

CREDIT OPINION

26 September 2023

Update

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RATINGS

Transportadora Associada de Gas S.A.

Domicile	Brazil
Long Term Rating	Ba1
Type	LT Corporate Family Ratings
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.

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Transportadora Associada de Gas S.A.

Update to credit analysis

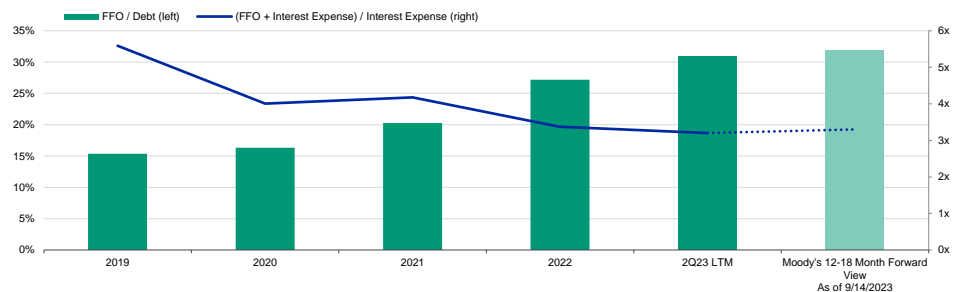
Summary

The credit profile of [Transportadora Associada de Gas S.A.](#) ("TAG", Ba1 stable) is indicative of its significant role in Brazil's ([Government of Brazil](#), Ba2 stable) natural gas infrastructure, owning 47% of the country's gas pipelines. It is reinforced by stable, predictable cash flow driven by long-term, availability based tariff contracts, adjusted annually for inflation, minimizing volume risk until at least 2025. TAG's robust margins and modest leverage also contribute positively to the rating.

Conversely, the rating is the dynamic nature of Brazil's gas transportation sector's regulatory framework restricts the rating. This evolving landscape presents a certain degree of uncertainty. Additionally, our projections indicate that the company plans to distribute surplus cash to its shareholders within the next 12 to 18 months. However, these risks are somewhat buffered by the diversified nature and guarantee structure of the receivables, as well as the strong credit profile of the shareholders. It is also important to mention that the rating reflects both direct and indirect credit ties to [Petroleo Brasileiro S.A. - Petrobras](#) (Ba1 stable).

Exhibit 1

Overall predictable cash flow support credit metrics



All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for nonfinancial Corporations.

Source: Moody's Financial Metrics™ and Moody's Investors Service estimates

Credit strengths

- » Relevance of TAG's natural gas infrastructure systems in Brazil.
- » Stable and predictable cash flows.
- » High margins and relative low leverage.
- » Solid credit profile of the shareholders.

Credit challenges

- » Still developing local regulatory framework.
- » Direct and indirect linkages to PETROBRAS.
- » Moody's projected distribution of excess cash.

Rating outlook

The stable outlook reflects our expectation that TAG will maintain overall predictable cash flows given its base of firm capacity revenue. Furthermore, the stable outlook is based on our projection that the company will maintain its Funds from Operations (FFO) to debt and interest coverage ratios at approximately 32% and 3.3x, respectively, over the forthcoming 12 to 18 months. The outlook does not take into consideration any additional debt-funded capacity expansion.

Factors that could lead to an upgrade

- » Upward pressure on the ratings could develop over time if the Government of Brazil is upgraded.

Factors that could lead to a downgrade

- » Negative rating pressure would arise if there is a significant deterioration in our view of the off-takers' credit quality or contractual guarantees or with an unfavorable shift in Brazil's regulatory environment. Also, perception of weaker support from the shareholders, such as higher than anticipated dividend distributions or sustainable deterioration in the liquidity profile, could all exert downward pressure on TAG's rating. The rating could be downgraded if we deterioration in credit metrics, such that:
 - » FFO / debt remains below 15% on a sustained basis; and
 - » Interest coverage ratio ((FFO + Interest) / Interest) remains below 3.0x on a sustained basis.

Key indicators

Exhibit 2

Transportadora Associada de Gas S.A.

	2018	2019	2020	2021	2022	LTM Jun-23
(FFO + Interest Expense) / Interest Expense	15.3x	5.6x	4.0x	4.2x	3.4x	3.2x
FFO / Debt	108.3%	15.3%	16.3%	20.3%	27.2%	30.9%
RCF / Debt	47.4%	-4.3%	7.8%	10.7%	19.3%	22.3%

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for nonfinancial Corporations.

Source: Moody's Financial Metrics™

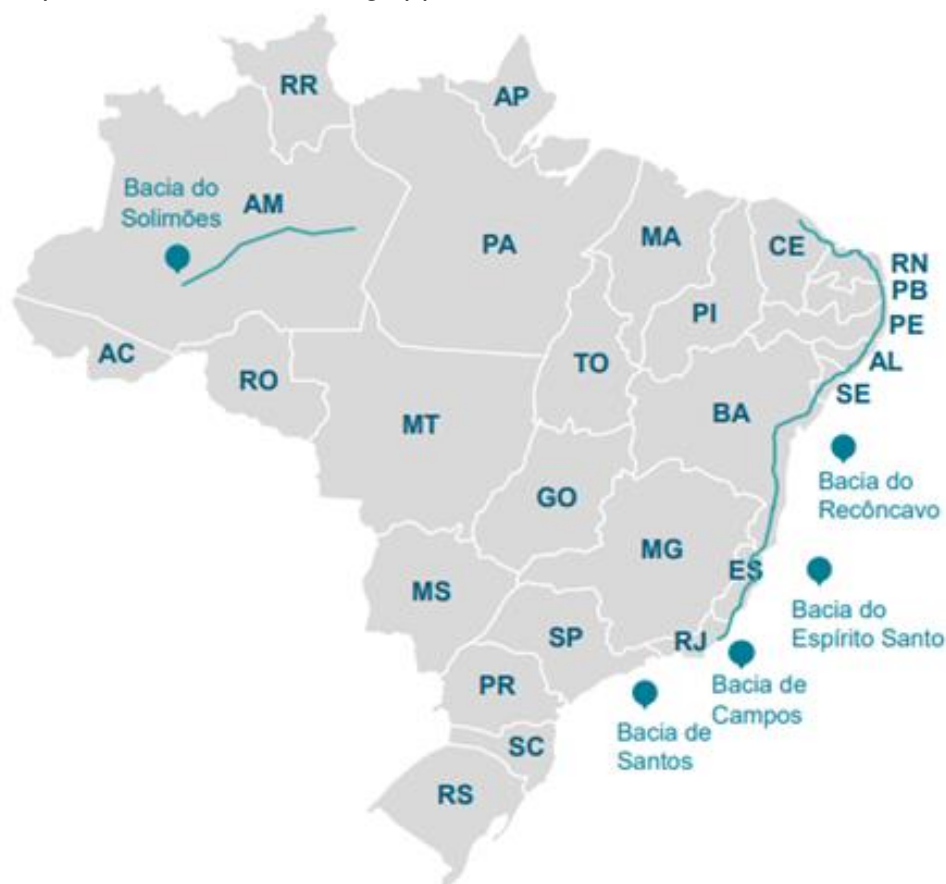
This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody.com> for the most updated credit rating action information and rating history.

Profile

Based in Rio de Janeiro, Brazil, TAG specializes in natural gas transportation via an extensive network of gas pipelines. It owns and operates the largest gas pipeline network in Brazil, spanning 4,500 km (47% of Brazil's total). This network extends across the North, Northeast and Southeast regions, traversing approximately 200 municipalities within 10 states. A significant portion of the company's pipelines, approximately 3,700 km, is strategically positioned along Brazil's coastline, crossing states from Ceará to Rio de Janeiro. The remaining 800 km segment is situated in the state of Amazonas, forming a crucial connection from Urucu to Manaus. In these regions, gas distributors rely on TAG's infrastructure to receive the gas. TAG owns six gas compression stations and subcontracts five within its network. It also has 14 receiving gas points and 90 delivery gas points, supplying refineries, fertilizers plants and power plants that are integrated into the distribution network in different regions.

Exhibit 3

TAG operates an extensive network of gas pipelines in Brazil



Source: Engie

ENGIE SA (32.5%; Baa1 stable), Engie Brasil Energia (32.5%), and Caisse de depot et placement du Quebec ("CDPQ," 35%; Aaa stable) compose TAG's shareholder structure. TAG started operations in 2002 under Petrobras, Brazil's state-owned oil company. In 2019, ENGIE and CDPQ acquired 90% of the company for BRL32.7 billion. In July 2020, ENGIE and CDPQ acquired the remaining 10% stake for BRL1.0 billion. TAG was the first Brazilian gas transportation company to become 100% privately owned. In the last twelve months ended in June 2023, TAG had BRL9 billion in net sales according to Moody's standard adjustments.

Detailed credit considerations

Regulated contracts with no volume exposure

TAG operates five long-term contracts signed with Petrobras, which together have a contracted capacity of 74.3 million m³/day. The National Petroleum Agency ("ANP") regulates the Gas Transportation Contracts ("GTAs") that govern the commercial relationship between TAG and Petrobras. The five contracts include a ship-or-pay clause. This clause ensures that TAG receives payment for unused capacity, in addition to the portion of the actual gas transported. In 2022, the average transported volume was 34.7 million m³/day (utilization rate =47%). TAG's contracts undergo an annual adjustment by: (1) 64% by IGP-M inflation; (2) 15% by IPCA inflation; and (3) 21% by USD/US-PPI. TAG's average tariff adjustment in 2023 is 6.3%, compared to 16% in 2022 and 22% in 2021.

In the first six months of 2023, TAG signed other 50 extraordinary contracts for gas transportation with 18 new shippers, totaling 13.8 MMm³/day, with maturity in December 2023. Since then, the company has continue to sign new extraordinary contracts. The guarantees of these contracts consist of 100 times the daily capacity; and in case of default, the contract is canceled and Petrobras assumes the engagements. TAG's contracts signed with other shippers than Petrobras correspond to around 18.6% of the total capacity, what partially mitigates the credit linkages to Petrobras.

Exhibit 4

TAG's long-term contracts with an average remaining life of 7 years

Contract	Contracted volume (MMm ³ /day)	2022 Revenue (BRL mm)	%	Extension (km)	Maturity	Tariff (As of Jan-23) (BRL/MMBTU)	Adjustment Index	Adjustment month
Gasene Sul	20.0	1,878	23%	1,400	2033	7.28	46% IGP-M/IPG-DI/IPA-DI;	December
Gasene Norte	10.3	1,424	17%			10.72	54% US PPI	
Malha Nordeste	21.6	1,939	24%	2,000	2025	6.93	100% IGP-M	January
Pilar-Ipojuca	15.0	530	6%	200	2031	2.72	100% IGP-M	January
Urucu-Manaus	6.7	2,395	29%	800	2030	27.68	50% IGP-M; 50% IPCA	December
Lagoa Parda Vitória	0.7	24	0%	100	2023	2.43	100% IGP-M	January
TOTAL	74.3	8,191	100%	4,500				

Source: TAG, Moody's Investors Service

TAG will not have any relevant exposure to demand until the maturity of the Malha Nordeste GTA in 2025, representing about 24% of total revenue. We expect the company will be able to renew the contract, although with a 20%-30% discount on the current level of maximum permitted revenue. Once the existing contract expires, TAG's proposed new tariffs will require approval from the regulator. These tariffs will be calculated based on a maximum permitted revenue, which takes into account the company's regulatory asset base (adjusted for depreciation and inflation) and the volume of demand. The regulatory WACC, to be determined by ANP, will also be factored into this calculation. These tariffs will then be subject to a review cycle every five years.

TAG's rating continues to reflect the direct and indirect linkages to Petrobras

Petrobras is the major off-taker for the current GTAs that represent around 83% of the company's revenue in 2023. However, we understand that the diversification and strength of the guarantees embedded in the contractual framework mitigates counterparty risk. It includes:

- (1) Diversification of the ultimate receivables provided by a pool with 13-16 Gas Supply Agreements ("GSAs") between Petrobras and local gas distribution companies.
- (2) GSA receivables guarantees TAG receivables under the GTAs with Petrobras, with the obligation to provide a minimum cash balance corresponding to 120%-140% of TAG's monthly revenue.

(3) The cash collection for the receivables, held separately in an escrow account at [Banco Santander \(Brasil\) S.A.](#) (long-term deposits rating Ba1 stable), is independent of PETROBRAS' other revenue.

(4) In the event of default of any GSA, Petrobras has to directly deposit the funds to restore the minimum cash balance. Otherwise, Petrobras must present a bank guarantee equivalent to 5x the monthly GSA receivable.

From our viewpoint, the sanctioning of the new gas law in April 2021 marks a positive change for the sector. We predict this law will diversify TAG's gas supply in the medium-term, lessening its dependence on Petrobras and incorporating other sources. We anticipate this law to stimulate a wider opening of the Brazilian gas market. The new regulatory framework, the sale of Petrobras' sector assets and regulatory changes promoting competition in gas supply, will collectively reshape the industry's landscape.

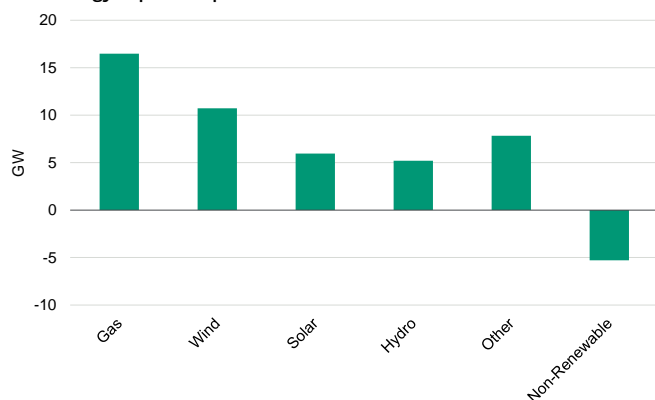
Supportive but still relatively new regulatory framework with significant growth perspective

The Brazilian Energy Research Company's ("EPE") forecast that the Brazilian installed capacity of natural gas will double from 16 GW to 32 GW. The energy market considers natural gas a strategic fuel for the transition to a low carbon economy. Natural gas, when it replaces other, higher-polluting fossil fuels, provides more security and flexibility than intermittent renewable sources such as solar and wind.

Although the existing contracts between TAG and Petrobras remain unchanged with the new law, we expect further diversification of both its off-taker and supply bases. The possible reduction in the gas price to the final consumers will increase gas consumption and production in the coming years, increasing the relevance and use of TAG assets' capacity.

Exhibit 5

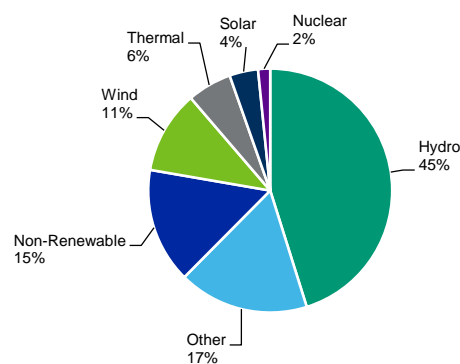
2031 Energy expansion plan



Source: Brazilian Energy Research Company ("EPE") and Moody's Investors Service

Exhibit 6

2031 Brazilian energy matrix



Source: Brazilian Energy Research Company ("EPE") and Moody's Investors Service

Strong shareholders further support the rating

TAG's shareholding structure, composed by ENGIE S.A. (32.5%), Engie Brasil Energia (32.5%) and CDPQ (35%), supports the rating. From our perspective, the shareholders possess both the capacity and inclination to offer support to TAG in times of necessity, primarily through the retention of dividends. This is largely due to TAG's strategic significance within the Latin American operations of its parent companies. Additionally, we factor in their proven record of successful operations and their ability to manage expenses effectively. This combination of shareholder support, strategic importance and operational success further strengthens TAG's position and stability.

In 2019, ENGIE and Caisse de dépôt et placement du Québec (CDPQ) made a significant investment in TAG, acquiring a substantial 90% stake in the company for BRL32.7 billion. A year later, in July 2020, they proceeded to purchase the remaining 10% stake for an additional BRL1.0 billion, thereby assuming full ownership of the company. The acquisition was strategically financed through a mix of equity and debt. They invested BRL10 billion of equity into the company and leveraged BRL24 billion of debt, composed of BRL14.0 billion from local debentures and USD2.45 billion from fully hedged notes.

After the acquisition, Engie and CDPQ retained the existing O&M agreement with Transpetro, a Petrobras subsidiary. In April 2021, TAG signed a contract to change the O&M operator for Engie Soluções de Operação e Manutenção Ltda. ("ESOM"), a wholly-

owned subsidiary of ENGIE SA. The new contract with ESOM was effective as of January 2022, with ESOM gradually taking over the maintenance activities previously performed by Transpetro until July 2022, since 2023. With the implementation of the new contract, it is anticipated that Operations and Maintenance (O&M) cost will witness a reduction of approximately 34% in 2023, compared to the costs incurred in 2022. Engie owns an extensive operational and technical support with a self-managed network of more than 32,000 kilometers of gas transportation pipelines in France.

Liquidity analysis

As of June 2023, the company had BRL578 million in cash and cash equivalents. Additionally, it had BRL1,565 million in receivables, mainly from Petrobras, and BRL123 million in deposits set aside for the next debt payment. This is in contrast to an amortization of short-term debt amounting to BRL 1,923 million, which is due in the latter half of the year 2023. Despite the lower cash balance, TAG has adequate liquidity given its robust internal cash generation and low investment requirements.

TAG's debt is composed by an outstanding BRL9,040 million USD Facility, BRL7,837 million debentures and BRL500 million Working Capital lines. Its foreign currency debt is indexed to Libor and 100% hedged by financial instruments and the USD revenue from Gasene's contract. Also, the debentures in local currency are hedged up to 2023.

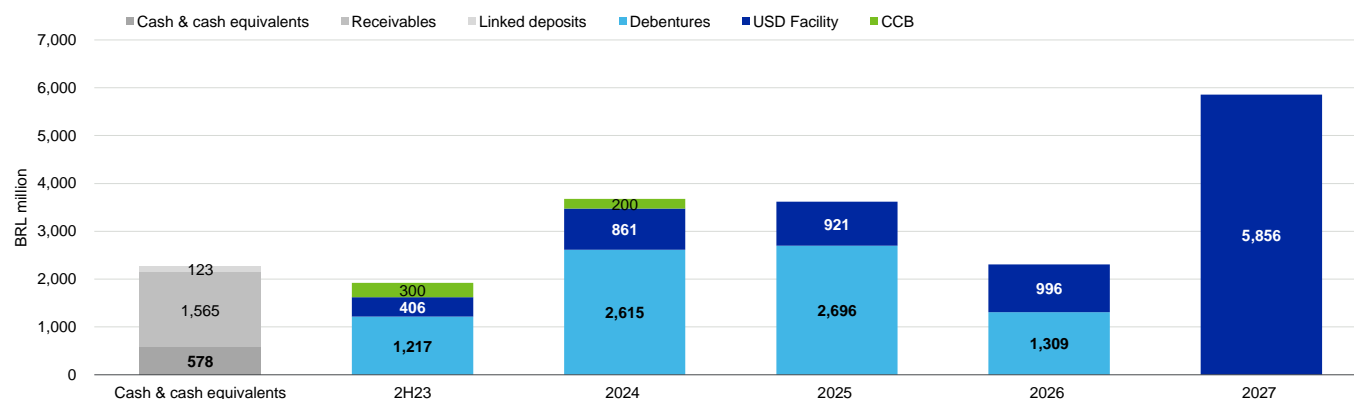
The financial covenants of TAG's outstanding debt require a debt service coverage ratio (DSCR) of at least 1.1x. Additionally, the net debt to EBITDA ratio should be 4.0x or less until 2021 and 3.5x or less from 2022 onwards. The company has been deleveraging quickly, with reported net debt to EBITDA ratios of 2.6x in 2022, from to 5.0x in 2020. We expect TAG to continue in compliance with financial covenants, reporting net leverage below 3.5x in the next 12-18 months.

In June 2023, the ratio of Funds from Operations (FFO) to Debt currently stands approximately at 30%, indicating low leverage. We expect this to improve due to no significant additional debt projected until 2026, and the ongoing repayment of debentures and USD notes. The USD facility has a balloon of 45% of the total debt in June 2027, which represents some refinancing risk that we expect will be prudently managed by the company. Also, in spite our expectation of high dividend payments from TAG to its shareholders we understand the shareholders have the ability to support TAG through dividend retention, if needed.

Exhibit 7

Debt amortization schedule

As of June 30, 2023



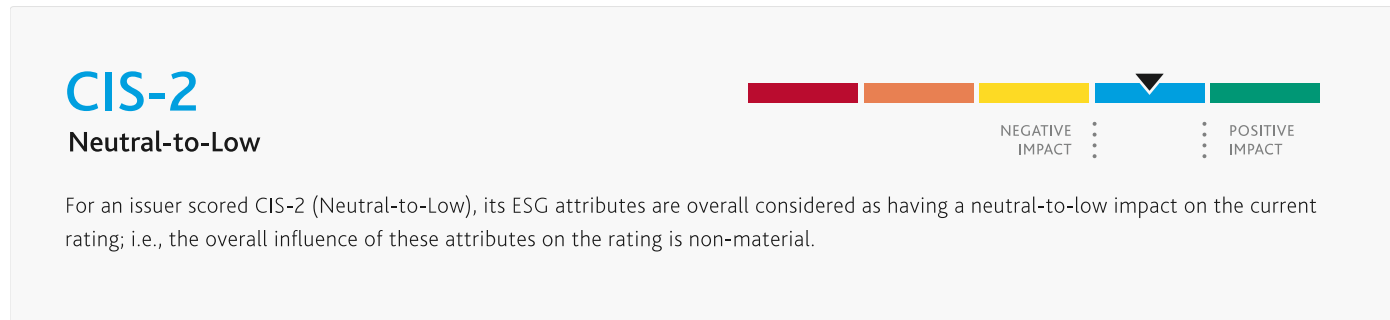
Source: TAG and Moody's Investors Service

ESG considerations

Transportadora Associada de Gas S.A.'s ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 8

ESG Credit Impact Score



Source: Moody's Investors Service

Transportadora Associada de Gas S.A.'s **CIS-2** indicates that ESG considerations are not material to the rating. This is largely due to the high level of government support on the gas sector, which effectively mitigates the impact of environmental and social risks.

Exhibit 9

ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

We evaluate TAG's exposure at **E-3**, primarily due to waste & pollution and carbon transition risk. The impact of carbon transition is somewhat lessened as natural gas, being the cleanest burning fossil fuel, operates under a regulated market. Additionally, we take into account the positive natural gas market in Brazil, with the government's plan to double its natural gas production by 2030 for a more diverse energy matrix.

Social

The **S-3** social risks score primarily indicates the influence of demographic & social trends, as well as moderate exposure to health and safety and responsible production risks. However, these risks are somewhat balanced by the minimal concerns related to human capital and customer relations. This balance is largely due to the projected significant rise in gas consumption in Brazil in the near future.

Governance

TAG's Governance **G-2** score reflects the low financial strategy risk due to relative low leverage combined with conservative financial policy and no volume exposure. Also, it incorporates the experienced management and track record of its ultimate parent Engie S.A. TAG has a good data transparency and timely disclosure practices which are however mitigated by a moderately negative policies & procedures given the ownership concentration.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.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.

Rating methodology and scorecard factors

We evaluate TAG under our [Natural Gas Pipelines](#) rating methodology, published in July 2018. TAG's scorecard-indicated outcome was Baa1 as of June 2023. Prospectively, the scorecard-indicated outcome maps to Baa2, which is two notches above the Ba1 rating assigned, reflecting the credit linkages to Petrobras and Brazil.

Exhibit 10

Rating factors

Transportadora Associada de Gas S.A.

Natural Gas Pipelines Industry Scorecard [1][2]	Current LTM 6/30/2023		Moody's 12-18 Month Forward View As of 9/14/2023 [3]	
Factor 1 : Market Position (15%)	Measure	Score	Measure	Score
a) Demand Growth	A	A	A	A
b) Competition	Aa	Aa	Aa	Aa
c) Volume Risk & Throughput Trend	Baa	Baa	Baa	Baa
Factor 2 : Quality of Supply Source (10%)				
a) Supply Source	Ba	Ba	Ba	Ba
Factor 3 : Contract Quality (30%)				
a) Firm Revenues	Aa	Aa	Aa	Aa
b) Contract Life	Baa	Baa	Baa	Baa
c) Shipper Quality / Recontracting Risk	Ba	Ba	Ba	Ba
Factor 4 : Financial Strength (45%)				
a) (FFO + Interest) / Interest	3.2x	Ba	2.8x - 3.7x	Ba
b) FFO / Debt	30.9%	A	28.2% - 35.5%	A
c) (FFO - Dividends) / Debt	22.3%	A	21.9% - 29.3%	Aa
Rating:				
a) Scorecard-Indicated Outcome		Baa1		Baa1
b) Actual Rating Assigned				Ba1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for nonfinancial Corporations.

[2] As of 6/30/2023(L);

[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics™

Ratings

Exhibit 11

Category	Moody's Rating
TRANSPORTADORA ASSOCIADA DE GAS S.A.	
Outlook	Stable
Corporate Family Rating	Ba1

Source: Moody's Investors Service

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