reserves:** In compliance with Colombian tax provisions contained in Article 130 (70% reserve for excess tax depreciation over accounting depreciation) of the Tax Code and Decree 2336 of 1995 (for profits incorporated into results in the application of the equity method applied under local regulations), EPM Group companies operating in Colombia have constituted legal reserves.

For subsidiaries in El Salvador, the legal reserve is established in accordance with the current Commercial Code. Companies must establish a legal reserve of 7% of net profits annually, with a minimum limit of one fifth of their capital stock. In addition, in accordance with the Income Tax Law, when the legal reserve is decreased for any circumstance, such as capitalization, application to prior years' losses or distribution, it will constitute taxable income for the company for the amount that was deducted for income tax purposes in tax years prior to the decrease, and will be liquidated separately from ordinary income, at the rate of 25%. For such purposes, the company will keep a record of the constitution of the legal reserve and of the amount deducted for the determination of the net or taxable income in each year or period of taxation.

For Guatemalan subsidiaries, according to the Code of Commerce, all corporations must annually appropriate at least 5% of their net profits to constitute the legal reserve, which cannot be distributed until liquidation of the company. However, this reserve may be capitalized when it is equal to or greater than 15% of the paid-in capital at the close of the immediately preceding fiscal year, without limitation to continuing to reserve the 5% mentioned.

For subsidiaries in other countries where the EPM Group operates, no legal reserves have been established by law.

- (1) The Board of Directors of EPM at its meetings on 26 March 2019 and 20 March 2018, approved:

Release reserves of \$256,216 (2018: \$990,610) gathered in prior periods by authorization of the Board of Directors.

- **Occasional Reserves:** in compliance with article 211 of the Tax Statute, and the companies of the EPM Group operating in Colombia have constituted the required reserves in order to enjoy the special tax treatment and obtain a rationalization in the payment of income and complementary taxes.
- **Other reserves:** includes statutory reserves for repurchase of shares and share certificates, equity funds and others, which at 31 December record the net balance corresponding to the releases made by the subsidiaries in those reserves that have already met the requirements for release.

### 19.3. Retained earnings

The movements of retained earnings during the period was:

Accumulated income	2019	2018
Initial balance	15,650,483	13,692,151
Movement of reserves	222,651	918,626
Surpluses or dividends decreed	(1,289,652)	(1,203,504)
Transfer from other comprehensive income	(8,993)	(51)
Equity method for changes in equity	(162)	-
Purchases and sales to non-controlling interests	(40,216)	2
Income tax related to transactions with owners	1,955	(341)
Other movement for the period	(17,842)	(14,693)
<b>Total accumulated income before net income or loss for the year</b>	<b>14,518,224</b>	<b>13,392,190</b>
<b>Net profit or loss for the period of controlling interest</b>	<b>2,985,182</b>	<b>2,258,293</b>
<b>Total accumulated income</b>	<b>17,503,406</b>	<b>15,650,483</b>

Figures stated in millions of Colombian pesos

Surplus paid during the year was \$1,289,652 (2018: \$1,503,504), \$703,447 (2018: \$656,457) ordinary and \$586,205 (2018: \$547,047) extraordinary. In 2018 includes payment of \$300,000 from the sale of ISAGEN.

### 19.4. Non-controlling interests

The movement of the non-controlling interests at the cut-off date is:

Non-Controlling Interests	2019	2018
Initial Balance	953,707	857,654
Surpluses or dividends decreed	(139,590)	(106,956)
Share in profit or loss for the period	170,794	159,245
Share in other comprehensive income	3,603	6,306
Purchase and sale to non-controlling interest	(31,561)	33
Income tax related to transactions with owners	1,866	(326)
Adjustment for conversion of equity and results	(2,569)	-
Other movements for the period	8,323	37,751
<b>Total accumulated income</b>	<b>964,572</b>	<b>953,707</b>

Figures stated in millions of Colombian pesos

## Note 20. Accumulated other comprehensive income

The breakdown of each component of the other comprehensive income for the consolidated statement of financial position and the corresponding tax effect is as follows:

Accumulated other comprehensive income	2019			2018		
	Gross	Tax effect	Net	Gross	Tax effect	Net
Reclassification of property, plant and equipment to investment property	13,438	(1,204)	12,234	13,439	(1,643)	11,796
Remeasurement of defined benefit plans	(115,483)	38,338	(77,145)	(47,279)	18,898	(28,381)
Equity investments measured at fair value through equity	2,796,497	(2,092)	2,794,405	2,300,129	(131,825)	2,168,304
Participation in other comprehensive income of associates and joint ventures	(3,914)	-	(3,914)	(3,640)	-	(3,640)
Cash flow hedges	8,421	(30,005)	(21,584)	(21,581)	(48,922)	(70,503)
Translation of financial statements of foreign operations	600,765	-	600,765	817,051	-	817,051
<b>Total</b>	<b>3,299,724</b>	<b>5,037</b>	<b>3,304,761</b>	<b>3,058,119</b>	<b>(163,492)</b>	<b>2,894,627</b>

Figures stated in millions of Colombian pesos

A reconciliation of the opening and closing balances at the cut-off date is presented below for each component of comprehensive income:

### 20.1 Component reclassification of property, plant and equipment to investment property

The component of reclassification of property, plant and equipment to investment property of other comprehensive income corresponds to transfers from property, plant and equipment to investment property, which are measured at fair value. changes in fair value do not reclassify to profit or loss for the period.

Reclassification of property, plant and equipment to investment property	2019	2018
Initial balance	11,796	12,079
Associated income tax (or equivalent)	-	(283)
Other changes	438	-
<b>Total</b>	<b>12,234</b>	<b>11,796</b>

Figures stated in millions of Colombian pesos

### 20.2. Component new measurements of defined benefit plans

The component of new measurements of defined benefit plans represents the accrued value of actuarial profits or losses, the return on plan assets and changes in the effect of the asset ceiling, excluding the values included in the net interest on the liability (asset) of net defined benefits. The net value of the new measurements is transferred to retained earnings and does not reclassify to profit or loss for the period.

Component new measurements of defined benefit plans	2019	2018
Initial balance	(28,381)	(29,557)
Profit or loss for the period due to new measurements of defined benefit plans	(67,674)	(3,409)
Associated income tax (or equivalent)	19,038	4,440
Accumulated income transferred to the accumulated income for the period	507	-
Associated income tax (or equivalent)	29	-
Purchase and sale to non-controlling interest	(108)	-
Other changes	(556)	144
<b>Total</b>	<b>(77,145)</b>	<b>(28,381)</b>

Figures stated in millions of Colombian pesos

### 20.3. Component equity investments measured at fair value through equity

The component of other comprehensive income from equity investments measured at fair value through equity represents the accumulated value of the profits or losses from the assessment at fair value less the values transferred to retained profit when these investments have been sold. Changes in fair value do not reclassify to the result of the period.

Equity investments measured at fair value through equity	2019	2018
Initial balance	2,168,304	2,173,345
Net earnings due to changes in the fair value of investment property	458,002	(9,156)
Associated income tax (or equivalent)	129,733	4,045
Accumulated income transferred to retained earnings	8,477	70
Purchase and sale to non-controlling interest	(1,090)	-
Other changes	30,979	-
<b>Total</b>	<b>2,794,405</b>	<b>2,168,304</b>

Figures stated in millions of Colombian pesos

### 20.4. Participation in other comprehensive income of associates and joint ventures

The component of other comprehensive income from participation in other comprehensive income of associates and joint ventures represents the accumulated value of applying the equity method to profits and losses of other comprehensive income of associates and joint ventures. The accrued value of the profits or losses will be reclassified to the profit or loss for the period or to the accrued profit or loss, depending on the items that originated the equity method, when these investments have been sold.

Participation in other comprehensive income of associates and joint ventures	2019	2018
Initial balance	(3,640)	(2,582)
New measurements of defined benefit plans	(241)	(277)
Result from translation of foreign operations	(89)	49
Associated income tax (or equivalent)	33	37
Hedging operations	-	(868)
Equity method through changes in equity	23	-
<b>Total</b>	<b>(3,914)</b>	<b>(3,640)</b>

Figures stated in millions of Colombian pesos

### 20.5. Component: cash flow hedges

The component of other comprehensive income from cash flow hedges represents the accumulated value of the effective portion of the gains or losses that arise from changes in the fair value of hedged items in a cash flow hedge. The accumulated value of the profits or losses will reclassify to profit or loss for the period only when the hedged transaction affects the profit or loss for the period or the highly probable transaction is not expected to occur, or is included, as part of its recorded value, in a heading non-financial item.

Cash flow hedges	2019	2018
Initial balance	(70,503)	(5,789)
Profit or loss through changes in the fair value of hedging instruments	(54,327)	3,181
Associated income tax (or equivalent)	35,234	(77,848)
Cumulative profit (loss) due to changes in the fair value of hedging instruments reclassified as profit/loss for the period	83,179	-
Associated income tax (or equivalent)	(15,970)	-
Purchase and sale to non-controlling interest	803	9,953
<b>Total</b>	<b>(21,584)</b>	<b>(70,503)</b>

Figures stated in millions of Colombian pesos

## 20.6. Component: Profit or loss for translation of foreign operations

The translation differences component represents the cumulative value of the exchange differences arising from the translation into the Group's presentation currency of profit and loss and net assets of foreign operations, as well as profit or loss on hedging instruments that are designated as a hedge of a net investment in a foreign operation. The accumulated translation differences are reclassified to the results of the period, partially or totally, when the foreign operation is disposed of.

Profit or loss for translation of foreign operations	2019	2018
Initial Balance	817,051	716,674
Net exchange differences for translation of foreign operations	(213,480)	100,377
Purchase and sale to non-controlling interest	(2,806)	-
<b>Total</b>	<b>600,765</b>	<b>817,051</b>

Figures stated in millions of Colombian pesos

## Note 21. Loans and borrowings

The following is the breakdown of the recorded value of loans and borrowings measured at amortized cost:

Loans and borrowings	2019	2018
<b>Non-current</b>		
Commercial banks loans	3,774,443	4,139,390
Other bonds and securities issued	9,151,073	6,177,480
Multilateral banks loans	3,326,049	3,249,965
Development banks loans	822,669	1,819,138
Bonds and securities issued	597,305	643,168
<b>Total non-current</b>	<b>17,671,539</b>	<b>16,029,141</b>
<b>Current</b>		
Commercial banks loans	1,542,949	1,581,113
Multilateral banks loans	268,895	615,309
Other bonds and securities issued	497,125	2,029,387
Bonds and securities issued	462,901	391,119
Development banks loans	212,596	177,626
Other loans	-	11,105
<b>Total current</b>	<b>2,984,466</b>	<b>4,805,659</b>
<b>Total loans and borrowings</b>	<b>20,656,005</b>	<b>20,834,800</b>

*Figures stated in millions of Colombian pesos*



The breakdown of loans and borrowings is as follows:

Company	Entity or loan	Original Currency	Initial Date	Years	Nominal interest rate	31 December 2019				31 December 2018			
						IRR	Nominal Value	Amortized cost value	Total Amount	IRR	Nominal Value	Amortized cost value	Total Amount
AGUAS DE ANTOFAGASTA	Banco BICE-BCI	CLP	1/1/2018	-	-	0.00%	14	-	14	0.00%	3	-	3
AGUAS DE ANTOFAGASTA	Banco del Estado	CLP	10/23/2014	5.00	UF + 1.9%	1.04%	-	-	-	1.04%	9,670	(27)	9,643
AGUAS DE ANTOFAGASTA	Banco del Estado	CLP	1/14/2015	10.00	UF + 2.9%	1.51%	121,157	1,691	122,848	1.51%	151,157	2,107	153,265
AGUAS DE ANTOFAGASTA	Banco del Estado	CLP	10/18/2018	5.00	TAB + 0.65%	1.42%	393,744	12,661	406,404	1.42%	433,144	2,355	435,499
AGUAS DE ANTOFAGASTA	Scotiabank	CLP	10/18/2018	5.00	TAB + 0.65%	1.50%	768,418	24,868	793,286	1.50%	845,310	4,966	850,276
AGUAS REGIONALES	Popular	COP	6/1/2018	7.00	IBR + 3%	7.54%	11,476	74	11,551	7.41%	13,563	85	13,648
AGUAS REGIONALES	Bogotá	COP	10/28/2015	10.00	DTF T.A. + 2.6%	7.21%	510	7	517	7.27%	595	8	603
AGUAS REGIONALES	HELM	COP	3/16/2012	12.00	DTF T.A. + -1%	2.61%	3,504	61	3,565	2.63%	4,328	99	4,427
AGUAS REGIONALES	Bbva	COP	5/20/2014	10.00	DTF T.A. + -0.7%	3.24%	563	8	571	3.27%	688	12	700
AGUAS REGIONALES	Bbva	COP	12/19/2014	10.00	DTF T.A. + -0.7%	3.50%	861	6	866	3.55%	1,033	9	1,042
AGUAS REGIONALES	Davivienda	COP	2/19/2018	10.00	IPC + 4.8%	8.80%	20,000	205	20,205	8.22%	5,000	47	5,047
CENS	Bancolombia	COP	1/31/2018	1.00	IBR + 1.86%	0.00%	-	-	-	6.17%	7,000	70	7,070
CENS	BBVA	COP	9/28/2018	1.00	IPC + 2.6%	0.00%	-	-	-	5.91%	15,000	11	15,011
CENS	Bogotá	COP	9/4/2012	7.00	IBR + 1.88%	0.00%	-	-	-	5.86%	6,000	125	6,125
CENS	Bogotá	COP	5/15/2014	7.00	IBR + 1.88%	6.35%	3,000	18	3,018	6.35%	5,000	27	5,027
CENS	Bogotá	COP	12/18/2015	7.00	IBR + 1.88%	5.78%	6,000	47	6,047	7.63%	8,000	(17)	7,983
CENS	Bogotá	COP	2/16/2018	10.00	IBR + 2.98%	7.30%	129,218	3,402	132,620	7.40%	137,832	3,590	141,422
CENS	Popular	COP	5/15/2017	10.00	IBR + 3.35%	7.64%	34,913	375	35,288	7.64%	37,241	432	37,672
CENS	Popular	COP	5/26/2017	10.00	IBR + 3.35%	7.63%	8,006	71	8,078	7.64%	8,540	81	8,621
CENS	Popular	COP	6/23/2017	10.00	IBR + 3.35%	7.62%	6,098	21	6,120	7.65%	6,505	21	6,526
CENS	Popular	COP	6/29/2017	10.00	IBR + 3.35%	7.60%	9,527	27	9,554	7.61%	10,162	33	10,195
CENS	Popular	COP	7/18/2017	10.00	IBR + 3.35%	7.58%	14,951	547	15,498	7.60%	14,951	560	15,511
CENS	Popular	COP	7/27/2017	10.00	IBR + 3.35%	7.66%	6,500	210	6,710	7.60%	6,500	230	6,730
CENS	Popular	COP	8/23/2017	10.00	IBR + 3.35%	7.76%	6,000	143	6,143	7.71%	6,000	155	6,155
CENS	Popular	COP	9/15/2017	12.00	IBR + 3.35%	7.67%	6,442	142	6,584	7.69%	6,442	144	6,586
CENS	Popular	COP	9/19/2017	10.00	IBR + -1.8%	2.99%	5,923	119	6,042	3.16%	5,923	79	6,002
CENS	Popular	COP	9/19/2017	10.00	IBR + 3.075%	7.11%	11,846	346	12,192	9.53%	11,846	348	12,194
CENS	Popular	COP	11/17/2017	12.00	IBR + 3.35%	7.61%	9,659	110	9,769	7.62%	9,659	120	9,779
CENS	Popular	COP	11/17/2017	10.00	IBR + -1.8%	2.78%	4,077	49	4,126	2.91%	4,077	27	4,104
CENS	Popular	COP	11/17/2017	10.00	IBR + 3.075%	7.11%	8,154	147	8,301	9.47%	8,154	129	8,283
CENS	Popular	COP	12/18/2017	10.00	IBR + 3.35%	7.56%	20,000	129	20,129	7.59%	20,000	136	20,136
CENS	Popular	COP	1/18/2018	9.00	IBR + 3.35%	7.56%	37,000	1,392	38,392	7.57%	37,000	1,429	38,429
CENS	BBVA	COP	10/18/2018	1.00	IPC + 2.6%	0.00%	-	-	-	5.94%	5,000	59	5,059
CENS	Davivienda	COP	11/29/2018	10.00	IPC + 4.3%	8.28%	6,000	49	6,049	7.72%	6,000	39	6,039
CENS	Davivienda	COP	12/19/2018	10.00	IPC + 4.3%	8.37%	15,000	4	15,004	7.71%	15,000	37	15,037
CENS	Davivienda	COP	1/2/2019	10.00	IPC + 4.3%	8.35%	20,000	739	20,739	0.00%	-	-	-
CENS	Davivienda	COP	1/18/2019	10.00	IPC + 4.3%	8.33%	14,000	476	14,476	0.00%	-	-	-

CENS	Bogotá	COP	2/1/2019	1.00	IBR + 1.9%	5.86%	7,000	175	7,175	0.00%	-	-	-
CENS	Davivienda	COP	6/14/2019	12.00	IBR + 1.15%	5.34%	20,000	35	20,035	0.00%	-	-	-
CENS	Davivienda	COP	6/27/2019	12.00	IBR + 1.15%	5.34%	5,713	(1)	5,712	0.00%	-	-	-
CENS	Davivienda	COP	6/28/2019	12.00	IBR + 3.47%	7.81%	4,287	3	4,290	0.00%	-	-	-
CENS	Occidente	COP	12/16/2019	7.00	IBR S.V. + 2.75%	0.00%	35,000	98	35,098	0.00%	-	-	-
CHEC	BBVA	COP	8/22/2014	10.00	IPC + 3.5%	7.20%	39,781	529	40,310	6.65%	48,156	628	48,784
CHEC	Corpbanca	COP	8/22/2014	10.00	IPC + 3.5%	7.20%	30,281	405	30,687	6.64%	36,656	482	37,138
CHEC	Bancolombia	COP	2/9/2018	8.00	IBR + 2.29%	6.70%	50,781	743	51,524	6.70%	58,906	855	59,761
CHEC	Davivienda	COP	12/27/2018	12.00	IBR + 0.388%	4.59%	43,000	159	43,159	4.59%	43,000	21	43,021
CHEC	Davivienda	COP	3/29/2019	12.00	IBR + 0.388%	4.59%	4,475	1	4,476	0.00%	-	-	-
CHEC	Popular	COP	4/24/2019	1.00	IBR + 1.65%	5.97%	70,000	79	70,079	0.00%	-	-	-
CHEC	Davivienda	COP	11/20/2019	12.00	IBR + 0.388%	4.59%	1,814	2	1,816	0.00%	-	-	-
DEL SUR	Citibank	USD	12/27/2018	-	+ 4.9%	0.00%	-	-	-	0.00%	14,624	-	14,624
DEL SUR	Davivienda	USD	8/26/2013	10.00	LIBOR 3M + 3.7%	1.02%	47,109	231	47,339	1.02%	54,840	296	55,135
DEL SUR	Davivienda	USD	10/7/2015	10.00	LIBOR 3M + 4.2%	1.02%	39,326	475	39,801	1.02%	43,872	557	44,428
DEL SUR	BONDS	USD	8/16/2010	10.00	LIBOR 6M + 3%	1.52%	68,820	413	69,233	1.52%	68,245	425	68,669
EDEQ	DAVIVIENDA	COP	11/12/2015	7.00	DTF + 2.66%	0.00%	-	-	-	8.35%	5,875	(43)	5,832
EDEQ	AV VILLAS	COP	6/23/2016	7.00	IBR + 3.1%	7.02%	2,099	17	2,116	10.67%	2,699	19	2,718
EDEQ	AV VILLAS	COP	9/15/2017	7.00	IBR + 3.1%	7.47%	5,700	13	5,713	7.48%	6,000	13	6,013
EDEQ	AV VILLAS	COP	2/22/2019	3.75	DTF T.A. + 2.3%	6.88%	4,415	35	4,450	0.00%	-	-	-
EDEQ	BANCOLOMBIA	COP	5/3/2019	7.00	IBR + 2.74%	0.00%	-	-	-	6.21%	11,000	105	11,105
EDEQ	OCCIDENTE	COP	11/29/2019	7.00	IBR + 2.75%	7.16%	10,000	61	10,061	0.00%	-	-	-
EDEQ	AV VILLAS	COP	11/5/2019	6.50	IBR + 2.3%	6.59%	11,000	108	11,108	0.00%	-	-	-
ENSA	Scotiabank	USD	12/7/2018	0.25	LIBOR + 2.68%	0.00%	-	-	-	2.68%	19,499	35	19,533
ENSA	BONDS	USD	7/10/2006	15.00	7.6%	8.16%	327,714	9,676	337,390	8.16%	324,975	8,465	333,440
ENSA	BONDS	USD	12/13/2012	15.00	4.73%	3.46%	262,171	(2,256)	259,915	3.46%	259,980	(2,520)	257,460
ENSA	Scotiabank	USD	10/3/2018	5.00	4.25%	4.25%	327,714	804	328,518	4.25%	324,975	732	325,707
ENSA	Bladex	USD	12/2/2019	0.08	0.4%	2.11%	32,771	15	32,787	2.90%	19,499	5	19,503
ENSA	Davivienda	USD	12/11/2019	0.25	0.3%	2.19%	32,771	40	32,811	0.00%	-	-	-
ENSA	Davivienda	USD	12/12/2019	0.25	0.3%	2.19%	16,386	19	16,405	0.00%	-	-	-
EP RIO	Bogotá	COP	6/15/2016	10.00	DTF T.A. + 5%	10.26%	2,031	(8)	2,023	10.19%	2,344	(11)	2,332
EP RIO	Bogotá	COP	10/19/2015	10.00	DTF T.A. + 5%	10.11%	2,188	(2)	2,185	10.18%	2,563	(4)	2,558
EP RIO	Bogotá	COP	2/28/2016	10.00	DTF T.A. + 5%	10.08%	3,292	(10)	3,282	10.16%	3,792	(14)	3,778
EP RIO	Bogotá	COP	7/27/2016	10.00	DTF T.A. + 5%	10.18%	771	(5)	766	10.22%	896	(6)	890
EPM	1257 BONDS IPC II TRANCHE	COP	1/22/2009	10.00	IPC + 5.8%	0.00%	-	-	-	9.16%	138,600	2,366	140,966
EPM	1259 BONDS TF II TRANCHE	COP	1/22/2009	10.00	10.8%	0.00%	-	-	-	10.79%	74,700	7,558	82,258
EPM	1261 BONDS IPC III TRANCHE	COP	4/21/2009	15.00	IPC + 6.24%	10.24%	198,400	4,321	202,721	9.63%	198,400	4,260	202,660
EPM	1264 BONDS IPC IV TRANCHE 2	COP	12/14/2010	12.00	IPC + 4.2%	8.18%	119,900	513	120,413	7.58%	119,900	515	120,415
EPM	1265 BONDS IPC IV TRANCHE 3	COP	12/14/2010	20.00	IPC + 4.94%	8.99%	267,400	634	268,034	8.40%	267,400	548	267,948
EPM	1268 BONDS IPC V TRANCHE II	COP	12/4/2013	10.00	IPC + 4.52%	8.80%	96,210	(206)	96,004	8.17%	96,210	(311)	95,899
EPM	1269 BONDS IPC V TRANCHE III	COP	12/4/2013	20.00	IPC + 5.03%	9.24%	229,190	(1,560)	227,630	8.62%	229,190	(1,541)	227,649
EPM	1270 BONDS IPC VI TRANCHE I	COP	7/29/2014	6.00	IPC + 3.57%	7.98%	125,000	1,289	126,289	7.36%	125,000	740	125,740

EPM	1271 BONDS IPC VI TRANCHE II	COP	7/29/2014	12.00	IPC + 4.17%	8.39%	125,000	409	125,409	7.78%	125,000	166	125,166
EPM	1272 BONDS IPC VI TRANCHE III	COP	7/29/2014	20.00	IPC + 4.5%	8.68%	250,000	219	250,219	8.08%	250,000	(100)	249,900
EPM	1274 BONDS IPC V TRANCHE IV	COP	3/20/2015	10.00	IPC + 3.65%	8.64%	130,000	369	130,369	8.01%	130,000	362	130,362
EPM	1275 BONDS IPC VII TRANCHE I	COP	3/20/2015	5.00	IPC + 2.72%	6.81%	120,000	217	120,217	6.13%	120,000	167	120,167
EPM	1276 BONDS IPC VII TRANCHE II	COP	3/20/2015	12.00	IPC + 3.92%	7.94%	120,000	132	120,132	7.34%	120,000	146	120,146
EPM	1277 BONDS IPC VII TRANCHE III	COP	3/20/2015	20.00	IPC + 4.43%	8.43%	260,000	886	260,886	7.83%	260,000	949	260,949
EPM	2218 BID 800- RESETTLED	USD	7/14/1994	25.00	LIBOR + 1.43%	0.00%	-	-	-	2.43%	26,312	827	27,138
EPM	1665 BID-1664-1	COP	12/9/2005	20.00	7.8%	9.14%	284,769	3,938	288,707	9.24%	332,231	4,367	336,598
EPM	1220 BID 2120	USD	3/25/2009	25.00	LIBOR + 0%	2.83%	353,055	(5,661)	347,394	3.62%	374,249	(1,614)	372,635
EPM	2021 BID 2120-1	COP	3/25/2009	25.00	6.272%	7.49%	190,295	(2,750)	187,545	7.25%	190,295	(2,591)	187,704
EPM	2179 BANK OF TOKYO-MITSUB	USD	9/29/2008	15.00	LIBOR + 0.95%	1.24%	218,441	9,037	227,478	2.07%	270,782	14,372	285,154
EPM	1266 GLOBAL 2021 COP	COP	1/31/2011	10.00	8.375%	14.03%	130,822	2,998	133,820	8.70%	1,250,000	88,210	1,338,210
EPM	1273 GLOBAL 2024 COP	COP	9/3/2014	10.00	7.625%	7.74%	965,745	17,919	983,664	7.74%	965,745	17,243	982,988
EPM	1262 BONDS INTERNACIONALE	USD	7/29/2009	10.00	7.625%	0.00%	-	-	-	8.25%	1,624,875	49,306	1,674,181
EPM	5765 AGRARIO	COP	5/20/2014	16.00	IPC + 4.7%	8.94%	116,000	(862)	115,138	8.38%	116,000	(1,234)	114,766
EPM	1013 AFD	USD	8/10/2012	14.00	4.311%	4.47%	738,875	12,333	751,208	4.47%	824,287	13,588	837,875
EPM	2015 CLUB DEAL BANK OF TOKYO	USD	12/29/2015	5.00	LIBOR + 1.4%	0.00%	-	0	0	4.94%	763,691	6,548	770,239
EPM	2022 BID 2120-2	COP	3/25/2009	25.00	7.5%	8.23%	363,057	(679)	362,379	8.06%	388,096	1,624	389,720
EPM	2016 BNDES	USD	4/26/2016	23.50	4.887%	5.42%	158,247	(4,503)	153,744	5.22%	132,517	(4,144)	128,373
EPM	1278 GLOBAL 2027 COP	COP	10/31/2017	10.00	8.375%	8.45%	3,530,000	28,768	3,558,768	8.46%	2,300,000	15,626	2,315,626
EPM	2023 BID 2120-3	COP	3/25/2009	25.00	6.265%	6.71%	180,750	825	181,576	6.56%	193,216	2,134	195,350
EPM	1014 EDC	USD	8/4/2016	6.00	LIBOR + 1.4%	0.00%	-	-	-	4.65%	974,925	10,059	984,984
EPM	6017 POPULAR	COP	1/15/2018	1.00	IBR + 1.8%	0.00%	-	-	-	6.06%	100,000	1,312	101,312
EPM	6018 Bancolombia	COP	1/22/2018	1.00	IBR + 1.59%	0.00%	-	-	-	5.87%	100,000	1,110	101,110
EPM	6019 Bancolombia	COP	1/29/2018	1.00	IBR + 1.59%	0.00%	-	-	-	5.87%	70,000	697	70,697
EPM	6020 Bancolombia	COP	2/19/2018	1.00	IBR + 1.59%	0.00%	-	-	-	5.89%	130,000	873	130,873
EPM	1015 CAF	USD	10/3/2016	18.00	LIBOR + 3.1%	5.26%	655,428	3,432	658,860	6.28%	649,950	5,285	655,235
EPM	9999 FEES UNDISBURSED LOANS	USD	1/0/1900	-	+ 0%	0.00%	-	-	-	0.00%	-	(20,185)	(20,185)
EPM	1230 IDB INVEST TRANCHE 12 years	USD	12/29/2017	12.00	Libor 6M + 2.75%	5.66%	1,228,928	(44,316)	1,184,612	6.37%	1,218,656	(36,582)	1,182,074
EPM	1231 IDB INVEST TRANCHE 8 years	USD	12/29/2017	8.00	Libor 6M + 2.125%	5.26%	245,786	(8,528)	237,258	5.88%	243,731	(7,346)	236,385
EPM	1019 COLPATRIA	COP	12/19/2018	1.00	IBR + 1.78%	0.00%	-	-	-	6.06%	100,000	199	100,199
EPM	1020 BBVA	COP	12/20/2018	10.00	8.375%	0.00%	-	-	-	6.07%	35,000	59	35,059
EPM	1018 BANCOLOMBIA	COP	11/22/2018	3.00	IBR S.V. + 3.5%	7.12%	450,000	9,404	459,404	0.00%	-	-	-
EPM	1017 HSBC	USD	11/26/2018	3.00	Libor 6M + 2.75%	0.00%	-	(3,472)	(3,472)	0.00%	-	-	-
EPM	1023 1023 BONDS USD	USD	7/11/2019	10.00	4.25%	4.39%	3,277,140	39,066	3,316,206	0.00%	-	-	-
ESSA	Bogotá	COP	2/26/2013	7.00	IBR + 1.88%	5.89%	5,600	35	5,635	5.85%	28,000	216	28,216
ESSA	Bogotá	COP	4/11/2013	7.00	IBR + 1.88%	5.89%	3,650	50	3,700	5.92%	10,950	162	11,112
ESSA	Bogotá	COP	5/20/2013	7.00	IBR + 1.88%	5.76%	700	6	706	5.73%	2,100	21	2,121
ESSA	Bogotá	COP	4/10/2014	7.00	IBR + 1.88%	5.92%	5,400	80	5,480	5.94%	9,000	141	9,141
ESSA	Bogotá	COP	4/16/2014	7.00	IBR + 1.88%	5.97%	3,000	41	3,041	6.00%	5,000	71	5,071
ESSA	Bogotá	COP	4/30/2015	7.00	IBR + 1.88%	6.15%	6,500	66	6,566	6.17%	9,100	91	9,191
ESSA	Bogotá	COP	1/27/2016	7.00	IBR + 1.88%	6.23%	9,750	92	9,842	6.25%	12,750	114	12,864

ESSA	Bogotá	COP	2/16/2016	7.00	IBR + 1.88%	6.27%	8,450	49	8,499	6.27%	11,050	60	11,110
ESSA	Bogotá	COP	3/28/2016	7.00	IBR + 1.88%	6.16%	4,550	1	4,551	6.02%	5,950	18	5,968
ESSA	Bogotá	COP	4/14/2016	7.00	IBR + 1.88%	6.27%	9,950	65	6,015	6.29%	7,650	79	7,729
ESSA	Bogotá	COP	7/1/2016	12.00	IBR + 3.15%	7.57%	17,500	265	17,765	7.59%	19,500	281	19,781
ESSA	Bogotá	COP	8/19/2016	12.00	IBR + 3.15%	7.53%	7,000	47	7,047	7.54%	7,800	52	7,852
ESSA	Bogotá	COP	10/13/2016	12.00	IBR + 3.15%	7.57%	8,100	101	8,201	7.60%	9,000	106	9,106
ESSA	Bogotá	COP	11/11/2016	12.00	IBR + 3.15%	7.66%	31,500	129	31,629	7.63%	35,000	170	35,170
ESSA	Bogotá	COP	12/5/2016	12.00	IBR + 3.15%	7.59%	7,200	9	7,209	7.60%	8,000	9	8,009
ESSA	Bogotá	COP	12/14/2016	12.00	IBR + 3.15%	7.57%	13,500	4	13,504	7.58%	15,000	0	15,000
ESSA	Bogotá	COP	1/11/2017	12.00	IBR + 3.15%	7.57%	13,869	181	14,051	7.59%	14,994	184	15,179
ESSA	Bogotá	COP	1/16/2017	12.00	IBR + 3.15%	7.56%	9,244	115	9,360	7.58%	9,994	117	10,112
ESSA	Bogotá	COP	5/15/2017	12.00	IBR + 3.15%	7.57%	9,500	57	9,557	7.58%	10,000	57	10,057
ESSA	Bogotá	COP	6/14/2017	12.00	IBR + 3.56%	8.08%	9,500	20	9,520	8.09%	10,000	18	10,018
ESSA	Bogotá	COP	6/29/2017	12.00	IBR + 3.56%	7.93%	7,600	31	7,631	7.94%	8,000	36	8,036
ESSA	Bogotá	COP	7/13/2017	12.00	IBR + 3.56%	8.06%	9,750	154	9,904	8.09%	10,000	151	10,151
ESSA	Bogotá	COP	9/28/2017	12.00	IBR + 3.56%	8.07%	14,625	(10)	14,615	8.08%	15,000	(14)	14,986
ESSA	Bogotá	COP	10/12/2017	12.00	IBR + 3.56%	8.05%	5,000	82	5,082	8.08%	5,000	78	5,078
ESSA	Bogotá	COP	10/30/2017	12.00	IBR + 3.56%	8.05%	5,000	62	5,062	8.08%	5,000	59	5,059
ESSA	Bogotá	COP	11/29/2017	12.00	IBR + 3.56%	8.08%	7,000	36	7,036	8.08%	7,000	36	7,036
ESSA	Bogotá	COP	12/11/2017	12.00	IBR + 3.56%	8.04%	4,000	16	4,016	8.05%	4,000	15	4,015
ESSA	Bogotá	COP	12/14/2017	12.00	IBR + 3.56%	8.04%	14,000	46	14,046	8.05%	14,000	44	14,044
ESSA	Bogotá	COP	12/26/2017	12.00	IBR + 3.56%	8.11%	90,000	(178)	89,822	8.13%	90,000	(230)	89,770
ESSA	Bogotá	COP	12/26/2017	12.00	IBR + 3.15%	7.56%	10,000	(21)	9,979	7.57%	10,000	(26)	9,974
ESSA	BBVA	COP	10/29/2018	12.00	IBR + 2.91%	7.35%	40,000	449	40,449	7.35%	40,000	492	40,492
ESSA	BBVA	COP	11/28/2018	12.00	IBR + 2.91%	7.34%	6,000	36	6,036	7.35%	6,000	39	6,039
ESSA	BBVA	COP	12/26/2018	12.00	IBR + 2.91%	7.33%	54,000	70	54,070	7.34%	54,000	52	54,052
ESSA	Popular	COP	12/28/2018	12.00	IBR + 2.91%	7.22%	106,000	68	106,068	7.24%	106,000	61	106,061
ESSA	Popular	COP	12/27/2019	12.00	IBR + 2.91%	7.22%	94,000	72	94,072	0.00%	-	-	-
DECA GROUP	Banco Agromercantil	USD	4/27/2018	1.00	LIBOR + 2.03%	0.00%	-	-	-	4.33%	159,237	-	159,237
DECA GROUP	Bancolombia	USD	7/9/2018	1.00	LIBOR + 2.03%	0.00%	-	-	-	4.33%	129,989	-	129,989
DECA GROUP	Banco Industrial	GTQ	12/20/2018	10.00	TAPP + -6.8%	6.11%	111,100	7	111,106	6.19%	109,627	181	109,808
DECA GROUP	Banco América Central	GTQ	12/21/2018	10.00	TAPP + -6.81%	6.11%	65,127	(10)	65,118	6.14%	64,264	95	64,359
DECA GROUP	Banco Agromercantil	GTQ	1/24/2019	10.00	TAPP + -6.87%	6.05%	136,214	1,286	137,500	6.82%	42,002	(258)	41,744
DECA GROUP	Banco América Central	USD	12/21/2018	10.00	LIBOR 90 + 2.26387%	4.58%	98,315	(380)	97,934	5.10%	97,492	120	97,611
DECA GROUP	Banco Internacional	USD	12/19/2018	10.00	TAPP + -1.25%	5.37%	16,386	63	16,449	5.10%	16,249	24	16,273
DECA GROUP	Banco Agromercantil	USD	1/24/2019	10.00	LIBOR 90 + 3.05%	5.39%	19,663	179	19,842	0.00%	-	-	-
DECA GROUP	Banco Industrial	USD	12/15/2017	1.00	TAPP + -1.5%	0.00%	32,772	-	32,772	0.00%	-	-	-
DECA GROUP	Banco Industrial	GTQ	12/20/2018	10.00	TAPP + -6.8%	6.11%	142,173	5	142,178	6.05%	140,289	-	140,289
DECA GROUP	Banco América Central	GTQ	12/26/2018	10.00	TAPP + -6.81%	6.11%	65,553	(10)	65,543	6.00%	64,684	-	64,684
DECA GROUP	Banco Agromercantil	GTQ	1/25/2019	10.00	TAPP + -6.87%	6.05%	136,214	1,298	137,512	0.00%	-	-	-
DECA GROUP	Banco América Central	USD	12/26/2018	10.00	LIBOR 90 + 2.26387%	4.58%	32,772	(125)	32,647	5.00%	32,497	-	32,497
DECA GROUP	Banco Internacional	USD	12/19/2018	10.00	TAPP + -1.25%	5.37%	16,386	63	16,449	5.00%	16,249	-	16,249

DECA GROUP	Mercom Bank LTD	USD	1/25/2019	10.00	LIBOR 90 + 3.05%	5.37%	19,663	188	19,851	0.00%	-	-	-
DECA GROUP	Bancolombia Panamá	USD	1/25/2019	10.00	LIBOR 90 + 3.05%	5.38%	78,652	713	79,365	0.00%	-	-	-
DECA GROUP	Bancolombia Panamá	USD	7/16/2019	1.00	LIBOR 30 + 2.07%	4.37%	32,772	-	32,772	0.00%	-	-	-
DECA GROUP	Banco Industrial	GTQ	4/25/2019	5.00	TAPP + -6.25%	6.67%	332,022	(71)	331,951	0.00%	-	-	-
TICSA	Bank of America	MXN	4/16/2018	1.00	TIIE + 1.75%	0.00%	-	-	-	10.35%	9,950	-	9,950
TICSA	Bank of America	USD	1/2/2019	1.00	LIBOR + 2.25%	0.00%	-	-	-	10.35%	12,677	-	12,677
TICSA	Bank of America	MXN	4/6/2018	1.00	TIIE + 1.75%	0.00%	-	-	-	10.35%	28,547	-	28,547
TICSA	Santander	MXN	6/14/2016	7.00	TIIE + 2.15%	12.47%	30,929	329	31,258	12.20%	36,704	172	36,876
TICSA	Santander	MXN	6/14/2016	10.00	TIIE + 2.15%	12.57%	50,600	45	50,645	12.41%	53,031	(116)	52,915
TICSA	Santander	MXN	6/14/2016	14.00	TIIE + 2.15%	13.33%	18,931	116	19,047	13.15%	18,861	58	18,919
TICSA	Interacciones	MXN	8/1/2007	15.33	TIIE + 3%	7.54%	17,694	1,687	19,381	11.60%	22,748	854	23,603
TICSA	Interacciones	MXN	5/1/2011	8.00	TIIE + 3.9%	12.41%	-	-	-	8.28%	1,646	6	1,651
TICSA	Banco del Bajío	MXN	7/31/2013	14.67	TIIE + 2.75%	8.57%	64,417	15	64,432	11.35%	65,184	(643)	64,542
TICSA	FIDE	MXN	12/9/2015	3.00	+ 0%	8.69%	-	-	-	8.69%	469	(428)	41
TICSA	Santander	MXN	5/25/2018	1.00	TIIE + 3%	11.51%	4,323	-	4,323	11.60%	4,916	-	4,916
TICSA	Bank of America	MXN	7/23/2018	1.00	TIIE + 1.75%	10.26%	-	-	-	10.35%	9,571	-	9,571
TICSA	Bank of America	MXN	9/3/2018	1.00	TIIE + 1.75%	10.26%	-	-	-	10.35%	11,551	-	11,551
TICSA	Bank of America	MXN	12/4/2018	1.00	TIIE + 2.25%	10.76%	14,700	(117)	14,583	10.85%	11,551	-	11,551
TICSA	Bank of America	USD	9/28/2018	1.00	LIBOR + 2.25%	10.35%	-	-	-	10.35%	10,341	-	10,341
<b>Total</b>							<b>20,524,224</b>	<b>131,781</b>	<b>20,656,005</b>	<b>-</b>	<b>20,628,839</b>	<b>205,961</b>	<b>20,834,800</b>

Figures stated in millions of Colombian pesos

Interest paid on loans as at 31 December 2019 was \$1,517,994 (2018: \$1,191,430).

The net exchange difference at 31 December 2019 assumed associated with debt was \$-103,866 (2018: \$-278,638).

## Information on bonds and securities issued is:

Subseries	Original currency	Initial date	Years	Nominal interest rate	31 December 2019				31 December 2018				Amount awarded								
					IRR	Nominal value	Amortized cost value	Total amount	IRR	Nominal value	Amortized cost value	Total amount	Amount awarded 2018	Amount awarded 2017	Amount awarded 2016	Amount awarded 2015	Amount awarded 2014	Amount awarded 2013	Amount awarded 2012		
A10a	COP	1/22/2009	10	IPC + 5.8%	0.00%	-	-	-	9.16%	138,600	2,366	140,966	138,600	138,600	138,600	138,600	138,600	138,600	138,600	138,600	138,600
A10a	COP	12/4/2013	10	IPC + 4.52%	8.80%	96,210	(206)	96,004	8.17%	96,210	(311)	95,899	96,210	96,210	96,210	96,210	96,210	96,210	96,210	96,210	-
A10a	COP	3/20/2015	10	IPC + 3.65%	8.64%	130,000	369	130,369	8.01%	130,000	362	130,362	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	-
A12a	COP	12/14/2010	12	IPC + 4.2%	8.18%	119,900	513	120,413	7.58%	119,900	515	120,415	119,900	119,900	119,900	119,900	119,900	119,900	119,900	119,900	119,900
A12a	COP	7/29/2014	12	IPC + 4.17%	8.39%	125,000	409	125,409	7.78%	125,000	166	125,166	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	-
A12a	COP	3/20/2015	12	IPC + 3.92%	7.94%	120,000	132	120,132	7.34%	120,000	146	120,146	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	-
A15a	COP	4/21/2009	15	IPC + 6.24%	10.24%	198,400	4,321	202,721	9.63%	198,400	4,260	202,660	198,400	198,400	198,400	198,400	198,400	198,400	198,400	198,400	198,400
A20a	COP	12/14/2010	20	IPC + 4.94%	8.99%	267,400	634	268,034	8.40%	267,400	548	267,948	267,400	267,400	267,400	267,400	267,400	267,400	267,400	267,400	267,400
A20a	COP	12/4/2013	20	IPC + 5.03%	9.24%	229,190	(1,560)	227,630	8.62%	229,190	(1,541)	227,649	229,190	229,190	229,190	229,190	229,190	229,190	229,190	229,190	229,190
A20a	COP	7/29/2014	20	IPC + 4.5%	8.68%	250,000	219	250,219	8.08%	250,000	(100)	249,900	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	-
A20a	COP	3/20/2015	20	IPC + 4.43%	8.43%	260,000	886	260,886	7.83%	260,000	949	260,949	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	-
A5a	COP	3/20/2015	5	IPC + 2.72%	6.81%	120,000	217	120,217	6.13%	120,000	167	120,167	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	-
A6a	COP	7/29/2014	6	IPC + 3.57%	7.98%	125,000	1,289	126,289	7.36%	125,000	740	125,740	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	-
C10a	COP	1/22/2009	10	10.8%	0.00%	-	-	-	10.79%	74,700	7,558	82,258	74,700	74,700	74,700	74,700	74,700	74,700	74,700	74,700	74,700
International bond	USD	7/29/2009	10	7.625%	0.00%	-	-	-	8.25%	1,624,875	49,306	1,674,181	1,624,875	1,492,000	1,500,355	1,574,735	1,196,230	963,415	884,115	884,115	-
International bond	COP	1/31/2011	10	8.375%	14.03%	130,822	2,998	133,820	8.70%	1,250,000	88,210	1,338,210	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
International bond	COP	9/3/2014	10	7.625%	7.74%	965,745	17,919	983,664	7.74%	965,745	17,243	982,988	965,745	965,745	965,745	965,745	965,745	965,745	965,745	965,745	-
International bond	COP	10/31/2017	10	8.375%	8.45%	3,530,000	28,768	3,558,768	8.46%	2,300,000	15,626	2,315,626	2,300,000	2,300,000	-	-	-	-	-	-	-
International bond	USD	7/11/2019	10	4.25%	4.39%	3,277,140	39,066	3,316,206	0.00%	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL BONDS ISSUED</b>						<b>9,944,807</b>	<b>95,974</b>	<b>#####</b>		<b>8,395,020</b>	<b>186,210</b>	<b>8,581,230</b>	<b>8,395,020</b>	<b>8,262,145</b>	<b>5,970,500</b>	<b>6,044,880</b>	<b>5,036,375</b>	<b>3,337,815</b>	<b>2,933,115</b>	<b>2,933,115</b>	<b>-</b>

Figures stated in millions of Colombian pesos, the exchange rate used was the MRR at the closing of each period

## The breakdown of international bonds issued by the Group is as follows:

### ENSA:

Type of bond	Original currency	Initial date	Years	Nominal interest rate	31 December 2019				31 December 2018				Amount awarded								
					IRR	Nominal value	Amortized cost value	Total amount	IRR	Nominal value	Amortized cost value	Total amount	2018	2017	2016	2015	2014	2013	2012		
Preference bonds	USD	7/10/2006	15	7.6%	8.16%	327,714	9,676	337,390	8.16%	324,975	8,465	333,440	-	-	-	-	-	-	-	-	-
Corporate bonds	USD	12/13/2012	15	4.73%	3.46%	262,171	2,256	259,915	3.46%	259,980	2,520	257,460	-	-	-	-	-	-	-	-	141,458
<b>TOTAL</b>						<b>589,885</b>	<b>7,420</b>	<b>597,305</b>		<b>584,955</b>	<b>5,945</b>	<b>590,900</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>141,458</b>

Figures stated in millions of Colombian pesos, the exchange rate used was the MRR at the closing of each period

### DELSUR:

Type of bond	Original currency	Initial date	Years	Nominal interest rate	31 December 2019				31 December 2018				Amount awarded								
					IRR	Nominal value	Amortized cost value	Total amount	IRR	Nominal value	Amortized cost value	Total amount	2018	2017	2016	2015	2014	2013	2012		
INVESTMENT BONDS - CIDELSUR1 (ScotiaInversiones, BVES)	USD	8/16/2010	10	LIBOR 6M + 3%	1.52%	68,820	413	69,233	1.52%	68,245	425	68,669	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>						<b>68,820</b>	<b>413</b>	<b>69,233</b>		<b>68,245</b>	<b>425</b>	<b>68,669</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

Figures stated in millions of Colombian pesos, the exchange rate used was the MRR at the closing of each period

In 2019, EPM Group had the following significant changes related to loans and borrowings:

#### New loans

##### January

- EPM Holding company: Colpatría for \$165,000 and BBVA for \$300,000.
- Aguas Regionales EPM S.A. E.S.P.: Davivienda for \$4,800.
- Centrales Electricas del Norte de Santander S.A. E.S.P. (CENS): Davivienda for \$34,000.
- Deca Group: Banco Industrial S.A. for USD \$5 million.

##### February

- EPM Holding company: Bancolombia for \$1,000,000 and HSBC for USD \$500 million.
- Central de Energía Norte de Santander (CENS): Banco de Bogotá for COP 7,000.
- Empresa de Energía del Quindío S.A. E.S.P. (EDEQ): Banco AV Villas for COP 5,519.
- Deca Group: Banco Industrial S.A. for US\$ 4 million.

##### March

- Aguas Regionales EPM S.A. E.S.P.: Davivienda for \$1,300.
- Empresa de Distribución de Energía del Noreste de Panamá S.A. (Ensa): Davivienda for USD \$10 million.
- Deca Group: Banco Industrial S.A. for USD \$6 million.

##### April

- Caldas Hydroelectric Plant (CHEC): Banco Popular for \$70,000.
- Tecnología Intercontinental S.A (TICSA): Bank of America for MXN \$233.3 million.
- Deca Group: Banco Industrial S.A. for GTQ \$780 million and USD \$5 million.

##### May

- Empresa de Energía del Quindío S.A. E.S.P. (EDEQ): Banco AV Villas for \$5,000 and Bancolombia for \$11,000.
- Empresa de Distribución de Energía del Noreste de Panamá S.A. (Ensa): The Bank of Nova Scotia (Panama) for USD \$7 million.
- Deca Group: Banco Agromercantil for GTQ \$192.5 million.

##### June

- Central de Energía Norte de Santander (CENS): Davivienda for \$30,000.
- Empresa de Energía del Quindío S.A. E.S.P. (EDEQ): Banco Popular for \$6,000.
- Tecnología Intercontinental S.A. (TICSA): Bank of America for MXN \$233.3 million.
- Empresa de Distribución de Energía del Noreste de Panamá S.A. (Ensa): Davivienda for USD \$17 million and The Bank of Nova Scotia (Panama) for USD \$13 million.
- Deca Group: Banco de Desarrollo Rural for USD \$18 million.

##### July

- EPM Holding company: BNDES for USD \$1.9 million.
- Empresa de Distribución de Energía del Noreste de Panamá S.A. (Ensa): The Bank of Nova Scotia (Panama) for USD \$25 million.

- Del sur: Bank of Central America for USD \$5 million.
- Deca Group: Bancolombia Panama for USD \$10 million.

#### August

- Central de Energía Norte de Santander (CENS): Banco de Occidente for \$10,000.
- Empresa de Distribución de Energía del Noreste de Panamá S.A. (Ensa): The Bank of Nova Scotia (Panama) for USD \$4 million and Bladex for USD \$4 million.

#### September

- EPM Holding company: BNDES new loan for USD \$5.6 million.
- Empresa de Distribución de Energía del Noreste de Panamá S.A. (Ensa): Bladex for USD \$3 million.

#### November

- Caldas Hydroelectric Plant (CHEC): Davivienda for \$1,814.
- Empresa de Energía del Quindío S.A. E.S.P. (EDEQ): Banco de Occidente for \$10,000 and Banco Av Villas for \$11,000.

#### December

- Central de Energía Norte de Santander (CENS): Banco de Occidente for \$35,000.
- Empresa de Distribución de Energía del Noreste de Panamá S.A. (Ensa): Davivienda for USD \$15 million, Bladex for USD \$10 million.
- Electrificadora de Santander (ESSA): Banco Popular for \$94,000.

### Voluntary pre-payment

#### July

- EPM Holding company: Bancolombia partial voluntary pre-payment for \$300,000.

#### August

- EPM Holding company: Bancolombia partial voluntary pre-payment for \$250,000.

#### October

- EPM Holding company: Colpatria total voluntary pre-payment for \$265,000 and BBVA total voluntary prepayment for \$35,000.

#### December

- EPM Holding company: BBVA total voluntary pre-payment for \$300,000.

### Debt Exchange / roll-over

#### January

Deca Group: Banco Agromercantil for GTQ \$447.5 million, Banco Internacional for USD \$6 million, Mercom Bank LTD for USD \$6 million and Bancolombia Panama for USD \$24 million.



July

EPM performed a Debt Exchange / roll-over consisting of:

- Early repurchase of \$1.1 trillion, corresponding to the international bond issue scheduled to mature in January 2021, with a balance of \$1.25 trillion, under a "Tender Offer" scheme. This repurchase corresponded to 89.5% of the balance of that financial liability.
- Issuance of two tranches of bonds in the international capital market, for an amount equivalent to USD \$1,382 million: USD \$1 billion with a 10-year term and reopening of the global peso bond, maturing in 2027, for \$1.23 trillion.
- Voluntary pre-payment of USD \$1,035 million, of Club Deal International loans for USD \$235 million, HSBC for USD \$500 million and EDC for USD \$300 million.

#### Debt/EBITDA Covenant

On 29 December 2017, EPM entered into a credit agreement for USD 1 billion ("IDB Invest Loan") with the Inter-American Investment Corporation ("IDB Invest"), the private sector division of the Inter-American Development Bank. The IDB Invest Loan has an A/B structure in which the IDB group funds tranche A and a group of international commercial banks and institutional investors from North America, Europe and Asia (CDPQ, KFW IPEX, BNP Paribas, ICBC, Sumitomo Mitsui, BBVA and Banco Santander) funds tranche B. Additionally, the IDB Invest Loan includes resources from the China Fund - China co-financing fund managed by IDB Invest. Tranche A and the portion financed by the China Fund have a total term of 12 years, and tranche B has terms of 8 and 12 years. Interest on the IDB Invest Loan accrued at a LIBOR rate plus 2.125% or LIBOR + 2.75% according to the term, payable semi-annually. The proceeds will be disbursed gradually over a 4-year disbursement period. EPM may voluntarily pre-pay the IDB Invest Loan at any time and payment obligations qualify as *pari passu* regarding payment priority with all other present and future unsecured and unsubordinated External Indebtedness of EPM. The IDB Invest Loan provides for certain financial covenants, what indicates that it shall not allow the net debt to Adjusted EBITDA ratio be greater than 4.0 and the interest coverage ratio be less than 3.0. On December 12, 2018, IDB Invest granted EPM a waiver for its non-compliance with certain environmental covenants under the loan agreement caused by of the Ituango Contingency. Currently EPM and IDB Invest are negotiating an amendment to this loan agreement to revise the environmental covenants.

EPM has entered into several loan agreements with the IDB, certain of which are guaranteed by Colombia (the "IDB Loans"). Generally, these loans have been entered into in connection with certain of EPM's infrastructure projects, including the expansion of water and sewage infrastructure in Medellín, the Medellín river clean-up program and the Porce III hydroelectric project. In relation to the Medellín river clean-up program, on March 25, 2009, EPM and the IDB entered into a 25-year credit facility for up to USD 450 million.

These loans provide for an interest rate of (i) LIBOR plus a fixed rate and/or (ii) the IDB lending spread, semi-annual interest payments, cross-defaults in respect of other indebtedness with the IDB and voluntary prepayments. Also, under certain loan agreements, EPM is (i) prohibited from incurring new indebtedness with maturities longer than one year, as a result of which EPM's total financial indebtedness/consolidated Adjusted EBITDA ratio exceeds 3.5, and (ii) required to maintain a long-term indebtedness/net worth ratio not to exceed 1.5. Other restrictive covenants include limitations on liens, limitations on the sale of assets and limitations on investments.

The IDB Loans allow EPM to convert the currency of the outstanding balance, with the authorization of Colombia, the loan's guarantor. On 27 May 2014, EPM converted a tranche of IDB Loan 2120 for an aggregate principal amount of USD 98.6 million to COP 190,295 million, with a fixed interest rate of 6.2716%. On 31 March 2016, EPM converted IDB Loan 1664 for an aggregate principal amount of USD 153.8 million to COP 474,615 million, with a fixed interest rate of 7.80%. On 23 August 2016, EPM converted a tranche of IDB Loan 2120 for an aggregate principal amount of USD 154.3 million to COP 450,692 million, with a fixed interest rate of 7.50%.

On 8 December 2017, EPM converted a tranche of IDB Loan 2120 for an aggregate principal amount of USD 68.3 million to COP 205,681 million, with a fixed interest rate of 6.265%.

Under IDB Loan contract 1664, EPM is required to maintain a total financial indebtedness/consolidated Adjusted EBITDA ratio of 3.5 which is measured and reviewed annually. On December 2018 IDB confirmed that would grant the waiver, in the official communication on 17 January 2019, the IDB granted EPM a waiver for its non-compliance with such ratio for the period ending 31 December 2018 and 2019.

On 29 September 2008, EPM entered into a syndicated loan agreement with The Bank of Tokyo-Mitsubishi UFJ, LTD acting as joint lead arranger and facility and collection agent, and Banco Bilbao Vizcaya Argentaria, S.A., Tokyo Branch, acting as joint lead arranger (the "Japan Bank Loan"). The Japan Bank Loan is guaranteed by the Japan Bank for International Cooperation. The Japan Bank Loan bears interest at LIBOR plus 0.95% per annum. EPM may voluntarily pre-pay the Japan Bank Loan at any time, without premium or penalty (except for mandatory prepayment *Break Funding Costs* in case prepayments are made on a date other than on an interest payment date). Amounts prepaid or repaid under the Japan Bank Loan cannot be re-borrowed. All payment obligations under the Japan Bank Loan rank *pari passu* with all of EPM's unsecured and unsubordinated External Indebtedness. The Japan Bank Loan contains both affirmative and negative covenants and provides for certain cross default events, including defaults under agreements guaranteed by the Japan Bank for International Cooperation or defaults under any of EPM's External Indebtedness. On May 29, 2013, EPM and the Japan Bank for International Cooperation entered into an *Indemnity Agreement*, which provides for certain financial covenants, including covenants pursuant to which EPM may not allow its long-term financial debt to shareholders' equity ratio to exceed 1.5:1.0 or its total financial debt to consolidated Adjusted EBITDA ratio to exceed 3.5:1.0, measured quarterly.

On 24 May 2019, the JBIC granted EPM a waiver for non-compliance with the consolidated Total Financial Debt/Adjusted EBITDA ratio for the period ending 31 December 2018.

On 28 June 2019, the JBIC granted EPM a waiver for non-compliance with the consolidated Long-Term Financial Debt to EBITDA ratio as during the period ended 31 March 2019, the ratio was 4.0:1.0. This waiver also covers the quarters ended 30 June 2019, 30 September 2019 and 31 December 2019, provided that the ratio does not exceed 4.0:1.0.

On 10 August 2012, EPM entered into a credit facility with *Agence Française de Développement* ("AFD" - French Agency of Development), this loan matures in July 2027 and, after 31 January 2016, EPM may voluntarily pre-pay the AFD loan at any time, without premium or penalty (except for mandatory prepayment *Break Funding Costs* in case prepayments are made on a date other than on the interest payment date). All payment obligations under the AFD loan rank at least *pari passu* with all EPM's unsecured and unsubordinated External Indebtedness obligations.

The AFD loan provides for certain financial covenants, including covenants pursuant to which EPM shall maintain an interest coverage ratio of no less than 3.0 and a total financial indebtedness to consolidated Adjusted EBITDA ratio of no more than 3.5, which are reviewed semi-annually. Other restrictive covenants include limitations on liens and limitations on the sale of assets. On 14 December 2018, the AFD granted EPM with a waiver for its non-compliance with the total financial indebtedness to consolidated Adjusted EBITDA ratio as of 31 December 2018 and as of 30 June 2019.

Contractually, one of the management schemes to avoid non-compliance with this type of commitment is the issuance of waivers by creditors.

It is worth mentioning that the fact that EPM exceeds the agreed Debt/EBITDA covenant does not generate a direct activation of default declaration by the banks nor of advance payment, as exercising or not such declaration is a contractual action at the banks' discretion, additional to having remedial periods agreed in the contracts to attend an eventual default.

EPM must report compliance with the Long-Term Financial Debt/EBITDA indicator as follows: to the Japan Bank for International Cooperation -JBIC- on a quarterly basis, to the French Development Agency -AFD- on a semi-annual basis and to the Inter-American Development Bank -IADB on an annual basis. Currently, the waivers granted by the above-mentioned banks are valid for 2019.

JBIC established a new monitoring indicator from June, Net Financial Debt / EBITDA including cash and transitional credits.

Regarding the HSBC credit, the Net Financial Debt/EBITDA indicator has been agreed and is inactive, since EPM has two credit risk ratings at investment grade level.

#### Default events

During the reporting period, the EPM Group has not defaulted on any principal or interest payment of its loans.

## Note 22. Trade and other payables

Trade and other payables are measured at amortized cost and consist of:

Trade and other payables	2019	2018
<b>Non-current</b>		
Creditors	130,662	155,063
Acquisition of goods and services	83,030	62,971
Deposits received as collateral <sup>(1)</sup>	278,706	257,175
Advance payments received	92,476	4,054
Resources received for management	10,177	15,083
Construction contracts	6,342	8,423
<b>Total trade and other payables non-current</b>	<b>601,393</b>	<b>502,769</b>
<b>Current</b>		
Creditors	734,205	742,979
Acquisition of goods and services	1,685,076	1,784,124
Allocated subsidies	18,261	8,109
Deposits received as collateral <sup>(1)</sup>	22,456	18,446
Advance payments received	15,419	92,824
Resources received for management	33,562	49,701
Other accounts payable	693	871
Construction contracts	22,472	(470)
Fees payable	2,110	2,110
<b>Total trade and other payables current</b>	<b>2,534,254</b>	<b>2,698,694</b>
<b>Total trade and other payables</b>	<b>3,135,646</b>	<b>3,201,463</b>

Figures stated in millions of Colombian pesos

<sup>(1)</sup> In Guatemala, the Electricity General Act establishes that all new users must provide the distributor with a payment collateral. This collateral may be provided in monetary form or by means of a bond and will be calculated for each user category as the amount equivalent to two average monthly invoices from a typical user in the same category. EEGSA collects such collaterals from its customers and records the amounts received as "Consumer Deposits". In accordance with the provisions of the Electricity General Act, Decree No. 93-96 of 15 November 1996, article 94, as from that date until 10 March 2007, deposits received from customers bore real interest of 5% per annum. As from 11 March 2007, deposits received must be returned by adding to the capital the monthly weighted average lending rate of the banking system. It also establishes that, upon termination of the contract, the distributor must make a settlement that includes the initial amount of the collateral plus the total accrued and capitalized interest each year less any outstanding debt and costs incurred by the user.

As from 31 December 2006, EEGSA records a provision for the amount of interest arising from the payment collaterals.

Deposits received from consumers, plus accrued interest and less any outstanding debt for past services, are refundable to users when they cease to use the electric power service provided by EEGSA. In 2019 these deposits have been classified as non-current liabilities because the company does not expect to make significant payments in the next year, according to estimates and recurrence of customer withdrawals, in addition to the premise of going concern.

As at 31 December 2019, the amount of consumer deposits was \$274,834 (2018: \$227,748).

The term for payment to suppliers is generally 30 calendar days, with exceptions that are documented in the processes and determined by the type of obligation and contract, among others.

#### Default events

During the accounting period, the Group has not defaulted on the payment of principal or interest on creditors and other accounts payable.

## Note 23. Other financial liabilities

The other financial liabilities consist of:

Other financial liabilities	2019	2018
<b>Non-current</b>		
Finance leases	645,576	194,267
Pension bonds <sup>(1)</sup>	271,341	297,304
<b>Total other financial liabilities non-current</b>	<b>916,917</b>	<b>491,571</b>
<b>Current</b>		
Finance leases	37,184	1,216
Pension bonds <sup>(1)</sup>	379,477	345,884
<b>Total other financial liabilities current</b>	<b>416,661</b>	<b>347,100</b>
<b>Total other financial liabilities</b>	<b>1,333,578</b>	<b>838,671</b>

*Figures stated in millions of Colombian pesos*

<sup>(1)</sup> Variation was generated by the amortized cost and the payments made during the period.

Conventional purchases and sales of financial liabilities are accounted for by applying the trading date.

The Group has not designated any financial liabilities at fair value through profit or loss.

#### Default events

During the accounting period, the EPM Group has not defaulted on the payment of principal and interest on its loans.

## Note 24. Derivatives and hedging

The Group has the following types of cash flow hedges, whose fair values at 31 December 2019 amount to \$46,148 (2018: \$192,465).

Hedge Classification	Description	Hedged risk	Tranche	Hedged item	Recorded value of hedged item	Recorded value of hedging instrument	Changes in fair value of the dedging instrument for the period	Changes in fair value of the hedged item for the period	Hedge effectiveness recognized in the profit or loss for the period	Hedge effectiveness recognized in other comprehensive income	Reclassification of other comprehensive income for the period <sup>1</sup>
<b>Cash flow hedging</b>											
Swaps EPM	Cross Currency Swap	USD/COP exchange rate and Libor/fixed debt service rate	Part of Club Deal, AFD and EDC loans	Credit in Dollars	751,208	(45,062)	(10,737)	(7,735)	N.A	(10,737)	(2,302)
Swaps TICSА	Interest rate swap	TIIE interest rate	Santander loan	Credit in MXN	100,942	(1,086)	(5,470)	N.A	N.A	(5,470)	N.A
Futures	Derivex	Price of sale in energy exchange	N.A	Sales of Energy highly probable	N.A	-	23	N.A	N.A	23	23

Figures stated in millions of Colombian pesos

<sup>1</sup> Reclassification of other comprehensive income to profit or loss for the period, for swap instruments, affected the interest item, difference in exchange, difference in interest and capital of the right; and for the instrument futures contracts affected the item of electricity sales in the stock market. Additionally, \$10,322 were capitalized as borrowing costs mainly to the Ituango Project.

Hedging cash flow

The characteristics of the main cash flow hedging instruments that are under hedge accounting are the following:

Swaps:

EPM

Characteristics					
Hedged underlying	Loan AFD	Loan AFD	Loan AFD	Loan AFD	Loan AFD
Tranche No.	1	2	3	4	5
Closing date	3-Feb-17	6-Feb-17	10-Feb-17	24-Mar-17	30-Mar-17
Derivative type	CCS	CCS	CCS	CCS	CCS
Counterpart	BNP Paribas	BNP Paribas	BNP Paribas	CITI BANK	CITI BANK
Nominal amount (USD)	64,750,000	47,381,250	85,312,500	13,164,375	85,312,500
Spot exchange rate	2,850	2,855	2,850	2,899	2,878
Liability (COP)	184,537,500,000	135,273,468,750	243,140,625,000	38,163,523,125	245,529,375,000
EPM pays	IBR + 0,83	IBR + 0,33	IBR + 0,69	IBR + 0,379	IBR + 0,479
	IBR OIS compound 1 day	IBR OIS compound 1 day	IBR OIS compound 1 day	IBR OIS compound 1 day	IBR OIS compound 1 day
EPM receives	Tasa fija 4,50%	Tasa fija de 4,04%	Tasa fija de 4,32%	Tasa fija de 4,25%	Tasa fija de 4,32%
	Back starting	Back starting	Back starting	Back starting	Back starting
Expiring date	31-Jul-22	31-Jul-22	31-Jul-22	31-Jul-22	31-Jul-22
Initial exchange	No	No	No	No	No
Final exchange	No	No	No	No	No
Modality	Non Delivery	Non Delivery	Non Delivery	Non Delivery	Non Delivery

\* CCS : Cross Currency Swap

TICSA

Characteristics	COLIMA	CELAYA	MORELIA
Hedged underlying	Loan Santander	Loan Santander	Loan Santander
Tranche No.	1	1	1
Closing date	31-Dec-19	31-Dec-19	31-Dec-19
Derivative type	swap	swap	swap
Counterpart	Santander	Santander	Santander
Nominal amount (MXN)	282,750,000	95,250,000	246,300,000
Spot exchange rate	N.A	N.A	N.A
Liability (MXN)	377,000,000	127,000,000	328,400,000
EPM pays	6.1259%	6.40%	5.84%
EPM receives	TIE+Spread Variable	TIE+Spread Variable	TIE+Spread Variable
Expiring date	12-Feb-24	10-Dec-26	10-Jan-22
Initial exchange	No	No	No
Final exchange	No	No	No
Modality	Non Delivery	Non Delivery	Non Delivery

### Early termination of hedging

The characteristics of the canceled operations in July 2019 are as follows:

Characteristics	Tranche 2	Tranche 3	Tranche 8	Tranche 9	Tranche 14	Tranche 12	Tranche 1	Tranche 2	Tranche 3
Contract date	24-May-16	26-May-16	20-Jun-16	8-Jul-16	21-Jul-16	8-Aug-16	23-Mar-18	3-Apr-18	11-May-18
Hedged underlying	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan Club Deal	Loan EDC	Loan EDC	Loan EDC
Derivative type	CCS	CCS	CCS	CCS	CCS	CCS	CCS	CCS	CCS
Counterpart	JP Morgan	JP Morgan	Bank of America Merrill Lynch	BNP Paribas	BNP Paribas	BNP Paribas	Goldman Sachs	Goldman Sachs	Goldman Sachs
Nominal amount (USD)	50,000,000	50,000,000	60,000,000	40,000,000	5,000,000	30,000,000	110,000,000	100,000,000	90,000,000
Spot exchange rate	\$ 3,058	\$ 3,053	\$ 2,976	\$ 2,965	\$ 2,924	\$ 2,990	\$ 2,847	\$ 2,776	\$ 2,816
Liability (COP)	152,900,000,000	152,650,000,000	178,560,000,000	118,600,000,000	14,620,000,000	89,700,000,000	313,170,000,000	277,600,000,000	253,440,000,000
EPM pays	IBR + 2.17	IBR + 2.17	0.093	0.0842	0.0848	0.0844	IBR + 0.432	IBR + 0.4071	IBR + 0.3286
	IBR OIS compound 1 day	IBR OIS compound 1 day					IBR OIS compound 1 day	IBR OIS compound 1 day	IBR OIS compound 1 day
EPM receives	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	LIBOR 6 months + 140	Libor +0%	Libor +0%	Libor +0%
Periodicity	Semiannual	Semiannual	Semiannual	Semiannual	Semiannual	Semiannual	Semiannual	Semiannual	Semiannual
Expiring date	29-Dec-20	29-Dec-20	29-Dec-20	29-Dec-20	29-Dec-20	29-Dec-20	4-Aug-22	4-Aug-22	4-Aug-22
Initial exchange	No	No	No	No	No	No	No	No	No
Final exchange	Si	Si	Si	Si	Si	Si	Si	Si	Si
Cancellation date	22-Jul-19	22-Jul-19	24-Jul-19	23-Jul-19	23-Jul-19	23-Jul-19	18-Jul-19	19-Jul-19	19-Jul-19
Cancellation exchange rate	\$ 3,172	\$ 3,172	\$ 3,186	\$ 3,181	\$ 3,182	\$ 3,182	\$ 3,180	\$ 3,163	\$ 3,166
EPM (Pays / Receives)	Receives	Receives	Receives	Receives	Receives	Receives	Receives	Receives	Receives
Amount of reported liquidity (USD)	USD 1,476,071	USD 1,557,150	USD 1,037,079	USD 1,309,385	USD 229,134	USD 731,855	USD 10,547,947	USD 11,343,857	USD 9,360,428

### Embedded derivatives

The Group has not entered into any contracts containing embedded derivatives.



## Note 25. Employee benefits

The item of employee benefits recognised at the reporting date have the following composition:

Employee benefits	2019	2018
<b>Non-current</b>		
Post-employment benefits	834,447	767,749
Long-term benefits	96,973	90,671
Termination benefits	63	95
Other benefits	9	-
<b>Total employee benefits non-current</b>	<b>931,492</b>	<b>858,515</b>
<b>Current</b>		
Short-term benefits	147,438	146,148
Post-employment benefits	100,028	104,421
Termination benefits	-	691
<b>Total employee benefits current</b>	<b>247,466</b>	<b>251,260</b>
<b>Total</b>	<b>1,178,958</b>	<b>1,109,775</b>

*Figures stated in millions of Colombian pesos*

### 25.1. Post-employment benefits

Comprises of the defined benefit plans and the defined contribution plans detailed below:

## 25.1.1. Defined benefit plans

Defined benefit plans	Pensions <sup>(1)</sup>		Retroactive severances <sup>(2)</sup>		Public utilities subsidies <sup>(3)</sup>		Educational Assistance Plan <sup>(4)</sup>		Otros defined benefit plans		Total	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
<b>Current value of liabilities due to defined benefits</b>												
Initial balance	992,082	1,051,681	130,101	141,061	37,916	40,185	1,289	-	25,617	25,935	1,187,006	1,258,862
Current service cost	2,598	1,383	4,283	4,814	-	171	-	-	2,493	3,950	9,374	10,318
Profit (or loss) due to interests cost	67,328	66,450	7,878	8,732	2,596	2,692	74	85	26	12	77,902	77,972
New measurements	-	-	-	-	195	-	-	-	1,720	-	1,915	-
Actuarial profit or loss due to changes in:												
Assumptions by experience	28,738	6,480	8,314	(6,847)	41	(1,509)	103	(95)	-	-	37,196	(1,971)
Demographic assumptions	(130)	-	-	(16)	-	(141)	-	-	-	-	(130)	(157)
Financial assumptions	26,456	268	3,891	1,619	1,017	(386)	17	29	-	-	31,381	1,530
Past service cost	-	(328)	-	-	-	-	-	-	-	-	-	(328)
Settlement profit or loss	-	-	-	-	-	(432)	-	-	(8)	(599)	(8)	(1,031)
Effect in foreign exchange translation	(2,652)	(38,322)	-	-	3	83	-	-	146	499	(2,503)	(37,739)
Contributions made to the plan	28,171	-	-	-	-	-	-	-	-	-	28,171	-
Payments made by the plan	(94,314)	(96,613)	(18,650)	(19,330)	(2,922)	(2,680)	(197)	(211)	(3,506)	(3,072)	(119,589)	(121,906)
Dispositions	-	-	(1)	-	-	-	-	-	-	(2,446)	(1)	(2,446)
Other changes	239	1,084	-	68	-	(68)	-	1,481	2,206	1,338	2,445	3,903
<b>Present value of liabilities as of 31 December</b>	<b>1,048,516</b>	<b>992,082</b>	<b>135,816</b>	<b>130,101</b>	<b>38,846</b>	<b>37,916</b>	<b>1,286</b>	<b>1,289</b>	<b>28,694</b>	<b>25,617</b>	<b>1,253,159</b>	<b>1,187,006</b>
<b>Fair value of plan assets</b>												
Initial balance	314,836	385,026	-	-	-	-	-	-	-	5,087	314,836	390,113
Contributions made to the plan	47,422	9,277	-	-	-	-	-	-	-	-	47,422	9,277
Payments made by the plan	(62,361)	(65,633)	-	-	-	-	-	-	-	-	(62,361)	(65,633)
Interest income	22,208	21,268	-	-	-	-	-	-	-	-	22,208	21,268
Actuarial profit or loss:												
Expected plan yields (excluding profits due to interests)	(2,886)	(989)	-	-	-	-	-	-	-	-	(2,886)	(989)
Effect in foreign exchange translation	(866)	(32,928)	-	-	-	-	-	-	-	-	(866)	(32,928)
Other changes	331	(1,185)	-	-	-	-	-	-	-	(5,087)	331	(6,272)
<b>Fair value of plan assets as of 31 December</b>	<b>318,684</b>	<b>314,836</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>318,684</b>	<b>314,836</b>
<b>Surplus or (deficit) of the defined benefit plan</b>	<b>(729,832)</b>	<b>(677,246)</b>	<b>(135,816)</b>	<b>(130,101)</b>	<b>(38,846)</b>	<b>(37,916)</b>	<b>(1,286)</b>	<b>(1,289)</b>	<b>(28,694)</b>	<b>(25,617)</b>	<b>(934,475)</b>	<b>(872,170)</b>
<b>Net assets (or liabilities) of the defined benefit plan</b>	<b>(729,832)</b>	<b>(677,246)</b>	<b>(135,816)</b>	<b>(130,101)</b>	<b>(38,846)</b>	<b>(37,916)</b>	<b>(1,286)</b>	<b>(1,289)</b>	<b>(28,694)</b>	<b>(25,617)</b>	<b>(934,475)</b>	<b>(872,170)</b>
<b>Total defined benefits</b>	<b>(729,832)</b>	<b>(677,246)</b>	<b>(135,816)</b>	<b>(130,101)</b>	<b>(38,846)</b>	<b>(37,916)</b>	<b>(1,286)</b>	<b>(1,289)</b>	<b>(28,694)</b>	<b>(25,617)</b>	<b>(934,475)</b>	<b>(872,170)</b>

Figures stated in millions of Colombian pesos

- (1) Includes pension plans of the EPM Group companies in accordance with the regulations of each country. Also, contributions to social security and funeral assistance.
- (2) Includes retroactive severance plans, which consist of a recognition of an average monthly salary multiplied by the years of service, payable through advances and at the time of contract termination. The source of the plan is the "Sixth Law of 1945, by which some provisions are issued on labor conventions, professional associations, collective conflicts and special labor jurisdiction" and the National Decree 1160 of 1989, which partially regulates Law 71 of 1988, which issues rules on pensions and other provisions.
- (3) The benefit for public utilities subsidies is a plan consisting on a total or partial discount on the monthly value to be paid of the public utility of energy, and in some cases in the service of water and telephone, in the following companies of the Group: Central Hidroeléctrica de Caldas S.A. E.S.P., Centrales Eléctricas del Norte de Santander S.A. E.S.P., Electrificadora de Santander S.A. E.S.P. and Elektra Noreste S.A. At Electrificadora de Santander S.A. E.S.P., the benefit is granted to former employees whose service at the date of retirement was at least 15 years. The benefit for public utilities is covered by the collective labour agreements in force in these companies.
- (4) Corresponds to the educational assistance that by law is granted to the children of retirees who are economically dependent on it, up to the age of 25.

No risks have been identified for the EPM Group coming from the post-employment benefit plans, nor any amendments, reductions or settlements that impact the present value of the liability.

The weighted average duration, in years, of the defined benefit plan obligations at the cut-off date is as follows:

Benefit	2019		2018	
	Desde	Hasta	Desde	Hasta
Pension	8	12	8	12
Retroactive severances	5	7	5	7
Public utilities assistance	9	12	9	12
Education	5	8	4	4
Other defined benefit plans	2	6	2	6

The Group has no restrictions on the current realization of the defined benefit plan surplus.

The Group did not make any contributions to defined benefits during the period.

The composition of the fair value of plan assets is as follows:

Assets that support the plan	2019		2018	
	Participation %	Fair value	Participation %	Fair value
Cash and cash equivalents	2.47%	7,870	2.39%	8,016
Equity instruments				
Government sector	6.38%	20,326	6.62%	22,233
<b>Total equity instruments</b>	<b>6.38%</b>	<b>20,326</b>	<b>6.62%</b>	<b>22,233</b>
Debt instruments				
AAA	72.32%	230,470	73.59%	247,040
AA	5.31%	16,910	6.21%	20,840
BB and less	0.54%	1,715	0.99%	3,312
Without rating	11.14%	35,514	2.04%	6,857
Investment funds <sup>(1)</sup>	1.85%	5,880	1.95%	6,538
<b>Total debt instruments</b>	<b>91.15%</b>	<b>290,489</b>	<b>89.30%</b>	<b>284,587</b>
<b>Total assets that support the plan</b>	<b>100%</b>	<b>318,684</b>	<b>99%</b>	<b>314,836</b>

Figures stated in millions of Colombian pesos

- (1) Includes from EPM a conservative profile mutual fund, with immediate availability of resources called *Rental Liquida* (liquid rent), managed by Fiduciaria Davivienda, with a balance of \$1,576 (2018: \$1,522) and an Exchange Trade Fund (ETF), which follows the behavior of Colcap, with a balance of \$4,304 (2018: \$5,016).

The main actuarial assumptions used to determine the obligations under the defined benefit plans are as follows:

Assumptions	Colombia				Panamá			
	2019		2018		2019		2018	
	From	To	From	To	From	To	From	To
Discount rate (%)	6.00%	7.20%	5.00%	7.70%	3.31%	3.31%	4.51%	4.75%
Yearly salary increase rate (%)	4.60%	5.50%	3.50%	5.50%	5.00%	5.00%	5.00%	5.00%
Real rate of return on plan assets	4.83%	4.83%	3.14%	6.44%	5.25%	5.25%	5.25%	5.25%
Future yearly pension increase rate	3.25%	3.50%	3.25%	4.00%	-	-	-	-
Yearly inflation rate (%)	3.25%	3.50%	3.00%	4.00%	0.20%	0.20%	0.20%	0.20%
Mortality rate tables	Valid Rentiers 2008 Table				Republic of Panama Urban Population Mortality Tables 2010-2015			

Assumptions	Guatemala				México			
	2019		2018		2019		2018	
	From	To	From	To	From	To	From	To
Discount rate (%)	5.80%	5.80%	6.00%	6.10%	7.60%	7.60%	7.50%	7.50%
Yearly salary increase rate (%)	4.50%	4.50%	4.50%	4.50%	5.58%	5.58%	5.50%	5.50%
Future yearly pension increase rate	-	-	-	-	-	-	-	-
Yearly inflation rate (%)	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.50%	3.50%
Mortality rate tables	RP-2000 Tables							

Assumptions	El Salvador				Chile			
	2019		2018		2019		2018	
	From	To	From	To	From	To	From	To
Discount rate (%)	3.49%	3.49%	4.70%	4.70%	0.66%	0.66%	1.54%	1.54%
Yearly salary increase rate (%)	1.50%	1.50%	1.50%	1.50%	0.63%	0.63%	0.05%	1.00%
Future yearly pension increase rate	-	-	-	-	-	-	-	-
Yearly inflation rate (%)	1.00%	1.00%	1.00%	1.00%	2.43%	2.43%	2.43%	2.43%
Mortality rate tables	CSO-80 Table				CB H 2014 and RV M 2014 Tables			

The following table shows the effect of a variation for more than 1% and less than 1% in salary increase, discount rate and an increase in benefit over the obligation for post-employment defined benefit plans:

Assumptions	Increase in Discount Rate by +1%	Decrease in Discount Rate by -1%	Salary Increase Rise by +1%	Salary Increase Decline by -1%	Benefit Increase Rise by +1%	Benefit Increase Decline by -1%
Pensions	810,872	975,589	-	-	107,887	107,887
Retroactive Severances	129,287	142,771	148,901	123,377	-	-
Public Utilities	34,563	42,465	-	-	42,784	42,784
Other Post-Employment Benefits	126,145	152,457	23,260	20,551	1,223	1,223
<b>Total Post-Employment Benefits</b>	<b>1,100,867</b>	<b>1,313,282</b>	<b>172,161</b>	<b>143,928</b>	<b>151,894</b>	<b>151,894</b>

Figures stated in millions of Colombian pesos

The methods and assumptions used to prepare the sensitivity analysis for the present value of defined Benefit Obligations (DBO) were made using the same methodology that for actuarial calculation as of December 31, 2019 and 2018: Projected Unit of Credit (PUC) Method. Sensitivity does not present neither limitations nor changes in the methods or assumptions used to prepare the current period analysis.

### Pension liabilities calculation according to current fiscal requirements in Colombia.

Resolution 037 of 2017 issued by the General Accountancy of the Nation established the obligation to disclose the calculation of pension liabilities in accordance with the parameters established in Decree 1625 of 2016 and Decree 1833 for pension commutations; therefore, the figures presented below do not correspond to the requirements of IFRS adopted in Colombia.

### Pension liabilities

The actuarial calculation of pensions was prepared with the following technical bases:

Actuarial assumptions - Pension obligation	2019	2018
Real technical interest rate	4.80%	4.80%
Salary increase rate	3.91%	5.09%
Pension increase rate	3.91%	5.09%
Mortality rate table	Valid rentiers 2008 table	

The following table is the calculation of Pension Liabilities with the previous parameters:

Description	2019		2018	
	Number of people	Amount of the obligation	Number of people	Amount of the obligation
Personnel pensioned entirely by the company	1,443	351,149	1,480	352,114
Personnel pensioned with amounts shared with Colpensiones (state pension system)	1,989	298,745	1,771	169,403
Personnel benefit shared with Colpensiones	865	103,616	838	85,660
Personnel pensioned with amounts shared with other institutions	397	41,086	323	35,737
<b>Total</b>	<b>4,694</b>	<b>794,596</b>	<b>4,412</b>	<b>642,913</b>

Figures stated in millions of Colombian pesos

Below are Pension Bonds related to Pension Obligations:

Description	2019		2018	
	Number of people	Amount of the reserve	Number of people	Amount of the reserve
Retirement payment type A modality 1	246	2,707	246	2,524
Retirement payment type A modality 2	4,531	195,937	4,542	192,122
Retirement payment type B	3,618	397,976	3,556	383,006
Retirement payment type T	5	277	5	340
Other - Contributions Law 549	178	5,175	178	4,925
<b>Total</b>	<b>8,578</b>	<b>602,072</b>	<b>8,527</b>	<b>582,917</b>

Figures stated in millions of Colombian pesos

Following, the differences between the pension liabilities calculated under IFRS adopted in Colombia and the fiscal pension liabilities are shown:

Description	2019	2018
Pension liabilities	737,837	719,344
Fiscal pension liabilities	1,133,103	1,131,353
<b>Difference</b>	<b>(395,266)</b>	<b>(412,009)</b>

Figures stated in millions of Colombian pesos

**Pension commutation liabilities**

The actuarial calculation of pension commutation was prepared with the following technical basis:

Actuarial assumptions - Pension commutation	2019	2018
Real technical interest rate	4.80%	4.80%
Salary increase rate	3.91%	5.09%
Pension increase rate	3.91%	5.09%
Mortality rate table	Valid rentiers 2008 table	

The following table is the calculation of the pension commutation with the previous parameters:

Description	2019		2018	
	Number of people	Amount of the obligation	Number of people	Amount of the obligation
Personnel pensioned entirely by the company	92	25,716	109	23,558
Personnel pensioned with amounts shared with Colpensiones	346	44,513	340	42,781
Personnel benefit shared with Colpensiones	37	3,167	34	2,757
Personnel pensioned with amounts shared with other institutions	31	3,693	44	3,576
<b>Total</b>	<b>506</b>	<b>77,089</b>	<b>527</b>	<b>72,672</b>

Figures stated in millions of Colombian pesos

Below are the pension bonuses related to pension commutation liabilities:

Description	2019		2018	
	Number of people	Amount of the reserve	Number of people	Amount of the reserve
Retirement payment type A modality 1	12	38	12	35
Retirement payment type A modality 2	255	10,803	262	10,398
Retirement payment type B	219	21,928	226	21,795
Retirement payment type T	3	84	3	149
Other - Include type of pension bond-	3	115	3	107
<b>Difference</b>	<b>492</b>	<b>32,967</b>	<b>506</b>	<b>32,484</b>

Figures stated in millions of Colombian pesos

Differences between pension commutation liability as calculated under IFRS adopted in Colombia, and the tax pension commutation liability are shown below:

Description	2019	2018
Pension commutation liabilities	90,694	83,240
Fiscal pension commutation liabilities	110,055	105,157
<b>Difference</b>	<b>(19,361)</b>	<b>(21,916)</b>

Figures stated in millions of Colombian pesos

### 25.1.2. Defined contribution plans

The Group made contributions to defined contribution plans recognised in the results of the period as an expense of \$76,450 (2018: \$21,261), as a cost of \$50,289 (2018: \$47,525) for a total of \$126,739 (2018: \$68,786).

### 25.2. Long-term employee benefits

Long-term benefits	Seniority premium <sup>(1)</sup>		Other long-term benefits		Total	
	2019	2018	2019	2018	2019	2018
<b>Current value of liabilities due to other long-term benefits</b>						
Initial balance	90,671	84,008	-	1,644	90,671	85,652
Present service cost	7,982	7,881	-	-	7,982	7,881
Profit (or expenses) due to interests	5,843	5,580	-	-	5,843	5,580
Actuarial profit or loss due to changes in:						
Assumptions by experience	2,794	1,300	-	-	2,794	1,300
Supuestos demográficos	41	(695)	-	-	41	(695)
Financial assumptions	2,105	524	-	-	2,105	524
Past service cost	-	419	-	-	-	419
Effect in foreign exchange translation	5	1,685	-	(1,644)	5	41
Payments made by the plan	(12,468)	(10,030)	-	-	(12,468)	(10,030)
<b>Present value of liabilities at 31 December</b>	<b>96,973</b>	<b>90,671</b>	<b>-</b>	<b>-</b>	<b>96,973</b>	<b>90,671</b>
<b>Long-term benefit deficit</b>	<b>(96,973)</b>	<b>(90,671)</b>	<b>-</b>	<b>-</b>	<b>(96,973)</b>	<b>(90,671)</b>
<b>Long-term net profit liability</b>	<b>(96,973)</b>	<b>(90,671)</b>	<b>-</b>	<b>-</b>	<b>(96,973)</b>	<b>(90,671)</b>

Figures stated in millions of Colombian pesos

- (1) Granted on the basis of the employee's years of service, is recognised and paid in accordance with the terms established in the collective labour agreements in force in each company or the labor regulations of the country.

The Group has not identified any risks generated by the long-term benefit plans, nor any modifications, reductions or settlements that impact the present value of the obligation.

The weighted average duration in years, of the obligations for long-term benefit plans at the report date, is as follows:

Benefit	2019		2018	
	From	To	From	To
Seniority premium	6.6	7.1	6.5	6.6
Other long-term benefits	6.6	6.6	7.15	9.7

The Group does not expect to make contributions to the plan for the next year period.

The main actuarial assumptions used to determine the obligations for long-term employee benefit plans are the following:

Assumptions	Colombia		Guatemala	
	2019	2018	2019	2018
Discount rate (%)	6.40%	6.65%	5.90%	6.10%
Yearly salary increase rate (%)	4.85%	4.50%	4.50%	4.50%
Yearly inflation rate (%)	3.50%	3.50%	4.00%	4.00%
Mortality rate tables	Valid rentiers 2008 table		RP-2000 table	

The following table shows the effect of a variation of plus 1% and less 1% in the Salary Increase, in the discount rate and in the increase in the benefit over the obligation for long-term benefit plans:

Assumptions	Increase in discount rate by +1%	Decrease in discount rate by -1%	Salary increase by +1%	Salary decrease by -1%	Benefit Increase Rise by +1%	Benefit Increase Decline by -1%
seniority premium	88,283	99,769	99,827	88,159	-	-
Other long-term benefits	1,336	1,910	1,909	1,334	-	-
<b>Total long-term benefits</b>	<b>89,619</b>	<b>101,679</b>	<b>101,736</b>	<b>89,493</b>	<b>-</b>	<b>-</b>

Figures stated in millions of Colombian pesos

The methods and assumptions used to prepare the sensitivity analysis for the present value of defined benefit obligations (DBO) were made using the same methodology that for actuarial calculation as of 31 December 2019: Projected Unit of Credit (PUC). The sensitivity does not present neither limitations nor changes in the methods or assumptions used to prepare the current period analysis.

### 25.3. Short-term employee benefits

The composition of the short-term benefits is as follows:

Short-term benefits	2019	2018
Payroll payable	389	7,059
Severances	48,963	44,733
Interests on severances	6,739	5,793
Vacations	30,300	27,613
Vacations bonus	39,223	35,568
Service bonus	549	459
Holidays (Christmas) bonus	249	248
Bonuses	10,760	13,866
Other bonuses, salaries and legal benefits	10,266	10,809
<b>Total short-term benefits</b>	<b>147,438</b>	<b>146,148</b>

Figures stated in millions of Colombian pesos



## Note 26. Taxes, contributions and rates

The detail of taxes, contributions and rates, other than income tax, is as follows:

Taxes, contributions and rates	2019	2018
Withholding tax on income and stamp duty	106,121	91,307
Value added tax (VAT)	43,872	34,376
Industry and commerce tax	38,105	38,269
Rates	16,167	15,822
Contributions	11,521	5,517
Taxes, contributions and rates abroad	2,706	2,462
Customs duty and surcharges	1,432	1,127
Royalties and monetary compensations	1,411	611
Other national taxes	730	713
Other municipal taxes	123	702
Valuation tax	97	136
Unified property tax	78	86
National consumption tax	5	5
Audit and audit fee	-	148
<b>Total taxes, contributions and rates</b>	<b>222,368</b>	<b>191,281</b>

Figures stated in millions of Colombian pesos

## Note 27. Provisions, contingent assets and liabilities

### 27.1. Provisions

The reconciliation of provisions is as follows:

Description	Decommissioning and restoring <sup>(1)</sup>	Onerous contracts	Lawsuits <sup>(2)</sup>	Contingent consideration on business combinations	Warranties <sup>(3)</sup>	Other provisions	Total
Initial balance	85,134	61,051	326,141	153,668	239,115	387,258	1,252,367
Additions	28,555	-	61,322	-	-	66,175	156,052
Uses (-)	(19,449)	(28,084)	(13,519)	(2,179)	(151,401)	(91,786)	(306,418)
Unused amounts reversed (-)	(1,452)	(2,395)	(45,576)	(21,210)	-	(3,157)	(73,789)
Effect due to loss of control	(6,199)	-	-	-	-	-	(6,199)
Adjustment for changes in estimates	36,325	-	(63,758)	152	20,916	(3,483)	(9,846)
Capitalizable decommissioning	47,100	-	-	-	-	-	47,100
Exchange difference	-	-	695	1,309	-	-	2,004
Other changes _Financial expenses_	2,788	1,674	12,056	3,101	-	2,792	22,410
Effect in foreign exchange translation	315	-	(1,541)	-	-	(546)	(1,774)
<b>Final balance</b>	<b>173,117</b>	<b>32,246</b>	<b>275,820</b>	<b>134,841</b>	<b>108,630</b>	<b>357,253</b>	<b>1,081,907</b>
Non-current	95,559	-	82,996	126,509	108,630	78,236	491,930
Current	77,558	32,246	192,824	8,332	-	279,017	589,977
<b>Total</b>	<b>173,117</b>	<b>32,246</b>	<b>275,820</b>	<b>134,841</b>	<b>108,630</b>	<b>357,253</b>	<b>1,081,907</b>

Figures stated in millions of Colombian pesos

As at 31 December 2019, the significant behavior of the Group's provisions is:

- (1) Increase of \$87,983 originated by the recording of the mandatory or environmental affectation provisions to the investment projects undertaken at the request of the National Environmental License Authority -ANLA, mainly in the companies ESSA and EPM. Additionally, EPM created the provision for the dismantling of the Jepírachi Wind Farm.
- (2) Decrease of \$50,321 in lawsuit for the updating of estimated value of some labor claims received by EPM from EADE in December 2019.
- (3) Decrease of \$130,485 for the payment of the guarantee covering construction and commissioning of the Ituango Hydroelectric project, according to Standby Letter of Credit No. 04156826 issued by BNP Paribas Bank.

### 27.1.1 Decommissioning or restoring

The Group is obliged to incur costs for decommissioning or restoring its facilities and assets, in the following events:

- Recall of transformers containing PCBs (Polychlorinated Biphenyls). The Group has committed to the decommissioning of these assets from 2014 to 2026, covered by Resolution 222 of 15 December 2011 of the Ministry of Environment and Sustainable Development and the Stockholm Convention of 22 May 2008. Applies in Colombia, Panama and El Salvador. The provision is recognised at the present value of the expected costs to settle the obligation using estimated cash flows. The main assumptions considered in the calculation of the provision are estimated costs, CPI and fixed rate TES. As at 31 December 2019, the national subsidiaries that contribute to this item are ESSA with \$1,984, CENS with \$392, CHEC with \$366, EPM with \$289 and EDEQ with \$252 and the international subsidiaries that contribute are ENSA with \$584 and DELSUR with \$3,897.
- Solid waste management utility in Colombia, for the disposal of solid waste by the subsidiary EMVARIAS requires land on which cells or vessels are built for the deposit of solid waste, a landfill, being necessary to restore it through a series of activities aimed at making its closure, decommissioning and post-closure. The obligation begins from the moment the landfill is in optimal conditions for the final disposal activity and goes until the environmental regulatory body, by means of a resolution, decrees the completion of the closure, decommissioning and post-closure stage. This obligation is defined in the RAS 2000 (Technical Regulations on Drinking Water and Basic Sanitation), which establishes the basic criteria and minimum environmental requirements that solid waste management systems must meet in order to mitigate and minimize the impacts of design, construction, commissioning, operation, maintenance, decommissioning, completion, and closure activities. As at 31 December 2019, this item ended at \$20,626.
- Decommissioning of a coal mine located in the municipality of Amagá, department of Antioquia, Colombia, with Resolution 130 AS-1106242 of October 21, 2011 issued by the competent environmental authority (Corantioquia), approves the environmental component of the plan to close the coal mines of the mining title and for this purpose, contracts are carried out for construction of various civil works, urban planning and monitoring in the coal mines of the mining title, code RPP 434 of the area of Amagá. In 2019, the company reached the final stage of the actions contemplated in the above-mentioned resolution, thus no payment was made for this provision since it was decided not to continue provisioning this concept, given the possibility of selling the title through the subsidiary PROMOBILIARIA; this matter was taken to the Board of Directors of EPM and approved on 16 December 2019. For this reason, it was not considered for future budgets and the provision was cancelled.

- Decommissioning of the Jepírachi wind farm located in the department of La Guajira, in the towns of Cabo de la Vela and Puerto Bolívar in Colombia, due to non-compliance with the technical standard issued by resolution CREG 060 of 2019, it is determined that the Jepírachi wind farm must be removed from the National Interconnected System and the respective decommissioning must be performed. The main assumptions considered in the calculation of the provision are estimated costs, CPI and TES fixed rate. As of 31 December 2019, the provision was recorded for \$8,722.
- In EPM, provision for environmental impact in the construction of infrastructure projects: this arises as a legal obligation derived from the granting of the environmental license to compensate for the loss of biodiversity during the construction phase, as well as compensation for the subtraction of reserve areas, affectation of prohibited species and forest use; obligations that are formalized through resolutions of the ANLA (National Environmental Licensing Authority), CAR - Regional Autonomous Corporation and / or MADS - Ministry of Environment and Sustainable Development. The execution of the biotic environmental compensations of the project extends beyond the time in which the asset begins to operate technically, being necessary to implement the figure of the provision with the intention that these expenditures remain as greater value of the construction in course. The Group has committed to compensate the loss of biodiversity, subtraction and closures from 2016 to 2019 according to the resolutions: Res. 1313/2013 ANLA, Res. 519/2014 ANLA, Res LA. 0882/04/08/2014 ANLA, Res. 1166/2013 MADS, Res. 1852/2013 CAR, Res. 2135/2014 CAR, Resolution 1189/22/07/2104 MADS, Res. 1120907/17-03-2015 CORNARE, Res. 141011206/16-10-2014 CORANTIOQUIA, Res LA. EIA1-9872 21/04/2014 CVS, among others. The provision is recognised for the present value of the expected costs to settle the obligation using estimated cash flows. The main assumptions considered in the calculation of the provision are estimated costs, CPI and TES fixed rate. As of December 31, 2019, the main subsidiaries contributing to this concept are EPM with \$11,965, ESSA with \$7,128 and CENS with \$206.
- Environmental compensation and compulsory investment of 1%: Law 99 of 1993, established the mandatory nature of environmental licensing for the development of any activity that could cause serious damage to renewable natural resources or the environment, or introduce considerable or noticeable modifications to the landscape and depending on the type of activity, the size and location of the project, and assigned the powers in relation to environmental licensing to the National Environmental Licensing Authority, the Regional Autonomous Corporations, or the metropolitan areas.

Article 321 of Law 1955 of 2019 indicates that all holders of an environmental license who have investments pending as of 25 May 2019 may benefit from the percentage increase in the value of the liquidation basis of the compulsory investment of not less than 1%, according to the year of commencement of activities authorized in the environmental license and defined the requirements and procedures to update pending investments and benefit from new terms of execution subject to the approval of the ANLA.

As of 31 December 2019, the EPM Group has obligations of this type amounting to \$61,850 related to the use of water taken directly from natural sources in the current projects in La Sierra, Porce II, Porce III and Hidroituango. In accordance with the law, the executed values of 1% are Porce II for \$4,525, Porce III for \$9,755, La Sierra for \$470 and Hidroituango for \$47,100.

Additionally, as of 31 December 2019, EPM includes a provision of \$54,854 for environmental contingencies, established by the specific action plan for the recovery of the parties affected by the events of the occluding of the Cauca River diversion tunnel at the Hidroituango project on 28 April 2018; by the closing of floodgates in 2019 that reduced the flow of the river downstream of the project; and by the events that may arise from the pending technical milestones to be reached, typical of the contingency, as well as from the execution of the project itself.

The specific action plan for recovery should consider three framework programs:

- a. Recovery of affected bogs
- b. Recovery of affected fish fauna
- c. Re-establishment of the aquatic habitats located in the affected area

These three programs correspond to the environmental component as a response to the identifying of the caused damage, as well as the discretionary actions. Also included are social programs, economic activities, infrastructure, and risk management, among others.

The different actions are to be developed between the municipalities of Valdivia to Nechí, however, if they are identified in the municipalities that are part of La Mojana, will also be the subject of intervention.

### 27.1.2 Onerous Contracts

As of 31 December 2018, \$32,246 have been recognised by the Group for the contract of fuel supply and transportation signed between EPM and TGI-Transportadora de Gas Internacional S.A. E.S.P., with the objective of supporting the Termosierra plant and obtaining the income from the reliability charge established by the Energy and Gas Regulatory Commission.

The main assumptions considered for calculating the provision are the costs associated to the contract with the conditions stated each quarter, utilization factor or suspension of payments for contract maintenance, LIBOR rate, fixed rate in Colombian pesos TES, MRR for the quarter and macroeconomic environment.

The main assumptions used for future events are to maintain the following assumptions in 2020: Suspension of the contract for 30 days every year and its benefit rights for 15 days each year for generation of the Termosierra plant and the rest of the time would be paid without using the contract (only fixed costs).

### 27.1.3 Lawsuits

This provision covers the estimated probable losses related to labour, administrative, civil and tax lawsuits arising in the operations of the companies of the Group. The main assumptions considered for calculating the provision are: Average CPI to actual data in previous years and projected data in future years, fixed rate TES in Colombian pesos to discount, estimated value to be paid, and the estimated payment date for those lawsuits rated as probable. As of today, no future events have been foreseen that may affect the calculation of the provision.

In order to minimize the uncertainty that may arise regarding estimated dates of payment and values to be paid in a lawsuit rated as probable, the companies of the Group that operate in Colombia uses business rules based on statistic studies to obtain the average length of processes per action as well as case law to estimate the maximum amounts the law defines for the value of the extra-economic or intangible claims when they exceed their amount, as described below:

Average duration of processes per action

Administrative and tax processes

Type of legal action or procedure	Average length (in years)
Abbreviated	4
Petition for compliance	4
Group action	6
Representative actions	4
Conciliation (pre-trial)	2
Partie civile proceedings	4
Contractual (Breach of contract)	13
Survey and demarcation	5
Executive	5
Singular executive	3
Expropriation	4
Comprehensive reparation incident (criminal)	2
Imposition of easements	4
Nullification of administrative acts	5
Nullification and reinstatement of rights	10
Nullification and reinstatement of labour rights	11
Ordinary	7
Ordinary of membership	5
Accusatorial criminal (Law 906 of 2004)	4
Division's lawsuit	4
Protection of consumer rights	6
Police Grievance	3
Right to reclaim	7
Direct compensation	12
Oral	5

Labor processes

Type of legal action or procedure	Average length (in years)
Labor Solidarity	3.5
Pension	3.5
Extra hours	3.5
Job reinstatement	4
Salary scale equalization	3.5
Unfair dismissal compensation	3.5
Reassessment of social benefits	3.5
Compensation work accident	4
Refund of the health/pension contribution	4

### Application of case law

**Typology:** the values of claims for compensation of extra-patrimonial damages will be recorded according to the following typology:

- Non-material damage.
- Damage to health (physiological or biological damage), from a physical or psychophysical injury.
- Damage to relationship life.
- Damage to constitutional and conventional property.

The values of other extra-matrimonial claims not recognised by the jurisprudence will not be recorded, unless it can be inferred from the claim that, despite its name, it corresponds to one of the accepted typologies. Nor shall claims for extra-patrimonial compensation for damage to property be recorded.

**Quantification:** The amounts of extra-patrimonial damage claims will be recorded uniformly as follows, regardless of its typology:

Direct victim compensation	100 Monthly Minimum Legal Wage Enforced (MMLWE)
Indirect victim compensation	50 Monthly Minimum Legal Wage Enforced (MMLWE)

- **For subsidiaries in Chile:** With regard to the probable payment date of the trials, the type of process and the previous cases are taken into consideration. In this sense, the labor process, being oral and only two hearings, has a maximum duration of six months, except in specific cases where there are problems in notifying the lawsuit. In civil processes since are lengthy processes and the instances available may take at least two years, the estimated time for the lawsuits currently being processed by the subsidiary Aguas de Antofagasta S.A., considering their state of progress, should be until 2019.

**Amounts:** to determine the amount of the judgments, first the amount of the claim by the plaintiff is considered, for applying case law in that regard is unfeasible, the amounts will vary depending on the Court and the cause to ask.

Additionally, in civil trials, the amounts of the indemnities will depend on the court that dictates it, given that Chile possesses no case-law-system. What a civil judge cannot do and less the appellate and supreme court, is to confer figures greater than plaintiffs' demands.

- **For subsidiaries in Panama:** regarding the estimated date of payment, each case is evaluated in a particular way with external legal advisors, for which the average duration of similar processes is taken into consideration.

**Amounts:** estimated amounts to pay for a lawsuit is determined based on the amount of the plaintiff claim and an analysis of the specific condition that motivates the claim in order to determine the recognition of a possible loss. For this we use the appreciation of external legal advisors of each company and in certain cases with the support of insurance advisors in case of requiring an actuarial valuation.

- **For subsidiaries in El Salvador:** the estimated date of payment for administrative or judicial proceedings is assessed based on the average length for the resolution of similar processes, obtained from statistical data over the 20 years of operation of the subsidiaries.

**Amounts:** estimate amounts of lawsuits are determined based on the amount of the initial claim filed against the company.

Detail for each type of process is as follows:

Company	Third party (Plaintiff)	Complaint	Amount
EPM	Oscar Elías Arboleda Lopera	Solidarity. The shareholders claim to have worked for Empresa Antioqueña de Energía S.A. E.S.P., performing different tasks, all of the plaintiffs worked for more than 10 years; they state that upon the dissolution and liquidation of said company there was a substitution of employers with Empresas Públicas de Medellín E.S.P., since it carried out the same activities without continuity, was the owner of all of EADE upon its liquidation and was obliged to all labor claims. In total, there are 173 plaintiffs.	102,190
	Dragados Porce II Consortium	To pay the plaintiffs, among others, the sums of money resulting from the return of all the compensation illegally deducted by EPM in the hiring process No. CD002376.	28,006
	Misc. Labour	Other proceedings for amounts less than \$1,036.	12,411
	Misc. Administratives	Other proceedings for amounts less than \$1,070.	10,524
	Fiduciaria Colpatría S.A.	Issue a payment order against EPM and in favor of Fiduciaria Colpatría S.A. acting as spokesperson for Patrimonio Autónomo FC - Enertotal.	6,077
	Municipio de Yumbo (Valle)	Industry and commerce and its complementary notices and boards and public lighting.	4,756
	John Walter Jaramillo	That the dismissal be declared null and void, with the respective salaries and increases, the social benefits during all the time that they remain untied; in the same way it will be on behalf of the claiming party the contributions to the social security until it is effectively reintegrated.	4,153
	Dragados Porce II Consortium	That EPM be ordered to recognise and pay the amount of the damages caused in the good name of the companies that constituted the CONSORTIUM DRAGADOS CONCRETO PORCE II.	4,107
	Oliver Antonio Aguirre Soto	That the nullity of the conciliation act signed due to a defect in the consent is decreed and consequently, the reestablishment of the work contract, the reimbursement, the payment of all the salaries and benefits not received, in the same way that the contributions to the social security are cancelled from the moment of the dismissal and until the moment when the plaintiff is effectively reimbursed.	3,165
	Temporary Union Energía Solar S.A. and Estructuras Arbi Ltda.	Declare that the tender submitted by the applicants to the tender No ES-2043-GI called by EPM was legally capable of being taken into account at the time of the award of the respective contract under tender No ES-2043-GI	1,922
Construcciones Pico y Pala Ltda.	The decisions of EPM 95070 of 5 April 1999, by which contract 1/DJ-682/15 concluded between EPM and Consorcio Trainco S.A. was unilaterally terminated, and the decision of EPM 113701 of 15 March 2000, by which the appeal for reversal of decision 95070 of 5 April 1999 was dismissed, are invalid.	1,838	

	Humberto Hernando Gómez Franco	Declare EPM administratively and patrimonially responsible for the injuries suffered by Mr. HUMBERTO HENANDO GOMEZ FRANCO, when he was electrocuted by high voltage cables owned by the defendant entity, on 23/10/2013, in the property of Mr. Antonio Lopera, located in the sector of La Virgen, in the Vereda Hoyorrico jurisdiction of the Municipality of Santa Rosa de Osos.	1,651
	Francisco Javier Muñoz Usman	That the nullity of the conciliation act signed due to a defect in the consent is decreed and consequently the reestablishment of the work contract, the reimbursement, the payment of all the salaries and benefits left to be received, in the same way that the contributions to the social security are cancelled from the moment of the dismissal and until when the actor is effectively reintegrated.	1,620
	Misc. Tax	Other tax proceedings with an amount less than \$4,756.	1,286
	Carlos Olimpo Cardona	That the plaintiffs be reinstated to the same position or office or another of equal or superior category that they had been performing, which as a consequence, by way of compensation, all the salaries and legal social benefits ceased to be received must be cancelled, in addition to all the contributions caused in favor of the Integral Social Security System.	1,283
	Accesorios y Sistemas S.A.	Declare the nullity of resolution 3077 of 12/11/200, issued by the General Manager of EPM, by which it was resolved to declare the realization of the quality risk and correct operation of the vehicles subject to contract 090321557.	1,207
	TRAINCO S.A.	Declare null and void resolutions 161052 of 03/05/2001, issued by EPM, by means of which contract 2101870 concluded between EPM and Trainco S.A. and 178702 of 06/07/2001 were unilaterally settled.	1,070
	Omar Augusto Lugo Hoyos	Decree the nullity of the conciliation act signed due to a defect in the consent and consequently order the reinstatement of the employment contract, the reimbursement, the payment of all the salaries and benefits not received, in the same way that the contributions to the social security are cancelled from the moment of the dismissal and until the actor is effectively reintegrated.	1,036
	Dragados Porce II Consortium	Record difference in exchange Account 271005 Litigation No. 14000857	210
	Payments	Labour processes that have been partially cancelled, in 2019, and are still not finished for \$740.	-740
<b>Total EPM</b>			<b>187,772</b>
<b>DECAII</b>	Tax management	Tax Adjustment lawsuit	27,936
<b>Total DECAII</b>			<b>27,936</b>
<b>CHEC</b>	Claudia Viviana Morales and others	Moral and material damages	6,557
	Jairo Castaño Hoyos and others	Profit Cessation/Material-Moral Damage	4,926



	José Fernando Arango and others	Permanent per diem - social security contributions	3,285
	Cartones Y Papeles Del Risaralda S.A.	Repair and payment of material damage	2,071
	Andrés Mauricio Alzate Benjumea and others	Reinstatement of office, reinstatement of social benefits and moratoriums	790
	Ingeniería y Desarrollo Ltda and others	Emerging Damage	633
	Aleyda Del Socorro Giraldo	Workplace accident, moral damage	450
	Hernando De Jesús Ocampo Jiménez	Contract reality	437
	Diego Hernando Grajales and others	Trade Union Jurisdiction	396
	Alba Lucía Saldarriaga Toro	Salary and performance adjustment	353
	Maria Noralba Flórez Arias	Payment 100% pension allowance	352
	Gustavo Uribe Jaramillo and others	Reliquidation of pension	347
	Zoe Ospina De Gómez and others	Pension Replacement	330
	Camilo Donado Barcelo	Termination Without Just Cause - Refund	316
	Mario Romero Londoño	Employer's fault - work accident	177
	Ana María Londoño and others	14 Wage Premium (Mesada 14)	135
	Jairo Antonio Amariles Marulanda	Public Excuses and Compensation Payments	126
	Jhon James Henao Alzate	Reimbursement and payment of lost wages	80
	María Isabel Hurtado De Gómez	Recognition and payment of pension and retroactive replacement	49
	María Noralba Flórez	Consider qualifying for a survivor's pension	39
	Francisco Fernando Sánchez Hincapié	Material damages/ Moral damages	32
	José Aldover Cardona Sánchez	Reimbursement - Compensation for unfair dismissal	31
	Angelmira Garcés Candamil	Compensation for property damage	26
	Hernán De Jesús Marín Salgado	Part of the pension	5
<b>Total CHEC</b>			<b>21,943</b>
<b>CENS</b>	Elsa Reyes De Buitrago	Recognise and pay the differences that derive from the mathematical operation to obtain the indexation of the first pensionable month, in their condition of pensioners and/or pensioner substitutes to the totality of the plaintiffs	2,291

Jesús Efraín Ibarra Ochoa	Declare that the retirement pension recognised by CENS is compatible with the old-age pension recognised by the ISS Pensiones, now Colpensiones	1,088
William Alexis Ramírez	cease payment of public lighting to the municipality of Cúcuta, repayment of public lighting balances to the municipality, payment of contractual and non-contractual damages Claim: \$928,023,004.78 Incentive: 15% of the value recovered by the Municipality.	1,074
Carmen Alicia Rodríguez	That the differences derived from the mathematical operation tending to obtain the indexation of the first pensionable month, in their condition of pensioners and/or pension substitutes, be recognised and paid to the totality of the shareholders.	926
José Francisco Arango Bautista	Material damages/moral damages/life damages in relation.	759
Hayber Humberto Bermúdez Peñaloza	Moral damage to the injured party /Health damage. /Damage to conventional and constitutionally protected goods or rights. /Moral damage for the injured party's child. /Damage to conventional goods or rights for the child/moral damage in favour of the parents. /Damage to conventional goods or rights of the parents.	736
Ermelina Pérez De Rivera	That it is declared that CENS has the obligation to continue to pay the totality of the contributions to health as an acquired right in favour of the actors and consequently it is ordered to continue to pay 12% on the pension allowance as a legally acquired right in accordance with the collective agreement in force at the time of retirement.	676
Carlos Omar Rincón Carrillo	The lawsuit claims the recognition and payment of the transportation assistance discounted by the contractor, expenses assumed for the maintenance of the work tools, social benefits, layoffs and the interest thereon, vacations, service premium, and the moratorium compensation referred to in Article 99 of Law 50 of 1990.	655
Other labour lawsuits, with amounts less than \$100 million	Other labor processes (13) with an amount less than \$100 million.	551
Yesid Jaimes	Declare that the applicants have the right, throughout their lives, to have their pensions adjusted in accordance with the parameters indicated in Article 1 of Law 71 of 1988 and not in accordance with those established in Article 14 of Law 100 of 1993, order CENS to pay the applicants retroactively	542
Carmen Rosa Galvis Urbina	declare CENS and the Temporary Union Engineering and Services to be non-contractually liable for the damage caused to the applicant by the death of Freddy Diaz /Moral damages/ consolidated and future material damages.	470
Alexander Pineda Riobo	Claim for assistance of transportation for workers of a contractor company and failure to provide assistance for layoffs and failure to pay social benefits /\$374,619,803	379

Ana Victoria Rivera Mantilla	Refund of 12% pensioner health contributions // According to the lawsuit, this is more than 50 times the monthly minimum wage for each of the plaintiffs // The provision corresponds to the following value: According to the lawsuit, this is more than \$312,496,800	318
Bersaline Ortiz Llanez	It demands that the loss of the possibility of carrying out "other virtual activities be repaired, which, although they do not produce a financial return, make existence pleasant". To determine these values of PHYSIOLOGICAL DAMAGE	301
Mercedes Quintero Muñoz	That the differences derived from the mathematical operation to obtain the indexation of the first pensionable month be recognised and paid, likewise CENS is condemned to cancel the interests at the legal maximum.	253
José Herlin Velandia Rojas	They request recognition of the conventional benefits of Articles 20, 21, 26 and 36 in the same way as the workers who joined the company as employees before 1 February 2004, the moratorium compensation of Article 99 of Law 50 of 1990, costs, indexation and extra and ultra petita.	199
Melba Sofia Nieto	It requests the recognition and payment of the pension readjustment enshrined in article 116 of Law 6 of 1992 and its regulatory decree 2108 of the same year, the payment of the differences that exist in the value of their pension according to the readjustment claimed that has been caused since January 1, 1993.	196
Richard Arcenio Rodríguez Camargo	Declare that the applicants' time of service as a SENA trainee in CENS will be taken into account for all purposes with the date on which they began as indefinite-term contract workers in accordance with the provisions of the Collective Labour Convention.	195
Luis Horacio Duran Villaruel	It requests that CENS S.A. E.S.P. pay the plaintiff the money that, according to the plaintiff, was illegally deducted from his paycheck, for salaries and social benefits caused in the period between August 18, 2009 and the date of his retirement from the company.	184
Hernando Duarte Silva	He requests that the ISS (now COLPENSIONES) be ordered to recognise and pay the old-age pension compatible with the retirement pension recognised by CENS S.A. E.S.P. and, as a result, order the reinstatement of the old-age pension in accordance with the provisions of Article 20 of Agreement 049 of 1990, with default interest under Article 141 of Law 100 of 1993.	175
Leidy Lorena Rincón Ramírez	The lawsuit claims the recognition and payment of the transport aid discounted by the contractor, other discounted values, social benefits, layoffs and the interest on them, holidays, service premium, compensation for the moratorium referred to in Article 99 of Law 50 of 1990.	168

	Elda Beatriz Villamizar Vivas	Order CENS to cancel the health contributions consisting of 12% of the value of the pensionable month of all the shareholders and to re-settle the pension consisting of the 14 months per year, from the moment in which this 12% has been discounted to date with the inclusion of the percentage factor included in the pension, as well as to reimburse the health contributions discounted to the shareholders in the amount of 12%.	166
	José Javier Velandia	That Cens and Comyconta be declared administratively and extra-contractually liable for the damages caused by the disqualification of Mr. José Velandia/failure to work/Moral damages, for the pain suffered by Mr. José Velandia when he lost his job, since he worked for 17 years as an installation and measuring technician.	162
	Jesús David Osorio Vega	They request recognition of the conventional benefits of articles 20, 21, 26, 36 in the same way as the workers who entered the company as workers before February 1, 2004, the compensation for the moratorium of article 99 of Law 50 of 1990, costs, indexation and extra and ultra petita.	159
	Jhonatan Marciano Acevedo Lombana	Declare that the time spent by the applicants as SENA apprentices in CENS will be taken into account for all purposes with the date on which they started as indefinite-term contract workers in accordance with the provisions of the Collective Labour Convention	156
	Jaime David Quintana Rancruel	The lawsuit claims recognition and payment of the transportation assistance discounted by the contractor, expenses assumed for maintenance of the work tools, social benefits, layoffs and the interest thereon, vacations, service premium, compensation for the moratorium referred to in article 99 of Law 50 of 1990.	143
	Sociedad Palmas la Llana SAS	Declare Cens civilly responsible in the modality of extra-contractual civil liability for damages of various kinds / emergent damage / lost profits / moral damage.	125
<b>Total CENS</b>			<b>13,044</b>
Aguas de Antofagasta S.A.	12.050/272 Gobernación Marítima	45.000 PESOS	1,287
	12.050/201 Gobernación Marítima	45.000 PESOS	1,285
	Sanctioning file SISS N° 4265-2019	300 UTA	765
	Sanctioning file SISS N° 4416-2019	200 UTA	514
	Sanctioning file SISS N° 4259-2019	200 UTA	510
	Sanctioning file SISS N° 4209-2018	172 UTA	455
	16901/18-7 Morales and others with ADASA and others.	M\$100.000.-	428

	T-403-2019 Concha con Ezentis Chile and Others	Other proceedings for amounts less than \$84 million	315
	O-1512-2018 González con Omar Muñoz, Iteck, DERL and ADASA.	M\$72.166.-	308
	Sanctioning file SISS N° 4408-2019	120 UTA	306
	Sanctioning file SISS N° 4223-2019	100 UTA	255
	Sanctioning file SISS N° 4222-2018	100 UTA	255
	Sanctioning file SISS N° 4172-2018	80 UTA	204
	O-993-2018 Servicios Tirreno de Aguas Antofagasta	M\$30.000.-	128
	Sanctioning file SISS N° 4400-2018	50 UTA	127
<b>Total Aguas de Antofagasta S.A.</b>			<b>7,143</b>
ESSA	Franquelina Ortiz Cruz y Otros	Other proceedings for amounts less than \$188 million	1,265
	Luis Antonio Manrique Hernández	Claim for full and ordinary compensation for material damages in respect of the consolidated loss of earnings arising from the occupational accident	592
	Gerardo Vargas Barón	Claim for a disability pension of common origin for the following aspects.	455
	Gloria Edilse Gámez	Claim for death of Mr. Omar Méndez Lozano and an order for payment of moral and material damages	443
	Osmel Rodríguez	Workplace accident claim	403
	Mary Consuelo Abaunza Salazar	The ELECTRIFICADORA DE SANTANDER ESSA is condemned to respond patrimonially by solidarity with the contractor Javier Sánchez Gómez to the payment of the patrimonial and extra patrimonial damages owed because of the death of the worker Arley David Ospina Abaunza who loses his life in a work accident due to the conditions exposed in the facts.	389
	Martha Cecilia Rodríguez Ardila	The applicants request that ESSA be declared liable for all the damages caused to the applicants as a result of the events in which Mr Hugo Feliz Duarte Rojas died. 1000 grams of gold, in events that occurred on January 9, 1991.	374
	Diana Rocío Rivera Galeano and Others	Declare that the work accident in which Mr. Juan Alberto Granados Ramírez lost his life occurred through the proven fault of his employer. That it be declared that ELECTRIFICADORA DE SANTANDER is jointly and severally liable with the employer for the value of the compensation to which the legitimate successors, such as his daughter and his surviving permanent companion, are entitled.	358

	Ana Aydee Prada Ochoa	Payment of Compensation for the death of Mr. Alirio Silva Pimiento in a work accident in the Municipality of San Joaquin, due to a power failure.	337
	Ana Mides Díaz Palacio	That the defendants PROING and ESSA be jointly and severally ordered to recognise and pay total and ordinary compensation for material damages in respect of consolidated and future loss of earnings, for objective and subjective moral damages and damages in relation to and life claimed in this lawsuit as a result of the work accident in which worker Pedro Nel Díaz Díaz lost his life.	333
	Carolina Herrera De Ortiz	Workplace accident claim	301
	Gabriel Antonio Villegas Murcia	Declare that between Gabriel Antonio Villegas Murcia and FUREL S.A. there existed an individual contract of employment for an indefinite period, in verbal form, within the time limits from 5 November 2011 to 15 July 2014 Declare that Mr. Gabriel Antonio Villegas Murcia suffered an accident at work on November 29, 2011, while carrying out his duties as a moto liner, in the execution of activities for the defendant.	298
	Jorge Eliseo Chaparro Murcia	Declare that ESSA is administratively responsible for the death of Ernesto Chaparro Uruña as a result of an electric shock and consequently order the payment of 100 minimum wages to each of the applicants	280
	Carlos Eduardo Solano	declare that ESSA is administratively liable for the damage caused to the applicants as a result of the death of Mauricio Solano Camacho and pay the applicants moral and material damages	262
	María Yasmina Sanabria Mejía	Declare ELECTRIFICADORA DE SANTANDER S.A ESP, CHARTIS SEGUROS, SEGUROS DEL ESTADO, H-V CONSTRUCTORES LTDA, CPI CENTRAL DE PROYECTOS E INGENIERIA LTDA and CARLOS JULIO HERRERA SUAREZ, administratively and extra contractually liable for the damages caused to the plaintiff as a result of the indiscriminate felling of trees that caused erosion on the property owned by my attorney-in-fact, and invasion of private property.	240
	Samuel Prada Cordero	Lost profit/emerging damage	210
<b>Total ESSA</b>			<b>6,540</b>
<b>EMVARIAS</b>	ORLANDO ALFONSO DUQUE ZULUAGA Y OTROS	CONTRACT REALITY different from the contractors' issue	2,254
	LIZ NORMA BEDOYA MOLINA	SALARY LEVELING REQUEST	470
	LUZ DARY GARCIA ORTEGA//JHOANA MARIA RIVERA	SURVIVOR'S PENSION	104
	LUZ MARINA MOLINA PULGARIN AND OTHERS	Pension - sanction	61
	LUZ MARLENY ROJO ZAPATA	RETIREMENT PENSION	49
	JESUS ANTONIO MURILLO	SUBSTITUTE COMPENSATION OR RETURN OF BALANCES	49

	MIGUEL ANGEL BERMUDEZ ROLDAN	LABOUR RESPONSIBILITY FOR SOLIDARITY WITH COOMULTREVV	45
	NORMA LUCÍA AGUDELO SÁNCHEZ	PENSION REPLACEMENT	31
	ANTONIO ESTRADA TAPIAS	APPLICATION FOR CONVENTIONAL RETIREMENT PENSION	31
	LUZ FABIOLA ARBOLEDA	RESTORATION OF COMPENSATION (pension bond paid by Emvarias)	26
	ALVARO ANTONIO SANCHEZ ALVAREZ	LABOR SOLIDARITY	24
<b>Total EMVARIAS</b>			<b>3,145</b>
<b>Aguas Nacionales</b>	Jesús Enrique Acevedo Ruiz	Warranty call: Contract reality. Payment of legal and extralegal salaries and social security benefits, legal compensation and moratoriums, monetary correction, extra and ultra petita sentence and payment of procedural costs.	1,589
	Alberto Guerrero Castro	Reimbursement of salaries, benefits and social security, compensation for moratorium	483
	Antonio José Lopera Jaramillo	Solidarity, Payment of salaries, benefits and social security, compensation moratorium for unjustified dismissal	292
	Fray Noe Betancurt Taborda	Solidarity, compensation for job stability reinforced by health, compensation law 361 of 1997 and compensation moratorium, payment of social benefits	145
	Rodrigo Cuervo Duque	AGUAS NACIONALES EPM S.A. E.S.P. is declared jointly and severally liable for salaries, social benefits, compensation for unfair dismissal and compensation for dismissal of a sick worker (Law 361 of 1997), in terms of job stability reinforced by health.	40
	Natalia López Montoya	The existence of the employment relationship, payment of salaries, social benefits, compensation, moratorium sanction of Article 65 CST is declared.	20
<b>Total Aguas Nacionales</b>			<b>2,570</b>
<b>ENSA</b>	Aristides Contreras and others	Civil procedure - residents of Tuscany	967
	ASEP	Civil lawsuit against Res.12581	492
	Oswald Dall Amico and others VS M&D and ENSA	Lawsuit against ENSA for solidarity in the payment of acquired rights	406
	Electrical Technology	Civil process - unilateral discount to your invoices	20
<b>Total ENSA</b>			<b>1,884</b>
<b>EDEQ</b>	Willson Grisales Henao and Others	Declaration of employer's liability in the work accident suffered by Mr. Wilson Grisales Henao in events that occurred on October 17, 2012 while performing electrical work on the farm the mountain path Peking municipality of Quimbaya by the contractor of EDEQ INGELEL S.A.S, therefore.	1,432
	Elena Ríos mesa	That the Administrative Act contained in the Business Decision, through which some discharges are answered, issued by LA EMPRESA DE ENERGÍA DEL QUINDÍO S.A E.S.P signed by ENITH VILLEGAS BOTERO, leader of the customer service team, is void. As a consequence of the above, the right to my power of attorney is restored by THE EDEQ QUINDÍO ENERGY COMPANY and THE SUPERINTENDENCE OF HOME PUBLIC SERVICES.	20

<b>Total EDEQ</b>			<b>1,452</b>
<b>EMPRIO</b>	EMPRIO PPA	EMPRIO PPA	1,195
<b>Total EMPRIO</b>			<b>1,195</b>
<b>DEL SUR</b>	SIGET	Claim for bad tax classification	570
	TV RED, S.A. de C.V. AND OTHERS	Other proceedings for amounts less than \$67 million	238
	Various employees	Claiming employee benefits	219
	Inversiones Tunari, S.A de C.V.	Claiming damaged equipment	129
<b>Total DELSUR</b>			<b>1,157</b>
<b>AGURAB</b>	HLB FAST & ABS AUDITORES LTDA.	Direct Repair requesting that the Regional Office of Occidente S.A. E.S.P. of the patrimonial damage caused to the shareholder by the omission in payment for services rendered up to September 2010 order the payment of default interest.	36
<b>Total AGURAB</b>			<b>36</b>
<b>Total recognised lawsuits</b>			<b>275,819</b>

*Figures stated in millions of Colombian pesos*

#### 27.1.4 Contingent consideration - on business combination

Corresponds to contingent considerations related to the acquisition of the subsidiaries Espiritu Santo Energy S. de R.L. and Empresas Varias de Medellín S.A. E.S.P. - EMVARIAS. The balance as of 31 December 2019 amounted to \$117,724 and \$17,117, respectively, for a total provision in the Group of \$134,841.

The main assumptions considered in the calculation of the contingent consideration related to the acquisition of Espiritu Santo are: the estimated date of occurrence of the milestones associated with the contingent payment, the associated probability of occurrence and additionally, the discount of the payment flows was considered by applying a discount rate (LIBOR rate) in accordance with the risk of the liability. To date, no future events that could affect the calculation of the provision have been evidenced.

The main assumption used in the future events of the contingent consideration related to the acquisition of EMVARIAS are: ongoing lawsuits against EMVARIAS at the date of the transaction, definition of the year of materialization of each lawsuit, definition of the related amount to each of the disputes, estimate of future contingent outlays related to the estimated lawsuits for each year and discount rate (TES fixed rate) to discount future contingent expense flows. To date, there have been no future events that could affect the calculation of the provision.

#### 27.1.5 Warranties

In December 2018, the Group at the head of EPM created a provision for warranties with an amount of \$107,797 (approximately USD 3.5 million per month) which covered the default that would be incurred from January to October 2021, to the Intercolombia carrier for the months after the entry into operation of the infrastructure connection of the Ituango project. The balance of this item as of December 31, 2019 is \$108,630.

Additionally, the provision for warranty of the reliability charge No. 10090002278 to cover the construction and commissioning of the Ituango Hydroelectric Power Plant, had payments in 2019 in the amount of \$151,401 ending with a zero balance as of December 31, 2019.



### 27.1.6 Other provisions

The Group's subsidiaries that contribute to other provisions are:

**EPM in Colombia:** includes the detail of the following provisions: a) for events focused on the quality of life of employees and their families, such as: employer policy, multiplier points, *Somos* program, technical reserve and provision for high cost and catastrophic illness; b) provisions regarding environmental sanctioning procedures and sanctions imposed by the competent authorities; c) provisions related to the contingency of the Hidroitungo project.

The main assumptions considered for the calculation of each type of provisions are:

**Employer policy:** Awarded to EPM workers as an extralegal benefit. The main assumptions considered in the calculation for each type of provision are fixed rate TES discount rate, estimated value to be paid and estimated date of payment. To date, no future events that could affect the calculation of the provision have been evidenced. The balance of the provision as of December 31, 2019 amounts to \$5,293.

**Multiplier points:** granted to workers in EPM. The points obtained during the year must be recognised at the request of the interested party or by decision of the Human Talent Development Directorate each time there is accounting closure of the term and must be paid through the payroll. The value of each point is equivalent to 1% of the SMMLV and should not be accumulated from one year to another. The provision balance as of 31 December 2019 amounts to \$12.

**Somos Program:** works under the point accumulation modality. According to the behavior of the statistics the points are counted with a probability of 80% of redemption. The balance of the provision as of 31 December 2019 amounts to \$-67.

**Technical reserve:** The basis for calculating the reserve is that corresponding to all service authorisations issued and which on the cut-off date have not been redeemed, except those corresponding to authorisations with more than twelve months of issue or those which, at least four months after they have been issued, are known not to have been used. The balance of the provision as of 31 December 2019 amounts to \$7,511.

**High cost and catastrophic illness:** The basis for calculating this provision is that corresponding to the analysis of the entire population of members and beneficiaries of the Adapted Health Entity (EAS) of EPM, who suffer from any of the authorized pathologies. The balance of the provision as of 31 December 2019 amounts to \$20,456.

For the other provisions described, the main assumptions considered in the measurement are estimated life expectancy, estimated payment date, estimated payment value, discount rate calculated with reference to market yields of bonds issued by the National Government.

**Environmental sanctioning procedure:** Corresponds to sanctions imposed on EPM for not implementing environmental management measures for the execution of works or executing them without the respective authorization or modification of the environmental license. As of December 2019, there is a record of \$12,169 for four fines imposed by the ANLA and one by Corantioquia. From the ANLA, the first for having obstructed the course of the "Quebrada Tenche" water source by filling it with stone material; the second for building or modifying a tunnel without prior authorization and disposing of excess material on the road to San Andrés de Cuerquia; The third related to the adaptation of the slopes on which the geomembrane was installed and the waterproofing of the soil surrounding the solid waste disposal cell in the "BOLIVIA" landfill; and the fourth for having initiated activities related to the construction of the Auxiliary Deviation System (SAD) and its associated infrastructure within the Ituango Project without having previously processed and obtained the modification of the environmental license. For its part, Corantioquia declared EPM environmental liable for carrying out intervention in natural forests in March 2014 in Village (Vereda) las Palmas in the municipality of Envigado without having applied The balance as of 31 December 2019 is \$12,169.

**Sanctions:** As of 31 December 2019, there is a provision of \$1,656 to be charged to the Superintendence of Public Utilities for sanctions within the investigation of the Guatapé plant incident that occurred on 15 February 2016.

**Ituango contingency:**

- In EPM, provision for \$38,877 for the Contingency of the Hidroituango Project that caused the rising of the waters of the Cauca River as a consequence of the occluding of the waters that the project had on 12 May 2018. For the attention of the affected people of Puerto Valdivia, for the compensation of emergent damage, lost profits and moral damage. As of 31 December 2019, the balance of the provision amounts to \$35,873.
- Provision recognised in 2018 for \$42,917 for the attention of the affected families and evacuated due to the total loss of their homes and economic activities, as a result of the increase in the waters of the Cauca River due to the occluding of the project on 28 April 2018. This provision includes all costs for the maintenance of the shelters and the payment of economic support; this estimate was updated and projected until October 2019. As of 31 December 2019, EPM has paid \$20,420 and the balance of the provision is \$4,256.
- Provision of \$11,864 corresponding to sanctions imposed by the National Environmental Licensing Authority -ANLA to EPM for not implementing environmental management measures for the execution of works or executing them without the respective authorization or modification of the environmental license. Among them are: a) obstruction of the channel of the water source "Quebrada Tenche" when filling it with stone material; b) construction of the tunnel or modification without previous authorization and disposal of excess material on the road to San Andrés de Cuerquia; c) beginning of activities related to the construction of the Auxiliary Deviation System (SAD) and its associated infrastructure within the Ituango Project, without having previously processed and obtained the modification of the environmental license. This provision had payments during 2019, amounting to \$2,420.

**Aguas Nacionales in Medellín - Colombia:** includes provision for disputes brought by the CICE and HHA consortia of a contractual, non-judicial nature. The CICE consortium built the Interceptor Norte. The HHA Consortium is responsible for the construction of the Wastewater Treatment Plant in Bello and the points under discussion relate to time, design engineering and financial issues. The main assumptions considered in the calculation for each type of provision are the same as those applied to lawsuits provision. The balance of the provision as of 31 December 2019 amounts to \$15,914.

**CENS - Norte de Santander - Colombia:** includes provision for expected losses on construction contracts. The balance of the provision as of 31 December 2019 amounts to \$84.

**ADASA in Chile:** includes the provision related to the return of the working capital existing at the end of the concession term of the Sanitary Concession Transfer Agreement, signed between the Company and Econsa Chile S.A. The balance of the provision as of 31 December 2019 amounts to \$27,476.

**ENSA in Panama:** includes the provision related to compensation to customers for non-compliance with service quality standards, which are regulated by the National Public Services Authority of Panama (ASEP). The balance of the provision at 31 December 2019 amounts to \$15,592.

**TICSA in Mexico:** includes provisions related to: contractual obligations, electricity expenses and other expenses related to plant construction projects. The balance of the provision as of 31 December 2019 amounts to \$5,866.

**DELSUR in El Salvador:** includes provision related to customer claims for improper collections, voltage variations, damage to electrical appliances, among others. The balance of the provision as of 31 December 2019 amounts to \$893.

### 27.1.7 Estimated payments

The estimate of the dates on which the Group may have to disburse payments related to contingent liabilities included in the consolidated statement of financial position at the cut-off date, is the following:

Estimated payments provisions	Decommissioning or restoration	Onerous contracts	Lawsuits	Business combination	Warranties	Other provisions	Total
To one year	72,542	32,246	196,457	6,837	-	160,598	468,680
To two years	42,298	-	19,003	1,197	108,630	29,097	200,225
To three years	47,946	-	11,191	3	-	5,940	65,080
To four or more years	26,362	-	55,852	125,309	-	89,284	296,807
<b>Total</b>	<b>189,148</b>	<b>32,246</b>	<b>282,503</b>	<b>133,346</b>	<b>108,630</b>	<b>284,919</b>	<b>1,030,792</b>

Figures stated in millions of Colombian pesos

### 27.2. Insurance technical reserves

The technical reserves associated with insurance contract obligations are as follows:

Insurance technical reserves	2019	2018
Loss reserve payable	93,613	129,491
Reserve for unreported incurred losses	68,729	49,804
Unearned premium reserve	39,748	39,912
<b>Total</b>	<b>202,090</b>	<b>219,207</b>

Figures stated in millions of Colombian pesos

Movement in insurance technical reserves was as follows:

2019	Initial balance	Adjustment in technical reserves	Final balance
Loss reserve payable	129,491	(35,878)	93,613
Reserve for unreported incurred losses	49,804	18,925	68,729
Unearned premium reserve	39,912	(164)	39,748
<b>Total</b>	<b>219,207</b>	<b>(17,117)</b>	<b>202,090</b>

Figures stated in millions of Colombian pesos

2018	Initial balance	Adjustment in technical reserves	Final balance
Loss reserve payable	92,550	36,941	129,491
Reserve for unreported incurred losses	32,350	17,454	49,804
Unearned premium reserve	32,979	6,933	39,912
<b>Total</b>	<b>157,879</b>	<b>61,328</b>	<b>219,207</b>

Figures stated in millions of Colombian pesos

### 27.3. Contingent assets and liabilities

The composition of contingent assets and liabilities is as follows:

Type of contingency	Contingent liabilities	Contingent assets
Lawsuits	1,063,985	274,717
Warranties	223,327	133
Others	413,775	-
<b>Total</b>	<b>1,701,087</b>	<b>274,850</b>

*Figures stated in millions of Colombian pesos*

The Group has disputes or proceedings currently pending before courts, administrative bodies and arbitrators.

The main pending lawsuits and judicial and extrajudicial disputes to which the Group is party as of the court date are indicated below:

#### 27.3.1 Contingent liabilities

Company	Third party (Plaintiff)	Complaint	Amount
EPM	ISAGEN S.A. E.S.P.	Order EPM to compensate ISAGEN for the damages it suffered as a result of the fire and the consequent unavailability of the Guatapé plant.	290,981
	Misc. Administrative	327 lawsuits under \$5,931 with an average of \$645.	210,915
	Hidroeléctrica Ituango S.A.	Value of the execution for the fines of constraint at the date of filing of the lawsuit. Such amount will be increased by interest on arrears, and for each day of delay.	106,158
	Aura De Jesús Salazar Mazo	They request 100 SMLMV for the affectation of the mining activity; for moral damages which are assessed in the equivalent of 200 SMLMV for each of the persons in the group, approximately 113.	39,211
	Aura De Jesús Salazar Mazo	Collective right, approximately 113 persons, each claiming \$1,133,400 for consolidated loss of earnings and \$78,753,854 for future loss of earnings, for destroying, interrupting and cutting the ancestral roads of La Herradura that lead from the Alto Chiri trail in the municipality of Briceño to the village of Valle de Toledo.	29,569
	Obras Civiles E Inmobiliarias S.A - Oceisa	Declare that EPM's failure to comply with its main obligation to deliver studies and designs prevented the execution of the contract by OCEISA and that it is not contractually liable for those portions of the work which could not be executed by third parties due to events beyond the control of the parties which prevented the normal execution of the contract.	16,614
	Misc. Labour	201 lawsuit less than \$784 with an average of \$73	14,634

Company	Third party (Plaintiff)	Complaint	Amount
	Luis Fernando Anchico Indaburo	Declare EPM administratively responsible, as the cause of the anti-legal damage due to the destruction of the fishing resource of the Montecristo swamp complex, which is due to the construction of the PHI (Ituango Hydroelectric Project) and requests the recognition and payment of a minimum wage for each family nucleus from February 2019 until the sentence is issued, this is denominated by the defendants as consolidated loss of profit.	13,680
	Luis Fernando Anchico Indaburo	Declare EPM administratively responsible, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo marshes complex, which is due to the construction of the PHI (Ituango Hydroelectric Project); that a minimum wage be recognised and paid for each family nucleus from February 2019 until the sentence is issued and the recognition of a future loss of profit that goes from the moment of the sentence until the probable life span of each of the plaintiffs.	13,668
	Yalida María Madrigal Ochoa	For the eleven defendants, it is estimated that they suffered damages to their family and social environment as a result of the death of Nicolás Alberto Moreno Trujillo.	10,356
	Maikol Arenales Chaves	Declare EPM administratively responsible, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo swamp complex, which is due to the construction of the PHI (Ituango Hydroelectric Project) and requests the recognition and payment of a minimum wage for each family nucleus from February 2019 until the sentence is issued, this is called by the defendants as consolidated loss of earnings.	10,204
	Maikol Arenales Chaves	Declare EPM administratively responsible, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo marshes complex, which is due to the construction of the PHI (Ituango Hydroelectric Project); that a minimum wage be recognised and paid for each family nucleus from February 2019 until the sentence is issued and the recognition of a future loss of profit that goes from the moment of the sentence until the probable life span of each of the plaintiffs.	10,204
	Javier Maure Rojas	Declare EPM administratively responsible, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo marshes complex, which is due to the construction of the PHI (Ituango Hydroelectric Project) and requests the recognition and payment of a minimum wage for each family nucleus from February 2019 until the sentence is issued, this is called by the plaintiffs as a consolidated loss of earnings.	8,605
	Javier Maure Rojas	Declare EPM administratively responsible, as the cause of the anti-legal damage by having destroyed the fishing resource of the Montecristo marshes complex, which is due to the construction of the PHI (Ituango Hydroelectric Project); that a minimum wage be recognised and paid for each family nucleus from February 2019 until the sentence is issued and the recognition of a future loss of profit that goes from the moment of the sentence until the probable life span of each of the plaintiffs.	8,605

Company	Third party (Plaintiff)	Complaint	Amount
	INMEL Ingeniería S.A.S.	Order EPM to compensate Consorcio Línea BGA for the damages suffered, in proportion to its participation in the contractor consortium (80%), after the submission of the offer, execution and completion of contract CT 2016 001695, where unforeseen situations and circumstances not attributable to the contractor occurred that substantially varied the defined execution conditions and made compliance more onerous for the contractor and which the contractor failed to comply with while refusing to restore the financial or economic balance of the contract.	7,626
	CONINSA RAMÓN H S.A.	That EPM, failed to comply with contract No. 2/DJ-2183/43 and its additional agreements, (bilateral modification acts) signed with EL CONSORCIO CONINSA S.A.- CONSTRUCCIONES E COMERCIO CAMARGO CORRÁ S.A., due to the non-payment of the damages suffered by El Consorcio Contratista, during the execution and development of the contract.	6,801
	Alejandra Betancur Giraldo	Declare EPM, the municipality of Girardota and INGELEL, are responsible for the de facto occupation of the plaintiffs' property. That they be paid the damages, jointly and severally, in the amount of \$6,102,004,043.	6,111
	VELPA SOLUCIONES INTEGRALES S.A.	EPM is ordered to pay the damages suffered by Velpa Soluciones Integrales, with its respective update and moratorium interests, since its proposal was rejected within the 2009-0927 contracting process and was awarded to the firms ELECTROLUMEN Ltda and MELEC S.A., as well as the amount of the sums that VELPA SOLUCIONES INTEGRALES S.A. will no longer receive, due to the impossibility of contracting with the State for a period of 5 years, as a result of the decision adopted by EPM.	5,931
	Moraine Olave De Larios	Relatives of a former Integral worker who died in Ituango, claiming full compensation for damages, for moral damages caused. Solidarity.	5,121
	HERNANDO DIAZ CORREA	Plaintiff requests compensation for work accident.	924
	Aldo Adrián Gutiérrez Posada	Employer substitution ex EADE.	788
	Juliana Urrea Giraldo	Plaintiff seeks a declaration that the death of the former Mincivil worker occurred due to the employer's fault. The intention is to declare the MISPE Consortium jointly and severally liable to EPM, for the payment of patrimonial and extra patrimonial damages.	784
	Ciudadela Comercial Unicentro Medellín PH	Declare the nullity of the administrative act issued by EPM with filed 20190130037817 of February 27, 2019. Order the reinstatement of the plaintiff's rights by ceasing the collection of the electric energy tax contemplated by Law 142 of 1994, Law 143 of 1994 and Law 223 of 1995; and, make the refund of the amounts paid for such concept from January 1, 2017 and until the date of judicial notification that ends the process.	282
	Jesús Evelio Garcés Franco	Nullity of the resolutions that resolve the Appeal for Replacement by EPM, and of the SSPPD be declared; that EPM be declared administratively responsible for restoring the rights of the plaintiff due to the undue collection of alleged works in connection with the water supply.	166

Company	Third party (Plaintiff)	Complaint	Amount
<b>Total EPM</b>			<b>817,938</b>
Aguas Nacionales	HHA Consortium (Controversy)	Dispute of a contractual, non-legal nature arising from the construction of the Aguas Claras plant, regarding timing, engineering, design and financial issues	343,560
	Consorcio CICE (Controversy)	Dispute of a contractual nature	70,216
	Wilber Leibin Castillo Borja / Matilde Andrade de Palacios and others	Declare the company liable for the death of the wife of the plaintiff, allegedly caused by a traffic accident on a rainwater collection grate.	2,632
	Adrián Heber Murillo Ortiz	Declare and condemn the Municipality of Quibdó, Aguas del Atrato, Aguas Nacionales E.P.M. S.A. E.S.P., administratively responsible without division of quotas for all extra-patrimonial damages of moral order, of alteration to the conditions of existence and material in the morality of emergent damage suffered by all the plaintiffs.	1,229
	Darly Bibiany Cabezas y Otros	Other proceedings for amounts less than \$277 million	1,140
	Seguros Comerciales Bolívar S.A.	Monetary recognition for damages caused to one of the Insurer's clients due to a rainstorm in March 2006 that caused flooding.	616
	Compañía Colombiana de Consultores S.A.S.	Declare AGUAS NACIONALES EPM S.A. ESP failed to comply with contract No. 2014-90000-00147 and consequently that it be settled in court, that it be declared responsible for the damages suffered by the plaintiff COMPAÑÍA COLOMBIANA DE CONSULTORES S.A.S., and that it be ordered to pay.	535
	Rosalba Valoyes Palomeque	Based on Article 90 of the National Constitution, declares the municipality of Quibdó, Aguas Nacionales EPM S.A. ESP, INGECOR S.A.S. to be administratively and jointly liable for all the damages caused by the injuries to Mrs. Rosalba Valoyes Palomeque.	522
<b>Total Aguas Nacionales</b>			<b>420,450</b>
ENSA	Compañías Generadoras	Performance guarantee to provide credit security and compliance with obligations under power purchase agreements.	152,347
	Autoridad Nacional de los Servicios Públicos	Performance bond to guarantee compliance with obligations under the Concession Agreement.	49,157
	Autoridad Nacional de los Servicios Públicos	For non-compliance with the technical service quality standard	20,690
	Empresa de Transmisión Eléctrica, S. A.	Bank guarantee to ensure payment of one month's billing for the Transmission System.	11,401
	Ente Operador Regulador del El Salvador y Otros	Letter of credit as a guarantee of payment of energy purchase costs in the occasional market.	10,421
	SEGURITAS, INC. Y OTROS	Claim for damages and labor	1,928
<b>Total ENSA</b>			<b>245,945</b>
EDEQ	Gerson Obed Peña Muñoz and others	They demand the return of the money collected from the public lighting tax in the municipality of Armenia, as they consider this collection to be illegal.	67,886

Company	Third party (Plaintiff)	Complaint	Amount
	Danielly Arcila de Gil y Otros	The defendants are declared administratively, extra-contractually, jointly and patrimonially responsible for the injuries suffered by Mrs. Danielly Arcila de Gil, which are a consequence of the fall suffered by an iron hook that is part of the cover of the junction box, which is made of concrete and belongs to the MUNICIPALITY OF ARMENIA, the PUBLIC COMPANIES OF ARMENIA - E. S.P.; and the EMPRESA DE ENERGIA DEL QUINDÍO S.A. E.S.P. PUBLIC SERVICES COMPANY - EDEQ.	2,514
	Maria Amparo Fernández Gil	That he be ordered to pay all damages, due to the death of Mr. Otálvaro Sánchez	2,022
	Diana Rocío Vargas Álzate and others	Demand for direct reparation for the death of the minor JOAN MANUEL VARGAS PELÁEZ, which occurred on November 16, 2013 at Finca La Molienda Quindiana. (village Baraya- Montenegro Quindío)	911
	John Jairo López Pérez and others	EDEQ is being sued for the damages allegedly suffered by the plaintiffs in the death by electrocution of Jhon Esteban López Henao, which occurred on November 4, 2016 at the Lotería del Quindío building	773
	Sandra Milena Sánchez	That the Co-defendants be declared administratively responsible for the facts and omissions that caused the death of Mr. Otálvaro Sánchez, and that as a consequence of such declaration the Co-defendants be condemned.	593
	Jhon James Montoya Marín and others	Declare the defendant entity administratively responsible for the damages caused to Mr. Jhon James Montoya Marín and Others as a consequence of an electric shock caused by an electric cable	592
	Leonardo Castaño López	Declare that Mr. Leonardo Castaño López was unjustly dismissed and that he is therefore entitled to the compensation that this situation entails	448
	Angela Eliana Jaramillo Ballén and others	EDEQ is sued for the death of David Mauricio Walteros Jaramillo as a result of the traffic accident that occurred on July 30, 2016. EDEQ is being sued because, allegedly, he was in charge of the public lighting fixtures.	436
	Alba Lucía Luna García and others	EDEQ is being sued for the damages suffered due to the death of young Victor Manuel Serrano Luna and the injuries suffered by Laura Victoria Botero on November 22, 2014, being the first: 20 in the afternoon, when the young people were travelling on a motorcycle, brand Auteco línea pulsar 135 LS, model 2014, plate ITT 13D, at the height of the neighbourhood La Alambra by the race 19 A in front of the block A number 3, of the municipality of Armenia, when they stumbled upon a fixed cement block, left on the track, which caused them to collide with a power pole, located incorrectly, on the edge that separates the platform from the vehicle track. ”	431
	Claudia Marcela Escobar Pérez and other	EDEQ is being sued for the death of David Mauricio Walteros Jaramillo as a result of a traffic accident on July 30, 2016. EDEQ is being sued because he was allegedly in charge of the public lighting fixtures.	378



Company	Third party (Plaintiff)	Complaint	Amount
	Luis Fernando Cerón Betancur and others	EDEQ is being sued for the damages suffered by Mr. Luis Fernando Cerón Betancur and his family as a result of the electric shock he suffered on June 11, 2015 while he was carrying out construction work on the second floor of a house located in the municipality of Montenegro on the 6Nro 20-49 road, as a consequence of the shock he fell from the second floor.	328
	Ricarte Arévalo Hernández and others	EDEQ is being sued for injuries sustained by an ROR worker who was involved in an accident on December 23, 2017, while performing work in the city of Armenia in the La Española condominium.	325
	Alba Irene Muñoz y Otros	Other proceedings for amounts less than \$143 million	263
<b>Total EDEQ</b>			<b>77,899</b>
ESSA	Other provisions	Other miscellaneous provisions	10,652
	Tomon Ltda	Requests that the existence of a Strategic Alliance contract between ESSA and the Temporary Union "San Gil Iluminado" be declared.	8,866
	Carlos Gerardo Hernández Flórez	Declare the Department of Santander, Municipality of Betulia and Electrificadora de Santander S.A. ESP as administratively responsible, jointly and severally or individually, as the case may be, for the material and moral damages caused to Mr. Carlos Gerardo Hernández Flórez due to the failure or lack of service of the administration for the events that occurred on January 7, 2015 that caused the fire in the municipality of Betulia Santander and affected his property called Finca Vistahermosa.	5,327
	APH Servicios Eléctricos S.A. Tomon Ltda., Kesman Overseas Limited., Inversiones El Prado	Requests that the existence of a Strategic Alliance contract between ESSA and the Temporary Union "San Gil Iluminado" be declared.	5,262
	José De La Cruz Carreño Acevedo y Otros	Other proceedings for amounts less than \$768 million	5,103
	Gerrsson Enmanuel Duarte Pabón	Declare the ESSA responsible for the damages caused to Gerson Duarte and his family (4 people), for the damages derived from the inadequate location of the energy networks that caused the electrocution of the actor on July 30, 2011, when he was working on the property located at Calle 10 con carrera 14 no. 10-37 barrio San Antonio de Piedecuesta. Order the ESSA for the material and moral damages derived from the described event that in the actor's opinion are equivalent to the sum of \$2,128,885,110	2,772
	Promotora Agrotropical Colombiana SAS	Failure to comply with the commercial offer No. ON-013-2008 of October 3, 2008 is declared. The ESSA is ordered to pay \$886,313,271.31 in damages.	1,197
	Gabriel Méndez Jaimes	ESSA be declared administratively responsible for the damages caused to the Plaintiff.	1,004
	Blanca Sepúlveda Oviedo	Moral damages/loss of earnings/health damage	936
<b>Total ESSA</b>			<b>41,120</b>
CHEC	Honorios Herrera López and others	Material, patrimonial, moral damages, emergent damage,	30,090
	Municipio de Salamina	Energy no longer generated and marketed	5,605

Company	Third party (Plaintiff)	Complaint	Amount
	Reinel Rivera Toro y Otros	Direct compensation for moral and material damages	2,123
	José Gustavo Morales Guarín	Injury compensation	1,437
	Positiva Compañía de Seguros S.A.	Return of mathematical capital reserve	1,089
	Suministros y Proyectos Tecnológicos Eléctricos SYPELC	Restitution of unauthorised cost overruns and discounts in contract	644
<b>Total CHEC</b>			<b>40,987</b>
Emvarias	JAC VAINILLAL Y OTROS	DIRECT REPAIR	14,814
	JUNTA DE ACCIÓN COMUNAL LA CEJITA	Declarations	9,299
	Varios Pasivos contingentes	Labor Liability and Reality Contract	4,081
	JESÚS GREGORIO VALENCIA	CHANGE OF MODE FROM PUBLIC WORKER TO OFFICIAL WORKER	956
	WILSON MARIO QUINTERO	DAMAGE TO HEALTH, FUTURE LOSS OF EARNINGS, PAST LOSS OF EARNINGS, SUBJECTIVE MORALITY OF THE INDIRECT VICTIM.	593
	JOHN JAIRO MESA ISAZA	PATRONAL GUILT	172
	MARTHA CECILIA LEGARDA OCAMPO Y OTROS	OCCUPATIONAL LIABILITY	114
	JORGE HERNANDO BARON SEPULVEDA Y OTROS	CONVENTIONAL PENSION	93
	JAIR IGNACIO AGUDELO ÁLVAREZ	Salary levelling	70
	BEATRIZ ELENA RESTREPO RENDON Y OTROS	SOLIDARITY	47
	GLORIA LUZ OSPINA GUTIERREZ	Call for warranty nullity and restoration of right	33
	Ligia Beatriz Pereira Girón y Otros	PENSION REPLACEMENT	21
	LIGIA STELLA SIERRA VALENCIA	Salary levelling	20
JHON DARIO CANO LONDOÑO	Readjustment of pension compensation.	11	
<b>Total Emvarias</b>			<b>30,323</b>
CENS	Carlos Enrique Salamanca Soto y Otros	Other proceedings for amounts less than \$563 million	3,882

Company	Third party (Plaintiff)	Complaint	Amount
	Mariana Bautista Ortíz	Declare the NACION-CENTRALES ELÉCTRICAS DEL NORTE DE SANTANDER S.A. E.S.P. civil, administrative, patrimonial and extra-contractual liable for the damages caused to the plaintiffs as a result of the death of Mr RAMON ALIPIO ALVAREZ PAEZ (Q.E.P.D.) on 26 April 2016, as a consequence of an electrical discharge produced by a high voltage cable.	2,305
	Orlando Emiro Contreras Velasco	Declare that the applicants are entitled, throughout their pensionable lives, to have their pensions adjusted in accordance with the parameters indicated in Article 1 of Law 71 of 1988 and not in accordance with those set out in Article 14 of Law 100 of 1993, and order CENS to pay the applicants retroactively the sums which have not been paid and which have been settled when the largest increase is applied	2,081
	Paht Construcciones S.A.S.	Order the settlement of Contract CT-2015-000070, entered into by the parties, where CENTRALES ELECTRICAS DEL NORTE DE SANTANDER S.A E.S.P., must readjust the contractual equity in favor of PAHT CONSTRUCCIONES S.A.S., with the application of the theory of unforeseen circumstances.	1,561
	Geomara Carreño	For moral damages the sum of 1300 smlmv. Damage in life in relation / material damages - / lost profits.	1,386
	Nubia Boada Dueñas	The lawsuit requests the continuation of the payment of 12% of the monthly pension, the reimbursement of the contributions discounted from the moment of the compatibility of the pension duly indexed and the payment of moratorium interest of article 141 of Law 100 of 1990, plus the costs of the process.	1,386
	Eleida Carrascal Velásquez	Obtain the recognition and payment by CENS and the Department of Norte de Santander, in favor of the applicant, of the value of the material damages (consequential damages, loss of earnings and moral or immaterial damages) caused to her by the total destruction of the business establishment called Ferretería y Materiales Diego Alejandro, in events that occurred on February 5, 2015, which caused damage to her assets and patrimonial income.	1,151
	Sara Franco Guerrero	Order CENS S.A E.S.P. and ELECTRONING S.A.S. to pay for moral damages. 100 SMLMV to each of the applicants and the direct victim / order CENS S.A E.S.P and ELECTRONING S.A.S to pay for the life damages in relation to 100 SMLMV to each of the applicants	884
	Luvier Sánchez	It is requested that CENS and the other defendants be declared liable for the damages caused to Mr. Luvier Sánchez and the other applicants, requesting payment of material and immaterial damages.	837
	Jeison Orlando Ortiz Valenzuela	Declare jointly and severally CENS and the Municipality of Aguachica - Mayor's Office - Planning Secretariat, administratively responsible for the totality of the damages caused to the plaintiffs by the death of Mr. Fabio Alberto Ortiz Valenzuela, in events that occurred on March 29, 2014, due to electrocution.	835
	Julio Cesar Peña Villamizar	Declare CENS S.A E.S.P. directly responsible for the death of at least Gerson Fabian Peña Capacho, on October 27, 2006 for providing energy services, considered a risky activity.	686

Company	Third party (Plaintiff)	Complaint	Amount
	Other administrative proceedings, for amounts less than \$200 million.	Other administrative proceedings (8) for amounts less than \$200 million.	624
	Other labor proceedings, for amounts less than \$200 million.	Other labor proceedings (27) for amounts less than \$200 million.	606
<b>Total CENS</b>			<b>18,225</b>
<b>Aguas Regionales</b>	María Inés Osorio Montoya	That the MUNICIPALITY OF APARTADÓ AND/OR REGIONAL WATERS EPM S.A ESP, jointly and severally or independently are administratively responsible for the omission in the fulfillment of their constitutional and legal duties for the death of the young Cesar Augusto Jiménez Osorio (q.e.p.d) determined by the injuries suffered in the events that occurred on June 1st, 2016 in the city of Apartadó.	3,013
	Rosmery Velásquez Herrera	Order AGUAS REGIONALES EPM S.A. E.S.P. to return the property to the owners; / Order the defendant company to pay the civil fruits that the owners could have received with average intelligence and activity, from August 2012 until the date of the judgment; / If the property is not voluntarily surrendered within the term set by his office, order the competent police officer to enforce that order; / Order the defendant company to pay the costs of the proceedings.	124
	WILSON DE JESÚS LEGARDA PALACIO	Declare that between Mr. WILSON DE JESÚS LEGARDA PALACIO and EMPRESAS MANPOWER DE COLOMBIA, identified with Nit 890.916.868-8 an employment contract was entered into, which began on June 1, 2015 and was effective until June 28, 2018, date on which the employer decided to unilaterally and unfairly terminate the employment contract.	57
<b>Total Aguas Regionales</b>			<b>3,193</b>
<b>Aguas de Antofagasta</b>	Lawsuit C-4372-2019 Soto with ADASA	M\$200.000.-	887
	Lawsuit 12.050/73 Investigación Sumaria, Gobernación Marítima.	30.000 pesos	857
	Lawsuit C-26284-2019 Muñoz with ADASA	M\$172.000.-	759
	Lawsuit C-4568-2016 Constructora e Inmobiliaria CRC Ltda. with Econssa Chile S.A. and others	Other proceedings for amounts less than \$171 million	320
<b>Total Aguas de Antofagasta</b>			<b>2,823</b>
<b>EMPRIIO</b>	Maria Consuelo Giraldo	Declare the company and Mr. Gonzalo Emilio Pérez Montoya responsible for the damages caused by the death of Mr. Justo Pastor Herrera Giraldo	1,168
	Diego Nicolás Botero Puerta	Indemnity for unjustified dismissal to fixed-term contract for 21 months	217
<b>Total EMPRIIO</b>			<b>1,385</b>

Company	Third party (Plaintiff)	Complaint	Amount
Aguas de Malambo	T & A Proyectos Ltda.	Problematic additional amounts of work and greater permanence of work in the execution of contract No. 22-2012.	764
	Fabian Bacca Jiménez	Recognition by Aguas de Malambo of an employment relationship acquired in 2015 and 2016 in which he worked as a temporary employee of the company S.A.S. and, consequently, payment of holidays, bonuses, severance pay, bonus for signing the agreement and compensation for dismissal without just cause.	19
	Emer Enrique Conrado Anguila and others	The Nation is declared administratively responsible Municipality of Malambo Department of Atlántico, Instituto nacional de Infraestructura (ANI) Concessionary firm, Autopista del Sol SAS. Aguas de Malambo S.A. ESP. responsible for material damages, health to other goods and or rights conventionally and constitutionally protected and in general any other type that is shown to have been caused by the failure to provide the service.	15
<b>Total Aguas de Malambo</b>			<b>799</b>
<b>Total contingent liabilities</b>			<b>1,701,087</b>

Figures stated in millions of Colombian pesos

Regarding the uncertainty of the estimated payment date and the estimated value payable, the same business rules indicated in note 27.1.3 Lawsuits apply to contingent liabilities.

### 27.3.2 Contingent assets

Company	Third party (Plaintiff)	Complaint	Amount
EPM	Municipality of Bello	Integral nullity of the complex administrative act contained in Resolutions 2717 of 2009 and 0531 of 2010 PTAR Bello.	117,972
	Municipality of Bello	Reimbursement of monies paid by EPM, for the determination and liquidation of the capital gain effect, PTAR Bello.	114,820
	La Nación Ministerio de Salud y Protección Social	MINSALUD has the legal and constitutional obligation to recognise and cancel the value of the services rendered to members in relation to medicines and/or procedures, interventions or elements not included in the Compulsory Health Plan (POS).	7,079
	Other administrative	Processes for amounts less than \$867.	4,589
	Interconexión Eléctrica S.A. E.S.P. ISA	To declare that Interconexión Eléctrica S.A. E.S.P., ISA is civilly responsible for not recognising to EPM, the value that corresponds to it, of the remuneration that ISA received between the years 1995 to 1999, for the line modules that correspond to assets of use of the STN in the Playas and Guatapé substations represented by it, in which there is shared property, value that to date has not been realized, generating an enrichment without cause by increasing the patrimony of the	3,577

Company	Third party (Plaintiff)	Complaint	Amount
		defendant at the expense and to the detriment of the patrimony of the plaintiff.	
	Poblado Club Campestre Ejecutivo S.A.	Declare the Poblado Club Campestre Ejecutivo S.A., Optima S.A. Vivienda y Construcción and the Municipality of Envigado responsible for the damage to the collector owned by EPM, which collects and transports the wastewater from the sanitary basin of the La Honda stream in the Municipality of Envigado, and indemnify EPM for the value of all the patrimonial damages that are proven for the damage to the collector that collects and transports the wastewater from said sanitary basin.	3,369
	Other Tax	Processes with a value of less than \$114,820.	2,321
	Fiduciaria Bogotá S.A. - FIDUBOGOTÁ S.A.	TO IMPOSE in favor of EMPRESAS PÚBLICAS DE MEDELLÍN E.S.P. a power transmission easement, on the lot of land or property called LA BOCA DEL PANTANO, with real estate registration No. 50 C-1497258 located in a rural area of the Municipality of Madrid (Cundinamarca) for the 500 Kv transmission lines, and for one (1) tower point (with its landings) of the Transmisión Nueva Esperanza project.	923
	Municipality of Envigado	To declare the nullity of the administrative act contained in Resolutions 2656 of August 13, 2007 and 4176 of October 26 corresponding to the sanction imposed for the alleged violation of Municipal Decree 259 of August 14, 2002; to declare the inapplicability of Decree 259 of August 14, 2002 of the Municipality of Envigado (Antioquia), "By means of which urbanistic sanctions are established", for being contrary to the Political Constitution, the Law and the Regime of Public Home Services. Order by way of restoration of rights, that EPM be refunded \$655'460,000 for the sanction imposed on the administrative acts whose nullity is requested.	867
<b>Total EPM</b>			<b>255,517</b>
	Dirección de Impuestos y Aduanas DIAN	Declare the nullity of the official revision settlement >No 072412015000018 of September 14, 2015 and Resolution No 007521 of October 4, 2016.	9,276
<b>CENS</b>	Dirección de Impuestos y Aduanas DIAN	Declare the nullity of a) Resolution issued by the Dirección de Impuestos y Aduanas Nacionales DIAN, notified to CENS on September 15, 2015. b) Resolution issued by the Dirección de Impuestos y Aduanas Nacionales DIAN, notified to CENS, which resolves the appeal for reconsideration filed by CENS against the official review assessment, ORDER the defendant to make the refund of the amount of money paid by CENS S.A E.S.P, for the higher Income and Complementary Tax and the sanction for inaccuracy with the current interest and moratoriums in accordance with the provisions of article 863 of the Tax Statute.	4,027

Company	Third party (Plaintiff)	Complaint	Amount
	Consortio CDE Ltda.	Obtain cancellation of the resources owed in favour of CENS	1,243
	Rubén Darío Sanchez y Otros	Other proceedings for amounts less than \$121 million	330
<b>Total CENS</b>			<b>14,875</b>
<b>Aguas Regionales</b>	Municipality of Chigorodó	Issue a payment order in favor of Aguas de Urabá S.A. E.S.P. and against the MUNICIPALITY OF CHIGORODÓ, for sewage and aqueduct subsidies owed in 2008, 2009 and 2010.	1,922
	Corpourabá - Corporación para el Desarrollo Sostenible del Urabá	Declare the nullity of the 1. Settlement of Tax No. 6509 of the remuneration rate corresponding to the municipality of Apartadó for the period January to December 2014, given that it does not correspond to the reality of the charges dumped by the sewerage users of the company Aguas de Urabá S.A. E.S.P. in the urban area of the municipality of Apartadó (Antioquia)	367
	Superintendence of Public Home Utilities - SSPD	Official liquidation number SSPD No. 20185340029156 of 3 August 2018 of the Special Contribution corresponding to the year 2018 for the Aqueduct service. And several prosecutors	228
<b>Total Aguas Regionales</b>			<b>2,516</b>
<b>Aguas de Malambo</b>	Municipality of Malambo	A payment order is hereby issued against the Municipality of Malambo - Atlántico and in favor of Aguas de Malambo S.A. ESP. for the following sums of money: \$1,446,217,806.90 for the concept of capital represented in the promissory note 01 of 2011 that is contributed. For the interest on arrears of the above capital from December 31, 2012 at the rate of 28.76% effective per annum until the obligation is cancelled.	1776
	Superintendence of Public Home Utilities	Return of greater value cancelled by AGUAS DE MALAMBO S.A. E.S.P., for the special contribution corresponding to 2015, for the Sewerage service, in the amount of \$4,379,938, in accordance with the difference established between the official liquidation made by the defendant entity (added to the payment of the advance) and the legally collectible value in accordance with the taxable base authorized by Law 142 of 1994, article 85.	5
<b>Total Aguas de Malambo</b>			<b>1,781</b>
<b>Emvarias</b>	MARTA NELLY QUINTERO R	MORTGAGE EXECUTIVE	27
<b>Total Emvarias</b>			<b>27</b>
<b>Total contingent assets - lawsuits</b>			<b>274,717</b>

Figures stated in millions of Colombian pesos

## Warranties

The Group has provided the following warranties:

Company	Third party (Plaintiff)	Complaint	Amount
ESSA	Seguros del Estado	Constituted and granted with the purpose of covering litigious process against the Municipality of Bucaramanga	133
<b>Total ESSA</b>			<b>133</b>
<b>Total granted warranties</b>			<b>133</b>

*Figures stated in millions of Colombian pesos*

## Estimated payments and collections

The estimated dates on which the Group expects to make payments related to the contingent liabilities or receive collections related to the contingent assets included in this note to the consolidated statement of financial position at the cut-off date are as follows:

Estimated payments and collections	Contingent liabilities	Contingent assets
To one year	130,528	128,072
To two years	22,077	15,183
To three years	50,815	128,312
To four years and beyond	1,303,883	25,769
<b>Total</b>	<b>1,507,303</b>	<b>297,336</b>

*Figures stated in millions of Colombian pesos*



## Note 28. Other liabilities

The composition of other liabilities is as follows:

Other liabilities	2019	2018
<b>Non-current</b>		
Collection in favour of third parties <sup>(1)</sup>	10	10
Payments received in advance	4,130	4,371
Government grants	25,745	25,778
Assets received from customers or third Parties	30,955	31,784
Other deferred loans	21,089	21,159
Transfer of financial assets and guarantees	34,511	36,425
<b>Total other liabilities non-current</b>	<b>116,440</b>	<b>119,527</b>
<b>Current</b>		
Collection in favour of third parties <sup>(1)</sup>	197,144	115,715
Payments received in advance	123,711	67,786
Government grants	708	763
Assets received from customers or third Parties	248	153
Transfer of financial assets and guarantees	8,253	6,231
<b>Total other liabilities current</b>	<b>330,064</b>	<b>190,648</b>
<b>Total other liabilities</b>	<b>446,504</b>	<b>310,175</b>

Figures stated in millions of Colombian pesos

- <sup>(1)</sup> Obeys to collection in favour of third parties through agreements on public lighting, portfolio collection, solid waste management, taxes, among others.

### 28.1 Deferred Reinsurance Commissions

The breakdown of Deferred reinsurance commissions, which is included in the Payment received in advance, is as follows:

Deferred income from reinsurance commission	2019	2018
Initial balance	6,612	7,288
Amortization	(1,501)	(676)
<b>Final balance</b>	<b>5,111</b>	<b>6,612</b>

Figures stated in millions of Colombian pesos

## 28.2 Government Grants

Movement of Government grants to the cutoff date is as follows:

Grants	2019	2018
Initial balance	26,540	25,790
Awarded during the period	154	353
Recognized in profit or loss for the period	(1,023)	(2,091)
Effect in foreign exchange translation	255	1,587
Other changes	527	901
<b>Final balance</b>	<b>26,453</b>	<b>26,540</b>
Non-current	25,745	25,778
Current	708	763
<b>Recorded value at 31 December</b>	<b>26,453</b>	<b>26,540</b>

*Figures stated in millions of Colombian pesos*

The Group has received grants from the Inter-American Development Bank (IADB) for the micro and small business financing program; from Financiera del Desarrollo (FINDETER) as a favorable rate loan for the construction of water and sewerage infrastructure; and from the Fund for the Reconstruction of the Coffee Belt (FOREC) for the reconstruction of energy networks following the earthquake in that region of the country; by the Financial Fund for Development Projects (FONADE) for the promotion of telecommunications in rural schools, and by the Rural Electrification Office (Panama) and the National Investment Fund for Electricity and Telephony (El Salvador) for the construction of rural electrical infrastructure.

The Group has not breached any of the conditions relating to grants.

## 28.3 Payment received in advance

The breakdown of payment received in advance as of the cut-off date was:

Payment received in advance	2019	2018
<b>Non-current</b>		
Leases	298	399
Sales	162	117
Sale of energy utility	3,670	3,855
<b>Total non-current payment received in advance</b>	<b>4,130</b>	<b>4,371</b>
<b>Current</b>		
Leases	326	381
Sales	70,130	8,520
Sale of energy utility	19,480	45,640
Sale of water utility	7,435	1,591
Sale of sewerage utility	34	83
Sale of solid waste management utility	677	677
Sale of fuel gas utility	10,277	5,406
Other payment received in advance	15,352	5,488
<b>Total current payment received in advance</b>	<b>123,711</b>	<b>67,786</b>
<b>Total payment received in advance</b>	<b>127,841</b>	<b>72,157</b>

*Figures stated in millions of Colombian pesos*

## Note 29. Changes in liabilities due to financing activities

The reconciliation of liabilities due to financing activities is as follows:

Reconciliation of liabilities due to financing activities 2019	Initial balance	Cash flows	Changes other than cash		Other changes <sup>1</sup>	Total
			Foreign exchange	Changes in fair value		
Loans and borrowings (see note 21)	20,834,800	(140,692)	103,866	-	(141,969)	20,656,005
Lease liabilities (see note 23)	195,483	(40,883)	-	-	528,160	682,761
Pension bonds (see note 23)	643,188	(26,091)	-	-	33,720	650,817
Hedging instruments	(192,465)	156,514	-	51,155	(61,352)	(46,148)
Dividends or surpluses paid	42,207	(1,392,814)	-	-	1,395,497	44,890
Capital grants	26,540	154	-	-	(241)	26,453
Other financing flows	-	(16,708)	-	-	16,708	-
<b>Total liabilities from financing activities</b>	<b>21,549,754</b>	<b>(1,460,519)</b>	<b>103,866</b>	<b>51,155</b>	<b>1,753,815</b>	<b>22,014,778</b>

Reconciliation of liabilities due to financing activities 2018	Initial balance	Cash flows	Changes other than cash		Other changes <sup>1</sup>	Total
			Foreign exchange	Changes in fair value		
Loans and borrowings (see note 21)	16,958,723	3,179,749	280,935	-	415,393	20,834,800
Lease liabilities (see note 23)	196,491	(1,040)	-	-	33	195,483
Pension bonds (see note 23)	640,720	(34,798)	-	-	37,266	643,188
Hedging instruments	46,596	(77,241)	-	(163,086)	1,266	(192,465)
Dividends or surpluses paid	340,996	(1,629,893)	-	-	1,331,104	42,207
Capital grants	25,790	353	-	-	397	26,540
Other financing flows	-	195,939	-	-	(195,939)	-
<b>Total liabilities from financing activities</b>	<b>18,209,315</b>	<b>1,633,069</b>	<b>280,935</b>	<b>(163,086)</b>	<b>1,785,459</b>	<b>21,549,754</b>

<sup>1</sup> Includes interest paid during the year of \$1,612,421 (2018: \$1,268,260), which by policy is classified as operating activities in the statement of cash flows; variation in measurement at amortized cost of loans and receivables \$1,444,332 (2018: \$1,271,472); translation effect \$-82,614 (2018 \$110,875); origination of dividends and surplus \$1,395,497 (2018 \$1,331,104); and Other \$609,021 (2018 \$340,268).

## Note 30. Deferred regulatory accounts

The balance of deferred regulatory accounts at the date of presentation of the consolidated financial statements corresponds to the local regulatory framework applicable to the subsidiary Elektra Noreste S.A. - ENSA, established by the National Public Services Authority of Panama (ASEP). This entity is responsible for regulating and establishing the rates that the Company invoices to its customers. The Company maintains its accounting records in accordance with the uniform system of accounts established by ASEP for electric companies.

The regulated system under which the Company operates allows any excess or deficiency between the estimated cost of energy considered in the tariff and the actual cost incurred by the Company to be included as a compensatory adjustment, to be recovered from (or returned to) customers, at the next tariff review. Any excess in the cost of energy charged to customers is accrued as a credit to a deferred regulatory account in the Group's consolidated statement of financial position and carries a reduction in the next tariff review to be applied to customers. Similarly, any shortfall in the cost of energy charged to customers is accumulated as a debit balance in the deferred regulatory account in the Group's consolidated statement of financial position and leads to an increase in the next tariff review to be recovered from customers.

Deferred regulatory accounts with a debit balance represent probable future revenues associated with certain costs that are expected to be recovered from customers through the tariff process. Deferred

regulatory accounts with a credit balance represent probable future revenue reductions associated with amounts expected to be credited to customers through the tariff process.

The movement of Deferred regulatory accounts is as follows:

Regulatory accounts	Asset (Liability)	
	2019	2018
Initial balance	111,868	48,842
Profit or loss form the period	(139,997)	52,884
Foreign exchange rates/Discount rates effect	2,519	10,142
<b>Final balance</b>	<b>(25,610)</b>	<b>111,868</b>

*Figures stated in millions of Colombian pesos*

Balances associated with Regulatory deferral accounts in accordance with regulation must be recovered or returned in the following two semesters.

The movement of deferred tax associated with the regulatory accounts is as follows:

Deferred tax related to regulatory accounts	Asset (Liability)	
	2019	2018
Initial balance	(33,560)	(14,653)
Profit or loss form the period	41,988	(15,928)
Effect of changes in foreign exchange	(745)	(2,979)
<b>Final balance</b>	<b>7,683</b>	<b>(33,560)</b>

*Figures stated in millions of Colombian pesos*

Cash flows generated by the regulatory accounts amounted to \$-137,478 (2018: \$63,026), which, by Group policy, are classified as operating activities in the statement of cash flows.

## Note 31. Revenue

For presentation purposes, the Group breaks down its income from the services it provides according to the lines of business in which it participates and the way in which management analyses them. The detail of revenue is as follows:

Revenue	2019	2018
<b>Sales of goods</b>	24,222	18,266
<b>Rendering of services</b>		
Electricity generation service	4,043,982	3,804,344
Electricity transmission service	299,243	257,294
Electricity distribution service <sup>(1)</sup>	11,985,016	10,360,425
Inter-segments electricity elimination	(1,755,233)	(1,350,516)
Fuel gas service	860,675	847,081
Sewage service <sup>(2)</sup>	696,033	590,327
Water service <sup>(2)</sup>	1,188,428	1,083,065
Solid waste treatment service <sup>(3)</sup>	240,848	222,470
Insurance and reinsurance services	15,148	9,353
IT Services	389	339
Construction contracts	61,317	125,697
Other services	215,623	156,053
Refunds	(238,796)	(271,561)
<b>Total rendering of services</b>	<b>17,612,673</b>	<b>15,834,371</b>
Leases	111,824	83,110
Gain in sale of assets <sup>3</sup>	1,576	7,311
<b>Total</b>	<b>17,750,295</b>	<b>15,943,058</b>

Figures stated in millions of Colombian pesos

- (1) Revenue from the energy distribution service increased due to the application of Resolution 015 of 2018 and higher income from marketing due to higher unit costs and increased consumption.
- (2) Increase obeys higher discharges and consumption, users and tariffs.
- (3) Decrease due to the sale of land that the Group made to the subsidiary Promobiliaria S.A. for the development of a real estate project in 2018.

The Group recognises all its revenue from the satisfaction of performance obligations and most of its contracts with customers are for less than one year.

### Construction contracts

The Group recognised revenue from ordinary activities for asset construction agreements within the scope of IAS 11 - Construction contracts at the cut-off date of \$61,317 (2018: \$125,697).

The method applied to determine the stage of completion of past construction contracts is the proportion of contract costs incurred for work already completed to date in relation to the total estimated costs for the contract.

## Other contracts with customers

2019	Contract asset balance at the beginning of the period	Contract asset balance at the end of the period	Liability balance at the beginning of the period	Liability balance at the end of the period
Contract of uniform conditions for regulated utilities <sup>(1)</sup>	554,948	707,810	17,285	20,459
Non-regulated market - (NRM) or large customers <sup>(2)</sup>	136,800	126,680	34,642	10,098
Other contracts with customers	-	4	5,857	6,216
<b>Total</b>	<b>691,748</b>	<b>834,494</b>	<b>57,784</b>	<b>36,773</b>

Figures stated in millions of Colombian pesos

2018	Contract asset balance at the beginning of the period	Contract asset balance at the end of the period	Liability balance at the beginning of the period	Liability balance at the end of the period
Contract of uniform conditions for regulated utilities <sup>(1)</sup>	503,265	554,948	20,947	17,285
Non-regulated market - (NRM) or large customers <sup>(2)</sup>	115,837	136,800	25,575	34,642
Other contracts with customers	-	-	4,662	5,857
<b>Total</b>	<b>619,102</b>	<b>691,748</b>	<b>51,184</b>	<b>57,784</b>

Figures stated in millions of Colombian pesos

<sup>(1)</sup> The purpose of this contract is to define the uniform conditions by which Empresas Públicas de Medellín E.S.P., identified with TIN 890904996-1, hereinafter EPM, provides public residential utilities of water and/or sewage in exchange for a price in money, which will be fixed according to the current rates, and according to the use given to the service by the users, subscribers or owners of properties, hereinafter the USER, who by benefiting from the water and/or sewage utilities provided by EPM, accepts and abides by all the provisions defined herein.

<sup>(2)</sup> Resolution 131 of 23 December 1998 of the Energy and Gas Regulation Commission (CREG) establishes the conditions for the supply of energy and power to large consumers and indicates in Article 2 the power or energy limits for a user to contract for the supply of energy in the competitive market; The aforementioned resolution allows the conclusion of contracts with large consumers to establish by common agreement the prices for the supply of energy and power; the object of the contract is to supply energy and power to the consumer, as an unregulated user, to meet its own demand.

Another important contract is the XM representation contract, which is not disclosed since there are no balances in assets and liabilities.

In contracts with customers, no income was recognised during the period from performance obligations satisfied in previous periods.

For these contracts it is not possible to identify the outstanding value of unmet performance obligations considering that they are contracts without a termination date.

## Note 32. Other Income

The breakdown of other income is as follows:

Other income	2019	2018
Recoveries <sup>(1)</sup>	340,202	104,848
Compensation for asset damages <sup>(2)</sup>	78,295	-
Other revenue	58,889	60,099
Valuation of investment properties <sup>(3)</sup>	51,808	4,352
Commissions	33,730	32,448
Compensations	31,698	109,633
Benefit rights	7,313	7,855
Goods and services sales margin	2,754	2,094
Fees	2,253	2,185
Remainings	1,228	179
Government grants	1,023	2,091
Contracts for the management of public utilities	90	90
Investment property loans	16	-
Income on derecognition of right-of-use	16	-
Photocopies	4	4
<b>Total other income</b>	<b>609,319</b>	<b>325,878</b>

Figures stated in millions of Colombian pesos

- (1) Includes mainly recoveries from EPM Parent for provisions of \$88,084; labor lawsuits for \$75,019; contingent consideration Espiritu Santo for \$21,211, due to the modification of the estimated payment dates from 2020 to 2036; other recoveries for \$20,150, basically associated with the provision of the industry and commerce tax after the filing of the returns and recoveries for obligations that were extinguished for \$15,729.
- (2) Corresponds to the value of the assets of the Ituango hydroelectric project that were derecognised during 2018 due to the effects of the contingency (see note 4).
- (3) Increase obeys the valuation of some properties due to urban developments in neighbor sectors.

## Note 33. Costs of services rendered

The breakdown of costs of services rendered is as follows:

Costs of Services Rendered	2019	2018
Purchases on the stock exchange and/or in the short term	3,523,410	3,325,626
Purchases in block and/or long-term	2,485,111	2,226,705
Use of lines, networks and ducts	1,291,976	1,177,651
Personal Services	818,587	780,129
Depreciations	814,417	749,595
Orders and contracts for other services	667,938	672,645
Maintenance and repair orders and contracts	384,846	306,933
Cost of natural gas distribution and/or marketing	349,249	347,205
Materials and other operating costs	181,681	180,968
Licenses, contributions and royalties	156,973	152,397
Amortizations	155,773	135,739
Insurance	127,715	97,721
General	110,080	100,604
Consumption of direct inputs	109,537	83,222
Fees	91,206	93,493
Taxes and Fees	86,191	73,802
Amortization of right-of-use(1)	36,505	-
Other cost of public goods and utilities for sale	34,716	16,962
Commercial and financial management of the service	31,023	27,999
Utilities	26,462	24,116
Leases	19,795	59,762
Commercialized goods	18,202	17,140
Costs associated with transactions in the wholesale market	10,886	9,534
Exhaustion	9,426	9,322
Cost for connection	8,879	18,540
Liquefied natural gas	4,980	2,172
Impairment of property, plant and equipment	2,243	-
<b>Total costs of Services Rendered</b>	<b>11,557,807</b>	<b>10,689,982</b>

Figures stated in millions of Colombian pesos

<sup>(1)</sup> Corresponds to finance lease contracts with the implementation of IFRS 16 - Leases, from January 2019.

## Note 34. Administrative expenses and portfolio impairment

### 34.1. Administrative expenses

The breakdown of administrative expenses is as follows:



Administrative expenses	2019	2018
<b>Personnel expenses</b>		
Payroll expenses	450,255	395,297
Social security expenses	120,928	98,639
Pension expenses	49,961	44,796
Other post-employment benefit plans different from pension	5,334	5,237
Other long-term benefits	7,464	4,894
Termination benefits	(732)	1,918
Benefits in interest rates to employees	12,599	8,054
<b>Total gastos de personal</b>	<b>645,809</b>	<b>558,835</b>
<b>General expenses</b>		
Taxes, contributions and fees	187,662	188,053
Commissions, fees and services	135,020	108,123
Depreciation of property, plant and equipment	70,102	61,022
Provision for contingencies(1)	69,591	134,381
Maintenance	63,726	56,314
Provision for decommissioning, removal or rehabilitation(2)	61,450	31,549
Intangibles	43,396	36,691
Other miscellaneous provisions(3)	38,397	318,874
Amortization of intangibles	35,444	25,740
Other general expenses	25,144	24,162
Advertising and publicity	20,294	14,355
Studies and projects	19,921	15,420
General insurance	19,864	15,342
surveillance and private security	19,045	17,612
Amortization of right-of-use assets	18,432	-
Provision of guarantees	15,757	-
Christmas Lighting	12,945	14,547
Services of cleaning, cafeteria, restaurant and laundry	11,482	10,591
Promotion and publications	11,331	9,080
Communications and transport	9,315	9,277
Licenses and safe conduct	8,725	6,690
Utilities	6,570	12,979
Leasing	6,098	10,492
Legal expenses	5,568	3,727
Apprenticeship contracts	5,156	5,070
Materials and supplies	4,690	4,031
Printed matter, publications, subscriptions and affiliations	3,970	4,157
Photocopies	2,735	1,754
Information processing	2,612	3,519
Fuels and lubricants	2,549	2,131
Insurance and reinsurance provision	2,455	-
Management contracts	2,101	2,004
Organization of events	1,700	1,443
Per diem and travel expenses	1,690	1,623
Toilet, laundry and cafeteria equipment	1,530	1,616
Others	4,516	9,494
<b>Total general expenses</b>	<b>950,983</b>	<b>1,161,863</b>
<b>Total</b>	<b>1,596,792</b>	<b>1,720,698</b>

Figures stated in millions of Colombian pesos

- (1) During 2018, higher provisions were recorded due to the incident at the Ituango Hydroelectric Project, a situation that was controlled in 2019.
- (2) Corresponds to reclassification received from the account other miscellaneous provisions.
- (3) Decrease was explained by the lower provisions for the contingency of the Ituango project registered in 2018: \$137,318 for the guarantee that covers the construction and operation of the Pescadero Ituango Hydroelectric Plant, \$101,797 for the Ituango connection, \$42,917 to continue attending to evacuees due to the contingency of the project and \$31,388 for the environmental contingency.

### 34.2. Loss due to portfolio impairment

The breakdown of net impairment loss of receivables at the date of the reporting period is as follows:

Impairment of receivables	2019	2018
Reversal on impairment of receivable	152,542	53,153
Impairment of receivables	(230,343)	(122,614)
<b>Total impairment loss of receivable</b>	<b>(77,801)</b>	<b>(69,461)</b>

*Figures stated in millions of Colombian pesos*

## Note 35. Other Expenses

The breakdown of other expenses is as follows:

Other expenses	2019	2018
Loss on asset disposal <sup>(1)</sup>	99,445	102,781
Other ordinary expenses <sup>(2)</sup>	37,101	62,148
Contributions to non-corporate entities	14,947	15,025
Arbitral awards and extrajudicial conciliations <sup>(3)</sup>	3,294	12,360
Taxes assumed	1,667	3
Court rulings	484	371
Loss due to changes in fair value in investment property	291	479
Donations	171	318
Loss on sale of assets	53	4,162
Loss on derecognition of right-of-use	14	-
<b>Total</b>	<b>157,467</b>	<b>197,647</b>

*Figures stated in millions of Colombian pesos*

- (1) Includes decommissioning of asset for the contingency of the Ituango Hydroelectric project.
- (2) The decrease obeys lower expenses executed in 2019 for the attention of the community affected by the contingency of the Ituango project.
- (3) In 2018, arbitration awards with Rio Piedras for \$10,316 are included.

## Note 36. Finance income and expenses

### 36.1 Finance income

The breakdown of finance income is as follows:

Finance income	2019	2018
<b>Interest revenue:</b>		
Bank deposits	40,022	38,023
Interest income from financial assets at amortized cost	46	35
Interests by debtors and arrears	207,976	176,293
Inflation indexation gains	11	13
Gains from valuation of financial instruments at fair value <sup>(1)</sup>	86,702	26,339
Gains from valuation of financial instruments at amortized cost	111	1,989
Gains from trust rights	32,212	23,750
Other finance income	3,757	4,394
<b>Total finance income</b>	<b>370,837</b>	<b>270,836</b>

Figures stated in millions of Colombian pesos

<sup>(1)</sup> Corresponds to the valuation of the temporary investment portfolio. The variation with respect to the previous period obeys the increase in the amount invested in said portfolio.

### 36.2 Finance expenses

The breakdown of finance expenses is as follows:

Gastos financieros	2019	2018
<b>Interest expenses:</b>		
Interests for lease liabilities <sup>(1)</sup>	58,618	37,795
Other interest expenses	34,126	62,262
<b>Total interests</b>	<b>92,744</b>	<b>100,057</b>
Short-term internal public credit operations	1,005	673
Long-term internal public credit operations	230,612	208,660
External long-term public credit operations <sup>(2)</sup>	615,810	491,815
Short-term internal financing operations <sup>(2)</sup>	56,775	6,378
Long-term internal financing operations	72,336	72,139
Long-term external financing operations	59,646	49,700
Total interest expense on other financial liabilities not measured at fair value through profit or loss	2,885	547
Fees other than the amounts included when determining the effective interest rate	7,534	8,433
Other finance expenses	150,935	111,391
<b>Total finance expenses</b>	<b>1,290,282</b>	<b>1,049,793</b>

Figures stated in millions of Colombian pesos

<sup>(1)</sup> Increase associated with the implementation of IFRS 16 - Leases, from January 2019.

<sup>(2)</sup> Increase related to new loan disbursements received in the period.

## Note 37. Net foreign exchange difference

The effect of transactions in foreign currency is the following:

Foreign exchange difference, net	2019	2018
<b>Foreign exchange difference gains</b>		
<u>Own position</u>		
For goods and services and other	34,219	5,376
For liquidity	15,038	62,336
Receivables	292,688	119,608
Other adjustments in foreign exchange difference	50,198	13,686
<u>Financial</u>		
Gross profit	23,748	43,000
<b>Total foreign exchange difference gains</b>	<b>415,891</b>	<b>244,006</b>
<b>Foreign exchange difference expenses</b>		
<u>Posición propia</u>		
For goods and services and other	(13,503)	(15,415)
For liquidity	(25,250)	(7,358)
Receivables	(254,053)	(76,298)
Other adjustments in foreign exchange difference	(51,354)	(87,684)
<u>Financial</u>		
Gross expenses	(127,614)	(321,368)
<b>Total foreign exchange difference expenses</b>	<b>(471,774)</b>	<b>(508,123)</b>
<b>Foreign exchange difference, net</b>	<b>(55,883)</b>	<b>(264,117)</b>

Figures stated in millions of Colombian pesos

The rates used for the conversion of foreign currency in the consolidated financial statements are:

Currency	ISO Code	Exchange to USD as of December 31		Exchange rate as of December 31		Average exchange rate	
		2019	2018	2019	2018	2019	2018
United States Dollar	USD	-	-	3,277.14	3,249.75	3,378.05	3,218.55
Guatemalan quetzal	GTQ	7.70	7.74	425.67	420.03	439.36	416.37
Mexican peso	MXN	18.89	19.69	173.52	165.01	176.86	160.23
Chilean peso	CLP	769.88	694.00	4.26	4.68	4.39	4.70

## Note 38. Gain on equity investment

Gain on equity investment is as follows:

Gain on equity investment	2019	2018
Dividends and participations <sup>(1)</sup>	57,262	68,209
Profit or loss on sale of equity investments, net <sup>(2)</sup>	(47,535)	(3,042)
<b>Total gain on equity investment</b>	<b>9,727</b>	<b>65,167</b>

*Figures stated in millions of Colombian pesos*

- (1) Includes dividends of investments classified in Financial Instruments (See note 13. Other financial assets).
- (2) Includes in 2019 a loss of \$47,620 generated in EPM Parent for the sale of 14,881,134 ISA shares, originated by the difference between the sale price and the valuation of the share on the day of the transaction, (\$15,700 pesos/share - \$18,900 pesos/share = \$-3,200 pesos/share). In 2018, this corresponds to a loss on the sale of the equity investment that was held in Ecosistemas de Uruapan S.A. de C.V.

## Note 39. Income tax

### 39.1 Tax Provisions

Tax Provisions applicable and in effect, establish the following:

- The nominal income tax rate is 33% for EPM and its subsidiaries in Colombia.
- For Guatemalan subsidiaries, the tax is determined by the Regime on Profits from Profitable Activities consisting of applying the rate of 25% on profits; or by the Simplified Optional Regime on Income from Profitable Activities, consisting of applying the tax rate on monthly taxed income. From 2014 onwards, the tax rate is 5% on the first Q 30,000 and 7% on the surplus; likewise, the tax legislation contemplates a Regime on Capital Income which establishes a rate of 10% and a tax of 5% on the distribution of dividends and profits to both resident and non-resident shareholders.
- For subsidiaries in El Salvador, 30% for companies with taxable income over US\$150,000 and 25% for those that do not exceed that ceiling; for subsidiaries in Panama and Mexico, a tax rate of 30%; and for subsidiaries in Chile, the nominal rate is 27% for 2018 and subsequent periods.
- Public utilities domiciled in Colombia are excluded from determining income tax by the presumptive income system calculated from fiscal liquid assets of the immediately preceding year.
- During the taxable period, the Congress of the Republic of Colombia approved Law 2010 of 2019 reiterating the income tax rate, which had been modified by Law 1943 of 2018 that was declared unconstitutional by the Constitutional Court, which generated a significant impact on the recovery of deferred tax from EPM and its national subsidiaries for the period 2018.
- The Holding company of the EPM Group uses the tax benefit called "Special deduction for investment in real productive fixed assets", equivalent to 40% of the investments made during the taxable period. This benefit is in force for the EPM Generation segment on the occasion of the legal stability contract signed with the National Government in 2008.

### 39.2 Effective rate Reconciliation

Reconciliation between the applicable tax rate and the effective rate and the composition of income tax expense for the periods 2019 and 2018 is as follows:

Income tax and complementary	2019	%	2018	%
<b>Profit before tax</b>	4,015,939		2,595,223	
<b>Nominal income rate</b>		33%		37%
<b>Income tax nominal rate</b>	1,325,260		960,233	
Effects of changes in tax rates	-	0%	(217,950)	-8%
Elimination in consolidated results	(138,403)	-3%	14,781	1%
Tax effect of tax rates by foreign subsidiaries	(196,484)	-5%	(243,500)	-9%
<b>Effect of permanent tax differences:</b>	<b>(97,491)</b>	<b>-2%</b>	<b>(125,849)</b>	<b>-5%</b>
Dividend Income	249,911	6%	145,018	6%
Tax-only income	196,078	5%	28,751	1%
Special deduction refund	118,768	3%	11,597	0%
Non-deductible provisions	48,242	1%	181,135	7%
Untaxed dividends	(151,361)	-4%	(117,228)	-5%
Compensation for consequential damage	(174,205)	-4%	(33,423)	-1%
Exempt income	(141,713)	-4%	(17,740)	-1%
Special deduction for productive real assets	(196,923)	-5%	(292,481)	-11%
Net result other permanent differences	33,345	1%	67,442	3%
Rate difference adjustment (current tax/deferred)	(79,633)	-2%	(98,919)	-4%
Tax discounts	46,173	1%	5,628	0%
Occasional Earnings	3,120	0%	548	0%
Income adjustments from previous years	(39,630)	-1%	(172,029)	-7%
<b>Income tax at effective rate</b>	<b>810,199</b>	<b>20%</b>	<b>210,606</b>	<b>8%</b>
<b>Details of current and deferred expenditure</b>				
Current tax	1,043,701	26%	574,890	22%
Deferred tax	(233,502)	-6%	(364,285)	-14%
<b>Income Tax</b>	<b>810,199</b>	<b>20%</b>	<b>210,606</b>	<b>8%</b>

Figures stated in millions of Colombian pesos

### 39.3 Income tax recognised through profit or loss

The most significant components of income tax expense at the cut-off date are:

Income tax	2019	2018
<b>Current income tax</b>		
Expenses due to current income tax	1,083,331	745,033
Adjustments recognized in the current period related to the current income tax of previous periods	(39,630)	(172,029)
Net expense for current income tax, SIP, reserves and rectifications		-
Other current income taxes		1,886
<b>Total Current income tax</b>	<b>1,043,701</b>	<b>574,890</b>
<b>Deferred tax</b>		
Net expenses due to deferred tax related to the origin and reversal of temporary differences	(232,202)	(123,162)
Net expenses (revenue) due to deferred tax related to changes in income tax or regulations	(1,364)	(234,860)
Tax benefits from tax losses, tax credits or temporary differences used in the period	-	1,782
derecognition in accounts (or reversal in pre-recognized accounts) asset due to deferred tax	-	(6,417)
Net expense (income) for deferred tax related to changes in accounting policy/errors	-	(611)
Other deferred taxes	63	(1,016)
<b>Total deferred tax</b>	<b>(233,502)</b>	<b>(364,284)</b>
<b>Income tax</b>	<b>810,199</b>	<b>210,606</b>

Figures stated in millions of Colombian pesos

- <sup>(1)</sup> Deferred tax expense (income) related to changes in tax rates for 2019 and 2018 corresponds to changes in the rate for determining deferred tax due to the amendment introduced by Law 1943 of December 28, 2018 (in force during 2019, declared unconstitutional by Constitutional Court Ruling C-481 of 2019), rates ratified by Law 2010 of December 27, 2019 applicable as of January 2019.

The rates used for the determination of deferred tax are:

37% for 2018 (33% income and 4% surcharge), which varied from the previous year's 40%, this for short-term items that are reversed during 2018. For generation, a rate of 37% is used considering the legal stability contract signed with the National Government.

33% for 2019, which varied compared to the used the previous year of 37%, this for medium-term items that revert during 2019, as a result of the elimination of the surcharge.

32% for 2020, which varied from the previous year's 33% for long-term items that revert during 2020.

31% for 2021, which varied from the previous year's 32% for long-term items that revert during 2021.

30% for 2022 and subsequent periods, which varied from the previous year's figure of 31% for long-term items that reverse during 2022 and subsequent periods.

For property, plant and equipment, the current rate was used considering the year in which the difference is expected to be reversed, taking as a reference the remaining useful life of each asset.

For assets which profit is expected to be realized from occasional earnings a rate of 10% is used.

27% for temporary differences generated in subsidiaries in Chile, 30% for subsidiaries in Panama and Mexico and 25% for other subsidiaries in Central America.

The current income tax expense is impacted for 2019 mainly by the higher profits obtained in the period, in the same way the increase is justified by the restitution of the benefit of the special deduction of real productive fixed assets and that is originated in the removal of assets from the Ituango Hydroelectric Project, as well as the rejection of costs and deductions associated with the contingency of this project.

For 2018, mainly due to the effect of recoveries from previous income tax and supplementary tax periods, since EPM received during that taxable period refunds from the tax authority for an amount close to \$440,000 million, for balances in favor and recoveries in income tax and supplementary tax in application of Article 66 of Law 1739 of 2014, equity tax for the 2011 period under the legal stability agreement, and

wealth tax due to decrease in liquid equity and consequently decrease in the taxable base subject to this tax.

Regarding the amounts not recognised as a refund by the National Tax and Customs Administration for the 2011 taxable period, EPM, in exercise of the control of nullity and restoration of rights, filed a claim before the Administrative Court of Antioquia against the tax authority, which amounts to approximately \$258,000 million.

The rates used to determine deferred tax for subsidiaries in Colombia are:

Year	2019	2020	2021	2022
Income	33%	32%	31%	30%
<b>Total tariff</b>	<b>33%</b>	<b>32%</b>	<b>31%</b>	<b>30%</b>

EPM's electricity generation segment has an income and supplementary tax rate of 33%, stabilized for 20 years under the legal stability agreement EJ-04 of March 31, 2008, as amended by OTRO SI EJ-01 of June 4, 2010.

#### 39.4 Temporary differences with no effect in deferred tax

Deductible temporary differences and unused tax losses and credits, for which the Group has not recognised deferred tax assets, are as follows:

Description	2019	2018
More than one year and up to five years	672	179
More than five years	3,367	47
No time limit	5,341	5,342
<b>Unused tax losses</b>	<b>9,380</b>	<b>5,568</b>
No time limit	161,653	59
<b>Unused tax credits</b>	<b>161,653</b>	<b>59</b>
More than one year and up to five years	71	2,229
More than five years	2,697	-
<b>Surplus of presumptive income over ordinary liquid income</b>	<b>2,768</b>	<b>2,229</b>
<b>Total</b>	<b>173,801</b>	<b>7,856</b>

*Figures stated in millions of Colombian pesos*

The unused deductible temporary differences and losses, tax credits and surplus of presumptive income over ordinary liquid income, correspond to unused tax losses by Aguas de Malambo S.A. E.S.P. of \$7,298 million (2018 \$5,521), EPM Inversiones S.A. of \$1,373 (2018 \$0), Hidroecológica del Teribe S.A. of \$672 (2018 \$0) EV Alianza Energética S.A. for \$37 (2018 \$47), unused tax credits by Empresas Públicas de Medellín E.S.P. of \$161,519 million (2018 \$-), Aguas de Malambo S.A. E.S.P. of \$134 million (2018 \$59) and unused presumptive income over ordinary liquid income by EPM Inversiones S.A. of \$2,698 million (2018 \$2,222), EV Alianza Energética S.A. of Ch\$7 (2018 \$7), Aguas de Malambo S.A. E.S.P. of \$64 million (2018 \$0).



The value of current income tax assets or liabilities is the following:

	2019	2018
<b>Current income tax asset or liability</b>		
<b>Total non-current income tax liability</b>		
Income tax <sup>(1)</sup>	(33,701)	(33,701)
<b>Total income tax liability</b>	<b>(33,701)</b>	<b>(33,701)</b>
<b>Total current income tax liability</b>		
Income Tax	(363,584)	(91,264)
<b>Total income tax assets</b>	<b>169,185</b>	<b>118,400</b>
Balance in favor of rent	169,185	118,400
<b>Total income tax assets (or liabilities)</b>	<b>(228,100)</b>	<b>(6,565)</b>

*Figures stated in millions of Colombian pesos*

- <sup>(1)</sup> Corresponds to the tax liabilities for works of EPM and EDEQ, which represents the possibility for companies to partially pay income and complementary taxes by financing and executing public works of social importance in the areas most affected by the conflict - ZOMAC - instead of transferring the resources to the tax authority DIAN. This possibility arose with Law 1819 of 2016 and was regulated with Decree 1915 of 2017.

This liability is backed by a commercial trust contract which is being executed as the works under this program are built.

### 39.5 Income tax recognised in other comprehensive income

The detail of the tax effect corresponding to each component of "other comprehensive income" in the consolidated statement of comprehensive income is as follows:

Accumulated other comprehensive income	2019			2018		
	Bruto	Efecto impositivo	Neto	Bruto	Efecto impositivo	Neto
Reclassifications of property, plant and equipment to investment property	13,438	(1,204)	12,234	13,439	(1,643)	11,796
New measurements of defined benefit plans	(115,483)	38,338	(77,145)	(47,279)	18,898	(28,381)
Equity investments measured at fair value through equity	2,796,497	(2,092)	2,794,405	2,300,129	(131,825)	2,168,304
Share of other comprehensive income of associates and joint ventures	(3,914)	-	(3,914)	(3,640)	-	(3,640)
Cash flow hedges	8,421	(30,005)	(21,584)	(21,581)	(48,922)	(70,503)
Translation of financial statements of foreign operations	600,765	-	600,765	817,051	-	817,051
<b>Total</b>	<b>3,299,724</b>	<b>5,037</b>	<b>3,304,761</b>	<b>3,058,119</b>	<b>(163,492)</b>	<b>2,894,627</b>

*Figures stated in millions of Colombian pesos*

### 39.6 Deferred tax

The breakdown of deferred tax is as follows:

Deferred tax	2019	2018
Deferred tax asset	220,026	249,700
Deferred tax liability	(2,243,327)	(2,556,008)
<b>Total deferred tax, net</b>	<b>(2,023,301)</b>	<b>(2,629,024)</b>

Figures stated in millions of Colombian pesos

#### 39.6.1 Deferred tax assets

Deferred tax assets	Initial balance	Assets classified as held for sale	Changes included in the OCI	Net changes in profit or loss	Translation effect adjustments	Effect of loss of control in subsidiary	Others	Valuation to equity	Foreign exchange translation effect	Difference in movements	Final Balance
<b>Assets</b>	<b>999,190</b>	<b>-</b>	<b>2,217</b>	<b>166,318</b>	<b>132</b>	<b>(116,626)</b>	<b>157,809</b>	<b>587</b>	<b>(6,402)</b>	<b>98</b>	<b>1,203,323</b>
Property, plant and equipment	705,103	4	-	(29,205)	1	(116,332)	1,543	587	4,369	1	566,071
Intangibles	12,952	(4)	-	(7,192)	-	(294)	1	-	278	(2)	5,739
Investments and derivative instruments	12,114	-	1,836	(1,133)	-	-	217	-	526	4	13,564
Receivables	181,980	-	-	1,570	-	-	9,749	-	841	(5)	194,135
Cash and cash equivalents	-	-	-	1	-	-	-	-	-	-	1
Inventories	6,636	-	-	(1,362)	131	-	766	-	(0)	(5)	6,166
Other assets	80,405	-	381	131,928	-	-	145,533	-	(12,416)	105	345,936
Right-of-use deferred tax assets	-	-	-	71,711	-	-	-	-	-	-	71,711
<b>Liabilities</b>	<b>(749,490)</b>	<b>1</b>	<b>2,189</b>	<b>(77,441)</b>	<b>(8,555)</b>	<b>170</b>	<b>(158,546)</b>	<b>-</b>	<b>8,427</b>	<b>(51)</b>	<b>(983,296)</b>
Loans and borrowings	288,964	4	-	(57,397)	(8,555)	104	(36)	-	(5,454)	4	217,634
Payables	24,984	-	-	7,539	-	-	1	-	40	2	32,566
Employee benefits	233,137	-	17,887	8,635	-	-	(664)	-	0	5	259,000
Derivatives	223	-	-	(220)	-	-	-	-	-	-	3
Provisions	190,871	(3)	-	(13,257)	-	(21)	18,113	-	(1,862)	2	193,843
Other liabilities	108,586	-	-	(60,191)	-	-	21	-	657	-	49,073
Effect by elimination vs. asset	(1,596,255)	0	(15,698)	37,450	-	87	(175,981)	-	15,045	(64)	(1,735,416)
<b>Total deferred tax assets</b>	<b>249,700</b>	<b>1</b>	<b>4,406</b>	<b>88,877</b>	<b>(8,423)</b>	<b>(116,456)</b>	<b>(737)</b>	<b>587</b>	<b>2,025</b>	<b>47</b>	<b>220,026</b>

Figures stated in millions of Colombian pesos

### 39.6.2 Deferred income liability

Deferred tax liability	Initial balance	Assets classified as held for sale	Changes included in the OCI	Net changes in profit or loss	Translation effect adjustments	Effect of loss of control in subsidiary	Others	Valuation to equity	Foreign exchange translation effect	Difference in movements	Final Balance
<b>Assets</b>	<b>3,593,185</b>	<b>(1)</b>	<b>(98,077)</b>	<b>(157,559)</b>	<b>-</b>	<b>(87)</b>	<b>221,175</b>	<b>(6,370)</b>	<b>2,010</b>	<b>116</b>	<b>3,554,392</b>
Property, plant and equipment	2,823,081	(4)	-	389,617	-	(292)	150,827	(6,370)	1,961	-	3,358,820
Intangibles	34,545	3	-	(19,448)	-	205	66,045	-	(4,806)	(1)	76,543
Investment property	1,401	-	-	10,886	-	-	(1)	-	-	4	12,290
Investments and derivative instruments	111,178	-	(98,077)	(99,375)	-	-	26,458	-	10	-	(59,806)
Receivables	570,257	-	-	(479,874)	-	-	1,154	-	5,060	7	96,604
Inventories	1,364	-	-	(101)	-	-	(230)	-	(22)	1	1,012
Other assets	51,359	-	-	(8,949)	-	-	(23,078)	-	(193)	105	19,244
Right-of-use	-	-	-	49,685	-	-	-	-	-	-	49,685
<b>Liabilities</b>	<b>(1,037,177)</b>	<b>1</b>	<b>(66,495)</b>	<b>12,934</b>	<b>44</b>	<b>87</b>	<b>(218,787)</b>	<b>-</b>	<b>(1,588)</b>	<b>(84)</b>	<b>(1,311,065)</b>
Loans and borrowings	27,421	-	-	39,169	44	-	(341)	-	119	(4)	66,408
Payables	96,572	-	-	(49,922)	-	-	765	-	2	(5)	47,412
Employee benefits	175,348	-	(1,650)	(6,150)	-	-	(1,180)	-	(35)	-	166,333
Derivatives	59,599	-	(49,147)	(10,171)	-	-	1	-	45	(8)	319
Provisions	3,014	-	-	3,474	-	-	(4)	-	(7)	-	6,477
Other liabilities	197,124	-	-	(947)	-	-	(42,047)	-	(16,727)	(3)	137,400
Effect by elimination vs. liability	(1,596,255)	1	(15,698)	37,481	-	87	(175,981)	-	15,015	(64)	(1,735,414)
<b>Total deferred tax liabilities</b>	<b>2,556,008</b>	<b>-</b>	<b>(164,572)</b>	<b>(144,625)</b>	<b>44</b>	<b>-</b>	<b>2,388</b>	<b>(6,370)</b>	<b>422</b>	<b>32</b>	<b>2,243,327</b>

Figures stated in millions of Colombian pesos

Significant variations in deferred tax assets and liabilities are mainly generated by the application of the new income tax rates introduced by Article 80 of Law 1943 of 2018 (in force during 2019, declared unconstitutional by Ruling C-481 of 2019 of the Constitutional Court), rates ratified by Law 2010 of 27 December 2019, which resulted in an income tax recovery; to the extent that the deferred tax on temporary differences as of 2017 was calculated at a higher income rate based on the rates in force under Law 1819 of 2016, in accordance with paragraph 47 of IAS 12.

Another significant item is the unrealized exchange difference resulting from the application of the exchange rate at the end of the reporting period for accounting purposes, which when compared to the exchange rate established by the tax standard, generates a higher deductible temporary difference than the one reported in the calculation of the deferred tax from the previous year, i.e. the exchange difference of the debt causes the accounting base of the financial liability to be higher than its tax base.

### 39.6.3 Temporary differences

The most significant concepts on which Temporary Differences were presented are the following:

In assets, the greatest impact arises from temporary differences in property, plant and equipment by virtue of asset purchase and sale transactions between EPM Group companies, which imply the recognition of unrealized accounting profits in the Group, on which individual companies must pay taxes, and from the valuation at amortized cost of long-term receivables. In trade receivables, this corresponds to the portfolio provisions due to the difference in the depreciation of the portfolio provision under the tax standard and the portfolio impairment under the accounting standard with the expected loss method; additionally, there are temporary differences due to the effect of the valuation at amortized cost of short-term loans to economic associates.

Regarding liabilities, the items that impact the calculation of deferred taxes are, for the most part, the settlement of the provision corresponding to installments of pension bonds, the actuarial calculation of pensions and the pension commutation of EADE, the amortization of the actuarial calculation of Emvarias' pensions, and the loans and borrowings from the valuation at amortized cost of bonds, securities issued, and short-term loans and borrowings. Differently, the temporary differences in the liabilities for long-term employee benefits such as retirement pensions, installments of pension bonds and actuarial calculation of retroactive severance payments and interest on severance payments and the unrealized exchange difference of payables.

No deferred tax was generated on items that have no future tax consequences, such as tax liabilities and finance income generated on the plan assets of, EPM, CHEC and Emvarias as they are exempt income in accordance with Article 235-2, paragraph 7 of the Tax Code.

Other circumstances that affect the determination of deferred tax in the consolidated financial statements are related to the management of the investment portfolio in ISA, Parque Eólico Los Cururos and the business reorganisation process that begun at the end of 2019 with the merger by absorption of the subsidiary Empresas Públicas de Rionegro S.A.S E.S.P. -EPRIO-. These operations have a direct impact on the calculation of deferred tax, since between EPM, Cururos and EPRIO there were reciprocal operations for the purchase and sale of assets and valuations at amortized cost for loans between related parties; with the management of the investment portfolio, the reciprocal operations are eliminated, assets are realized and liabilities are settled; with their corresponding effect on deferred tax. In addition, in the Aguas Claras wastewater treatment plant operating contract, the valuation of the account receivable recorded by Aguas Nacionales compared to the valuation made by EPM for the finance lease under accounting standards is asymmetrical as they use different financial assumptions and accounting bases.

Temporary differences on which no deferred tax was generated were, among others, for the investments in subsidiaries, associates and joint ventures, in accordance with paragraph 39 of IAS 12; also, in the items without future tax consequences, such as tax liabilities and plan assets, of EPM, CHEC and Emvarias because they correspond to items except of income tax.

The approval of dividends in the EPM Group after the date of presentation and before the financial statements were authorized for publication, does not generate income tax consequences as is the policy of national subsidiaries to distribute only non-taxed profits and reserves. Tax effects that in the income tax could be generated by dividends declared by foreign subsidiaries are eliminated with the entry into force of article 77 of Law 2010 of 2019, since these distributions are considered income exempt from capital in application of the Colombian Holding Companies (CHC) regime.

Finally, the devaluation effect that the Colombian currency has experienced during the last taxable period, close to 0.84%, generates a substantial increase in the accounting value of liabilities and payables in foreign currency, while its continuous stable tax base and its effects are only evident at the time of settlement or partial payment of the obligations, based on the difference in exchange effectively made, as provided by articles 269 and 288 of the Tax Code. The above implies a decrease in net deferred tax.

## New regulations for subsidiaries in Colombia

### Ley de Financiamiento Colombia (Financing Law Colombia)

During 2019, Law 1943 of 2018 "By which financing rules are issued for the reestablishment of the balancing of the national budget and other provisions", was the subject of lawsuits filed with the Constitutional Court, seeking a declaration of unconstitutionality due to procedural defects in its formation.

Thus, through Ruling C - 481 of 16 October 2019, the Constitutional Court accepted the claims of one of the lawsuits and declared that the articles contained in the financing law are unconstitutional, stating: *"THIRD. TO PROVIDE that (i) the declaration of unconstitutionality provided for in the second resolution shall take effect as from the first (1st) of January of two thousand and twenty (2020), so that Congress, within its own power to configure it, may issue the regime that ratifies, repeals, modifies or subrogates the contents of Law 1943 of 2018; (ii) the effects of the present ruling shall only be produced towards the future and, consequently, in no case shall they affect the consolidated legal situations"*. Thus, the rules contained in Law 1943 of 2018, remain in force during the taxable period 2019, since the ruling of the Constitutional Court was made with deferred effect, that is, maintaining the validity of the law until 31 December 2019.

According to the above, the Congress of the Republic had a limited term to issue a regime to ratify, repeal, modify or subrogate the contents of the law that was declared unconstitutional.

### Ley de Crecimiento Económico 2019 Colombia (Economic Growth Act 2019 Colombia)

During the last quarter of 2019, the National Government submitted to Congress a bill on economic growth, in order to comply with the Constitutional Court's ruling.

Under this scenario and after exhausting the stages required by the Colombian legal system for the creation of the law, on 27 December 2019, Law 2010 of 2019 was passed *"By means of which regulations are adopted for the promotion of economic growth, employment, investment, the strengthening of public finances and the progressiveness, equity and efficiency of the tax system, in accordance with the objectives that Law 1943 of 2018 promoted on this matter, and other provisions are issued"*.

Thus, among the main modifications, we can highlight:

#### General rate of income and supplementary taxes:

The income and supplementary tax rate will have the following modification:

2020:	Thirty-two percent (32%)
2021:	Thirty-one percent (31%)
2022 onwards:	Thirty percent (30%)

#### Presumptive Income

Will experience a progressive elimination as follows:

2019:	1.5%
2020:	0.5%
2021 onwards:	0%

Exemption in the determination of presumptive income for home utilities is maintained.

#### Sales tax (VAT)

The general rate of 19% is conserved.

The 5% rate is maintained for electric vehicles and their components, parts and accessories, as well as for the components and spare parts of the natural gas vehicle plan.

The VAT rule of Article 192 of Law 1819 of 2016 remains, according to which, the VAT rate of contracts in which a public entity is a contracting party will be the one corresponding to the date of the resolution or awarding act, or subscription of the respective contract, the rate is increased once they are added.

#### Other elements

- Tax deductions on income tax is kept as on VAT paid in the acquisition, import, construction and forming of real productive fixed assets, including the required services to put the good in use conditions, and those assets acquired through leasing.
- The possibility of taking 50% of the industry and commerce tax paid as a tax discount is retained. It is estimated in accordance with the growth law that from the year 2022 this discount will be 100%.
- The tax on dividends received by national companies continues in effect to the general rate of 7.5% by way of withholding tax on income, that will be transferable and imputable to the resident natural person or investor resident abroad.
- The sale of electricity generated from wind energy, biomass or agricultural waste, solar, geothermal or sea energy by electricity generating companies, as defined in Law 1715 of 2014 and Decree 2755 of 2003, will continue to be exempt of income tax for a period of 15 years as from 2017, as defined by Law 1715 of 2014 and Decree 2755 of 2003.
- The Colombian Holding Companies (CHC) framework is ratified as an instrument to promote foreign investment in the country.
- The requirements to access the tax benefits through the figure of Mega Investments are updated with the possibility of accessing a tax stability regime.
- The amendments made by Law 1943 of 2018 to the sub-capitalisation rule in Article 118-1 of the Tax Code remain in force, limiting the deductibility of interest paid when there is over-indebtedness, specifying that such limitations only apply to debts incurred between economic associates.

## Note 40. Discontinued operations

On 16 September 2019, the EPM Group announced the signing of a share purchase agreement with AES Gener S.A. and its subsidiary Norgener Renovables SpA to dispose of 100% of the shares it holds in Parque Eólico Los Cururos SpA. and EPM Transmisión Chile S.A., as part of the sale plan promoted by the Group to meet the liquidity requirements arising from the contingency in the Ituango Hydroelectric Project.

As of 30 September 2019, the operations of Parque Eólico Los Cururos SpA. and EPM Transmisión Chile S.A. were classified as discontinued operations and are presented in the generation and transmission segments, respectively.

The detail, by function, of the income (loss) for the period from discontinued operations net of tax in the consolidated statement of comprehensive income and the net cash flows in the consolidated statement of cash flows, corresponding to the subsidiaries Parque Eólico Los Cururos SpA. and EPM Transmisión Chile S.A., is as follows:

Discontinued operations	2019	2018
Income <sup>(1)</sup>	70,196	51,517
Cost of services rendered	(16,837)	(43,992)
Expenses	(4,877)	(3,781)
Other income	168	890
Other expenses	(22)	(1,880)
<b>Income from discontinued operations before taxes</b>	<b>48,628</b>	<b>2,754</b>
Income tax associated with the profit of discontinued operations	(383)	(6,788)
<b>Income (loss) from discontinued operations</b>	<b>48,245</b>	<b>(4,034)</b>

Figures stated in millions of Colombian pesos

- <sup>(1)</sup> In 2019 includes \$27,148 for realization of capitalized interest and 8,222 for reclassification of other comprehensive income in translation of financial statements.

Cash flows related to discontinued operations are:

Assets held for sale	2019	2018
Operating activities	15,206	5,622
Investment activities	475,471	(14,263)
Financing activities	(9,471)	18,845
<b>Net cash flows</b>	<b>481,206</b>	<b>10,204</b>

Figures stated in millions of Colombian pesos

The disposition of the investments was made on 27 November 2019.

## Note 41. Information to be disclosed on related parties

EPM, the Holding company of the EPM Group, is a decentralized industrial and commercial company of municipal order, whose sole owner is the Municipality of Medellín. Its capital is not divided into shares.

Related parties of the Group are subsidiaries, associates and joint ventures, including subsidiaries of associates and joint ventures, key management personnel, as well as entities over which key management personnel may exercise control or joint control and post-employment benefit plans for the benefit of employees.

Balances and transactions between EPM Group companies have been eliminated in the consolidation process and are not disclosed in this note. The total value of the transactions performed by the Group with its related parties during the corresponding period is shown below:

Transactions and balances with related parties	Income <sup>(1)</sup>	Costs/ Expenses <sup>(2)</sup>	Amounts receivable <sup>(3)</sup>	Amounts payable <sup>(4)</sup>	Guarantees received <sup>(5)</sup>
<b>Associates:</b>					
2019	70,363	32,728	6,815	4,693	-
2018	146,319	34,656	45,000	12,459	-
<b>Key management personnel from the company or its controller:</b>					
2019	5	27,090	790	2,738	1,082
2018	189	18,936	1,038	1,304	964
<b>Other related parties:</b>					
2019	58,499	80,039	18,956	4,552	-
2018	23,231	67,728	9,826	214,522	-

Figures stated in millions of Colombian pesos

- (1) Income from transactions with associates corresponds to the sale of services related to information and communication technologies, information services and the complementary activities related to them. Income generated with other related parties corresponds mainly to the sale of electricity, the rendering of public utilities and financial services. Detail of the income obtained by the Group from its related parties is as follows:

	Income	2019	2018
Associates	Sale of goods and services	49,351	103,098
	Others	21,012	43,221
Key personnel of the company's management or its controller	Sale of goods and services	5	7
	Others	-	183
Other related parties	Sale of goods and services	50,976	22,465
	Interests	-	351
	Fees	3,764	23
	Others	3,759	393
<b>Total income from related parties</b>		<b>128,868</b>	<b>169,740</b>

Figures stated in millions of Colombian pesos

- (2) Corresponds to costs and expenses arising from transactions involving the purchase of electricity, the acquisition of goods and services, including services related to communications and complementary activities, with associates and other related parties. The detail of costs and expenses incurred by the Group with its related parties is as follows:

	Costs and expenses	2019	2018
Associates	Purchase of goods and services	30,664	30,931
	Fees	2,047	3,726
	Others	17	-
Key personnel of the company's management or its controller	Purchase of goods and services	4,224	16,957
	Fees	54	-
	Others	22,812	1,979
Other related parties	Purchase of goods and services	51,175	42,553
	Interests	1	1
	Fees	8,268	907
	Others	20,595	24,266
<b>Total costs and expenses incurred with related parties</b>		<b>139,856</b>	<b>121,319</b>

Figures stated in millions of Colombian pesos

- (3) The Group keeps receivables from its related parties arising from the sale of electricity, the rendering of public utilities, the sale of services associated with information and communications technologies and information services, among others. The EPM Group classifies its receivables using criteria that enable it to prioritise the management of their recovery through the agencies responsible for them or collection entities. The collection applies according to the billing cycle with respect to public home utilities.
- (4) Payment policy, generally, is 30 days from the date of the invoice.
- (5) Collaterals and endorsements received correspond to mortgage collateral on housing loans granted to key management personnel.

Transactions between the Group and its related parties are carried out under conditions equivalent to those that exist in transactions between independent parties, in terms of their purpose and conditions.



**Transactions and balances with government-related entities**

Surpluses paid during the year were \$1,289,652 (2018: \$1,503,504), \$703,447 (2018: \$656,457) ordinary and \$586,205 (2018: \$547,047) extraordinary. 2018 includes \$300,000 from the sale of ISAGEN.

**Compensation to the Board of Directors and key Personnel of the Group**

Compensation to the members of the Board of Directors and key management personnel of the Group is as follows:

Description	2019	2018
Wages and other short-term employee benefits	27,274	26,896
Pensions and other post-employment benefits	564	479
Other long-term employee benefits	1,156	1,725
<b>Compensation to key management personnel</b>	<b>28,994</b>	<b>29,099</b>

*Figures stated in millions of Colombian pesos*

Amounts disclosed are those recognised as Costs or Expenses during the period report for compensation to key management personnel.

**Note 42. Capital management**

Capital of the Group includes indebtedness through the Capital Market, Commercial Banks, Development Banks, Development Agencies and Multilateral Banks, at national and international levels.

The Group manages its capital in order to plan, manage and assess the attainment of financial resources in the national and international financial markets, for strategic investments, and investment projects, through several options that optimize costs, guarantee the stability of adequate financial indicators and adequate credit rating, and minimize financial risk. For this, the following capital management policies and processes have been defined:

**Financing Management:** financing management comprises the performance of all long-term credit operations, in order to guarantee the timely availability of the resources required for the normal operation of the Group and to materialize the investment and growth decisions, striving to optimizing financing costs.

The Group has not made any changes to its capital management objectives, policies and processes during the period ended the cut-off date, nor has it been subject to external capital requirements.

In order to face the changes in the economic conditions, the Group implements proactive management mechanisms for its financing, enabling as far as it is feasible, different financing alternatives, so that at the time performance of any long-term credit operation is required, there will be access to the source that each time has availability of competitive market conditions at the necessary time.

Below are presented the values that the Group manages as capital:

Capital management	2019	2018
<b>Bonds and loans</b>		
Commercial bank loans	5,317,391	5,720,503
Multilateral bank loans	3,594,944	3,865,275
Development bank loans	1,035,265	1,996,764
Bonds and securities issued	1,060,207	1,034,287
Other bonds and securities issued	9,648,198	8,206,867
Other loans	-	11,104
<b>Total debt</b>	<b>20,656,005</b>	<b>20,834,800</b>
<b>Total capital</b>	<b>20,656,005</b>	<b>20,834,800</b>

*Figures stated in millions of Colombian pesos*

### Note 43. Financial risk management objectives and policies

The Group is exposed to financial risk, defined as the possibility of occurrence of an event that affects negatively the financial results, among which are price risk, liquidity risk, credit risk and operating risk.

Price risk refers to the changes or volatility of market variables that can generate economic losses. Market variables refer to exchange rates, interest rates, securities, commodities, among others; and their changes may impact, for example, the financial statements, cash flow, financial indicators, contracts, project viability and investments.

Credit risk refers to the possible default of payment obligations by third parties derived from contracts or financial transactions performed.

Liquidity risk is the scarcity of funds and the inability to obtain the resources at the time they are required to cover the contractual obligation and execute investment strategies. The scarcity of funds leads to the need to sell assets or to contract financing operations in unfavorable market conditions.

Finally, operating risk, from a financial standpoint, is defined as deficiencies or failures in the processes, technology, infrastructure, human resources or occurrence of unforeseen external events.

The objective of the Integral Risk Management Department is to lead the definition and implementation of strategies for integral risk management, in order to achieve adequate protection and assurance of the assets, resources and interests of the EPM Group.

The Group's policy is to manage risks that affect its activity and environment, adopting the best practices and international standards of Integrated Risk Management (IRM), as a way of facilitating compliance with the purpose, strategy, objectives and business goals, both statutory and legal. It has an information system that facilitates integral risk management, guarantees the confidentiality, availability and reliability of the information and allows analysis and monitoring of risks and improvement plans. It has implemented an integral risk management system and deploys a methodology for the identification, analysis, assessment, control and monitoring of risks, among which are those associated with money laundering and financing of terrorism, which allows reducing vulnerability, and propose and implement effective mechanisms for the proper development of business, processes, projects and contracts. As valuation criteria there are tables for the evaluation of the consequences of the materialization of risks and probability tables, which are applicable to the different management levels defined in the methodological guide for integral risk management.

The monitoring and review activity to the integral risk management is aligned with the follow-up process to the management established in the Group, in order to propose and implement improvement actions.

The monitoring and review scheme established assesses, among others, the following aspects:

- The implementation strategy for integrated risk management.
- Changes in the internal and external context that imply adjusting the treatment of identified risks or that generate new risks.
- The variation of risks in terms of frequency, probability and consequence.
- The assessment criteria for the probability and consequence of the risks.
- The implementation and effectiveness of the treatment plans.

The Group manages financial risks associated with the different levels of management by identifying the risks within the market, liquidity and credit groupings that are classified as financial risks, quantifying their impact and implementing strategies to mitigate them.

#### 43.1. Price risk

Price risk is the risk that the fair value of the future cash flows of a financial instrument may fluctuate because of changes in market prices. The Group has identified that the financial instruments affected by price risk include:

- Cash and cash equivalents (fixed income securities and trust duties)
- Investments at fair value through profit and loss.
- Investments measured at fair value through equity.

Sensitivity analyses correspond to the financial situation as at 31 December 2019 and apply to the following concepts:

- Cash and cash equivalents (fixed income securities and trust duties)
- Investments at fair value through profit and loss.

The methodology used for measuring market risk is Value at Risk (VaR), consisting of the quantification of the maximum loss that the portfolio could present in a month with a 95% confidence level. For the quantification of VaR the methodology defined by the Superintendence of Finance in the Basic Financial Accounting Circular Letter (CE100 of 1995) is used.

	VaR COP daily	VaR % COP
VaR Total Portfolio	4.443.994.101	0,32%

#### 43.2. Interest rate risk

Interest Rate Risk is the risk that the fair value or future cash flows of a financial instrument may fluctuate as a result of changes in market interest rates. The Group has identified that financial instruments affected by interest rate risk include:

- Cash and cash equivalents.
- Investments at fair value through profit and loss.
- Financial liabilities measured at amortized cost-Loans and borrowings.
- Financial liabilities measured at fair value with changes in other comprehensive income-Derivative instruments.

Concentration of Interest Rate Risk materializes when there are large individual exposures and significant exposures to counterparties whose probability of default is determined by factors such as the economic sector, currency and credit ratings. Interest rate risk management seeks to preserve capital and maintain or increase profitability. The EPM Group has defined policies on risk in interest rates through the

identification of risks, the determination of the position of rates and the simulation of possible hedging strategies. This assist decision making, oriented to maintaining the position to hedge it, and later the results of the executed strategies are assessed.

### Analysis of sensitivity to interest rates

The following table indicates the sensitivity to a possible reasonable change in the interest rates of financial instruments exposed to this risk, without considering the effect of hedge accounting. Keeping all other variables constant, the pre-tax income or loss and the equity of the EPM Group would be affected by changes in variable interest rates as follows:

	Increase/decrease in basic points	Exposed value	Financial effect	
			In profit or loss before taxes	In equity
<b>2019</b>				
<b>Financial assets measured at fair value through profit and loss</b>				
Investments at fair value through profit and loss	100	1,459,726	(3,882)	(3,105)
	(100)	1,459,726	3,882	3,105
<b>Financial liabilities measured at amortized cost</b>				
Loans and borrowings	100	7,486,598	(74,866)	(59,893)
	(100)	7,486,598	74,866	59,893
<b>Financial liabilities measured at fair value through other comprehensive income</b>				
Derivative instruments	100	93,812	(6,451)	(5,160)
	(100)	93,812	6,451	5,160
<b>2018</b>				
<b>Financial assets measured at fair value through profit and loss</b>				
Investments at fair value through profit and loss	100	1,153,472	(15,084)	(12,067)
	(100)	1,153,472	15,084	12,067
<b>Financial liabilities measured at amortized cost</b>				
Loans and borrowings	100	7,903,448	(79,034)	(63,228)
	(100)	7,903,448	79,034	63,228
<b>Financial liabilities measured at fair value through other comprehensive income</b>				
Derivative instruments	100	285,968	(3,991)	(3,193)
	(100)	285,968	3,991	3,193

Figures stated in millions of Colombian pesos

The Group considers that the sensitivity analysis is representative in respect to the exposure of the interest rate risk.

### 43.3. Foreign exchange risk

Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

The Group has identified that financial instruments affected by foreign exchange risk include:

- Cash and cash equivalents.
- Investments at fair value through profit and loss.
- Financial liabilities measured at amortized cost-Loans and borrowings.
- Financial liabilities measured at fair value with changes in other comprehensive income-Derivative instruments.

Exposure to foreign exchange rate risk relates, firstly, to financing activities in a currency other than the functional currency and to contracted hedging operations.

The Group manages its foreign exchange rate risk by means of hedging operations on a medium-term horizon. It is the Group's policy not to close speculative hedging transactions, so the terms of the hedging derivative instruments replicate the terms of the underlying in order to maximize the effectiveness of the hedge.

The Group covers its exposure to exchange rate fluctuations by using different hedging instruments, among which are Swaps, Forwards and Options at several terms.

#### Analysis of sensitivity to foreign exchange rates

The following table indicates the sensitivity to a possible reasonable change in foreign exchange rates for \$100 pesos in the currency against the U.S. dollar without considering the effect of hedge accounting. The impact is caused by the change in monetary and non-monetary assets. Holding all other variables constant, pre-tax profit or loss and equity would be affected by changes in foreign exchange rates as follows:

	Increase/decrease in basic points	Exposed value	Financial effect	
			In profit or loss before taxes	In equity
<b>2019</b>				
<b>Financial assets measured at fair value through profit and loss</b>	100	562,524	16,657	13,325
	(100)	562,524	(16,657)	(13,325)
<b>Financial liabilities measured at amortized cost</b>				
Loans and borrowings	100	10,851,375	(331,123)	(264,899)
	(100)	10,851,375	331,123	264,899
<b>Financial liabilities measured at fair value through other comprehensive income</b>				
Derivative instruments	100	277,078	8,455	6,764
	(100)	277,078	(8,455)	(6,764)
<b>2018</b>				
<b>Financial assets measured at fair value through profit and loss</b>	100	1,218,075	29,238	23,390
	(100)	1,218,075	(29,238)	(23,390)
<b>Financial liabilities measured at amortized cost</b>				
Loans and borrowings	100	10,843,498	(333,672)	(266,937)
	(100)	10,843,498	333,672	266,937
<b>Financial liabilities measured at fair value through other comprehensive income</b>				
Derivative instruments	100	2,104,966	64,773	51,819
	(100)	2,104,966	(64,773)	(51,819)

Figures stated in millions of Colombian pesos

The Group considers that the sensitivity analysis is representative in respect to the exposure of the foreign Exchange Risk.

#### 43.4. Credit Risk

Credit Risk is the risk that one of the counterparts does not comply with the obligations derived from a financial instrument or purchase contract and that this will translate in a financial loss. The Group has identified that the financial instruments affected by credit risk include:

- Cash and cash equivalents
- Other financial assets:
- Trade and other receivables

Credit risk management by type of financial instrument is detailed below and is considered representative of credit risk exposure:

#### Cash and cash equivalents and investments at fair value through profit or loss

For credit risk management in the EPM Group quotas are assigned per issuer, per counterparty and intermediary, taking into account the financial, risk and fundamental analysis of the entities, emphasizing shareholder support. The methodology considers the characteristics of the investment portfolio and applicable regulations. Credit risk concentration is limited since it obeys the provisions of the business

rules manual for treasury operations. The description of the factors that define risk concentration is as follows:

- Quotas are updated quarterly based on the latest available financial statements of the entities analysed.
- When the value of the consolidated portfolio of temporary investments exceeds the equivalent of 10,000 minimum wages (SMMLV), no more than 20% of this value must be concentrated in the same issuer, counterparty or intermediary, with the exception of securities issued by governments that comply with current regulations.
- Securities market intermediaries, other than supervised banking establishments, may act as counterparties for transactions but cannot be considered as eligible issuers.
- Brokerage firms acting as counterparties to treasury operations must have at least the second risk rating in strength or quality of portfolio management.
- Stockbrokerage companies backed by banks, i.e. banked counterparties, must have a minimum net worth of 30,000 minimum wages (SMLMV).

Finally, efforts to avoid the concentration of risk are aimed at establishing, analysing, monitoring and controlling quotas, for which purpose the current quotas and their occupation status are controlled. Justifications related to the need to temporarily exceed the quotas are submitted for approval.

**Receivables measured at amortized cost and other receivables:** The EPM Group is exposed to the risk that users or customers who use public utilities may fall into arrears or default on the payment for these services. Receivables from utility customers are classified into two major groups: those arising from arrears and the other group relates to financing or payment agreements with customers as a portfolio recovery strategy or for linking new customers.

EPM Group companies evaluate at the end of each period the behavior and value of receivables to determine if there is objective evidence of portfolio impairment and thus identify its possible impact on future cash flows. The criteria used to determine objective evidence of impairment are:

- Defaults in payments by the customers.
- It is known or there is evidence of the customer entering processes of corporate restructuring or in insolvency or liquidation.
- The rise of social turmoil, be it of public order or natural disasters, which according to experience are directly correlated with default of accounts.

In order to avoid excessive concentration of risk, EPM Group companies have developed and implemented various strategies to mitigate the risk of default in the portfolio, including:

- **Persuasive collection** by making phone calls and sending letters to customers with the support of specialized collection agencies.
- Segmentation of customers to identify those of greater risk, due to their value, in order to carry out personalized collection activities with them.
- Possibility of making payment agreements or partial payments that lead to the recovery of the exposed capital.
- Offsetting of receivables against payables for EPM with customer-suppliers.
- When the above strategies do not generate satisfactory results, coercive collection actions are taken by suspending and disconnecting the service.
- If the above strategies do not produce satisfactory results, the portfolio is collected through legal proceedings.

The Group considers that the value that best represents its exposure to credit risk at the end of the period, without considering any collateral taken or other credit enhancements is:

Description	2019	2018
Restricted cash and cash equivalents	629,791	445,080
Investments in debt instruments	927,077	1,277,941
Receivables *	531,228	460,261
Other receivables *	215,142	214,760
<b>Maximum exposure to credit risk</b>	<b>2,303,238</b>	<b>2,398,042</b>

*Figures stated in millions of Colombian pesos*

\* Corresponds to the value of the portfolio provision.

#### Impairment of receivables

Expected credit losses are estimated considering the probability that an uncollectible loss may or may not occur and are recognised as profit or loss in the statement of comprehensive income against a lower value of the financial asset. The Group evaluates the credit risk of receivables on a monthly basis at the time of reporting in order to determine the value adjustment for expected credit losses on financial assets.

Breach of contract is measured in accordance with service contracts and the subsidiary's own rules in each country.

#### 43.5. Liquidity Risk

Refers to the possibility of insufficient resources for the timely payment of operations and commitments of the entity, and thus the Group would be forced to obtain liquidity in the market or to liquidate investments in an onerous manner. It is also understood as the possibility of not finding buyers for offered bonds.

The Group has identified that the financial instruments affected by liquidity risk include:

- Non-derivative financial assets.
- Variable-rate debt financial instruments
- Fixed-rate debt financial instruments

To control liquidity risk, time comparisons of figures, benchmarks and liquidity levels are made over different time horizons. From this analysis, investment strategies that do not affect the liquidity of the Group are developed, considering the cash budget and market risk analyses to assess the diversification of the sources of funds, the capacity to sell assets and the creation of contingency plans.

Generally, the main aspects considered in the analysis are:

**a. Liquidity of the securities:** the characteristics of the issuer, the amount of the issue and the trading volume are analysed.

**b. Market liquidity:** the general behavior of the market is analysed and rate forecasts are made to infer its future behavior.

**c. Portfolio liquidity:** cash flows are coordinated in order to determine investment strategies according to future liquidity requirements, and diversification is sought to avoid concentration of securities by issuer, rate, and/or terms.



The following table shows the remaining contractual maturity analysis for non-derivative financial assets and liabilities:

	Average effective interest rate	Less than 1 year	From 1 to 2 years	From 2 to 3 years	From 3 to 4 years	More than 4 years	Total contractual obligation
<b>2019</b>							
Non-derivative financial assets	4.82%	1,045,747	15,949	21,796	-	9,340	1,092,832
Debt financial instruments with variable interest rate	5.80%	820,505	385,391	2,494,672	1,006,647	5,156,011	9,863,226
Debt financial instruments with fixed interest rate	6.59%	259,253	635,861	177,325	695,334	8,893,208	10,660,982
<b>2018</b>							
Non-derivative financial assets	4.73%	1,133,713	19,450	-	8,000	2,600	1,163,763
Debt financial instruments with variable interest rate	5.69%	1,436,375	1,363,233	315,519	1,750,339	6,694,780	11,560,246
Debt financial instruments with fixed interest rate	7.68%	1,890,752	176,553	1,751,528	176,553	5,072,613	9,067,998

Figures stated in millions of Colombian pesos

Values included in the above tables for non-derivative financial assets and liabilities may change as a result of fluctuations in the variable interest rate relative to the estimated interest rate at the end of the reporting period. The Group believes that cash flows may not occur earlier than indicated above.

The following table shows the analysis of contractual maturity of remaining derivative financial liabilities:

	Less than 1 year	From 1 to 2 years	From 2 to 3 years	From 3 to 4 years	Total contractual obligation
<b>2019</b>					
Swap Contracts	(13,699)	(14,592)	(17,561)	-	(45,853)
<b>Total</b>	<b>(13,699)</b>	<b>(14,592)</b>	<b>(17,561)</b>	<b>-</b>	<b>(45,853)</b>
<b>2018</b>					
Swap Contracts	21,520	(45,843)	12,165	(192,984)	(205,142)
<b>Total</b>	<b>21,520</b>	<b>(45,843)</b>	<b>12,165</b>	<b>(192,984)</b>	<b>(205,142)</b>

Figures stated in millions of Colombian pesos

The main method for measuring and monitoring liquidity is cash flow forecasting which is carried out in the companies of the Group and consolidated in the cash budget. As a result, its cash position is monitored daily and projections are made on an ongoing basis in order to:

- Monitor liquidity needs related to operating and investing activities associated with the acquisition and disposal of long-term assets.
- Pay, pre-pay, refinance and/or obtain new loans, according to cash flow generation capacity in the Group.

These projections consider the Group's debt financing plans, compliance with ratios, compliance with organizational objectives and applicable regulations.

Finally, in addition to managing investments and forecasting cash flow as part of the strategy of prudent liquidity risk management, in order to control the current and working capital ratios, the EPM Group seeks to guarantee adequate liquidity through the availability of long-term financing with credit alternatives.

#### 43.6. Insurance risk

The EPM Group has incorporated a reinsurance captive company, domiciled in Bermuda, registered with REACOEX Colombia and rated A- by AM Best, and it is through this company that the reinsurance risk is transferred from the insurance company in Colombia (currently Sura) to the reinsurance market, for the

policies of Material Damage + Loss of Profit, Sabotage and Terrorism, Directors and Managers, Infidelity and Financial Risks ("Crime"), Errors and Omissions, Civil Liability and Coverage for cyber risks.

As mentioned, this risk management is done through Maxseguros EPM Ltd., which consolidates the risks assumed and assigns them through reinsurance operations.

With reference to selection, cession and reinsurance management policies, these are performed on the basis of a strategy established jointly by EPM's Comprehensive Risk Management Department and Maxseguros EPM Ltd., which may change from year to year according to fluctuations in the reinsurance market and the conditions of the insured risks; however, solid backing is sought and a minimum rating of A- or equivalent is required.

The reinsurance companies with which operations were carried out in 2019 were the following:

Reinsurer	Risk score
Liberty Mutual USA	S&P A
Chubb Seguros (Federal Insurance)	S&P AA
AIG (National Union Fire 78%)	AM Best A
Swiss Re International SE	AM Best A+
Hannover Re	S&P AA-

The main claims assumed by the Group are:

Type of claim	Value of the settled claim	Value of the reserve	Value EPM Group	Value reinsurer
Subestación Malena - ESSA	66	66	66	66
Los Cururos - Los Cururos wind farm	176	176	176	176
Castilla - EPM	53	53	53	53
Marsella II - CHEC	20	20	20	20
Marsella I - CHEC	20	20	20	20
Santuario - CHEC	18	18	18	18
Supia substation - CHEC	28	28	28	28
San Diego substation - EPM	2,003	2,003	2,003	2,003
<b>Total</b>	<b>2,384</b>	<b>2,384</b>	<b>2,384</b>	<b>2,384</b>

*Figures stated in millions of Colombian pesos*

The value of the insured assets is as follows:

Type of asset	2019	2018
Small and wind power plants (<20MW)	1,422,758	1,622,096
Larger hydroelectric plants (>20MW)	9,986,526	9,708,524
La Sierra thermal plant	1,056,070	1,043,534
Assets water	916,734	838,041
Assets transmission and distribution	1,826,292	1,743,721
Corporate Assets	1,346,307	1,193,592
Assets natural gas	4,644	16,938
<b>Total</b>	<b>16,559,331</b>	<b>16,166,446</b>

*Figures stated in millions of Colombian pesos*

## Note 44. Measurement of fair value on a recurring and non-recurring basis

The methodology established in IFRS 13 -Fair value measurement specifies a hierarchy in the assessment techniques based on whether the variables used in the determination of the fair value are observable or not.

The Group determines the fair value on a recurring and non-recurring basis, as well as for disclosure purposes:

- Based on prices quoted in assets or liabilities markets identical to those the Group can access on the measurement date (level 1).
- Based on inputs applied on valuation methodologies commonly used by market participants, which are different from observable quoted prices for assets or liabilities, directly or indirectly (level 2).
- Based on internal valuation techniques of cash flow discounts or other valuation models, using variables estimated by the Group that are non-observable for the asset or liability, in absence of variables observed in the market (level 3).

During 2019 and 2018 no transfers have been made in the Group between the fair value hierarchy levels, either for transfers in or out of the levels.

### Assessment techniques and variables used in the Group for measurement of fair value for recognition and disclosure:

**Cash and cash equivalents:** include fixed income instruments and trust duties. The latter reflects the balance of the Collective Investment Funds (CIF) held by the EPM Group. These funds are used as a savings and investment mechanism and are managed by trust companies. Through these funds, resources are invested in a portfolio of assets which are restated to fair value. The EPM Group uses the market approach as a valuation technique for this item. These items are classified in level 1 of the fair value hierarchy.

**Fair value investments through profit or loss and through equity:** corresponds to investments made to optimise surplus liquidity, i.e. all those resources that are not immediately allocated to the development of the activities that constitute the corporate purpose of the companies. Additionally, includes the resources given to a financial institution as collateral for the sale of the Los Cururos Wind Farm and EPM

Transmisión Chile. The EPM Group uses the market approach as a valuation technique, these items are classified in level 1 of the fair value hierarchy.

**Equity investments:** corresponds to the resources placed in participative securities of national or foreign entities, represented in shares or parts of societal interest. The methodologies used are: the market price for those listed on the stock exchange (level 1) and the discount of cash flows for the remaining ones (level 3).

**Trust rights:** corresponds to the rights arising from the conclusion of commercial trust contracts. The EPM Group uses the market approach as a valuation technique, these items are classified in level 1.

**Derivative instruments:** The Group uses derivative financial instruments such as forward contracts, futures contracts, swaps and options to hedge various financial risks, primarily interest rate, foreign exchange and commodity price risks. Such derivative financial instruments are initially recognised at fair value on the date the derivative contract is entered into and are subsequently remeasured at fair value. The Group uses as a valuation technique for swaps the discounted cash flow, in an income approach. The variables used are: Interest rate swap curve for dollar-denominated rates, to discount dollar flows; and external interest rate swap curve for Colombian peso-denominated rates, to discount flows in Colombian pesos. These items are classified in level 2 of the fair value hierarchy.

**Receivables:** comprised by the receivable from the business combination for the acquisition of the subsidiary Empresas Públicas de Rionegro. For its valuation, the discount of payment flows is considered, applying the weekly collection rates for 360-day CDT published by Banco de la República; and the receivable associated with the contract for the steady supply of liquid fuel (ACPM) for the Termoeléctrica La Sierra and Termodorada plants, which is updated according to the value of the fuel unit stated in the contract. Both items are classified in level 3 of the fair value hierarchy.

**Investment property:** are properties (land or buildings, considered in their entirety or in part, or both) held (by the Group in its own name or under a finance lease) to earn income, capital gains or both, rather than:

- Their use in the production or supply of goods or services, or for administrative purposes; or
- Their sale in the ordinary course of business.

The Group uses two valuation techniques for these items. Within the market approach, the comparative or market method is used, which consists of deducting the price by comparison of transactions, supply and demand and valuation results of similar or comparable properties, after adjustments of time, conformation and location. Within the cost approach, the residual method is used, which is applied only to buildings and is based on the determination of the updated cost of construction, less depreciation for age and condition. Both items are classified in level 3 of the fair value hierarchy.

**Contingent considerations:** originated by the business combinations in the acquisitions of the subsidiaries Espíritu Santo Energy S. de R.L. and Empresas Varias de Medellín S.A E.S.P. - EMVARIAS, the discount of payment flows is considered by applying the following discount rates: Libor rate and TES rate, respectively. These items are classified in level 3 of the fair value hierarchy.

The following table shows for each of the fair value hierarchy levels, the Group's assets and liabilities measured at fair value on a recurring basis at the cut-off date:

Fair value on a recurring basis 2019	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
Cash and cash equivalents	629,791	-	-	629,791
<b>Total negotiable or designated at fair value</b>	<b>629,791</b>	<b>-</b>	<b>-</b>	<b>629,791</b>
Fixed income securities	814,271	-	-	814,271
Equity securities investments at fair value	59,005	-	-	59,005
Investments pledged as collateral	53,800	-	-	53,800
<b>Total other investments at fair value (See Note 13)</b>	<b>927,077</b>	<b>-</b>	<b>-</b>	<b>927,077</b>
Variable income securities other equity investments	1,955,134	-	7,947	1,963,081
<b>Total other equity investments (See Note 13)</b>	<b>1,955,134</b>	<b>-</b>	<b>7,947</b>	<b>1,963,081</b>
Trust in management	431,972	-	-	431,972
<b>Total trust rights (See Note 13)</b>	<b>431,972</b>	<b>-</b>	<b>-</b>	<b>431,972</b>
Future contracts	-	-	-	-
Derivative Swaps	-	46,148	-	46,148
<b>Total derivatives (See Note 13)</b>	<b>-</b>	<b>46,148</b>	<b>-</b>	<b>46,148</b>
Other receivables	-	-	51,638	51,638
<b>Total debtors</b>	<b>-</b>	<b>-</b>	<b>51,638</b>	<b>51,638</b>
Investment properties Urban and rural land	-	-	123,377	123,377
Investment properties Buildings and houses	-	-	16,977	16,977
<b>Total investment properties (See Note 6)</b>	<b>-</b>	<b>-</b>	<b>140,354</b>	<b>140,354</b>
<b>Liabilities</b>				
Provisioning - business combination	-	-	134,841	134,841
<b>Total contingent consideration (See Note 27)</b>	<b>-</b>	<b>-</b>	<b>134,841</b>	<b>134,841</b>
<b>Total fair value on a recurring basis</b>	<b>3,943,974</b>	<b>46,148</b>	<b>65,098</b>	<b>4,055,221</b>

Figures stated in millions of Colombian pesos

Fair value on a recurring basis 2018	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
Cash and cash equivalents	445,080	-	-	445,080
<b>Total negotiable or designated at fair value</b>	<b>445,080</b>	-	-	<b>445,080</b>
Fixed income securities	1,178,685	-	-	1,178,685
Equity securities investments at fair value	93,608	-	-	93,608
Investments pledged as collateral	5,647	-	-	5,647
<b>Total other investments at fair value (See Note 13)</b>	<b>1,277,940</b>	-	-	<b>1,277,940</b>
Variable income securities other equity investments	1,574,358	-	54,515	1,628,873
<b>Total other equity investments (See Note 13)</b>	<b>1,574,358</b>	-	<b>54,515</b>	<b>1,628,873</b>
Trust in management	438,997	-	-	438,997
<b>Total trust rights (See Note 13)</b>	<b>438,997</b>	-	-	<b>438,997</b>
Future contracts	-	-	-	-
Derivative Swaps	-	192,465	-	192,465
<b>Total derivatives (See Note 13)</b>	-	<b>192,465</b>	-	<b>192,465</b>
Other receivables	-	-	48,180	48,180
<b>Total debtors</b>	-	-	<b>48,180</b>	<b>48,180</b>
Investment properties Urban and rural land	-	-	70,301	70,301
Investment properties Buildings and houses	-	-	21,080	21,080
<b>Total investment properties (See Note 6)</b>	-	-	<b>91,381</b>	<b>91,381</b>
<b>Liabilities</b>				
Provisioning - business combination	-	-	169,392	169,392
<b>Total contingent consideration (See Note 27)</b>	-	-	<b>169,392</b>	<b>169,392</b>
<b>Total fair value on a recurring basis</b>	<b>3,736,375</b>	<b>192,465</b>	<b>24,684</b>	<b>3,953,524</b>

Figures stated in millions of Colombian pesos

No transfers between levels were made during 2019.

The following tables present a reconciliation of the Group's assets and liabilities measured at fair value on a recurring basis using unobservable inputs (classified in level 3 of the fair value hierarchy) at 31 December 2019 and 2018:

Changes in Level 3 of the Fair Value Hierarchy 2019	Initial balance	Changes through profit or loss	Changes through other comprehensive income	Sales and transfers	Final balance
<b>Assets</b>					
Variable income securities other equity investments	54,515	-	(11,090)	(35,478)	7,947
<b>Total other equity investments (See Note 13)</b>	<b>54,515</b>	<b>-</b>	<b>(11,090)</b>	<b>(35,478)</b>	<b>7,947</b>
Other receivables	48,180	3,458	-	-	51,638
<b>Total debtors</b>	<b>48,180</b>	<b>3,458</b>	<b>-</b>	<b>-</b>	<b>51,638</b>
Investment properties Urban and rural land	70,301	39,667	88	(2,658)	107,398
Investment properties Buildings and houses	21,080	11,849	27	-	32,956
<b>Total investment properties (See Note 6)</b>	<b>91,381</b>	<b>51,516</b>	<b>115</b>	<b>(2,658)</b>	<b>140,354</b>
<b>Liabilities</b>					
Provisioning - business combination	169,392	(34,551)	-	-	134,841
<b>Total contingent consideration (See Note 27)</b>	<b>169,392</b>	<b>(34,551)</b>	<b>-</b>	<b>-</b>	<b>134,841</b>

Figures stated in millions of Colombian pesos

Changes in Level 3 of the Fair Value Hierarchy 2018	Initial balance	Changes through profit or loss	Changes through other comprehensive income	Sales and transfers	Final balance
<b>Assets</b>					
Variable income securities other equity investments	36,782	-	17,733	-	54,515
<b>Total other equity investments (See Note 13)</b>	<b>36,782</b>	<b>-</b>	<b>17,733</b>	<b>-</b>	<b>54,515</b>
Other receivables	33,206	14,974	-	-	48,180
<b>Total debtors</b>	<b>33,206</b>	<b>14,974</b>	<b>-</b>	<b>-</b>	<b>48,180</b>
Investment properties Urban and rural land	108,705	2,130	489	(41,023)	70,301
Investment properties Buildings and houses	18,035	1,743	400	902	21,080
<b>Total investment properties (See Note 6)</b>	<b>126,740</b>	<b>3,873</b>	<b>889</b>	<b>(40,121)</b>	<b>91,381</b>
<b>Liabilities</b>					
Provisioning - business combination	159,734	9,658	-	-	169,392
<b>Total contingent consideration (See Note 27)</b>	<b>159,734</b>	<b>9,658</b>	<b>-</b>	<b>-</b>	<b>169,392</b>

Figures stated in millions of Colombian pesos

The recorded value and estimated fair value of the Group's assets and liabilities that are not recognised at fair value in the consolidated statement of financial position, but require disclosure at fair value, at 31 December 2019 and 2018 are as follows:

2019	Recorded value	Level 2	Total
<b>Assets</b>			
Utilities	3,254,831	3,294,299	3,294,299
Employees	165,042	167,529	167,529
Construction contracts	2,001	2,001	2,001
Other receivables	1,660,250	1,652,240	1,652,240
<b>Total Assets</b>	<b>5,082,124</b>	<b>5,116,069</b>	<b>5,116,069</b>
<b>Liabilities</b>			
Development bank loans	1,035,266	1,035,266	1,035,266
Other bonds and securities issued	9,648,198	9,648,198	9,648,198
Multilateral bank loans	3,594,944	3,594,944	3,594,944
Commercial Bank Loans	5,317,391	5,317,391	5,317,391
Bonds and securities issued	1,060,207	1,060,207	1,060,207
<b>Total Liabilities</b>	<b>20,656,005</b>	<b>20,656,005</b>	<b>20,656,005</b>
<b>Total</b>	<b>(15,573,881)</b>	<b>(15,539,936)</b>	<b>(15,539,936)</b>

Figures stated in millions of Colombian pesos

2018	Recorded value	Level 2	Total
<b>Assets</b>			
Utilities	2,887,714	2,887,714	2,887,714
Employees	157,980	157,980	157,980
Construction contracts	1,689	1,689	1,689
Other receivables	1,166,834	1,166,834	1,166,834
<b>Total Assets</b>	<b>4,214,217</b>	<b>4,214,217</b>	<b>4,214,217</b>
<b>Liabilities</b>			
Development bank loans	1,996,764	1,996,764	1,996,764
Other bonds and securities issued	8,206,867	8,206,867	8,206,867
Multilateral bank loans	3,865,275	3,865,275	3,865,275
Commercial Bank Loans	5,720,503	5,720,503	5,720,503
Bonds and securities issued	1,034,287	1,034,287	1,034,287
Other liabilities	11,105	11,105	11,105
<b>Total Liabilities</b>	<b>20,834,801</b>	<b>20,834,801</b>	<b>20,834,801</b>
<b>Total</b>	<b>(16,620,584)</b>	<b>(16,620,584)</b>	<b>(16,620,584)</b>

Figures stated in millions of Colombian pesos

As of 31 December 2019 and 2018, there were no items in levels 1 and 3.



## Note 45. Service concession arrangements

At the cut-off date, the Group, as operator, managed various concessions containing provisions for the construction, operation and maintenance of facilities, as well as the provision of public utilities such as water supply, wastewater collection and treatment, in accordance with applicable regulations.

The remaining period of the concessions where the Group acts as an operator is detailed below:

Entity/Agreement	Activity	Country	Concession period	Initial remaining period
Empresas Públicas de Medellín - Municipality of Itagüí	Construction of the water and sewerage networks for the provision of the service of the assigned neighborhoods. Construction of the collector parallel to the La Justa stream and sewerage on 36th Street at the level of Ditaíres Park. Construction of the collector parallel to the coverage of the La Muñoz stream. Handing over of hydraulic structures to provide the sewage service in the municipality and to provide the sanitation to the Medellín River.	Colombia	30 years (extendable)	28 years
Empresas Públicas de Medellín - Municipality of Girardota	Provision of the Aqueduct and Sewer service.	Colombia	20 years (extendable)	13 years
Empresas Públicas de Medellín - Municipality of Copacabana	Execution of works for the supply of drinking water, sewage and provision of such utilities.	Colombia	20 years (extendable)	11 years
Empresas Públicas de Medellín - Municipality of Caldas	The Municipality undertakes to make available and facilitate the use of the networks and other infrastructure for the provision of water and sewerage utilities.	Colombia	30 years (extendable)	9 years
Empresas Públicas de Medellín - Municipality of Barbosa	The Municipality undertakes to make available and facilitate the use of the networks and other infrastructure for the provision of water and sewerage utilities.	Colombia	30 years (extendable)	8 years
Empresas Públicas de Medellín - Municipality of Envigado	Provision of water and sewage utilities and construction of works for the provision of water and sewage utilities.	Colombia	10 years (extendable)	8 years
Empresas Públicas de Medellín - Municipality of Sabaneta	The Municipality undertakes to make available and facilitate the use of networks and other infrastructure for the provision of water utilities.	Colombia	10 years (extendable)	5 years
Empresas Públicas de Medellín - Municipality of La Estrella	Execution of works and provision of drinking water supply and sewerage utilities.	Colombia	10 years (extendable)	5 years
Empresas Públicas de Medellín - Municipality of Bello	Execution of works and provision of water and sewerage utilities.	Colombia	10 years (extendable)	3 years
Aguas Regionales - Municipality of San Jerónimo	The Municipality undertakes to make available the movable and immovable assets that make up the system for the provision of water and sewerage utilities.	Colombia	30 years	18 years
Aguas Regionales - Municipality of Santa Fe	The Municipality undertakes to make available the movable and immovable assets that make up the system for the provision of water and sewerage utilities.	Colombia	30 years	18 years
Aguas Regionales - Municipality of Sopetrán	The Municipality agrees to make available the movable and immovable assets that make up the system for the provision of Water and Sewerage utilities.	Colombia	30 years	18 years
Aguas Regionales - Municipality of Olaya	The Municipality agrees to make available the movable and immovable assets that make up the system for the provision of Water and Sewerage utilities.	Colombia	30 years	18 years
Aguas Regionales - Municipality of Apartadó	The Municipality agrees to make available the movable and immovable assets that make up the system for the provision of Water and Sewerage utilities.	Colombia	30 years	18 years
Aguas Regionales - Municipality of Carepa	The Municipality agrees to make available the movable and immovable assets that make up the system for the provision of Water and Sewerage utilities.	Colombia	30 years	18 years
Aguas Regionales - Municipality of Chigorodó	The Municipality agrees to make available the movable and immovable assets that make up the system for the provision of Water and Sewerage utilities.	Colombia	30 years	18 years
Aguas Regionales - Municipality of Mutatá	The Municipality agrees to make available the movable and immovable assets that make up the system for the provision of Water and Sewerage utilities.	Colombia	30 years	18 years

Entity/Agreement	Activity	Country	Concession period	Initial remaining period
Aguas Regionales - Municipality of Turbo	The Municipality agrees to make available the movable and immovable assets that make up the system for the provision of Water and Sewerage utilities.	Colombia	30 years	18 years
Aguas de Oriente - Municipality El Retiro	To operate and maintain the networks and other infrastructure received during the concept of adequate service provision.	Colombia	No explicit duration period	143 months
Adasa - Econssa Chile S.A.	To operate public utilities for the production and distribution of drinking water, the collection and disposal of wastewater, and other utilities related to these activities.	Antofagasta region (Chile)	30 years	14 years
Wastewater treatment plant Colima.	Wastewater treatment	Mexico	34 years	23 years
New processes contracted for the project PEMEX en Ciudad Madero Tamaulipas.	Wastewater treatment	Mexico	24 years	22 years
Wastewater treatment plants Morelos y Tierra Negra, Tamaulipas.	Wastewater treatment	Mexico	24 years	22 years
Wastewater treatment plants Atapaneco e Itzcuaros, en Morelia.	Wastewater treatment	Mexico	27/14 years	16/9 years
Wastewater treatment plants Tuxtla y Paso el Limón, Tuxtla Gutiérrez.	Wastewater treatment	Mexico	18 years	16 years
Wastewater treatment plant Celaya, Guanajuato.	Wastewater treatment	Mexico	18 years	12 years
Wastewater treatment plant Torreón, Coahuila.	Wastewater treatment	Mexico	17 years	3 years

### Service concession arrangements for the provision of water and sewage utilities In Colombia:

The concession arrangements between the Group companies in Colombia and the municipalities establish the conditions under which the water and sewerage networks are managed, operated, and maintained to provide drinking water and wastewater treatment utilities to their inhabitants, under the terms, conditions, and rates established by the Commission for the Regulation of Drinking Water and Basic Sanitation - CRA -.

The agreements indicate the following rights and obligations for the companies of the Group as an operator in the service concession arrangement:

- The right to receive from the municipality the totality of the water and sewage networks and to have exclusivity as system operator.
- Obligation to make exclusive use of the water and sewage networks for the purposes for which they are intended, maintain and return them under the use conditions in which they were received.
- Some concession arrangements have the option to be renewed automatically for equal periods unless one of the parties expresses the intention not to continue.
- The concession arrangements do not establish the obligation of construction of property, plant and equipment elements.

Upon termination of the concession, the companies of the Group must return the water and sewage networks without any consideration to the municipalities. No changes have occurred in the terms of the concession arrangements during the period.

### In Chile:

The concession arrangement of ADASA, domiciled in Antofagasta - Chile, with Empresa Concesionaria de Servicios Sanitarios S.A. - Econssa S.A. establishes the conditions for the financing and execution of works

required for the maintenance, replacement and expansion of the infrastructure and facilities necessary to meet the demand for the related public utilities, during the term of the exploitation right, in the operational territory of the concession and in accordance with the Development Plan approved by ECONSSA CHILE S. A. or that which qualifies the Superintendence of Sanitation Utilities in the terms of article fifty-eight of the Sanitation Utilities General Act.

As part of the contract that granted the concession to the Company, the latter received real estate, furniture, installations, water use rights and easements, which are used in the operation of the sanitary concessions. The Company is prohibited from assigning, encumbering, leasing or constituting any right in favor of third parties over the assets received through the concession, which must be returned to the Company at the end of the contract in the condition in which they were at the beginning of the arrangement. Subsequent investments made by the Company, in that part that cannot be recovered via tariffs because its estimated use exceeds the remaining term of the Sanitary Concession, will be recovered in that portion at the end of the concession, where ECONSSA Chile S.A. will reimburse these investments, since the investment reimbursement clauses are applicable, as indicated and established in the respective transfer contract signed.

As part of its obligations, the Company must present annually specific information on the assets of use maintained under a loan agreement, as well as new investments made within the framework established in the transfer contract signed between both Companies, including a cadastre of each and every one of the facilities and networks of the sanitation utilities for the production and distribution of drinking water and for the collection and disposal of sewage.

## Note 46. Operating segments

### 46.1 Information by segments

For management purposes, the Group is organized into segments based on its products and services, and has the following eight operating segments on which information is presented:

- Electricity Generation Segment, which activity consists in the generation of electric power and commercialization of large electric power blocks, from the acquisition or development of a portfolio of power proposals for the market.
- Electricity Distribution Segment, which activity consists in transporting electric power through a set of lines and substations, with their associated equipment, which operate at voltages below 220 kv, the commercialization of energy to the end user of the regulated market and the development of related and complementary activities. It includes the Regional Transmission System (STR), the Local Distribution System (SDL), the public lighting utility and the provision of associated services.
- Electricity Transmission Segment, which activity consists in the transportation of energy in the National Transmission System (STN), consisting of the set of lines, with their corresponding connection equipment, operating at voltages equal to or greater than 220 KV. The National Transmitter (TN) is the legal entity that operates and transports electricity in the STN or has established a company whose purpose is the undertaking of such activity.
- Segment of Distribution and Commercialization of Natural Gas, which activity consists of the gas conduction from the city gate to the final user, through medium-pressure and low-pressure pipes. It includes the sale of natural gas by different systems, among them distribution by network, vehicular natural gas, compressed natural gas and service stations.
- Water Supply Segment, which activity consists of conceptualizing, structuring, developing and operating systems to provide water. It includes performing commercial management of the portfolio of services related to water supply for different uses, in addition to the use of the productive chain, specifically in the production of energy, and the supply of raw water.
- Wastewater Management Segment, includes the activities of conceptualizing, structuring, developing and operating wastewater and solid waste management systems.

- Solid Waste Management Segment, includes performing commercial management related to these services and the use of biosolids and other byproducts of wastewater treatment and solid waste management.
- Others Segment, which corresponds to the other activities not included in the segments mentioned above. Comprises: Entidad Adaptada de Salud (EAS) and Medical and Dental Services Unit, billing and collection services for third parties, income received from investment properties (leases), social financing, EATIC Laboratory tests, provision of the specialized transport service and services associated with information and communication technologies, information services and related activities.

The Group has not added operating segments to conform these eight reportable segments; however, it performs the activity of energy sale, which consists in the purchase of electricity in the wholesale market and its sale to other market agents or to regulated or non-regulated end users. Therefore, the Group includes its financial information in the corresponding segments of this activity.

Management supervises the results of operating segments separately in order to decide on the allocation of resources and assess their performance. Each segment performance is assessed on the basis of the profit or loss from operations before taxes and discontinued operations and is measured uniformly through profit or loss from operations of the Consolidated Financial Statements.

Transfer prices between operating segments are agreed as between independent parties in a manner similar to that agreed with third parties.

2019	Electricity generation	Electricity transmission	Electricity distribution	Natural gas	Water supply	Wastewater management	Solid waste management	Other segments	Total segments	Inter-segments eliminations	Consolidated
Revenue from outer customers	2,782,352	227,603	11,939,830	865,312	1,185,344	889,999	248,073	221,101	18,359,614	-	18,359,614
Inter-segment revenue	1,265,114	75,513	502,395	30,701	41,113	53,849	991	69,396	2,039,072	(2,039,072)	-
<b>Total net revenue</b>	<b>4,047,466</b>	<b>303,116</b>	<b>12,442,225</b>	<b>896,013</b>	<b>1,226,457</b>	<b>943,848</b>	<b>249,064</b>	<b>290,497</b>	<b>20,398,686</b>	<b>(2,039,072)</b>	<b>18,359,614</b>
Costs and expenses without depreciation, amortization, provisions and impairment of PP&E and intangibles	(1,887,185)	(78,370)	(9,502,222)	(781,950)	(609,685)	(417,656)	(169,490)	(240,860)	(13,687,418)	1,863,996	(11,823,422)
Depreciation, amortization, provisions and impairment of PP&E and intangibles	(325,986)	(46,798)	(615,629)	(20,133)	(186,240)	(99,008)	(36,616)	(28,454)	(1,358,864)	27,687	(1,331,177)
Impairment of receivables	(3,742)	532	(48,562)	2,092	(6,760)	(9,282)	528	(11,994)	(77,188)	(613)	(77,801)
Other expenses	(172,133)	(634)	(28,517)	(1,329)	(9,177)	(4,697)	(2,341)	(790)	(219,618)	62,151	(157,467)
Interest income and yields	52,503	1,339	155,218	42,704	41,736	93,690	6,420	69,662	463,272	(183,050)	280,222
Finance income (other than interest income and yields)	29,605	2,769	23,264	9,322	5,494	6,963	2,880	13,918	94,215	(3,600)	90,615
<b>Total finance income</b>	<b>82,108</b>	<b>4,108</b>	<b>178,482</b>	<b>52,026</b>	<b>47,230</b>	<b>100,653</b>	<b>9,300</b>	<b>83,580</b>	<b>557,487</b>	<b>(186,650)</b>	<b>370,837</b>
Interest expenses	(328,013)	(51,113)	(347,771)	(50,387)	(89,027)	(155,555)	(5,783)	(314,983)	(1,342,632)	210,819	(1,131,813)
Finance expenses (other than interest)	(28,388)	(2,188)	(36,124)	(3,223)	(40,685)	(7,575)	(5,626)	(18,652)	(142,461)	(16,008)	(158,469)
<b>Total finance expenses</b>	<b>(356,401)</b>	<b>(53,301)</b>	<b>(383,895)</b>	<b>(53,610)</b>	<b>(129,712)</b>	<b>(163,130)</b>	<b>(11,409)</b>	<b>(333,635)</b>	<b>(1,485,093)</b>	<b>194,811</b>	<b>(1,290,282)</b>
Net foreign exchange difference	(34,376)	4,668	(10,546)	(3,889)	(909)	457	2	(11,265)	(55,858)	(25)	(55,883)
Equity-accounted investees in the results of associates and joint ventures	-	-	-	-	-	-	-	15,620	15,620	(3,827)	11,793
Effect of participation in equity investments	-	-	1,829	-	-	-	-	9,235	11,064	(1,337)	9,727
<b>Profit or loss for the period before taxes</b>	<b>1,349,751</b>	<b>133,321</b>	<b>2,033,165</b>	<b>89,220</b>	<b>331,204</b>	<b>351,185</b>	<b>39,038</b>	<b>(228,066)</b>	<b>4,098,818</b>	<b>(82,879)</b>	<b>4,015,939</b>
Income Tax	(312,388)	(28,606)	(661,617)	(26,605)	(23,726)	(44,399)	(10,716)	232,774	(875,283)	65,084	(810,199)
Discontinued operations, net of income tax	(243)	116	-	-	-	-	-	20,554	20,427	27,818	48,245
Net movement of regulatory accounts related to profit or loss for the period	-	-	(98,009)	-	-	-	-	-	(98,009)	-	(98,009)
<b>Net profit for the period</b>	<b>1,037,120</b>	<b>104,831</b>	<b>1,273,539</b>	<b>62,615</b>	<b>307,478</b>	<b>306,786</b>	<b>28,322</b>	<b>25,262</b>	<b>3,145,953</b>	<b>10,023</b>	<b>3,155,976</b>
Total assets without investments in associates and joint ventures and deferred regulatory liabilities	20,970,368	1,992,608	15,783,112	1,159,540	6,198,019	5,339,015	384,290	11,221,096	63,048,048	(9,914,126)	53,133,922
Investments in associates and joint ventures accounted for using the equity method	-	-	-	-	-	-	-	1,758,544	1,758,544	-	1,758,544
Deferred assets related to regulatory account balances	-	-	7,683	-	-	-	-	-	7,683	-	7,683
<b>Total assets and liabilities balances of deferred regulatory accounts</b>	<b>20,970,368</b>	<b>1,992,608</b>	<b>15,790,795</b>	<b>1,159,540</b>	<b>6,198,019</b>	<b>5,339,015</b>	<b>384,290</b>	<b>12,979,640</b>	<b>64,814,275</b>	<b>(9,914,126)</b>	<b>54,900,149</b>
Total liabilities	11,952,920	1,176,126	9,612,610	688,746	2,973,592	2,328,239	320,061	4,412,121	33,464,415	(2,768,836)	30,695,579
Deferred liabilities related to regulatory account balances	-	-	25,610	-	-	-	-	-	25,610	-	25,610
<b>Total liabilities and credit balances of deferred regulatory accounts</b>	<b>11,952,920</b>	<b>1,176,126</b>	<b>9,638,220</b>	<b>688,746</b>	<b>2,973,592</b>	<b>2,328,239</b>	<b>320,061</b>	<b>4,412,121</b>	<b>33,490,025</b>	<b>(2,768,836)</b>	<b>30,721,189</b>
Additions of non-current assets	1,664,109	167,281	1,049,709	20,276	635,256	296,410	16,225	121,432	3,970,698	-	3,970,698

Figures stated in millions of Colombian pesos

2018	Electricity generation	Electricity transmission	Electricity distribution	Natural gas	Water supply	Wastewater management	Solid waste management	Other segments	Total segments	Inter-segments eliminations	Consolidated
Revenue from outer customers	2,841,574	199,126	10,237,830	866,380	1,108,340	685,696	226,205	103,785	16,268,936	-	16,268,936
Inter-segment revenue	912,323	62,680	477,272	9,269	23,819	80,149	1,222	60,652	1,627,386	(1,627,386)	-
<b>Total net revenue</b>	<b>3,753,897</b>	<b>261,806</b>	<b>10,715,102</b>	<b>875,649</b>	<b>1,132,159</b>	<b>765,845</b>	<b>227,427</b>	<b>164,437</b>	<b>17,896,322</b>	<b>(1,627,386)</b>	<b>16,268,936</b>
Costs and expenses without depreciation, amortization, provisions and impairment of PP&E and intangibles	(1,884,862)	(69,523)	(8,464,646)	(737,306)	(544,452)	(361,555)	(181,451)	(202,131)	(12,445,926)	1,523,318	(10,922,608)
Depreciation, amortization, provisions and impairment of PP&E and intangibles	(587,881)	(42,755)	(591,224)	(18,145)	(174,821)	(50,492)	(13,864)	(18,518)	(1,497,700)	9,627	(1,488,073)
Impairment of receivables	(2,762)	(725)	(36,296)	(15,422)	(7,322)	(3,829)	12	(6,697)	(73,041)	3,580	(69,461)
Other expenses	(153,683)	(4,238)	(27,110)	(420)	(6,424)	(2,381)	(3,783)	(549)	(198,588)	941	(197,647)
Interest income and yields	34,677	1,332	153,998	40,466	34,983	116,011	6,245	75,715	463,427	(225,347)	238,080
Finance income (other than interest income and yields)	10,665	664	8,933	2,117	1,100	5,501	4,306	2,815	36,101	(3,345)	32,756
<b>Total finance income</b>	<b>45,342</b>	<b>1,996</b>	<b>162,931</b>	<b>42,583</b>	<b>36,083</b>	<b>121,512</b>	<b>10,551</b>	<b>78,530</b>	<b>499,528</b>	<b>(228,692)</b>	<b>270,836</b>
Interest expenses	(288,455)	(52,733)	(288,955)	(46,891)	(90,366)	(161,465)	(4)	(230,315)	(1,159,184)	229,215	(929,969)
Finance expenses (other than interest)	(21,119)	(1,098)	(41,044)	(1,631)	(19,418)	(6,980)	(5,632)	(21,601)	(118,523)	(1,301)	(119,824)
<b>Total finance expenses</b>	<b>(309,574)</b>	<b>(53,831)</b>	<b>(329,999)</b>	<b>(48,522)</b>	<b>(109,784)</b>	<b>(168,445)</b>	<b>(5,636)</b>	<b>(251,916)</b>	<b>(1,277,707)</b>	<b>227,914</b>	<b>(1,049,793)</b>
Net foreign exchange difference	(189,860)	(10,978)	(61,792)	6,245	(126)	3,463	(1)	(11,068)	(264,117)	-	(264,117)
Equity-accounted investees in the results of associates and joint ventures	-	-	-	-	-	-	-	(18,017)	(18,017)	-	(18,017)
Effect of participation in equity investments	-	-	1,285	-	-	-	-	65,137	66,422	(1,255)	65,167
<b>Profit or loss for the period before taxes</b>	<b>670,617</b>	<b>81,752</b>	<b>1,368,251</b>	<b>104,662</b>	<b>325,313</b>	<b>304,118</b>	<b>33,255</b>	<b>(200,792)</b>	<b>2,687,176</b>	<b>(91,953)</b>	<b>2,595,223</b>
Income Tax	77,216	(28,164)	(400,035)	(42,358)	156,808	(177,564)	(15,340)	191,821	(237,616)	27,010	(210,606)
Discontinued operations, net of income tax	(3,489)	(545)	-	-	-	-	-	-	(4,034)	-	(4,034)
Net movement of regulatory accounts related to profit or loss for the period	-	-	36,956	-	-	-	-	-	36,956	-	36,956
<b>Net profit for the period</b>	<b>744,344</b>	<b>53,043</b>	<b>1,005,172</b>	<b>62,304</b>	<b>482,121</b>	<b>126,554</b>	<b>17,915</b>	<b>(8,971)</b>	<b>2,482,482</b>	<b>(64,943)</b>	<b>2,417,538</b>
Total assets without investments in associates and joint ventures and deferred regulatory liabilities	21,063,269	2,133,221	14,608,450	1,139,092	6,101,078	5,204,786	322,928	11,121,931	61,694,755	(11,063,909)	50,630,846
Investments in associates and joint ventures accounted for using the equity method	-	-	-	-	-	-	-	1,746,569	1,746,569	-	1,746,569
Deferred assets related to regulatory account balances	-	-	111,868	-	-	-	-	-	111,868	-	111,868
<b>Total assets and liabilities balances of deferred regulatory accounts</b>	<b>21,063,269</b>	<b>2,133,221</b>	<b>14,720,318</b>	<b>1,139,092</b>	<b>6,101,078</b>	<b>5,204,786</b>	<b>322,928</b>	<b>12,868,500</b>	<b>63,553,192</b>	<b>(11,063,909)</b>	<b>52,489,283</b>
Total liabilities	12,767,880	1,350,728	9,143,632	702,839	2,907,281	2,445,644	247,294	4,808,783	34,374,081	(3,954,576)	30,419,505
Deferred liabilities related to regulatory account balances	-	-	33,560	-	-	-	-	-	33,560	-	33,560
<b>Total liabilities and credit balances of deferred regulatory accounts</b>	<b>12,767,880</b>	<b>1,350,728</b>	<b>9,177,192</b>	<b>702,839</b>	<b>2,907,281</b>	<b>2,445,644</b>	<b>247,294</b>	<b>4,808,783</b>	<b>34,407,641</b>	<b>(3,954,576)</b>	<b>30,453,065</b>
Additions of non-current assets	2,029,298	189,929	1,045,663	19,873	340,390	424,629	25,319	123,348	4,198,449	-	4,198,449

Figures stated in millions of Colombian pesos

## 46.2 Information by geographic area

## Revenue from outer customers

Country	2019	2018
Colombia (country of residence of EPM)	11,548,671	10,661,294
Guatemala	2,427,919	1,975,441
Panama	2,469,950	2,056,850
El Salvador	1,043,549	887,256
Chile	541,341	503,663
Mexico	316,024	176,483
Ecuador	402	3,316
Bermuda	15,148	8,765
International inter-segment eliminations	(3,390)	(4,132)
<b>Total countries other than Colombia</b>	<b>6,810,943</b>	<b>5,607,642</b>
<b>Total consolidated income</b>	<b>18,359,614</b>	<b>16,268,936</b>

Figures stated in millions of Colombian pesos

Revenue information is based on customer location.

There is no customer in the Group who generates more than 10% of its revenue.

## Non-current assets

Country	2019	2018
Colombia (country of residence of EPM)	32,823,008	31,381,539
Chile	3,074,627	3,574,900
Panama	2,365,809	2,292,551
Guatemala	2,367,158	2,218,423
El Salvador	348,644	347,581
Mexico	12,627	20,975
<b>Total countries other than Colombia</b>	<b>8,168,865</b>	<b>8,454,430</b>
<b>Total non-current assets</b>	<b>40,991,873</b>	<b>39,835,969</b>

Figures stated in millions of Colombian pesos

For these purposes, non-current assets include property, plant and equipment, intangible assets and investment property including assets from the acquisition of subsidiaries and goodwill.

## Note 47. Events after the Reporting Period

### Main impacts COVID19, oil trade war and representative market rate (TRM):

Following the situation caused by the coronavirus, the oil trade war and representative market exchange rate (TRM, for its Spanish initials), the EPM Group is assessing the financial impacts considering changes in the macroeconomic scenario:

TRM is identified as a variable that presents a high risk in its behaviour mainly due to:

- Lower oil prices in the face of lower global demand due to the impact of the Coronavirus on value chains and the disagreement between OPEC and Russia on the possibility of prolonging the agreement to cut oil production, with the risk of a possible price war. The Markets Directorate estimates a downward trend in the next four years with an average of 42.85 USD/barrel.
- Increased risk aversion in the global financial markets represented by the spread of COVID-19 (coronavirus). If the global volatility scenario continues, there will be a strong demand for safe haven assets such as US Dollar.
- Risk of downward revision of investment grade for Colombia, associated with the fall in oil prices due to higher current account and fiscal.
- Geopolitical and commercial tension.
- Financial market volatility associated with the U.S. election process in the second half of 2020.

For the purposes of financial results, there is a natural hedge, since the Group has companies whose functional currency is the dollar.

As for profit or loss in Colombia, the greatest risk is in the difference in foreign exchange rate for the debt contracted in dollars, which could generate an increase in the debt balances.

EPM's Electricity Generation business does not foresee major impacts, as it is highly contracted in 2020 and in the following years, its income will not significantly depend on what happens in the stock market. In addition, many of the effects that push down revenues on the stock market are mitigated by countervailing economic effects.

While the effect of the increase in TRM could increase the cost of inputs and investments, measures to eliminate tariffs for some products associated with the provision of public services could offset this increase.

Likewise, the CPI is another of the variables that are mainly impacted by:

- Stress caused by high depreciation that is transferred to prices.
- Increase in the price of raw materials from China due to shortages.
- Price indexation due to wage increases.
- Supply shocks that generate higher than expected increases in agricultural prices. If the annual devaluation is maintained, greater exchange rate pass-through strains are expected due to the increase in the price of imported goods.
- Increased cost of raw materials from China and other trading partners affected by the pandemic.
- Supply shocks associated with a shortage of supplies due to the effects on production chains of the coronavirus, which will push up food prices.
- The expectations of economic agents are no longer anchored to the goal.
- The effect of tariff indexation represents an upward risk for the basket of non-tradable and regulated services.

What is expected to impact this variable is associated with the main components of the income, the commercial operation and the investment plan for all businesses, as well as the costs and expenses of operation, maintenance and management that depend on the behavior of this variable.



In addition to the macroeconomic scenario, the government has been announcing some measures that will directly impact companies in Colombia, among them we have identified the following:

- The demand for reconnections to users in energy and water utilities.
- The non-application of real indexation to the tariff in the Water business.
- Generalized social isolation policies.
- Elimination of tariffs for certain goods and materials associated with the provision of public utilities.

In the framework of the COVID-19 crisis, the EPM Group aims to mitigate the impact on the Group's finances through measures to address the crisis such as, reviewing the investment plan for the year 2020 in order to identify what can be optimized or postponed, without putting at risk the provision of public utilities. Additionally, a thorough review of the business' operating costs is initiated to identify what can be optimized without putting the operation at risk.

In addition, in order to ensure liquidity, the Group currently has approved credit lines and quotas, which would be managed for disbursement if necessary.

#### **Award of one of the two companies resulting from the exit of *Electricaribe* from the market:**

On 20 March 2020, the EPM Group was awarded to operate CaribeMar, one of the two auction processes in which the markets of Electricaribe were separated by the National Government.

As the operator of the electrical energy utility in the Caribbean Region, the Group is committed to growth with sustainability in the electricity sale and distribution market in Colombia, as a contribution to the growth of the country and the quality of life of the inhabitants of the departments of Bolívar, Cesar, Córdoba and Sucre. When it starts operating in the Caribbean Region, EPM Group will reach a 35% share in the energy distribution and sale market in Colombia, extending its services to a population of 19 million people. CaribeMar will have 1.5 million new customers in the Caribbean Region in the coming months. This new business will include investments of around \$4,000 billion over the next five years.

After the award of CaribeMar, the National Government must close the financial transaction to purchase 100% of the shares, incorporate the new company and prepare and deliver the assets and liabilities included. Only, until that moment, EPM Group will take control of the operation.

With this operation, the Group becomes the main operator of the national electricity system, both in electricity distribution and sales and assumes the challenge and commitment to contribute to the quality of life of the community, through the improvement of the energy utility, the care for the environment and the contribution to the growth and competitiveness of the Caribbean Region.

After the date of presentation of the separate financial statements and before the date of authorization of their publication, no other relevant facts were presented that would imply adjustments to the figures.



# Grupo EPM's certifications

## Certificación del Representante Legal y del Contador de EPM

26 de marzo de 2020

**A la Junta Directiva de  
Empresas Públicas de Medellín E.S.P.**


Los suscritos, en sus calidades de Representante Legal y Contador de Empresas Públicas de Medellín E.S.P., certificamos que los saldos de los Estados financieros consolidados de Empresas Públicas de Medellín E.S.P. y subsidiarias a 31 de diciembre de 2019 y 2018, fueron tomados fielmente de los libros de contabilidad, los cuales están elaborados de conformidad con las Normas de contabilidad y de información financiera aceptadas en Colombia (NCIF) y adoptadas por la Contaduría General de la Nación a través de la Resolución 037 de 2017 y Resolución 049 de 2019. Estas normas de información contable y financiera se basan en las Normas Internacionales de Información Financiera adoptadas en Colombia y emitidas por el Consejo de Normas Internacionales de Contabilidad (International Accounting Standards Board, IASB), así como las interpretaciones emitidas por el Comité de Interpretaciones.

Se hace constar que, para su elaboración se verificaron las afirmaciones contenidas en los mencionados Estados financieros consolidados, con relación a:

- a) Todos los hechos económicos que han ocurrido durante el periodo de corte se han registrado adecuadamente en atención a su debido reconocimiento en las cantidades y cuentas apropiadas, y medidos por los importes razonables y revelados adecuadamente.
- b) Que los hechos económicos se clasifican, presentan y revelan conforme a lo establecido en las Normas de contabilidad y de información financiera aceptadas en Colombia (NCIF) y adoptadas por la Contaduría General de la Nación a través de la Resolución 037 de 2017 y Resolución 049 de 2019.
- c) Todos los activos, pasivos y patrimonio neto de los Estados financieros consolidados representan la existencia de bienes, derechos y obligaciones a cargo de Empresas Públicas de Medellín E.S.P. y subsidiarias y se han valorado por los importes apropiados.
- d) Las revelaciones o notas contables están elaboradas con claridad y conforme a las Normas de contabilidad y de información financiera aceptadas en Colombia (NCIF) y adoptadas por la Contaduría General de la Nación a través de la Resolución 037 de 2017 y Resolución 049 de 2019.

Los estados financieros consolidados no contienen vicios, imprecisiones o errores que impidan conocer la verdadera situación financiera y el rendimiento financiero de la Entidad y sus subsidiarias.

  
**Álvaro Guillermo Rendón López**  
Representante Legal

  
**John Jaime Rodríguez Sosa**  
Contador Público  
T.P. 144842-T

*estamos ahí.*



## **INFORME DE LOS AUDITORES INDEPENDIENTES**

Señores Junta Directiva  
Empresas Públicas de Medellín E.S.P.:

### **Opinión**

Hemos auditado los estados financieros consolidados de Empresas Públicas de Medellín E.S.P. (el Grupo), los cuales comprenden el estado consolidado de situación financiera al 31 de diciembre de 2019, y los estados consolidados de resultados y otro resultado integral, de cambios en el patrimonio y de flujos de efectivo por el año que terminó en esa fecha y sus respectivas notas, que incluyen las políticas contables significativas y otra información explicativa.

En nuestra opinión, los estados financieros consolidados que se mencionan y adjuntos a este informe, presentan razonablemente, en todos los aspectos de importancia material, la situación financiera consolidada del Grupo al 31 de diciembre de 2019, los resultados consolidados de sus operaciones y sus flujos consolidados de efectivo por el año que terminó en esa fecha, de acuerdo con Normas de Contabilidad y de Información Financiera aceptadas en Colombia adoptadas por la Contaduría General de la Nación mediante resolución 037 de 2017 y resolución 049 de 2019, aplicadas de manera uniforme con el año anterior, excepto por la aplicación de la NIIF 16 – Arrendamientos.

### **Bases para la opinión**

Efectuamos nuestra auditoría de conformidad con las Normas Internacionales de Auditoría aceptadas en Colombia (NIAs). Nuestras responsabilidades de acuerdo con esas normas son descritas en la sección “Responsabilidades de los auditores en relación con la auditoría de los estados financieros consolidados” de nuestro informe. Somos independientes con respecto al Grupo, de acuerdo con el Código de Ética para profesionales de la Contabilidad emitido por el Consejo de Normas Internacionales de Ética para Contadores (Código IESBA - International Ethics Standards Board for Accountants, por sus siglas en inglés) incluido en las Normas de Aseguramiento de la Información aceptadas en Colombia junto con los requerimientos éticos que son relevantes para nuestra auditoría de los estados financieros consolidados establecidos en Colombia y hemos cumplido con nuestras otras responsabilidades éticas de acuerdo con estos requerimientos y el Código IESBA mencionado. Consideramos que la evidencia de auditoría que hemos obtenido es suficiente y apropiada para fundamentar nuestra opinión.

### **Párrafo de énfasis**

Llamamos la atención sobre la nota 4 a los estados financieros separados, la cual describe los eventos que ocurrieron en el Proyecto Hidroeléctrico Ituango y su impacto en los estados financieros. Las causas fundamentales de los eventos mencionados aún están siendo evaluadas por la Compañía y por los organismos de control y vigilancia pertinentes, por lo cual el resultado final no puede determinarse actualmente y en consecuencia no se ha previsto ningún efecto



adicional sobre los estados financieros separados de la Compañía. Nuestra opinión no es modificada en relación con este asunto.

### Asuntos Clave de Auditoría

Asuntos clave de auditoría son aquellos que, según nuestro juicio profesional, fueron de la mayor importancia en la auditoría de los estados financieros consolidados del periodo corriente.

Estos asuntos fueron abordados en el contexto de nuestra auditoría de los estados financieros consolidados como un todo y al formarnos nuestra opinión al respecto no proporcionamos una opinión separada sobre estos asuntos.

<b>Evaluación del Deterioro de la Unidad Generadora de Efectivo- Generación de Energía (Ver notas 2.24 y 8.2 de los estados financieros consolidados)</b>	
<b>Asunto clave de auditoría</b>	<b>Como se abordó este asunto clave de auditoría</b>
<p>El estado de situación financiera consolidado del Grupo incluye en el activo no corriente propiedades, planta y equipo, neto e Intangibles por \$17.880.484 millones de pesos asociados a la unidad generadora de efectivo (UGE) de Generación de Energía de la Matriz.</p> <p>La evaluación del deterioro de la UGE es calculada por la Dirección de Planeación Financiera mediante el aplicativo HSF- Oracle configurado; la información base para la determinación de las proyecciones financieras de los negocios es aprobada por la respectiva Vicepresidencia y anualmente se lleva a la Junta directiva para ratificación. Al cierre del año se genera el reporte de Valor en Uso de los activos no financieros y se compara con el valor en libros de la UGE para determinar si se debe reconocer un deterioro en los estados financieros.</p> <p>Consideré la evaluación de la Unidad Generadora de Efectivo – Generación de Energía como un asunto clave de auditoría, porque involucra elementos de juicio complejos por parte de la Matriz para la evaluación del deterioro, y hubo juicio significativo y un esfuerzo de auditoría para evaluar la evidencia de auditoría obtenida</p>	<p>Nuestros procedimientos de auditoría para determinar la correcta evaluación del deterioro de la unidad generadora de efectivo - Generación de Energía incluyeron, entre otros, los siguientes:</p> <ul style="list-style-type: none"> <li>- Verificación de la aprobación de las cifras financieras proyectadas por el Vicepresidente de cada negocio.</li> <li>- Revisión de la aprobación por parte de la Junta Directiva de las proyecciones financieras de los negocios.</li> <li>- Evaluación del diseño, la implementación y efectividad operativa de los controles clave establecidos por la Matriz para determinar los supuestos clave utilizados en la prueba de deterioro, con el involucramiento de profesionales con experiencia y conocimiento en valoración. Esto incluyó controles relacionados con la determinación de las hipótesis y variables macroeconómicas utilizadas para la estimación de las tasas de descuento aplicadas en la determinación del valor recuperable de la unidad generadora de efectivo.</li> <li>- Los profesionales con conocimiento en valoración nos asistieron en (i) evaluar la metodología de valor en uso; (ii) efectuar</li> </ul>



<p>relacionada con (i) la metodología de valor en uso; (ii) los cálculos sobre el valor de los activos y (iii) los principales datos de entrada y supuestos utilizados en el modelo tales como: (1) cifras históricas base para la proyección; (2) cifras proyectadas sobre cambios en volúmenes, precios y márgenes; (3) indemnización por parte de las aseguradoras (4) tasas aplicadas para descontar los flujos de efectivo futuros y (5) gradiente tasa de crecimiento a perpetuidad.</p>	<p>recálculos independientes; y (iii) analizar y evaluar los principales datos de entrada utilizados en el modelo tales como: (1) cifras históricas base para la proyección; (2) variables de cambios en volúmenes, precios y márgenes; (3) sensibilizar el modelo de la indemnización por parte de las aseguradoras, eliminando los montos estimados por recibir en el año 2021, (4) evaluar las tasas aplicadas para descontar los flujos de efectivo futuros, (5) el rango de tasas de descuento para la unidad generadora de efectivo con parámetros de mercado y (6) retar el gradiente tasa de crecimiento a perpetuidad comparando las tasas utilizadas por la Matriz con fuentes públicas de mercado.</p>
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**Evaluación de la suficiencia de las Provisiones por Litigios y adecuada evaluación de los pasivos contingentes (Ver notas 27.1.3 y 27.3 de los estados financieros consolidados)**

<b>Asunto clave de auditoría</b>	<b>Como se abordó este asunto clave de auditoría</b>
<p>El estado de situación financiera consolidado de la Compañía incluye provisiones por Litigios por valor de \$ 275.820 millones de pesos y pasivos contingentes por \$1.701.087 millones de pesos.</p> <p>La valoración de estas provisiones y pasivos contingentes requiere de la realización por parte del Grupo, de estimaciones complejas, así como la aplicación de determinados juicios e hipótesis sobre la probabilidad de fallo desfavorable del proceso legal y con ello determinar y reconocer la obligación de pago, la estimación del valor a pagar con base en las pretensiones de la demanda y la fecha estimada de pago.</p> <p>Hemos considerado la evaluación de la suficiencia de las provisiones para litigios y contingencias como un asunto clave de auditoría debido a la complejidad en la asignación del valor a las hipótesis clave consideradas y porque la valoración de tales asunciones podría tener un impacto material en los estados financieros consolidados de situación financiera y de resultados y otro</p>	<p>Nuestros procedimientos de auditoría para la evaluación de la suficiencia de las provisiones sobre los pasivos contingencias y por litigios incluyeron, entre otros, los siguientes:</p> <ul style="list-style-type: none"> <li>- Entendimiento de los procesos establecidos por el Grupo para la estimación de las provisiones y pasivos contingentes incluyendo la evaluación del diseño e implementación y efectividad de los controles relevantes, lo que incluyó controles relacionados con: definición de probabilidad, clasificación en laborales, administrativos, civiles, y fiscales, promedio de duración, aplicación de jurisprudencia y uniformidad en criterio de estimación de valor.</li> <li>- Lectura de las actas de Junta Directiva para verificar el seguimiento y aprobación de las decisiones de la Dirección Jurídica sobre los procesos del Grupo.</li> <li>- Obtención de la relación de litigios elaborada por la Dirección Jurídica del Grupo y verificación de los importes</li> </ul>



<p>resultado integral.</p>	<p>registrados y revelados en los estados financieros consolidados.</p> <ul style="list-style-type: none"> <li>- Obtención de confirmaciones de los asesores legales internos y externos del Grupo sobre las probabilidades de fallo y el estado actual del proceso.</li> <li>- Selección de una muestra de los principales litigios para analizar la documentación soporte con el involucramiento de nuestros profesionales con experiencia y conocimiento en derecho laboral y administrativo que nos asistieron en:             <ul style="list-style-type: none"> <li>• Análisis legal de los documentos soportes de las demandas, la probabilidad de fallo en contra indicada por el Grupo y el monto estimado.</li> <li>• Análisis de la posibilidad para el Grupo de interponer un recurso en contra de la decisión judicial, según la situación actual de cada uno de los casos seleccionados.</li> </ul> </li> <li>- Revisión de las revelaciones incluidas en las notas a los estados financieros consolidados de conformidad con el marco normativo de información financiera aplicable.</li> </ul>
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**Responsabilidad de la administración y de los encargados del gobierno corporativo del Grupo en relación con los estados financieros consolidados.**

La administración es responsable por la preparación y presentación razonable de estos estados financieros consolidados de acuerdo de acuerdo con Normas de Contabilidad y de información Financiera aceptadas en Colombia adoptadas por la Contaduría General de la Nación mediante resolución 037 de 2017 y resolución 049 de 2019. Esta responsabilidad incluye: diseñar, implementar y mantener el control interno que la administración considere necesario para permitir la preparación de estados financieros consolidados libres de errores de importancia material, bien



sea por fraude o error; seleccionar y aplicar las políticas contables apropiadas, así como establecer los estimados contables razonables en las circunstancias.

En la preparación de los estados financieros consolidados, la administración es responsable por la evaluación de la habilidad del Grupo para continuar como un negocio en marcha, de revelar, según sea aplicable, asuntos relacionados con la continuidad de la misma y de usar la base contable de negocio en marcha a menos que la administración pretenda liquidar el Grupo o cesar sus operaciones, o bien no exista otra alternativa más realista que proceder de una de estas formas.

Los encargados del gobierno corporativo son responsables por la supervisión del proceso de reportes de información financiera del Grupo.

### **Responsabilidades de los auditores en relación con la auditoría de los estados financieros consolidados.**

Nuestros objetivos son obtener una seguridad razonable sobre si los estados financieros consolidados considerados como un todo, están libres de errores de importancia material bien sea por fraude o error, y emitir un informe de auditoría que incluya nuestra opinión. Seguridad razonable significa un alto nivel de aseguramiento, pero no es una garantía de que una auditoría efectuada de acuerdo con NIAs siempre detectará un error material, cuando este exista. Los errores pueden surgir debido a fraude o error y son considerados materiales si, individualmente o en agregado, se podría razonablemente esperar que influyan en las decisiones económicas de los usuarios, tomadas sobre la base de estos estados financieros consolidados.

Como parte de una auditoría efectuada de acuerdo con NIAs, ejercemos nuestro juicio profesional y mantenemos escepticismo profesional durante la auditoría. También:

- Identificamos y evaluamos los riesgos de error material en los estados financieros consolidados, bien sea por fraude o error, diseñamos y realizamos procedimientos de auditoría en respuesta a estos riesgos y obtenemos evidencia de auditoría que sea suficiente y apropiada para fundamentar nuestra opinión. El riesgo de no detectar un error material resultante de fraude es mayor que aquel que surge de un error, debido a que el fraude puede involucrar colusión, falsificación, omisiones intencionales, representaciones engañosas o la anulación o sobrepaso del control interno.
- Obtenemos un entendimiento del control interno relevante para la auditoría con el objetivo de diseñar procedimientos de auditoría que sean apropiados en las circunstancias, pero no con el propósito de expresar una opinión sobre la efectividad del control interno de la entidad.
- Evaluamos lo apropiado de las políticas contables utilizadas y la razonabilidad de los estimados contables y de las revelaciones relacionadas, realizadas por la administración.
- Concluimos sobre lo adecuado del uso de la hipótesis de negocio en marcha por parte de la administración y, basado en la evidencia de auditoría obtenida, sobre si existe o no una incertidumbre material relacionada con eventos o condiciones que puedan indicar dudas significativas sobre la habilidad del Grupo para continuar como negocio en marcha. Si concluimos que existe una incertidumbre material, debemos llamar la atención en nuestro informe a la revelación que describa esta situación en los estados financieros consolidados o,





si esta revelación es inadecuada, debemos modificar nuestra opinión. Nuestras conclusiones están basadas en la evidencia de auditoría obtenida hasta la fecha de nuestro informe. No obstante, eventos o condiciones futuras pueden causar que el Grupo deje de operar como un negocio en marcha.

- Evaluamos la presentación general, estructura y contenido de los estados financieros consolidados, incluyendo las revelaciones, y si los estados financieros consolidados presentan las transacciones y eventos subyacentes para lograr una presentación razonable.
- Obtenemos evidencia de auditoría suficiente y apropiada respecto de la información financiera de las entidades o actividades de negocios dentro del Grupo para expresar nuestra opinión sobre los estados financieros consolidados. Somos responsables por la dirección, supervisión y realización de la auditoría del Grupo. Somos los únicos responsables por nuestra opinión de auditoría.

Comunicamos a los encargados del gobierno del Grupo, entre otros asuntos, el alcance planeado y la oportunidad para la auditoría, así como los hallazgos de auditoría significativos, incluyendo cualquier deficiencia significativa en el control interno que identificamos durante nuestra auditoría.

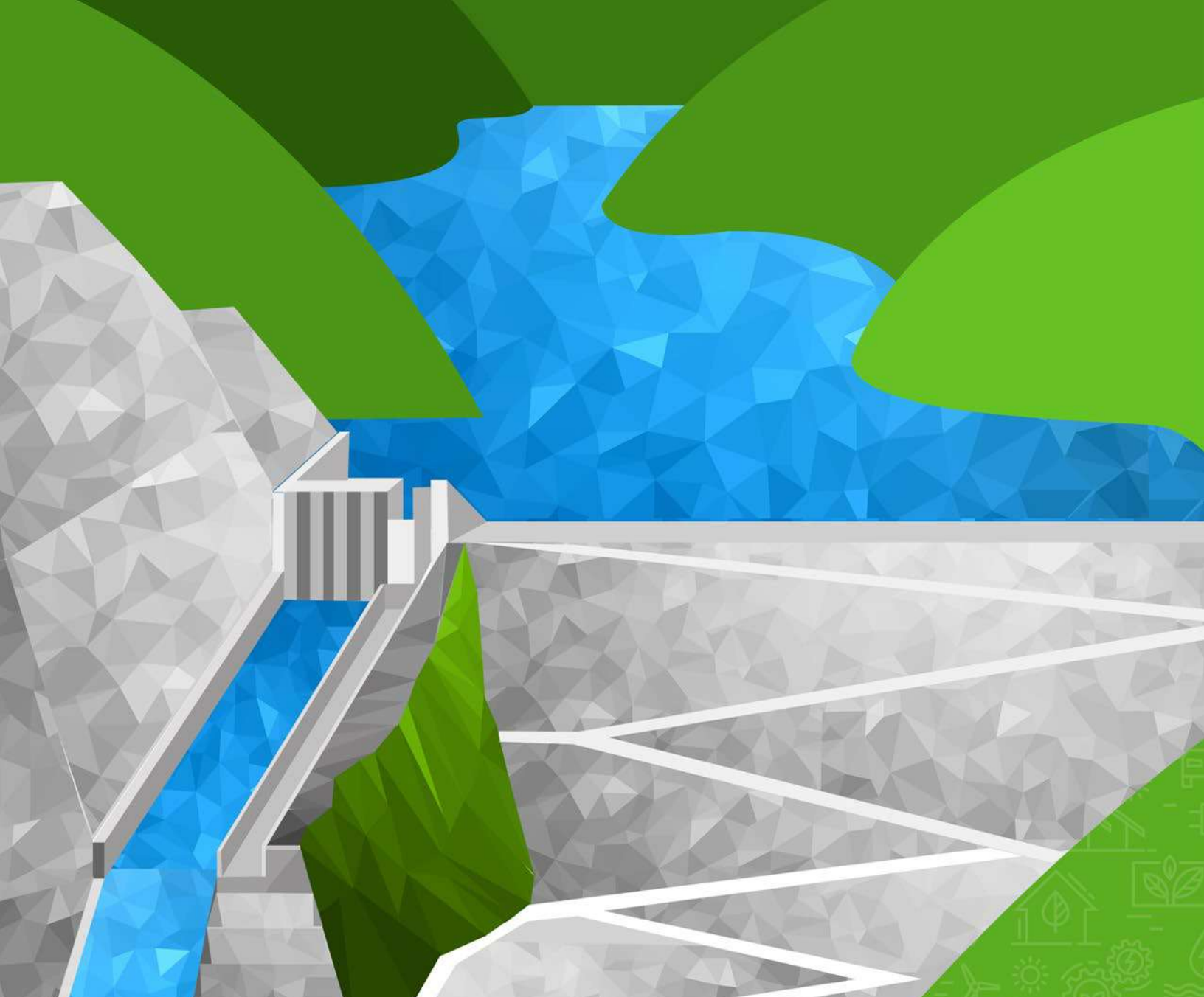
También proporcionamos a los encargados del gobierno corporativo la confirmación de que he cumplido con los requerimientos éticos relevantes de independencia y que les hemos comunicado todas las relaciones y otros asuntos que razonablemente se pueda considerar que influyen en nuestra independencia y, cuando corresponda, las salvaguardas relacionadas.

A partir de los asuntos comunicados con los encargados del gobierno corporativo, determinamos los asuntos que fueron de la mayor importancia en la auditoría de los estados financieros consolidados del período actual y, por lo tanto, son los asuntos clave de auditoría. Describimos estos asuntos en nuestro informe de los auditores a menos que la ley o regulación impida la divulgación pública sobre el asunto o cuando, en circunstancias extremadamente excepcionales, determinamos que un asunto no debe ser comunicado en nuestro informe porque las consecuencias adversas de hacerlo serían razonablemente mayores que los beneficios al interés público de tal comunicación.

A handwritten signature in black ink, appearing to read 'Gonzalo Ochoa Ruiz'.

Gonzalo Alonso Ochoa Ruiz  
Socio  
26 de marzo de 2020  
Medellín

KPMG S.A.S.



**Ituango**

**Grupo.epm**

# 1 Introduction

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The Ituango hydroelectric project is a vital work for Colombians. As we will explain throughout this report, we have made progress regarding technical, social, and environmental aspects, in order to ensure, above all, the protection of the communities surrounding the project and to open spaces for the country to be clear about what we are doing and achieved in 2019.

This progress has been confirmed by nearly four thousand people from all social and academic sectors, businesspeople, councilors, mayors, journalists, community leaders, among others—who, over the past year and a half, have visited the project. This contingency has taught the company multiple lessons, and, in each of them, the spirit that has always defined us prevails: serving people, acting responsibly, and making the most of all the experience and knowledge of our people to provide solutions. We have always maintained our commitment.

In 2019, we managed to close the gates through which water was getting inside the powerhouse. That is how we started draining and restoring this vital section of the project, without, of course, leaving aside the social and environmental actions that allowed mitigating the effects on the community and its environment.

In fact, this significant effort, whose purpose was, in technical and social terms, to guarantee the security of the communities in the area, the one that led the National System for Disaster Risk Management (SNGRD, as per its acronym in Spanish) to change the alert status, from red to orange, last July in the towns located downstream of the works.

We also highlight the start of full operation of the spillway, as well as the completion of the dam works, on whose top we recently delivered the road that allows people and vehicles to circulate, thus normalizing mobility in the area.

Another aspect that must be stressed is that the company successfully closed the second gate of the auxiliary diversion gallery after more than nine months of preparation and after having closed the first gate on May 29. With its two gates duly closed, the pre-plug of the auxiliary diversion gallery further reduces the risks for communities and means that the recovery process of the Ituango hydroelectric project continues, as this allows the entry of personnel, machinery, and other resources necessary to build the final concrete plug during the first half of 2020.

This project is mainly characterized by, beyond being an infrastructure project, becoming a transforming axis of an entire region. This is observed in the positive changes that the 12 municipalities in the area of influence have undergone. These municipalities, thanks to the project and from its social and environmental perspective, are starting to have a new dynamics with more opportunities for economic and social development.

Colombia needs the Ituango hydroelectric project—which has become the greatest challenge EPM has faced throughout its business history. This future hydroelectric power station will account for 17% of Colombia's power generation, using clean, reliable, safe, and low-cost technology. During its implementation—and in the future—, it contributes to compliance with the Sustainable Development Goals, mainly those related to affordable and clean energy, decent work and economic growth, and climate action and life on land, as well as to alliances to achieve them.

This 2019 report expresses all that effort made by people, inhabitants in the area of influence, contractors, and all EPM's staff, who have focused on making this great dream of our company and our country come true.

Nowadays, sustainability is the great focus of companies seeking a positive balance in social, environmental, and economic terms; and EPM is moving in this sphere. It is a public utility company that conceives its higher purpose in terms of "contributing to the harmony of life for a better world."

The Ituango hydroelectric project is, indeed, at the center of this dynamics. It represents an individual at the service of building the world that we all want: a world where life, equity, transparency, permanent innovation, dedication, and commitment are the axis of our present and our future.

## 2 General considerations of the Ituango hydroelectric project

The Ituango hydroelectric project is located along the Cauca River, in the so-called “Cañón del Cauca”, a section in which such river, which originates in southern Colombia, runs through deep canyons and descends about 800 meters.

The Cauca River, which is 1,350 km long, is one of the most important in the country. Its basin of about 37,800 km<sup>2</sup> passes through more than 150 municipalities in Colombia (with a population of around 10 million people). Such river flows into the Magdalena River, which, in turn, runs into the Caribbean Sea in northern Colombia.

The project is located in the northwest part of the department of Antioquia, approximately 170 km from the city of Medellín. It occupies properties in the municipalities of Ituango and Briceño, where the main works are situated, and of Santa Fe de Antioquia, Buriticá, Peque, Liborina, Sabanalarga, Toledo, Olaya, San Andrés de Cuerquia, Valdivia, and Yarumal, which provide lands for the different works of the project. The dam is located about 8 km downstream of the Pescadero bridge, on the Cauca River, on the road to Ituango, immediately upstream of the part where the Ituango River flows into the Cauca River. At the project site, the river has an average flow of 1,010 m<sup>3</sup>/s.

Access to the project area is possible through two main routes. The first one starts in the Troncal Occidental road—which connects Medellín with Cartagena on the Atlantic Coast—, crosses the municipality of San Andrés de Cuerquia and the small town of El Valle, which is part of the municipality of Toledo, near the Pescadero bridge, where the construction site can be accessed through a 13-km road. The second one is part of the works executed by the project and begins in the small town of Puerto Valdivia in the municipality of Valdivia, on the Troncal Occidental road, with a route that runs along 38 km on the left bank of the Cauca River.

The project consists of a dam that is 225 m high and with a volume of 20 million m<sup>3</sup> and an underground power station with a maximum installed capacity of 2,400 MW and 13,930 GWh of average annual energy. It also includes some works for the temporary diversion of the Cauca River, on its right bank. These works consist of two tunnels: an open channel spillway, controlled by five gates, to evacuate floods, and an intermediate discharge tunnel to control the reservoir water level and ensure discharge downstream of the dam, of a minimum flow—as required by the environmental authority— of 21 m<sup>3</sup>/s.

The power plant's works, located in the rock mass of the right bank, comprise the main cavern of the powerhouse that will host eight units of 300 MW of nominal power each, with Francis-type turbines, synchronous generators of vertical axis, electromechanical auxiliary and control equipment, control room, assembly room, and office buildings. Upstream the main cavern, we find the transformer cavern that houses banks of three single-phase transformers per group; and downstream, two beacon caverns, one for every four units, which will return the water to the Cauca River through two discharge tunnels about 1,400 m down from the catchment systems.

Each generating unit is fed by a headrace tunnel, which starts at an excavation on the right bank, where the eight catchment systems will be located. Such tunnels have closing gates installed in vertical shafts near the catchment systems. The main substation will be situated outside. It is a 500 kV encapsulated substation that will receive the insulated power cables through an inclined shaft. Other related works complement the project, such as the access tunnel to the powerhouse, the ventilation tunnel, the emergency exit, surge tank air shafts, smoke extraction shafts, as well as the following infrastructure works: access roads, camps, transmission lines, and the construction substation.

To learn more about the project, click here:

<https://www.epm.com.co/site/Portals/0/documentos/ituango/Brochure-proyecto-Ituango.pdf>

## 2.1 Progress on the environmental management plan

### 2.1.1 Progress on the physical component

Every environmental activity prior to filling was under implementation, in accordance to the provisions of the Environmental Management Plan (EMP) authorized by the National Environmental Licensing Authority (ANLA, as per its acronym in Spanish). A diagram of such plan concerning its physical component is presented below.



*Program for the management of the physical component.*

### 2.1.1.1 Program for the management of atmospheric quality

The purpose of executing the activities of this program is to reduce the impact on air quality through actions such as:

- Watering roads and exposed areas using tanks and sprinklers.
- Covering dump trucks with tarps.
- Controlling emissions in crushing, concrete, and asphalt plants.
- Covering and watering places where construction stone materials are stored.



Air quality monitoring



Particulate matter handling in crusher



Road watering

In addition, air quality is periodically monitored by following up variables such as particulate matter, gases, noise, and odors in the area of direct influence of the project.



### 2.1.1.2 Program for the management of excavation materials

The purpose of executing the activities of this program is to avoid and reduce the impact on air quality, water, and soil as a result of the excavations carried out to build the infrastructure required for the project. Different actions are implemented in this program, including:

- Removing materials and properly placing them in disposal areas.
- Forming and compacting materials in disposal areas.
- Executing underground and superficial drainage works.
- Final revegetation of the impacted area.



Construction of underground drainage filters for disposal areas



Sinitavé disposal area. Berm and slope forming and revegetation of upper slopes

### 2.1.1.3 Program for the management of surface water

The purpose of executing the activities of this program is to reduce the impacts that may be generated on water resources through the implementation of different actions such as:

- Gauging water sources.
- Monitoring water use.
- Supervising the operation of water intakes.
- Constructing ditches and canals in disposal roads and areas.

In addition, surface water sources in streams and in the Cauca River (reservoir area and downstream) are monitored permanently.



Sampling of water intended for consumption



Gauging of flow rates caught



Measurement of water quality in the Cauca River



Measurement of water quality in the Cauca River

One of the environmental authority's major concerns is to be able to determine if there is any effect on water quality due to the construction of the reservoir. Thus, in order to calculate such variation, different indices have been used, such as the water quality index (WQI), developed in 1970 by the National Sanitation Foundation (NSF) and widely used around the world.

For optimal conditions, the WQI adopts a maximum value of 100 that decreases as contamination of the water source under study increases, as shown in the following table:

- WQI (Water Quality Index).

### Water quality classification according to the WQI

Index value	Classification	Color
0–25	Very poor quality	Red
26–50	Poor quality	Orange
51–69	Medium quality	Yellow
71–89	Good quality	Green
90–100	Excellent quality	Blue

Based on the above classification, the quality of the water that reaches the tail end of the reservoir (Occidente bridge and Santa María) was determined to be of medium quality (improved by the reservoir). In addition, it is important to highlight that this quality is maintained downstream (Puerto Valdivia).

Moreover, the advisory board of the project highlights and concludes that the water quality of the reservoir continues to behave favorably (even better than predictions). This is demonstrated by the monitoring actions and studies conducted, which reveal that the reservoir has had a good recovery and that variables such as organic material, oxygen profiles, and temperature, indicate the recovery of the water quality of the reservoir, which enables the development of future programs with this surface water source.

#### 2.1.1.4 Program for the management of residential and industrial wastewater

This program seeks to minimize the impact on water as a result of the wastewater discharges by the different facilities of the project, by executing different activities such as:

- Treating residential and industrial wastewater.
- Permanently monitoring discharges and receiving water sources.
- Implementing portable sanitary systems in the work fronts.



Visit of the ANLA to the wastewater systems of the Ituango project camp



Verification in the north upper construction gallery



Residential wastewater treatment plant in Villa Luz camp

### 2.1.1.5 Program for the integrated management of waste

This program seeks to reduce the impact on soil and water quality through activities such as:

- Sorting at the source
- Collection
- Storage
- Final disposal
- Reclamation
- Treatment

Continuous improvement actions were implemented through environmental awareness activities focused on the proper classification of waste, order and cleaning activities, and collection of waste dispersed on some work fronts.

The Bolivia landfill is used for the final and adequate disposal of ordinary waste originated in the project.

With the operation of the reservoir, the waste that reaches the project is considered as nongenerated waste; however, all separation and final disposal or treatment activities are carried out if required.



Labeling and weighing of solid and conventional waste



Impermeabilization of a collection site for hazardous waste



Verification with a checklist of a vehicle transporting hazardous waste

### 2.1.1.6 Program for the management of vehicular traffic impacts

This program seeks to avoid or minimize the possible impact on wild fauna, people, and air quality, associated with the movement of vehicles through the project roads, through different activities such as:

- Training drivers in environmental issues.
- Controlling speed.
- Using signage on roads.
- Executing preventive maintenance tasks.



Signage on roads



Speed control

### 2.1.1.7 Program for the management of construction materials sources

The purpose of executing the activities of this program is to minimize the impact on water, soil, air, and flora. This program focuses on the proper environmental management of areas for the extraction of construction materials. During this period, the exploitation activities were completed in the El Palmar borrow area No. 4, from where the impermeable material for the core of the dam was extracted. There, the following actions were implemented:

- Air quality: watering access roads and exposed areas, and covering vehicles transporting materials with tarps.
- Water quality: implementing controls of rainwater and runoff through drainage systems and their maintenance, and constructing energy dissipation works.
- Closing plan or abandonment: partially and finally forming exposed areas and constructing drainage works in order to improve soil stability, prevent erosion, and mitigate the deterioration impact on landscape.
- Revegetation of the areas where exploitation activities were completed and planting of native tree species in stage 7 of this area.



Panoramic view of stage 7 in the El Palmar borrow area



Construction of drainage works and revegetation in the El Palmar borrow area

### 2.1.1.8 Program for the management of instability and erosion

This program seeks to prevent, avoid, and minimize the impact on soil and water due to erosive or instability processes that may occur during the development of the activities of the project, as well as, in some cases, erosive or instability processes caused by natural phenomena and which may affect the works.

With this purpose in mind, the following activities were executed:

- Treating slopes through works such as formation, drainage, and revegetation.
- Treating areas affected by erosion or instability through formation, polimez drainage, and revegetation works.
- Treating areas with electrowelded mesh and shotcrete, subdrains, and bolt placement.

Additionally, instability and erosion processes were followed-up in the sites that have been periodically monitored and in those generated during the contingency in the area of the reservoir and downstream of the project, on the Puerto Valdivia-Presa road, as well as in the project's works. Where possible, measures to address them are proposed and implemented. In other cases, such as in the reservoir, monitoring tasks are performed while reaching the upper level and the stabilization of the reservoir. Once that is achieved, the corresponding treatment program for the sites that require it will be established and implemented.



Treatments for the stabilization of a slope, through polimez drainage works complemented by revegetation processes



Gabions to control unstable site

### 2.1.1.9 Program for the reservoir filling and the Cauca River diversion

The diversion of the Cauca River began on February 17, 2014, with the blowing of the plugs that protected the branches of the diversion tunnels.

### 2.1.1.10 Program for the management of the reservoir

It is divided into two subprograms. However, none of them had been implemented before the contingency that started on April 28. Below, a general overview of both subprograms is provided.

#### 2.1.1.10.1 Subprogram for the operation of the reservoir

This subprogram is focused on the proper management of the reservoir and its purpose is to avoid discharge impacts downstream, by implementing the operation rule that states that, on a single day (or 24-hour period), the fluctuation of the river flow should be restricted depending on the average flow of the Cauca River on that same day.

#### 2.1.1.10.2 Subprogram for the management of macrophytes and waste

This subprogram aims to control macrophytes (water hyacinth) and floating waste on the reservoir, by properly managing and disposing them. Some of the activities of this program include containment, removal from the reservoir, separation, classification, final disposal, and treatment. This environmental subprogram started to be implemented on May 2018 due to the contingency in the project.

For managing invasive aquatic plants, the company implemented a permanent and combined manual control strategy (in coordination with three Associations of Community Action Boards in the municipalities of Sabanalarga, Ituango, and Liborina, which generated around 53 jobs) and mechanically extracted them using new machinery. This management site is located in the jurisdiction of the municipality of Sabanalarga, and the tasks are carried out by a team of 8 boats, 12 machines, including dump trucks, backhoes, bulldozers and tractors, and personnel dedicated to classifying and disposing floating materials and the water hyacinth.

Based on criteria of accessibility to the reservoir and less critical topography conditions, four sites were selected for the collection of floating materials (macrophytes and other waste): Mameyes property (also called polygon G1P4), El Algarrobo, El Ciruelar, and La Pena. Their preparation involves the following activities and works prior to their operation:

- Removing the vegetal cover and organic soil from the areas intended for the works.
- Manually or mechanically excavating the support soil and cuts, and moving and loading the removed material for adequacy of the areas.
- Hydraulic works for the circulation of surface runoff: constructing perimeter channels and filter systems for managing runoff from rains or dehydration of plant material.





Removal and collection site for plant material, La Pista, in El Ciruelar sector



Adequacy of the La Pista collection site, in el Ciruelar sector

**General treatment:** once the floating material (both macrophytes and floating waste), woods, and other ordinary, special, and usable waste have been extracted, they are disposed of in one of the active collection sites for their proper classification and subsequent handling or delivery for final disposal.

**Procedure for the collection, treatment, and final disposal of macrophytes:** macrophytes are removed using boats with sufficient power to drag them to the shores, from where they are then extracted with backhoes and loaded onto dump trucks to take them to the collection site intended for this type of material.



Macrophytes being dragged



Loading of macrophytes and floating waste

**Control of heavy metals and pesticides in macrophytes:** due to the characteristics of the Cauca River, the reservoir could have toxic elements, such as heavy metals. For this reason, the metal content in macrophytes (e.g., mercury, chromium, cadmium, lead and arsenic, manganese and iron) must be examined through the monitoring of leachate and sludge in the drying beds arranged for this purpose.



Drying beds for macrophyte samples

According to the results obtained during July, September, October, and November 2019, the leachates from water hyacinth at El Ciruelar and Mameyes camps exceed the maximum permissible limits established in Article 13 of Ruling 0631 of 2015 (manufacture of fertilizers and inorganic nitrogen compounds), with respect to the sulfides parameter. According to the results obtained during July, August, September, and October 2019, the substrate of the water hyacinth at El Ciruelar and Mameyes camps are not considered hazardous waste because they comply with the maximum permissible limits established in Decree 4741 of 2005.

**Site and process for the collection of macrophytes:** once the material is extracted, it is temporarily collected in a section within each proposed collection site. There, the extracted biomass is deposited and a classification and sorting of other non-plant waste is carried out.



Classification of macrophytes and floating waste



Collection of macrophytes on site

**Biomass treatment:** the composting process is only carried out if the macrophytes do not contain heavy metals or other substances that would classify them as hazardous waste. If macrophytes do not contain dangerous elements, the extracted biomass can be reclaimed through processes such as composting or direct application, using the mulching method, to soils lacking organic soil and which are part of the reservoir's peripheral offset lands.

**Final disposal of macrophytes:** it is necessary to make an analysis of the plant material resulting from the extraction, since these plants have the capacity to absorb elements from their aquatic environment, especially organic components, nutrients, and heavy metals. This analysis should focus on determining the levels of harmful pollutants.

Decomposing macrophytes are reincorporated into the soil. In addition, loose materials are removed from low slopes and water is controlled, which is a result of their degradation. Sometimes they are used for the restoration of degraded soils.

The management of floating waste not generated by the Ituango hydroelectric project is part of the environmental management described in this document. The records of floating materials recovered to date in the Ituango reservoir indicate a monthly average of  $7,860 \text{ m}^3 (\pm 2,534 \text{ m}^3)$ , from about 150 municipalities that form the upper and middle basins of the Cauca River. The procedure for collection and final disposal is described below.

**a. Sites and process for collecting floating waste:**

Once the floating material is extracted and collected from the reservoir, it is classified, sorted, and stored in a temporary site for later disposal, as established in the Environmental Management Plan (EMP) for integrated waste management.



Waste collection site

Round timber such as medium and large logs that can be reused as firewood, stakes for log booms, planks, or other purposes, are left to dry in a protected area before use or permanent storage.



Wood reclamation

Waste materials that do not meet the above requirements, i.e. that are too thin, decomposed, etc., are incorporated into the soil and their decomposition is aided by cutting them up with a chainsaw.

**b. Final disposal and reclamation of floating waste:**

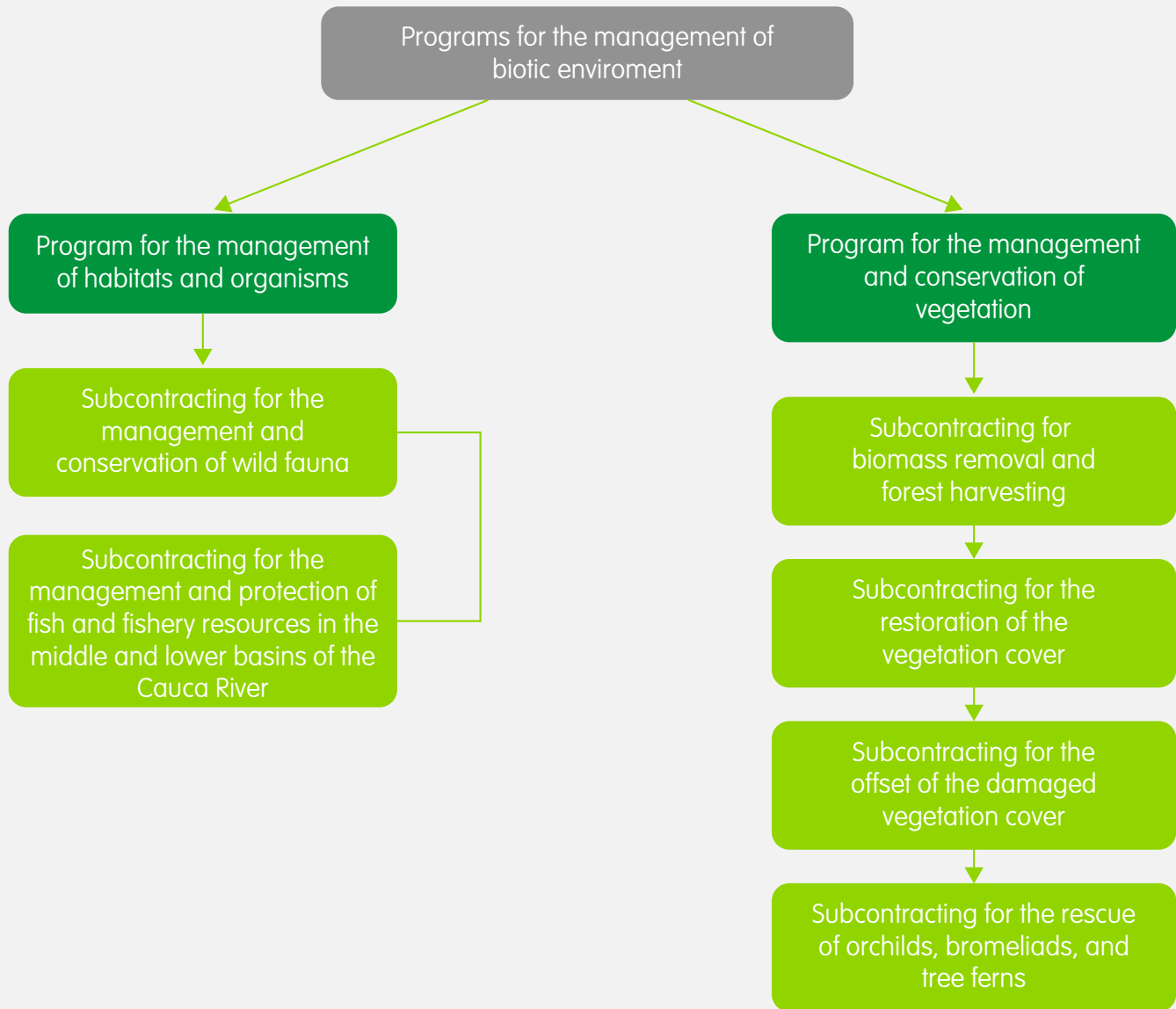
The final disposal of extracted waste is carried out in accordance with the provisions of the EMP for integrated waste management. This includes waste classified as biodegradable (roundwood and chipped wood) and recyclable (plastic, metals, cans, and glass, etc.) that can be used by communities in accordance with the line of productive development included in the Project for the Engagement with the Regional Development, in the framework of the Program for the Project-Region Integration.

The reservoir of the Ituango hydroelectric project will be 78 kilometers long and will occupy an area of 3,800 ha at its maximum capacity.

At present, it covers an area of 66 kilometers and occupies approximately 3,220 ha. In 2019, as a result of the floods of the Cauca River, the floating materials and water hyacinth covered a maximum of 260 ha which is equivalent to 8% of the area of the reservoir.

Monitoring of the Cauca River quality, which since 2012 is being carried out by the Ituango hydroelectric project, indicates that to date there are no significant changes in the physicochemical parameters of the body of water, nor in the ecosystem as a result of the partial cover of water hyacinth in the reservoir.

## 2.1.2 Progress in the biotic environment



*Biotic environment program.*

### 2.1.2.1 Program for the management of habitats and organisms

It is divided into two subprograms.

#### 2.1.2.1.1 Subprogram for the management and conservation of wild fauna

This program seeks to reduce the impact generated to the wild fauna, with the development of the following activities:

- Preventive signage on the crossing of wild fauna on the roads.
- Actions to chase away, rescue, and relocate the terrestrial fauna affected by the construction of works, the diversion of the Cauca River, and the filling of the reservoir.
- Construction and operation of wild fauna care and assessment centers (CAC) (one permanent and some mobile).
- Preparation of population studies of vulnerable wild fauna species.



Maintenance of preventive signage



Admission of *Didelphis marsupialis* to the Wild Fauna CAC of the Ituango hydroelectric project



Relocation of *Bothrops asper* snake

During 2019, chasing away, controlled dispersion, rescue and release of wildlife continued on the work fronts, such as roads and main works. Individuals affected by project activities are cared for at CAC. In the project's offset areas, activities are focused on monitoring and tracking species with high conservation value.

In relation to avifauna, in 2019 the monitoring and tracking of focal bird species began. This study will be carried out during three years and will provide information on the status of the populations of focal species and the design and implementation of measures for their conservation. Some of the species assessed include *Hypopyrrhus pyrohypogaster* (red-bellied grackle), *Thryophilus sernai* (Antioquia wren), *Ara militaris* (military macaw), and *Clyctantes alixii* (recurve-billed bushbird), among others.

In order to determine the current status of wildlife populations in the project's offset areas, specific samplings of birds, mammals, reptiles, and amphibians are implemented in the permanent plots used for vegetation and landscape monitoring.

#### 2.1.2.1.2 Subprogram for the management and protection of fish and fishery resources in the middle and lower basins of the Cauca River

There is a program called Program for the management and protection of fish and fishery resources in the middle and lower basins of the Cauca River, which is associated with the Program for the Monitoring and Conservation of Fish and Fishery Resources in the Middle and Lower Basins of the Cauca River, which is in turn associated with the operational phase of the project. During 2019, progress is being made along three main lines: the composition and structure of the fish community, the dynamics of fishing, and the assessment of spawning areas and migratory routes. To determine the composition and structure, four monitoring campaigns were carried out in 90 stations in which approximately 115 species were identified. With regard to fishing dynamics, data are being collected on catches per unit of effort and trade, as well as on the size, weight, and sexual maturity of the different species of fish subject to fishing in this area. On the other hand, for the assessment of the spawning areas, 34 stations were assessed, in which the highest percentage of ichthyoplankton corresponds to sardines, followed by the netted prochilod. Species tagging is carried out in eight stations, with a total of 3,291 fish tagged and a high percentage of netted prochilod individuals.



Fish monitoring with electrofishing



Collection of zooplankton in the reservoir

## 2.1.2.2 Program for the management and conservation of vegetation

### 2.1.2.2.1 Subprogram for biomass removal and forest harvesting

This program manages the impact on flora, landscape, and wildlife, both in the area of works, roads, and camps, and in the reservoir vessel. The following activities were carried out as part of this subprogram:

- Adaptation of roads,
- Topographical alignment, actions to chase fauna away
- Rescue of fauna,
- Rescue of epiphytic plants and other germplasm
- Clear felling, chopping, limbing, transport, and collection of forest products or by-products.

In 2016, the removal of the vegetation cover of the reservoir vessel began, and by the cut-off date of 2019, 892 ha had been removed, collecting 40,890 m<sup>3</sup> of wood at various sites along the reservoir. Due to the contingency event of the obstruction of the diversion tunnel (April 2018), a part of the areas to be removed was submerged prematurely (reservoir).

At the end of 2019, the forest harvesting of the Ituango project amounts to 1,493.4 ha, considering the reservoir and other works (roads, camps, industrial areas, and dam wall). The total volume of forest biomass removed is equivalent to 140,527.4 m<sup>3</sup>.





Tree felling in sites with land use changes (reservoir and other project works)



Tree limbing for removal



Transport of wood felled in the reservoir above the maximum flood level according to ground conditions



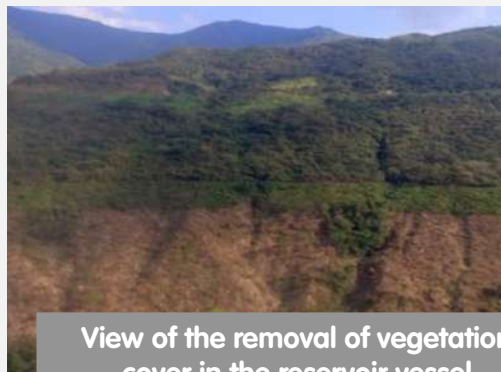
River wood removal after the premature damming of the Cauca River



Wood and branch chipping as part of the management of the biomass removed from the reservoir and other work areas



Temporary collection sites for wood removed from the area of the reservoir



View of the removal of vegetation cover in the reservoir vessel

### 2.1.2.2.2 Subprogram for the restoration of the vegetation cover

With the execution of the activities of this program, the aim is to restore and offset in better conditions the possible impacts on flora and fauna components, through the implementation of the following main actions:

**Rescue of germplasm:** during 2019, 810,000 seeds of 36 different species of trees from the Cauca River canyon were collected and stored in the project's direct area of influence. These seeds received all the basic treatments for storage and subsequent germination. Some of the most important species collected are courbaril and glassywood, which have a use restriction due to the high demand in the area and are protected by the Regional Autonomous Corporation of Central Antioquia (abbreviated Corantioquia in Spanish). Likewise, the piñuela tree stands out for its importance in the feeding of mammals, as well as the soapberry, cedar, saman, and bay cedar.



Beds for seed germination

**Conservation of vegetation:** in community association projects, 283,000 seedlings were delivered in 2019 for planting on different fronts, such as activities for revegetation of degraded soils and for the protection of hydrographic basins that serve water supply systems in different municipalities in the area of influence. Trees were also planted in cooperation with Universidad Nacional to restore priority areas in the dry and moist tropical forests. Likewise, the revegetation of slopes and closed disposal areas in the area of the main works was carried out.



Planting of seedlings



Digging holes for planting

### 2.1.2.2.3 Subprogram for the offset of the damaged vegetation cover

It allows a clear positive ecological balance to be obtained by carrying out activities to offset the vegetation cover affected by the construction of works and the formation of the reservoir.

The environmental license and its amendments establish the obligation to offset 17,458.7 ha. Of this area, as of January 2020, a total of 17,771.57 ha. has been acquired; 13,478.53 ha. corresponds to tropical dry forest (TDF) and 4,293.04 ha. to tropical moist forest (TMF). In the acquired offset areas, according to the degree of intervention identified, passive restoration, active restoration, conservation, and sustainable use activities will be carried out. These will allow for the restoration of functional and structural connectivity within the acquired areas and with other identified ecologically important areas.

Ecological restoration activities are currently being carried out in both tropical dry and moist forest areas, with the aim of generating, through the establishment of restoration nuclei, continuous patches of vegetation that will help to overcome the fragmentation that exists between the grass and herbaceous cover that dominates the landscape.



Digging holes in the grassland (TDF) for planting



Maintenance of seedlings



Tree planting

The results show that the project has become a real and valuable opportunity to protect and preserve large tropical dry forest areas that were previously at risk due to activities mainly related to stockbreeding and mining.

Additionally, beyond its obligations, the project has acquired and protected 6,532.41 ha of premontane moist forest (PMMF), thanks to which environmental benefits have been obtained in terms of improvement of the ecological connectivity and management of biodiversity in the area of influence.

#### 2.1.2.2.4 Subprogram for the rescue of orchids, bromeliads, and tree ferns

The purpose of this subprogram is to maintain the diversity and abundance of the species of orchids and bromeliads found in the areas intervened by the project, by rescuing and relocating a portion of the individuals affected by the construction of the works and the configuration of the reservoir.

Rescued individuals are relocated to selected and previously characterized sites, with optimal conditions for adaptability, areas with thick canopies, medium to high relative humidity, nearby surface water sources, in areas not flooded by the project and that have similar physical and biotic conditions to those found at the rescue site, taking into account that they will not be intervened later in the construction of works associated with the project.

In 2019, rescue, maintenance, monitoring, and tracking activities of rescued individuals were carried out. For the reservoir area, 48,774 individuals were rescued and relocated to eight relocation sites in the tropical dry forest (TDF) and tropical moist forest (TMF) life zones. The rescue of vascular epiphytes and the maintenance of the sites used for their relocation continue in the main works and roads of the project where forest harvesting is required.

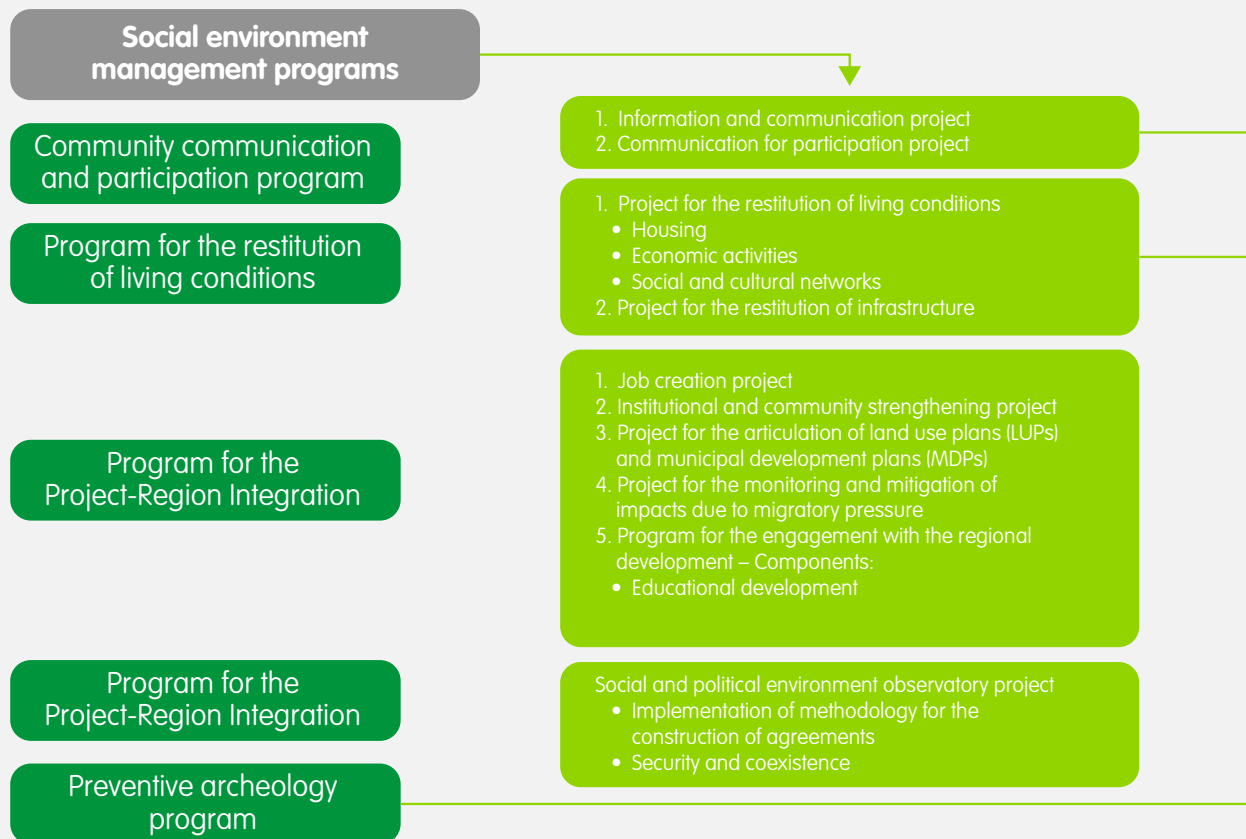


Maintenance of rescued and relocated epiphytes



Phenological monitoring of the development of the rescued epiphytes

### 2.1.3 Progress in the socioeconomic environment



*Socioeconomic environment program.*

#### 2.1.3.1 Community communication and participation program

In order to favor the construction of relationships based on trust and mutual understanding among stakeholder groups in the area of influence of the project, some assertive communication and pedagogical strategies have been implemented, based on the production and delivery of accurate and timely information, as well as on the promotion of spaces for dialogue and strengthening of communication and leadership skills.

This program is made up of two projects: communication for participation and information and communication.

### 2.1.3.1.1 Communication for participation project

In 2019, the workshops for the training of communication skills and mechanisms for citizen participation continued, in which training meetings were held with youth groups and 35 training workshops were held with the six youth communication groups in the municipalities of Ituango, Sabanalarga, Peque, Briceño, Valdivia, Liborina, and Olaya.

**Discussion group in rural settlements:** in 2019, 136 discussion groups were held, attended by 2,887 stakeholders. The topics discussed included the contingency, the closure of gates, and the difficulties encountered by the communities. In addition, communities' concerns regarding what happened during the contingency and how the project has planned its recovery process were resolved.

**Visits to the project with stakeholders. What can be seen can be experienced and thus better understood:** in order to inform authorities, leaders, business leaders, and academia, among others, about the progress made in the recovery of the Ituango hydroelectric project, the plan to visit the main works with all stakeholders continued during 2019. A total of 178 visits were received, with a total of 3,627 people. Some of the most relevant visitors were ministers and national authorities, affected families, officials from the Office of the Inspector General of Colombia, students and teachers, municipal ombudsmen of the Lower Cauca region, congress members, universities, groups of fishermen, communities downstream of the Cauca River, community action boards, employees, officials from the Office of the Comptroller General of Colombia, government teams from municipal administrations, and media, among others.



Visit by the media

### 2.1.3.1.2 Information and communication project

**Radio strategy: Radio for people:** about 5 years ago, EPM designed and implemented a radio strategy aimed at the 12 municipalities in the area of direct influence.

It is a space that connects us with communities to understand each other's issues of interest. The environment, development, opportunities, and progress of the project are the focus of ongoing conversation.



Radio programs

Contents and dialogues with the community can be listened to at the following link:  
<https://soundcloud.com/epmradio>

### Circulating print media

**La Voz del Proyecto Ituango (The Voice of the Ituango Project) newspaper:** this newspaper is a means of disseminating technical, social, and environmental advances to the different stakeholders of the municipalities in the area of influence of the project and to the workers on the construction sites. Six editions were published during 2019.

La Voz del Proyecto Ituango newspaper is a document to find the history and the memory of the project; all the editions published can be read at the link:

<https://www.epm.com.co/site/home/medios-de-comunicacion-epm/publicaciones>

**Didactic booklets of the project:** edition, design, and printing of 1,180 booklets on the otter, a subfamily of mammals that is present in the area, were carried out. This publication, which is distributed in environmental education activities, is an opportunity to show the results of the study that is being carried out on this subject in the area of influence of the Ituango hydroelectric project's reservoir.





Cover of the booklet on the otter

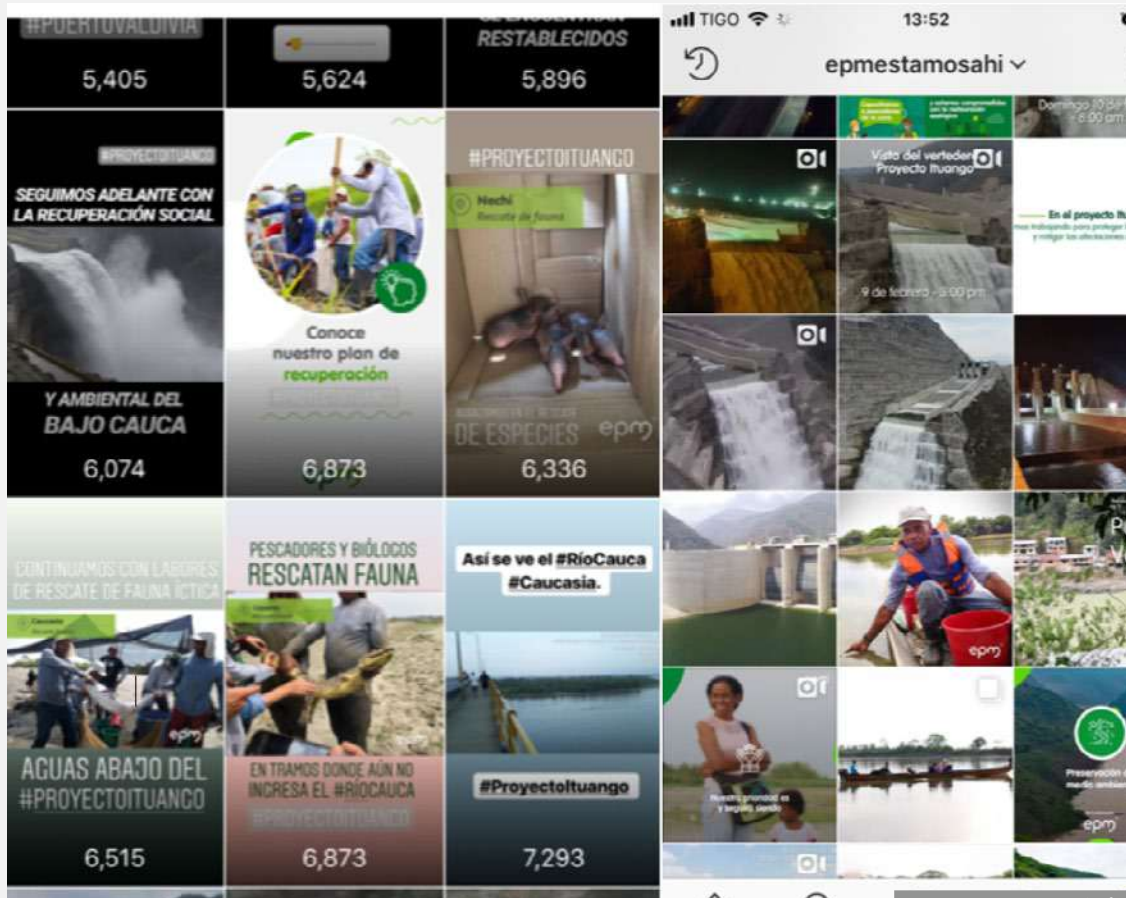
**Communications and newsletters:** in an exercise of openness and information transparency, the media have been informed in a timely and truthful manner about the progress of the Ituango hydroelectric project, both in technical terms and in its social and environmental management. In 2019, 93 newsletters were published for different regional and national media, as well as 23 communications to the community media in Ituango and Sabanalarga with specific information on the mobility plan.



**Dissemination of specific issues (January – November 2019):** informing communities about other important issues of the project through press releases and spaces on local and national television, social media, and chats with communities and leaders.

- Broad dissemination of the process established by the company for the control and management of the water hyacinth in the reservoir.
- Conversation with the media in Medellín to present the information related to the Epidemiological Surveillance System and the mosquito vector that transmits Leishmaniasis. In the territory, the radio strategy was used as a pedagogical tool, both for this topic and for the water hyacinth.
- Publication of articles on the relocation of the Orobajo, Barbacoas, and La Fortuna cemeteries.
- The Environmental Week was held in the 12 municipalities in the area of influence.
- Broad dissemination through the media and in the territory of the agreement signed with the Nutabe ethnic group of the small town of Orobajo in the municipality of Sabanalarga, following prior consultation with this community.
- During 2019, the community of Ituango was permanently informed through local media and chats about mobility through the reservoir by means of ferries and with caravans through the main works.
- In July, following the installation of the technical committee by the 75th guarantee control judge in Bogotá, the presence and information provided by EPM before this judicial body was made public.
- Support and dissemination of the legal actions and decisions that have been taken regarding the project.
- Information on insurance coverage by Mapfre.

**Social media:** through different formats and contents, a digital strategy is carried out that accounts for the technical, social, and environmental progress of the project, while at the same time making visible the benefits of the different programs that are carried out for the benefit of the community.



Posts on social media

All information is publicly and permanently available on the website [www.epm.com.co](http://www.epm.com.co), at the link:

<https://www.epm.com.co/site/home/sala-de-prensa/noticias-y-novedades/comunicado-proyecto-hidroelectrico-ituango/preguntas-y-repuestas-ituango>

### 2.1.3.2 Program for the restitution of living conditions

This program is in charge of restoring the living conditions of people affected in the components of habitat, housing, social fabric, economic base, and community infrastructure.

In cooperation with the affected families and the municipal administrations, EPM implemented the management measures according to the cultural particularities, the level of the impacts received due to the construction of the works, and the respective degrees of vulnerability.

A total of 1,299 families were affected by the construction of the project; 279 were physically displaced and 1,020 were economically affected. They include 849 mining families and 112 with other economic activities (gold buyers, muleteers, river transporters, and commerce and service workers); in addition, 59 families were compensated for the temporary loss of economic activity as well as two companies that provide river transport services in the small town of Puerto Valdivia.

The universe of the population groups was updated according to the identification of the impacts generated, both those assessed from previous studies (2006) and those found after this date. In this regard, it should be noted that 258 families from these population groups are subject to the restoration of living conditions with periodic support for five years, 297 are subject to annual monitoring, and 744 were subject to compensation. The closure was carried out with an investment orientation at the time of the agreement.

**Acquisition of land:** as part of the process of restoring living conditions, habitat, and economic activity, each family proceeded with the acquisition of land, following a legal, social, economic, technical, environmental, and sociopolitical analysis contained in the document entitled Evaluación Integral de Predios (Comprehensive Land Assessment). This document supports and makes the acquisition of land viable, which is acquired by choice, validation, and acceptance by the family, with comprehensive advice from EPM's Social Management team.

For 2019, eight families acquired land. Seven of these families bought land for the development of productive projects and habitat (four to leverage their productive project and three to develop new activities), while a final piece of land was acquired for habitat restoration.

## Mobility

During 2019, all the necessary technical, environmental, social, and risk management activities were carried out so that the Road Safety Agency of Antioquia—attached to the Secretariat of Government of the Government of Antioquia as a competent authority—could approve the Traffic Management Plan (TMP) through Ruling No. 2019060337214 of November 7, 2019 with a validity of 6 months.

The progress of the Ituango hydroelectric project and the completion of the urban development work on the dam crest made it possible to provide better mobility conditions for users going to and from the municipality of Ituango. For this purpose, road caravans were eliminated and continuous passage was provided for the community 24 hours a day, with some road and physical safety controls in the area of the works.

The following activities were implemented:

- Maintenance of roads was carried out on a permanent basis, seeking to provide adequate surfaces for vehicle movement. This maintenance is performed with road machinery such as graders and compactors. It also includes the removal and replacement of road materials in the event of rain and the wetting of roads during the dry season.
- The Chirí and El Bombillo gates, which were used to control access to the construction site, were removed.
- Regulatory, preventive, and informative road signs were maintained. This scheme is reinforced by the use of installed and functional traffic lights at the entrances to the Chirí and Vial km 12 tunnels.
- The restriction on motorcycle traffic on the road used for the TMP was lifted.
- A professional emergency team was hired as TMP resources to serve the community and workers in general.
- The EPM safety protocol which establishes speed restrictions on the project's internal and industrial access roads was fulfilled.
- Regular wetting and cleaning of the road was carried out in order to control particulate matter in the caravan development areas. In this way, EPM ensures the prevention of effects on the health of the community and of the collaborators working in the TMP collecting and development sites.
- The mobility plan, based on the actions carried out by CCC Ituango Consortium, was developed satisfactorily.
- EPM started the operation of the totally finished road, duly paved, with all the required urban development works, its signage, lighting, and other related works.
- The company has deployed a communication and engagement strategy in the area adjacent to this work to encourage road safety for frequent users. It has three components: educational, cultural, and communicational.

### 2.1.3.3 Program for the Project-Region Integration

This program seeks the insertion of the project in the region, which is achieved through the interaction between EPM, the communities in the project's area of influence, the public or private institutions, and the political and administrative entities of the region.

The following are the projects that make up the Program for the Project-Region Integration:

**Job creation:** 6,324 jobs created. 29% corresponds to people from the region.

**Institutional and community strengthening:** for the 2019 period, meetings were held using the methodology called *Aprendamos sobre las transferencias de recursos del sector eléctrico* (Let's learn about the transfer of resources from the electricity sector), in which the regulations and legislation within the framework of laws and decrees were presented to the institutionality of the municipalities of Sabanalarga and Peque: Act 99 of 1993, Decree 1933 of 1994, Decree 1729 of 2002, Act 1450 of 2011, Act 1753 of 2015, and Act 1955 of 2019.

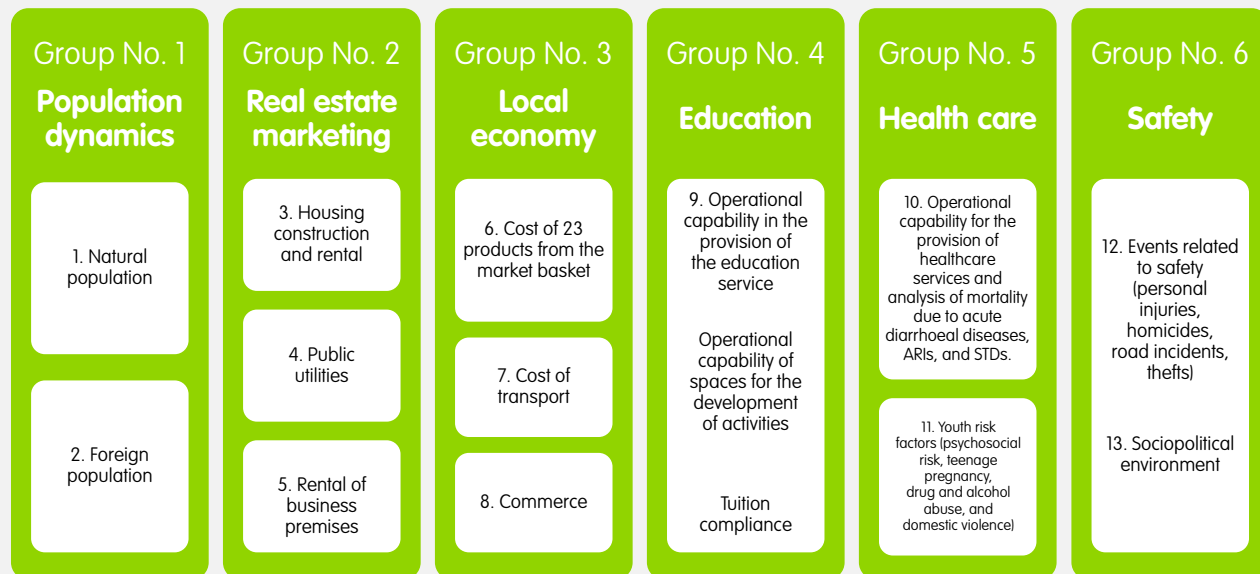
The institutional strengthening plan is implemented through meetings and workshops with municipal administrations on topics such as public management, transparency in administrative actions, instruments for control, targeting, prioritization, and monitoring of public expenditure, accountability to the community, citizen security, conflict resolution and management, information systems, establishment of alliances for the development of projects, and formulation of projects for the management of legal resources.

**Articulation of the Ituango project with the land use plans (LUPs) and the municipal development plans (MDPs):** the project has a land use plan for the reservoir. It is expected that the LUPs of the different municipalities will be articulated by 2020.

**Monitoring and mitigation of impacts due to migratory pressure:** the construction of large infrastructure projects normally attracts foreign people related to labor requirements, as well as people who come for other economic expectations. This can alter the normal demographic dynamics of the territory by accelerating population growth.

The increase in population produces an impact due to the rise in demand for services: housing, health, education, and public utilities; increased risk due to environmental vectors, disease, and the emergence of social problems, as well as the transformation of the cultural systems of the population affected directly or indirectly.

Some variables were defined for the monitoring of impacts due to migratory pressure. These variables were grouped into six categories, as shown in the following figure:



*Thematic variables for monitoring impacts due to migratory pressure.*

The measures to prevent, control, or mitigate the identified impacts are agreed through participatory methods in technical committees with municipal coordination entities. Municipal Councils for Social Policy (Compos, as per its acronym in Spanish) are spaces that municipalities can have for the coordination of monitoring and the definition of management measures for impacts due to migratory pressure. In the municipalities where this council does not exist, a local management committee is installed in coordination with the municipal administration.

In this way, the Ituango hydroelectric project, in the municipalities of San Andrés de Cuerquia, Toledo, Ituango, and Valdivia, where these impacts were identified, has made a total investment of COP 22,056,000,000 in the following strategies:

**Primary health care (PHC):** for families living in the areas of influence.

**Expansion of health coverage:** through activities related to oral health care, sexual and reproductive health, prevention of cardiovascular risk, vector-borne diseases, as well as training on water care.

**Strengthening of the municipal family support unit** for the mitigation of psychosocial risks in young population.



**Processes of sports, artistic, and cultural initiation with children, youth, and adults.**

**Construction or improvement of educational institutions, sports centers, hospitals, and health centers.**

**Project for the engagement with the regional development:** more than 5,000 families from 577 rural settlements benefit from family and entrepreneurship productive projects. Additionally, aiming at strengthening the educational development of the communities in the municipalities of the area of influence, rural educational centers (RECs) were built or improved in a participative way:

Project	Municipality	Rural	Amount
Improvement of La Bastilla REC	Peque	La Bastilla	117,354,832
Improvement of Renegado Valle REC	Peque	Renegado Valle	232,302,426
Astilleros REC	Valdivia	Astilleros	635,000,000
El Junco REC	Sabanalarga	El Junco	105,590,110
San Julián REC	Toledo	Barrancas	1,042,000,000
La Fragua and Buena Vista RECs	Buriticá	Buriticá	193,833,952
La Fragua REC	Buriticá	La Fragua	123,998,947
Buenavista REC	Buriticá	Buenavista	42,557,318

In 2019, the monitoring continued. The Educational Institution Nuestra Señora del Rosario was given to the community of the Cañaduzales, and the community of San Andrés de Cuerquia received the multi-purpose sports court El Recreo.

**Gender-oriented development:** it contributes to gender equity, prevention of gender violence, training in sexual health, and sexual and reproductive health rights in the area of influence of the project.

Cooperation agreements were signed by the municipalities, state-owned hospitals (executor), and EPM for the provision of friendly services in 11 municipalities and 109 rural settlements of Yarumal, Briceño, Valdivia, Toledo, San Andrés de Cuerquia, Ituango, Santa Fe de Antioquia, Olaya, Liborina, Sabanalarga, Peque, and Buriticá. The population directly benefited comprised 12,233 young people at risk, including 23 pregnant women, 34 young mothers, and 559 young people in vulnerable situations due to the use of psychoactive substances. Indirectly, more than 36,000 people of all ages and genders benefited with the following budget:

- Hospitals: COP 286,547,964
- Municipalities: COP 126,792,771
- Ituango hydroelectric project: COP 1,700,566,824

The beneficiary population is in the age range of 10 to 29 years in the area of influence of the agreement. By 2019, the total population in this age range of the municipalities mentioned was 58,177. Through the development of the agreements, 15,363 people were reached, which is equivalent to 26% of the total population of the municipality in the age range of 10 to 29 years in the 11 municipalities.

Through the implementation of the agreements, 1,821 workshops on sexual and reproductive health and life skills were held, with the participation of 32,873 people, comprising 17,422 women and 15,451 men.

In addition, 444 workshops were held by Schools for Parents, with training on topics such as sexual and reproductive health, life skills, parenting guidelines, authority and rules, assertive communication, decision-making, and gender equity. These spaces were attended by 2,793 people, with 4,458 women and 1,186 men.

In order to work on issues with a gender equity approach, 535 workshops were held on topics such as women's rights, sexual and reproductive rights, gender violence, and care routes: These workshops were attended by 11,195 people, with 6,717 women and 4,478 men.

One of the most closely monitored indicators is the rate of teenage pregnancy. The number of pregnancies among teenagers aged 10-19 years fell from 484 (December 2018) to 233 (November 2019), representing a reduction of 48%. The number of women aged 10-19 using contraception increased from 1,232 (as of December 2018) to 2,436 (as of November 2019).

In the development of the strategy of friendly services, personalized counseling and family visits are a great support to address the psychosocial risks detected; 2,522 were conducted, including counseling and family visits.

The Day of Non-Violence was celebrated in the 11 municipalities in the area of influence of the agreement and the Ituango project, in which 1,324 women and 542 men participated.

### Friendly services. Municipality of Briceño.

**Environmental education project:** pedagogical activities on coexistence and care for the environment were conducted in educational institutions in the area of direct influence of the project; as well as workshops and talks on environmental regulations and activities with families that are subject to full restitution of their living conditions.

For 2019, 35 educational workshops were held in 7 municipalities and 29 rural settlements with 2,009 participants including students and teachers from 17 educational institutions.



Rural Education Center Chirí –  
Municipality of Briceño, October 2019

#### 2.1.3.4 Program for the monitoring of the area of influence of the project

Considering the complexity of the territory and the context of the Ituango project, the analysis and management of sociopolitical risks have been implemented through a methodology that integrates into Grupo EPM's risk management.

The Ituango project has a sociopolitical risk matrix that is updated every six months and that accounts for the risks in terms of collective social action, human rights, security, and strategic litigation, to which the project is exposed at the local, regional, national, and international levels. It is worth mentioning that each of these risks has been assigned preventive and corrective controls to avoid or mitigate its materialization. There is also a map of actors with a sociopolitical approach that is constantly updated based on the readings of the territory and its dynamics.

The risks materialized, related to the mentioned categories, are reported every month, including actors involved, analysis of scenarios, and recommendations. In 2019, 13 reports were submitted and 101 signs of materialization of sociopolitical risks were registered, mainly in the categories of human rights, strategic litigation, and collective social action:

- Third-party claims against the project.
- Injunctions due to actions taken by third parties against the project.
- Social protests with de facto actions by third parties in the area of influence of the project.

Each of these risks was managed through preventive and corrective controls in inter-institutional coordination with local, regional, and national entities to deal with the events; joint legal action between the company and the state; due diligence with communities and state entities; timely response to complaints and claims; timely response to demands of national and international organizations; continuous dialogue and communication with impacted communities and the community in general; traceability of information, among others.

#### **2.1.3.5 Preventive archeology program**

Authorization for Archaeological Intervention was again requested from the Colombian Institute of Anthropology and History (ICANH, as per its acronym in Spanish), for the development of the Preventive Archaeology Program (PAP), archaeological reconnaissance and survey for the modification of the El Aro – Puerto Valdivia – Dam road, in the municipality of Ituango, Antioquia. ICANH granted the Authorization for Archaeological Intervention No. 8403, dated October 21, 2019, for the development of these activities. Apart from these actions, no monitoring or archaeological rescue activities were carried out because during the period no works involving soil removal were carried out.

#### **2.1.3.6 Indigenous communities**

The Ituango hydroelectric project, committed to the respect of human rights and cultural diversity, and in compliance with the Colombian regulations, activated the assistance protocol for the Nutabe indigenous community from Orobajo. After the certification issued by the Ministry of the Interior, through Ruling 8 of March 1, 2018, which reads: "taking into account that the project object of this certification is in construction stage, the interested party should request the Directorate of Prior Consultation to start the consultation process." Consequently, on March 14, 2018, the company made the request, before the Directorate of Prior Consultation of the Ministry of the Interior, to start the consultation process in the construction stage of the project.

In 2019, the prior consultation process was carried out, fulfilling the following stages:

- 1) Identification and analysis of impacts.
- 2) Formulation of management measures.
- 3) Protocolization. Establishing agreements with the indigenous community of Orobajo regarding the impacts generated at the sociocultural level, under the premise of respect for the rights of ethnic communities.

The prior consultation of the Ituango hydroelectric project is the first of its kind, given that the Nutabe indigenous community from Orobajo began its self-determination process in 2014 and was recognized by the Ministry of the Interior only in 2017. In consequence, the consultation process only started in March 2018, when the construction works were 80% completed.

Before the start of the prior consultation, and at the request of the inhabitants, the Ituango project resettled 35 families that lived in Orobajo. They are currently located in the municipalities of Ituango (31) and Sabanalarga (4), living in their own homes, implementing the productive projects of their interest, and getting used to their new territory; everything as part of the Program for the integral restitution of living conditions.

Thanks to the recognition of the Nutabe indigenous community from Orobajo by Ruling 071 of May 19, 2017, and the ordinance on the initiation of prior consultation by Ruling 08 of March 1, 2018, both issued by the Ministry of the Interior, the Ituango hydroelectric project began the process of participation and intercultural dialogue with the community. This process was carried out in conjunction with the entities responsible for guaranteeing rights, such as the Office of the Public Defender, Office of the Inspector General of Colombia, Office of the Ombudsman, as well as the coordination of the Directorate of Prior Consultation of the Ministry of the Interior, which is the institution responsible at the national level for regulating this type of processes.

The prior consultation process is clearly established in Decree 2613 of 2013 and Presidential Directive No. 10 of 2013. It comprises the following six stages:

- Coordination and preparation.
- Preconsultation and opening
- Workshop to identify impacts and formulate management measures.
- Formulation of agreements.
- Protocolization.
- Monitoring.
- Closure of the process.

Prior consultation between the Nutabe indigenous community from Orobajo and the Ituango hydroelectric project took place in compliance with the guiding principles of the consultation process:

- Appropriate and sufficient information.
- Good faith.
- Effective participation.

**Implementation of the agreements:** in relation to the project for the acquisition of a collective property as a management measure for the partial loss of territory, a milestone was reached in 2019 for the selection, acquisition, and delivery of property, complying with each of the commitments made to the community and the Directorate of Prior Consultation of the Ministry of the Interior. It is worth noting the effective participation of the community in this process.

The property has 30 ha of coffee plantations, with about 85,000 trees, most of them new, infrastructure for the benefit of its inhabitants, and an area for livestock. It has great water resources and an area of protective forest. It has no stubble or eroded areas and has connectivity through the main road that connects to the urban area of the municipality of Ituango. There are also 14 buildings on the property for housing, pig farms, coffee processing facilities, coffee dryers, warehouses, workers' accommodation, coal dryers, and salt warehouses, among others.



Patio Bonito property, Los Galgos rural settlement, municipality of Ituango. It was selected by the Nutabe indigenous community from Orobajo for the restoration of the lost territory.

Once the purchase of the land has been officially recorded, the next step is the contracting process for the implementation of the agreements, as established by law, for the formulation and implementation of the remaining 25 agreements relating to productive and cultural projects, training, ethnic strengthening, and community infrastructure.

### 2.1.3.7 Progress in additional social investment

#### Water Supply and Sewerage Master Plan in the municipality of Valdivia:

- Project works progressed, with priority given to sectors where work fronts had been partially implemented.
- The construction of the sewerage section in La Subestacion, 20 de Julio, and El Nevado sectors was carried out.
- The construction of the water supply networks in La Subestacion sector was carried out.
- The retaining wall located at the entrance to the substation was designed.
- The necessary pipe bridge to guarantee the continuity of the headrace network is being designed.

Due to situations of law and order, the building contractor requested the assignment of the contract, which was carried out by EMPVAL (as the contracting party) in order to continue the works.

#### Agreement with the municipality of Buriticá

- The construction of the Tabacal – El Ciento improvement and the opening of El Ciento – La Cordillera began. The main activities included:
  - Levelling of the existing road section, where the paved track for tertiary roads will be built.
  - Cutting and bending of steel and subsequent formwork to prepare the elements for the pouring of concrete.
  - Pouring of concrete for the different elements that make up the paved track for tertiary roads (tie beam, cyclopean concrete, main concrete slabs and ditches).

#### Water Supply and Sewerage Master Plan of the small town of Tabacal

It has a cumulative budget execution of COP 730,000,000 which is equivalent to 56% of the percentage of progress.

The most relevant activities include the installation of home water supply and sewerage networks, as well as the installation of junction boxes and the last section of piping in El Vergel sector.

### Housing in the municipality of Ituango

The project started on August 20, 2019 and the accumulated progress is 33%.

Some of the most important activities include the construction of 12 housing units with tile floors, floor and wall covering in bathrooms, and the installation of the roof in a thermo-acoustic system. Progress has also been made in the construction of a multi-purpose sports court, with activities such as excavation, shaping, and levelling of the ground as well as the foundations of the enclosure.

### Housing in the municipality of Peque

- The project started on September 2, 2009, with a cumulative progress of 26%. The following activities are worth mentioning: the construction of 16 housing units with activities such as the adaptation of the existing infrastructure, the treatment of exposed steel and the rectification of electrical conduits on the first floor, excavation, shaping and levelling of the external ground of the building, construction of concrete and structural masonry walls on the first and second floors, construction of access stairs to the second floor, and rectification of the hydrosanitary networks. The retaining wall was also built to protect the access road.

The Water Supply and Sewerage Master Plan for the municipalities of Olaya and Liborina has yet to be implemented.

## 2.1.4 1% investment

Colombian regulations establish that any project that involves the use of water taken directly from natural sources and that is subject to obtaining an environmental license must allocate at least 1% of the total investment for the recovery, conservation, preservation, and monitoring of the hydrographic basin that feeds the respective water source.

In the case of the Ituango project, the resources are invested as follows:

- Protection and management of strategic areas: purchase, reforestation, and isolation of areas of influence from springs that are source of water supply systems.
- Environmental sanitation: construction of sewers and residential wastewater treatment plants in the municipalities of the area of influence.
- Training of environmental leaders and managers through environmental education activities.



The Council of State issued a ruling dated July 19, 2018, as a result of a claim filed by EPM in relation to the compulsory investment for the Porce III hydroelectric project. It was decided that it is valid to include concepts such as taxes, auditing, and additional works within the settlement of the costs associated with the 1% compulsory investment, considering that they are necessary or compulsory costs for the execution of works, and that they are inherent to them.

Considering that the ruling does not limit the scope of this judicial decision to a particular project, the costs incurred by the holder of the environmental license for the recovery, preservation, and monitoring of the hydrographic basin may be included in the settlement of the 1% compulsory investment.

The Ituango hydroelectric project has had limited execution of the 1% projects because the ANLA conditions the investment to not include the costs of management and profit and of the audit. Considering that the same conditions are contemplated in this ruling as for the Ituango hydroelectric project, such ruling is accepted in order to carry out the financial closure of the 1% investment projects.

In this new execution scenario, the management and monitoring of the commitments that are under the responsibility of the municipal administrations are resumed. The following are some of the main activities:

**a. Basic sanitation**

In January 2019, at the request of the owner of the property where the Liborina wastewater treatment plant will be located, the feasibility study began for the change of location of the treatment system. As a result, the site selected by the designer is suitable to carry out the project.

The municipality of Sabanalarga was supported in approaching Corantioquia prior to the processing of the wastewater discharge permit. Consequently, the hydrological, hydraulic, and scour studies of San Pedro stream began in the area of influence of the wastewater treatment plant of this locality, in accordance with the requirements of Ruling No. 160HX-RES 1909- 5080 (wastewater discharge permit) from Corantioquia. This study was carried out to make the project viable for the year 2020.

The possible contracting schemes for the different typologies of projects were analyzed and the execution of individual septic systems was found to be viable through contracting with the community action boards.

In June, an interadministrative contract of mandate was signed with Empresa de Servicios Públicos de Briceño S.A. E.S.P. to build and put into operation the residential wastewater treatment plant of this municipality of Antioquia.

During the last quarter of 2019, the contract for the construction and commissioning of the Yarumal WWTP began, including the construction of collectors, infiltration fields, and a septic system.

**b. Purchase of land for the protection of micro-basins**

Considering that ANLA has not made a statement on the final approval of the properties to be acquired, a list of the properties pending approval was made and delivered in November 2019 in a monitoring visit, so that they can be authorized and the acquisition processes can continue. However, efforts have been made with municipal administrations to review the status of land tenure and the receipt of documents.

## 3 Recovery of the Ituango hydroelectric project

### 3.1 Technical component

In May 2018, when the construction of the dam was not yet finished, the powerhouse had to be habilitated as a channel for the discharge of the water from the reservoir, due to the probability of an overflow, taking into account that the powerhouse was not built as a discharge system of the Cauca River.

By closing the first gate (gate No. 2) in early 2019, the risks to the population downstream of the project were reduced, complying with the first premise defined for the response to the contingency that focuses on safeguarding the life of communities.

After closing the gate No. 2, the group of international experts advising the project recommended closing gate No. 1 as soon as possible based on the monitoring of variables. It is important to note that there is a change in the way the water entered the powerhouse: first it was pressurized and then it flowed freely. This circumstance modified the risk map of the project, which included the monitoring of the cavity (verifying that it was not expanding and that it did not compromise the intake structure area) and the monitoring of the trashrack located at the beginning of the intake.

On February 5, 2019, in a maneuver that lasted 57.17 minutes, in a controlled manner and without technical problems, EPM closed the second intake gate (gate No. 1). It was the last gate that was open for the passage of water through the powerhouse.

In order to carry out this maneuver, a protocol was defined, as well as specific procedures in the event of a temporary decrease in the flow of the Cauca River. These strategies can be found in the biotic environment.

According to the indicators issued by the Technical Monitoring Center (TMC) and the stability in general of the different variables that are being measured, it should be noted that the average flow rate is 425 cubic meters per second at the discharge outlet of the powerhouse, similar to the flows of the river at this time of year, which historically in the rainy season can reach an average flow of 1,000 cubic meters per second, and in the dry season may be less than 300 cubic meters per second.

EPM, in coordination with the national, regional, and local institutions that form part of the Unified Control Post (PMU, as per its acronym in Spanish), led by the SNGRD, implemented a contingency plan to mitigate the environmental and social impacts that would occur under this situation.

The company implemented an environmental care protocol in the event of a decrease in the flow of the Cauca River, preparation for activities such as inspection and rescue of fish, monitoring of water quality, swamps and strategic ecosystems, supply and alternative sources of drinking water, monitoring of economic activities, public health surveillance, social contracting, real-time communication with communities, and monitoring of the physical conditions of the riverbanks.

### 3.1.1 Construction progress

By December 31, 2019, the project was 76.4% complete, according to the Recovery and commissioning program, June 28, 2019. The main work fronts of the project presented the following progress:

**Dam:** a short plastic screen to cut off the flow was built along the core of the dam, between the 380.00 (MASL) and 418.00 (MASL) elevations, as well as two additional screens along the abutments. Likewise, the filling of the dam was completed at the elevation 435 (MASL), with a volume of material placed of 20,188,573 m<sup>3</sup>. Subsequently, continuous vehicular traffic was enabled on the road over the dam crest and the spillway vehicular bridge.

**Pre-plug 2 of the right diversion tunnel:** the six drillings for the throwing of ball sealers and the by-pass, as well as the four drillings for boreholes have been completed. Furthermore, the predrilling of micropiles began by means of sonic drilling equipment.

**Blocking of the auxiliary diversion gallery system:** the left and right gates of the floodgate well were closed. In addition, concrete was poured for the final plug around these gates.

**Intermediate discharge:** the concrete circular coating was completed upstream to the low coverage area between km 0+142/184. Downstream, 92.0% progress was made in the surface finish of the rock bolts and side walls.

**Cavity of pressure shafts 1 and 2:** the filling of the cavity started with the installation of a expanded metal mesh and the pouring of concrete. It has a progress of 11.5%.

**Upper part of the slope of the floodgate area:** excavation and treatments continued in a staggered manner. 292,212 m<sup>3</sup>/ 363,000 m<sup>3</sup> have been excavated, representing 80.5%.

**Upper part of intake area and 500 kV substation:** drilling, installation, injection, and tensioning of turnbuckles continued in addition to the shotcrete. Progress was 27.0%. The treatments in the drainage gallery of the upper part of the 500 kV substation, unstable site 7, showed a progress of 82.6%

**Powerhouse:** in the northern area, between units 1 and 2, the treatments on the vault were completed, the runway beam of the main overhead crane was removed, and the activities for the recovery of the support brackets of the temporary 25 t overhead crane were completed. In addition, progress was made with side wall treatments and the removal of material from the reinforced earth wall. In the southern area, treatments in the side walls were completed, while downstream of unit 5, treatments in the vault area continued.

**Transformers cavern:** support and rehabilitation treatments continue in the side wall downstream of units 5 and 6, in addition to exploratory drilling towards pressure shafts 5 to 8. In the communication gallery of the powerhouse with the transformer cavern, treatments were performed for the installation of mesh as well as drilling, installation, caulking, and injection of bolts into side walls, in addition to the application of shotcrete.

**Surge tank 1:** the weighted progress of treatments in the vault is 60.8%. Treatments continue in the cavities towards the powerhouse and towards the discharge tunnel 2.

**Surge tank 2:** rock removal and rehabilitation treatment continue (three layers of fiber shotcrete with double mesh), drilling, and installation of bolts in the upstream side wall.

**Discharge tunnels:** the construction of the protection wall was completed. In the discharge channel 3, cleaning work was carried out and the closure of the suction gates located in discharge tunnels 1 and 2 continued. The removal of construction and demolition waste (CDW) continued in the discharge tunnel 1.

**Electromechanical equipment:** the following contracts have been extended:

- Turbines and generators, with GE Energías Renováveis Ltda. Supply of the damaged units, assembly and testing of the first four units, and repairs of some stored parts.
- Shielding with ATB Riva Calzoni. It includes supply and assembly of shielding of the eight pressure shafts.
- 500 kV transformers with Siemens Transformer Guangzhou Supply of 19 transformers.
- Powerhouse overhead cranes with the company Industrias Electromecánicas GH S.A. It includes the supply of two overhead cranes of 300 tons each.

**500 kV power cables:** with the company Sudkabel GMBH. Replacement of ten power cables and their associated equipment.

### 3.1.2 Study carried out by the company Skava

The study was carried out by Skava Consulting, an international Norwegian-Chilean company with a proven track record in the development of root cause analysis.

On March 1, 2019 EPM shared the results of the root cause analysis that gave rise to the contingency. The results determine that the most likely hypothesis is that the obstruction of the auxiliary diversion tunnel was due to the “progressive erosion of areas of rock weakness”, located on the tunnel floor.

Areas of rock weakness were not adequately treated due to a design deficiency during the consulting stage, which was carried out by Consorcio Generación Ituango (Integral – Solingral).

The study was based on the scientific method and aimed solely at analyzing the root cause of a specific, concrete event: the blockage in the auxiliary diversion gallery, which had been in operation since September 2017.

**Careful attention to the auxiliary diversion gallery designs:** it is important to note that the auxiliary diversion gallery, which would operate on a temporary basis, was planned from the end of 2013 (when the original diversion tunnels were still under construction) as an alternative to avoid an additional delay of one year or more in the construction of the main works. Additional delays are referred to because when EPM took over the project through the BOOMT (build, operate, own, maintain, and transfer) contract in March 2011, the project schedule was already significantly delayed, which could affect the country’s energy supply.

The results of the study are available on the website  
<https://www.epm.com.co/site/estudio-causa-raiz-hidroituango>

## 3.2 Closure of the water flow through the powerhouse

Due to the dry season that occurred in the country at the beginning of the year and the few contributions of the Cauca River to the reservoir of the Ituango hydroelectric project, it would have taken more than 60 days for the water to flow naturally through the spillway. After analyzing the possibilities that could accelerate the rate of filling of the reservoir, it was found that, by means of a greater discharge of the Salvajina reservoir, located at the beginning of the Cauca River bed, the number of days necessary to reach the discharge level could be significantly reduced.

Thanks to the support of the company EPSA from Grupo Celsia, and through the interaction between the ANLA and the Autonomous Regional Corporation of Valle del Cauca (CVC), it was possible to increase the discharge from Salvajina reservoir from January 25 and for eight consecutive days. Afterwards, CVC determined the magnitude of the following discharges based on the evolution of the Salvajina reservoir and its inflows.

To close gate No. 1 of the powerhouse without posing a risk to the community, a desirable factor was to have the spillway back in operation, as occurred safely for 47 continuous days in late 2018. However, at the time gate No. 1 was closed, these conditions were not met due to climatic factors. Under normal conditions, the elevation of the spillway (401 masl) would have been reached at the end of March; however, with the flow contribution from the Salvajina reservoir, the water level reached this elevation on 8 February in the evening. To mitigate the potential environmental impact in the Lower Cauca region and La Mojana swamps, EPM increased the reserves in its Porce II and Porce III reservoirs so that they would be able to discharge the water level associated with their maximum production during the days when the flow of the Cauca River decreased (downstream of the municipality of Nechi) as a result of the closure of gate No. 1.

With this measure, it was possible to reduce the area of exposure and thus significantly mitigate the impacts on the river from the mouth of the Nechí River into the Cauca River, since flows close to historical minimums were reached at that point. It is worth mentioning that most of the swamp complex is located in this area, which was protected by this determination. The greatest social and environmental impact was limited to the section between the foot of the dam and the mouth of the Nechí River.

## Environmental protection

From the week before February 5, EPM deployed a total of 20 work teams throughout the area to be close to communities, to give them official first-hand information and to respond to the possible effects of the closure of gate No. 1.

EPM was carefully prepared on the various social and environmental fronts. An entire contingent, including company and contractor officials, as well as local residents, technicians, and specially hired professionals, carried out intensive information and prevention work in the municipalities of Valdivia, Tarazá, Cáceres, Caucasia, and Nechí, downstream of the project.

A total of 21 tank cars, 82 containers, and 33 stationary tanks were made available for the community, as well as adaptations to pumping systems to supply safe water to the populations that derive their consumption from the Cauca River and some of its tributaries. In total, 2,672 m<sup>3</sup> of water were distributed for residential use. Additional mitigation activities were developed, such as chasing away, rescuing, and releasing fish in the main riverbed, which were stuck in disconnected areas due to the decrease in the river's level. Likewise, other activities included the conservation of water surfaces of the Lower Cauca region swamps, solid waste management, monitoring of the effects on some economic activities (mining, fishing, river transport, agriculture, and livestock), mobility of people, activation of the epidemiological surveillance system, and monitoring of water quality and river banks, among others.

It should be noted that at the Nechí-Las Flores Station, the minimum historical flow recorded by EPM was 465 m<sup>3</sup>/s. As it is evidenced, according to measurements at the station, the flows that the Cauca River had during and after the closure of the intake gate No. 1 to the powerhouse were similar to those of the weeks prior to the closing maneuver, and higher than the historical minimum reached in the past. Based on this, the contingency area was limited to the section of the Cauca River between the dam site and the municipality of Nechí, Antioquia. The recent levels of the Cauca river in the La Mojana area did not correspond to the closure of the second gate, since the flow that decreased in the Cauca River was totally compensated by the operation of the reservoirs of the Grande, Guadalupe, and Porce River chains (Tasajera, Guadalupe-Troneras, Porce II, and Porce III power plants owned by EPM).



**Response activities for the temporary decrease in the flow of the Cauca River due to the closure of gate No. 1:** the decision to carry out the closing maneuver of gate No. 1 was taken based on the following premises:

- Safeguard the life of the communities downstream of the project.
- Care for the environment.
- Feasibility of the project.
- Country's energy reliability.

A protocol and specific procedures were defined for this maneuver in the event of a temporary decrease in the flow of the Cauca River. The following environmental and socioeconomic impacts were identified along with strategies to address each of them:

Impact	Response strategy
Alteration of the ichthyofauna	Crews of fishermen and a technical team of environmentalists and biologists for the rescue of fish in pools and the proper disposal of dead fish in sections defined for each municipality.
Disconnection and drainage of	Monitoring of swamp levels.
Drinking water shortage.	Disposal of tank cars, tanks, containers, and 6-liter water bags, as well as filtration and purification plants.
Alteration of economic activities.	Monitoring of critical points.
The communications plan is aimed at communities, local administration, and local, regional, and national media.	

Once the river flow in the municipalities of Valdivia, Tarazá, Cáceres, Caucasia, and Nechí was fully reestablished during the week of February 11, 2019, these were the results of the activities related to the environmental impacts identified.

**Ichthyofauna:** the rescue figures are as follows: 708,402 species rescued and 82,447 dead, most of the latter being smaller and non-migratory species. A total of 878 kg of biomass was collected and taken to the Humagá disposal site and to La Pradera landfill, in coordination with Emvarias and with the appropriate techniques for the management of this type of waste.

Additionally, the rescue and conservation of parental individuals was carried out to safeguard the genetic resource of species of fishing interest. For the whole strategy, 735 fishermen from the area were hired.

**Drinking water:** a total of 2,601 m<sup>3</sup> of drinking water was accumulated, for an average population of 74,000 people in the municipalities of Cáceres, Caucasia, and Nechí. A total of 21 tank cars were put into operation. In addition, 82 containers, 33 tanks, 36,000 bags of 5 and 6 liters, and the pumping system for water catchment in the Man River, in the municipality of Caucasia, were provided for the community.

At that time, 70 officials were in charge of planning, programming, logistics, distribution of drinking water, and assembly of the pumping system in the Man River.

There was no shortage of water in rural areas at any time.

**Waste management:** a total of 878 kg of fish biomass was properly managed in the Humagá disposal site. In addition, 48.22 t of plant material was removed from the Cauca River bed, which contributed greatly to its cleanliness and protection. 220 kg of ordinary waste was discarded.

Water quality measurements were made at 34 points (16 in the Cauca River and 18 in the swamps).

**Epidemiological Surveillance System:** meetings and talks were held with the participation of the emergency response agencies and the Epidemiological Surveillance System of Universidad de Antioquia, to emphasize the warnings about the gradual increase in the river levels and the preventive health in the communities. This whole process of dissemination was strengthened with messages through local radio stations, flyers, and megaphones in the areas.

**Strategic ecosystems:** a total of 10 swamps were temporarily disconnected with the construction of embankments in main streams to prevent the loss of water volume and the drainage of the swamps into the Cauca River. The swamps were: Colombia, Río Viejo, La Habana, Palanca, La Ilusión, Palomar, El Aguacate, La Coqueta, Margento, and La Estrella; a team of 230 people from the area, supported by 20 professionals from Universidad Nacional and EPM, participated in the project.

**Economic activities:** monitoring, documentation, and registration of the behavior of economic activities during the contingency caused by the closure of the powerhouse's intake gates were carried out with Universidad Nacional. The balance of the effects, according to the economic activities analyzed during the closure of gate No. 1 is as follows:

- **Mining:** in general, there was an important increase in the number of miners engaged in mining activities as well as in the daily production obtained by them during the time that the levels and flows of the Cauca River decreased.

As the levels of the Cauca River decreased due to the closing of the intake gates of the powerhouse, the mining population (number of miners and production of mining productive units) increased on the beaches and riverside areas of the Cauca River that were being exposed. When the levels of the Cauca River increased again with the operation of the spillway, the number of gold panners, mini dredge operators, and sand miners decreased again.

- **Fishing:** before the closure of the gates, fishing activity was being carried out according to the normal and usual way for that time, taking into account that there was no upstream migration. After the first gate closure (gate No. 2 of the powerhouse, on January 16, 2019), there was a decrease in fishing activity, which could be due to the compliance of the coastal and fishing communities with the recommendation not to remain in the riverbed or on the banks of the Cauca River. After the second gate closure (gate No. 1 of the powerhouse, on February 5, 2019), there was another decrease in the number of fishermen on the river. Approximately 700 fishermen from the region were hired to carry out fish rescue work, which may also explain the decrease in the number of fishermen carrying out fishing activities during this period (5-14 February 2019).
- **River transport:** during the days prior to the second closure of the gates (between January 15 and February 5, 2019) it was observed that river mobility developed normally on all sections, from Puerto Valdivia to Nechí, with the exception of the ferry from Piamonte (Cáceres) which only transported light vehicles. However, according to the community, this situation is normal in strong dry seasons, when people have to travel by land transport through Cáceres to pass to the other side of the Cauca River. After the second gate closure (approximately from February 5 to February 13, 2019), the levels and flows of the Cauca River were below historical data. During this period, it was evident that, in general, river transport presented difficulties in some sections, from Puerto Valdivia to Nechí, including the ferry from Piamonte (Cáceres). Similarly, due to the great demand from EPM and its contractors for river transport to respond to the contingency, light boat owners were able to increase their income during those days. Another aspect that caused the decrease in river transport activity was law and order problems on February 9 and 10, 2019, due to an alleged armed strike by illegal groups.

- **Agriculture:** it was found that the different plant species were under water stress, caused by the strong dry season and the change in the water table. This forced rural people to intensify pump irrigation with the consequent cost overruns and possible delays in production. The strong dry season and the possible drops in the water table are environmental conditions typical of this period and it is not easy to associate them with the drop in river levels and flows that occurred in the short time that the flow lasted below the historical data.
- **Livestock activities:** some pools, watering troughs for livestock, and fish ponds showed low levels in their water surface, which is a condition or situation typical of a strong dry season. Monitoring these productive activities associated with the Cauca River will be useful to establish a base line that will allow for objective criteria for decision making in the face of eventual offset or mitigation of impacts.

**Fish rescue and protection of swampy ecosystems:** on January 16, 2019, with the closure of gate No. 2 of the powerhouse, fish inspection and rescue activities were carried out, which were associated with the decrease in flow downstream of the project's dam site. The section where the possible effects were considered for the closure of the first gate was delimited from the dam site to Puerto Valdivia. About 80 people participated in this activity, including professionals and artisanal fishers from the region.



Fish rescue activities during the closure of gate No. 2

On February 5, gate No. 1 was closed, causing a decrease in water levels and affecting fish communities. Activities for the rescue, management, and release of ichthyofauna were carried out in the section of the Cauca River between the dam site and the municipality of Nechí, in the Middle and Lower Cauca subregions.

The rescue and release of fish as well as the protection of swamps took place between 5 and 14 February. The latter date corresponds to the moment when the flow was recovered again in the municipality of Nechí. EPM hired 750 people, including fishermen, rural people, and professionals specialized in the hydrobiological component to work on the rescue of fish and the protection of ecosystems, as is the case of the previously prioritized streams and swamps of La Mojana.



Fish rescue activities during the closure of gate No. 1



Activities for the protection of swampy ecosystems

### 3.3 Drainage and cleaning of the powerhouse

For the drainage of the powerhouse of the Ituango project, it was necessary to implement environmental guidelines that would comply with all environmental requirements of the environmental authority.

The programs that were implemented and that are monitored by the environmental authority are described below:

#### 3.3.1 Environmental guidelines for the cleaning of the cavern complex of the Ituango hydroelectric project

##### Physical environment

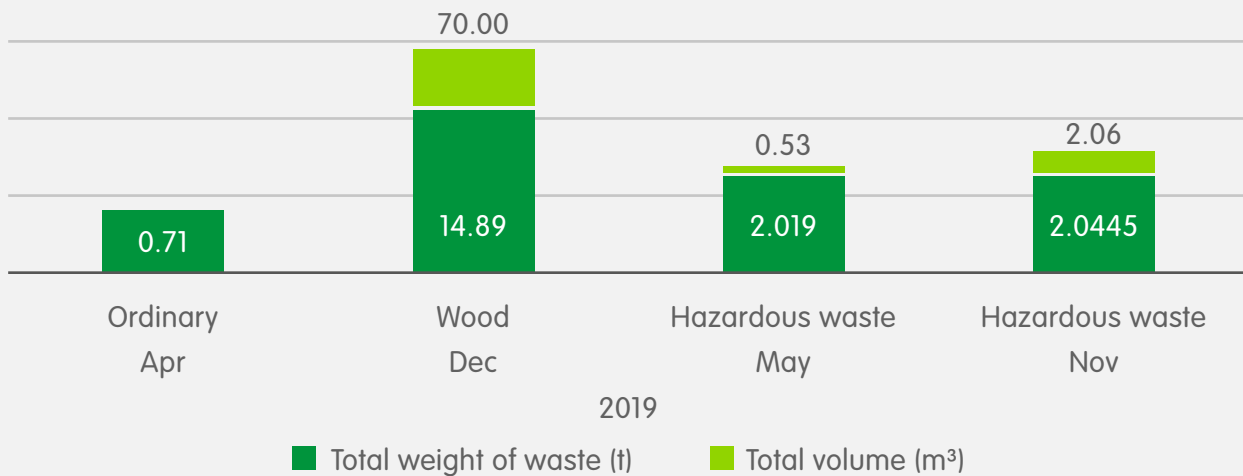
- Water quality program: grease and oil subprogram and sediment subprogram.
- Program for the management of surface water (supplementary): subprograms for the management of water resources and response to spills of hydrocarbons or harmful substances (supplementary).
- Waste program: subprograms for waste management, hazardous waste, CDW (supplementary), special and hazardous waste (supplementary), and ordinary solid waste (supplementary).

- Program for the management of atmospheric quality: subprograms for odor management and for atmospheric quality management.

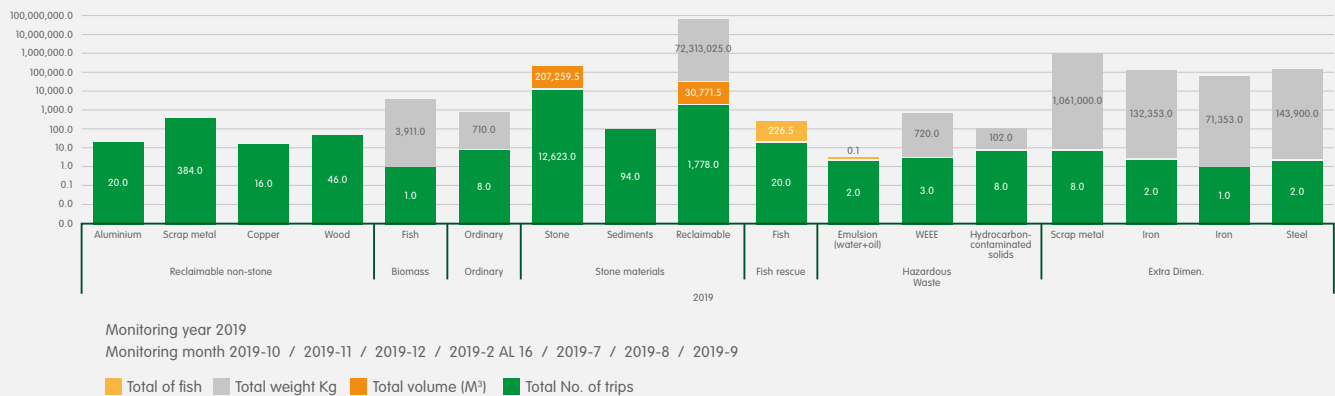
**Biotic environment**

- Fish rescue program: subprogram for the rescue and release of fish.
- Monitoring program (supplementary): subprograms for monitoring (water quality, non-residential wastewater, sediments, and atmospheric quality).

The following chart shows the disposal of the different types of waste managed in 2019 for the environmental guidelines of the powerhouse.



Disposal of waste managed in 2019 for the powerhouse environmental guidelines.



### Storage and reclamation of waste

In the previous chart, an integral management can be observed, according to the established environmental guidelines, where mainly 72,313 t of stone CDW was reclaimed, preventing it from reaching a dump. Reclaimable non-stone CDW is being sold by public auction. This material will also be reintroduced into the production cycle.

For the control and monitoring of the transformers, an oil balance was made. The oil that had been extracted was quantified to avoid any spillage.

### 3.3.2 Monitoring and tracking activities

For 2019, water quality, air, odor, noise, and CRETIB (hazardous waste) monitoring was conducted. In general terms, the physicochemical results for water quality have been good. Although there have been difficulties with pH variation, the project is making improvements to the system. The environmental standard is met regarding air quality and odors.

The sludge or sediments found in the powerhouse were analyzed to see whether they were hazardous or not according to the standard. In this way, it was possible to carry out its disposal as usual in the disposal site.

## 3.4 Specific plan for the recovery of the environmental component

Due to the contingency in the project, a specific plan was established for the recovery in case of an eventual impact. This plan was presented in working groups with different entities and academic institutions—Universidad Nacional de Colombia, Universidad de Antioquia, Pontificia Universidad Javeriana, Universidad de Medellín, Universidad de Córdoba, the Alexander Von Humboldt Institute, the National Aquaculture and Fisheries Authority (AUNAP, as per its acronym in Spanish), Corantioquia, among others—that suggested adjustments and provided advice and support.

These are the main activities carried out as a preparation for the implementation of the recovery plan in case of an impact:

- There are 1,500 individuals of different species of fish that are potential breeders and are found in the Caucasia and Tarazá fish stations. Reproduction trials of species that are part of the fishery resource were carried out in agreement with Universidad de Córdoba and with the support of the Santa Cruz and Piedras fish farming stations in Caucasia and Tarazá respectively.
- In coordination with Universidad Nacional, a genetic analysis of the population is being conducted in order to make the right decisions regarding the feasibility of restocking actions.
- Different water level stations were installed for the physicochemical characterization of some swampy environments.
- There is an environmental education and awareness plan through Fundación EPM for all the communities of the middle and lower basins of the Cauca River.
- As a measure for the recovery of the fish species affected by the closure of gates, a project is underway with Universidad de Córdoba for the reproduction of species that are part of the biological diversity and do not constitute a fishery resource. A live collection of fish was installed in Parque Explora in Medellín, as a measure to protect the species, which was supported by an educational strategy for communities.
- In EPM's plant nurseries, the reproduction of different plant species that can be used in eventual ecological restoration processes is being carried out.
- At the moment, monitoring is being conducted in different aspects of great importance as primary information for defining possible impacts on ecosystems. These studies are carried out by Pontificia Universidad Javeriana and Universidad Nacional de Colombia (Medellín campus).

**Monitoring:** hydrobiological communities in agreement with Universidad de Antioquia which includes the analysis in 90 sampling stations; spawning areas in 34 sampling stations and migration routes (8 sampling stations) of different fish species, performed by Universidad de Córdoba; fishing activity in 40 sampling sites in agreement with Fundación Humedales; hydraulic and hydrological conditions of the middle and lower river basin conducted by Universidad Nacional de Colombia; some swampy ecosystems with water level measurement equipment in ecosystems that have been considered strategic by Corantioquia; and physicochemical variables in the river downstream of the dam, through a contract with Universidad de Medellín, with reports that are delivered to the environmental authority in accordance with the requirements of the environmental license, as well as modifications and requirements associated with the contingency.



Regarding environmental aspects, agreements and contracts have been signed as part of the recovery plan. These are especially aimed at gathering the information necessary for the recovery of ecosystems in the event of any possible impacts that may have been caused by the closure of the gates.

The following is a summary of these agreements and contracts:



## 3.5 Contingency plan

In compliance with the contingency plan for the Ituango hydroelectric project, chapter 9 of the Environmental Impact Assessment (EIA), approved by Ruling 0155 of 2009 (environmental license in force), as amended, and in the context of Act 1523 of December 2012, the following project recovery activities were carried out during 2019, as part of the social processes of risk management, risk reduction, and disaster management (of the contingency):

### 3.5.1 Risk management

The Ituango project has an approved contingency plan within the environmental license and a response plan that has been the road map. Grupo EPM also has a Protocol for Addressing Events and Crises (PADEC), which is activated from the beginning of the event and is the mechanism that coordinates the attention and provides the necessary economic resources for it.

Based on the plans established and approved, the group developed the actions intended to mitigate the risk associated with the Ituango hydroelectric project and implemented them by strengthening the communities in terms of preparation for the response.

These are the activities that have been developed:

- 557 workshops, with the participation of 28,068 people in the municipalities of Valdivia, Tarazá, Cáceres, Caucasia, and Nechí.
- Training, since 2014, for the municipal councils for disaster risk management (CMGRDs, as per its acronym in Spanish) of the municipalities located upstream and downstream.
- Integration of processes with the Administrative Department of the System for Prevention, Attention, and Recovery of Disasters (DAPARD, as per its acronym in Spanish).
- Delivery of 135 emergency kits to the communities.
- Definition of meeting points and evacuation routes and installation of 95 early warning systems (EWSs) in Valdivia, Tarazá, Cáceres, Caucasia, and Nechí.
- Commissioning of land and river caravans for the communication of the municipality of Ituango.
- Installation of a hydrometry network and a technical monitoring center (TMC) that analyzes more than 600 technical variables in real time and generates warnings to activate the EWSs and the emergency and contingency plans of the project.

With the preparation of the disaster risk management plan of public and private organizations, registered before the ANLA on December 28, 2018, in compliance with Decree 2157 of 2017, the group identified short-, medium-, and long-term measures to mitigate the risk based on the knowledge processes, the disaster reduction and management, in relation to the continuity of the Emergency and Contingency Plan (PEC, as per its acronym in Spanish) implementation and the definition of agreements with the organizations of the SNGRD to increase responsiveness in the presence of an event.

During the first semester of 2019, the national PMU—created on May 7, 2018—remained active, but holding meetings less frequently; the last PMU meeting of that semester was held on June 10, given the progress made with risk control and the level of preparation of the communities.

### 3.5.2 Ending of the red warning

As a result of the events that took place in the project, the flow rate variations in the Cauca River put at risk the population located downstream of the dam, along the riverbanks; therefore, the SNGRD recommended a preventive evacuation warning.

To identify measures and technical inputs that would favor prevention and preparation, the Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM, as per its acronym in Spanish) and EPM worked together to create a new analysis model for the Cauca River downstream, taking into account the project conditions, and thus establish risk scenarios based on a flow rate estimate. In that way, the SNGRD defined an evacuation warning model that the coordinating entity of the system, the National Unit for Disaster Risk Management (UNGRD, as per its acronym in Spanish) communicated by means of circular letters. These circular letters established three warning levels in the municipalities identified, based on the project distances and the arrival times of the flood.

- **Red warning:** the population under this warning level should remain evacuated as a preventive measure until the authorities indicate changes in the risk level.
- **Orange warning:** the population under this warning level should prepare as appropriate for an immediate evacuation according to the indications of the authorities.
- **Yellow warning:** the population under this warning level should prepare for any evacuation orders and evacuation preparation notices.

The circular letters issued by the UNGRD are the following:

Circular letter by the UNGRD	Considerations of the peak flow modeling	Peak flow estimate
034, dated May 19, 2018	Dam piping failure	263,323 m <sup>3</sup> /s
035, dated May 24, 2018	Unblocking of diversion tunnels	16,000 m <sup>3</sup> /s
	Flow evacuation through the powerhouse	
042, dated June 14, 2018	Reservoir level elevation: 405 MASL	8,100 m <sup>3</sup> /s
	Volume stored at the reservoir elevation: 2,038 hm <sup>3</sup>	
	Flow evacuated through the spillway at the start of the failure	
	Flow evacuated through the powerhouse at the start of the failure	
032, dated June 26, 2019 (circular letter in force to date)	Peak flow evacuated through the right diversion tunnel	Close to 8,000 m <sup>3</sup> /s
	Reservoir level at the moment of the failure at elevation 409	
	Volume stored in the reservoir would be 2,169 hm <sup>3</sup>	
	Flow evacuated from the reservoir (only through the spillway)	
	Peak flow evacuated through the right diversion tunnel	

In accordance with Circular Letter 032, dated July 26, 2019, the warning level decreased in the municipality of Valdivia, namely in the small town Puerto Valdivia; it went from red warning to yellow warning, which enabled activities in this area and allowed families to return. A progressive return plan was implemented, which included:

1. Information gathering of the conditions of:
  - a. Homes and businesses.
  - b. Public utilities: public lighting, waste collection, water supply and drinking water, and residential energy network supply.

2. Return discussion process:
  - a. Meetings with leaders and the community.
  - b. Statement for the municipal administration, the CMGRD, and other organizations.
  - c. Discussion of the new circular letter.
3. Return implementation:
  - a. Restoration of conditions of homes and businesses.
  - b. Activation of public utilities: public lighting, waste collection, water supply and drinking water, and residential energy network supply.
  - c. Epidemiological surveillance.
4. Return discussion process:
  - a. Meetings with leaders and the community.
  - b. Statement for the municipal administration, the CMGRD, and other organizations.
  - c. Discussion of the new circular letter.
5. Psychosocial strategy:
  - a. EPM-municipal administration agreement, municipal psychosocial working group.
  - b. Red Cross.
  - c. Primary health care agreement with the hospital.

### 3.5.3 Internal and external call string

With the participation of the chairman of the CMGRD and a leader of the PADEC from EPM, a procedure was implemented in the municipalities to activate, downstream of the project, the emergency and contingency actions.

### 3.5.4 Implementation of the contingency plan

In the second semester of 2019, the PEC was updated as a result of the dam failure and sudden flood downstream of the Ituango hydroelectric project, in the construction stage (version 3); likewise, support was provided to the preparation of the Disaster Risk Management Plan of Public and Private Entities (PGRDEPP, as per its acronym in Spanish).

**Assistance in the transportation of patients:** the basic ambulance transport (BAT) supporting the Ituango hydroelectric project contingency plan provided its services in the municipality of Valdivia and in the small town Puerto Valdivia to facilitate the return process of the families.

Since October 25, 2018, when, at the request of EPM, the basic ambulance located in Valdivia to support the contingency plan by transporting the Puerto Valdivia community, these assistance and BAT services for people of the community have increased. This shows the importance of this service for the returning community and other inhabitants of Puerto Valdivia. During the second semester of 2019, a total of 110 people received assistance, 107 of them were taken to different health centers in the municipalities of Valdivia, Yarumal, Bello, and Medellín.

Since the moment the basic ambulance located in the municipality of Valdivia until December 31, 2019, a total of 322 events have been addressed, of which 255 (79%) needed transportation to health centers and 48 (15%), to hospitals, with higher levels of health care.

**EWSs:** the main works of the Ituango project have 43 electrical audible alarms installed. To date, 83 audible EWSs have been installed downstream of the dam site to Nechí. These systems are complemented and communicated with the TMC at the project through three relay stations, software, and an entire call string including EPM staff; contractors; the community; CMGRDs; departmental councils for disaster risk management (CDGRDs, as per its acronym in Spanish); the DAPARD; the UNGRD; the ANLA; the Inter-American Development Bank (IDB); among others.



Installation of EWSs

**EWSs installed by the Early Warning System of Medellín and Valle de Aburrá (SIATA, as per its acronym in Spanish):** during the second semester of 2019, the agreement with the SIATA remained in force to install 34 automatic and remotely activated (from the TMC at the Ituango project) alarms, two meteorological sensors, and one level sensor. Eight alarms were installed in Puerto Valdivia; eight, in Tarazá; eight, in Cáceres; and 10, in Caucasia; likewise, two sensors were installed in Caucasia and one was installed in Tarazá. The TMC team was trained on the use of the software that monitors all the EWSs installed by the SIATA.

As of December 31, 2019, as per the recommendation of the UNGRD, 196 evacuation route signs were installed.

**Strengthening of responsiveness:** EPM makes progress with the implementation of an application named Alertas Ituango (Ituango Warnings), which will favor the communication, through mobile devices, of possible warnings associated with the construction and operation of the project.

Simultaneously and since the previous year, the company has implemented a dashboard that largely summarizes the preparation and response activities that have been taking place in the territory; locates the EWSs installed; identifies the evacuation routes, the meeting points, the distances, and the access times; and allows the CMGRDs and end users to access the information.

Click the link to access the dashboard: <https://goo.gl/xNkkGx>

Besides the 37 EWSs installed in 2019, two meteorological sensors (one in Caucasia and one in Tarazá) and one level sensor (in Caucasia) were installed. All the systems are connected to the project TMC.

### 3.5.5 Training of the CMGRDs at the area of direct influence

11 training activities were conducted with the CMGRDs in seven municipalities of the area of direct influence of the Ituango hydroelectric project. The topics addressed were “revision of the municipal strategy for emergency response: planning of drills and simulations” and “discussion of the risks associated with the Ituango hydroelectric project,” according to the progress and methodology established for each municipality. 22 people participated in the training activities.

**Training of the CMGRDs downstream:** reinforcement workshops were developed in Valdivia, Cáceres, Tarazá, Caucasia, and Nechí.

**Discussion of the Ituango hydroelectric project with the CMGRD of La Mojana:** discussion activities were carried out in the departments of Córdoba, Bolívar, and Sucre, in 19 municipalities that were included in the study that assesses the high impact of the project.

**Drills at the project works:** 16 emergency drills were carried out including the following scenarios: total evacuation from the main works due to the closing of the headrace gates, rescue of injured staff at the discharge shaft, evacuation from the discharge tunnels 2 and 3, rescue of staff due to falling material and generation of biological waste at the heliport, rescue of collaborator due to fall at different level into the floodgate wells, injured people care, and spillage of hydrocarbons during fueling maneuver at the Matanzas camp.

During the semester, the contractors continued updating the call strings and establishing the Integrated Center for Safety and Emergencies and the TMC as activation mechanisms.

**Support to third parties:** the emergency and contingency plans of the contractors are integrated into the PEC of EPM. They consider the warning levels for the activation of possible emergencies and contingencies that occur in the project and require the support of external entities.

Meetings and work days were shared with staff from Oleoducto Central S.A., Intercolombia S.A., and Mineros S.A., among other companies, to discuss and get to know their corresponding emergency and contingency plans and disaster risk management plans.

**Drills with CMGRDs at the area of direct influence:** 10 drills were carried out with CMGRDs at the area of direct influence, applying the protocols for emergency response downstream and upstream of the Ituango hydroelectric project. 126 people participated.

**Risk management self-assessment with the CMGRDs from the area of direct influence and La Mojana:**

With the purpose of learning the current status of the CMGRDs of Antioquia and La Mojana, a tool was used to allow these councils to conduct their self-assessment considering four aspects established by Act 1523 of 2012, such as:



- Planning tools (integration of the Ituango hydroelectric project risk scenarios into the territorial planning tools).
- Information systems.
- Organizational structure.
- Financing mechanisms.

### Integration of the Ituango hydroelectric project risk scenarios into the planning tools:

Four meetings were held with coordinators or representatives of the CMGRDs of Valdivia, Tarazá, Cauca, and Nechí, to revise the progress with the integration of the Ituango hydroelectric project risk scenarios into their planning tools.

### 3.5.6 Main activities downstream

In Antioquia and in part of La Mojana, workshops were held with each of the CDGRDs of Córdoba, Sucre and Bolívar to address topics such as the current status of the project in terms of progress with the works, the recovery of the powerhouse, the risks associated with the project, the PGREPP, and the PEC. These workshops were attended by 99 members of the CDGRDs.

In addition, 21 communities from 10 municipalities of the area of direct influence of the Ituango hydroelectric project received 37 training activities with the following workshops: "Family and Community Emergency Plan" and "Basic Community First Aid," according to the progress and the methodology established for each community. A total of 1,456 people were trained.



Workshop with CDGRD in Turbaco, Bolívar

### 3.5.7 Training downstream

In total, 136 training activities were developed with 6,181 participants from communities located downstream of the project in the municipalities of Valdivia, Tarazá, Cáceres, Caucasia, and Nechí. They were attended by community leaders, productive associations, and representatives of the educational community, among others, and included topics such as family and community emergency plan, basic community first aid, and community validation and adoption of the flood-related emergency and contingency plan.

**Community information events in La Mojana:** 150 community information events were held to share generalities of the Ituango hydroelectric project and the associated risks, the PEC downstream of the project, and the role of community leaders and the community in general during the warning levels established by the competent authorities. 8,605 people participated.

**Drills downstream:** five evacuation drills were carried out with five communities located in Valdivia, according to the methodological route established for each community. 243 people participated.



Training in drills, downstream in the municipality of Valdivia.

## 3.6 Preventive evacuation of the population and provision of humanitarian aid

### 3.6.1 Context

In accordance with the preventive evacuation warning established by the PMU coordinated by the UNGRD, preventive population evacuation measures were implemented, always acting with the aim of ensuring the rights to life and integrity of the people at risk.

The contingency management was permanently articulated with all the institutional entities of the state and following the guidelines established for this purpose by the Colombian National Constitution, the National Government, and the applicable regulations.

The people evacuated were treated in accordance with the guidelines of the Standardization of Humanitarian Aid in Colombia developed by the UNGRD. It was necessary to implement temporary accommodation with the purpose of safeguarding the lives of the communities at risk and ensuring conditions worthy of this humanitarian assistance.

However, aware of the need to improve the conditions of the sheltered families, EPM provided temporary economic support to each family group evacuated living in the area before the contingency took place. The families interested in this economic support could pay with it the expenses of rent, food, transportation, and other needs for their subsistence.

For the delivery of the economic support, EPM prepared a protocol as part of an agreement with the UNGRD.

Likewise, EPM provided psychosocial support and training in disaster risk prevention and management.

### 3.6.2 Population

According to PMU reports as of August 31, 2018, around 17,184 people (5,626 families) were evacuated from the municipalities of Valdivia, Tarazá, and Cáceres as a result of the contingency. However, the official information did not include 15 families and two owners from the municipality of Briceño who were affected in the Puente Palestina sector; they are included for the purposes of this report.

In the case of Valdivia, 292 families who have technical issues with their public utilities and whose homes are under assessment are waiting to return. Likewise, 2,638 families were registered in the unified registry of people damnified (RUD as per its acronym in Spanish), but the return was not applicable to 148 because they were not found during the process or because they corresponded to repeated information in the database.

## People who evacuated and returned – Contingency of the Ituango project

Municipality	No. of people	No. of families	No. of families who returned*	No. of families waiting to return*	No. of families damnified or affected	Remarks
Valdivia- Puerto Valdivia	7,622	2,638 <sup>2</sup>	1,963	292	235	The return is not applicable for 148 families
Tarazá	5,763	1,690	1,690	0	10	The 10 families affected are included in the population of return
Cáceres	3,799	1,298	1,298	0	0	-
Caucasia	0	0	N.A.	N.A.	N.A.	-
Nechí	0	0	N.A.	N.A.	N.A.	-
Briceño	17	17	17	0	17	The 17 families affected are included in the population of return
<b>Total</b>	<b>17,201</b>	<b>5,643</b>	<b>4,979</b>	<b>292</b>	<b>262</b>	<b>-</b>

\* Information as for December 2019.

**Valdivia:** 1,564 families returned in accordance with Circular Letter 042 dated June 14, 2018 by the SNGRD. 399 families returned in accordance with Circular Letter 032 of 2019 by the SNGRD. 74 families damnified that do not return. 162 families with partial damages and 292 families waiting to return due to technical issues such as public utilities and condition of their homes.

**Tarazá:** families that returned in accordance with Circular Letter 042 dated June 14, 2018 by the SNGRD.

<sup>1</sup> PMU reports: number 51 dated June 30, 2018 and number 113 dated August 31, 2018.

<sup>2</sup> According to the PMU report number 148 dated October 12, 2018, a total of 14 families from Briceño (56 people), 1 from Ituango (4 people), and 46 from Tarazá (138 people) were included in the RUD in Valdivia.

**Cáceres:** families that returned in accordance with Circular Letter 042 dated June 14, 2018 by the SNGRD. In the municipality of Cáceres, preventive evacuation of the community located in the river island La Amargura was conducted from May 17 to June 24, 2018; the families moved to shelters only at night and returned to their homes during the day.

**Caucasia and Nechí:** an evacuation process was not carried out in these municipalities.

### 3.6.3 Intervention measures

For the care of the population evacuated, different temporary and definitive measures were established, as described below:

#### Temporary measures

**Delivery of humanitarian aid:** a total of 84,344 actions providing food and non-food aid were carried out.

**Economic support:** This benefit was activated for family groups evacuated that were registered in the RUD and met the requirements; it was enabled until they were given an order to return to their homes.

#### Financial support delivered as of December 2019

No. of families	Total	Remarks
2,492	COP 28,759 million	The economic supports only apply to families registered in the RUD and certified by the Municipality of Valdivia; most of the families corresponds to a population located in Puerto Valdivia. Some families from the Briceño and Tarazá jurisdictions, close to the area of influence, were registered in the RUD and also received economic support.

## Definitive measures

**Return process:** this strategy aims to reestablish the living conditions of the families evacuated preventively. For its implementation, different actions established in the Return Process Protocol are carried out, including the restoration of public utilities (energy, water supply, sewerage, cleaning of the area, and waste collection); support for the transportation of the population and furniture and fixtures; delivery of food aid; training in risk management; psychosocial support; and information activities on the completion of delivery of economic support. These actions are described below:

**Communication and participation strategy:** the project implemented different strategies to share information about the return, to address the needs of those interested in psychosocial support, and to receive questions, requests, complaints, and claims through the human rights grievance mechanism.

**Care of pregnant and lactating women and early childhood:** these actions are developed in coordination with the PMU through allies such as the Colombian Family Welfare Institute and Universidad de Antioquia. As of December 2019, children and adolescents had received comprehensive and uninterrupted care by professionals in the psychosocial field, in addition to support, nutritional assessment, and preferential early childhood care according to the following six lines:

### Care of pregnant and lactating women and early childhood

Line/Municipality	Valdivia	Tarazá	Cáceres	Total
Psychosocial support	1,077	777	896	2,750
Assurance of rights	1,306	316	439	2,061
Nutritional assessment	983	382	166	1,531
Pregnant women	91	23	25	139
Lactating women	94	28	18	140
Nutritional supplement (liquid bienestarina)	51,409	21,148	5,325	77,882
Mobile units	1	0	0	1

**Updating family information and surveying the baseline:** through an agreement between EPM and the municipal administration of Valdivia, social professionals survey the family baseline concerning the conditions presented by families once they returned to their homes. This activity ensures that their basic services and needs are met.

**Renovation of the evacuated houses:** this strategy consists of a unique economic contribution to compensate for the deterioration that the houses located in the small town of Puerto Valdivia may present as a result of disuse, temporary abandonment, and inclement weather conditions, among other factors, during the permanent preventive evacuation order. For the contribution, each house was diagnosed, regardless of whether the family groups are registered in the RUD or not.

### Diagnoses for renovation of evacuated houses as of December 2019

Municipality	No. of diagnoses due to disuse	No. of families with a contract	No. of families that received contribution
Valdivia – Puerto Valdivia	1,934	802	640

## 3.7 Attention to the riverside population affected by the May 12 emergency

### 3.7.1 Context

On May 12, 2018, as a result of the increase in water caused by the unblocking of one of the Ituango project tunnels, built for the diversion of the Cauca River, an emergency arose in the small town Puerto Valdivia. That day, the right diversion tunnel unblocked, generating a flow increase in the Cauca River, downstream of the dam site.

On the same day, a new obstruction blocked this tunnel again, decreasing the flow. The increase in water affected homes and productive and community infrastructure from part of the riverside population of the small town Puerto Valdivia. No victims, people injured, or missing persons were reported.

EPM immediately began assessing the damages, putting an emphasis on people, basic service infrastructure, and homes, as well as on the destination of humanitarian aid. The UNGRD classified 235 families as negatively impacted in the municipality of Valdivia, of which 73 were damnified (with total loss of infrastructure) and 162 partially affected. In addition, 87 people were reported having economic damages.

For their part, the CMGRDs of the municipalities of Briceño and Tarazá reported the following damages:

In the municipality of Briceño, the productive infrastructure of 15 families located in the Palestine, El Turcó, and La Cristalina sectors, where they carried out mining and fishing activities, was identified with damages. As for the community infrastructure, the Palestine and the El Turcó bridges were affected.

EPM supported the characterization of the communities affected in Briceño and identified two more families, corresponding to owners of productive infrastructure.

For its part, the CMGRD of the municipality of Tarazá identified damages for 10 families including flood in their homes and loss of fixtures; the houses were not structurally affected. Likewise, damages were reported in community infrastructure, namely structural damages in the vehicular bridge of the small town El Doce and in a pipe bridge that carries the water of the same small town's water supply system. With regard to the productive sector, agricultural damages (destruction of crops), fish farming damages, and livestock damages (loss of pigs and cattle) were identified.

On May 14, 2018, the PMU of the municipality of Tarazá reported agricultural damages for 19 people.

### 3.7.2 Population

Considering the information of the municipalities of Valdivia, Briceño, and Tarazá, as of December 2019, the population affected by the emergency on May 12, 2018 is classified according to the impact on infrastructure and economic activities, as follows:

**Families associated with damaged infrastructure:** although the unit of analysis is one family, the process of replacement and restoration of living conditions considers the consensus among different actors interested in the house or productive infrastructure affected, such as owners/possessor and tenants/commodataries. The infrastructure, the economic activity, and other items such as furniture and fixtures, appurtenances, crops, etc. are considered in the analysis of each case.



As of December 2019, a total of 257 family groups<sup>3</sup> were classified as follows:

- 74 families damnified in Valdivia: with total loss of housing and/or productive infrastructure.
- 156 families affected in Valdivia: with partial damage to furniture and fixtures and/or housing or productive infrastructure.
- 17 families affected from Briceño: with partial damages in productive infrastructure (improvised tents), registered in the minutes of the CMGRD.
- 10 families affected from Tarazá: with partial damages to furniture and fixtures and/or housing or productive infrastructure, registered in the minutes of the CMGRD.

Likewise, 106 people associated with economic damages are identified and classified as follows:

- 87 people from Valdivia with economic damages: corresponding to economic damages that were collected in cards once the emergency occurred and/or claims with subsequent validations on site.
- 19 people from Tarazá with economic damages: corresponding to economic damages identified in the municipality of Tarazá, registered in the minutes of the CMGRD and the PMU of the municipality.

### 3.7.3 Intervention measures

With the purpose of addressing the socioeconomic damages, EPM designed a definitive involuntary resettlement plan for the 235 families damnified by the emergence on May 12, 2018, following the provisions of the IDB Invest Environmental and Social Sustainability Policy (based on compliance with Act 1523 of 2012, the Circular Letters 034 and 035 dated May 19 and 25, 2018, respectively, issued by the UNGRD) and the provisions of the Corporate Social Responsibility Policy of Grupo EPM that establishes that “the socially-responsible corporate action of EPM has an ethical foundation, based on the recognition of the impacts that its decisions have on stakeholders.”

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<sup>3</sup> The population of families damnified and affected was 235. However, as of December 2019, it increased to 257 families. The changes in the information are the result of incorporating families from Briceño and Tarazá, as well as attending to claims of other families. Moreover, with the process of verification and validation of information, new additions and inconsistencies were identified.

This plan includes the compensation measures and intervention strategies for the management of the damages caused and is completed with the execution of a process that includes a) characterization of the population, b) analysis of the population included in the census and registered in the RUD, c) verification and validation of information, d) information and consultation, e) discussion and consensus on compensation and/or intervention measures, f) implementation, and g) follow-up and monitoring.

### 3.7.4 Progress with the 74 families damnified in Valdivia

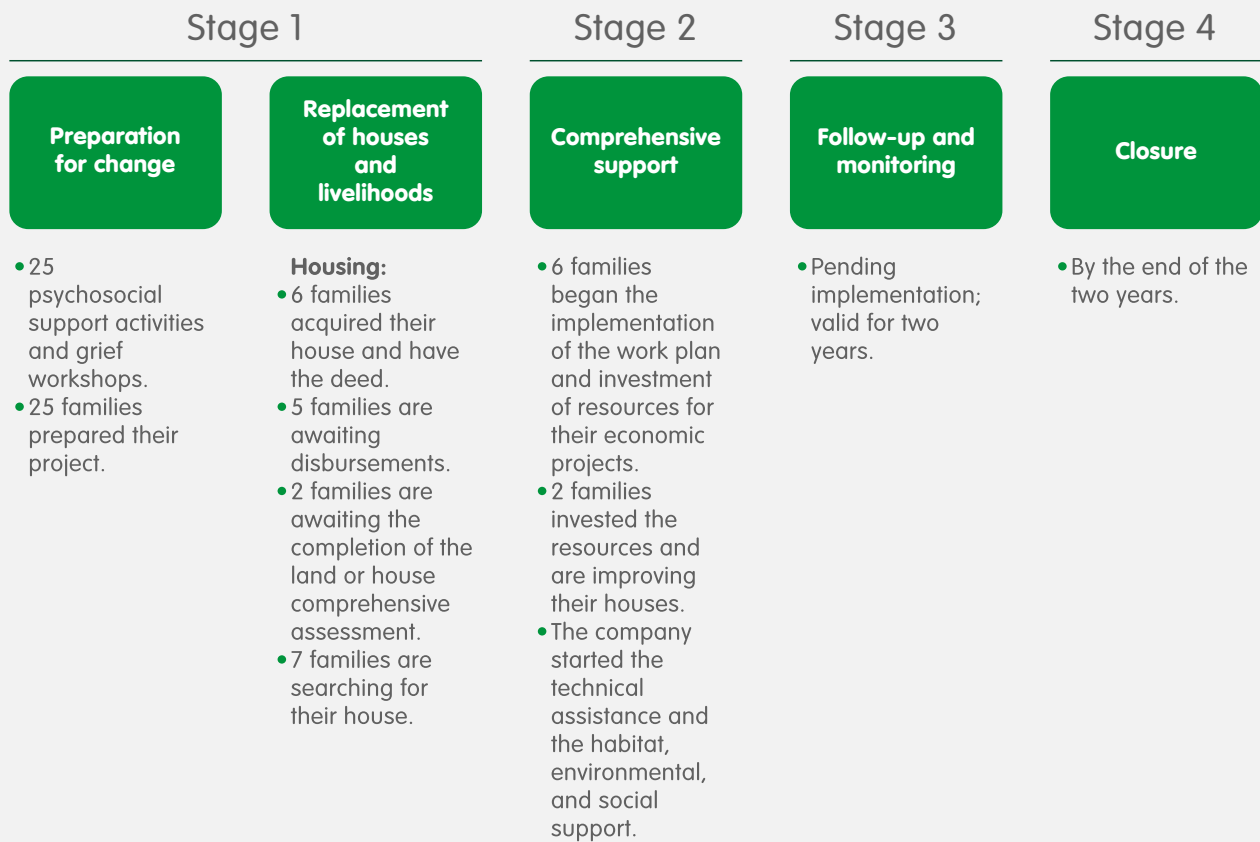
Intervention measures apply to the 74 families damnified according to the infrastructure affected and its habitability conditions. The table below shows the consensus and solution details and classifies the families in the following way:

- 59 infrastructures corresponded to houses inhabited by their possessors/owners or by tenants.
- Only the families that inhabited the houses and were possessors or owners are targets of an intervention measure and beneficiaries of support for two years. In this sense, as of December 2019, 26 out of the 74 families eligible for this measure began the process of restoring their living conditions and, therefore, receive social support to prepare for change, technical assistance to replace their homes and economic projects, and guidance for their social and institutional integration into their new environments.
- 10 families opted for a direct purchase (execution of resources on their own).
- Eight families are in process (five are processing successions and three are negotiating economic offers).
- The remaining 15 infrastructures were occupied by tenants and/or possessors who were adapting them for rent. 14 of these families were paid for the damages and there is a current process of consensus with 10 of the 15 possessors.
- Two infrastructures were establishments (one used by its owner and the other rented).
- 13 corresponded to productive infrastructures, that is, improvised tents used as spaces to develop mining, fishing, and agricultural activities. It is necessary to clarify that, of the 74 families damnified, only these 13 can return because their permanent homes were not affected.

### Status of consensus and solution for the 74 families damnified in the municipality of Valdivia as of December 2019.

Population	No. of families	Consensus		Solution offered					
		Yes	No	Return	Payment to occupier	Payment to owner / tenant*	Resettlement	Pending occupiers	Pending owners / tenants**
Owner-occupants	44	36	8	N.A.	36	N.A.	26	8	N.A.
Tenants and/or possessors of homes for rent	15	14	1	N.A.	14	10	N.A.	1	5
<b>Homes</b>	<b>59</b>	<b>50</b>	<b>9</b>	<b>N.A.</b>	<b>50</b>	<b>10</b>	<b>26</b>	<b>9</b>	<b>5</b>
Owner-occupants	1	1	0	N.A.	1	N.A.	N.A.	0	N.A.
Tenants and/or possessors of establishments for rent	1	1	0	N.A.	1	1	N.A.	0	0
<b>Stores and establishments</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>N.A.</b>	<b>2</b>	<b>1</b>	<b>N.A.</b>	<b>0</b>	<b>0</b>
Owner-occupants	13	13	0	13	13	N.A.	N.A.	0	0
<b>Precarious structures or improvised</b>	<b>13</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>13</b>	<b>N.A.</b>	<b>N.A.</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>74</b>	<b>65</b>	<b>9</b>	<b>13</b>	<b>65</b>	<b>11</b>	<b>26</b>	<b>9</b>	<b>5</b>

**Note:** the values of columns "Payment to owner/tenant\*" and "Pending owner/tenant\*\*" are control information and should not be added or taken into account for the cost of the 74 infrastructures affected.



*Progress with the implementation process with 26 families subject to resettlement.*

**Process of restoring living conditions: Luz Dary Martínez Serna’s family**



House in the Remolinos sector, built with unconventional materials (wood board walls, cement floor, zinc roof, bathroom with latrine, kitchen, and bedroom), with promissory purchase document, and located on a risky area.



Total loss of housing due to the emergency on May 12, 2018 in the Cauca River, in the small town Puerto Valdivia, due to the construction of the Ituango hydroelectric project



Suggested housing for rent in Yarumal.  
(Awaiting disbursement).

### 3.7.5 Progress with the 156 families affected in Valdivia

The initial population of families with partial damages in housing and/or productive infrastructure in Valdivia was 162; however, with the process of verification and validation of information, new additions were identified, generating changes in the database.

As of December 2019, there were 135 families in houses or apartments, of which 90 are owners and/or possessors and 45 tenants or possessors of homes for rent. With 28 families of this last group, progress is being made with the consensus and payment of damages.

In the case of the possessors and/or owners occupying the affected infrastructures, it is expected to have a definitive technical concept to define their habitability conditions. If total damages were found, the families would have to be considered as damnified and start the resettlement process.

Furthermore, there are eight families in mixed-use infrastructures, which, besides being used as homes, were used as commercial establishments such as shops and bars. A consensus has been reached with four of these families.

A total of 13 families are owners and/or possessors of precarious infrastructures or have another condition as possessors of affected tools. They are under analysis and could no longer be considered as affected because the first technical concepts indicate that the flood that took place on May 12, 2018 did not reach the level where they are located or the residential or productive space was not damaged.

## Status of consensus and solution for the 156 families affected in the municipality of Valdivia.

Population	No. of families	Consensus		Solution offered					
		Yes	No	Return	Payment to occupier	Payment to owner / tenant*	Resettlement	Pending occupiers	Pending owners / tenants**
Owner-occupants	90	0	90	0	0	N.A.	0	90	N.A.
Tenants and/or possessors of homes for rent	45	28	17	N.A.	28	0	N.A.	17	45
<b>Homes</b>	<b>135</b>	<b>28</b>	<b>107</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>107</b>	<b>45</b>
Owner-occupants	2	0	2	0	0	N.A.	0	2	N.A.
Tenants and/or possessors of establishments for rent	6	4	2	N.A.	4	0	N.A.	2	6
<b>Mixed used (shops/ establishments)</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>6</b>
Owner-occupants	10	0	10	0	0	N.A.	N.A.	10	N.A.
Other condition	3	0	3	0	0	0	N.A.	3	0
<b>Precarious structures or improvised</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N.A.</b>	<b>13</b>	<b>0</b>
<b>Total</b>	<b>156</b>	<b>32</b>	<b>124</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>124</b>	<b>51</b>

### 3.7.6 Progress with the 17 families affected in Briceño

The 17 families from Briceño with productive infrastructure identified as partially affected were located in the Puente Palestina sector, the connection between the municipalities of Ituango and Briceño. Although the PMU was not enabled in this municipality, the CMGRD did identify damages. Consensus for these damages was reached with all the families, which received compensation according to the established methodology.

### Status of consensus and solution for the 17 families affected in the municipality of Briceño.

Population	No. of families	Consensus		Solution offered					
		Yes	No	Return	Payment to occupier	Payment to owner / tenant*	Resettlement	Pending occupiers	Pending owners / tenants**
Owner-occupants	15	15	0	15	15	N.A.	N.A.	0	0
Tenants and/or possessors of establishments for rent	2	2	0	2	1	1	N.A.	0	0
Precarious structures or improvised tents	17	17	0	17	16	1	N.A.	0	0
<b>Total</b>	<b>17</b>	<b>17</b>	<b>0</b>	<b>17</b>	<b>16</b>	<b>1</b>	<b>N.A.</b>	<b>0</b>	<b>0</b>

### 3.7.7 Progress with the 10 families affected in Tarazá

The 10 families from Tarazá with housing and/or productive infrastructure identified as partially affected were located in the El Doce sector.

As of December 2019, progress was made with the methodological process to define definitive intervention measures. Validation interviews were conducted and information on the condition of the houses was collected; however, a consensus has not been reached with any of the families.

It is important to clarify that these families and all those from Tarazá returned according to Circular Letter 042 date June 14, 2018.

### Status of consensus and solution for the 10 families affected in the municipality of Tarazá.

Population	No. of families	Consensus		Solution offered					
		Yes	No	Return	Payment to occupier	Payment to owner / tenant*	Resettlement	Pending occupiers	Pending owners / tenants**
Owner-occupants	6	0	6	6	0	N.A.	N.A.	6	N.A.
Tenants and/or possessors of homes for rent	4	0	4	4	0	0	N.A.	4	4
<b>Homes</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>N.A.</b>	<b>10</b>	<b>4</b>

### 3.7.8 Progress with the 106 people with economic damages

With the economic activities of 87 people from Valdivia and 19 from Tarazá identified as partially affected, the company started to implement methodological processes to characterize the activities and assess the level of damage.

As of December 2019, the company had conducted validation interviews, collected on-site information, and contrasted technical information with secondary sources such as the Colombian Agricultural Institute and the rural and environmental development offices of the municipalities of Valdivia and Tarazá.

For the municipality of Tarazá, technical validations were carried out on the plots identified by the possessors, located in the river island Bocas de Purí in the small town El Doce. The fieldwork was carried out through participatory processes: all possessors identified the areas that they used and that were affected by the flood. Subsequently, a technical analysis was performed using an orthophotograph created with drones and the results were shared with the possessors, who validated the process and, in some cases, made clarifications.

This fieldwork was compared with the model of the flood area that the Cauca River could have generated and that exceeded 6,100 m<sup>3</sup>/s; this area can be observed in the following aerial photograph.





Modeling of the 6,100- m3 flood area in the river island Bocas de Purí, small town El Doce, municipality of Tarazá.

## 3.8 Grievance procedure for economic damages in Puerto Valdivia, caused by the preventive evacuation order.

### 3.8.1 Context

The starting point of the grievance procedure concerning the economic damages in the small town Puerto Valdivia was the request by the Negotiating Table of People Affected by the Ituango Hydroelectric Project in Valdivia, Antioquia (MEDAV, as per its acronym in Spanish), which consisted in the need to learn the immediate future of the trading population from the small town. However, this procedure is not limited exclusively to this segment; it also extends to all those people whose formal or informal economic activities were affected and who had submitted a grievance to EPM.

EPM established the parameters of the grievance procedure for damages in the economic activity of the small town Puerto Valdivia in the municipality of Valdivia, as a result of the permanent preventive evacuation order issued on May 16, 2018 by the authorities that comprise the SNGRD. Thus, the premises for the identification of the people affected and the applicable compensation measures were determined.

### 3.8.2 Population

As of December 2019, there were 1,711 people registered as claimants for damages in formal and informal economic activities, including street sales, artisanal mining, various trades, and renting, agricultural, and trading activities.

The human rights grievance mechanism remains active to receive requests and claims from the community; therefore, the number of claims for economic damages changes every month.

### 3.8.3 Intervention measures

EPM developed the methodology for the grievance procedure for damages in the economic activity in the small town Puerto Valdivia. It established that the applicable economic compensation will be effective from May 16, 2018 (date of the permanent preventive evacuation order) to the moment of return, including an additional time for the reactivation of economic activity.

This methodology was discussed with the community and the representatives of the commercial guild, participating or not in the MEDAV, who considered that “the established compensation measures reflect the expectations of fair reparation for the damages caused by the contingency,” as stated during the table sessions.

- Status of consensus and solution provided to people with economic claims in Valdivia.

Population	No. of families	Consensus			Solution offered			
		Yes	No	Damage-free notifications	Return	Payment	Resettlement	Pending traders
Economic compensations	1,711	262	1,373	76	1,711	227	N.A.	1,373
<b>Total</b>	<b>1,711</b>	<b>262</b>	<b>1,373</b>	<b>76</b>	<b>1,711</b>	<b>227</b>	<b>N.A.</b>	<b>1,373</b>

### 3.9 Mobility

A contingent mobility plan was implemented for the community of the municipality of Ituango (between the stations of Chirí and Bombillo in the municipality of Briceño), which includes caravans at defined times informed to the community, based on the security conditions found in the project. The table below shows the cumulative report of the community mobility to and from the municipality of Ituango since April 29, 2018:

Cumulative land mobility report*			
Vehicles	15,986	Special vehicles	593
Public transit vehicles	4,227	Three-wheeler vans	203
Motorcycles	5,481	Animals	11,739
Cargo trucks	7,771	People	118,439

\*Land caravans ended on November 7, 2019.

Due to the contingency that took place on Saturday, May 26, 2018, regarding one of the slopes on the right bank, a river mobility plan was additionally activated with the construction of a ferry (La Tranquilidad) for the community of the municipality of Ituango, connecting the ports of Brujas in the municipality of Toledo, left bank of the Cauca River, and Bombillo in the municipality of Briceño, right bank of the same river.

The La Tranquilidad ferry was operated by the company Naviera del Guavio, which had all the permits, patents, and insurance required for an optimal operation. The costs were entirely paid for by EPM. In Bocas de Niquía, a ferry called Wirdhrnson was also available for transportation.

<b>Ferry*</b>			
Departures	14,354	Special vehicles	435
Public transit buses	6,297	Motorcycles	44,769
Vehicles	12,615	People	215,021
Cargo trucks*	4,727		
<b>Boats</b>			
Community			75,983

*\*River transfers ended on January 2, 2020.*

In order to comply with the provisions and requirements of the road authority, the road at the top of the dam serves for the continuous mobility to and from the urban area of the municipality of Ituango since November 8, 2019. The river transport service in the Ituango project reservoir was suspended as of January 3, 2020, when the new route through the crest of the dam was enabled for mobility.

Furthermore, some bridges—Palestina, El Turcó, and Simón Bolívar in Puerto Valdivia—were damaged by the May-12 event. The new bridges were designed for a 100-year return period flood, as required by the bridge design standard CCP114 and the road design standard by the Colombian National Roads Institute (Invías, as per its acronym in Spanish). The interventions began when Circular Letter 032 of 2019 modified the warning level, since the red warning restricted the activities on the river.

The El Doce bridge, in Tarazá, owned by Invías, was partially damaged in its metallic structure and its left-bank support shaft shifted. EPM, through the UNGRD, partially repaired this structure, relocated the support shaft on its abutment, and adapted the floor plate. The definitive repair of this structure consists in changing the floor plate, the lateral bracing, and the mesh enclosure, adjusting and fixing the defective parts, and painting the entire structure. The company is currently in negotiations to sign an inter-administrative agreement with Invías for the repair.

## 3.10 Specific action plan

### 3.10.1 Specific action plan for recovery

EPM has been implementing specific actions for the recovery of aquatic and terrestrial ecosystems and the care for the communities eventually affected. With this objective, the company structured a Specific Action Plan (PAE, as per its acronym in Spanish) that resulted from Decree 2018070001272 dated May 14, 2018, which declared the public calamity in the municipalities of the department of Antioquia located in the area of direct influence of the Ituango hydroelectric project and in those municipalities located between the dam and the municipality of Nechí (Antioquia). As the executing company of the Ituango project and applying its social and environmental responsibility policies, EPM has comprehensively and bindingly considered the needs of the communities eventually affected. The foregoing complies with Article 61 of Act 1523 of 2012, the conditions of Circular Letter 02 of 2019 by the UNGRD, and the provisions of Circular Letter 001 of 2019 by the Office of the Inspector General of Colombia, which establish the priorities in terms of protection of the population and the environment and require establishing measures for recovery.

The purpose of the PAE is to continue working in collaboration with the municipalities and contribute, as our duty, to the recovery of damages caused to the communities. For this, EPM has defined programs, projects, and activities to be developed in the municipalities of Ituango, Valdivia, Tarazá, Cáceres, Caucasia, and Nechí, which are structured in the following nine lines of work:

1. Society.
2. Environment.
3. Accessibility and transportation.
4. Education.
5. Health care.
6. Public utilities.
7. Housing.
8. Livelihood.
9. Information and communication.

These nine lines group 86 activities of direct compliance responsibility by EPM; 20 of those activities were completed in 2019.

The PAE started in May 2018 and has an activity completion horizon by December 2022.

### **3.10.2 Budget execution during the contingency.**

From April 2018 to December 31, 2019, there was an accumulated budget execution of COP 139,533 million to address the contingency of the project.

This value includes actions carried out downstream of the dam, such as emergency humanitarian aid (food and non-food aid, adaptation of facilities, water supply, and basic sanitation), operational and logistical support to municipalities, economic support to the people affected and the families evacuated, recovery of the infrastructure damaged, maintenance of shelters, mechanism to address lawsuits and claims for loss of economic activity, social actions, risk management of the recovery action plan, and agreements with institutions for the execution of the recovery action plan.

### Budget execution during the contingency per lines of the PAE in 2019.

No.	PAE lines	Investment in 2019
1	Social line	21,346
2	Housing line	7,423
3	Accessibility and transportation line	167
4	Health-care line	90
5	Education line	2,640
6	Public utilities line	200
7	Livelihood line	3,219
8	Information and communication line	19,249
9	Environmental line	11,343
		<b>65,676</b>

*\*Values in million COP for 2019.*

Activities carried out upstream of the dam are also included, which are mainly intended for river transport through the reservoir and the land mobility plan designed to serve the communities affected by the transportation of cargo and passengers in the region.

## 4 Cross-cutting management

### 4.1 Investigation and precautionary measures by the Attorney General's Office and technical committee of the Inspector General's Office

In compliance with the order issued on June 12, 2019 by the 75<sup>th</sup> municipal criminal court judge with guarantee control powers, EPM participated in eight sessions of the technical committee and in a visit to the project. The objective, according to the judge's order, was to study aspects such as the stability of the project and the rock mass.

### 4.2 Special Jurisdiction for Peace

In relation to the request of the Special Jurisdiction for Peace (JEP, as per its acronym in Spanish) to "provide information on the search for missing persons in the municipalities surrounding the Ituango hydroelectric project," EPM informed the public opinion that:

1. On March 4, 2019, EPM received a request for information from the first instance section of the JEP for cases of lack of recognition of truth and responsibility. The request was related to the recovery, care for, protection, and preservation of 16 places in the national territory, including some places located in the area of influence of the Ituango hydroelectric project, without clarifying their specific locations. The company is processing this request.
2. Considering the due diligence and respecting human rights, in 2013, EPM requested the Office of the Attorney General of Colombia, as the entity in charge of the search, identification, and delivery of missing persons, to expedite the pending processes that are reported before the investigating entity in the areas where the dam would be built and where the reservoir would be filled.
3. To facilitate the work of the investigating entity, EPM has provided support through Socya, its social operator for the Ituango hydroelectric project. This support is provided by virtue of the duty of harmonious collaboration with the different authorities, without signing any agreement or contract with the Office of the Attorney General of Colombia for that purpose.



4. On March 15, 2019, EPM responded to the requests of the JEP through two reports with the information at its disposal regarding the precautionary measures on the alleged places in the project area where bodies of missing persons could rest; the company also reported the due diligence actions it has developed, as well as those actions, known by EPM, carried out by the authorized entities in the search, survey, and exhumation of unidentified human remains.

5. Subsequently, as part of Order 035 of 2019, the JEP called a public hearing on October 8 and 9, 2019 in Medellín, to address the care for, protection, and conservation of the 16 areas located throughout the country where human remains could be found, namely one of these areas, made up of six municipalities, which was named by the petitioners of precautionary measures as “places in the area of influence of the Ituango hydroelectric project.”

6. During the hearing, which is conceived as a technical and dialogic space, the different entities that have worked around the project area searching for human remains provided information.

7. After the hearing, on October 28, 2019, EPM submitted a new report to the JEP adding and clarifying information.

8. A decision is currently pending.

## 4.3 The Cauca River as a subject of protection rights

In relation to the decision of the High Court of Medellín, which recognizes the Cauca River as a subject of protection rights, EPM informed the public opinion that:

1. In its determination, the court orders the national government to exercise its legal representation of the Cauca River and all the pertinent activities for its protection, conservation, preservation, and restoration.

2. The court pointed out that, with its interventions in the Ituango hydroelectric project, EPM caused damages to the Cauca River, but it refrained from issuing any order against the company because it recognized that EPM has acted effectively and diligently in undertaking all the necessary measures to mitigate the impact.

3. In its effort to conserve and protect the fauna, flora and strategic aquatic and terrestrial ecosystems of this important region and to identify and evaluate possible changes caused by the contingency and the construction and future operation of the Ituango hydroelectric project, EPM signed agreements with several recognized entities with scientific and technical experience in environmental issues, including the AUNAP, the Alexander Von Humboldt Institute, Corantioquia, and Universidad de Antioquia. With this same objective, the company formalized new agreements with Pontificia Universidad Javeriana, Universidad de Córdoba, Universidad Nacional de Colombia, the Humedales foundation, and the Natura foundation.

Likewise, EPM works with the Santa Cruz Aquaculture and Fish Farming Center in the creation of a gene bank to conserve the diversity of fish in the basin and with Parque Explora in the assembly of a living collection of species from the middle and low basin, in addition to the development of environmental awareness and education activities.

4. EPM implemented a recovery plan for the municipalities of Ituango, Valdivia, Tarazá, Cáceres, Caucasia, and Nechí, affected by the contingency. The plan is structured in eight lines of work, among which the environmental component stands out. This is a commitment to the communities located downstream of the dam and a continuous task to conserve the aquatic and terrestrial ecosystems. In this regard, the company has not spared efforts or resources.

## 4.4 Policy coverage

The Ituango hydroelectric project has the following policies:

- All-risk construction and assembly policy: it includes additional coverage against sabotage and terrorism, lucrum cessans (delay in start-up), international and national transportation for project teams, and coverage for equipment and machinery. It amounts to USD 2,074,510,311 for material damage, USD 149,000,000 for delay in start-up, and USD 200,000,000 for sabotage and terrorism coverage.
- Non-contractual civil liability policy: it includes damnum emergens, lucrum cessans, and non-pecuniary damages caused to third parties and for which the insured is responsible. The insurance limit is COP 50,000,000,000.

**Insurance claim:** as a result of the collapse of the third diversion tunnel, the insurance company Mapfre was notified of the loss on May 2, 2018.

The claim affecting the civil liability policy is supported by the damages caused to the community downstream of the project, specifically in the small town Puerto Valdivia due to the unblocking of the right tunnel and the sudden flood on May 12, 2018 that generated material damage to homes and public infrastructure.

In this loss, EPM appointed an expert (claim adjuster) to assess the damages caused to third parties and to review with them the applicable compensation model in accordance with the law and the policy. The legal and social areas of EPM have been conducting the assessments and the respective transaction contracts with the third parties affected. In December 2018, the insurance company confirmed the coverage for this event and, in May 2019, EPM received the first advance payment of COP 6,168 million, amount that will be formalized as the transactions are signed and the agreed model regarding the policy is applied. Additional advance payments may be requested to the insurance company as the previous payments exhaust.

As for the claim of the all-risk construction and assembly policy, upon the aforementioned notice, the reinsurers appointed an expert to adjust the claim figures and in turn appointed a team of experts to analyze the technical situation of the project and conduct their own root cause analysis.

EPM exchanged with the adjusters and experts extensive technical information on the evolution of the project from the start of construction, the root cause analyses prepared by the Skava firm and the project advisory firm, and the costs incurred for the recovery of the project.

The process to demonstrate the occurrence or, in other words, the cause and the facts that gave rise to the contingency lasted 16 months. It successfully concluded with the confirmation of coverage letter signed by Mapfre and received by EPM on September 16, 2019, where the insurer expressly states: "Mapfre Seguros Generales de Colombia S. A. hereby confirms that, in accordance with its terms and conditions, the policy covers the contingency." The confirmation of coverage represents the recognition of the compensatory liability of the insurer considering the legal purposes that this entails, always framed within the conditions and stipulations provided in the insurance contract.

Once the insurer confirmed the coverage of the occurrence, and given the difficulties to define an adjusted and definitive amount of the losses generated by the contingency and claimable in accordance with the policy, but taking into account that EPM has been incurring expenditures to replace the equipment and repair the works damaged by the loss, and that the policy expressly provides the possibility of agreeing on advances, EPM and Mapfre signed a framework agreement at the end of November 2019 by means of which the conditions for the advance payments were established. Consequently, on December 4, 2019, Mapfre made a first advance payment of USD 150 million corresponding to *damnum emergens* in civil works without assigning it to any particular coverage of the policy and corresponding to the amount recommended by the adjuster according to the expenses and investments made by EPM in the recovery of the project so far. However, this amount does not correspond in any way to the total compensation or to an adjusted amount of the damages caused by the contingency; the adjusted amount will be the result of a rigorous analysis of the quantification of damages, linked to the conditions of the policy, such as deductibles, limits, sub-limits, additional coverage, and exclusions.

EPM continues to share technical information on the evolution of the project with the adjusters and experts appointed by the reinsurers, with the purpose of making progress with the quantification of damages and obtaining compensation from the policy coverage adjusted to the changes implemented in the project after the contingency.

## 4.5 Christmas lighting

On this occasion, EPM held two parallel activities related to the customer's day and the switching on of the Christmas lighting. The dates agreed for these events in the municipalities of the Lower Cauca region downstream of the project are listed below:

- Valdivia: November 30
- Tarazá: December 1
- Cáceres: December 1
- Caucasia: November 30
- Nechí: November 24

In these spaces, the company delivered Christmas maracas, Christmas hats, and small boxes with *buñuelos* and *natilla* to the communities of the municipalities that attended these spaces, as planned for community Christmas.

**Customer's Day and EPM Christmas lighting:** EPM developed the Customer's Day institutional program in the municipalities, a community meeting space where the communities can:

- Ask for clarifications concerning the energy service.
- Learn recommendations for the safe use of energy to prevent accidents at home and in the municipality.
- Participate in contests.
- Enjoy educational and recreational activities focused on public utilities and care for the environment (for children, young boys and girls, and adults).
- Rejoice with a varied cultural agenda.

In addition, this time, EPM coordinated Christmas celebration with the Christmas lighting, an ideal program to share with family and friends.

It included the following agenda:

- Customer's Day
- Mass in the church
- EPM Christmas lighting event

In coordination with each municipal administration, EPM invited to enjoy the event to turn on the Christmas lights and to start Christmas celebrations in these municipalities of Antioquia. The community enjoyed this show of lights and colors until the long weekend holiday ending on January 6, 2020.

## 4.6 Grievance procedure

Since 2009, the Ituango hydroelectric project has a grievance mechanism. As of 2015, it was updated to include issues related to human rights. This mechanism serves the population of the 12 municipalities of the area of influence of the project through the community service offices and other means such as email, EPM building service offices in Medellín, and rural tours guided by field professionals. This mechanism groups the following eight service lines:

- Inclusion in the census.
- Consensus and negotiation.
- Infrastructure damages.
- Labor complaints.
- Environmental and sociocultural impacts.
- Engagement of employees and contractors with stakeholders.
- Public safety, private security, and international humanitarian law.
- Sustainable territories.

Initially the service lines were seven because the line of labor complaints was part of the line of infrastructure damages, but, since they are unrelated lines, they were separated; the corresponding analysis for the previous years is in progress.

Due to the contingency that occurred in May 2018, it was necessary to create a new service line called "Ituango project contingency compensation claims." As of December 31, 2019, EPM received 2,634 complaints and claims and 271 requests for information regarding the contingency, for a total of 2,905 letters from the community in 2019.

Indicator	Status	2014	2015	2016	2017	2018	2019
Letters	Attended to	1,809	947	941	397	718	238
	Solved	1,809	887	898	377	709	230
Rights to petition	Attended to	0	454	2,645	339	2,285	3,229
	Solved	0	433	2,638	278	2,141	3,054
Labor complaints	Attended to						52
	Solved						51
Writs for protection of constitutional rights	Attended to	8	11	8	7	24	33
	Solved	8	8	8	7	13	14
Lawsuits addressed	Attended to	10	-	7	31	40	35
	Solved	0	-	2	31	30	4

The information presented for 2014 and 2015 was corrected. The information registered for those years corresponded to general letters that were submitted to the project, including civil work letters, which represented a significant volume; however, these should not be included in the grievance mechanism because they correspond to technical communication letters among EPM, auditors, and contractors. Likewise, since EPM did not implemented the same mechanism in 2014 as that currently implemented, this information has been adjusted per service lines and labor complaints. As for 2018 and 2019, the table includes the communication letters and rights to petition generated by the contingency, which considerably increases the amounts.

# Sustainability report **2019**

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