

A large, leafy green tree stands on a grassy hill, positioned on the left side of the slide. The tree is the central visual element, with its canopy extending across the middle of the frame. The background is a plain white sky.

EPM Group

J.P. Morgan 9th Annual Global Emerging Markets Corporate Conference

February 25-27, 2019

EPM Team



Jorge Tabares

Executive Vice President of Corporate Finance, Risk and Investment Management

- 4 years with EPM
- 29 years of industry experience

Jorge.andres.tabares@epm.com.co



Mary Sol Londoño

Financial Analyst

- 15 years with EPM
- 23 years of industry experience

Mary.londono@epm.com.co



Carla Meza

Financial Analyst

- 12 years with EPM
- 16 years of industry experience

Carla.meza@epm.com.co

Agenda



1. Group EPM highlights
2. Infrastructure investment plan 2019-2022
3. Ituango Hydroelectric Project and Aguas Claras WWT
4. Financial results as of November 2018

1. Group EPM Highlights

Colombia's largest multi-utility Company leading across sectors



Electricity



Natural Gas



Water



Solid Waste Management



Telecommunications
(as Une Tigo shareholder)

1. Group EPM Highlights

Geographical diversification



Colombia's largest multi-utility company

- **Assets:** COP 51.1 billion (USD 15.787 MM equiv.)
- **Revenues:** COP 14.8 billion (USD 4.591 MM equiv.)
- **EBITDA:** COP 4.6 billion (USD 1.447 MM equiv.)

Headquartered in Medellin, with a growing Latin American portfolio

- Founded in 1955, **100% owned by the municipality of Medellin** with administrative and budgetary autonomy from its owner.
- Provides services **across 6 countries** throughout **7 business segments**

Investment Grade Rating ⁽¹⁾:

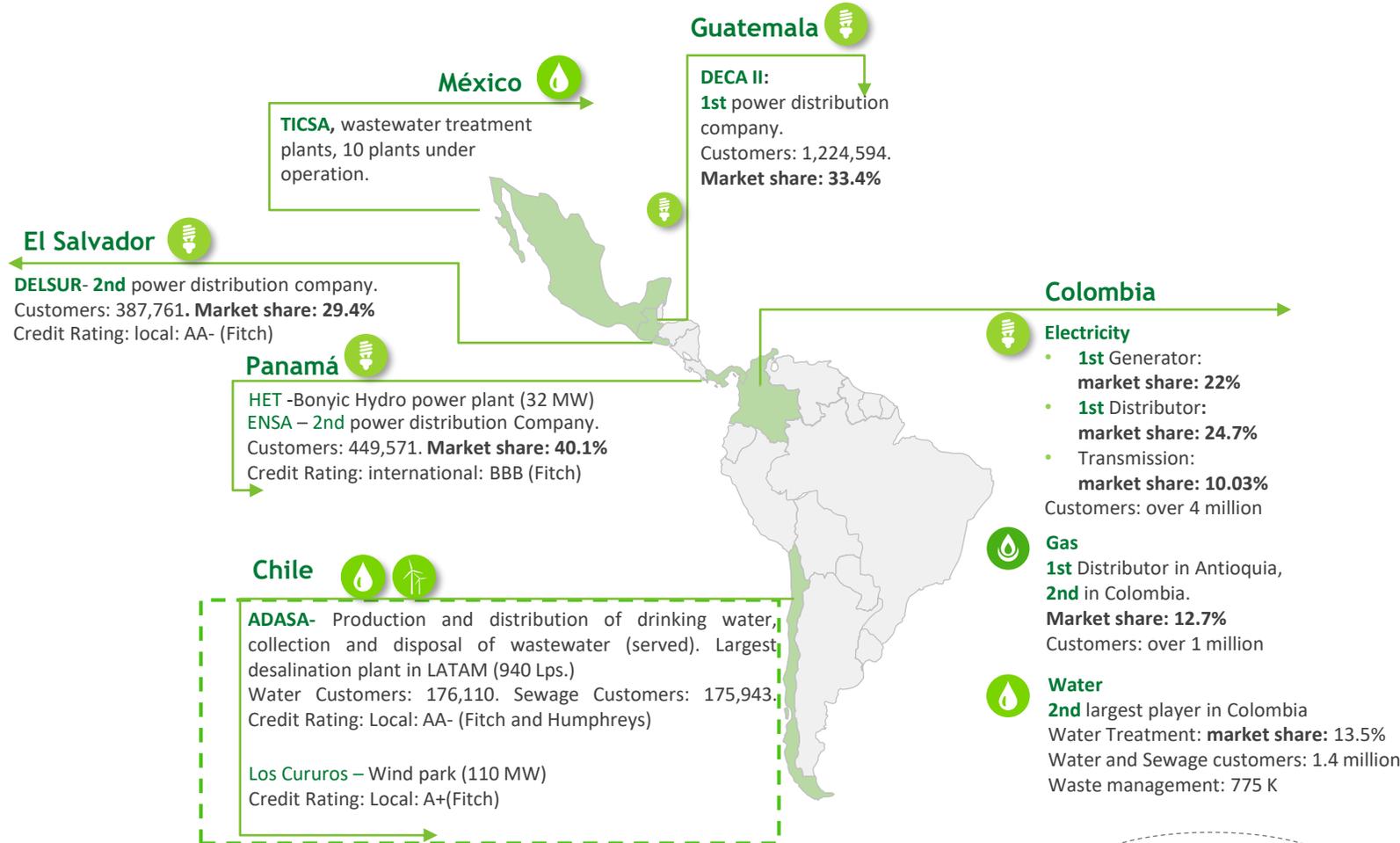
- **Fitch:**
 - International **BBB**, rating watch negative (Nov.27th,2018).
 - Local **AAA**, rating watch negative (Nov.27th,2018).
- **Moody's: Baa3**, negative outlook (Aug.27th,2018).

Note: USD figures converted at an exchange rate of COP/USD \$ 3.240,02 as of November 30, 2018.

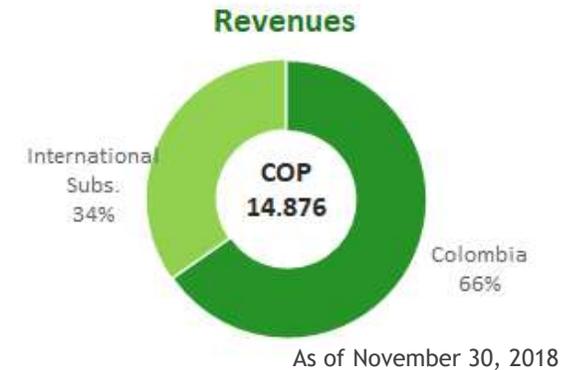
(1) Source: Credit Rating Agencies.

1. Group EPM Highlights

Ample presence in Latin America



Infraestructure	Grupo EPM (Colombia and LatAm)
Power Generation	34 hydro power plants: 3,057 MW 2 thermal power plants: 496 MW 2 wind parks: 128,4 MW
Power Distribution	T&D Lines: 235,274 Km Substations: 435 Transformers: 337,551
Gas Natural	Distribution Lines: 7,519 Km
Water	Potable Water network: 5,962 Km Sewage network: 6,270 Km



Year of acquisition/investment:	ADASA 2015	DECA 2010	HET 2011	Los Cururos 2013	ENSA 2011	TICSA 2013	DELSUR 2011
Amount Invested (USD MM):	991	635	314	238	152	116	63

Total invested: USD 2.509 million

2. CapEx 2019-2022

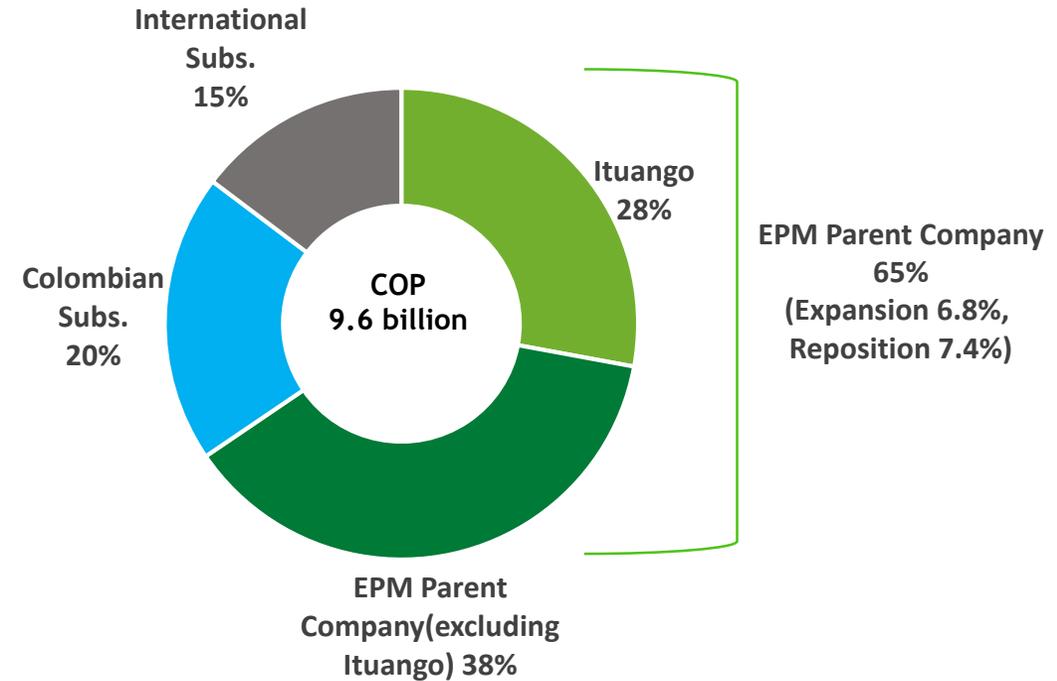


CapEx: COP 9.6 billion (USD 3.143 MM equiv.)

- 63% Power, 35% Water, 2% Other
- 65% EPM Parent company, 20% Colombian subsidiaries, 15% International subsidiaries

Figures in USD Million

	2019	2020	2021	2022	Total 2019- 2022
Ituango	344	289	153	91	877
Power Generation	23	40	33	25	121
Transmission & Distribution	411	358	309	226	1.303
Gas	5	4	5	2	17
Water	324	256	156	76	812
Corporative	6	6	1	0	13
Total EPM Group	1.114	953	656	420	3.143



➤ **Funding sources:**

➤ **Funding operations to be disbursed (USD 771 MM):**

- ✓ A/B loan IDB Invest: USD 450 MM
- ✓ BNDES: USD 71 MM
- ✓ HSBC: USD 250 MM

➤ **Potential new funding sources:**

- ✓ Capital markets: international and local
- ✓ Commercial banks: international and local
- ✓ Development Banks

3. Main infrastructure projects

Aguas Claras Park- Waste Water Treatment Plant



The recovery of the Medellín river watershed

95% of the wastewater collected from Medellín will be treated and returned to the river



Treatment capacity: 5 m³/s

• Total work progress as of Dec.2018: **98%**

➤ Three of the four water and mud lines were put into operation. Average flow of 3 m³/s.

✓ Start of operation: 4Q2018

Progress in main components:

- Treatment plant: 98%.
- ✓ 4th Treatment Line enabled on Dec.25th,2018
- Drying of biosolids: 96%.
- ✓ North Interceptor: 100% completed.

- Total cost: COP 1.6 billion (USD 503 MM equiv.)
- Total invested as of Dec.2018: COP 1.5 billion (USD 469 MM equiv.)

Financing strategy: 80% debt, 20% equity

✓ Loan agreement: IADB → USD 450 MM.

3. Main infrastructure projects

Ituango Hydroelectric Generation Plant



-  Largest hydro-generation power plant in Colombia **2.400 MW**
17% of total Colombian installed capacity



Total cost: **COP 14 billion** (USD 4.320 MM equiv.)

Invested as of Nov.2018: **COP 9.8 billion** (USD 3.024 MM equiv.)

Total work progress at the date of the contingency, April 2018: **84.3%**

Ituango Hydroelectric Project



Reservoir

Auxiliary Diversion
Gallery

Intake Gates

Substation 500 kV

Spillway

Dam

Intermediate
Discharge

Discharges
Deviation 1 and 2

PowerHouse
Discharges

3 . Update on the Ituango Contingency

All dates estimated as of Feb. 21st, subject to changes due to technical findings and design adjustments



Technical actions - What follows



Dam works



- **The main screen in plastic concrete was completed**, as well as the screens in the stirrups.
- **Dam filling** between the elevations 418 msnm to 435 msnm will be restarted once the surface at 418 msnm is adapted. Activity started in Feb 2019.

Estimated compliance dates:

- **Dam filling 435 masl: 2Q2019**



Right Diversion Tunnel (RDT), Auxiliary Diversion Gallery (ADG) and Intermediate Discharge



- **In the RDT:** the injections for the **pre-plug 1** continue from the tunnel of the intermediate discharge. 64 perforations of 120 total have been executed.
- The construction of the gallery 265 (54 m) was completed for the consolidation of the **pre-plug 2** in the **RDT**.
- For the construction of the final plug in the **RDT**, a gallery of 155 m is built, with an advance of 94% (146 m).
- **ADG:** activities for rehabilitation of the floodgates and subsequent placement of the final plug.

Estimated compliance dates:

- **RDT: 1Q2020**
- **ADG: Pre-plug (closing of gates): 3Q2019**
Final plug: 4Q2019
- **Intermediate Discharge Recovery: 1Q2020**



Powerhouse



- ✓ **Closing of the first intake gate (Gate No.2):** milestone completed on January 16, 2019.
- ✓ **Closing of the second intake gate (Gate No.1):** milestone completed on February 5th, 2019.

Estimated compliance dates:

- **Pumping of power house: 2Q2019**
- **Tunnels and caverns recovery: 2Q2020**
- **Access tunnel 3Q2019**



Estimated date of entry into operation Phase 1: Dec. 2021

3 . Update on the Ituango Contingency

PowerHouse



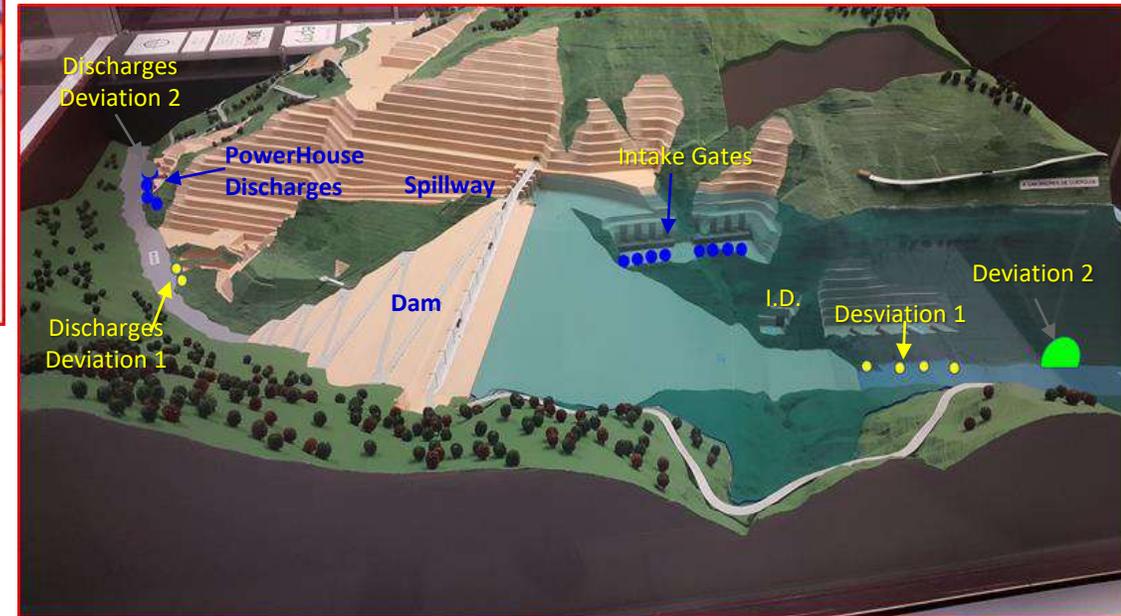
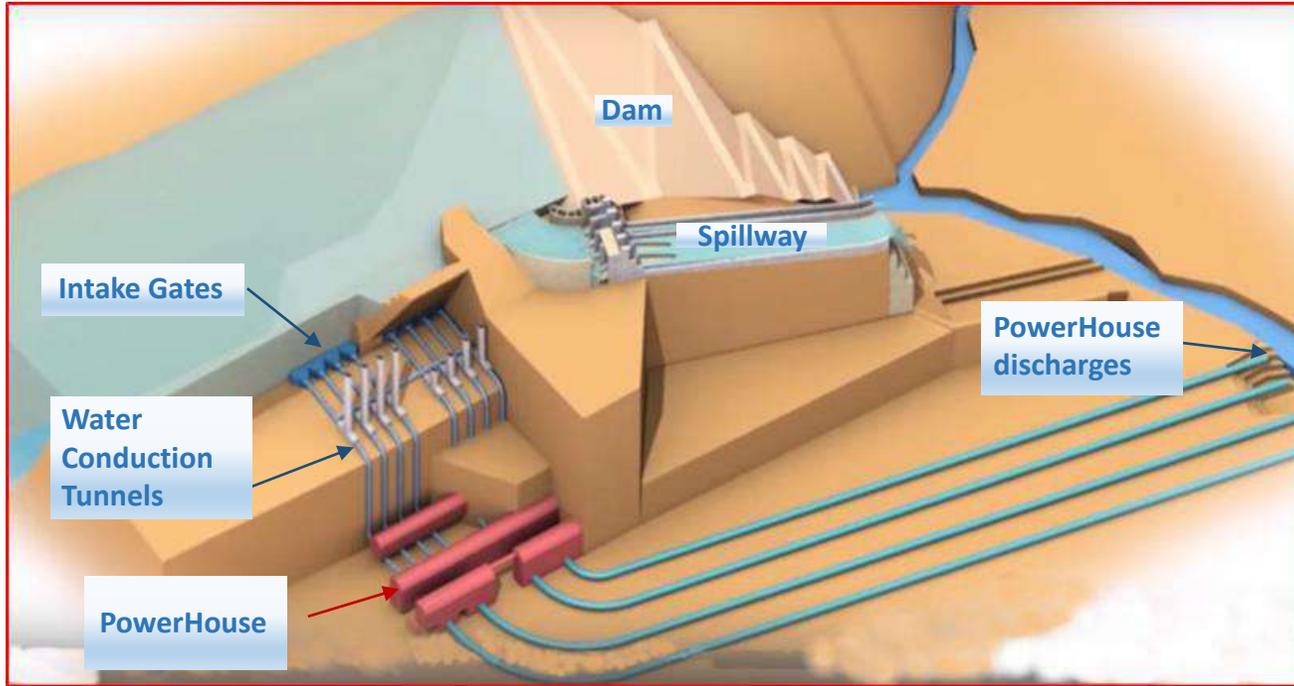
Preliminary view of the PowerHouse

Picture taken after the closing of the second intake gate on February 5th, 2019.

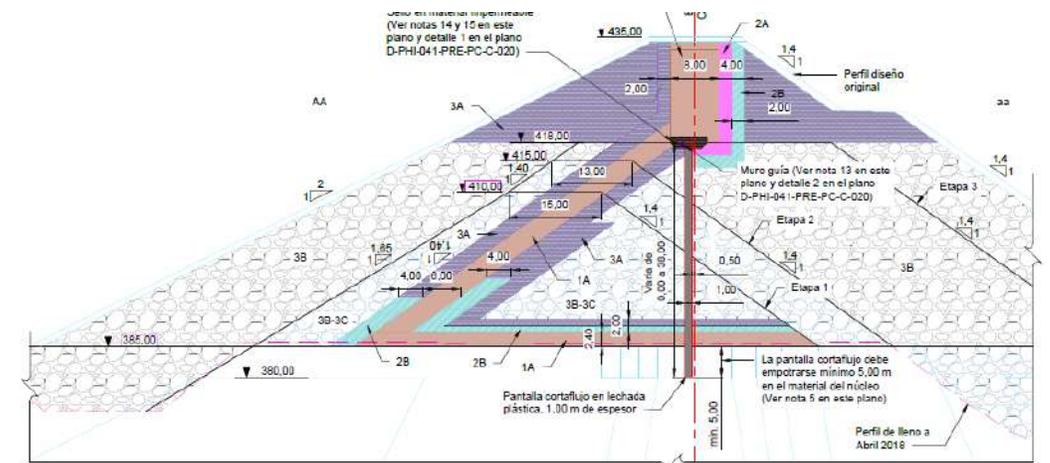
- ✓ The roof of the cavern doesn't show relevant damages despite the flood and water pressure.
- ✓ The beams of the crane-bridge seem to be in good conditions, which will facilitate the reconstruction process.

3 . Update on the Ituango Contingency

General Plan of the Works



3 . Update on the Ituango Contingency Dam



- The main screen in plastic concrete was completed and the sonic perforations and contact injections were started in the stirrups.
- The dam filling between levels 418 to 435 will be restarted once the surface is adjusted to level 418 (demolition of the guide wall, dismantling of silos and storage tanks).

3 . Update on the Ituango Contingency Intake Structure

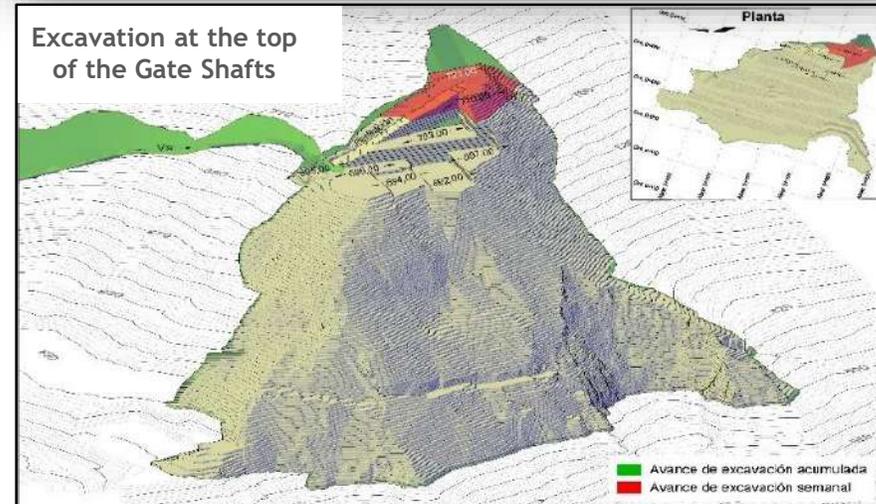


3 . Update on the Ituango Contingency

Top Landslide Treatment



- Excavations at the top of the Gate Shafts: the total volume to be excavated is 473,000 m³. Progress: 33,889 m³ (7%).
- Treatments of the slope: injection of tendons, installation of anchors and placement of steel reinforcement in the screen for the tendons.



3. Ituango Contingency - Financial Impact

Figures in COP Billion



Project Cost

Concept	CONTINGENCY COST		
	Before	Contingency	After
Direct Cost	10.0	1.7	11.7
Financial Expenses	1.5	0.8	2.3
Total Cost	11.5	2.5	14.0

Direct Cost: COP 1.7 billion increase, mainly in recovery of the main Works and Equipment.

Financial Expenses: COP 0.8 billion increase, due to a greater period of construction (accounting effect, does not correspond to additional debt).

Total invested as of Nov.2018: COP 9.8 billion

Financial resources as of Nov. 2018

Contingency CapEx Execution As of Nov. 2018	
Investments	0.36
Expenses	0.07
Total executed	0.43

PROVISIONS	Provision 2018	Payments as of Nov. 2018	Balance Provisions
Shelters Support	0.04	0.02	0.02
Affected Care and Compensation	0.04	0.00	0.04
Reliability Charge Guarantee	0.14	0.00	0.14
Total Provisions	0.22	0.02	0.20

Pending Financial Resources to be executed Estimated Figures

Contingency Investments: It is estimated that additional resources of up to COP 1.34 billion will be invested in works associated with the contingency. It should be noted that a recovery is expected for compensation of damage insurance for COP 1.22 billion.

Contingency expenses: in the financial projections, a value of up to COP 0.6 billion was considered for the attention of the communities, compensation and reconstruction of community infrastructure, and environmental effects, etc.

The value of the COP 0.6 billion is not included in the COP 1.7 billion of contingency CapEx investments.

3. Ituango Contingency - Financial Impact

Project Cost Breakdown

Figures in COP Billion

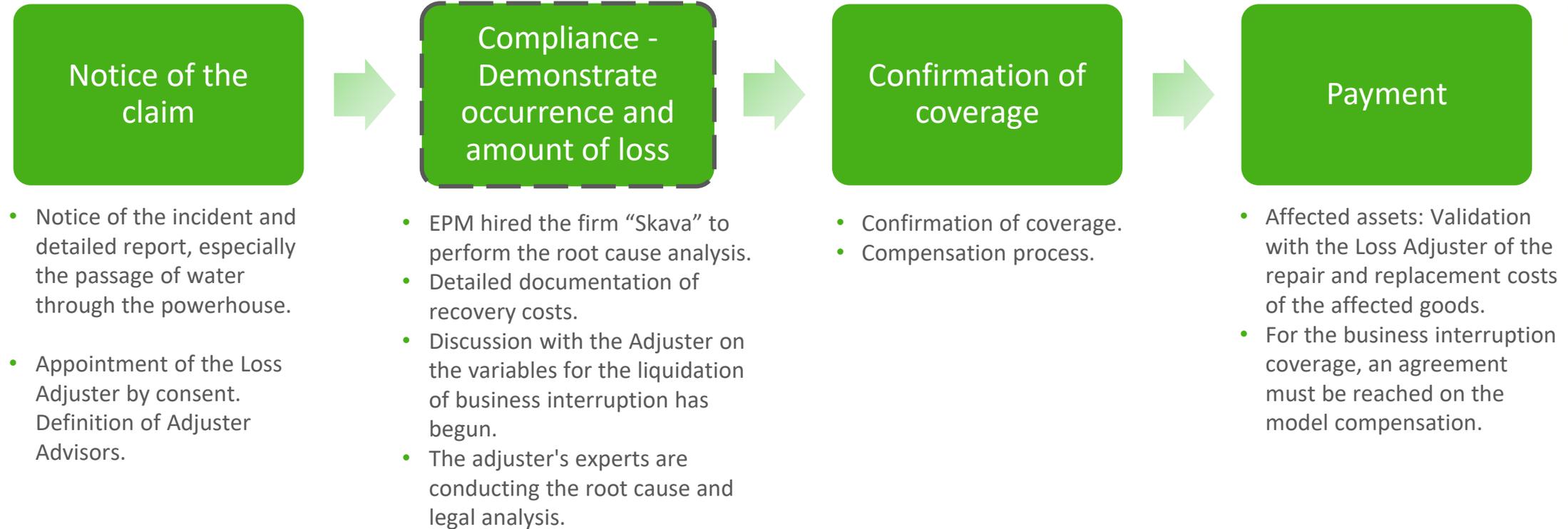


CONCEPT	Before Contingency	After Contingency	% Var.
Engineering administrative expenses	1,8	2,2	20%
Infrastructure and Main Works	5,3	6,4	20%
Equipment	1,5	2,0	30%
Environmental and Social Management	0,9	1,1	19%
Land and Easements	0,1	0,1	14%
Unforeseen delays and downward adjustments	0,4	0,0	-100%
DIRECT COST	10,0	11,7	17%
Capitalized interests	1,5	2,3	55%
TOTAL COST	11,5	14,0	22%

3. Ituango Contingency-Insurance policy all risk construction and assembly



Milestones of the claim process



➤ **Total coverage: USD 2,556 million, with USD 1 million deductible.**

Premises for loss management:

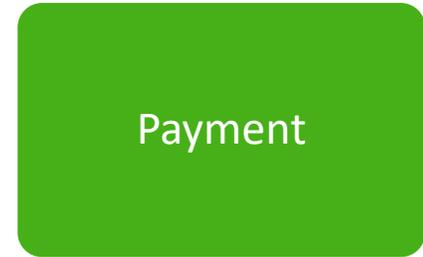
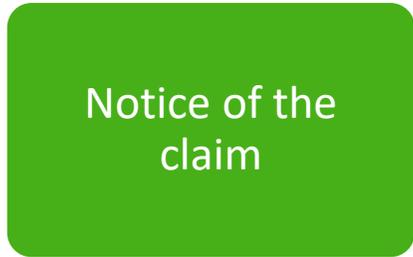
Construction of a relationship of trust and joint work with the Loss Adjuster and the insurer and reinsurers:

- Report of contingency progress, weekly.
- Visits of the leader Adjuster, monthly.
- Visits to the project with reinsurers leaders of claims and experts appointed by them.
- Continuous answers to requested information.
- Recruitment of experts in management of large claims to support the claim process.

3. Ituango Contingency - Insurance policy for non-contractual civil liability



Milestones of the claim process



- Notice of the incident
- Appointment of the Adjuster.
- Visit of the Adjuster to the Project's affected area, the following week the event occurred.

- Explanation of why the event is part of the coverage of the policy and the reasons.
- Development and agreement of the compensation model related to effected people.
- Evolving assessment of the damage and cost of community infrastructure.

- On December 18, the coverage of the policy was confirmed. With this, the reserve figures were adjusted.

- Currently, we are in the process of reimbursement of compensation that EPM made to third parties and the costs incurred to repair or rebuild the affected community infrastructure.

➤ Total coverage: COP 50.000 million, with COP 150 million deductible.

Premises for loss management:

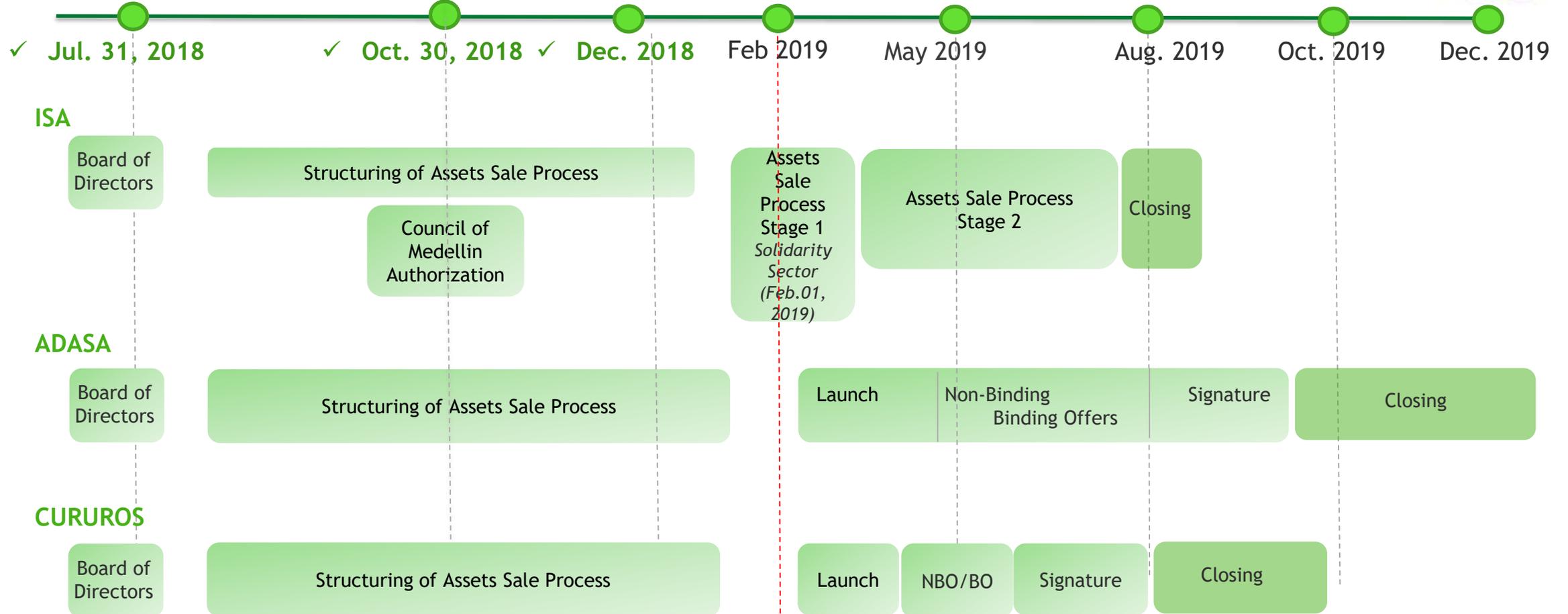
Relationship of trust and joint work with the adjuster through constant exchange of information about the compensation strategy for people affected
Accompaniment of the adjuster to the EPM team on the site to participate in the valuation of homes and negotiation.

Divesment Plan

Indicative schedule



Estimated value of sales: COP 3.5 - COP 4.0 bn approx.



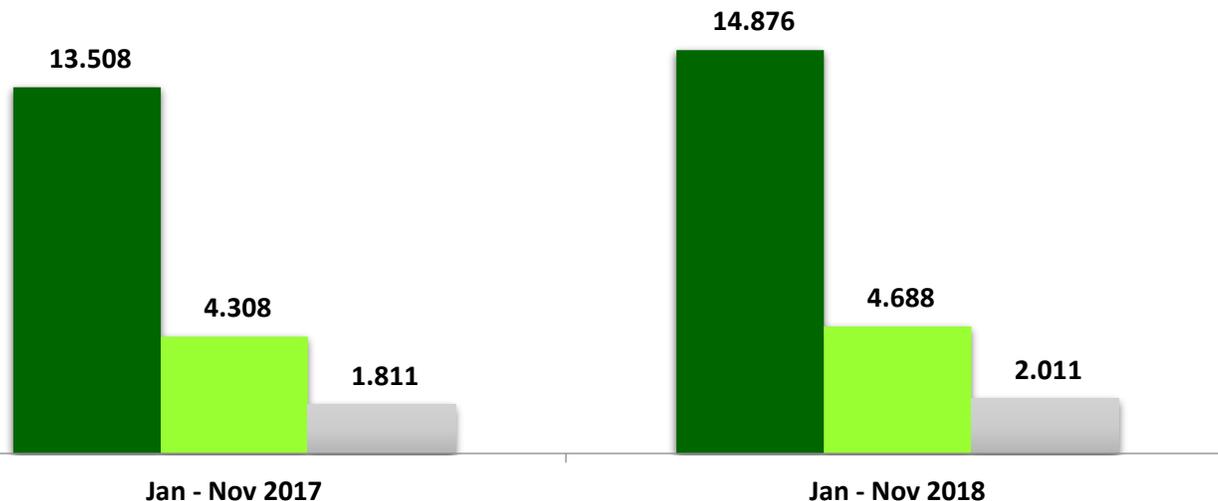
4. Financial Results as of November 30, 2018

EPM Group Income Statement

Figures in COP thousand million



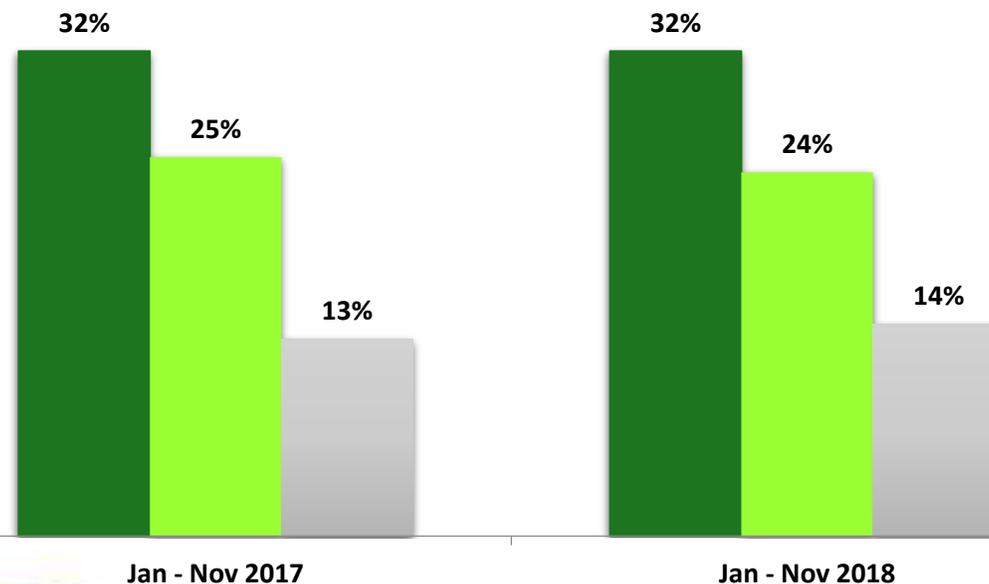
■ Revenues ■ EBITDA ■ Comprehensive income



Jan - Nov 2017-2018

- Revenues: 10%
- EBITDA: 9%
- Comprehensive income: 11%

■ EBITDA margin ■ Operational margin ■ Net Margin



- Revenues increased COP 1,369, 10%, explained by greater demand on the non-regulated market and long-term sales on EPM Parent Company.
- EBITDA rose COP 380, 9% with respect to previous year.
- Comprehensive income increased 11% due to higher operating income by COP 201, higher revenues related to investments by COP 65, and a lower income tax provision by COP 184.
- The extraordinary expenses generated by the contingency attention in the Ituango hydroelectric project amount to COP 265.

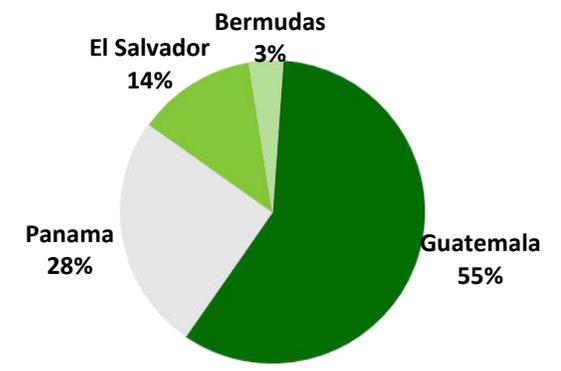
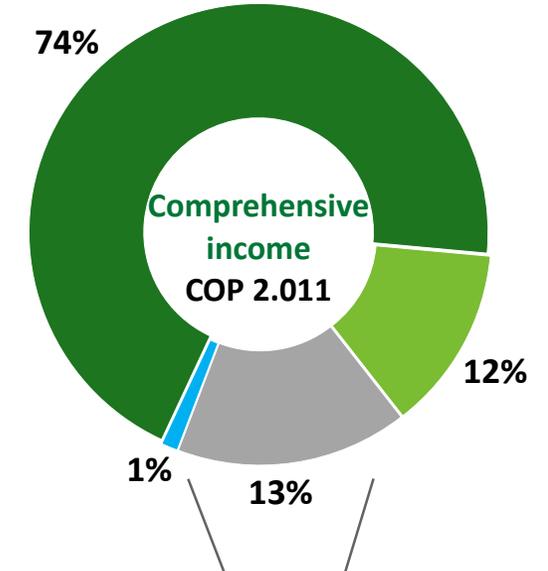
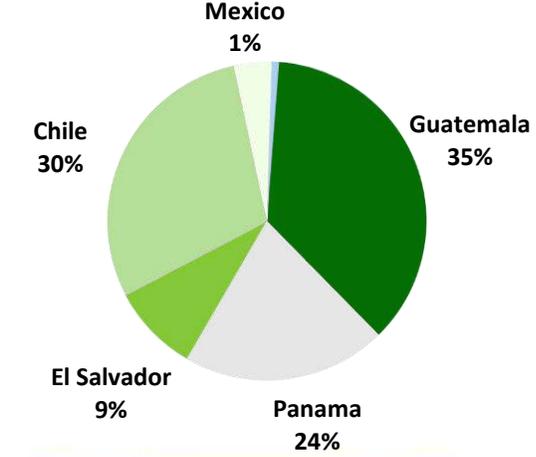
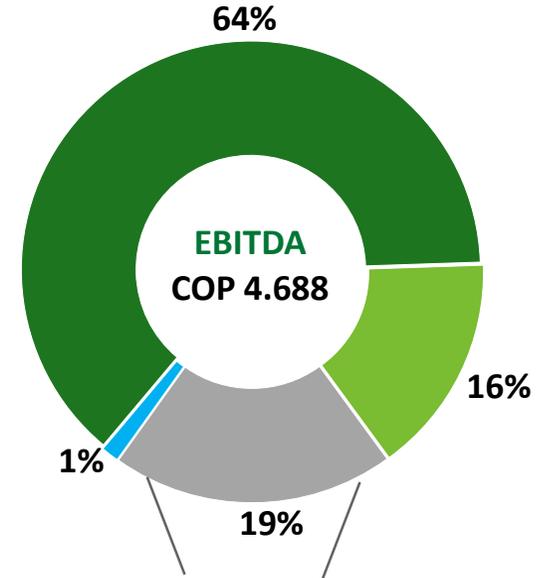
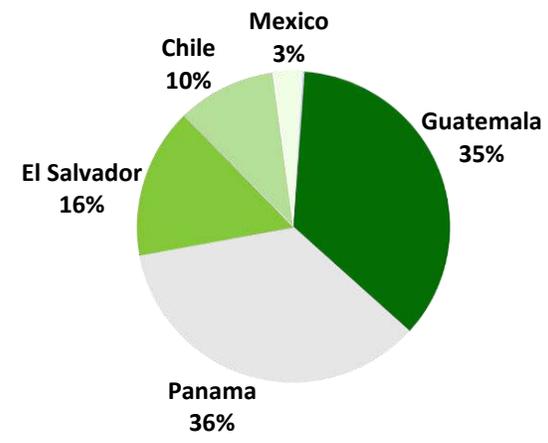
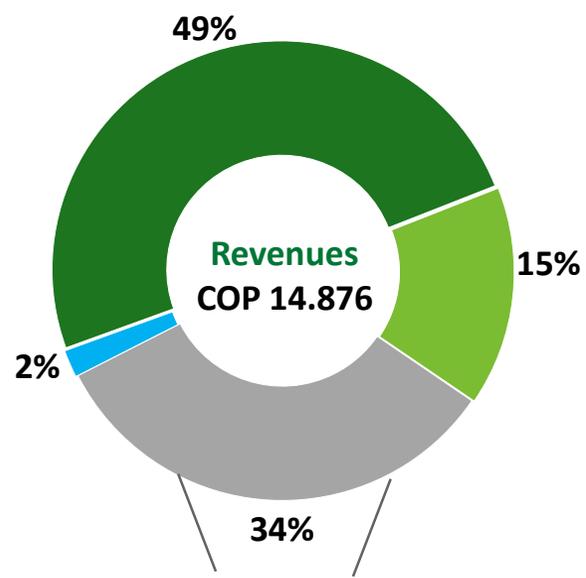
4. Financial Results as of November 30, 2018

EPM Group by Colombian and International Subsidiaries

Figures in COP thousand million



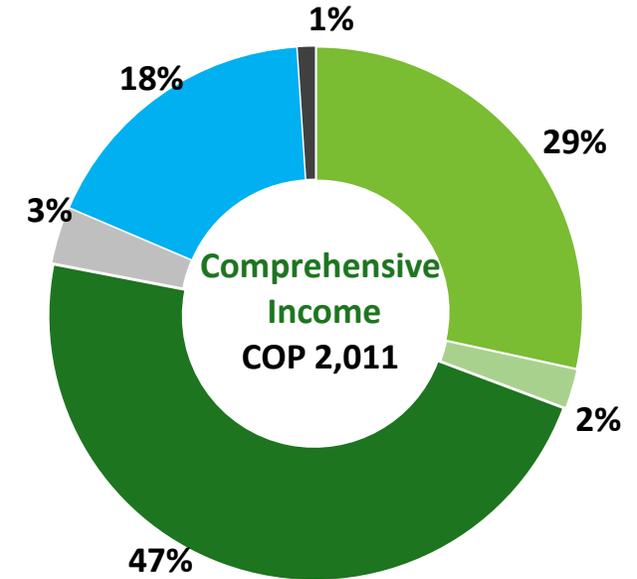
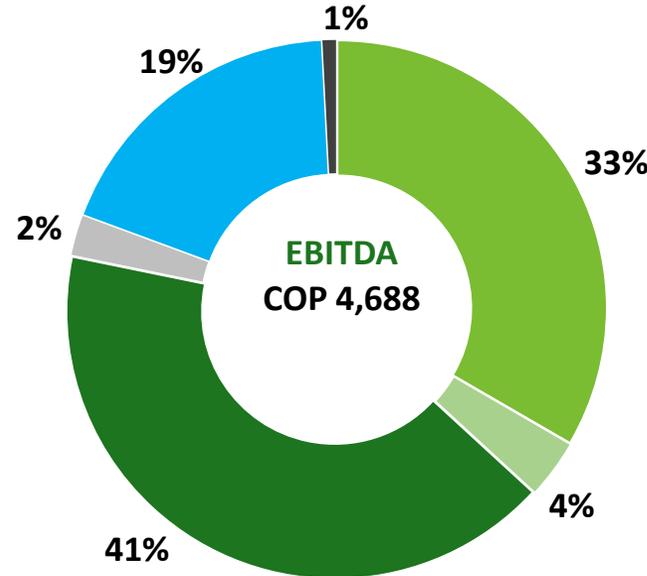
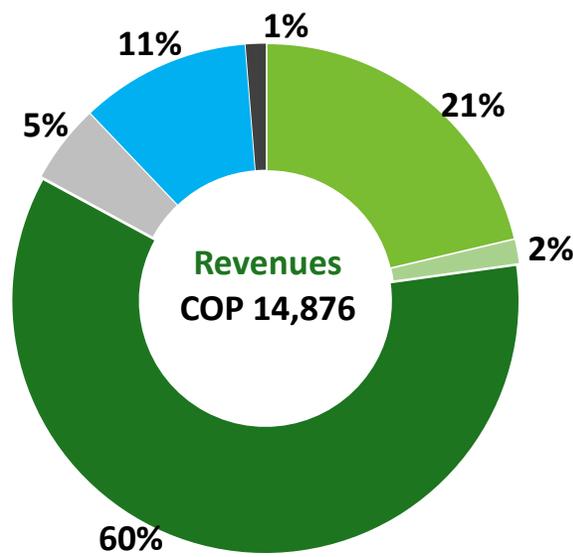
- EPM
- International Subsidiaries
- Colombian Power Subsidiaries
- Colombian Water Subsidiaries



4. Financial Results as of November 30, 2018

EPM Group by Segments*

Figures in COP thousand million



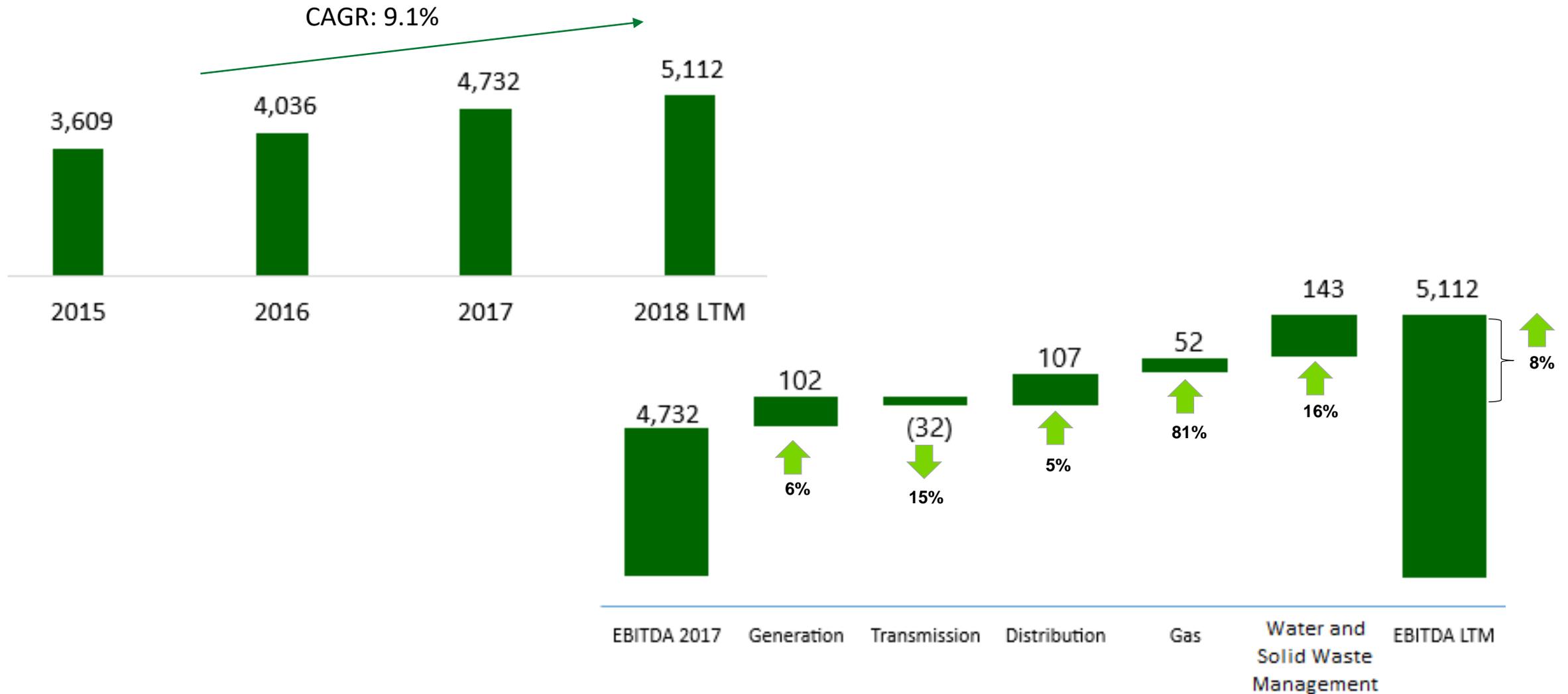
- Power Generation
- Power Transmission
- Power Distribution
- Gas
- Water
- Solid Waste Management

*It does not include "Other" business segment and "Intersegment transactions"

4. Financial Results as of November 30, 2018

EPM Group EBITDA*

Figures in COP thousand million

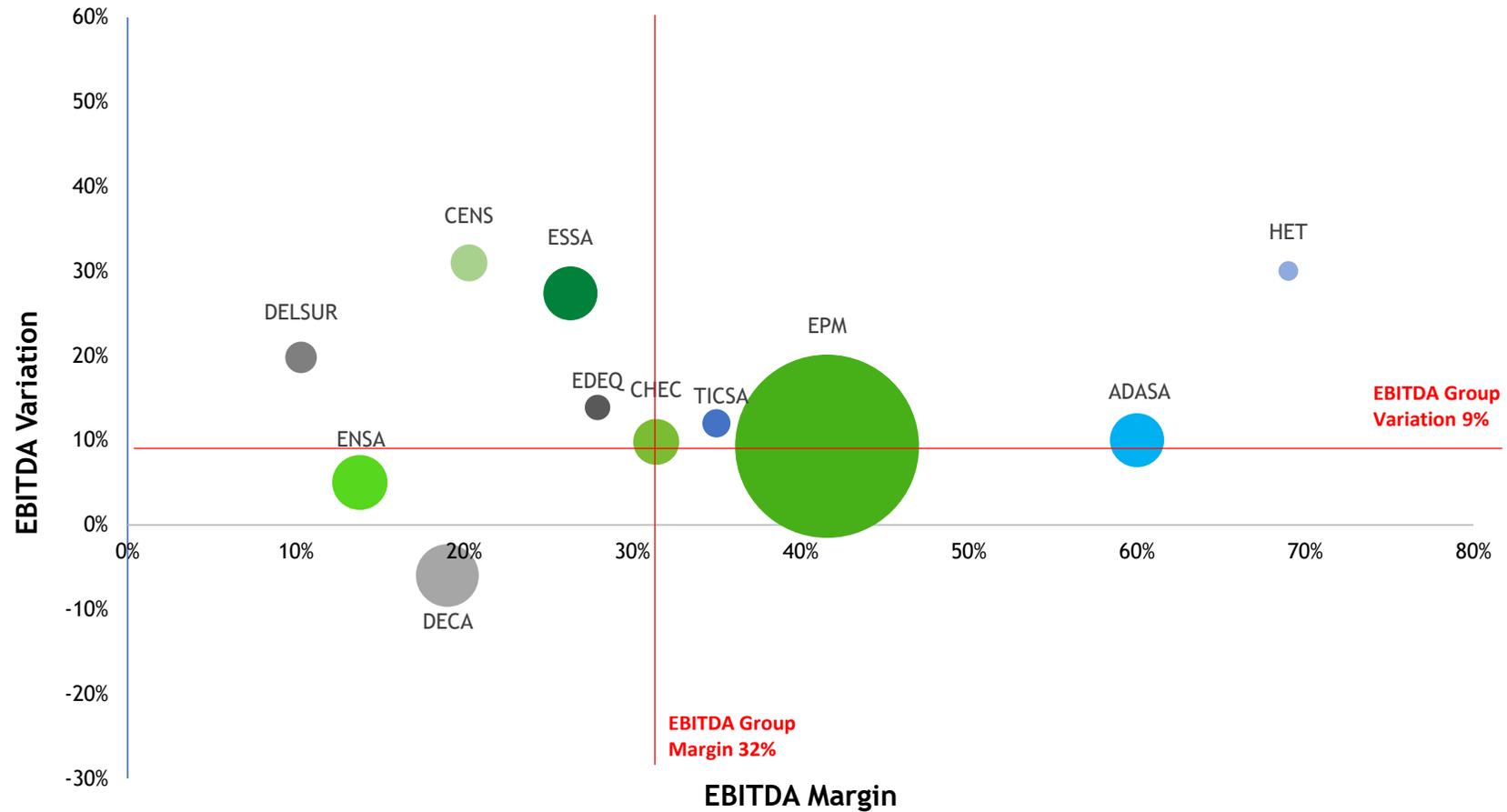


*It does not include "Other" business segment and "Intersegment transactions"

4. Financial Results as of November 30, 2018

EPM Group EBITDA

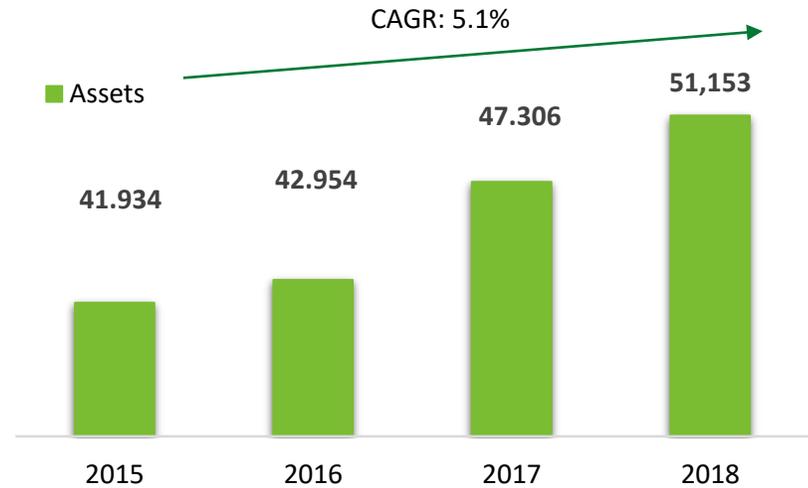
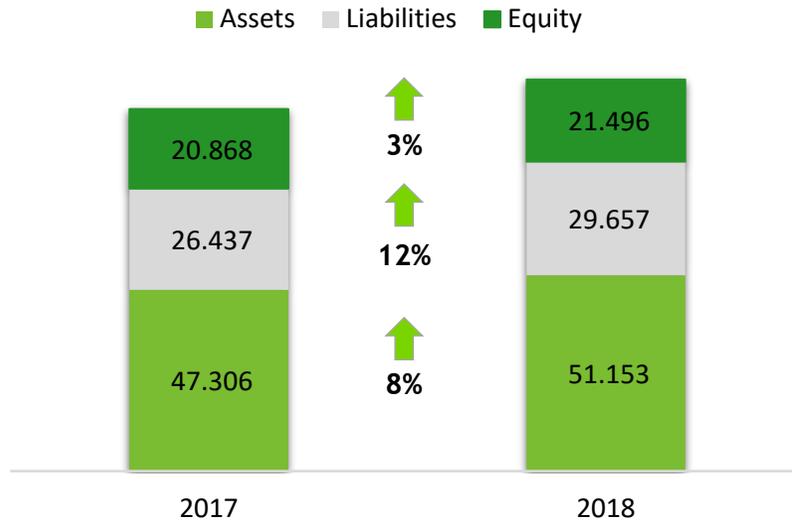
Figures in COP thousand million



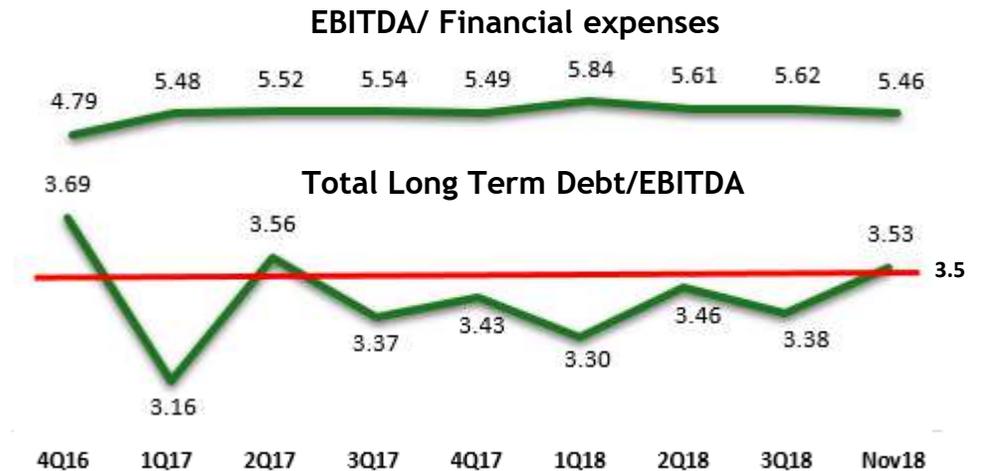
4. Financial Results as of November 30, 2018

EPM Group - Statement of Financial Position

Figures in COP thousand million



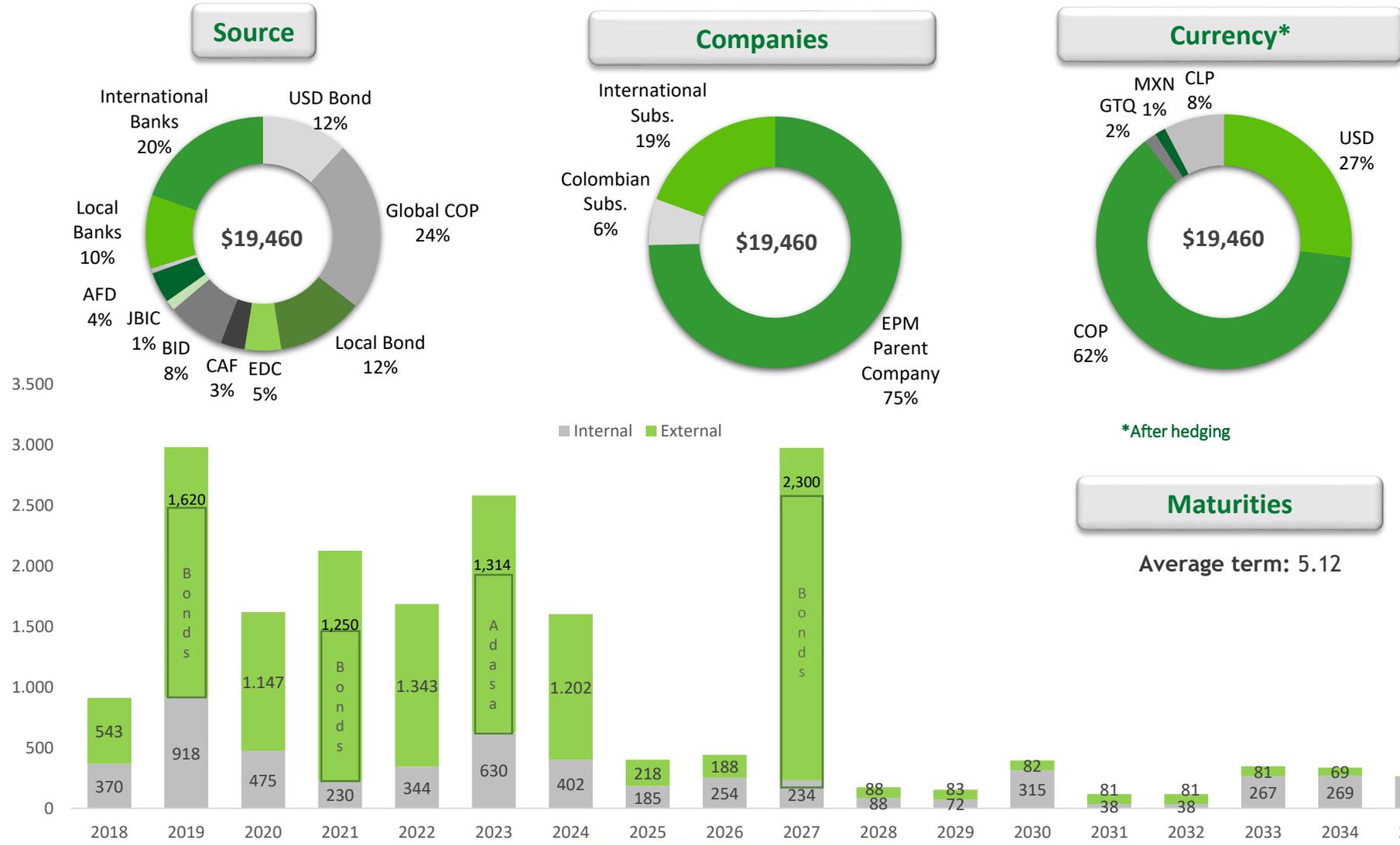
Ratios	2017	2018
Total debt	56	58
Financial debt	38	39
EBITDA/financial expenses	5.56	5.46
Total Long Term Debt/EBITDA	3.43	3.53



4. Financial Results as of November 30, 2018

Debt profile

Figures in COP thousand million



Credit transactions since the Contingency, April 2018

Credit transactions total amount: USD 2.462 million



- ✓ **Loans - Disbursement**
 - EDC - USD 90 million (May)
 - CAF - USD 200 million (June and August)
 - IDB Invest - USD 450 million (December)

- ✓ **Liability management in October to increase maturity in 5 years**
 - ADASA - CLP 273,000 million (USD 430 million equiv.)
 - ENSA - USD 100 million

- ✓ **Signing loans in November**
 - International bank USD 750 million
 - Local bank COP 1.0 billion

- ✓ **Energy operations guarantees**
 - International banks USD 134 million
 - Local banks COP 0.4 billion

- ✓ **Stakeholders were kept informed about the advances of the contingency**
 - Investors, financial institutions and credit rating agencies.

Disclaimer



- This is a general information presentation about Empresas Públicas de Medellín ESP and its Subsidiaries, as on the date of presentation. The materials herein contained have been summarized and do not intend to be complete.
- This presentation contains forward-looking statements which are subject to several risks, uncertainties and circumstances relative to the operations and business environments of EPM. These factors could cause actual results to materially differ from any future result, expressed or implied, in such forward-looking statements. Accordingly, EPM cannot guarantee any results or future events. EPM expressly states that it will be under no obligation to update the forward-looking statements or any other information herein contained.
- This presentation does not constitute any offer or invitation to offer, or a recommendation to enter into any transaction, agreement or contract with EPM. This presentation is for debate only and shall be referred to considering only the verbal information supplied by EPM, otherwise it would be incomplete. Neither this nor any of its contents may be used for any other purpose without the prior written consent of EPM.
- Only for information matters and reader's convenience, figures in COP were translated in this presentation into their USD equivalent using the exchange rate of COP/USD \$3.240,02 as of November 30, 2018, issued by the Colombian Financial Superintendence. Such translations do not agree with US GAAP and have not been audited. Also, they shall not be interpreted as representation of the amounts in Colombian Pesos, which could be translated into US Dollars at this or at any other rate.

Thank you!

Investorelations@epm.com.co

<https://www.epm.com.co/site/inversionistas>