

Grupo·epm

Annual Emerging Markets
Corporate Conference 2018
Bank of America Merrill Lynch
Miami, FL. May 30 - June 1

Included in The Sustainability Yearbook 2018

ROBECOSAM



Agenda

- > Corporate overview
- > Infrastructure investment plan
- > Ituango Project
- > Financial highlights



1. Corporate Overview

We provide comprehensive solutions in the fields of:

We are a Colombian Multi-Latin economic group owned by the municipality of Medellin, with 63 years of corporate experience.



Electricity



Natural Gas



Water



Solid Waste Management



Telecommunications
(as Une Tigo shareholder)

1. Corporate Overview

Relevant facts



Power (Generation, Distribution, Transmission)



Gas



Water



Waste Management

Colombia's largest multi-utility

- **Assets:** COP 47.8 billion* (USD 17 bn equiv.)
- **Revenues:** COP 5.1 billion* (USD 1.8 bn equiv.)
- **EBITDA:** COP 1.7 billion* (USD 609 mn equiv.)

Headquartered in Medellin, with a growing Latin American portfolio

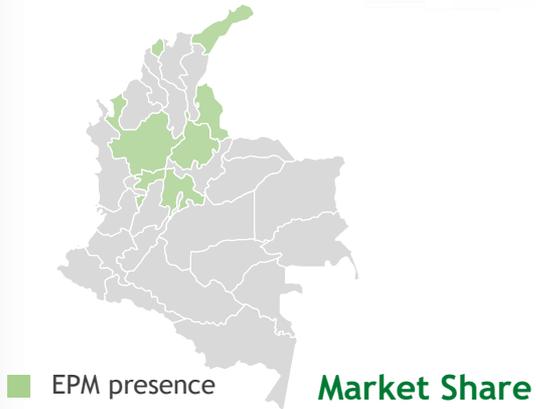
- Founded in 1955, 100% owned by the municipality of Medellin, with administrative and budgetary autonomy from its owner.
- Provides services **across 6 countries** throughout **7 business segments**

Credit Ratings:

- **Fitch:** international **BBB+** and Local **AAA** (rating watch negative from stable outlook).
- **Moody's:** **Baa3** (placed under review for further possible downgrade).

1. Corporate Overview

Our presence in Colombia



Power



- Generation **23%** (1,2)
- Distribution **23.9%** (3)
- Transmission **10.3%** (4)

Customers

More than **4.3 million**

Key Figure

3,482 MW net effective capacity throughout 33 power plants.

Largest electricity generator and electricity distributor in the country

Gas



- Distribution and Commercialization **12.7%**

More than **1 million**

Main distributor in the region of Antioquia, **2nd** in Colombia.

Water



- Water and Sewage **13.5%** (5)

- Water and Sewage **1.4 million**
- Waste management **775 thousand**

2nd largest player in Colombia

Source: EPM. XM.

Note: Information as of Dec. 2017, unless otherwise stated.

(1) EPM ranks 1st in terms of Generation, Distribution and Commercialization.

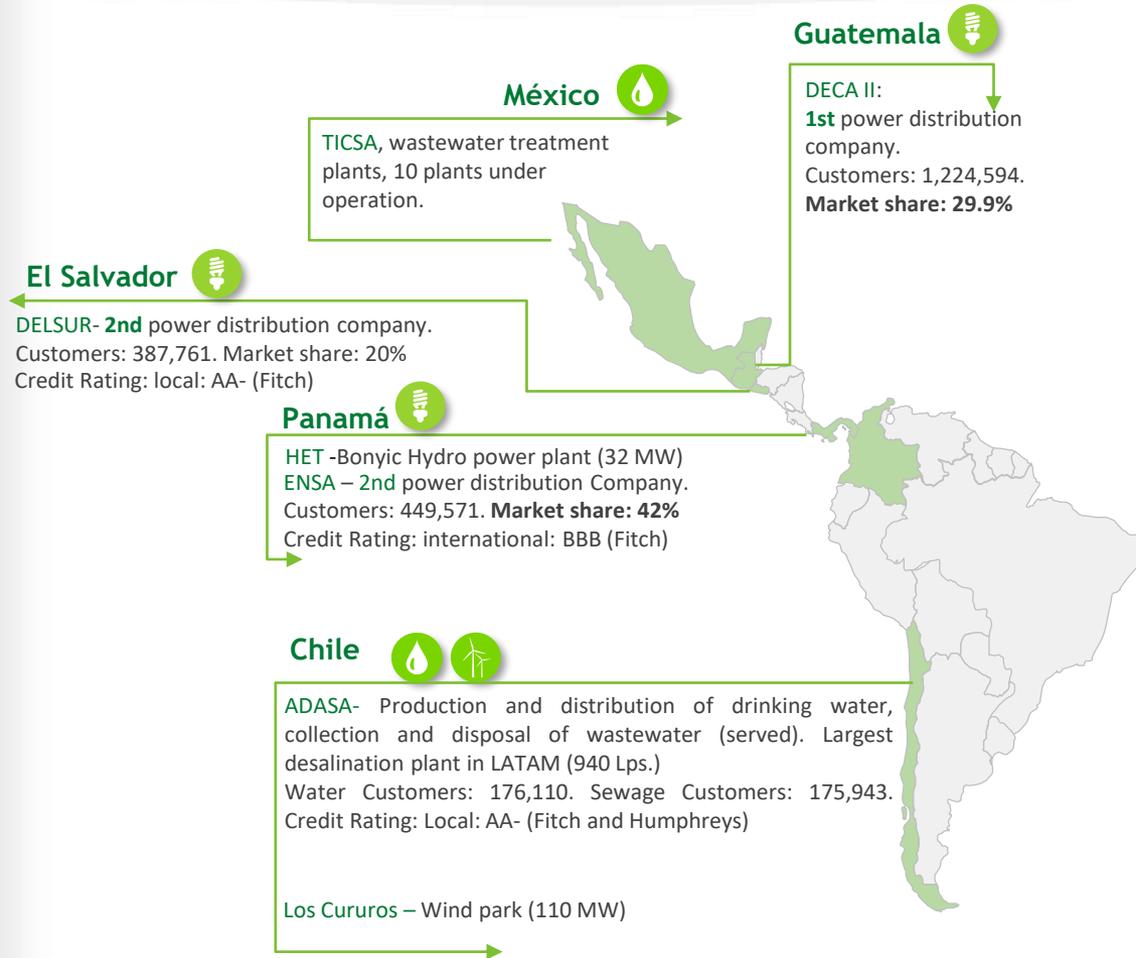
(2) Based on electricity generated in the Sistema Interconectado Nacional.

(3) Based on commercialized energy.

(4) Measured as a percentage of total transmission lines in the Sistema de Transmisión Nacional. (5) Information as of December 30, 2014.

1. Corporate Overview

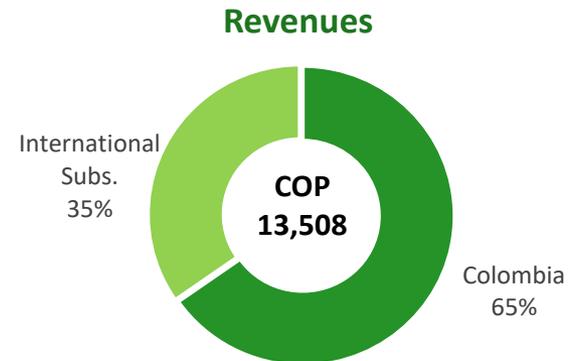
Our presence in Latin America



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

Total invested: USD 2.509 million

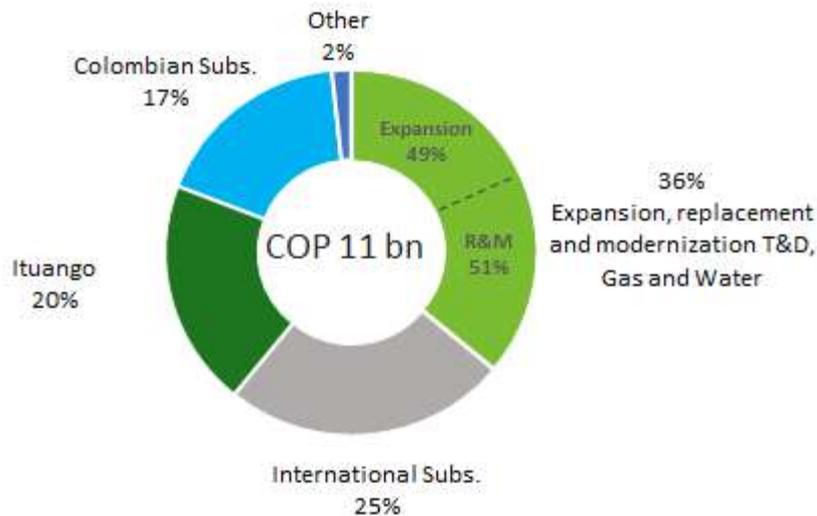
Infraestructure	Grupo EPM (Colombia and LatAm)
Power Generation	34 hydro power plants: 3,054 MW 2 thermal power plants: 497 MW 2 wind parks: 129 MW
Power Distribution	T&D Lines: 235,274 Km Substations: 435 Transformers: 337,551
Gas Natural	Distribution Lines: 7,519 Km
Water	Potable Water network: 5,962 Km Sewage network: 6,270 Km



2. Infrastructure Investment Plan 2018-2021

CapEx: COP 11 billion* (USD 3.67 billion equiv.)

- 63% Power, 35% Water, 2% Other
- 58% EPM Parent company, 17% Colombian subsidiaries, 25% International subsidiaries



➤ Financing structure:

➤ Funding operations to be disbursed (USD 1.779 MM):

- ✓ A/B loan IDB Invest: USD 1.000 MM
- ✓ EDC: USD 300 MM
- ✓ CAF: USD 200 MM
- ✓ Local commercial Banks: equiv. USD 113 MM
- ✓ BNDES: USD 85 MM
- ✓ IDB 2120: USD 81 MM

➤ Funding operations in progress:

- Local bond in Chile: USD 400 MM
- Local commercial banks: USD 41MM

Potential new funding sources:

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

* Financial budget as of Dec. 2017

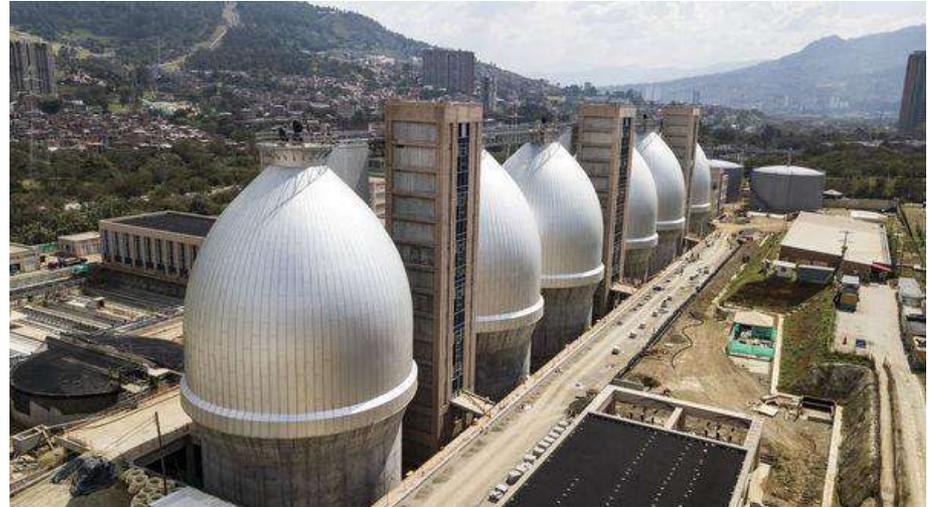
2. Infrastructure Investment Plan 2018-2021

Aguas Claras Park - Waste Water Treatment Plant in Bello



The recovery of the Medellin river watershed

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



Treatment capacity : 5.0 m³/seg

Total cost: COP 1.6 billion (USD 536 million equiv.).

Invested to date: COP 1.4 billion.

Key contracts for civil works and equipment:

- ✓ Korean - Spanish consortium “Aguas de Aburra” HHA: Hyundai Engineering and Acciona Agua.
- ✓ North Interceptor: Colombian-Mexican consortium “CICE”.

Start of operation (Plant): 3Q2018

✓ **Status as of April 2018:** **94.6%**

Progress in main components:

- Treatment Plant: civil Works are at **93.4%**, mechanical component is at **98.7%** and electrical component at **91.8%**
- North Interceptor: **100% completed.**

Financing strategy:

78% debt, 22% equity

✓ Loan agreement:

- IADB → USD 450 m.
Disbursements: USD 369 m.

EPM will recover costs through a regulated tariff.

2. Infrastructure Investment Plan 2018-2021

Ituango Hydroelectric Generation Plant



Largest hydro-generation power plant in Colombia **2.400 MW** /8.563 GWh/year
17% of total Colombian installed capacity in 2022



Start of operation before the contingency:
 1st power generation unit (**300 MW**) in **November 2018** and the remaining 7 turbines will start operation gradually until the Project totals **2400 MW in March 2022**.

Key contracts with top construction firms

- Main civil works: International Consortium CCC
- Turbines, generators: GE Renewable Energy Ltd.
- Transformers: Siemens Transformer Co. Ltd.

3. Ituango Project

Work progress before the contingency



84.3% total work progress as of April 2018 Invested to date: **COP 8.48 billion (USD 3 bn equiv.)**

Progress of main civil works:

- ✓ **The Dam**, 225 m high with 20 million m³ of rock is at **88%** of construction.
- ✓ **The Spillway**, (a channel to control river floods of more than 22,600 m³/s of water and whose construction means excavating 14 million m³ of rock) is at **99%** of construction.
- ✓ **The Power House** was **concluded**.



External civil Works: Spillway and Dam

Progress in power generation equipment:

- ✓ **1st stage/4 power generation units: 4 turbines** of 300 MW each and **4 generators** of 336 MVA each. The manufacture is at **100%** and the assembly is at **29.13%**. **2nd stage/of 4 power generation units, just 3 in assembly process: 4.7%**
- ✓ **25 transformers** in total, of 112 MVA each. At the North Area the manufacture and assembly are at **100%**. In the South Area, the manufacture is at **100%**.
- ✓ **2 Crane bridges** of 600 tons of total capacity are under operation.



Civil Works at the Power House: equipment's assembly (turbines and generators)

3. Ituango Project



Total cost: COP 11.4 billion (USD 3.8 billion equiv.)



Financing Strategy:
64% debt, 36% equity

➤ Financing allocated to date :

COP 7.4 billion (USD 2.6 billion equiv.)

- Represents 64% of the total cost of the project.

➤ Disbursed to date:

COP 4.4 billion (USD 1.6 billion equiv.)

Loans Agreements subscribed:

- ✓ Local bonds: COP 867.280 million
- ✓ Global COP bonds: COP 2 billion
- ✓ Club Deal: USD 106 million
- ✓ BNDES: USD 111 million
- ✓ EDC: USD 135 million
- ✓ BID-IIC and other banks: USD 1.000 million
(signed on December 29th,2017)

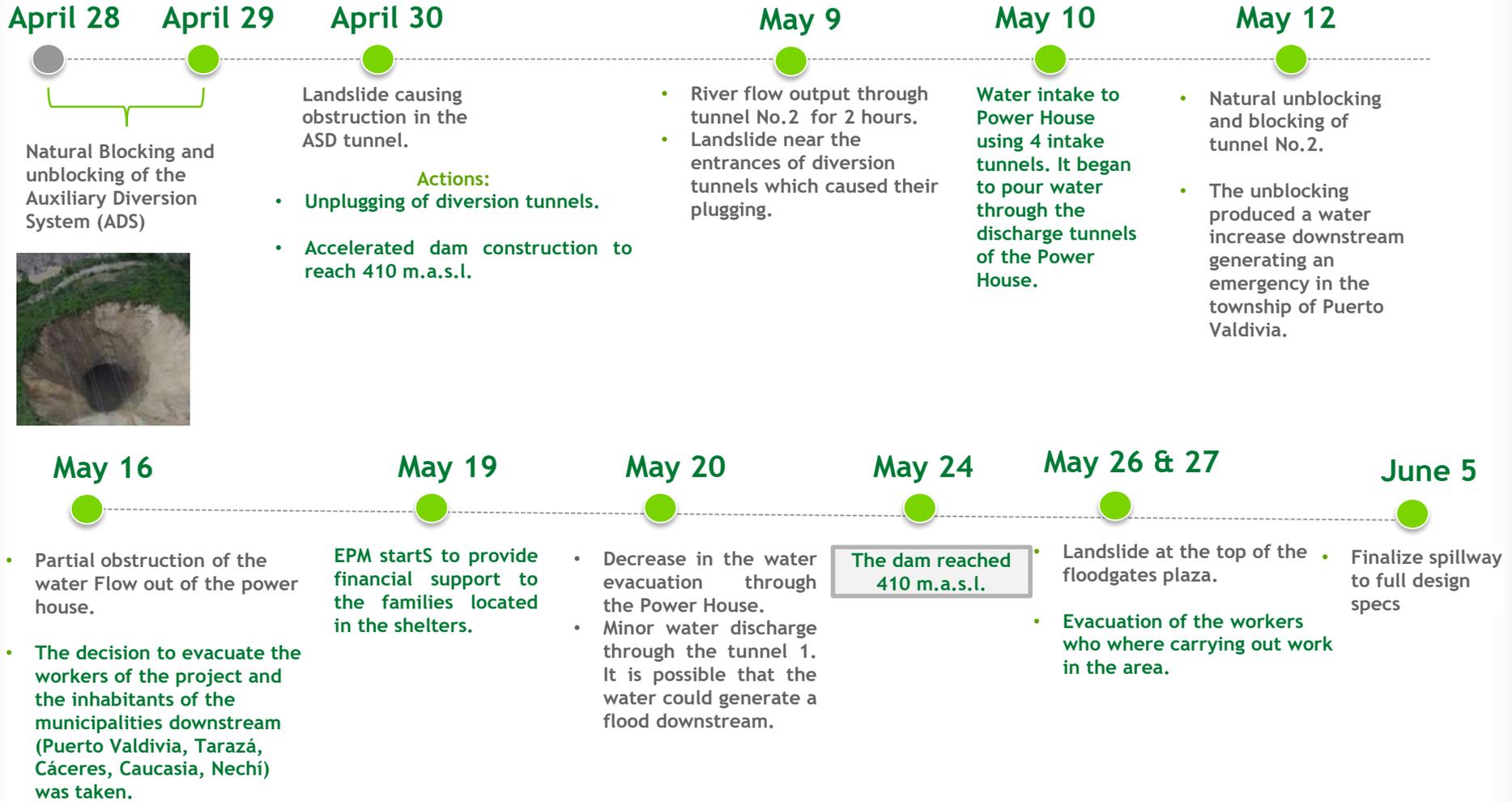
3. Ituango Project

Location of Main Civil Works and Contingency



3. Ituango Project

Contingency chronology



3. Ituango Project

Contingency chronology

Technical actions - What follows



- To continue rising the dam. Next milestone 415 m.a.s.l.



- To block the diversion tunnel 2 and the Auxiliary Diversion System (ADS).



- Find a solution to evacuate the water from the reservoir.
- Shutting down the flow through the Power House and evaluate damages.



- Assess damages to tunnels and Power House
- Define technical solutions to recover the project



1.500 people carry out the repair works in 3 shifts per day/24 hours.

3. Ituango Project

Insurance policies

- ✓ **Material damage to infrastructure and equipment:** USD 2,556 million, with a USD 1 million deductible.
- ✓ **Business interruption:** USD 628 million or 12 months: USD 380 million for the first stage of the project (initial 1,200 MW) and USD 248 million for the second stage (final 1,200 MW), with a 90-day deductible.
- ✓ **Third party:** COP 50.000 million (USD 18 million equiv.), with a COP 150 million deductible (USD 53.451 equiv.).
- ✓ These policies are held with representative firms in the insurance industry worldwide.
- ✓ **Claim conditions**
 - Detailed information updated to the insurance companies throughout the execution of the project.
 - Insurance companies independent technical expert annual review and visit to the project- Recommendations received and implemented.
 - The Adjuster appointed on a consensus basis on May 7. Information shared and insurance market meeting held. Geology, scheduling and DSU (Delay Start Up) experts to be hired by Adjuster.
 - Recent major claims resolved without legal intervention.

3. Ituango Project

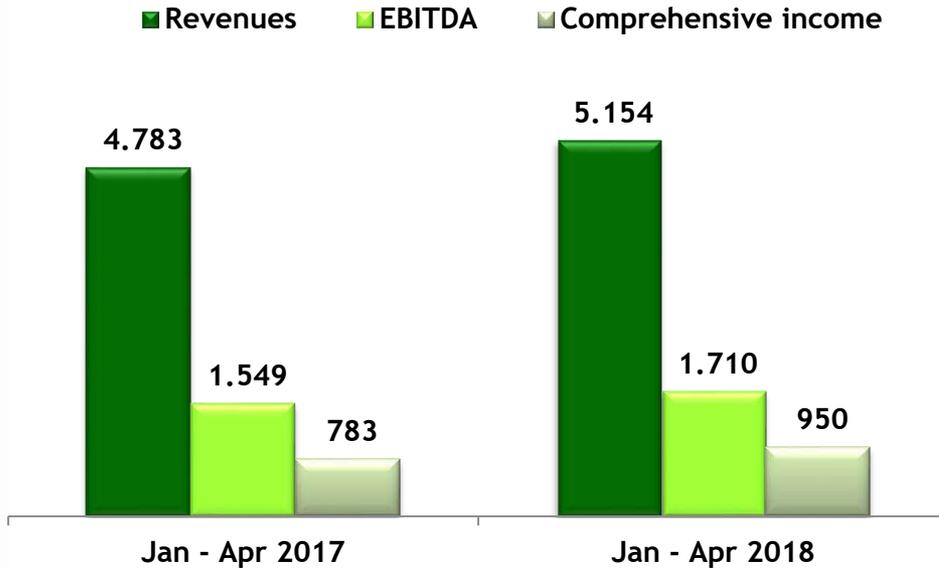
Financial Impacts (preliminary view) and mitigation strategies

<ul style="list-style-type: none"> Energy for Reliability Charge 	<ul style="list-style-type: none"> USD 41,5 MM guarantee 	<ul style="list-style-type: none"> In 2019 mitigated by the capacity available in La Sierra Thermal Plant (450 Mw) Expected energy reconfiguration bid in 2018 by the Regulator (CREG)
<ul style="list-style-type: none"> Long Term contracts 	<ul style="list-style-type: none"> 2019: No commitments from Ituango 2020: 5000 Gwh 2021: 2100 Gwh 	<ul style="list-style-type: none"> Commercial strategy anticipating energy purchase processes for 2020 and 2021, additionally: availability of 450 Mw from La Sierra Thermal plant
<ul style="list-style-type: none"> Payments related to transmission lines 	<ul style="list-style-type: none"> From 35 USD MM to USD 94 MM equivalent 	<ul style="list-style-type: none"> Subject to compliance of the construction of Transmission Lines
<ul style="list-style-type: none"> Contingencies for damages on third parties properties and other economical effects Additional capex related to: <ul style="list-style-type: none"> Reparation and adjustments on the Cauca river diversion and Intake systems Eventual Power house and equipment reparation 	<ul style="list-style-type: none"> Under evaluation 	<ul style="list-style-type: none"> Current action plan: <ul style="list-style-type: none"> To continue rising the dam. To block the right diversion tunnel and the Auxiliary Diversion System (ADS). Finding a solution to evacuate the water from the reservoir. Shutting down the flow through the Power House and evaluate damages.

4. Financial Results as of April 30, 2018

EPM Group Income Statement

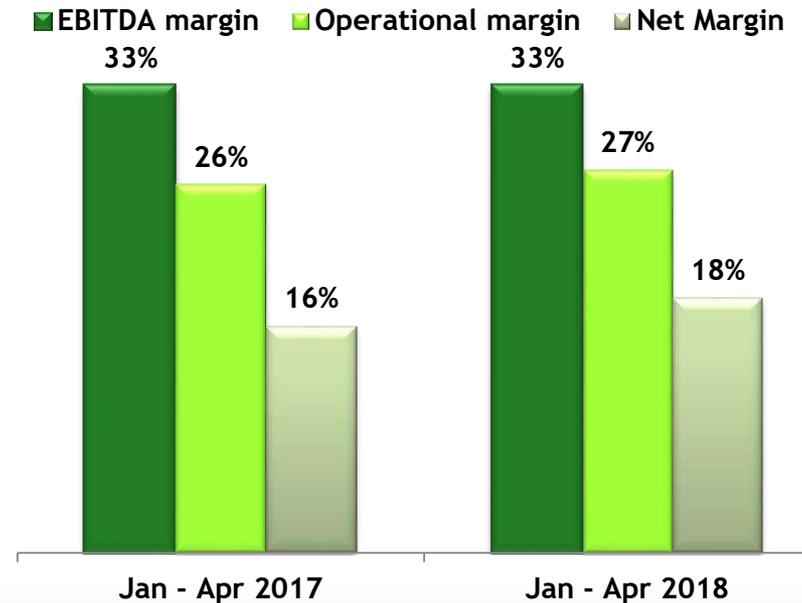
Figures in COP thousand million



2017 - 2018

- Revenues: 8%
- EBITDA: 10%
- Comprehensive income: 21%

- Revenues increased COP 371, 8%, explained by greater demand on the non-regulated market and long-term sales on EPM Parent Company.
- EBITDA rose COP 161, 10% with respect to previous year.
- Comprehensive income rose COP 167, 21%, due to higher operating income in COP 162.

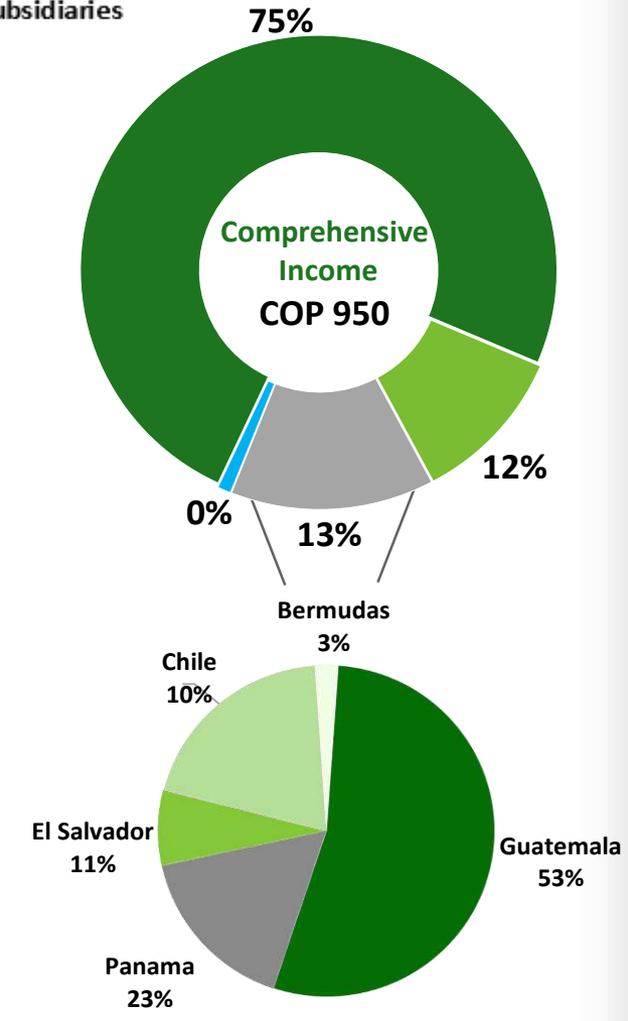
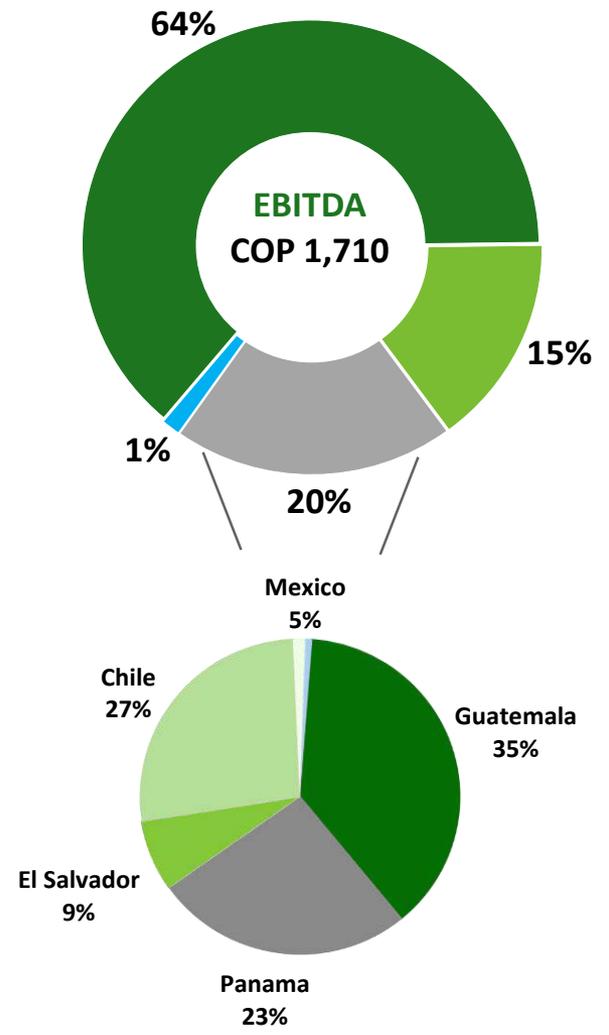
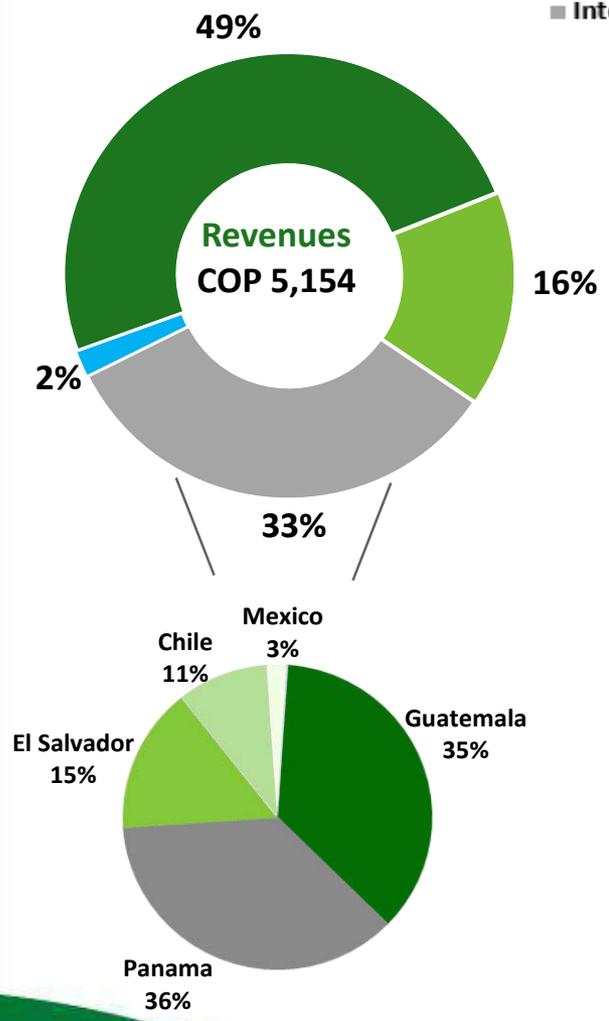


4. Financial Results as of April 30, 2018

EPM Group by Colombian and International Subsidiaries

Figures in COP thousand million

■ EPM
 ■ Colombian Power Subsidiaries
 ■ International Subsidiaries
 ■ Colombian Water Subsidiaries

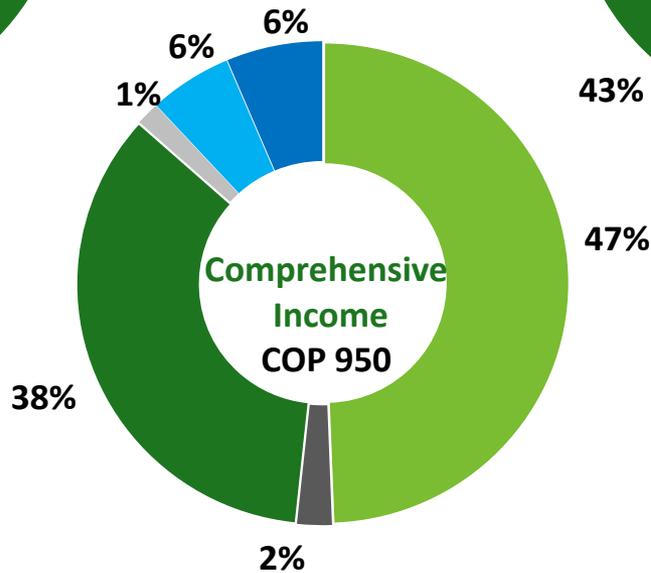
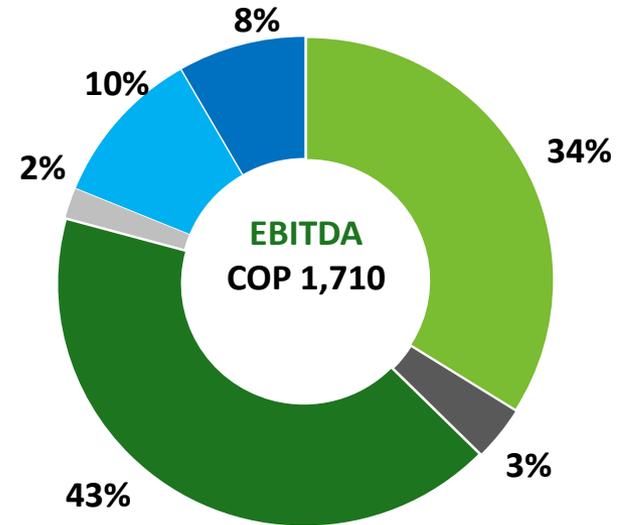
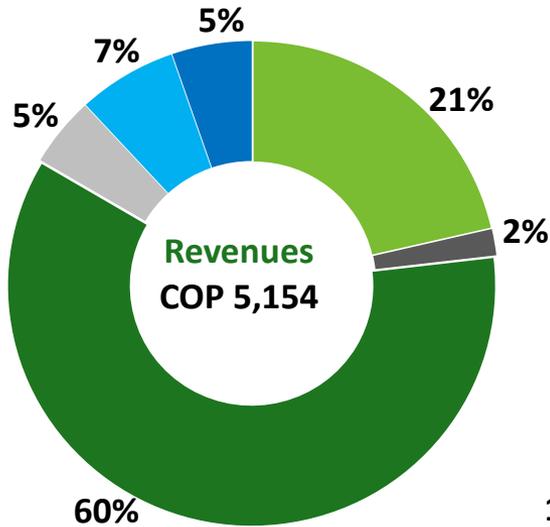


4. Financial Results as of April 30, 2018

EPM Group by Segments

Figures in COP thousand million

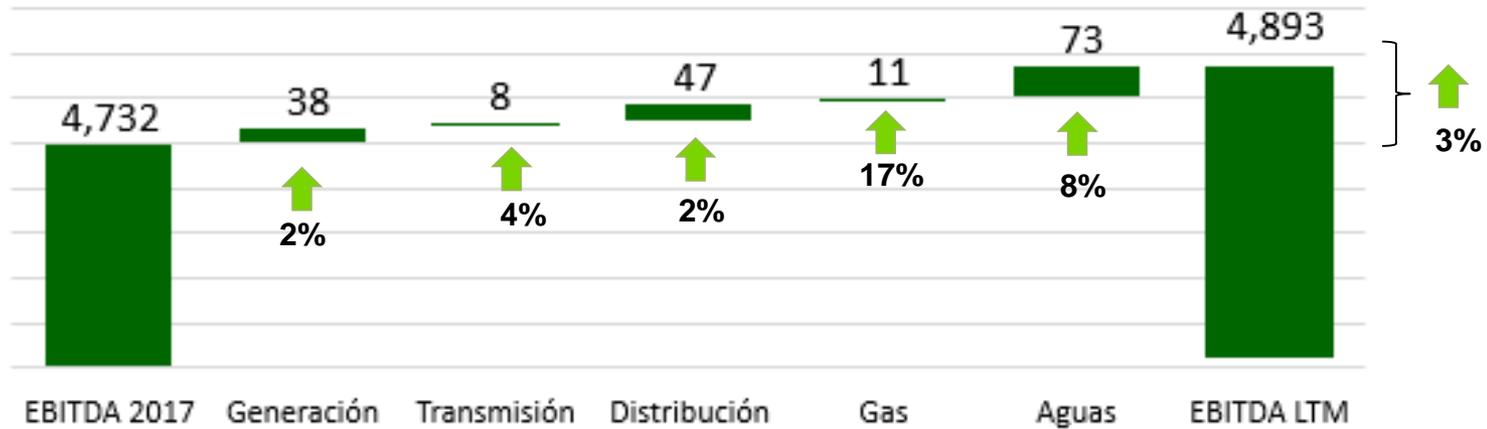
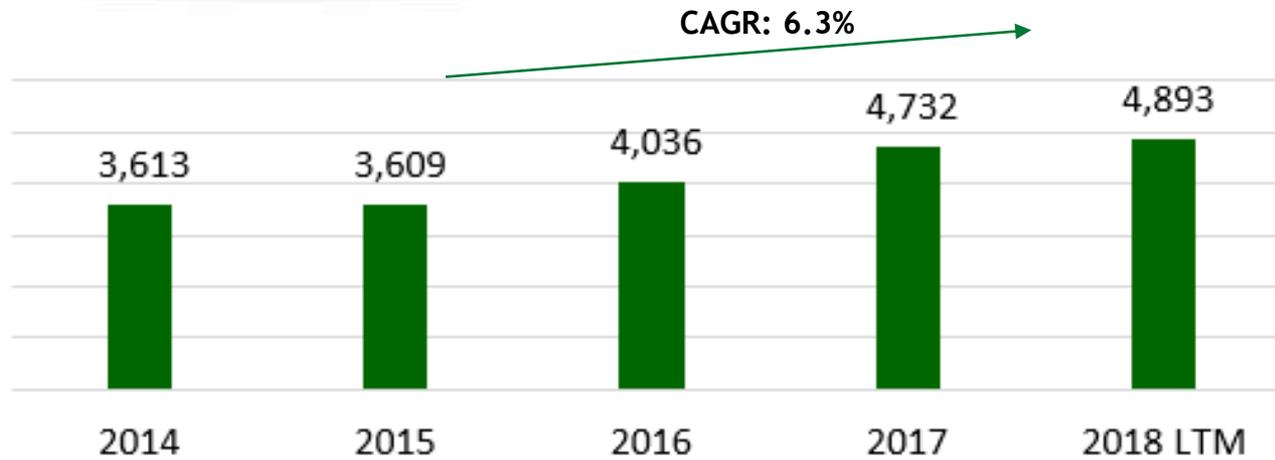
- Power Generation
- Power Transmission
- Power Distribution
- Gas
- Water
- Waste Management



4. Financial Results as of April 30, 2018

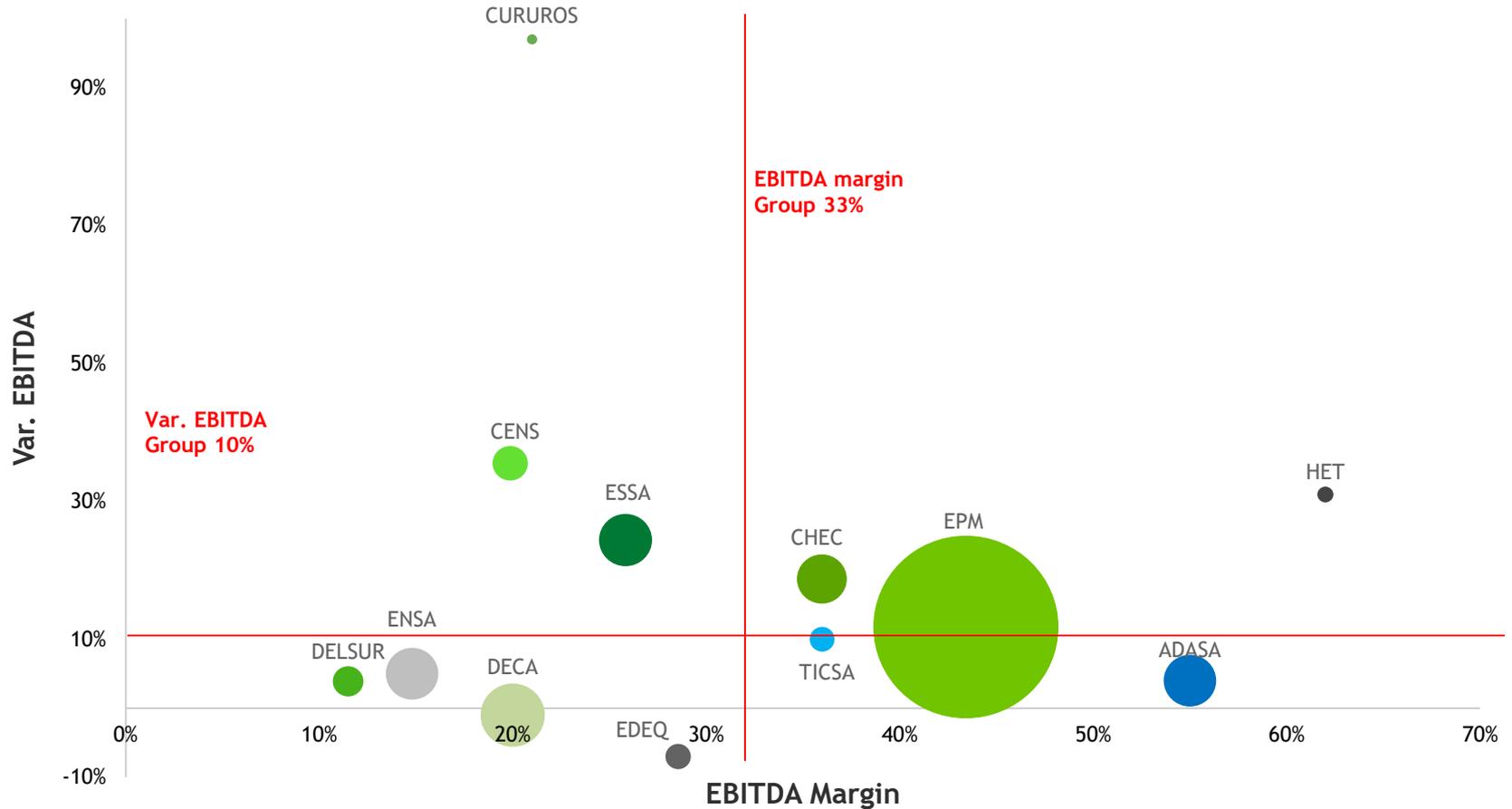
EPM Group EBITDA

Figures in COP thousand million



4. Financial Results as of April 30, 2018

EPM Group EBITDA

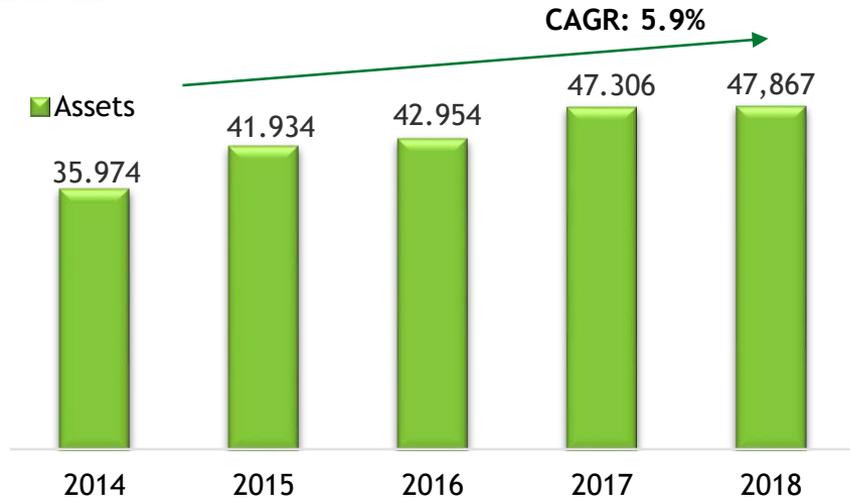
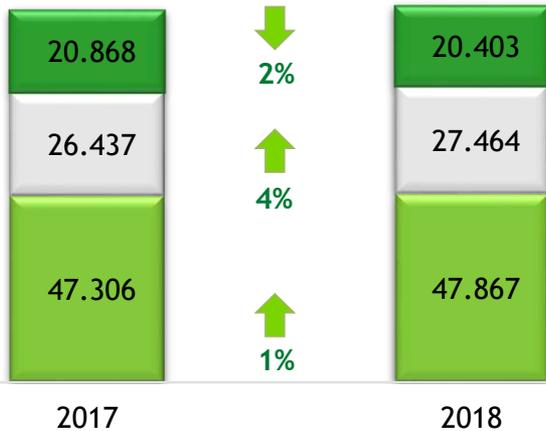


4. Financial Results as of April 30, 2018

EPM Group - Statement of Financial Position

Figures in COP thousand million

■ Assets ■ Liabilities ■ Equity

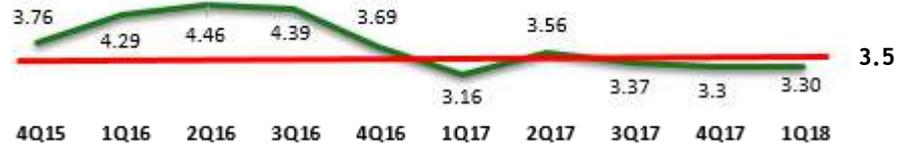


Ratios	2017	2018
Total debt	56	57
Financial debt	38	39
EBITDA/financial expenses	5.63	5.74
Total Long Term Debt/EBITDA	3.33	3.35

EBITDA/financial expenses



Total Long term debt/EBITDA

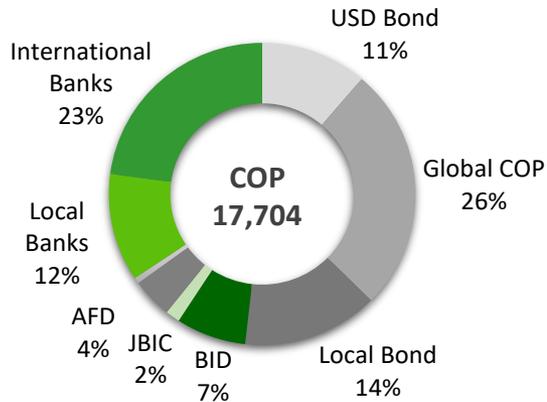


4. Financial Results as of april 30, 2018

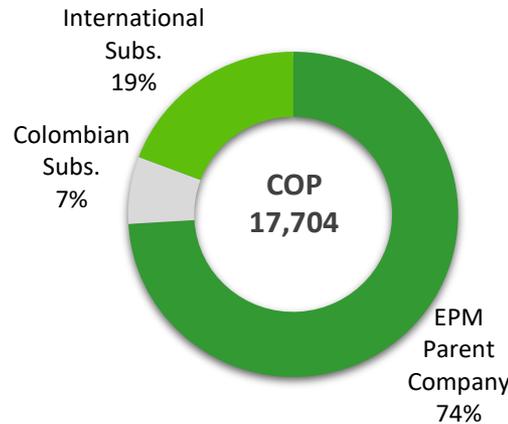
Debt Profile

Figures in COP thousand million

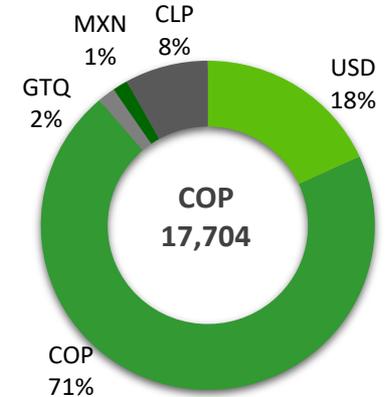
Source



Companies



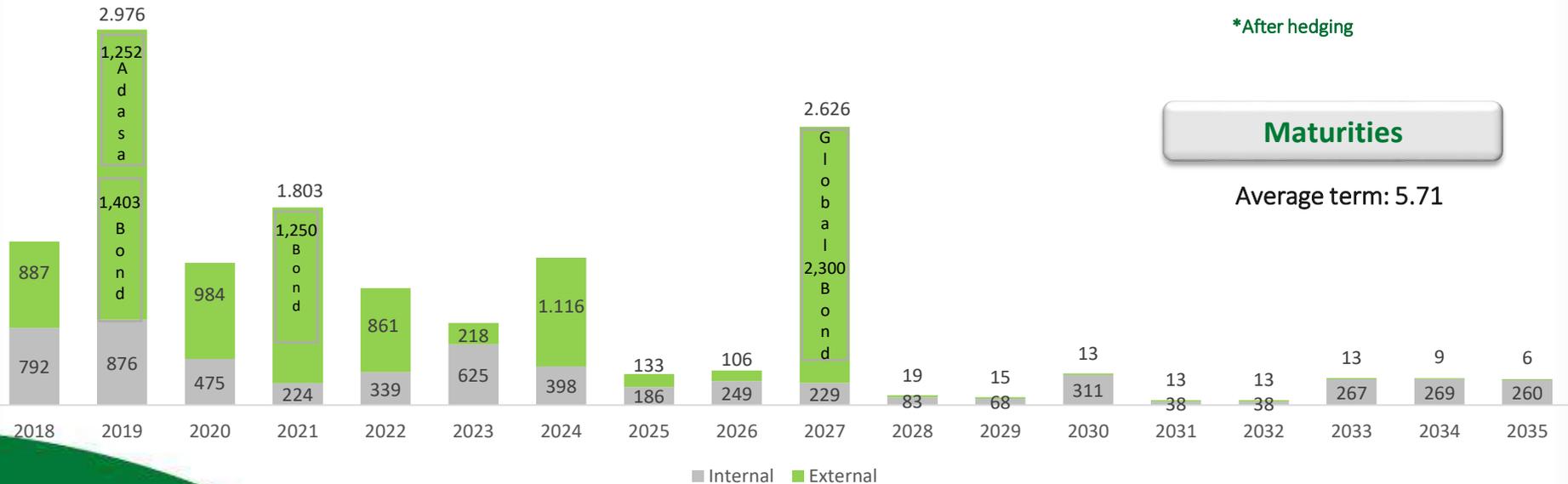
Currency*



*After hedging

Maturities

Average term: 5.71



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- 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.
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- 2017 Offering Memorandum (Risk Factors Chapter, pages 34 and 35): Bloomberg: CFAP810558

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