

EPM's 2022 Annual Report



Generating solutions that bring well-being, we contribute to the achievement of the SDGs.



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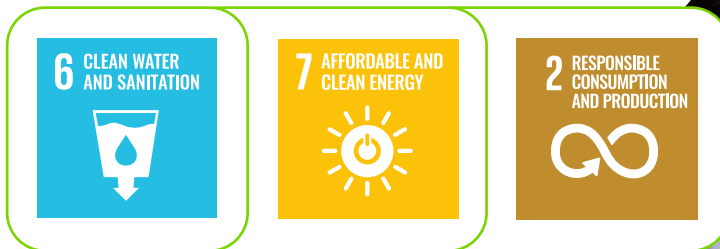
Letter from EPM's CEO



Members of EPM's Board of Directors

2022 was a year full of important advances for EPM, which allowed us to stay connected to our **business purpose of contributing to the harmony of life for a better world**. This purpose is fulfilled through the advancement of strategies, initiatives, and actions that contribute to the **welfare and development of the communities in the territories where we operate**. We deliver solutions in public utilities such as water, sewage, energy generation, transmission and distribution, as well as gas and solid waste management.

The alignment of business objectives with the sustainability of the planet enables us to conduct our management with greater responsibility, vision, and proactivity. It also aligns the management of our business group with the Global Development Agenda 2015-2030, to which we have committed our operations, **making direct contributions to the Sustainable Development Goals (SDGs)**. Specifically, we focus on goals related to Clean Water and Sanitation, Affordable and Clean Energy, and Responsible Production and Consumption.



Networking, collaboration, commitment, and attentiveness to environmental signals have allowed us to make progress in relevant matters for the future of the company and the country. Some of these achievements include the **comprehensive management of the Ituango hydroelectric project**, with the successful start of operations for units 1 and 2



in November. This milestone has given us greater confidence to take firm steps in guaranteeing Colombia's energy security. We have also prioritized **the execution of investment plans to initiate the**

operation of high-impact infrastructure that improves the well-being of the people living in the areas where Grupo EPM operates. This commitment ensures the **quality and continuity of residential public utilities**, which has always been a hallmark of our organization. As a result, we have maintained a leading position in the Colombian market compared to other companies in the sector. We are the number one agent in both energy generation and distribution, and we hold the second position in the water and sanitation, gas, and solid waste businesses.



As allies of Colombia's sustainable development, **we are committed to the energy transition** through non-conventional renewable energies NCRE and diversification of the energy supply portfolio. In 2022, **we commenced the construction of the Tepuy solar park, a photovoltaic solar energy project** located in the department of Caldas. With a progress rate of over 30% in its initial phase, the project has generated 67 jobs in the region. Additionally, we made significant **strides in the development of a Hydrogen project**, consolidating the roadmap and assembling the necessary work team to achieve its implementation.

Contributing to the circular economy, **our CDW** (construction and demolition waste) **recovery plant has begun operation**, enabling the reuse of these materials. We have also made progress in **digital transformation** with the AMI smart metering project and the development of solutions to address various customer needs.



Water conservation, biodiversity preservation, and climate change mitigation are key priorities on our agenda. **In 2022, we protected over 13,705 hectares in the watersheds** that supply our systems and reservoirs, in addition to our own conservation efforts. Furthermore, we have actively promoted **electric mobility** by operating 18 green

charging stations for electric vehicles and establishing the **green corridor**, connecting Medellín with the coffee region through the installation of fast charging stations in La Pintada (EPM), Manizales (CHEC), Pereira (EEP), and Filandia (EDEQ). These actions contribute to reducing greenhouse gas emissions and improving air quality.

In recognition of EPM's track record, technical discipline, and experience as a reliable provider of high-quality utilities, we have been designated by the National Utility Services Authority as **special agents—to operate the water and sanitation systems on the island of Providencia and Santa Catalina for P&K company**. Noteworthy achievements include reaching 100% coverage in aqueduct services and increasing service continuity from 5% to 60% through the operation of two desalination plants, as well as improving the quality

of water for human consumption. Additionally, we have taken on the challenge of enhancing water and sewage services for over 100,000 customers of **Empresa de Servicios Públicos del Distrito de Santa Marta (Essmar)**.

We continue to generate benefits for a total of 350,000 families through the **Somos program**, which provides credits for services and products, promoting responsible and efficient use of utilities.

In celebration of our 55th year **illuminating Christmas in Medellín, we showcased lights inspired by the Walt Disney Animation Studios movie "Encanto."** This display had a significant impact at both the national and international level, resulting in a 41.1% increase in the number of visitors to the different illuminated areas. The increased tourism brought an economic revenue boost of USD 36.9 million for the city. This initiative not only stimulated tourism but also created employment opportunities and contributed to the overall economy.

Regarding our EPM People, **we have expanded the coverage of our inclusion program** for people with disabilities, increasing the number of job positions from 20 to 40 within the company. Since its inception in 2019, this program has resulted in the employment of eight individuals with indefinite-term contracts.



The Global Compact Network in Colombia chose our **Guide to Engagement with Ethnic Communities of Grupo EPM**, among 216 initiatives submitted, as one of the winners of the fifth edition of the **Recognition of Good Practices in Sustainable Development**.

This document is considered a reference in the region for its contribution to the achievement of the SDGs in its 2030 Agenda and was selected taking into account criteria such as innovation, management and quality, impact and sustainability over time.

On December 12, our capacity for adaptability and cooperation allowed us to **deal with a cybersecurity incident** caused by a ransomware attack, software that blocks applications, encrypts data, kidnaps and steals information and demands a ransom for it. The timely deployment of a **contingency plan and the collaborative and multidisciplinary** work allowed us to avoid affecting the provision of our own business services, as well as to control the impacts suffered by some customers of the energy and prepaid water offers, achieving the reestablishment in one and four days, respectively. **To date, we continue implementing cybersecurity controls according to the Cybersecurity Agreement 1502** of the National Operation Council (CNO) and we are strengthening the technology governance and cybersecurity architecture with the scope of Grupo EPM.



Committed to the development of Medellín and to our owner, the District of Medellín, **we contribute to the municipal development plan with COP 1.8 billion in**

ordinary and extraordinary transfers, for the benefit of the people of Medellín through social programs promoted by the Mayor's Office and the participation of the local government.

In projects carried out by EPM such as **Water Connections for Life, Closing the Gap, Upgrading of City Lighting, Solar Energy Self-Generation Solutions, and Solid Waste Containers**, the latter with our subsidiary **Emvarias**.

Our **Annual Report** is the compendium of different initiatives, projects, results and experiences during the previous fiscal year, which we present to all our stakeholders as an act of transparency and openness of information—**so that they can learn a little more about what we do to contribute to the harmony of life for a better world.** So, **I invite you to read this document to connect with our company and its business group**, to get closer, and together we will continue to contribute to the care of the territories and the planet in which we live.





Our 2022 Annual Report responds to our commitment to “Communicating Progress” to inform about the practices of the corporate group derived from the conviction and commitment we have to the ten principles of human rights, labor standards, environment, and anti-corruption. We renew our commitment to remain adhered to the United Nations (UN), as we have done annually since 2006, in accordance with the purpose we live day by day and in which we resolutely pursue to contribute to the harmony of life.



Jorge Andrés Carrillo Cardoso

EPM General manager

Strategic direction



Our **strategic direction** seeks to guide us as a business group and lead us to a desired future position. It is supported by the Sustainability Model as a fundamental basis for the construction of each of its components, thus strengthening the vision of **a business management model in which economic growth must respect social and environmental limits**.

The strategic direction is born as an inspiration for our existence and work; in this sense, we define a common **purpose** that drives us to **contribute to the harmony of life for a better world**, reconciling business objectives with sustainable human development to **contribute to the achievement of the Sustainable Development Goals (SDGs)**, proposed in the Global Development Agenda 2015 - 2030.



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS





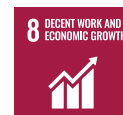
The sustainability vision established at Grupo EPM

It conceives the protection and generation of value for companies and society from the core business activities, distancing itself from the philanthropic or welfare approach, without supplanting the competencies of the State or any other actor.



SUSTAINABLE DEVELOPMENT GOALS

Being part of a whole, we are called to connect with the world in the fulfillment of global challenges, such as the SDGs, with the achievement of strategic objectives and the management of material issues. In this sense, **this Management Report highlights the main initiatives and achievements in each of the SDGs on which we had a direct impact as Grupo EPM** and in accordance with the sustainability principles defined with the vision of stakeholders, as well as those to which we contribute indirectly.



Grupo·epm



Relevant Milestones 2022



The main organizational efforts were oriented towards:

1

Dissemination and appropriation of the strategy approved in 2021.



2

Updating the definition of materiality for Grupo EPM.



3

The definition of the scope of management focus and the identification and formulation of strategic initiatives to be implemented.



4

The adaptation of the organizational structure to favor the incubation and development of new solutions, which leverage the eight business division—defined as Commercialization of New Solutions.



5

The evolution of the Corporate Social Responsibility (CSR) policy approved in 2009 towards a Sustainability policy for the corporate group.



The concept of sustainability is broad and includes the different initiatives carried out by Grupo EPM and the economic, social, environmental and governance perspectives; therefore, the **new Sustainability policy** is expressed in the following terms:

Sustainability Policy

“Grupo EPM **promotes the generation of value for people, territories and their environments** through mission critical activities of its business divisions and companies by means of individual and collective actions that reconcile the achievement of business objectives with sustainable human development.

The sustainability approach is the fundamental basis of our strategic direction, incorporates good governance practices, has an ethical foundation based on the recognition of the impacts that business decisions generate on its stakeholders, the environment, and society in general; and is consistent with postulates contemplated in local, national and global initiatives”.





A Government owned utility
with:



8,182
partners



2,790,451
customers and users
in Antioquia



COP 3.2 billion
in infrastructure
investments



7 business lines



Power
Generation and
Commercialization



Power Transmission



Energy
Distribution and
Commercialization



Gas
Distribution and
Commercialization



Water Supply and
Commercialization

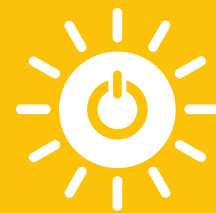


Wastewater
Management and
Commercialization



Commercialization
of New Solutions



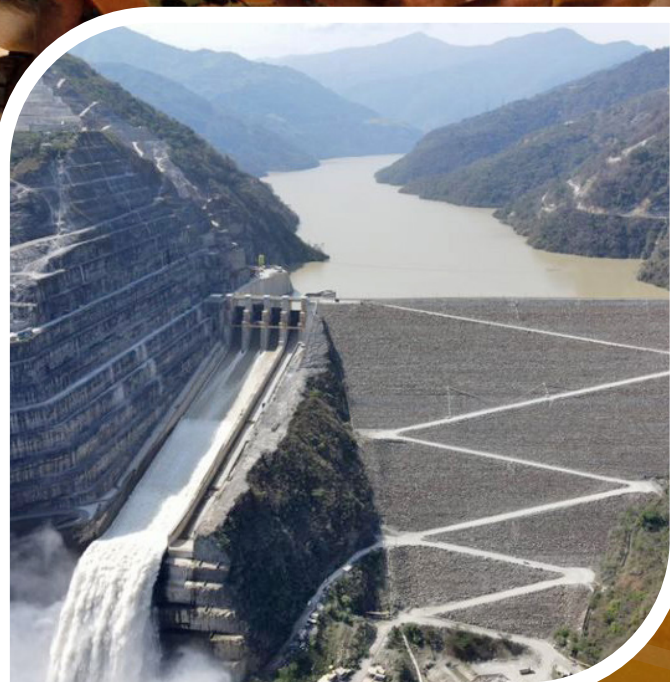


1

SDG 7

**Affordable and
nonpolluting
energy**

We are thrilled with the arrival of energy and gas to more homes and companies, thanks to the **expansion of coverage in optimal conditions of quality and continuity of service, the implementation of energy efficiency actions and the delivery of solutions through nonconventional renewable energy sources**, which allow us to bring the service to areas of difficult access and satisfy customers and users who demand alternative solutions.





1.1. Ituango Hydroelectric Power Plant



With Hidroituango,
Colombia is evolving



Scan the
QR code



On November 30th, Colombia experienced one of the most important historical milestones in the electricity sector: **the first two Hidroituango units were duly registered with the national energy system** and, therefore, available for commercial operation.



Relevant Milestones 2022

Technical Results



1

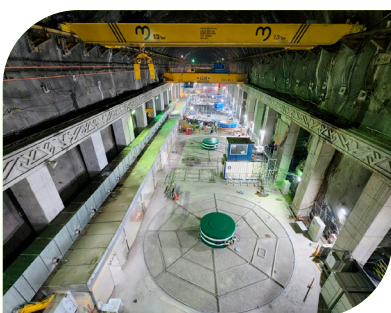
We have **completed 90.35% of civil works costing COP 14.4 billions**—this amount includes writing off assets, the payment for damages awarded by the insurance company, as well as financial expenses.



2

As of December 14th, 2022, the **Ituango Hydroelectric Power Plant** will **generate clean, renewable and low-cost energy for Colombia**.

In compliance with Resolution 1056 of 2022 -In addition to the preventive evacuation ordered by the National Unit for Disaster Risk Management (UNGRD), **we successfully completed the final tests of generation units 1 and 2 and started the continuous commercial operation** of EPM's new generation plant.



3

The two units **generate an average of 12 GWh/day**, equivalent to **5.5% of the national generation** and have allowed EPM to reach a **share of 27%** at the beginning of 2023; each generation unit is capable of lighting a city like Ibagué or Pereira.





New resources for 155 municipalities



Hidroituango is more than an infrastructure project, it is a **development initiative** with which we contribute to territorial and institutional articulation through **new resources for 155 municipalities in the Cauca River basin** and a greater state presence, which **contributes to the viability and sustainability of the territory**.



Relevant Milestones 2022

Social Results

The plant has a real commitment to the people, and for this reason, we highlight our efforts benefiting downstream communities through the **Specific Action Plan (Spanish acronym: PAE)**.

1

We invested **COP 279,297 million** between **2018 and 2022** to compensate families affected by the contingency, **improving their conditions with more dignified housing** and strengthening the care and protection of life through the **health line**.



2

We held various **meetings with community organizations and institutions in the territory to strengthen community capacities** in human rights and the Sustainable Development Goals (SDGs).





Relevant Milestones 2022

Environmental management

1

We minimize the impact generated in the area of influence of the project through **prevention, attention, and compensation actions** through the implementation of programs to manage atmospheric quality, surface water, excavation materials, domestic and industrial wastewater, habitat and organisms, vegetation conservation, among others.





In this sense, we understand the importance of continuing to work in the territory, so, **from EPM we are moving forward in the implementation of a Territorial Integration Model (TIM)**, which favors the short-, medium- and long-term articulation of programs and projects that support the local development of the region—as of December 2022, we achieved **76% progress**.

Thanks to the systematic guidance of the TIM, we have made considerable **progress in the participation of interinstitutional spaces and collaborative networks** that strengthen relationships and the management of alliances, as well as the development of electrical interconnection works to connect more than 4,300 families; the improvement of access to drinking water for the population with the upgrading repowering of three water treatment plants; capacity building for community organizations; and the protection of water resources and biodiversity with the restoration of 167 hectares close to swamp ecosystems.

The Ituango Hydroelectric Power Plant is progressing with high safety standards, as evidenced by the authorities and communities in the area who have visited the works, the various tests successfully carried out and the data provided by the **Technical Monitoring Center (CMT)**, which measures 3,000 variables daily 24 hours a day.

In fact, we closed 2022 with a **risk index of 0.630**, the lowest since the current general risk register was implemented. This indicator is based on the fulfillment of goals, achievements and events that represent an **improvement in the plant's risk condition**.

Finally, we would like to highlight the **project's insurance management results** for the renewal of the property damage coverage that includes the dam and the spillway as insured areas, among others, totaling USD 200,000,000; as well as the non-contractual civil liability coverage for USD 5,000,000; both until March 2023 and the coverage for equipment and machinery until September 2023.



1.2. Energy Generation and Commercialization

Market Leader

in energy production
in Colombia



25.5 %

share in **energy production**
in Colombia

19.3 %

share of **net effective capacity** in Colombia



19,644 GWh

EPM
generation

3,783 GWh

net effective
capacity



27

hydropower
plants

18,385 GWh

hydroelectric
generation



1

high-capacity
thermal plant

1,214 GWh

natural gas-fired
thermal generation



23

distributed solar
generation systems

4 GWh

of distributed
solar generation



1

wind
farm

41 GWh

for wind power
generation





In figures...

Energy Generation and Commercialization at EPM

COP 1.9 billion invested in **infrastructure of EPM's Power Generation and Commercialization business** to contribute to the operational safety and reliability of the system.

Revenue

+12%

COP 5.6 billion

Ebitda

+17%

COP 2.8 billion





Relevant Milestones 2022



1

As Grupo EPM we are the **first agent in energy production in Colombia**, thanks to the high availability of our power generation plants, the commercial strategy of the business and the high water contributions as a result of the effects of the La Niña phenomenon.



2



Scan the
QR code

We add **600 MW** at our **generating park** corresponding to the start-up of commercial operation of units 1 and 2 of the Hidroituango power plant, to provide Colombians with clean, renewable and low-cost energy.



3

We managed initiatives of the **Cobertura project** such as the **installation of 300 solar photovoltaic solutions for isolated users in non-interconnected areas** nationwide and in Antioquia; we also **implemented a pilot with 13 families in Zaragoza**, Antioquia, to validate the acceptance of the value proposition and the technical performance of the solution; and we signed an agreement with the Government of Antioquia to provide resources to install 180 solutions between homes and schools in non-interconnected areas.





4

We installed **solar photovoltaic self-generation solutions** of 9.87 MWp, for a total accumulated capacity of 13 MWp in 23 solar systems, including their administration, operation and maintenance. **We closed the year with 14 projects in the assembly process** with a total capacity of 10.23 MWp. Of the 17 projects that came into operation in 2022, **four Colombian Air Force (FAC) bases, six Bios Group headquarters, SENA** in the department of Amazonas, and the Non-Conventional Energy and Efficient Energy Management Fund (**FENOGE**) stand out.



5



Scan the
QR code

We began construction work on the **Tepuy solar project**, located in the department of Caldas, Colombia; this future solar park will allow us to honor the commitments acquired during the long-term energy auction. non-conventional renewables.



6

We obtained the **extension of the water concessions for** the Guadalupe hydroelectric complex and the Guatapé power plant **for a term of 50 years**, which guarantees continuity in the operation of the plants.



7

We received **environmental licenses** for the **Mina Vieja river hydroelectric development project** and a **wind farm**, as well as the **modification of the environmental management measures for the Guadalupe hydroelectric complex** for the construction and operation of the pipeline alternative between the Miraflores and Troneras reservoirs and the Coco Hondo small plant.





8

We carry out actions aligned with the **strategy of Partnerships for Development** to contribute to the sustainability of the territories and the business sector through **agricultural production projects**, with emphasis on the productive chain of initiatives for the improvement of the quality of life, community strengthening, education with emphasis on culture and sports, and the care of natural resources, articulated with the SDGs with a 2030 perspective.



9

We started the operation of **four projects** that contribute to **manage in a profitable and sustainable manner the availability of EPM's existing power generation plants**, through the reliability and optimization of its assets. These projects are: Updating of civil structures of Porce II dam; modernization and replacement of Porce II power plant equipment; modernization and replacement of La Ayurá mini-power plant; and replacement of auxiliary services of the powerhouse and Tasajera power plant.



Awards and Recognition

- ★ **ISO 9001/2015 quality certification** for the Energy Production process of the Power Generation business by the Colombian Institute of Technical Standards and Certification (ICONTEC).
- ★ **Third place in the CIER Innovation Award** in the Decentralization category, for the proposal and development of a comprehensive and interoperable technological solution to enable new electricity services in non-interconnected zones (ZNI).
- ★ **Xposable - Colsubsidio 2022 Award** to the pilot of individual solar photovoltaic solutions for non-interconnected areas.



1.3. Power Transmission



7.28%

market share of
the transmission
market in
Colombia



1,081 km

in the **National
Transmission
System (STN)**



99.98%

average
availability for
reliability in
Colombia

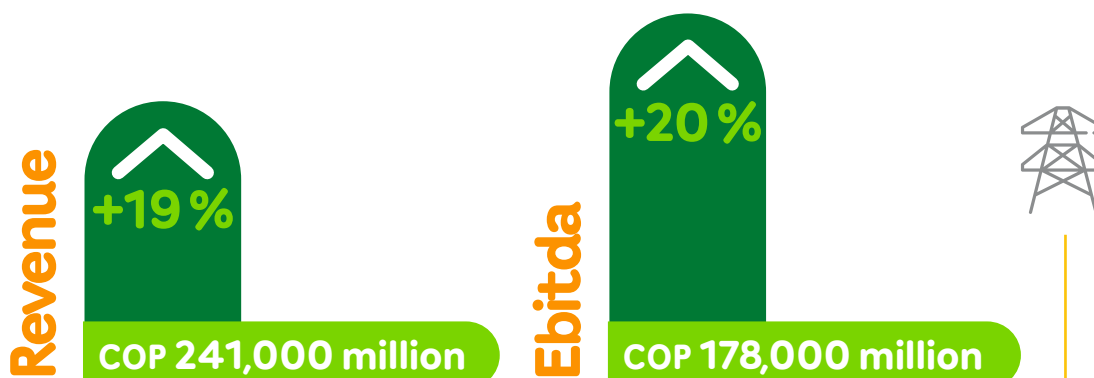
Transmission system availabilities were **0.15% higher than expected**, achieved by complying with the half-yearly maintenance plans and other interventions and events outside of the planned schedule, in addition to the timely management of excludable unavailability.



In figures...

Power Transmission at EPM

COP 5,000 million invested in **infrastructure of EPM's Energy Transmission business** to transport the energy that the territories need and contribute to the strengthening of the infrastructure.



Relevant Milestones 2022

1

We upgraded the connection to the transmission system of the **Tasajera Power Plant** at EPM, with an investment of **COP 3,000 million**.





2

We upgraded remote terminals in EPM's power transmission and distribution substations for COP 1,200 million.



3

We obtained **certification in Asset Management under the ISO 55001 standard**. The international firm PMM was the company hired for the certification process.



4

We began partial operation of the **Guadalupe IV Substation Modernization project**. This replacement allows us to comply with the regulatory useful life of the power and control equipment, and also provides greater reliability to the transmission of energy generated by the Guatiron Chain.



Awards and Recognition



Participation in the event of the International Council of Large Electric Grids (CIGRE) with a presentation on the implementation of the **DFACTS pilot**, a technology of which EPM is a pioneer in its implementation in Latin America and which allows redirecting energy from overloaded lines to underutilized corridors, thus maximizing the use of the existing network and optimizing the use of infrastructure. More than 90 countries participated in this event.



1.4. Energy Distribution and Commercialization



2,743,875

customers
and users



97.67%

universal market
coverage in **Antioquia**



14.9%

distribution market
share in **Colombia**



15.8%

market **share** in the
commercialization market
in **Colombia**



123

municipalities of
Antioquia receive
energy service



1

municipality of
Chocó receives
energy service



100,066 km

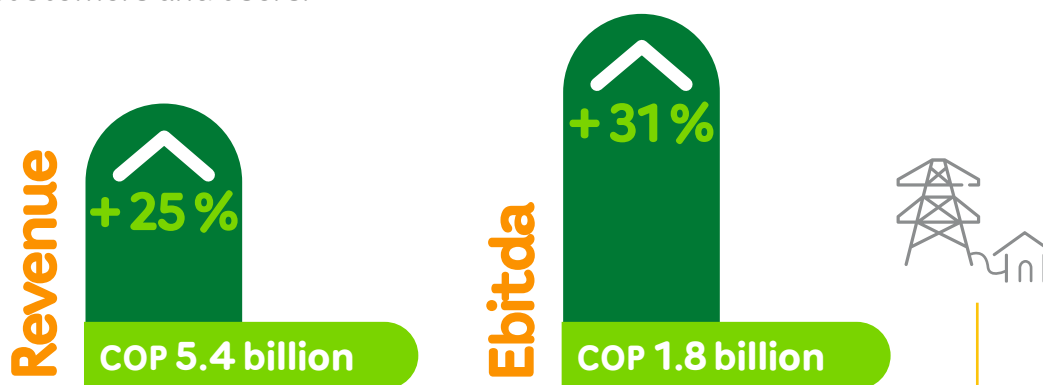
of the **Regional
Transmission System
(STR) networks**
and **electric power
distribution**



In figures...

Energy Distribution and Commercialization at EPM

COP 500,000 million invested in infrastructure of **EPM's Energy Distribution and Commercialization business**, for the expansion and replacement of networks and substations, reduction of energy losses and improvement of the quality of service for our customers and users.



The strong rainy “season”—trending from 2020 to date— is one of the most relevant causes that contribute to underperforming frequency and duration metrics for energy service interruptions. This situation is generated by the falling trees that affect infrastructure and access to rural areas, landslides on roads that hinder the time required for travel, and the shortage of materials.



Relevant Milestones 2022

1

We strengthened regional energy reliability and availability with the **Urabá - Nueva Colonia - Apartadó Connection** to benefit 60,092 customers in Urabá and meet future demand, given the growth generated by road and port development in the region. ✓



"It is a very important project because it provides security to the region for investment, for the arrival of ports and so that we do not have those power outages that at some point in history have occurred. This way we will have the security that the projects can be installed in Turbo and have guarantees in the flow of security. Above all, so that foreign investments have quality infrastructure in the region. The Urabá - Nueva Colonia - Apartadó connection is a reinforcement for the entire electrical network of the region; it is energy security for Urabá."

Felipe Maturana
Mayor of Turbo, Antioquia

2

We obtained **ISO 55001:2014 certification** for the asset management system (EMS) of EPM's Energy Transmission and Distribution businesses, issued by the auditing firm PMM Enterprise Certification. ✓

3

We started the operation of the **expansion/modernization of the Chigorodó, El Limón, San Jerónimo, Valdivia and Cañas Gordas substations.** ✓

4

We fulfilled close to **22,500 requests for the construction of rural electrification networks**, as well as the installation of approximately 2,150 transformers and more than 2,340 km of networks built. ✓



5

We started the operation of **the Regional Control Center (RCC)** in its new headquarters at EPM's Colombia substation. A video wall system was installed in this space to support and facilitate the operation and visualization of the systems, as well as a crisis room that allows the visualization of the control room so as not to interrupt operations.



6

We successfully concluded the second phase of Distributed FACTS. We permanently installed these devices in three transmission lines in the metropolitan area of Medellín, only the declaration of commercial operation is pending.



7

We advanced the modernization of public lighting with the installation of 131,171 luminaires—streetlights— in Frontino, Granada, Peñol, Hispania, Liborina, Betulia, Uramita, and Medellín, with revenues of COP 86,000 million. Specifically in Medellín, we installed 89,884 modernized streetlights, which correspond to 58% of the total existing in the district. This modernization is part of EPM's commitments to the municipal development plan of the district of Medellín.



8

We linked 13,434 customers to EPM Prepaid Energy, with a compliance of 88% compared to the year's goal—15,200. This was generated by the shortage and difficulties in importing materials for the construction of networks, which impacted the year's schedule. Our Prepaid Energy service currently has more than 311,000 active customers.



"I think it's a more convenient service because one keeps recharging it, which if has the five thousand or ten thousand pesos and one makes oneself the limit of what one is consuming and thus is reviewing the consumptions. I keep an eye on the chargers, on the children not to open the refrigerator so much, and on the TV set. It is a normal service; you are aware of how many kilowatts you have left. I highly recommend it; it is a good service."

Carola Daza

Prepaid Energy Customer number 300,000 in San Juan de Urabá



9

We made progress in electric mobility with the operation of **18 green charging stations for electric vehicles**; the implementation of the green corridor between Antioquia and the Eje Cafetero—the coffee growing region; the installation of fast charging stations in La Pintada (EPM), Manizales (CHEC), Pereira (EEP), and Filandia (EDEQ); as well as **the installation of 1,121 electric vehicles**, for a total of 3,721.



Awards and Recognition

- ★ **Andesco Energy Efficiency Award to the Optimal Distribution Planning project.**
- ★ **CIER Innovation Award for winning the national selection stage with the Coverage Sandbox with the project Cobertura, in the Decentralization category.**
- ★ **Energy Efficiency Award 2022 of the Ministry of Science, Technology and Innovation (Minciencias—Ministry of Science) in the sectors of public utilities, industry and commerce, public entities, ESCOS and academia.**
- ★ **ÁMBAR Award for Research and Development in the Electric Sector in the innovation category by the Colombian Association of Electric Energy Distributors (Asocodis).**



1.5. Gas Distribution and Commercialization

2nd. largest

natural gas distributor in Colombia



1,422,118

customers
and users



87.35%

universal service in
Antioquia

92

municipalities

121

villages



13%

is the market share
in Colombia



88 km

Steel
network

8,658 km

polyethylene
netting



17

Service stations
(EDS)—an EPM brand

25,740

gas-
vehicles



24

years of operation
in EPM





During the year, **we guaranteed the supply and continuity of gas service** by attending to events associated with the winter wave and public order.

In this sense, the operating results in the quality indicators for the provision of service were above the levels required by current regulations, thanks to activities aimed at improving communications, monitoring from the gas control center and the operating capacity of contractors and technical personnel in the field.



In figures...

Gas Distribution and Commercialization at EPM

COP 16 thousand million invested in **infrastructure of EPM's Gas Distribution and Commercialization business** to activate industries, businesses, residences and transportation.

Revenue

+21%

COP 1.5 billion

Ebitda

+16%

COP 210,000 billion





Relevant Milestones 2022

1

We extended coverage to families in the township of El Carmen de la Venta, in the municipality of Liborina, thus completing the 121 towns served.



2

We reached 1,400,000 users of EPM's natural gas service with the Fundación Hermanos de los Desvalidos, a non-profit organization that serves people in vulnerable conditions.



"With natural gas, not only is easier, faster, and safer to prepare the meals in the foundation; We also obtained savings on the monthly bill—of 50% compared to the use of gas cylinders— and now we always have it available."

Hugo Humberto Cifuentes Quintero
Director of Fundación Hermanos de los Desvalidos

3

We connected 58,533 new customers, benefiting close to 180,285 people with savings of close to 68% compared to liquefied petroleum gas (LPG) and 67% compared to energy.



4

We connected the Digital University to the Thermal District to fill the infrastructure capacity and optimize its operation. We are currently receiving requests for new projects to evaluate options for increasing capacity based on optimizations and possible expansions.





5

We built 118.6 km of networks, reaching 163% of the proposed goal. This allowed us to connect new customers and guarantee the arrival of natural gas in new sectors of Antioquia.



6

We are the first distributor in Colombia to use micro-scale liquefied natural gas (LNG) technology with 20 stations. We have obtained savings of around 20% in costs associated with energy, equipment maintenance and transportation, and increased autonomy and backup, thus contributing to the reliability of the service.



7

We developed two solutions focused on improving the customer experience and optimizing processes and reducing costs and service times of the natural gas service: Self-management of Gas Service Requests and Revenue Assurance Orchestrator, the latter for self-enabled detection and generation of alerts on transactions to ensure timely revenues.



2

SDG 6

Clean water and sanitation

We are inspired by the sustainable use of water—an element that provides life; we are committed to the materialization of initiatives that guarantee its availability, sustainable management and sanitation in the territories where we operate.

In this sense, **we contribute to universal and equitable access to drinking water and basic sanitation**, as well as to the **reduction of water pollution** through wastewater treatment and the protection of water-related ecosystems.



6

 CLEAN WATER AND SANITATION



2.1. Water Supply and Marketing

2nd.

water utility with the largest number of users in Colombia



1,391,805

customers and users



98.09 %

universal service in the metropolitan area of the Aburrá valley and in the eastern parts of the department of Antioquia



12.8 %

participation of EPM in Colombia



13

water treatment plants with capacity of 15.46 m³/s



131

storage tanks



4,370 km

of aqueduct networks





The water supplied by EPM in all the municipalities where it provides water services **complies with the Water Quality Risk Index (IRCA) for human consumption**, with values below the limit of 5%, additionally, we achieved the goals of operational indicators such as **continuity of service -99.84%**, and compliance with the **water color index -91.98%**.

In terms of system efficiency and optimization, the level of water losses is 5.70 m³ per billed user, exceeding the regulatory standard target of 6.0 m³ per billed user.

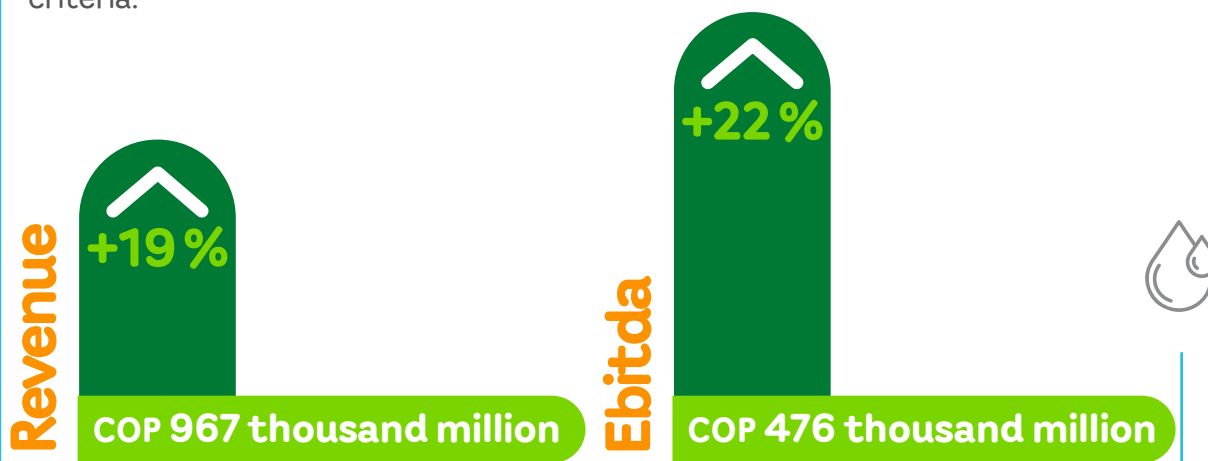
In the **Single Sectoral Indicator (IUS)**, EPM obtained results above 90 points out of 100 in the measurement of the risk level of the water and sewerage services, which represents a **low risk level** rating, ratifying the Company's commitment to its customers and users, with the provision of services with quality, continuity, coverage and business rigor.



In figures...

Water Provision and Commercialization at EPM

COP 458 thousand million invested in **infrastructure of EPM's Water Supply and Commercialization business** to supply **drinking water** to communities based on quality, continuity and reliability criteria.





Relevant Milestones 2022

1



Scan the
QR code

We connected 5,390 homes to water and/or sewage services through the **Conexiones por la Vida** program, in conjunction with the District of Medellín. We intervened in 11 neighborhoods or sectors by means of community supply and five by **Habilitación Viviendas (HV)**, among others, benefiting populations located in areas of the city that are difficult to manage. A total of 10,896 homes were connected thanks to this initiative, from 2020. This project is part of EPM's commitments in the municipal development plan of the district of Medellín.



2

We seek to guarantee the provision of water services to more than 500,000 users in a reliable manner with the **Water Provision with the program Intervención Provisión Aguas (PIPA)**, which takes into account the rapid growth of the Aburrá Valley - expansion projects and vegetative growth - and the deterioration of water sources. The initiative consists of six projects located in: the upper western part of Medellín in the Pajarito, San Cristóbal and San Javier sectors, among others; the south in the San Antonio de Prado district in operation since 2019 and the municipality of Itagüí since 2021; and the north in Bello.



3

We began operating the first phase of the **Expansión circuito Yulimar - Tercera salida Manantiales Project**, which benefits close to 16,000 users.





4

We will benefit close to 84,000 users with the **entry into operation**, in August 2022, of the infrastructure of the **first stage of the Interconexión Caldas – La Estrella Project**.



5

In July 2022, we began operating the first phase of the **Mejora estructural de tanques de almacenamiento en concreto project** for the benefit of approximately 27,000 user.



6

We provide **non-domestic wastewater treatment services for 52 nonresidential customers**, including new and renegotiated customers, when these exceed the maximum limits established by current regulations, **through the Non-Domestic Wastewater (ARND) initiative**, avoiding the impact on the process carried out by the wastewater treatment plants. During 2022, contracts for COP 4,000 million were signed.



7

We made progress in the **modernization of the La Ayurá and Manantiales water treatment plants**, which generate 88% of the water produced for the entire EPM service area. In this way, we ensure continuity and quality in the supply of drinking water to guarantee service in summer seasons and in the face of drought climatic phenomena such as El Niño.



“It can be seen how this development and expansion will increase the capacity to supply not only the municipality of Envigado, but also the municipalities in the southern part of the Aburrá Valley.”

Luis Eduardo Taborda Ramírez
Deputy Director of Planning Municipality of Envigado





"The work is impressive from a technical point of view, due to the type of construction, the tanks, their capacity and the characteristics of the network. The environmental management seems to me to be very appropriate for the conditions of the terrain and the relationship with the neighbors."

Juan Mauricio Gómez Herrera

Official of Envigado's Municipal
Environmental Authority

8

We completed the replacement and modernization of 21 km of aqueduct networks in the lower part of the La Iguaná sector, which benefits the inhabitants of 24 neighborhoods in Medellín with the enjoyment of quality utilities.

9

We will benefit 57,000 users in the **municipalities of Rionegro and El Retiro** with the **entry into operation** of the **fourth stage** of the **Valle San Nicolás project** in May 2022.

10

We began the operation of the Separación Circuitos Nutibara - Campestre Etapa 4 projects in May 2022, **and the modernization and replacement of** América, Ana Díaz, Corazón Alto, Corazón, San Cristóbal, Versailles and Berlín **circuits** in October 2022, positively impacting the lives of close to 21,000 users.

11

We upgraded the water treatment plant in the town of Palmitas, becoming the **first 100% tele-commanded ultrafiltration plant of EPM.**



12

We incorporated a new line of business focused on the sale of water to tank trucks, through the installation of two dispensing units at the San Fernando and Aguas Claras wastewater treatment plants (WWTP), with 8,628 m³ sold between July and December. ✓

13

We signed an agreement with the Universidad Nacional de Colombia to join technical, economic and logistical efforts to develop research processes in the supply basins of La Fe and Riogrande II, the two reservoirs that provide approximately 88% of the water consumed by the inhabitants of the Aburrá Valley. This initiative, called HidroFores (Forest Hydrology), adds actions and actors to EPM's purpose of strengthening water security in the Aburrá Valley and complements the infrastructure projects developed, with the objective of guaranteeing the supply of drinking water to the current and projected population for the next 50 years. ✓

14

We acted as special agent appointed by the Superintendencia de Servicios Públicos Domiciliarios (SSPD) on the island of Providencia and Santa Catalina in the company P&K, where we achieved 100% coverage in water supply; we went from 5% to 60% of water supply continuity with the start-up of two desalination plants; and we improved the quality of water for human consumption. In addition, we achieved 100% coverage of the sanitation service. ✓



"In the many years that I have lived in Providencia, I haven't seen an aqueduct service with the quality of Today, the water in my sector has a good continuity, I no longer have to buy water from a tanker when we are in summer and, above all, I can use it for cooking because it is drinkable."

Francia Elena López Ruiz
User of the Mountain sector on Providencia Island



15

We were appointed as **special agent of the Santa Marta Public Utilities Company (Essmar E.S.P.)**, a fact that represents a recognition of EPM's good name and a challenge to improve the quality of service to more than 120,000 aqueduct and 110,000 sewerage customers. ✓

16

We added **2,399 customers to the EPM prepaid water offer**, with a compliance of 141% compared to the year's goal of 1,700. This business initiative currently has 28,000 active customers. ✓

2.2. Wastewater Management and Commercialization



1,374,055

customers
and users

96.19%

universal service coverage in the metropolitan area of the Aburrá valley and in the eastern part of the department of Antioquia. Rionegro and El Retiro



12.8%

EPM market share
in Colombia

5 PTAR

in Antioquia with a treatment capacity of 7,0125 m3/s.



4,899 km

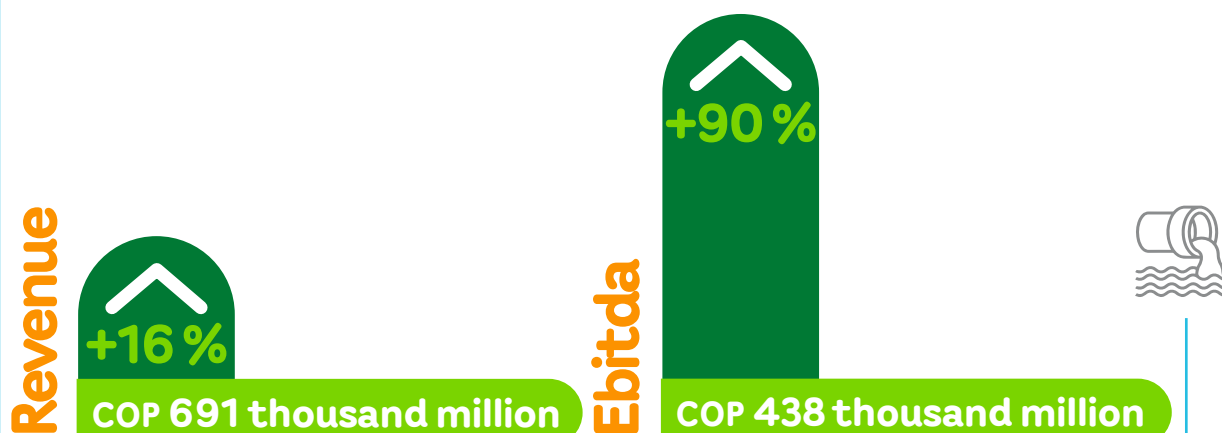
of sewerage
networks



In figures...

Wastewater management and Commercialization at EPM

We invested **COP 226 thousand million** in **EPM's Wastewater Management and Commercialization business** to improve the environment and contribute to the quality of life.



Relevant Milestones 2022

1

We started to provide sewerage service to **1,695 homes located in difficult-to-manage areas**, which previously only had access to aqueduct service—this was possible thanks to **the Cierre de brecha project (in English: Closing the Gap)**. Since 2019, we have connected 7,113 families to the service, contributing to improving their quality of life and caring for the environment by eliminating direct discharges of wastewater into bodies of water and the river. This project is part of EPM's commitments to the municipal development plan for the district of Medellín.





2

We contributed to the search for solutions for the decontamination of the Medellín River and its tributaries with the Plan for Sanitation and Management of Discharges from the Aburrá River - Medellín, through an effective and efficient sewerage service that accumulates the collection of 347 wastewater discharges through the development of the Interceptor Sur projects, Other basins, Centro Parrilla, La Iguaná-La García Basins and Rodas Basins, Piedras Blancas and El Salado. During 2022, 9 discharges were completed.



3



Scan the
QR code

We repowered the biodigesters of San Fernando WWTP for the first time in more than two decades of continuous operation. For this challenge, we had to vacate the huge biodigesters to carry out a structural and mechanical inspection process for the repowering of the infrastructure, actions that guarantee the quality of the water treatment that is discharged into the Medellín River



4



Scan the
QR code

We finished the works to replace and modernize the sewerage networks in the La Iguaná sector lower part for the benefit of the inhabitants of 24 neighborhoods of Medellín. These 16 km of sewage networks in optimal conditions allow the community to continue enjoying high-quality utilities and reduce the discharge of water from homes, industries, and businesses to this creek.





All the works mentioned above enabled an aggregate treatment capacity of 90.3%, corresponding to the wastewater collected and treated at the San Fernando and Aguas Claras WWTPs, contributing to the sanitation of the Medellín River.



Awards and Recognition

- ★ The **Banco Interamericano de Desarrollo (BID)** recognized us as **the most innovative water and sanitation company in Latin America and the Caribbean**, among 21 participating companies, for the implementation of actions that allow access to water and sanitation for communities. **The awarded project was Cierre de brecha (Closing the Gap)**, whose objective is to improve the quality of life and the environment of communities through the construction of unconventional sewers in areas of difficult access in the municipalities of Valle de Aburrá.
- ★ On the **Quality Assurance** front, **EPM renewed its ISO 9001 certificate for three more years.**



3

SDG 12

Responsible Production and Consumption

We contribute to the sustainable development of our planet by **increasing the efficiency of resource utilization and promoting environmentally friendly consumption and production.**

We ideate and materialize key initiatives that guide Grupo EPM's long-term vision to contribute to SDG 12.



NO APRO
Ordinaries



3.1. Solid Waste

Our Solid Waste business growth project is aimed at leveraging the activities of Emvarias Grupo EPM and its customers and users, as well as **strengthening EPM through comprehensive solutions in solid waste management**, which impact the different services of the business group, specifically in the profitability of the business and growth in the market and the incorporation of new lines of business with strategic alliances.





Relevant Milestones 2022

1

We signed a contract with the IFC/World Bank for the **preparation of a feasibility study for the valorization of Medellín's waste.**



2



Scan the
QR code

We started the operation of the waste, construction and demolition (WCD) recovery plant located in Girardota, Antioquia. This is a valuable solution to environmental care and reuse through the proper disposal of waste from public and private builders, and its use in recycled and certified products for reuse, contributing and strengthening the circular economy in the construction sector. We materialized this achievement thanks to the alliance between EPM and the company Recicladados Industriales de Colombia (RIC), which is part of the Ventures EPM fund and in which we have a 19.7% shareholding.

There are currently 16,000 m³ of material in storage, of which 20% has been processed to start selling recycled aggregates in March 2023.



3

We provide integral technical assistance in the sanitation service in the Providencia and Santa Catalina project in all service activities: sweeping of roads and public areas; beach maintenance; collection, transportation and final disposal; and mowing of lawns.





4

Also in the Providencia and Santa Catalina project we delivered the diagnosis of the situation of the sanitary landfill to give alerts, prepare the base technical annex for the contracting of the basic engineering studies and preliminary designs and accompaniment to the National Utility Services Authority(SSPD); Also, to initiate the contracting of the definitive studies and designs, the structuring of the market study for the purchase of a compactor truck and the structuring of the technical annex of consultancy for the design of the scheme of use on the island of Providencia and Santa Catalina, in conjunction with the Departmental water plan (PDA), among other achievements



5

We delivered the diagnosis of the sanitation service in the project in the city of Santa Marta, which focused on the auditing activities carried out by the Empresa de Servicios Públicos del Distrito de Santa Marta (ESSMAR) and the service provided by Aseo Técnico de la Sabana S.A.S. E.S.P. (ATESA).



3.2. Circular economy

The circular economy requires a critical look at the prevailing habits of production and consumption in the world, which even goes beyond the visual of governments and companies to transcend each individual. It is necessary to break the current paradigms, question the comfort margins of today's society, have high doses of innovation so that everything that today is considered waste or surplus can be incorporated again, understanding the way nature works; be creative to achieve greater efficiencies in the processes; work together with suppliers and contractors to minimize environmental impacts in the supply phase and; rethink the design and presentation of inputs.



Based on these precepts, **EPM's circular economy strategy was structured during 2022**, through the establishment of lines of action, prioritization of topics and value areas within the framework of which opportunities and business models are identified, oriented towards sustainable production and consumption and the closing of cycles -reincorporation to productive cycles-.

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION

From EPM we made progress in the implementation of some circular economy initiatives,

which address the flows of energy, water, materials and biomass as key issues guiding the long-term vision of the business group.

Through these initiatives, we contribute to SDG 12 Responsible production and consumption, with the aim of decoupling economic growth from environmental degradation, increasing efficiency in the use of resources and promoting sustainable consumption and production patterns. This is precisely the SDG that lies at the heart of the circular economy.

In a process of full interconnection, **our circular economy initiatives contribute to different SDG 6—Clean water and sanitation— and SDG 7—Affordable and clean energy.** Thus, these three goals are closely linked to the provision of the utilities our company offers:



Enablers

1 Through innovation on circularity

1

2 And circularity alliances with stakeholders

2

Foster a culture of circularity

Objectives

1

Growing clean energy supply

2

Improving efficiency in the use and utilization of resources and materials

3

Protecting and optimizing water resources

6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



12 RESPONSIBLE CONSUMPTION AND PRODUCTION





Relevant Milestones 2022

We made progress in the **implementation of some circular economy initiatives** focused on strengthening good practices **driven by innovation in the provision of services**, through the **closure of production cycles** and the **promotion of a culture** in this area, in order to **facilitate the development of new business models** in a **long-term vision** that recognizes circularity as a fundamental element of sustainability.



In the flow of energy:

1

We made progress in the **installation and operation of solar panels at EPM** for the generation of 541 MWh/year of self-consumption energy in our own infrastructure.



2

We advance **offers and sales of photovoltaic solar energy** to customers.



3

We **increased the share of renewable energies by 34.34%** in the generation matrix.



4

We **reduce electrical energy losses** in the networks





5

We manage **self-supply and energy use** of 7,152 MWh-yr at the San Fernando WWTP. ✓

6

We install air conditioners with a lower global warming potential refrigerants in administrative and operational areas. ✓

7

We replace diesel or gasoline vehicles with **electric or natural gas vehicles**. ✓

8

We participate in **city actions for sustainable mobility**. ✓

9

We made progress in the **project to use biomethane at the San Fernando WWTP** as a renewable gas for injection into the grid. ✓



“With the use of the biogas that is generated in the treatment process at our San Fernando plant, we aim to diversify supply sources, take advantage of the great energy potential present in wastewater and boost the circular economy by cleaning and injecting it into the gas grid as a renewable natural energy source.”

Luis Guillermo Villada Corrales
EPM Gas Solutions Director



In the materials and biomass front:

1

We continue with **actions for the utilization of biosolids** in soil remediation.



2

We used **14,410 tons of plant residues from logging and pruning and organic waste**.



3

We carry out **prevention in the generation of waste**.



4

We manage 86,566 tons of waste that reach reservoirs and water treatment plant intake grids.



5

We make **use of some special and hazardous waste**.



6

We re-incorporate materials, by-products or waste to other production processes and the precise dosing of chemical products in water purification according to water quality, among others.





In the water flow:

1

We implemented actions to **protect forests, recirculate water in drinking water treatment plants and reduce water losses** in distribution networks, among others.



All these actions are aligned with the National Circular Economy Strategy, based on the logic of producing by conserving and conserving by producing.



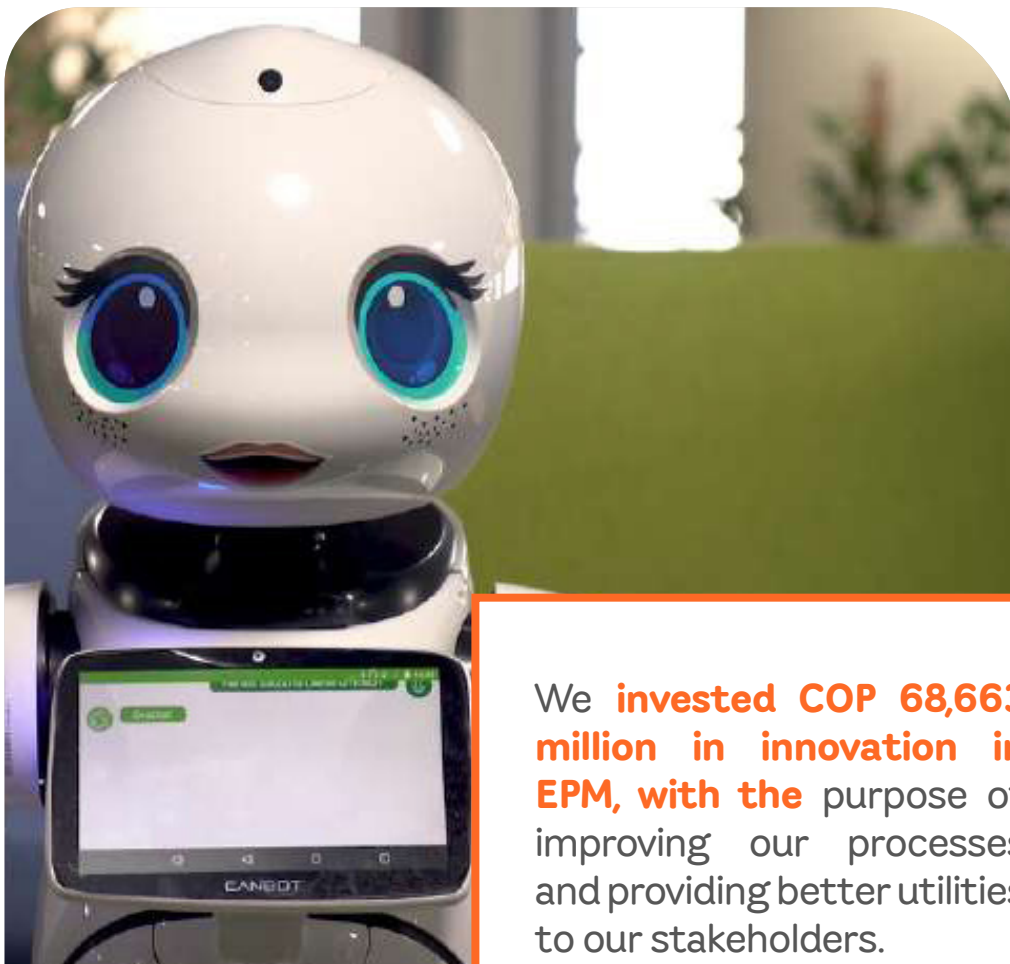
4

SDG 9

**Industry, Innovation
and infrastructure**

We encourage the development of new lines of business, new or improved products and technology transfer to optimize internal processes and improve the services offered, through our innovation model and its connection with the corporate strategy of the business group.





We **invested COP 68,663 million in innovation in EPM, with the** purpose of improving our processes and providing better utilities to our stakeholders.

4.1. Innovation Management

During 2022, in order to adapt the Organization to the new realities and challenges demanded by a constantly changing environment, we **integrated two units to form the New Solutions Management** that seeks to identify, formulate and execute projects to make viable, develop and implement new businesses and business lines, products, services and capabilities, which **consequently contributes positively to the fulfillment of different SDGs, mainly SDG 9—Industry, innovation and infrastructure—**, which is directly related to the portfolio of innovation projects and activities that we execute in EPM.



Relevant Milestones 2022

1



Innovate Grupo EPM
Motivation and knowledge to transform lives

Innovate Grupo EPM 2022: this innovation program has positioned itself in EPM thanks to the positive impact it has generated in the vision of innovation and entrepreneurship of different audiences of the Company, such as students and families, teachers who serve as leaders in each educational institution, officials of EPM and participating subsidiaries, and of course, the community itself.



Category - Discovering:

Innovate Grupo EPM

Motivation and knowledge to transform lives



21

educational institutions participated.

6

Private educational institutions.

15

public educational institutions.



1000

students participated.

70

teachers in the municipalities of Copacabana, Bello, Medellín, Envigado, Itagüí, Guarne and Marinilla participated.



"My experience with Innóvate was totally good, I learned many important things such as including the evolution of the human being with the ecological and technological part at the same time, taking care of the environment and the surroundings where we are."

Juan Pablo Hernández Benítez

Ninth grade student Fernando
Velez Educational Institution Bello, Antioquia

Category – Entrepreneurship

Innóvate Grupo EPM



Motivation and knowledge to transform lives



54

projects presented.

48

projects selected in our strategic focus lines: circular economy, digital transformation, and energy transformation.



102

participants from 8 companies of Grupo EPM.



“Dare to innovate, to bring out those dreams, to let them be seen because there are many capabilities in our business group. It doesn’t matter how dreamy the idea is, start communicating it, take advantage of opportunities like Innóvate so that little by little they become a reality.”

Diana Liseth Chaustre Cárdenas, Néstor Gonzalo Usa Torres y Luis Fernando Uribe Angarita.

Collaborators of CENS Grupo EPM / CENS COINS Proyecto

2

Ventures EPM - Private Equity Fund Management II: in conjunction with the professional fund manager Axon Partners Group:

- **We analyzed 304 companies**, of which **we made in-depth technical and strategic analyses with 34**, materializing investments in **UptimeAnalytics (Colombia)** to promote new services and solutions in energy efficiency and **Seab Power (England)** for the management and use of solid waste.
- **We participate with our Private Equity Fund in a Spanish fund (FCRNTV)** with resources from the government and other investors in that country, with which we expect to achieve joint investments of EUR 40 million and participation in at least 25 companies worldwide, which will provide us with greater tools to deploy the Group’s innovation strategy.





4.2. Energy transformation

From EPM we carried out the preliminary mapping of the roadmap in the prioritized business models of Distributed Resources, Storage, Data Energy and Digital Energy Commercialization; input that will allow us to start the development and formulation of business cases and Special Purpose Vehicles (SPVs), which are necessary for their implementation.



Relevant Milestones 2022

1

We carried out the pilot project of solar solutions in areas of difficult management, with a duration of six months, with the company Kingo Colombia, which consists of the installation of individual solar solutions in the village of Bocas de Caná in the municipality of Zaragoza, Antioquia, for 13 beneficiaries. In this way, we validated the business model and the design of the service proposed from the Cobertura project, for its technical, social and commercial scaling up.





2

We developed the Community Solar pilot in the El Salvador neighborhood of Medellín with the participation of EPM, EIA University and ERCO Energía in cooperation with the Royal Academy of Engineering of the United Kingdom and University College London (UCL). A total of 24 homes of medium-low socioeconomic level (stratum 3) participated in this initiative that has distributed energy resources, smart metering and a digital platform for energy management and energy efficiency, in order to have evidence based on real experience.

For the first time, the operation of a solar community was reviewed with all the stakeholders involved in order to give EPM signals regarding the aspects to be strengthened, mobilized or known before the entry of new forms of energy commercialization such as solar communities.



"We have learned that environmentally friendly energy can be produced. We are going to be producers, as we have understood, with the panels. We have learned to interpret the bill in a digital way, that is, to be connected and thus to be controlling, to be reducing consumption as we see that suddenly we have shot up in some expenses, in short. We are going to see savings and more programming of our energy consumption, which would be the most important thing, to be planners of the consumption of our homes."

Óscar Hernán Posada

Inhabitant of El Salvador neighborhood, Medellín

3

We advanced the design of the Energy as a Service (EaaS) service in electric buses, with the identification of more than 20 business opportunities, which are in the process of prioritization, with market and competitiveness criteria of EPM.





In this way, we structured two business cases in EAAS with Electric Bus Batteries and Backup Batteries, of which only the second one yielded positive internal rate of return (IRR) and net present value (NPV) figures with competitive values.

We also completed the pilot of electric buses developed with the Metropolitan Area of the Aburrá Valley (AMVA), Metroplús, Metro and the District of Medellín, with studies by the University of Antioquia (UDEA) and the Pontificia Bolivariana University (UPB), with very positive results in terms of reliability, efficiency and operational savings.



4

We obtained a patent for the manufacture of nanostructured flexible solar cells with new materials in the United States, together with UDEA, Sumicol of Grupo Corona and Andercol of Grupo Orbis. For this patent we obtained a quota from the Innpulsa Colombia Sácalejugo a tu patente call, which ended in December 2022.



5

We have a hydrogen roadmap for Grupo EPM and we are making progress in the construction of the plan, which will allow us to position ourselves both in the domestic and international markets. At the same time, we are working on the search for allies to complement the capabilities and the implementation of a pilot project, with the purpose of generating knowledge in the management and operation of hydrogen.

We are working on a consultancy for market research and development of more attractive business models for EPM, oriented towards the





production and commercialization of green hydrogen with local scope and exports in the international market, in view of the growth strategy defined with the vision of becoming a relevant player in the new hydrogen industry.



"The energy transition, understood as the path towards the decarbonization of the global economy, represents an enormous challenge for today's society, since it will be necessary to replace fossil fuels, which currently represent around 80% of the energy sources we use globally, with clean energies, which today account for barely 20%."

In this global mission for the climate, green hydrogen, produced from clean energies, has become one of the fundamental pillars for the universalization of clean energies and the reduction of CO₂ emissions. It is for this reason that Grupo EPM, with its tradition of more than 60 years as a clean energy generator, is determined to become a relevant player at a global level in the production and commercialization of green hydrogen."

Néstor Raúl Encinales Gallo

Hydrogen Solutions Director EPM

4.3. Digital transformation Smart territories



Relevant milestones 2022

1

We defined three specific minimum viable product (MPV) **business models**. We also **identified 56 potential business initiatives for EPM**, of which we prioritized: Energy Marketplace, Fintech, Loyalty with Blockchain, IoT equipment, Data Observatory, Mobility - Fleet



Management, Metaverse, Smart and Sustainable Housing and Smart Territories Consulting

- **Energy Marketplace:** we delivered a first MPV consisting of the development of platform functionality, which will be tested and demonstrate its hypothesis as of January 2023.
- **Metaverse:** we developed a proof of concept with an MVP consisting of the design of a virtual reality space in the customer service center and the main plaza of the EPM Building, to carry out processes, consultations and interactions with Ema's customer services and allies such as Somos, FEPEP, among others.
- **Smart and sustainable housing (SSH):** we formulated a business case for the offer of smart and sustainable solutions that integrate new technologies for the efficient use of energy, water and waste collection services through different devices that can be connected for remote telemetry management, monitoring and efficient control of energy use, through intelligent equipment.

2

We conducted a study aimed at restructuring and digitally transforming the Somos program in terms of generating new business, increasing profitability, customer experience, and process flexibility and efficiency. In 2022 we carried out the diagnosis and the modification proposal will be developed during 2023.

SOMOS
Grupo EPM



3

EPM's Information Technology Department developed **173 digital solutions in robotics**, artificial intelligence, advanced analytics, internet of things, digital twins, digital assistants, blockchain and digital components, of which 41% contributed to the management of the Commercial Vice-Presidency. (71); 28 % to the Vice-Presidency Supply and Shared Services (48) and 14% to the Executive Vice Presidency of New Businesses, Innovation and Information Technology (25). Thanks to the achievement of this goal, we obtained savings and benefits worth COP 210,000 million between 2021 and 2023.



4

The Trébol program has three projects under its umbrella: AMI, Redes de Acceso and Redes Inteligentes, with which we seek to modernize and transform the productive processes of businesses leveraged on a higher level of automation, information management, development of new capabilities and adequate technological incorporation, based on the concepts Smart Grids, AMI (*advanced metering infrastructure*) and Telecommunications.



"With the Clover Unit (In Spanish: Trébol Unit) at EPM, we are moving forward in the transformation of our business, with the incorporation of cutting-edge technological solutions and the development of new capabilities that allow us to optimize the provision of utilities to positively impact the lives of our users."



**Javier Darío
Fernández Ledesma**
EPM Clover Program Manager



AMI Project (*advanced metering infrastructure*):

We conducted controlled tests of different AMI technologies, in the **sandbox*** environment, through the management of free commercial samples from several AMI suppliers, achieving avoided costs of close to COP 2,000 million.

In addition, as a result of a coordinated effort between different EPM departments that directly or indirectly participated in the sandbox, we installed 49 AMI meters in the field.

We conducted a market study to identify potential suppliers of AMI technological solutions for Grupo EPM; we also conducted market research to identify the perception of households and companies regarding AMI and structured three customer-facing solutions to be implemented in the pilot.

Redes de Acceso Project: we conducted tests for RF-MESH technology in different brands and with different use cases, to validate the performance of communication equipment with energy meters. We also carried out the planning and high-level designs of the TELCO network for the AMI pilot. We made progress in the regulatory management before the National Spectrum Agency (ANE) and the Ministry of Information and Communications Technologies (MinTIC) at the trade level to obtain the necessary spectrum resources to advance in the technological transformation of businesses and experiment in all the access technologies defined for the use cases of Smart Grids and AMI.

Red de Acceso Project: we obtained approval for the implementation and adaptation of the consumption measurement management center and the enabling of use cases for smart grids at **sandbox** level, which will allow us to manage large volumes of data and information from measurement equipment that will facilitate decision making at the operational and commercial levels. At the same time, we enhanced and adapted the first phase of the **sandbox** that functions as an innovation platform for Grupo EPM, in which we developed new types of standardized solutions for the benefit of the Organization.



* **Sandbox: testing environment**



4.4. Response to Cyberattack

On December 12th, 2022, we faced a **cybersecurity incident** caused by a ransomware attack, software that blocks applications, encrypts data, hijacks and steals information and demands a ransom for it.

At EPM we deployed a contingency plan to minimize the impacts, in which the Company's own business services such as substation, plant and power plant control centers -including the Hidroituango power plant - were not compromised. However, the incident affected 30 % of the Company's technological infrastructure.

The main impact for our customers and users was in the energy and prepaid water services, which were attended by contingency since December 13th. These were the first offers reestablished since December 14th and 18th, respectively.



Relevant milestones 2022

Faced with an event of this magnitude, actions were divided into **three blocks** focused on **detection, containment and restoration**:

1

Detection: we identify the type of attack and activate all the defense mechanisms.



2

Containment: we managed and attended the incident prioritizing the preventive isolation of the business network and the Hidroituango Power Plant, without being affected by the *ransomware*. In the same way and for prevention, we isolated other technology infrastructures, which generated unavailability of corporate services in EPM parent company and in some of the subsidiaries of the business.





3

Controlled recovery: both the technology areas and the rest of the vice-presidencies and subsidiaries of Grupo EPM participated as a sign of true teamwork. From the crisis committee -PADEC- we carried out the daily management and follow-up of the needs of each of the businesses and key internal processes, prioritizing and continuously communicating the progress of the recovery. With the management carried out, we recovered most of the affected production services in less than a week



EPM has duly reported this computer crime to the Attorney General's Office and other government entities.



Challenges and plans

- **We continue with the implementation of cybersecurity controls** established in the Cybersecurity Agreement 1502 of the National Operation Council (CNO), with priority for EPM's businesses. In the case of the Energy business, we are at 89% compliance and we expect to finish within the established deadlines in 2023. Likewise, we started the assurance in the Water and Gas businesses, prioritizing critical assets in each of them.
- **We will strengthen the technology governance and cybersecurity architecture with the scope of Grupo EPM** to be even more prepared in terms of infrastructure and processes, people, culture and tools, with the purpose of strengthening the monitoring and containment of this type of incidents.
- Finally, as part of the improvement plan, **we will implement storage, encryption and segmentation tools**, as well as upgrade some critical applications in our alternate processing center (CAP).



5

SDG 8**Decent work
and economic
growth**

We support productive activities in the territories where we operate by generating decent employment and leveraging the development of our suppliers. We are committed to protecting labor rights and promoting a safe working environment for all workers, both in our own operations and in those carried out through contractors.





5.1. EPM People



**EPM
Employees**

8,182



1

We promoted talent mobility in EPM with professional growth options for employees through **61 promotions and 192 position changes** by selection process, with an internal mobility rate of 4.52%.

In addition, 199 new people joined and 424 people left the company, 222 of them to enjoy their retirement and the remaining due to termination of fixed-term contracts, resignations, disability pension, among others. The personnel turnover rate was 3.81 %.



2

We promoted training processes, under classroom and virtual modalities, with more than 234,610 hours directed to technical and competency aspects, achieving a coverage of 96% of employees.





3

We conduct provide onboarding and training in accordance with risk factors and regulatory requests, epidemiological health surveillance, and follow up with contractors regarding compliance with legal requirements and those defined by the Organization in occupational health and safety.

We implemented some measures applied for the care of mental and physical health, such as diagnoses of health conditions, preparation of tactical guides, updating of emergency plans and evacuation drills, training, talks, conferences, dissemination of psycho-educational information, socialization in the media and visits to sites, safety inspections, observation of safe behavior, psychological first aid, strengthening of psychosocial life skills, among others.



4

We continue with the identification and management of risks associated to employees in critical positions associated with operational safety, assessing the psychophysical profile of 164 people, accompanied by assessment, analysis, and training in operational safety competencies.

We trained the fourth and fifth cohorts in the Operational Safety diploma course, provided by the UPB/Más4 alliance. We also carried out the measurement of the appropriation of **operational safety practices in the EPM culture**, reaching an indicator of 96% and with the participation of 714 of the people impacted.





432 trainees and students

The internships at EPM are part of their professional development process.

We run

COP 3,486 million

of budget for the **development of our employees** through the courses developed at **EPM University**.



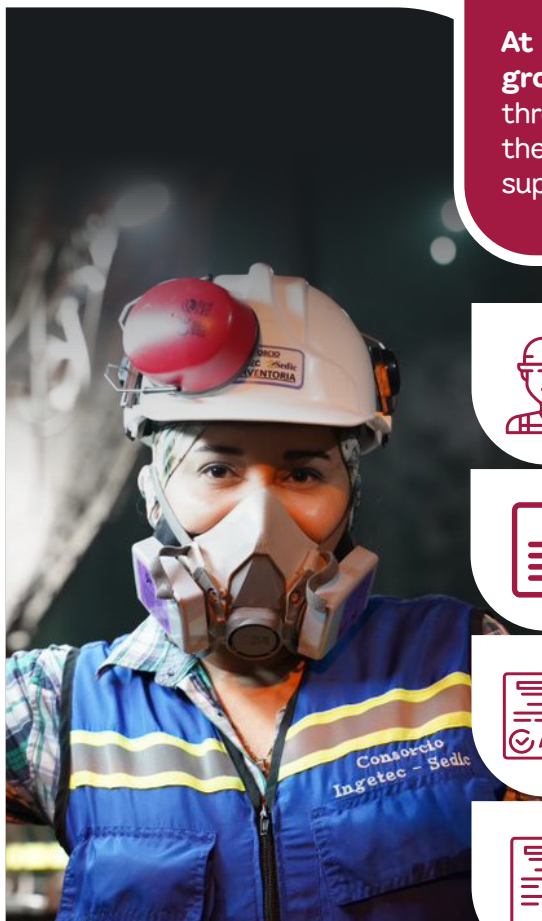
Awards and Recognition

- ★ **International Resilient Company Award** for EPM at the **Latam Resilience Awards 2022**.
- ★ **Eighth place in the Merco Talento 2022 ranking**, among the 100 most attractive companies to work for in Colombia. Thus, EPM remains for 13 consecutive years in the top ten of the overall ranking.
- ★ **Certification Sustainable Business Mobility Plans (PEMS) with the Bicycle to Work strategy**, for the implementation of actions aimed at active mobility as a strategy to promote sustainable habits and travel among our employees, granted by the Sustainable Business Mobility Plans Program.





5.2. EPM's Suppliers and contractors



At EPM we also contribute to the economic growth of the territories where we are present, through the generation of value chains and the strengthening of our relationship with the suppliers that support the Company's operations.



25,031

outside employment generated.



2,187

EPM contractors



6,141

contracts awarded at EPM



COP 2.3 billion

in contracts awarded in EPM.



3,953

contracts awarded to local suppliers in EPM.



47.12 %

of the contracts were awarded to local suppliers



COP 45,152 million

in contracts awarded to community action councils and associations.





Social contracting is a strategy through which we contract works and services with community action boards and associations of community action boards to contribute to the strengthening and sustainable development of the communities in which we operate.



Relevant milestones 2022

1

We invited contractors linked to the Water and Sanitation VicePresidency to participate in the initiatives of the **program for the Industrialization of the water sector**, achieving the training of 429 people, 42 of whom are women. In this way we contribute to the gender equity strategy in tasks that have traditionally been performed by men. These initiatives were carried out through our ally, SENA:

- **Thermo- and electro-fusion welding courses for polyethylene pipe:** 52 people from eight contractor companies were trained and certified, including EPM personnel.
- **Water Skills School:** 105 people were certified in the training of skills and abilities of officers and assistants in the construction, operation and maintenance of water and sewerage networks, belonging to nine contractors and 47 people from the community of Granizal de Bello.



"The most pleasant experience is to acquire knowledge, we must be competitive in any area of life and this is an expeditious opportunity to do so. One is trained for a job and the most important thing is to keep the knowledge and we can expand it or transmit it to other people. To learn is never too late."

Gabriel Ángel Bedoya
Participant from Escuela de
Destrezas EPM



- **Labor Competency Certification:** 242 workers from seven contractor companies were certified in various labor competency standards, in compliance with Resolution 0330 of 2017.
- **Reading and writing course:** certification for 18 people linked to three contracting companies.



2

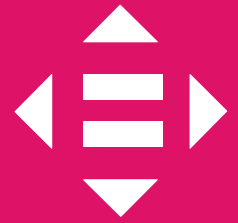
We managed EPM's relationship plan with suppliers and contractors (P&C) through nine strategies that brought together 23 actions. We also shared 57 newsletters and communiques that impacted 12,946 P&C and held 33 events with an approximate participation of 1,730 people.



3

We encouraged the **development of communication and awareness spaces to strengthen suppliers in the** promotion and respect of **human rights** in the supply chain. To this end, we sent eight communiqués related to this topic, including some alluding to the training workshops with the English international consulting firm ECO on gender inclusion and the development program aimed at closing gaps in human rights with the Bogota Chamber of Commerce and the Ideas for Peace Foundation.





6

SDG 10 Reduction of inequalities

We are driven by providing opportunities to **close existing gaps and reduce inequalities in the workplace**, through the consolidation of a **culture of inclusion and respect for diversity**.





6.1. Cultural evolution

At EPM we understand culture as a living process, which starts from the people and is traversed by each one of them, where it is built collaboratively and the process is accompanied in such a way that culture is not seen as a point of arrival, but as a dynamic process that is always in motion.

Therefore, through **cultural evolution** we foster healthy and agile organizational contexts that facilitate people's capacity for adaptability in the face of changing and uncertain scenarios, as well as the recognition of their responsibility in the way they act and contribute to the company's purpose, in connection with others.

The primary medium leveraging this evolution is conversation. -Conversational capital, which makes it possible to coordinate actions based on collaborative work to live our purpose and achieve the organizational strategy



Relevant milestones 2022

1

Conscious leadership: more than 1,900 leaders participated in the training spaces of the Leadership School and the EPM Leaders Meeting, which brought together 220 managers.





2

Collaborative networks: more than 2,440 EPM employees participated in the Collaborative Networks and more than 2,500 people responded to the Conversational Capital survey.



3

Diversity, equity and inclusion (DEI): we understand that the difference adds and enriches relationships, to the extent that we respect and value the other from the point of view of thinking, feeling and acting:

- Since 2019, we have started the **Inclusion of People with Disabilities** program with **20 people**, of which, as of December 2022, eight have been hired under indefinite-term contracts.



"EPM has been the company that has given me the opportunity to have my first work experience and has allowed me to grow in autonomy, self-confidence and security in my abilities. I feel very happy working here, since I have been able to contribute significantly in the teams where I have been able to be. This is an organization that puts disability aside and firmly believes that a person, regardless of his or her condition, can provide superior productivity."

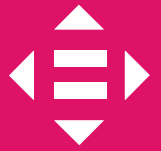
Yudy Andrea Saldarriaga Toro

Administrative Technician Gas
EPM Partner Management Unit

- We promoted **gender equity** with **24 women** who began their work experience as industrial electricity technicians, in agreement with SENA.
- We obtained the approval of the Board of Directors of EPM for **20 temporary positions** to maintain and expand **the coverage of the inclusion program for people with disabilities**. A total of **40 places** have been approved for the program.
- **We strengthened the diversity table** as a mechanism for articulating the practices associated with DEI, within the framework of cultural evolution.



Scan the
QR code



4

Ethical management: we understand ethics as an axis that runs through the entire Organization, our actions and decisions are framed in principles and values that privilege the purpose that unites us as a business community.



5

Change Management: we achieved 94% compliance with the change plans of the projects and initiatives and the implementation of the EPM People Adaptability Training program, with the participation of more than 600 employees.



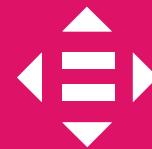
6



EPM Contigo Program: we develop articulated strategies at the organizational level for the promotion of healthy lifestyles and work:

- More than **28,230 participations** in lectures, cultural and sporting events.
- More than **5,200 participations in training spaces** related to new ways of working.
- **920** registered **permits** associated with the Time for Your Wellness program.
- **6 Management Coffee Meetings** with more than 300 attendees.
- **85 % satisfaction** with the EPM Contigo program.





6.2. Customer-focused organization



Relevant milestones 2022

Customer experience

1

We successfully implemented the strategy of **EPM Experiences, emotions that leave a mark, with the** implementation of virtual awareness workshops and a panel of experts with the presence of 400 employees.



2

We built the **Experience Guide** and developed and made the **Customer Experience virtual course** available to all the organization's employees.



3

We carried out a **pilot program to improve the customer experience** with responses to requests, complaints and appeals (PQR), achieving closer, clearer and more concrete communications.



Relevant milestones 2022

Education

For more than 25 years, at EPM we have had a team of professionals who, from the Customer and Community Education Unit, implement



educational outreach and community relations programs processes for users of household utility services belonging to the Customers and Community stakeholder groups—We've built relationships with more than 420,000 people.

1

We Are Here for You outreach program (in Spanish: por ti estamos ahí) we had an institutional presence in 47 territories in all subregions of Antioquia; we engaged with communities and institutions in the territories; we participated in 123 broadcasts in radio, tv, and social media; and we impacted 43,000 people face-to-face and 20,800 through the media.



2

Cuidamundos EPM: we visited 130 schools in Bajo Cauca with the Cuidamundos program and 47 schools in the other subregions in Antioquia with awareness-raising programs and drawing contests. Moreover, we impacted 3,315 students with the Cuidamundos program—16,000 people participated in awareness-raising activities and 7,000 in contests.





3

I care for water, I care for life: we reached 69 sectors of the Aburrá Valley, trained 83 leaders, carried out 27 participations in mass media, invited 29 artists to the Ponle Flow al Agua contest with 4,500 interactions in social media, and ultimately benefited 50,000 people.



4

Environment for life: we carried out an outreach program with 16 municipalities to establish trust between the community and the Company; we contributed to the certification of leaders in five municipalities by the University of Antioquia in community strengthening processes. In total, we benefited 110,000 people.



5

Customized meter reading and utility bill clarity: we introduced the process of taking consumption readings with Customized Reading for more than 120,000 customers in Antioquia. We provided training and explanation of tariff and billing concepts for an additional 30,000 customers. We benefited a total of 150,000 customers.



6

EPM Friendly Leaders Network and training meetings: we held 18 meetings with the participation of 542 leaders, 300 of them on a permanent basis to share their leadership experiences in the Friendly Leaders Network. We provided training and explanations on tariff and billing concepts for 491 leaders participating in the training and certification meetings for leaders in the territories of the We Are Here for You program (in Spanish: Por ti estamos ahí).



Service channels

Our customer service channels have been available to customers and users throughout the year, even in atypical situations such as the cybersecurity incident that occurred on December 12th, 2022, making significant efforts to meet customer requests with quality and in compliance with regulations.



Transactions in 2022



1,032,175

in **customer service desks**.



4,661,751

in the **telephone channel**.



305,532

by **written channels**.



1,295,246

in **digital channels**
through Ema.



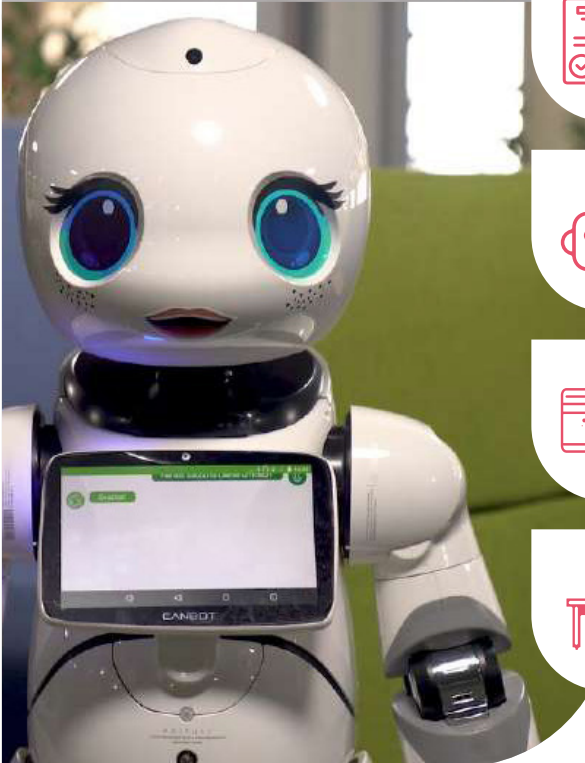
2,172,622

self-service transactions
through our **web portal**.



854,324

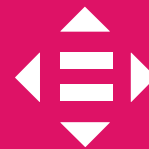
in **self-service kiosks** located
in **offices**.





Relevant milestones 2022

10 REDUCED INEQUALITIES



1

We continued with the **use of strategies to minimize waiting times in offices**, such as digital signature through tablets, biometrics, online reps and self-service modules. Likewise, we implemented the sending of the invoice through WhatsApp with 14,236 registered users.



2

We provided **transactions through Ema**, to know if the customer will have any interruption in the water supply service, and also to know where there is availability of tanker trucks to supply the liquid.



SOMOS
Grupo EPM

1

We facilitate a **closer relationships with customers and users through credits, discounts, experiences and other activities** for their benefit, contributing to the improvement of their quality of life beyond the provision of utilities provided by EPM.



2

In 2022, we reached an accumulated 350,000 families benefiting from the Somos Credit, of which 124,000 made purchases of products and services for home remodeling and the acquisition of household appliances, gas appliances, computer equipment and other products for better use and enjoyment of utilities.





Commercial alternatives for utility bill payment:

With the bill payment options, we reduced the number of days of suspension of utilities for users with payment difficulties:

Pay as you go

Allows customers and users to pay our bill in up to five installments or partial payments during each month

Payment in installments

Without prior registration for this solution, 235,000 customers and users paid their bills in up to three Installments.

Other payment alternatives

We managed 315,069 applications, equivalent to COP 31,000 million, for the benefit of 26,000 customers per month on average, 98% of which are residential customers in strata* 1, 2 and 3.

*strata: income level classification in Colombia; there are 6 strata, the highest being the top income bracket

epm® \$178.985
Valor total a pagar

Factura octubre de 2021
Contrato 3159091
Referente de pago: 840111063-70
Documento No: 122 8961268
Cliente: Arquitectura Corporativa Ltda
Dirección de cobro: CR 43 CL 57 -66 (INTERIOR 603)
Medellín - Antioquia Estrato: 4 Ciclo: 6

Pagar antes de 25/08/2021
El pago después de esta fecha generará intereses de mora

Resumen de facturación

Periodo de consumo: Consumo Del 17 Jun Al 17 Jul
Días de consumo: 30

Consumos	Valor a pagar
Acueducto 9 m3 ▲	\$ 35.161,95
Alcantarillado 9 m3 ▲	\$ 27.251,72
Energía 115 kwh ▼	\$ 62.381,75
Gas 11.1 m3 ▲	\$ 25.666,98
Pago a Terceros	\$ 28.522,11
Ajuste al peso	\$ 0,49
Aporte Voluntario	\$ 3.000,00

Este es el aporte voluntario sugerido según la iniciativa del Gobierno Nacional ¡Tu eliges si aportas!

Total a pagar con Aporte Voluntario \$181.985

New invoice format

We implemented the redesign of the utility bill formats, based on a referencing with other utilities worldwide and the signals provided by customers with the following features: color coding by service that allows a better understanding of the billed values, detailed and easy to understand information, larger letters and texts, prioritization of the spaces associated with the understanding of energy, gas and water services, and improvements in the distribution and presentation of information in general.

6 CLEAN WATER
AND SANITATION



7 AFFORDABLE AND
CLEAN ENERGY



8 DECENT WORK AND
ECONOMIC GROWTH



13 CLIMATE
ACTION



15 LIFE
ON LAND



17 PARTNERSHIPS
FOR THE GOALS



7

Composite
SDGs





7.1. Territorial Integration Model (MIT)

For the homologated performance with a territorial approach, Grupo EPM defined the **Territorial Integration Model (Spanish acronym: MIT)** for systemic territorial management with a long-term vocation and to connect business objectives with sustainable human development, making relevant and coherent contributions to local and regional integration processes.

7.1.1. MIT Bajo Cauca

The **MIT Bajo Cauca** contributes to the harmony of relations in the territory by strengthening institutional capacities and contributing to the improvement of the quality of life of the population of the municipalities of Valdivia, Tarazá, Cáceres, Caucasia, Nechí, El Bagre and Zaragoza.



Relevant milestones 2022

1

Initiative 1 - Cooperate in relevant inter-institutional spaces and promote collaborative alliances and networks

We continue to strengthen relations, manage territorial integration alliances and promote different actions, projects and alliances for the development of the territory through participation in the University, Business, State and Society Committee (CUEES) Bajo Cauca; a space that brings together approximately 70 institutions that work for sustainable territorial development.





"I feel that the leaders left very happy -from their visit to Hidroituango-, convinced that this belongs to all Antioquians and all Colombians. EPM is still a source of pride and nobody is going to stop this project, and we are not the ones who will do it."

Teresa Jaramillo

Leader of Asocomunal
Valdivia

2

Initiative 2 - Advance in the universalization of energy service

We advanced electric interconnection works, between 2020 and 2022, to connect more than 4,300 families to the energy service and formalize agreements with the Government of Antioquia to subsidize 70% of the connection to users in stratum 1. At the same time, we made progress in structuring an agreement with the Government of Antioquia to receive resources to install individual solar photovoltaic solutions (SISFV) for approximately 120 homes and 65 educational institutions in dispersed areas during 2023.



3

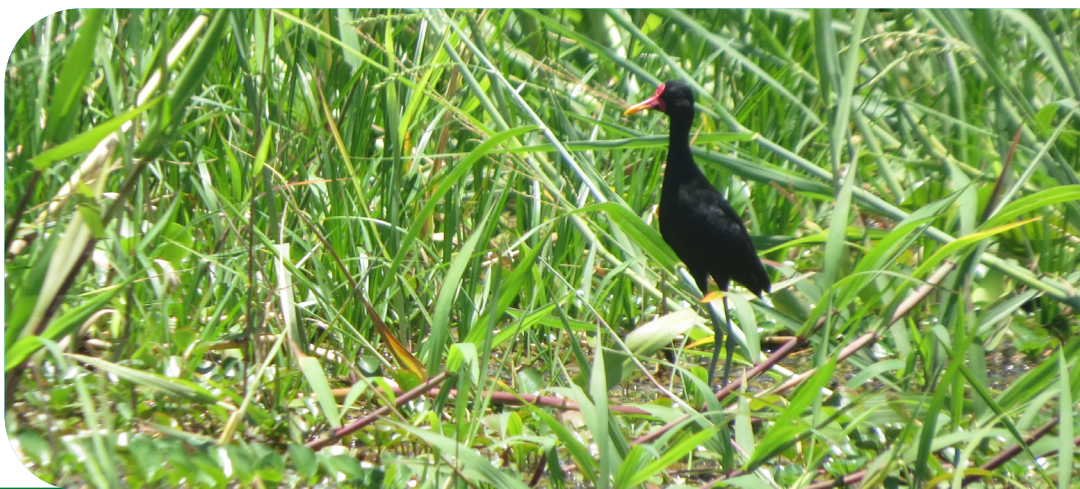
Initiative 6 - Contribute to the protection of water resources and biodiversity

We executed environmental agreements in the middle and lower Cauca River basin to reproduce six species that are part of the fishery resource and make progress on issues of fish diversity, migration routes, spawning areas, fishing, among others.





This was a fundamental input for the formulation of long-term restoration plans for the ecosystems located downstream of the Ituango hydroelectric project dam. Additionally, in alliance with the Government of Antioquia, we contributed to the restoration of 420 hectares near swamp ecosystems.



7.2. Water resources, biodiversity and climate change

7.2.1. Integrated water resource and biodiversity management

With the **Integrated Water Resources and Biodiversity Management (EGIRHB) strategy**, Grupo EPM contributes other stakeholders in the



directly, and in alliance with other stakeholders in the territory, in the common challenge of working for the **conservation of biodiversity and ecosystems, the care of the vital water cycle and water security.**

As a business group, we are committed to **contributing to the protection of 137,000 hectares in the watersheds that supply our systems and reservoirs by 2025**, in addition to our own; these actions contribute directly to the achievement of **SDG 6 Water and Sanitation, 13 Climate Action and 15 Life and Terrestrial Ecosystems.**



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ON LAND**EPM**Contributed to the **protection of water resources and biodiversity** in:**8,445 hectares.****Accumulated:****95,920 hectares**

from 2016

Water and biodiversity protection initiatives are materialized through direct actions and in alliance with other stakeholders through agreements such as EPM-Cuenca Verde, EPM-Cornare, EPMCorantioquia, EPM-Municipio de Envigado, EPM-Aguas RegionalesCorpouaba and the agreement EPM-Corporación Parque Arví, in the latter we managed the Comprehensive Forest Management Plan for EPM properties and other prioritized sites in the Piedras Blancas and La Honda creek basins.

7.2.2. Climate change

Grupo EPM's Climate Strategy

We have the mission to achieve resilient and carbon efficient businesses by 2030, as well as to reach a carbon neutral operation as of 2025. In this sense, from Grupo EPM we seek to contribute to Colombia's commitment in the 2015 Paris Agreement, updated in 2020, which seeks to reduce 51% of greenhouse gas (GHG) emissions by 2030—2010 is the baseline year.

- **Carbon footprint or GHG emissions inventory:**

Annually, we determine the Group's carbon footprint or GHG emissions inventory, and in 2022 we highlight the inclusion, for the first time, in this calculation of the emissions of the subsidiary Afinia.



In order to have carbon credits available, either for footprint offsetting or carbon trading purposes, or commercialization of external emissions, **we continued to manage the portfolio of emission reduction projects.** In this sense:

- We achieved the external verification of the GHG emissions reduction of the Porce III hydroelectric project (2019-2020), obtaining the certification of 2,317,748 tCO₂e reduced, by ICONTEC.
- We estimate the emissions generated by the operation of the La Vuelta and La Herradura mini-hydroelectric plants for 2021, as well as those of the Porce III hydroelectric project, which were also verified and certified externally.
- We advanced in the renewal process, in a second accreditation period, of the Porce III Hydroelectric Power Plant.



We generate commercial offers for a total of

COP 38,800 million for the purchase of the 2,318,257 carbon credit available from our projects.

We estimate that revenues from these awards will be approximately **COP 36,000 million.**

- **Energy efficiency:**
Aware of the importance of addressing in a coordinated manner all the issues associated with energy efficiency, and of addressing the great challenges and opportunities it represents on the path to decarbonization, climate resilience, digitalization



and the development of new business models; **at EPM we are moving forward with the development of energy efficiency solutions and digital transformation initiatives**, which reflect better business operation performance and the generation of opportunities for the development of smart territories.

We also study different technologies associated with energy storage that, together with the solutions already implemented for wind and solar generation and sustainable mobility, become innovative business models with a significant impact on the electricity sector, industry and transportation in our country and territories.

Most of Grupo EPM's companies made progress in solar systems, seeking clean energy solutions for self-consumption in their facilities.



The companies in the Energy Transmission and Distribution business continued to develop initiatives to reduce energy losses and sulfur hexafluoride (SF6) leaks.

6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



13 CLIMATE ACTION



15 LIFE ON LAND



Self-supply and energy use at wastewater treatment plants and drinking water treatment plants (WWTPs and DWTPs): we achieved 92% self-generation of the energy required for the operation of the Aguas Claras WWTP.

We also began civil works for the project to use biomethane from the San Fernando WWTP as renewable natural gas for the Company's distribution network from the biogas generated.



Scan the
QR code

- **Non-conventional renewable energies:**

We continued with the implementation of initiatives that allow the diversification of the energy basket of EPM and its business group. In this sense, **we started the works for the construction of the Tepuy solar project, located in the south of the municipality of La Dorada** in the department of Caldas, Colombia. This project will allow us to honor the commitments acquired during the long-term auction of non-conventional renewable energies programmed by the National Government.



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The works are 38.5% complete with an investment of COP 53,849 million, we have generated 89 jobs in the works, 67 of them for people from the region. We estimate that in Tepuy we will generate more than 200 jobs during its construction. We have advanced the construction of the voltage elevator substation, which is more than 60% complete. According to the simulations carried out, we estimate that the project will have an average energy output of 214.5 GWh/year in its first year.

On the other hand, **we obtained the environmental license for the 200 MW EO200i wind farm in Guajira**; we filed the **environmental license application for the 15 MW Puerto Wilches solar photovoltaic project** with the Autonomous Corporation of Santander; we **installed 10 MWp in distributed solar solutions for 17 projects**; and we made progress in the **studies and procedures for other nonconventional renewable energy NCRE projects** for EPM's portfolio.



- **Solar panels for energy self-sufficiency:**

In the **energy sales** modality, we completed the installation of the solar systems for the Water Museum and the EPM Library, and we made progress in the installation of the solar system for the San Fernando WWTP.

We achieved a generation of 654.1 MWh with the systems installed in EPM's headquarters, which is equivalent to 329.66 tons of CO2 avoided per year or the planting of 17,641 trees, thus continuing with the energy saving and efficiency actions in the processes and facilities of Grupo EPM.

In the modality of **solution sales to other head offices**, the Cobertura La 30 project (isolated 0.93 kWp + interconnected 10.23 kWp), the gas decompressor in Chigorodó (5.64 kWp) and Aguas Regionales in Urabá (44.64 kWp), were in operation for a total of 61.44 kWp installed.

- **Air Quality Program:**

EPM remains **committed to improving air quality** through the implementation of initiatives that contribute to its improvement and inter-institutional strengthening with the District of Medellín -Air Quality Pact-, the Naturgas-AMVA-EPM agreement and the joint agendas of the Ministry of Environment and Territorial Development, Transportation and Finance.



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In this way, we continued to develop our **sustainable mobility** initiatives, which include **natural gas vehicle (NGV)** solutions, **electric mobility** and the **sustainable mobility business plan (PEMS)**.



“At Operar Colombia we are working resolutely for the sustainability of our logistics services; therefore, we contribute to mitigating global warming and improving air quality by incorporating low or zeroemission vehicles into our transportation fleet.”

Iván Darío Mantilla
General Manager Operar
Colombia and Gas EPM customer



Relevant milestones 2022

Electric mobility

1

At the end of 2022, there are **3,721 vehicles** in Antioquia, **between 100% electric and plug-in hybrids vehicles**. Of these, 1,912 correspond to users of EPM's public charging offer.



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2

We inaugurated a fast-charging point in the municipality of La Pintada, connecting Medellín with Manizales, Armenia and Pereira.



3

We made progress in the adjustments to enable the Medellín - Bucaramanga - Atlantic Coast cities road corridors.



Relevant milestones 2022

Natural gas mobility



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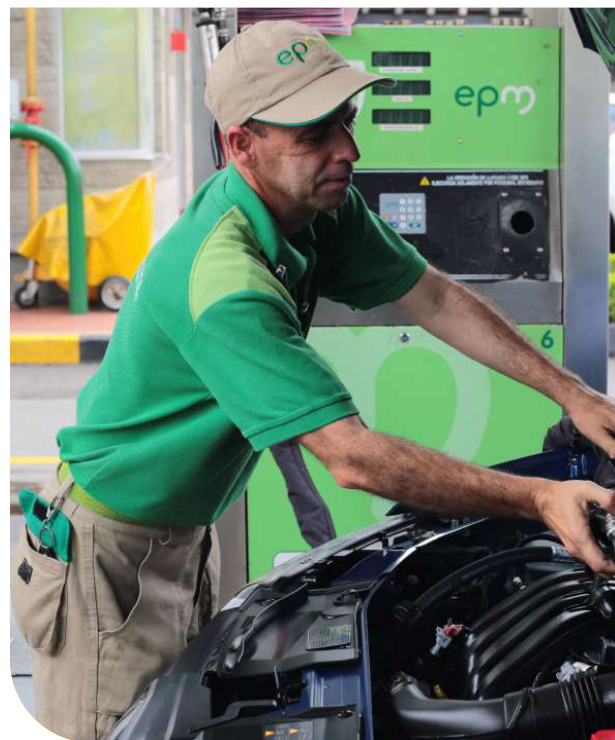
1

We managed and developed **10 projects totaling the importation of 103 gas-powered vehicles**. The companies participating in this initiative were Ditransa, Caritrans, Colanta, The Green Garden, Huevos Kike's, Transurcar, Transportes Lógico, Emvarias, Alion and JLT Transportes.



2

We achieved **1,308 bonds**, delivering COP 2,800 million in benefits, in addition to COP 83 million in dedicated vehicle bonds.



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3

We facilitated the **financing of NGV equipment installation** through conversion workshops, in which the Somos program solved the installation through the card.



4

There was an **increase of close to 6% in the fleet of vehicles dedicated to natural gas**, from 659 units at the end of 2021 to 700 units at the end of 2022.



Relevant milestones 2022

Sustainable Business Mobility Plan (PEMS)

1

We kept **five staggered flexible schedules** for EPM People.



2

We continued with the **Bike to Work program** in which 640 workers report their trips in the available APP.



With these actions we met our goal of implementing the PEMS and promoting a clean transportation culture.

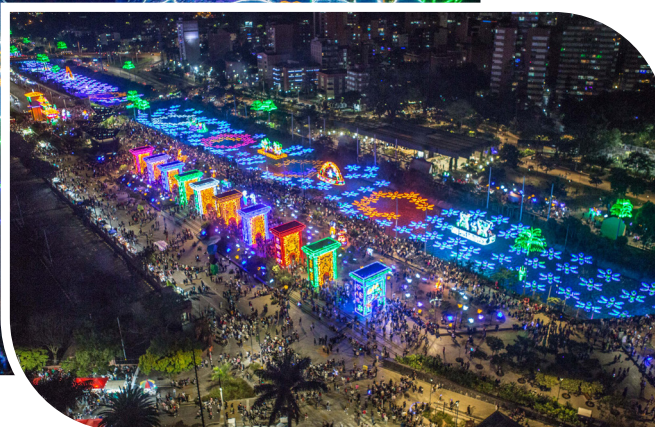
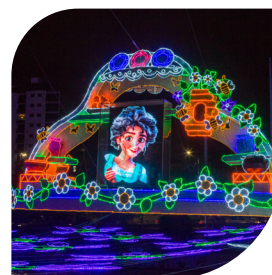


7.3. EPM's Christmas Lighting

EPM's Christmas Lighting celebrated its 55th anniversary representing Colombian traditions, customs, flora and fauna. **In 2022, it was inspired by Walt Disney Animation Studios' ENCANTO**, a film that celebrates Colombian culture and positions our country as a reference in biodiversity and cultural richness. This theme reinforced the internationalization capacity of our illuminations, which every year boosts tourism and commerce during the Christmas season.



Scan the
QR code





10 million
of LED bulbs.



32 thousand
handwoven
shapes.



750 kilometers
of luminous hose with
LED technology.



7 tons
of metallized paper in
different colors.



210 tons
of iron.



1.8 kilometers
extension of the central node
of the Medellín River, again
from the Guayaquil Bridge to
the EPM Building.



COP 21,000 million
of total investment.



10 years

the "Encendamos la Alegría"
("Let's Light the Joy") contest.



26 municipalities

2 townships in Antioquia

enjoyed the **rituals of lighting**
the Christmas lights.



More than 200,000

tourists visited the EPM's Christmas
Lighting Show, between December
1st, 2022 and January 10th, 2023.

41.1%

the **number of visitors**
increased compared to 2021.



USD 36.9 million

was the **economic revenue**
generated by the Christmas Lights.

360

direct jobs.



980

indirect jobs, including
street vendors.



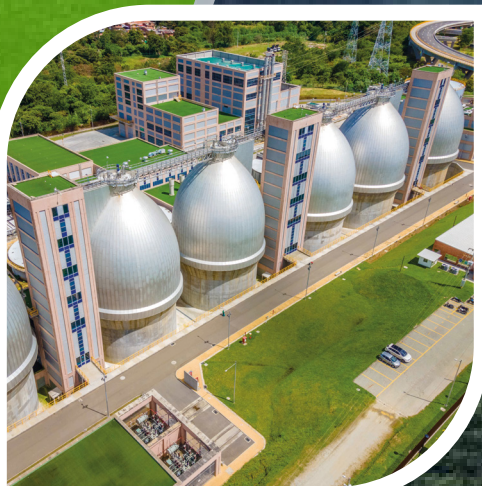
"This has been a boom for the people
because they were waiting to see the
Medellín River illuminated, this is the best
thing the city can have. I am very grateful
to EPM for what they are giving us all."

Yaneth Huila

Traveling vendor benefited from
EPM Christmas Lights Management

8

Financial
performance
EPM



epm[®] Financial Performance



+20%

COP 13.5 billion

Revenues

+25%

COP 5.7 billion

Ebitda

+20%

COP 3.2 billion

Infrastructure
investments

+32%

COP 1.8 billion

Transfers to
the District of
Medellín

EPM's financial results occur in a macroeconomic scenario characterized by the growing trend of the Consumer Price Index (CPI) and the Producer Price Index (PPI), generating a significant impact on operating costs, infrastructure investment and a higher indexation of some regulated items and services.



Relevant milestones 2022



1

The Ituango hydroelectric project's generating units 1 and 2 came into operation, having met the requirements of XM (electricity market administrators) and the CON (National Electricity Sector Operation Council), and are now available for commercial generation.



2

In December 2022, we signed our first sustainable credit line for USD 700 million with international commercial banks, which consolidates us as one of the leading government-owned Colombian corporations in developing a government borrowing operation with sustainability criteria.



3

EPM's financial statements reflect an **impairment of the investment estimated at COP 1 billion at the end of 2022**, caused by the risks associated with the telecommunications sector through the company UNE.



4

We returned COP 1.3 billion to the country in taxes, fees and contributions.



5

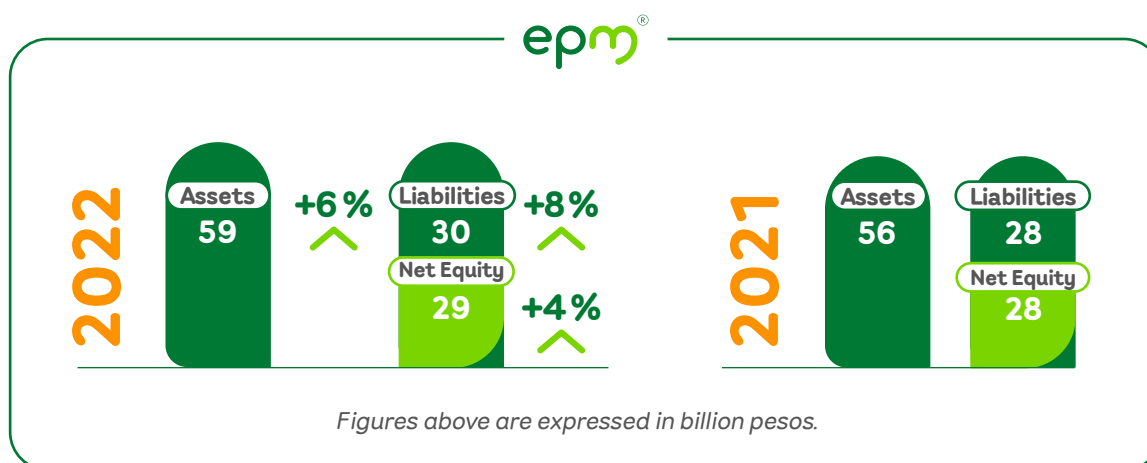
The carrying value of **portfolio investments** in controlled and non-controlled companies **amounted to COP 15.7 billion**, at the end of 2022. 

Resultados financieros

By the end of 2022, we will reach **revenues of COP 13.5 billion, an ebitda of COP 5.7 billion and net income for the year of COP 3 billion**.

Our **operating results in the different businesses** showed growth in revenues and in the cost and expense components, the latter in a lower proportion than revenues. This performance responds to cost and expense control strategies, which are fundamental in times of high uncertainty and volatility.

The **net result of the parent company EPM** was COP 3 billion, 10% lower than the previous year, which includes the result of the subsidiaries through the equity method for COP 1.6 billion, which means that our subsidiaries contributed 53% to the profit of the parent company EPM. The decrease in the results of the parent company is due to the update of the value of the investment in telecommunications (UNE), due to industry trends, competitive dynamics, new business models and the renewal of the spectrum.



Total assets amounted to COP 59 billion, net equity COP 29 billion and liabilities COP 30 billion, figures that compared to December of the previous year presented growth of 6% for total assets and 8% and 4% for liabilities and net equity, respectively.

The **growth in assets** was due to the increase in property, plant and equipment due to the additions of construction in progress, mainly the Ituango hydroelectric power plant, and in investments in subsidiaries as a result of the application of the equity method, especially in Afinia, DECA, CHEC, ESSA, CENS, Aguas de Aguas de Lima and CENS, among others. National, PDG and EDEQ.

The **growth in liabilities** was related to the financing efforts for the needs required for the year 2022, as well as a partial funding for the year 2023. Loan disbursements amounted to COP 1.7 billion, highlighting the signing of the first line of sustainable loans for USD 700 million with international commercial banks through a group of four banks: BBVA, BNP Paribas, Bank of Nova Scotia (Scotiabank) and SMBC. This type of credit directly linked to sustainability aims to facilitate and support economic activity and the environmentally and socially sustainable growth of companies. To this end, the financial institutions grant resources.

The financing that will have a benefit in the financial cost, subject to the fulfillment of the objectives agreed upon with the organizations that access the credit. As a result of foreign exchange risk management through natural, accounting and financial hedges, throughout 2022 the net foreign exchange exposure remained stable, and there was practically parity between assets and liabilities in dollars; therefore, there was no material impact on the financial results, considering that the accumulated devaluation during the year amounted to 21%.

On the other hand, during the year 2022, two new counterparties were enabled for the potential negotiation of financial derivatives; thus, the Company accumulates a total of 13 active counterparties, with the possibility of accessing more competitive prices when quoting firm derivative financial instruments to mitigate the market risks associated with foreign debt denominated in dollars.

In **EPM** we maintained the practice of timely informing the credit risk rating agencies about the relevant facts of the Organization, in order to transparently provide them with the necessary elements for their decision making. Fitch Ratings placed EPM's risk rating at "BB+" in international scale as a consequence of the adjustments in the ratings of the Republic of Colombia and the Municipality of Medellín; and "AAA" in national scale, both in negative observation. Moody's maintained the international rating at "Baa3" with negative outlook, in international investment grade.

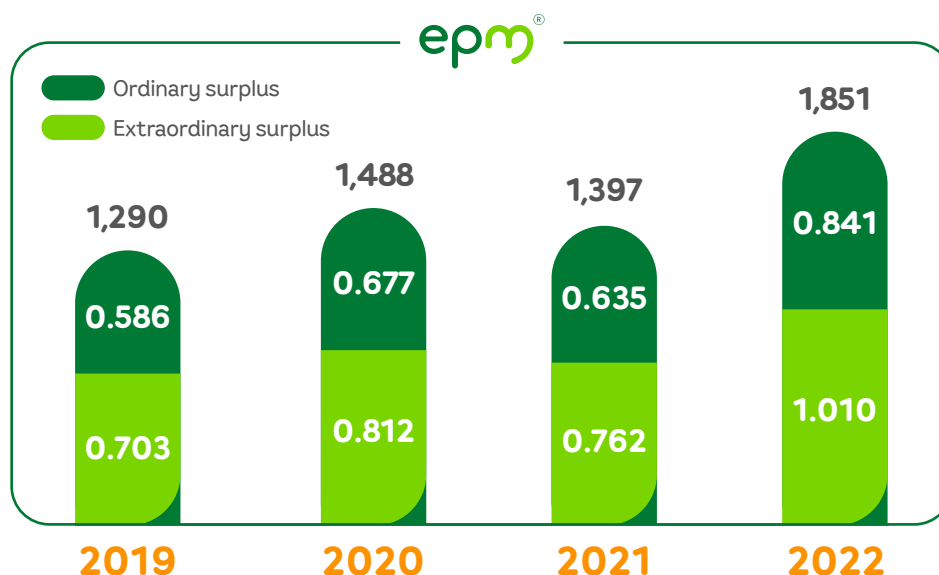
We maintained our transparency practices before the national and international financial markets, complying with the timely delivery of the Company's updated information. Some noteworthy initiatives in the relationship with this stakeholder group are: teleconferences for the delivery of quarterly financial results -We also offer four annual meetings in Spanish and English, the annual Investors' Meeting, a web portal for investors in Spanish and English, and a permanent service to local and international investors through different channels.



In addition, we **once again achieved IR (Investor Relations) recognition from the Colombian Stock Exchange**, thanks to the voluntary adoption of best practices in disclosure and investor relations.

Transfers to the District of Medellín

In 2022, from EPM we **delivered to the District of Medellín transfers for COP 1.8 billion**, of this amount, COP 1 billion was by way of ordinary transfers, corresponding to 30% of the profits for the year 2021 and the remaining 25% corresponds to extraordinary transfers.



Figures expressed in billion of pesos.

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Challenges
2023



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Challenges 2023



The current fiscal year presents us with important **challenges for the materialization of our strategic management focuses**. Fulfilling these initiatives will allow us to continue contributing to the harmony of life for a better world by generating benefits for our stakeholders:



Commissioning of **units 3 and 4** of the **Hidroituango power plant**.

Start-up of the **Tepuy solar farm**.

Improved project management capacity for an adequate execution of the infrastructure investment plan, meeting cost, time and project performance criteria.

Progress in the execution of the **hydrogen pilot**.

Implementation of actions of the Productivity Pathways program to increase cost and expense efficiencies in organizational areas, with the purpose of increasing value for stakeholders.

External Verification

See the external verification certificate of the figures in EPM's 2022 Annual Report that are part of EPM's 2022 Sustainability Report at: [Independent Review Report](#).

The financial figures listed below were externally verified by Deloitte, through its audit of EPM's financial statements. The reports of the independent auditors are available at: [EPM Certifications](#).

Financial Information	Verification item	Reported Assertion	Page
Financial Performance	Revenues	At the end of 2022 we reached revenues of COP 13.5 billion	109
	Assets	Total assets amounted to COP 59 billion	110
	Liabilities	Liabilities COP 30 billion	110
	Net equity	Equity in COP 29 billion	110
	EPM's result for the period	EPM's net result was COP 3 billion-10% lower than the previous year	109

