

CREDIT OPINION

29 May 2026

Update

Send Your Feedback

RATINGS

Empresas Publicas de Medellin E.S.P

Domicile	Medellin, Antioquia, Colombia
Long Term Rating	Baa3
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Jose Batalla Diez
Analyst
jose.batalladiez@moodys.com

Diego Gonzalez, CFA +52.55.1555.5336
VP-Senior Analyst
diego.gonzalezfigueroa@moodys.com

Cristiane Spercel +55.11.3043.7333
Associate Managing Director
cristiane.spercel@moodys.com

» Contacts continued on last page

CLIENT SERVICES

Americas 1-212-553-1653

Asia Pacific 852-3551-3077

Japan 81-3-5408-4100

EMEA 44-20-7772-5454

Empresas Publicas de Medellin E.S.P

Update to credit analysis

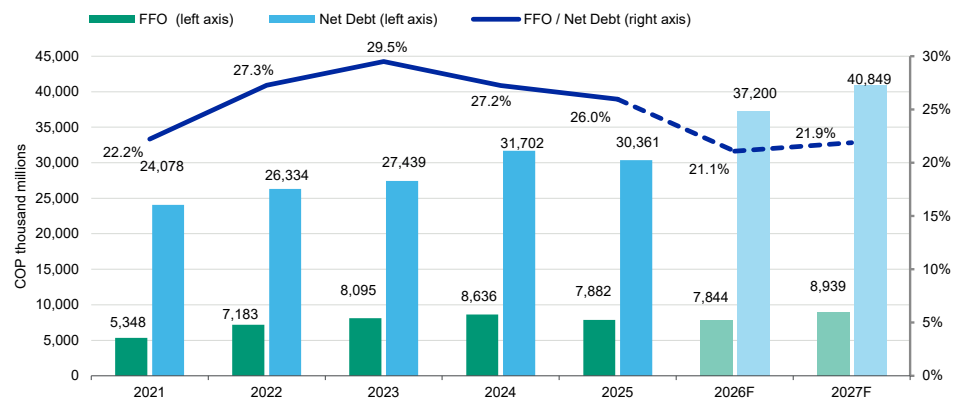
Summary

[Empresas Publicas de Medellin, E.S.P.](#)'s (EPM, Baa3 stable) credit profile takes into consideration the application of our Joint Default Analysis (JDA), with the [City of Medellin](#) (Baa3 stable) as the support provider, incorporating our assumptions of very high dependence and strong extraordinary support in case of need. This results in a one-notch uplift from the company's ba1 Baseline Credit Assessment (BCA).

EPM's ba1 BCA reflects its large scale, presence in several countries and diversified operations. It also considers the progress around the development of the Ituango hydro plant, whose first four units are already in operations. Constraining the BCA are the track record of government interference aiming to decrease electricity tariffs in [Colombia](#) (Baa3 stable), its still large investments and refinancing needs. Additionally, as of May 2026, the National Oceanic and Atmospheric Administration estimates an 82% likelihood that an "El Niño" event will develop during 2026, which could affect EPM's credit quality depending on the event's intensity and duration.

We expect credit metrics to deteriorate in 2026 and 2027 due to higher indebtedness to finance its capital spending higher interest rates and the potential "El niño event" (see exhibit 1).

Exhibit 1
Historical FFO, Total debt, and FFO/debt



All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

Credit strengths

- » Strong likelihood of support from the City of Medellín
- » Diversified operations in terms of business segment and geography
- » Successful start of operations of four turbines at the Ituango hydro plant

Credit challenges

- » Limited room for debt reduction given its significant capital spending program
- » Increasing regulatory risk in Colombia

Rating outlook

The stable rating outlook reflects our expectation that EPM's credit metrics will remain in line with the current rating, as reflected in the leverage ratio measured as funds from operations [FFO] /net debt higher than 20% and interest coverage ratio (FFO + interest expense)/interest expense around 3.5x, respectively, through 2026-2027. These metrics take into consideration our assumption of continued progress in the construction of the Ituango hydro plant.

Factors that could lead to an upgrade

We could upgrade EPM's rating following an upgrade of Medellín's rating, the successful construction and full operation of the Ituango project, and a sustained improvement in the company's liquidity profile. Quantitatively, positive rating pressure would arise if FFO/net debt and (FFO + interest expense) / interest expense remain above 25% and 4.5x, respectively, on a sustained basis.

Factors that could lead to a downgrade

We would downgrade the rating if further incidents at Ituango cause additional environmental damage, third-party liability expense or permanent/irreversible damage to the project's infrastructure. Negative rating pressure would also arise if significant cost overruns, substantial delays on its capital program keeps (FFO)/net debt and (FFO+ interest expense)/interest expense below 20% and 3.5x, respectively, on a projected and sustained basis. A decline in support from the City of Medellín would also constrain the rating, and increased refinancing risk—particularly if the company does not refinance upcoming maturities in advance—would add further pressure.

Key indicators

Exhibit 2

Empresas Publicas de Medellín E.S.P.

	2021	2022	2023	2024	2025
(FFO + Interest Expense) / Interest Expense	4.0x	4.3x	4.3x	4.5x	3.9x
FFO / Net Debt	22.2%	27.3%	29.5%	27.2%	26.0%
RCF / Net Debt	16.2%	19.6%	22.8%	20.3%	16.6%

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Source: Moody's Financial Metrics™

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

Profile

Headquartered in Medellin, Colombia, Empresas Publicas de Medellin E.S.P. (EPM) is a multi-utility vertically integrated public service group. EPM is the parent company of a group comprising 47 companies and six structured entities. EPM provides public services in Colombia, [Chile](#) (A2 stable), [El Salvador](#) (B3 positive), [Guatemala](#) (Ba1 stable), [Mexico](#) (Baa3 stable) and [Panama](#) (Baa3 negative). The company offers its services through the following segments: power generation, distribution and transmission; natural gas distribution; water provision; wastewater treatment; and solid waste management.

Recent developments

On January 27, 2026, EPM awarded the remaining shares of UNE EPM Telecomunicaciones S.A. (Tigo UNE) offered to the general public under the second phase of the divestment process to Millicom Colombia Holding S.A.S.. Proceeds of COP 2.1 trillion will be used to fund EPM's investment plan. Given Tigo UNE's financial position, EPM has not been receiving meaningful dividends from the company, nor was it expecting such dividends in its projections.

Detailed credit considerations

Strong likelihood of receiving support from the City of Medellin

EPM's Baa3 rating reflects the application of our JDA framework for government-related issuers. The City of Medellin is EPM's only shareholder. Our Government-Related Issuers Methodology takes into consideration the following inputs:

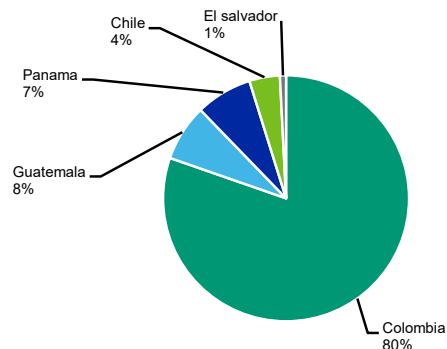
- » Strong probability of extraordinary support from Medellin if EPM faces financial distress
- » Our estimation of a very high level of default dependence between the company and the City of Medellin
- » The City of Medellin's Baa3 rating
- » EPM's intrinsic credit profile as captured in its ba1 BCA

EPM is strategically important to the local economy. Its dividends have historically accounted for around 25% of the Medellin's total revenue. EPM maintains a dividend payout ratio of 55% of net income. Our assumptions reflect our view that the city could decrease the dividend payout to support EPM in case of financial stress.

Diversified operations in terms of business segment and geography, with some concentration in Colombia and the power segment

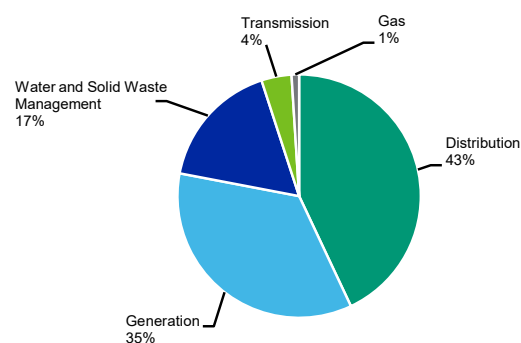
EPM has seven business segments in several countries in Latin America. We consider this diversification credit positive, despite some concentration in Colombia (accounting for around 80% of EBITDA as of December 2025). EPM also has concentration in the power segment, with 47% of EBITDA as of December 2025 coming from the regulated business (43% distribution and 4% transmission) and 35% from the unregulated business corresponding to generation (see Exhibit 4). The contribution of the generation business to total EBITDA will increase as additional units at Ituango start operations.

Exhibit 3
Consolidated EBITDA by country as of 31 December 2025



Mexico and Bermuda contributed to consolidated EBITDA less than 1%.
Source: Company filings

Exhibit 4
Consolidated EBITDA by business segment as of 31 December 2025



Source: Company filings

EPM's power generation fleet consists of 41 operational generation plants, with installed capacity of approximately 4,750 megawatts (MW), of which 37 are hydro, three are thermal and one is a solar plant, and almost all of the installed capacity is located in Colombia. EPM is a key operator in the Colombian power market; it is the main power generator and distributor, and ranks third in the power transmission business, with market shares of around 24%, 39% and 7.5%, respectively. Nonetheless, the high share of hydro in the overall portfolio exposes the company's cash flow to various water availability scenarios, mainly droughts, such as the expected El Niño weather phenomenon for 2026. EPM's share of hydro will increase with the start of operations of the remaining four units of the Ituango hydro plant — the first four units are already in operation with an installed capacity of 1,200 MW, while the second stage will add an additional 1,200 MW. However, EPM has insurance against low hydrology, which mitigates the revenue loss from lower electricity generation.

Ituango is a strategic project for EPM and Colombia. Its completion will consolidate EPM's leadership in the energy generation sector with non-carbon-related sources. The project is estimated to account for around 17% of the country's installed capacity once fully operational. However, it will increase the company's EBITDA concentration in Colombia.

In the electricity distribution business, EPM operates in Colombia, Panama, El Salvador and Guatemala, with market shares of 39.3%, 39.7%, 27.1% and 43.6%, respectively (as of December 2025). The distribution sector accounted for about 43% of the group's total consolidated EBITDA as of December 2025, making it the most important contributor

Lower uncertainties in the development of the Ituango hydro plant

The [contingency that occurred at the Ituango hydroelectric project](#) in 2018 triggered high uncertainty regarding the future of the project. However, EPM's first two turbines started operations in November 2022, as scheduled. Two additional turbines started operations by year-end 2023, and the rest are projected to operate in 2027. EPM expects to complete them according to schedule to strengthen its generation footprint. Each unit will generate 300 MW and the total installed capacity is 2,400 MW.

As of February 2026, the project's construction was 95.01% completed. EPM does not expect new findings and requirements to generate significant costs in addition to those already incorporated in the budget. On 19 September 2024, EPM sealed the right diversion tunnel of Hidroituango, a structure that generated the emergency downstream of the dam on 12 May 2018. The underwater work has also concluded, enabling the rehabilitation of the hydraulic conditions of intake tunnels 2, 3 and 4, which channel water from the reservoir to the turbines for energy generation in the powerhouse.

The company forecasts that it will spend COP3.7 trillion to finalize of the construction of the Ituango plant, which represents 17% of the total capex for 2025-30.

Distribution business performance remains constrained by persistent working capital pressures

EPM's distribution segment faces persistent working capital pressure, primarily because of recurrent delays in government subsidy payments and slower than expected recovery of tariff option receivables. Outstanding energy subsidy arrears total approximately COP 450 billion after recent partial payments, while unpaid government entity bills amount to roughly COP 1.4 trillion and gas subsidy arrears to about COP 1 trillion, contributing to total sector wide government obligations exceeding COP 7 trillion. The government disbursed approximately COP 625 billion in catch up payments in late 2025 and early 2026, of which Afinia received COP 351 billion and EPM received COP 155 billion, covering Q2 and Q3 2025 obligations only. Payments for Q4 2025 and 2026 remain pending. Tariff option receivables, accumulated during the COVID era tariff freeze that left distributors with COP 7.2 trillion in unrecovered costs sector wide, are also being collected below plan. Afinia held COP 1.1 trillion in tariff option receivables and sold those rights to a private investor for approximately COP 850 billion at a discount. EPM retains roughly COP 219 billion, which we expect to be fully collected by year end 2026.

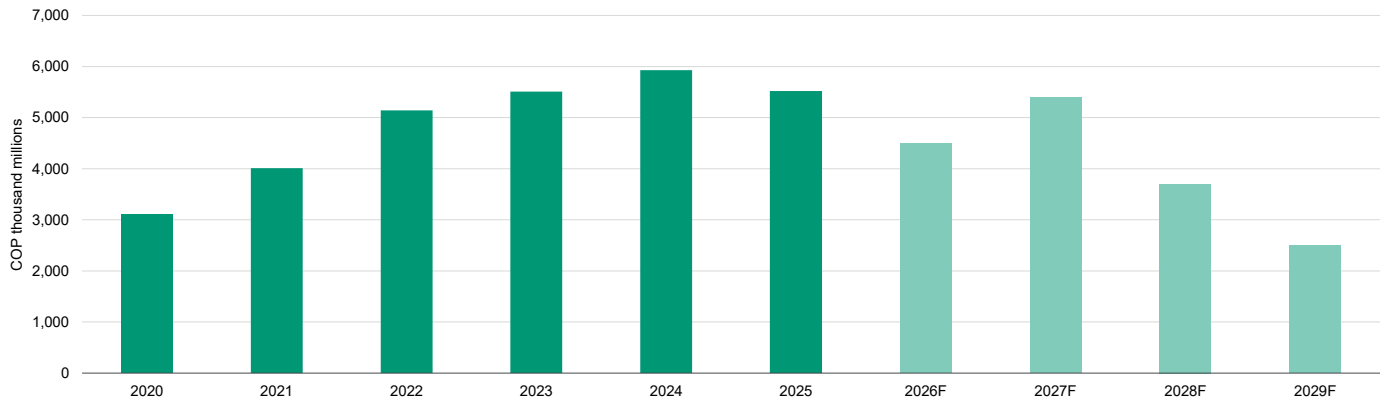
Afinia continues to underperform materially relative to plan, reflecting high non technical losses, weak payment culture and delayed government transfers. The subsidiary faces a COP 3 trillion funding gap with no clearly identified financing source. Additional pressure stems from a 23% increase in Colombia's minimum wage for 2026, with inflation tracking at approximately 6.5% versus the 3.9% assumed in the prior plan, and from lagged indexation effects on contract prices. Emergency Decrees, issued under the 2026 economic emergency, mandate payment deferrals of 12 to 36 months and suspend new billing in eight flood affected departments, with Afinia bearing the largest exposure to the resulting cash flow disruption. We expect tariff normalization at Afinia no earlier than 2029, while EPM's broader distribution operations should substantially recover by the end of 2026. Until then, the segment will continue to weigh on consolidated liquidity and represents a key source of downside risk to the credit profile.

Significant capital spending program and adverse regulatory changes constrain financial metrics

EPM has maintained strong financial metrics in recent years. Although metrics weakened slightly in 2025, they remain adequate for the current rating level. As of December 2025, (FFO + interest) to interest expense declined to 3.9x from 4.5x in 2024, while FFO to net debt decreased to 26% from 27.2%. Higher interest expense primarily drove this deterioration. In prior years, strong performance in the distribution business—supported by higher Producer Price Index (PPI) levels and solid power sales—boosted credit metrics. In addition, EPM received significant insurance proceeds in 2022 related to the Ituango contingency.

We expect (FFO + interest) to interest expense to decline further to around 3.5x in 2026 and recover slightly to 3.8x in 2027. Similarly, we project FFO to net debt to decrease to 21.1% in 2026 and 21.9% in 2027. Higher debt levels to support EPM's investment plan, a still-elevated interest rate environment, and the potential impact of the El Niño event in 2026–2027 will drive this deterioration. EPM plans capital spending of nearly COP 10 trillion during this period (see Exhibit 5), mainly concentrated in the energy sector. We expect the investments to be funded through a combination of incremental debt and internal cash generation, supported by approximately COP 2.1 trillion in proceeds from the recent sale of UNE Telecomunicaciones, which will contribute to weaker credit metrics during the investment period.

Exhibit 5
Capital spending program for 2026-29

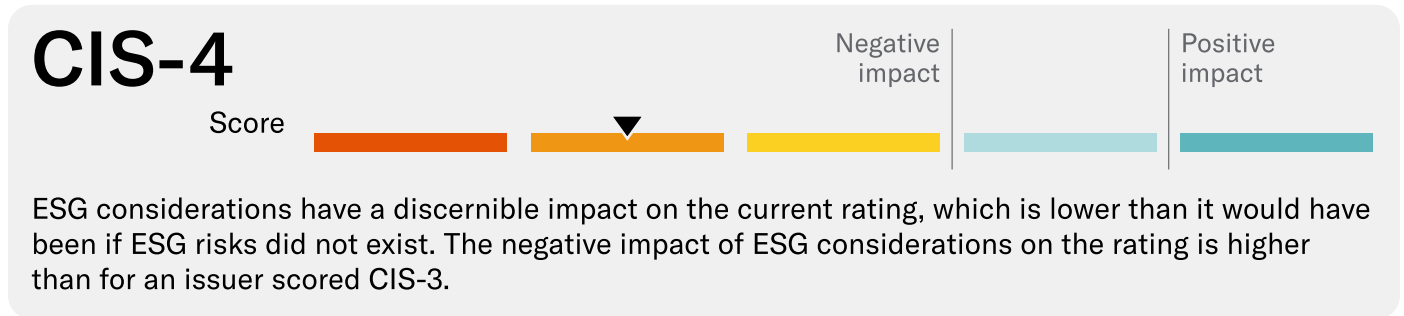


All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.
Sources: Company filings and Moody's Financial Metrics™

ESG considerations

Empresas Publicas de Medellin E.S.P's ESG credit impact score is CIS-4

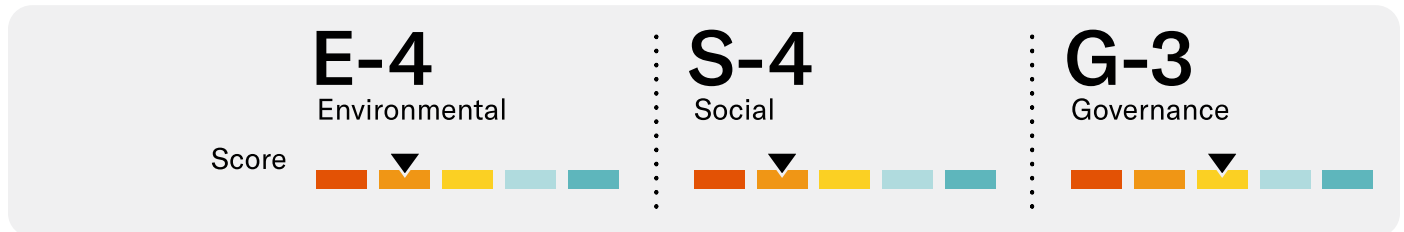
Exhibit 6
ESG credit impact score



Source: Moody's Ratings

Empresas Publicas de Medellin E.S.P's (EPM) ESG Credit Impact Score (**CIS-4**) reflects high exposures to environmental and social risks. The effect of ESG risks to the rating is partially mitigated by the expectation that its government shareholder would support the company if necessary.

Exhibit 7
ESG issuer profile scores



Source: Moody's Ratings

Environmental

EPM's environmental risk score (**E-4** issuer profile score) reflects the company's exposure to physical climate risks on its 35 hydro generation plants that represent 87% of its installed capacity. While risks are partially mitigated by EPM's climate risk insurance policy, the company's cash flow and operating margin are exposed to seasonal rainfall and prolonged droughts that impact energy spot prices. EPM is also implementing measures to transition to net zero emissions by 2025.

Social

EPM's social issuer profile score (**S-4**) reflects the risk of adverse regulatory decisions or political interference due to tariff affordability concerns and environmental-social considerations. These risks, which are common to electricity companies operating in Latin America, are balanced by low exposures to health and safety, human capital, and customer relationships. EPM, in particular, faces relatively higher social risks as related to the Ituango in order to continue protecting the communities downstream of the hydroelectric project.

Governance

EPM's governance issuer profile score (**G-3**) captures corporate governance risks arising from political interference as EPM is strategically important to the local economy of the City of Medellin, which is the sole owner. On 2020, EPM announced that eight of the company's nine board members resigned after the mayor (the ninth board member) decided to pursue contractual reimbursement from the Engineering, Procurement and Construction (EPC) contractors and the insurance company for the cost overruns and lost profit of the Ituango hydro project, without submission to the board. However, EPM announced a plan in order to strengthen corporate governance during the 2022-2025 period.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Liquidity analysis

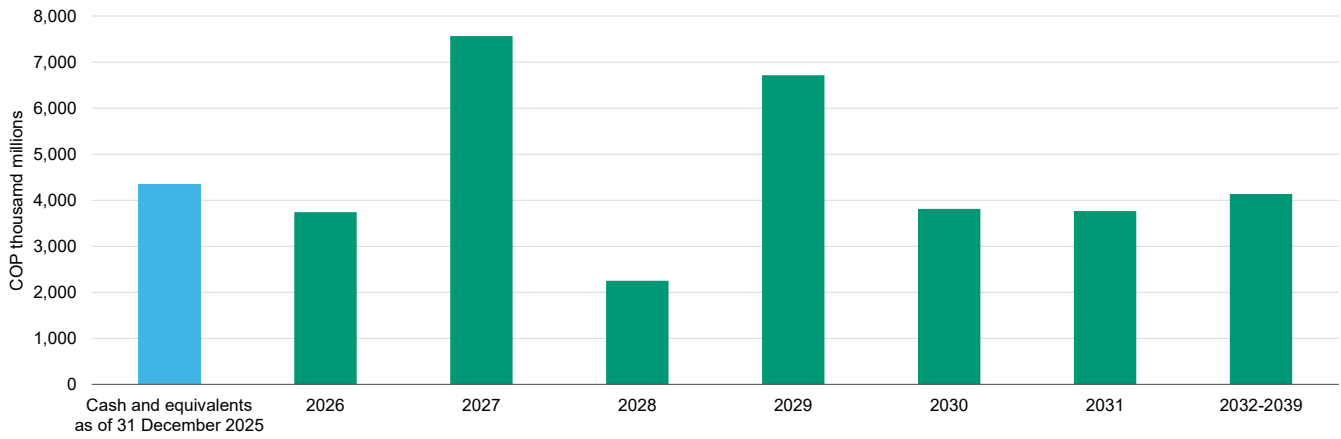
EPM currently maintains tight liquidity buffers relative to its debt maturity profile. As of December 2025, the company reported approximately COP 4.0 trillion in cash and cash equivalents, exceeding debt maturities due in 2026. However, in 2027, EPM faces a significant refinancing requirement tied to an international bond of COP 4.5 trillion, which could prove costly given Colombia's electoral environment and ongoing geopolitical uncertainty.

Strong internal cash flow generation supports EPM's liquidity. Nevertheless, the company will need to continue accessing debt capital markets and bank financing to refinance large maturities in 2027 and 2029, as well as to meet other funding needs. To support its capital spending program, EPM also relies on a syndicated loan with USD 325 million available and an additional loan facility of COP 800,000 million committed facilities.

Exhibit 8

Cash and cash equivalents as of 31 December 2025 were enough to cover 2026 debt maturities but refinancing risk remains for 2027 and 2029 maturities

Debt maturities as of 31 December 2025



Sources: Company filings and Moody's Financial Metrics™

Methodology and scorecard

We evaluate EPM's BCA using our Unregulated Utilities and Unregulated Power Companies rating methodology. EPM's current scorecard-indicated outcome is Ba1, in line with the assigned ba1 BCA. The Baa3 assigned rating reflects the potential for extraordinary support from the City of Medellin, as the sole shareholder, according to our Government-Related Issuers Methodology.

Exhibit 9

Rating factors

Empresas Publicas de Medellin E.S.P.

Unregulated Utilities and Unregulated Power Companies Industry Scorecard			Current FY Dec-25		Moody's 12-18 month forward view	
Factor	Measure	Score	Measure	Score	Measure	Score
Factor 1 : SCALE (10%)						
a) Total Assets (\$ billions)	23.0	Baa	30.5	A		
Factor 2 : BUSINESS PROFILE (35%)						
a) Market Diversification	Ba	Ba	Ba	Ba		
b) Cash Flow Stability	Ba	Ba	Ba	Ba		
Factor 3 : LEVERAGE AND COVERAGE (40%)						
a) (FFO + Interest Expense) / Interest Expense	3.9x	Ba	3.8	Ba		
b) FFO / Net Debt	26.0%	Baa	21.9	Ba		
c) RCF / Net Debt	16.6%	Ba	16.1	Ba		
Factor 4 : FINANCIAL POLICY (15%)						
a) Financial Policy	Ba	Ba	Ba	Ba		
Rating:						
Indicated Outcome before Notching Adjustments		Ba1			Ba1	
Notching Adjustments		0			0	
a) Scorecard-Indicated Outcome		Ba1			Ba1	
b) Actual Rating Assigned					Baa3	
Government-Related Issuer						
Factor						
a) Baseline Credit Assessment					ba1	
b) Government Local Currency Rating					Baa3	
c) Default Dependence					Very High	
d) Support					Strong	
e) Actual Rating Assigned					Baa3	

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

Appendix

Exhibit 10

Peer comparison

Empresas Publicas de Medellin E.S.P.

(in \$ millions)	Empresas Publicas de Medellin E.S.P. Baa3 Stable			Enel Chile S.A. Baa2 Stable			Enel Americas S.A. Baa3 Negative			AXIA Energia S.A. Ba1 Stable			Cemig Geracao e Transmissao S.A. Ba1 Stable		
	FY	FY	FY	FY	FY	LTM	FY	FY	LTM	FY	FY	FY	FY	FY	LTM
	Dec-23	Dec-24	Dec-25	Dec-24	Dec-25	Mar-26	Dec-24	Dec-25	Mar-26	Dec-23	Dec-24	Dec-25	Dec-23	Dec-24	Sep-25
Revenue	8,629	9,746	9,424	4,882	4,663	4,758	13,904	14,506	15,133	7,445	7,489	7,393	1,355	1,139	1,220
EBITDA	2,113	2,727	2,969	1,392	1,410	1,418	3,550	4,050	4,224	4,542	5,090	1,748	681	756	384
Total Debt	7,805	7,769	9,093	3,987	3,924	3,981	6,447	7,537	8,108	21,538	19,644	22,270	629	235	439
(FFO + Interest) / Interest	429.5%	447.5%	391.3%	560.9%	583.6%	599.9%	333.9%	429.3%	431.9%	233.7%	256.0%	230.5%	443.6%	307.0%	483.2%
FFO / Debt	26.8%	25.2%	22.9%	27.0%	24.5%	25.0%	35.7%	33.7%	32.7%	13.5%	13.4%	10.4%	65.2%	53.3%	42.6%
RCF / Debt	20.7%	18.8%	14.7%	17.8%	15.6%	16.5%	28.6%	20.1%	23.4%	12.7%	12.4%	0.4%	31.1%	-148.9%	-48.0%
Debt / EBITDA	3.3x	3.1x	2.9x	2.9x	2.8x	2.8x	1.8x	1.9x	1.9x	4.6x	4.4x	12.5x	0.9x	0.4x	1.1x
EBITDA / Interest Expense	3.7x	4.5x	4.4x	6.0x	7.1x	7.1x	3.6x	5.2x	5.3x	2.1x	2.6x	1.0x	5.9x	10.8x	8.4x

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months.

Source: Moody's Financial Metrics™

Exhibit 11

Moody's-adjusted cash flow metrics

Empresas Publicas de Medellin E.S.P.

(in COP thousand millions)	2020	2021	2022	2023	2024	2025
EBITDA	7,108.6	6,666.4	9,127.6	9,094.3	11,086.8	12,008.6
FFO	4,071.0	5,348.1	7,182.6	8,095.1	8,635.7	7,882.4
- Div	1,592.6	1,449.7	2,023.4	1,844.1	2,187.4	2,844.7
RCF	2,478.4	3,898.5	5,159.2	6,251.0	6,448.3	5,037.7
FFO	4,071.0	5,348.1	7,182.6	8,095.1	8,635.7	7,882.4
+/- ΔWC	613.9	(1,214.1)	(2,861.1)	(3,764.5)	(183.6)	(1,655.0)
+/- Other	7.5	(352.1)	103.0	(606.8)	(2,517.4)	211.9
CFO	4,692.4	3,782.0	4,424.6	3,723.9	5,934.7	6,439.3
- Div	1,592.6	1,449.7	2,023.4	1,844.1	2,187.4	2,844.7
- Capex	3,109.9	4,012.1	5,141.1	5,507.0	5,931.5	5,520.4
FCF	(10.0)	(1,679.7)	(2,739.9)	(3,627.2)	(2,184.2)	(1,925.9)
Debt / EBITDA	3.7x	4.1x	3.4x	3.3x	3.1x	2.9x
EBITDA / Interest	4.8x	3.8x	4.2x	3.7x	4.5x	4.4x
FFO / Debt	15.6%	19.7%	23.2%	26.8%	25.2%	22.9%
RCF / Debt	9.5%	14.3%	16.7%	20.7%	18.8%	14.7%
Revenue	19,326.6	24,831.6	31,728.4	37,139.1	39,617.7	38,117.8
Interest Expense	1,471.3	1,769.7	2,169.4	2,456.6	2,485.3	2,705.6
Net Income	3,729.2	2,532.3	3,558.2	3,056.3	4,888.5	5,301.8
Total Assets	63,398.5	67,125.0	75,173.7	76,987.9	83,439.2	86,912.8
Total Liabilities	37,641.1	40,161.0	46,016.4	47,266.3	51,007.3	51,982.2
Total Equity	25,757.3	26,964.0	29,157.4	29,721.6	32,431.9	34,930.7

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Source: Moody's Financial Metrics™

Exhibit 12

Moody's-adjusted debt reconciliation
Empresas Publicas de Medellin E.S.P.

(in COP thousand millions)	2020	2021	2022	2023	2024	2025
As Reported Debt	25,316	26,540	30,414	28,773	32,929	33,315
Pensions	780	654	529	1,462	1,297	1,035
Moody's - Adjusted Debt	26,097	27,193	30,943	30,235	34,226	34,350

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.
Source: Moody's Financial Metrics™

Ratings

Exhibit 13

Category	Moody's Rating
EMPRESAS PUBLICAS DE MEDELLIN E.S.P	
Outlook	Stable
Issuer Rating -Dom Curr	Baa3
Senior Unsecured	Baa3
PARENT: MEDELLIN, CITY OF	
Outlook	Stable
Issuer Rating	Baa2

Source: Moody's Ratings

© 2026 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE LEGAL, COMPLIANCE, INVESTMENT, FINANCIAL OR OTHER PROFESSIONAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating or assessment is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating or assessment process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating or assessment assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at ir.moody.com under the heading "Investor Relations — Corporate Governance — Charter and Governance Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., Moody's Local PA Clasificadora de Riesgo S.A., Moody's Local CR Clasificadora de Riesgo S.A., Moody's Local ES S.A. de CV Clasificadora de Riesgo, Moody's Local RD Sociedad Clasificadora de Riesgo S.R.L. and Moody's Local GT S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore. EU: In the European Union, each of Moody's Deutschland GmbH and Moody's France SAS provide services as an external reviewer in accordance with the applicable requirements of the EU Green Bond Regulation. JAPAN: In Japan, development and provision of SPOs and NZAs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used

within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

REPORT NUMBER 1479308

Contacts

Jose Batalla Diez
Analyst
jose.batalladiez@moodys.com

Guillermo Guiran
Rosaldo, CFA
Lead Ratings Associate
guillermo.guiran@moodys.com

+52.55.1253.5743

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454