



EPM Group HSBC Latin American Investment Summit 2019

Key Largo , FL. April 3-5, 2019

EPM Team



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Agenda



- 1. Group EPM highlights**
- 2. Infrastructure investment plan 2019-2022**
- 3. Aguas Claras WWTP and Ituango Hydroelectric Project**
- 4. Financial results as of December 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 52.4 billion (USD 16.152 MM equiv.)
- **Revenues:** COP 16.3 billion (USD 5.022 MM equiv.)
- **EBITDA:** COP 5.1 billion (USD 1.574 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 \$ 3.249,75 as of December 31, 2018.

(1) Source: Credit Rating Agencies.

1. Group EPM Highlights

Ample presence in Latin America



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

Infrastructure	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

EPM Group (figures in million)	Total Customers 2018	New Customers 2018	Var.%
EPM Parent Company	5,94	0,24	4.2%
Colombian Subs.	3,11	0,13	4.4%
Internacional Subs.	2,47	0,06	2.6%
Total EPM Group	11,53	0,43	3.9%



2. Infrastructure Investment Plan 2019-2022



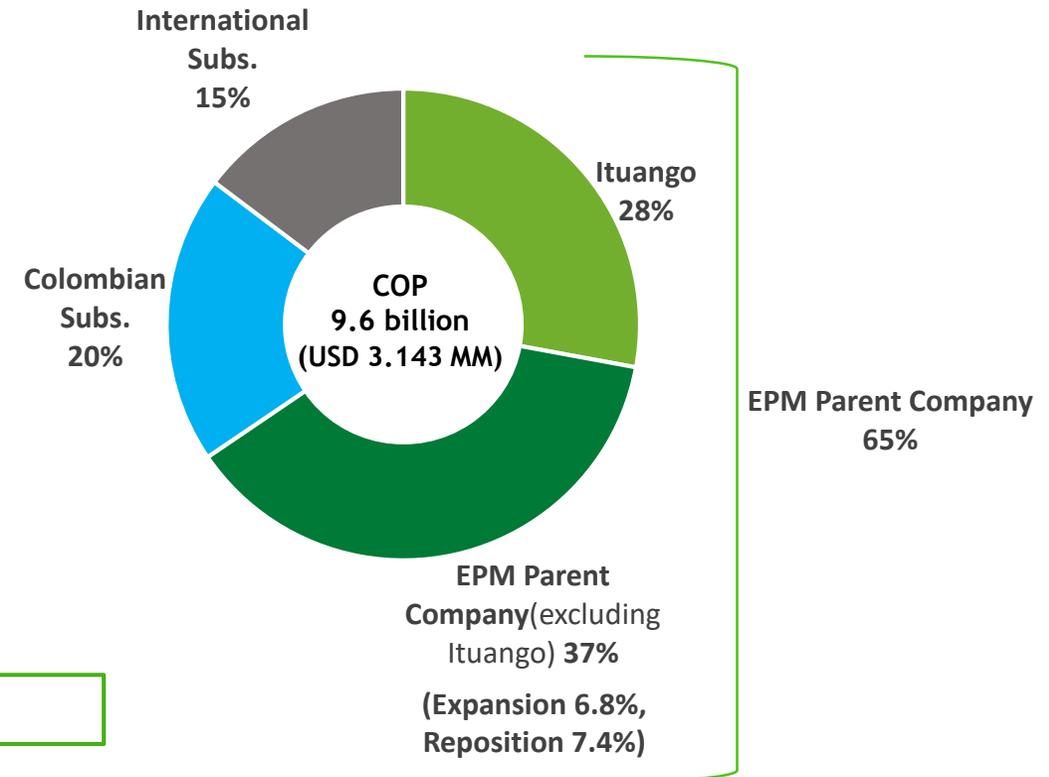
CapEx: COP 9.6 billion (USD 3.143 MM equiv.)

➤ 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. Aguas Claras Park - Waste Water Treatment Plant



The recovery of the Medellin river watershed

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



Treatment capacity: 5 m³/s

Total work progress as of Feb.2019: **98.78%**

✓ Start of operation of the plant: 4Q2018

Progress in main components:

- Treatment plant: 97%.
- ✓ 4th Treatment Line enabled on Dec.25th,2018
- Drying of biosolids: 99%.
- ✓ North Interceptor: 100% completed.

- Total cost: COP 1.6 billion (USD 522 MM equiv.)
- Total invested as of Feb.2019: COP 1.5 billion (USD 485 MM equiv.)

Financing strategy: 80% debt, 20% equity

✓ Loan agreement: IADB → USD 450 MM.

Ituango Hydroelectric Project

Status as of March 2019



Reservoir

Auxiliary Diversion
Gallery

Intake Gates

Substation 500 kV

Spillway

Dam

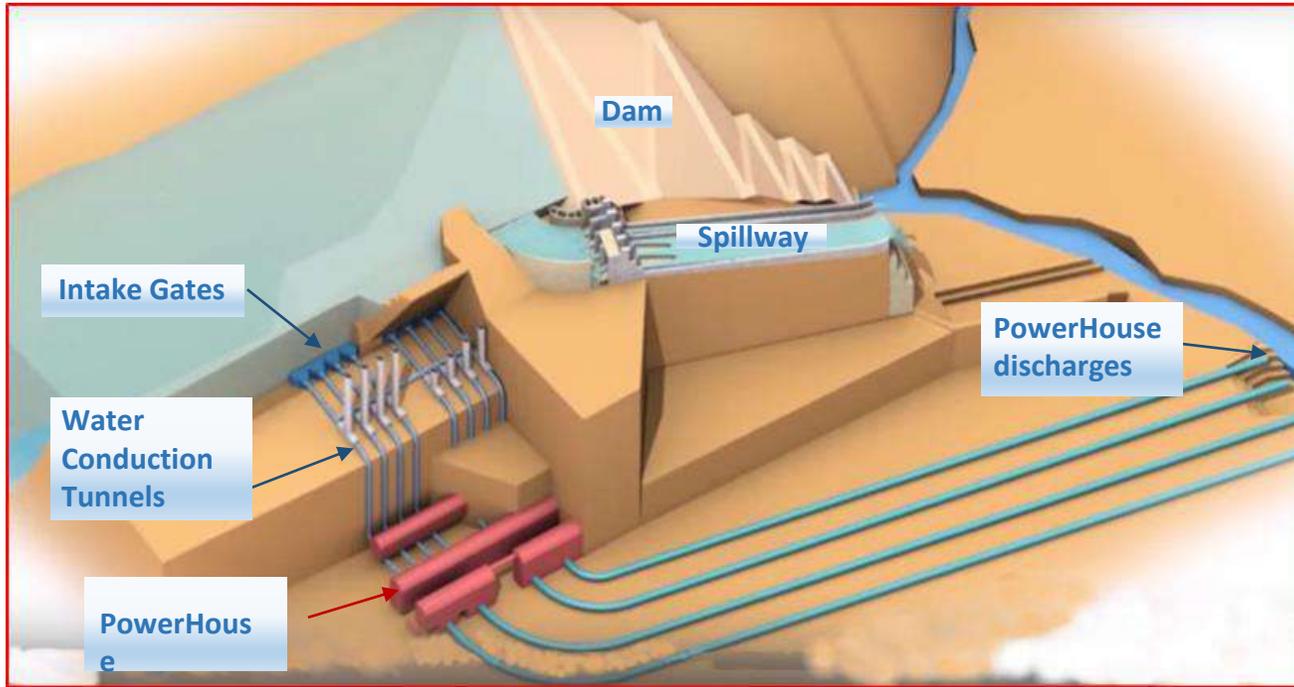
Intermediate
Discharge

Discharges
Deviation 1 and 2

PowerHouse
Discharges

3 . Update on the Ituango Contingency

General Plan of the Works



3 . Update on the Ituango Contingency Intake Structure



3 . Update on the Ituango Contingency

All dates estimated subject to changes due to technical findings and design adjustments (*)



Technical actions - What follows



Dam works

- **Main screen in plastic:** the construction of the panels on the screen (289 panels) was completed. Injections of consolidation continue on the right margin.
- **Dam filling** between the elevations 418 msnm to 435 msnm were restarted in February 2019. Level progress is at 423,60 masl.

Estimated compliance dates: (*)

- Dam filling 435 masl: 3Q2019



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 was built.
- **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: 1Q2020
- **Intermediate Discharge Recovery:** 3Q2020



Powerhouse

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

Estimated compliance dates: (*)

- **Pumping of Powerhouse:** 2Q2019
- **Powerhouse sediments extraction:** 3Q2019
- **Tunnels and caverns recovery:** 2Q2020
- **Access tunnel** 3Q2019



Estimated date of entry into operation Phase 1 (2 power units): Dec. 2021(*)
(the other 2 power units): Oct.2022(*)

3. Update on the Ituango Contingency

PowerHouse: water pumping



Installation of first pumps in the discharge 2



Current status of the water evacuation activity of the powerhouse



- After the closing of the adduction gates 1 and 2, the water evacuation activities of the powerhouse, carried out by the discharge tunnels, were initiated.
- Forming the 3 concrete jars in the discharges 1, 2 and 3, we proceeded to the installation of pumps, valves and pipes in the discharge 2 to start the evacuation of the water deposited in the powerhouse and battlements.
- 6 pumps of 250 l / s are used
- At the beginning of the water evacuation activities, the discharge level was at 229 masl, at February 28, the level at discharge 2 was at 215,10 masl.

3. Update on the Ituango Contingency

Overall plan of the works: Close of the Auxiliary Diversion Gallery (ADG)



- **Activities for the recovery of the deviation gates**
 - An inspection with the diving equipment is made by the Colombian Navy
 - The crane bridge is used 100% for dredging and extraction of material in the left gate
 - Mechanical and electrohydraulic clams are used for extraction.
 - 140 m³ of material has been extracted, 93% of progress.
 - The fracturing process of large rocks lodged in the adjacent gables began.
- **Plug for the bottom discharge:** the construction of the plug was started from the construction gallery 3.



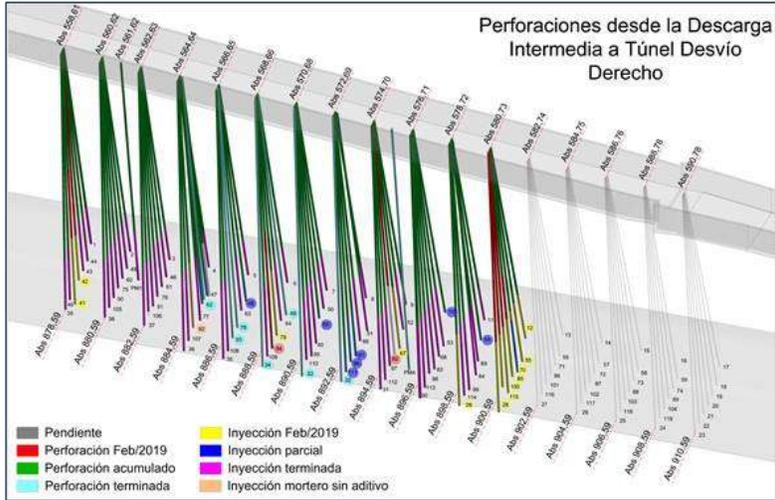
Navy divers admission for immersion and inspection of the areas to be dredged



Recovery and assembly of diversion gates

3. Update on the Ituango Contingency

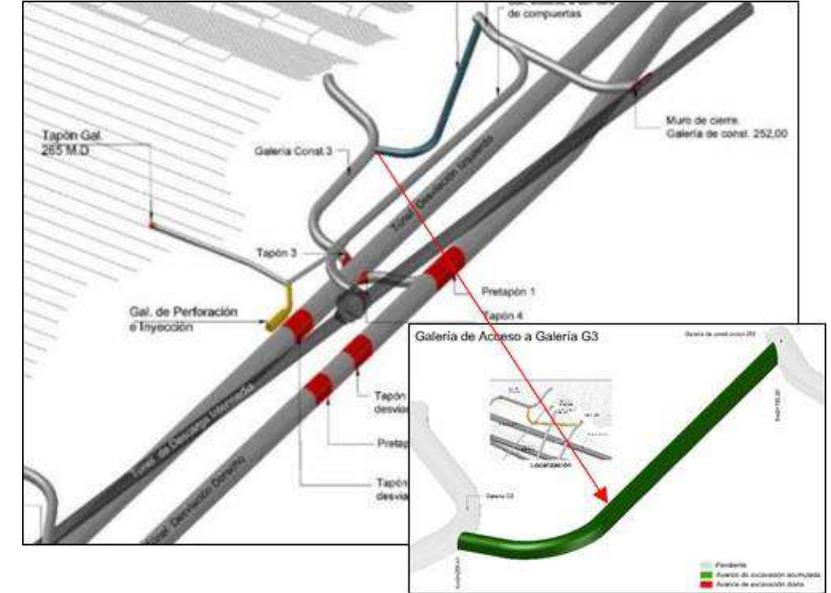
Closing of the Right Diversión Tunnel - RDT



Progress in perforations and injections of pre-plug 1, in RDT



Treatments in the intersection zone of the auxiliary gallery with G3



Location of auxiliary galleries for the closure of the right diversion tunnel

Pre-plug 1 consolidation:

- Primary drillings : 2.698 m/2.820 m (96%)
- Secondary drillings : 1.310 m/2.820 m (47%)
- Primary injections: 43 un/60 un (72%)
- Secondary injectios: 23 un/60 un (38%)

Pre plug 2: excavation completed of the gallery 265 (54 m).

Main plug: excavation completed of the Access Gallery to Gallery G3, to communicate the Left Diversion Tunnel with the Right Diversion Tunnel (155 m)

3. Update on the Ituango Contingency

Dam: filling and plastic concrete screen



- **Dam filling:** the extension and conformation of material 4 (rip rap) and 3B upstream in progress, reaching the level 423,60 masl.
- **Core of the dam on the left bank:** Dental concrete was cleaned and emptied between levels 420.75 to 424.30 masl.
- **Plastic concrete screen:** the construction of the panels on the screen (289 panels) was completed. Injections of consolidation continue on the right margin.
- **Unstable slope in upper part of the left margin:** Treatments in thrown concrete, injection of bolts and drains.

Dam: Demobilization equipment used on screen

Progress in dam filling (m ³)		
Total amount to be executed	Accumulated Progress	% of Progress
20.172.194	19.814.12	98,2%

3. Ituango Contingency - Financial Impact

Figures in COP thousand million^(*)



Project Cost

Concept	CONTINGENCY COST		
	Before	Contingency	After
Direct Cost	9,993	1,697	11,690
Financial Expenses	1,500	832	2,332
Total Cost	11,493	2,529	14,022

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

Financial Expenses: COP 832 increase, due to a greater period of construction (accounting effect, does not correspond to additional debt).

Total invested as of Dec.2018: COP 9.8 billion

Contingency CapEx Execution As of Dec. 2018

Investments	490
Expenses	69
Total executed	559

Financial resources as of Dec. 2018

Concept	Amounts accrued 2018	Payments as of Dec. 2018
Shelters Support	42.9	23.7
Affected Care and Compensation	38.9	0.1
Reliability Charge Guarantee	137.3	0.0
Contingency and environmental sanction	33.8	0.0
Payment to transmitter	100.4	0.0
Contingency attention	45.6	45.6
Removal of assets	78.3	N.A.
Total	477.2	69.3

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.

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

^(*) Figures subject to variation based on technical findings and design adjustments

3. Ituango Contingency - Financial Impact

Project Cost Breakdown

Figures in COP thousand million (*)



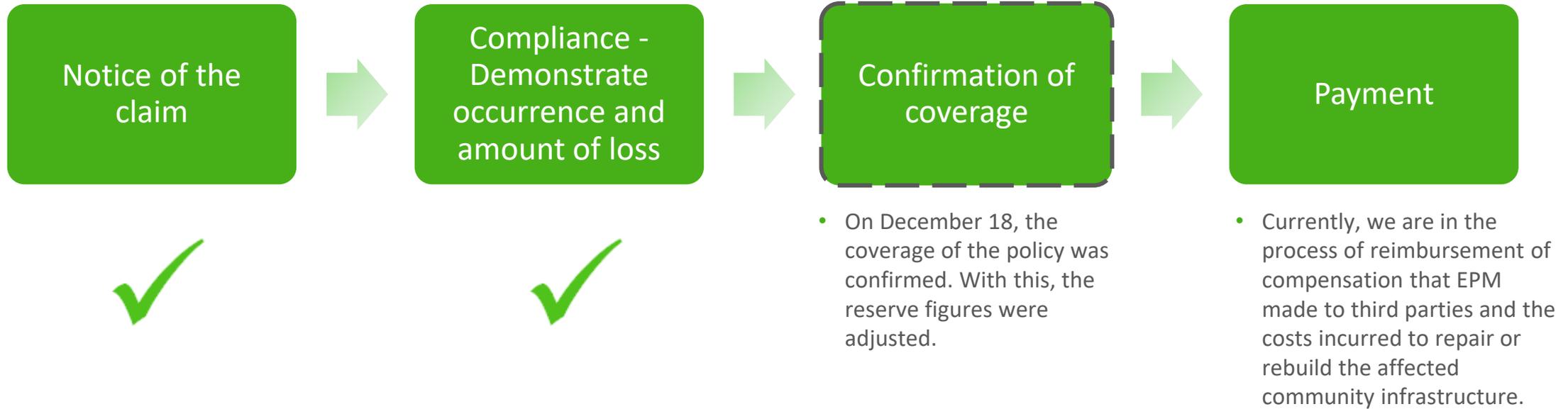
CONCEPT	Before Contingency	After (*) Contingency	% Var.
Engineering administrative expenses	1,803	2,164	20%
Infrastructure and Main Works	5,335	6,393	20%
Equipment	1,506	1,953	30%
Environmental and Social Management	914	1,085	19%
Land and Easements	83	95	14%
Unforeseen delays and downward adjustments	353	0,0	-100%
DIRECT COST	9,993	11,690	17%
Capitalized interests	1,500	2,332	55%
TOTAL COST	11,5	14,0	22%

(*) Figures subject to variation based on technical findings and design adjustments

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



Milestones of the claim process



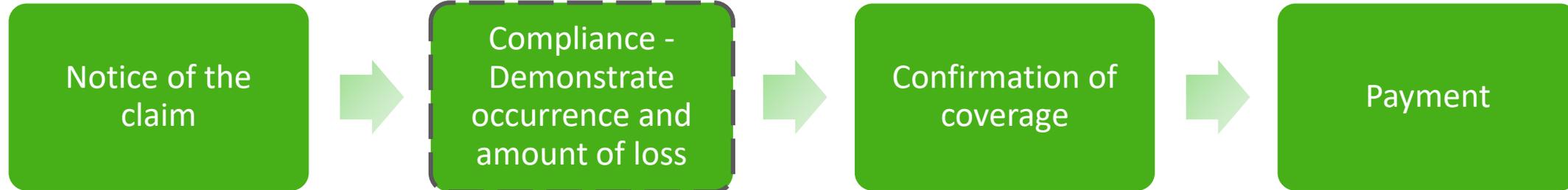
➤ Total coverage: COP 50.000 million, with COP 150 million deductible.

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.

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

Milestones of the claim process



- EPM hired the firm “Skava” to perform the root cause analysis.
- Detailed documentation of recovery costs.
- Discussion with the Adjuster on the variables for the liquidation of business interruption has begun.
- The adjuster's experts are conducting the root cause and legal analysis.

- Confirmation of coverage.
- Compensation process.

- Affected assets: Validation with the Loss Adjuster of the repair and replacement costs of the affected goods.
- For the business interruption coverage, work is being done jointly on the model compensation.

➤ **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:

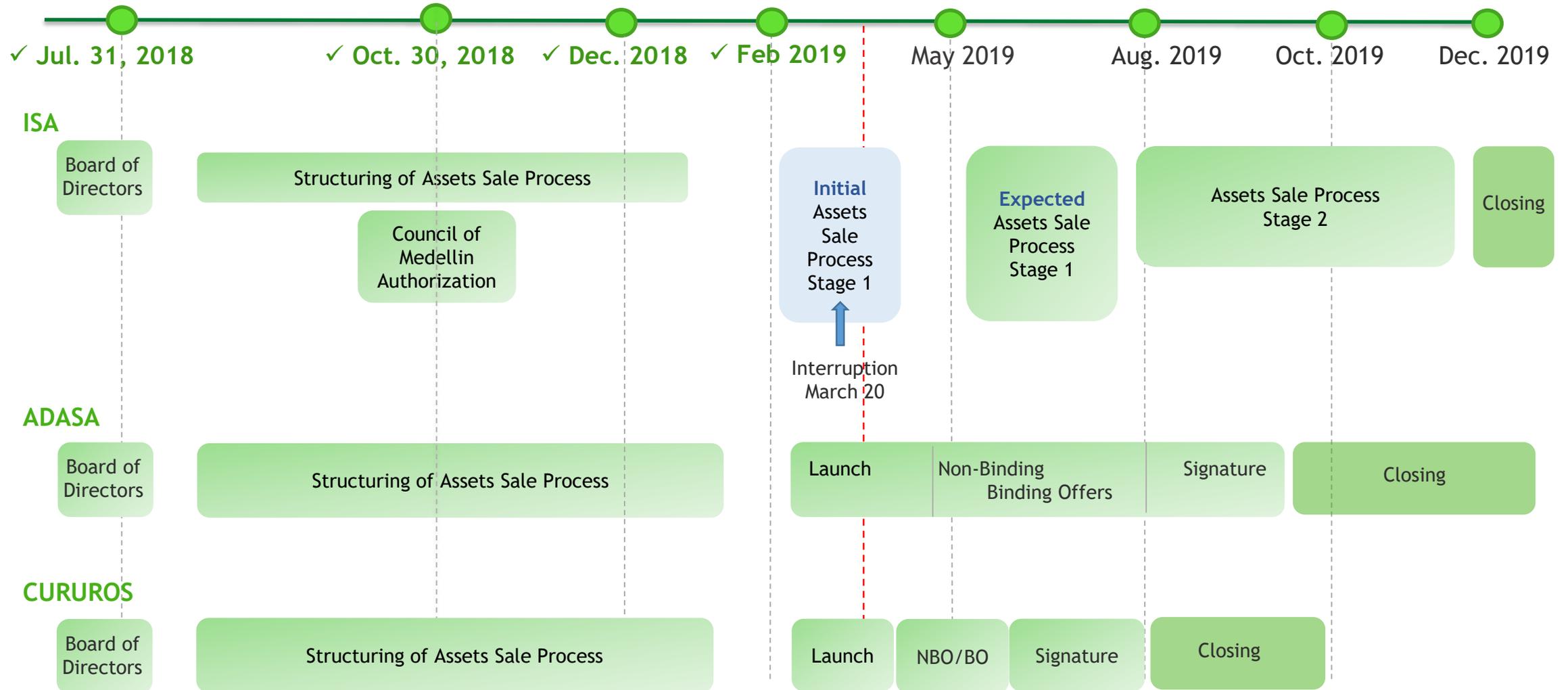
- Report of contingency progress, weekly.
- Visits of the leader Adjuster, monthly.
- Visits to the project with reinsurers leaders of claims and experts appointed by them.
- Continuous answers to requested information.
- Recruitment of experts in management of large claims to support the claim process.

3. Ituango Contingency - Divesment Plan

Indicative schedule



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



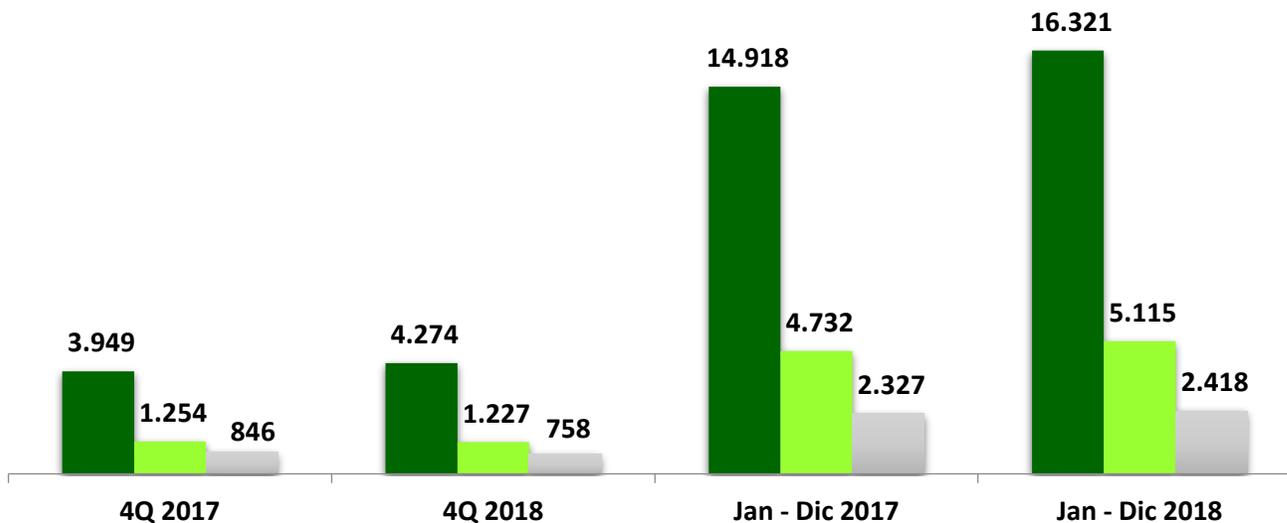
4. Financial Results as of December 31, 2018

EPM Group Income Statement

Figures in COP thousand million

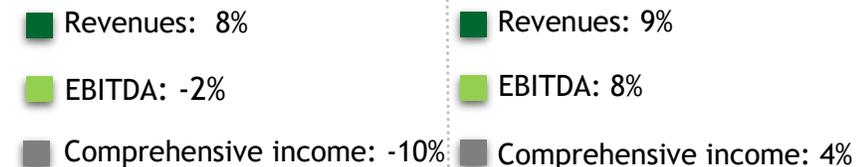


■ Revenues ■ EBITDA ■ Comprehensive income

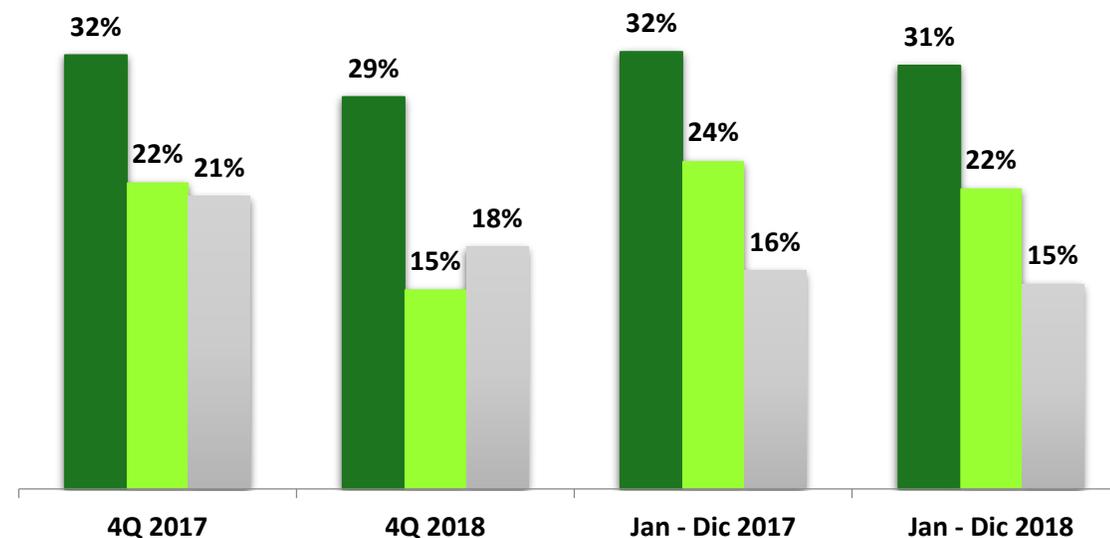


Var. 4Q2017 - 4Q2018

Jan - Dic 2017-2018



■ EBITDA margin ■ Operational margin ■ Net Margin



- Revenues increased 9%, explained by higher consumption with a weighted average growth -WAG- of 3.6%, and higher rates with a WAG of 8.5%. The number of customers/users, adding all the services, had an increase of COP 434 thousand, 3.9% equivalent.
- Cost control measures delivered COP 421 savings against the budget.
- Comprehensive income increased 4%, mainly due to:
 - + Higher EBITDA by COP 383
 - + Lower income tax provision by COP 569
 - Higher Ituango contingency provision by COP 477 (Cash COP 69) and labor by COP 75
 - Higher FX expenses COP 423

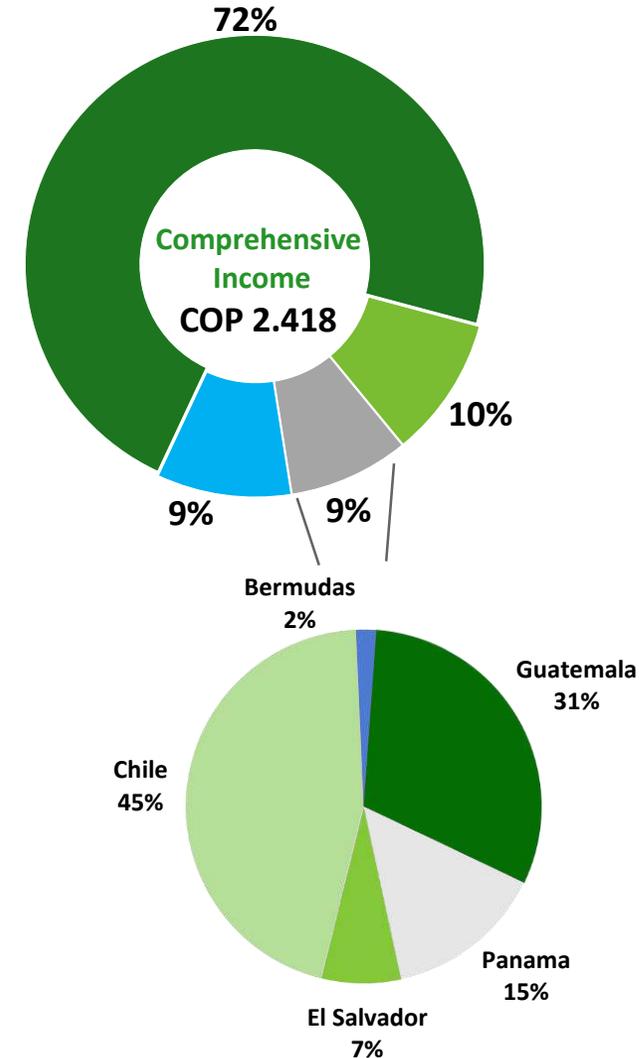
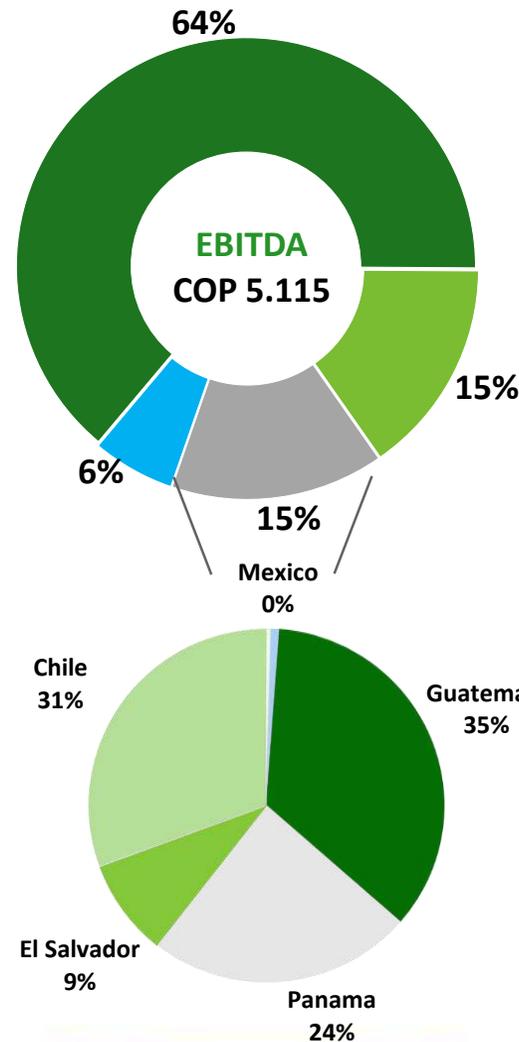
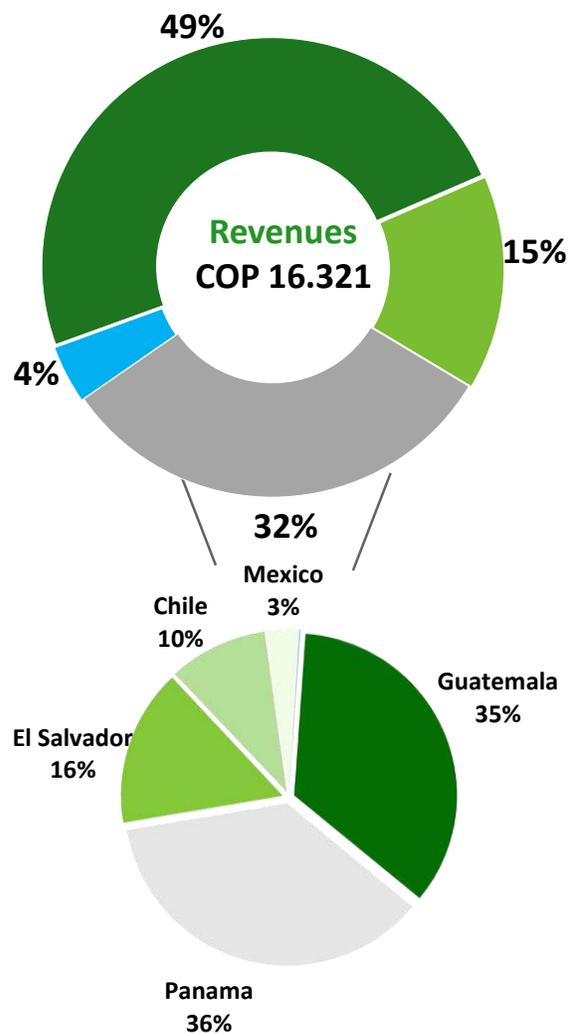
4. Financial Results as of December 31, 2018

EPM Group by Colombian and International Subsidiaries

Figures in COP thousand million



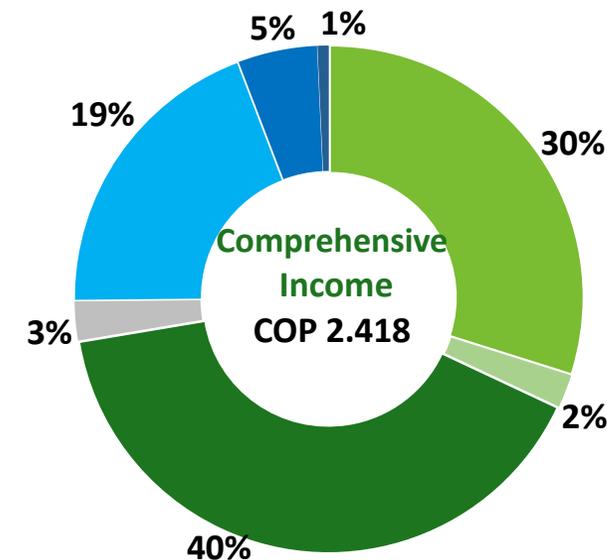
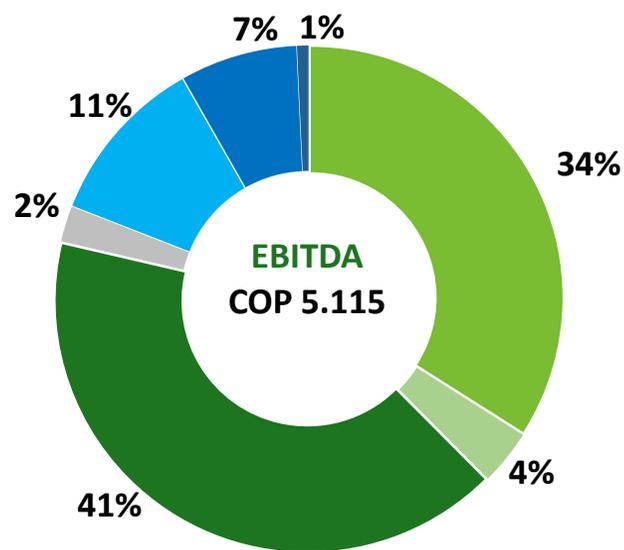
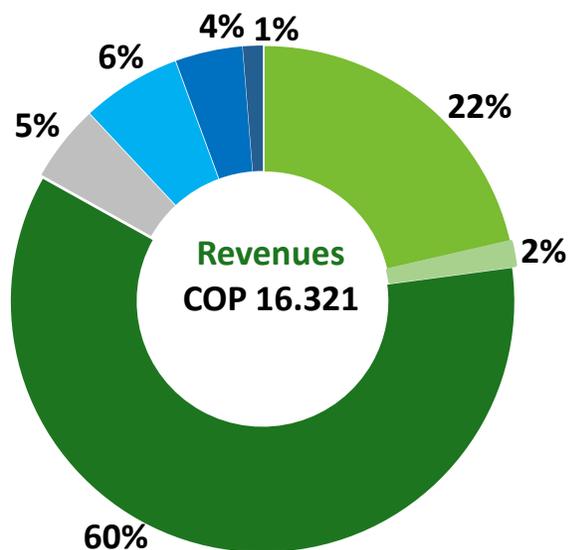
■ EPM
■ Colombian Power Subsidiaries
■ International Subsidiaries
■ Colombian Water Subsidiaries



4. Financial Results as of December 31, 2018

EPM Group by Segments

Figures in COP thousand million

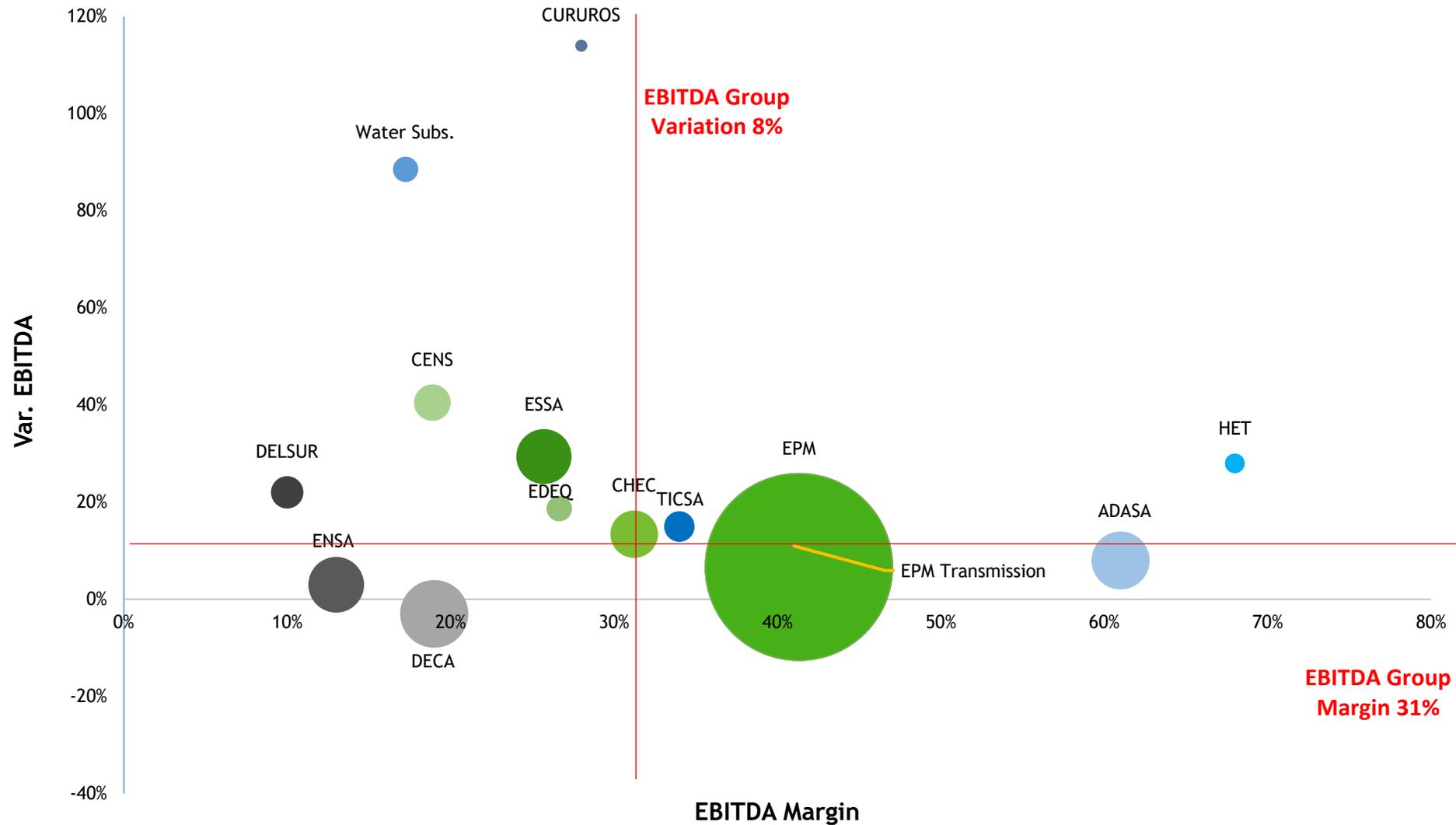


- Power Generation
- Power Distribution
- Water
- Solid Waste Management
- Power Transmission
- Gas
- Wastewater Management

4. Financial Results as of December 31, 2018

EPM Group EBITDA

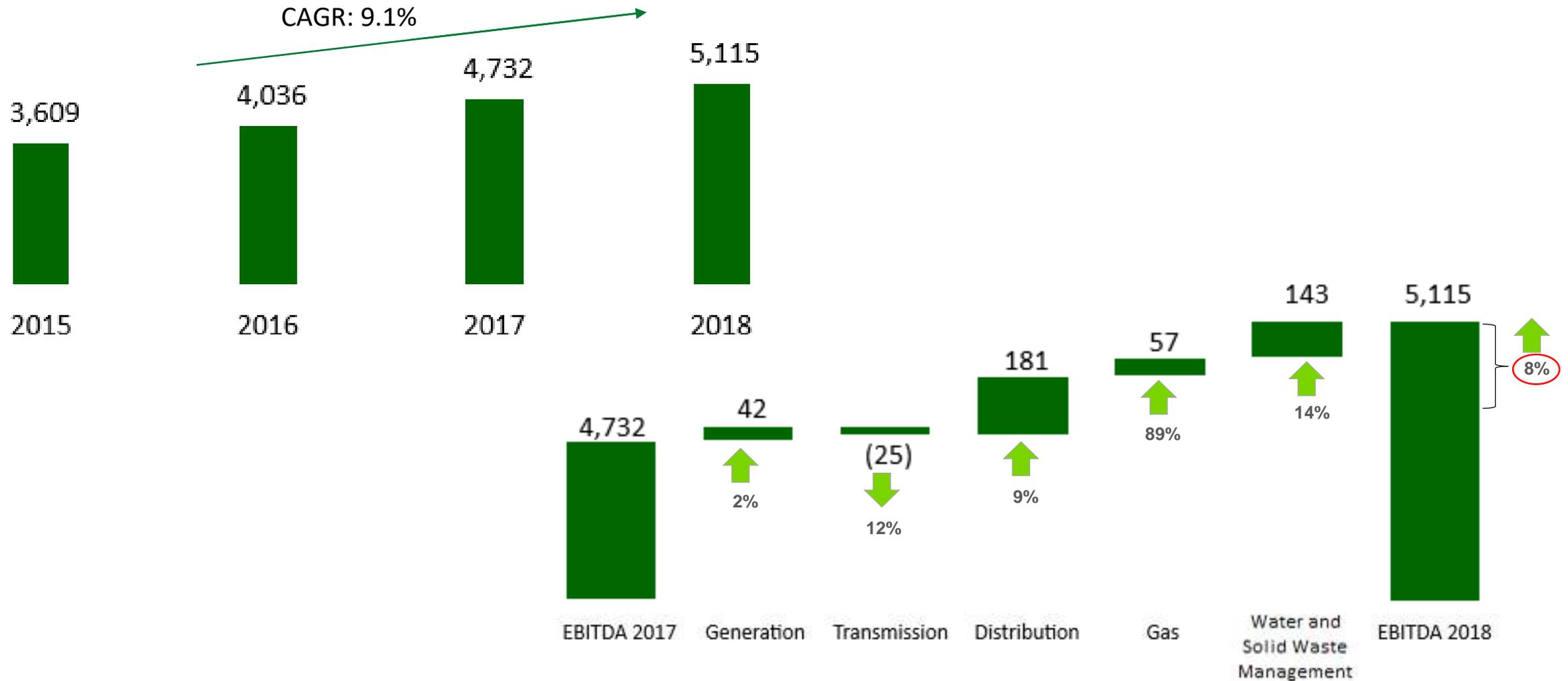
Figures in COP thousand million



4. Financial Results as of December 31, 2018

EPM Group EBITDA

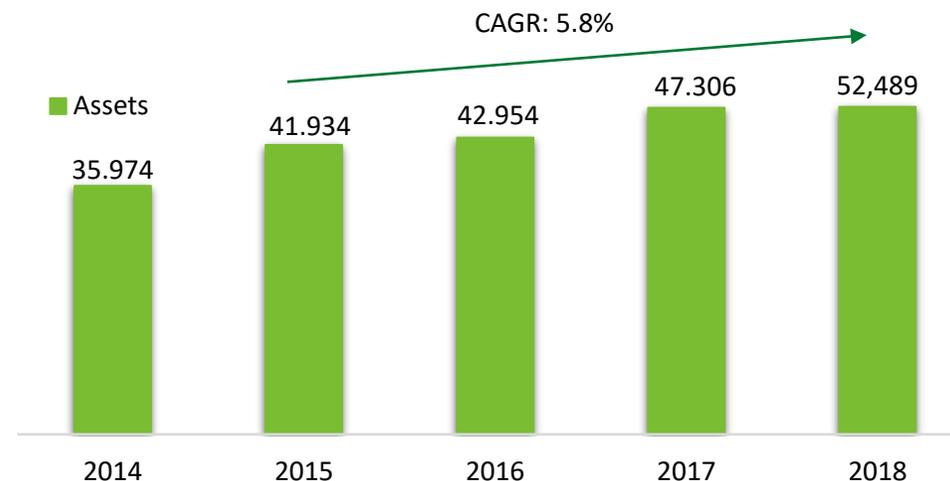
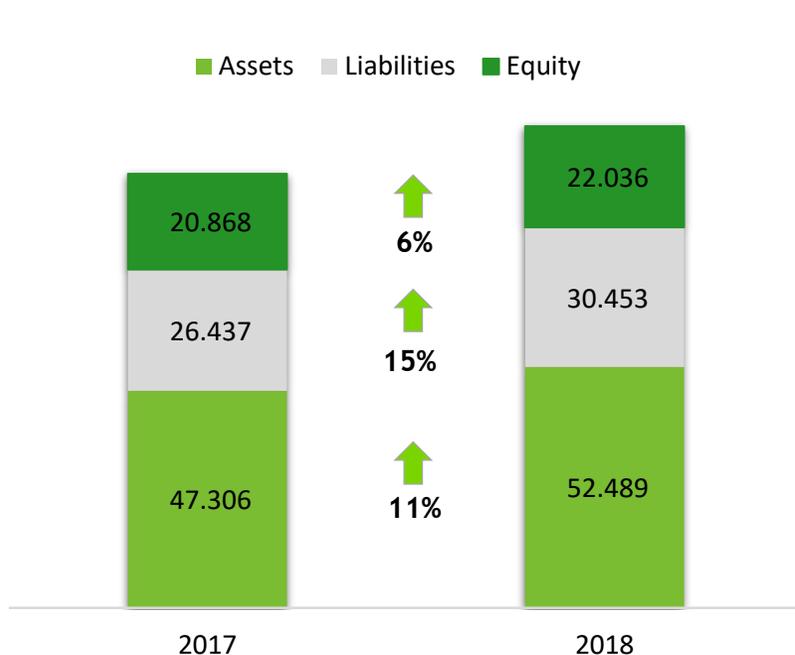
Figures in COP thousand million



4. Financial Results as of December 31, 2018

EPM Group Statement of Financial Position

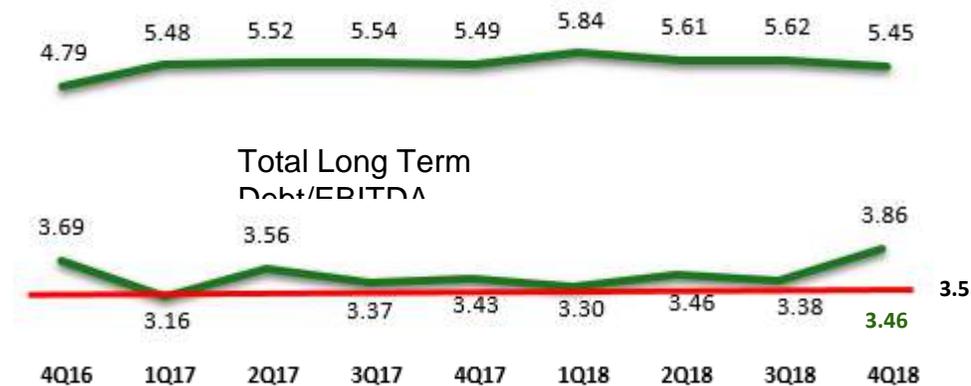
Figures in COP thousand million



Ratios	2017	2018
Total debt	56	58
Financial debt	38	41
EBITDA/financial expenses	5.49	5.45
Total Long Term Debt/EBITDA	3.43	3.86 ^(*)

(*) Net Debt/EBITDA: 3.46

EBITDA/ Financial expenses

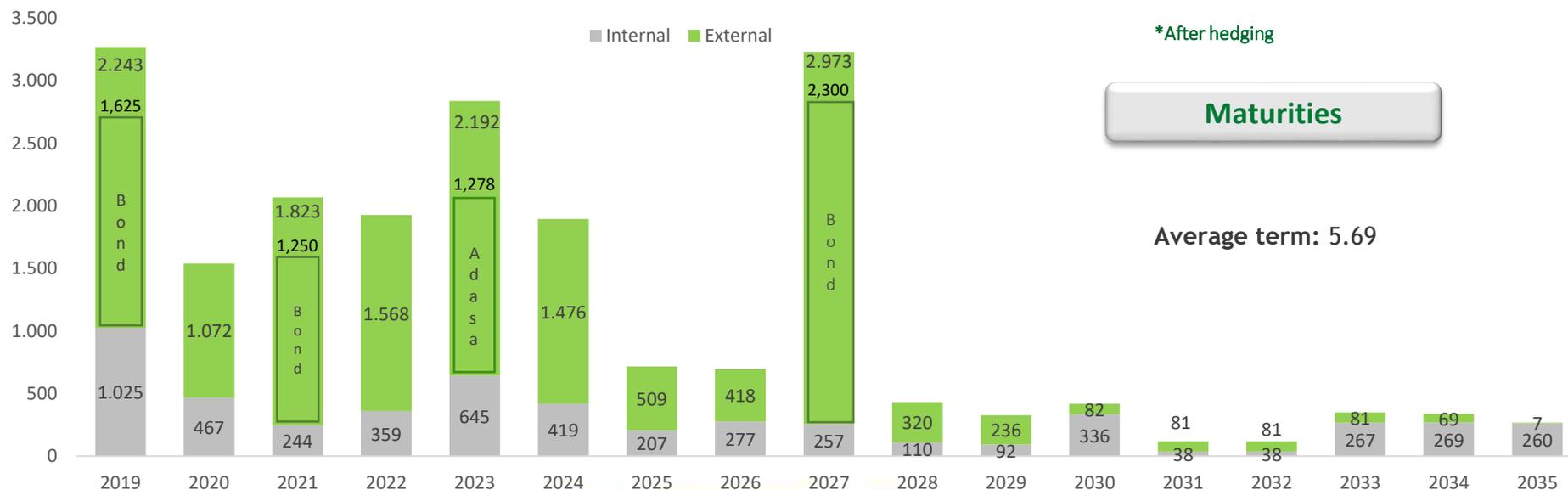


- Cash position as of December 31, 2018 was COP 2.6 billion

4. Financial Results as of December 31, 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

- ✓ **Signed 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



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