

## CREDIT OPINION

28 November 2025

### Update



Send Your Feedback

### RATINGS

#### Vibra Energia 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.

### Contacts

Erick Rodrigues +55.11.3043.7345  
VP-Senior Analyst  
erick.rodrigues@moodys.com

Marcos Schmidt +55.11.3043.7310  
Associate Managing Director  
marcos.schmidt@moodys.com

### CLIENT SERVICES

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

## Vibra Energia S.A.

### Update to credit analysis

#### Summary

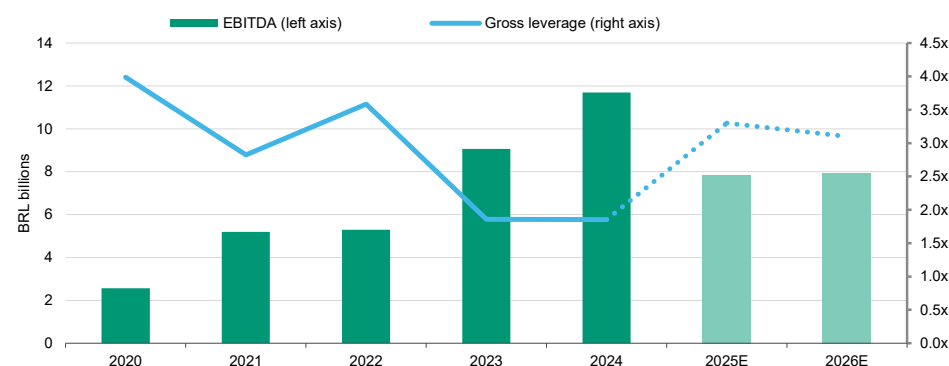
The Ba1 rating assigned to [Vibra Energia S.A.](#) reflects its market position as the largest fuel distributor in [Brazil](#) (Ba1 stable) in terms of volumes sold, gas station network and distribution logistics assets; its well-known brand names; and adequate credit metrics. The ratings also incorporate its adequate liquidity position, the improvements in its governance standards and its profitability gains.

Vibra's rating is constrained by the concentration of revenue in the fuel distribution business and correlated segments. We expect Vibra to continue to diversify its revenue sources, including its electric energy market and gas distribution. Further, we expect Vibra to maintain high dividend payments, although we do not expect these to restrain the company's liquidity or impede its positive-to-neutral free cash flow (FCF) because of its strong cash generation capacity.

As the fuel distribution business in Brazil evolves with a greater participation of electric vehicles (100% electric, hybrid and plug-in hybrid), the importance of diversification will increase for the credit quality of the company. Presently, given the strong biofuel infrastructure and ethanol participation in the Brazilian fuel matrix, we expect the flex-fuel (run on gasoline, ethanol or a blend of both) fleet in Brazil to continue to grow in the next decade, even as electric vehicles increase their participation.

#### Exhibit 1

We expect Vibra's leverage to remain around 3.0x - 3.5x following the consolidation of Comerc Gross leverage (debt/EBITDA)



2025 estimates include Comerc Energia S.A. pro forma consolidation.

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

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

- » Largest fuel distributor in the Brazilian market with a nationwide logistics market presence
- » Strong brand names and initiatives to strengthen efficiency
- » Improvement in governance and profitability following the transition from a state-owned company to a publicly traded corporation and because of the absence of constraints faced by state-owned companies
- » Good liquidity

## Credit challenges

- » Concentration of revenue in the fuel distribution business and correlated segments
- » Highly regulated market
- » High dividend distributions

## Rating outlook

The stable outlook reflects our expectation that Vibra will maintain its market share and strong competitive position while sustaining robust EBITDA and positive FCF. Additionally, gross leverage will remain adequate following the full acquisition and integration of Comerc.

## Factors that could lead to an upgrade

A rating upgrade would require the company to maintain good liquidity and credit metrics, such as gross debt/EBITDA below 3.0x and retained cash flow/net debt above 25% on a sustained basis. It would require a stable cash flow, aligned with the nature of the fuel distribution business in Brazil, a consistent operating track record and positive FCF. As the fuel distribution business in Brazil evolves, diversification will increase its importance for credit quality.

## Factors that could lead to a downgrade

We could downgrade Vibra's ratings in case of a deterioration in its operating performance or credit metrics. Further, a deterioration in liquidity could prompt a downgrade. Quantitatively, a rating downgrade would require gross debt/EBITDA to remain above 3.5x and retained cash flow/net debt to stay below 20% on a sustained basis.

## Key indicators

Exhibit 2

### Vibra Energia S.A.

#### Vibra Energia S.A.

(In BRL billions)	2020	2021	2022	2023	2024	2025E	2026E
Revenue	81.5	130.1	181.4	162.9	172.2	182.9	181.6
Debt / EBITDA	4.0x	2.8x	3.6x	1.9x	1.9x	3.5x	3.0x
RCF / Net Debt	10.5%	15.3%	23.6%	41.9%	14.3%	17.0%	25.0%
(EBITDA - CAPEX) / Interest Expense	3.9x	7.5x	3.3x	5.2x	6.9x	2.4x	2.8x

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

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

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

Vibra Energia S.A., headquartered in Rio de Janeiro, is the largest fuel distributor in Brazil, with a market share of around 22% in terms of fuel sales. It is a publicly held corporation, with shares listed on [B3 S.A. - Brasil, Bolsa, Balcão](#) (Baa3 stable). Until July 2019, Vibra was a state-owned company controlled by [Petroleo Brasileiro S.A. - PETROBRAS](#) (Petrobras, Ba1 stable). Vibra generated revenue of BRL183 billion in the 12 months until September 2025, with an EBITDA of BRL6.6 billion, a 3.6% margin.

## Detailed credit considerations

### Acquisition of Comerc diversifies cash flow

In January 2025, Vibra completed the acquisition of an additional 50.4% stake in Comerc Energia S.A. (Comerc) for BRL3.2 billion. Before this, Vibra already retained a 48.7% stake in the holding company. Pro forma to the acquisition gross leverage peaked at 3.8x in the 12 months ended June 2025, but we expect it to decline to 3.0x - 3.5x over the next 12-18 months as Vibra extracts synergies from the acquisition and amortizes debt.

Comerc is a holding company with subsidiaries engaged in energy trading, as well as centralized and distributed energy generation. We expect Comerc to contribute with BRL1.0 billion - 1.2 billion in EBITDA in the next years. Currently, the company has an installed capacity of 2.2 GWh (gigawatts/hour) of solar and wind projects.

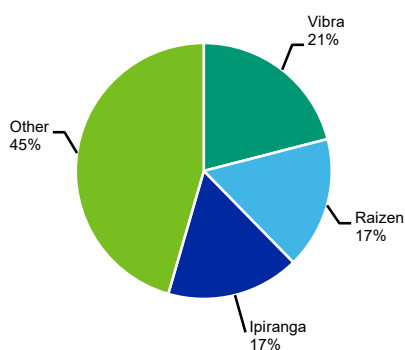
Additionally, Vibra has diversified its business portfolio, through a partnership with Copersucar S.A., which represents a cooperative of 34 ethanol producing mills; a cooperation agreement with ZEG Biogas; and the acquisition of Targus (now Vibra Comercializadora).

### Largest fuel distributor in the Brazilian market with a nationwide logistics market presence

Along with the second- and third-largest fuel distributors, [Raizen S.A.](#) (Ba1 RUR DNG) and Ipiranga Produtos de Petroleo S.A. (Ipiranga, a wholly owned subsidiary of [Ultrapar Participacoes S.A.](#) [Ba1 positive]), respectively, Vibra sells around 60% of all fuels, including gasoline, ethanol, diesel and aviation fuel, in Brazil annually. As of June 2025, Vibra had 7,922 gas stations under the BR brand name and over 1,500 convenience stores. The company has the largest logistics market presence in Brazil, including 92 fuel storage bases, 12 lubricant deposits and 92 airport fuel stations, servicing all Brazilian regions.

Exhibit 3

**Vibra holds a leadership position in Brazil along with Raizen and Ipiranga**  
Percentage share in the volume of fuels sold in service stations (LTM Sep-25)

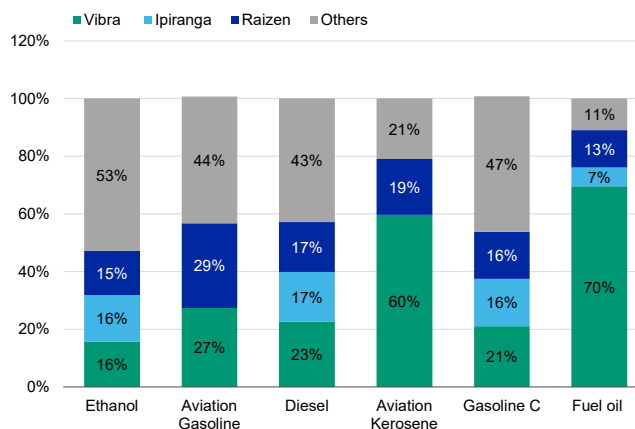


This includes ethanol, gasoline and diesel. LTM = Last 12 months.

Sources: ANP (National Petroleum Agency), Sindicom, Abegas (Brazilian Association of Piped Gas Distributors) and Moody's Ratings

Exhibit 4

**Vibra is the sales leader in fuel oil, aviation fuel, diesel and gasoline**  
Percentage share in the volume of fuels sold (LTM Sep-25)



LTM = Last 12 months.

Source: ANP (National Petroleum Agency)

### Strong competitive position in diverse fuel distribution segments and well-known brand names

Vibra's main reporting segments are Retail Network, Large Customers, Aviation and Special Products (see [Petrobras Distribuidora S.A., New Issuer](#), 16 January 2020). The Retail Network segment accounts for 61% of the company's revenue and comprises the BR fuel

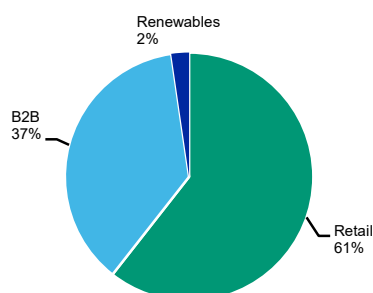
stations, BR Mania convenience stores and Lubrax service centers. The Large Customers segment accounts for 37% of its revenue and services, with more than 10,000 customers in diverse sectors such as steel, mining, pulp and paper, cement, transport, energy, agribusiness and transporter-reseller-retailers (TRRs<sup>1</sup>). The Aviation and Special Products businesses are consolidated under the Large Customers segment. The Aviation business, which accounts for 11% of revenue, has 92 fuel stations in airports. The Special Products business — comprising mainly lubricants, coke, chemicals and energy — has better margins despite lower volumes.

Following its privatization, Vibra entered a licensing deal to continue to use the Petrobras brands (BR, BR Mania, Lubrax, Premmia and others) for the next 10 years, which is renewable for another 10 years. The premature loss of the right to use the well-known Petrobras brands would be credit negative because of the importance of branding in the distribution business and the strong recognition of the brands associated with Petrobras among the retail public. Along with scale and logistics, brand strength is one of the three main drivers of the fuel distribution business in Brazil.

Exhibit 5

**Retail is the major contributor to revenue...**

Revenue breakdown by operational segment (LTM Sep-25)

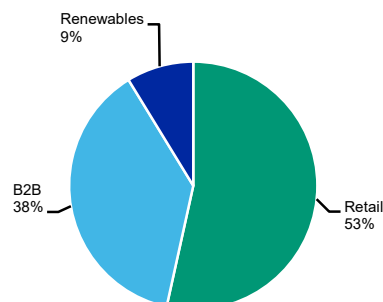


LTM = Last 12 months.  
Source: Company filings

Exhibit 6

**...and to EBITDA**

EBITDA breakdown by operational segment (LTM Sep-25)

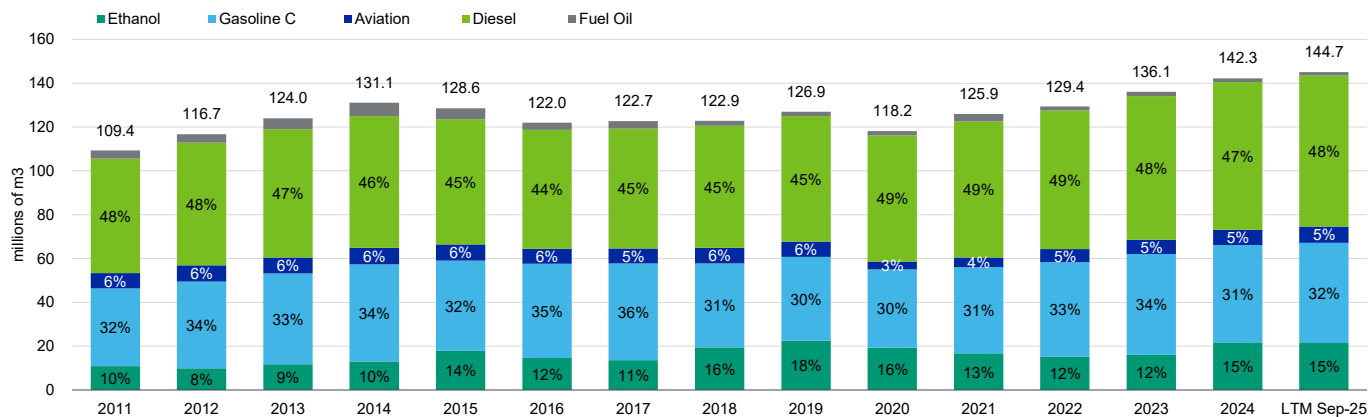


LTM = Last 12 months.  
Source: Company filings

**Fuel distribution in Brazil presents some stability but also good growth prospects**

Fuel distribution and the correlated retail business offer good growth prospects in Brazil. Vibra will maintain its leadership position in the coming years as the gradual improvement in the macroeconomic environment helps boost vehicle sales, income levels, and agricultural and industrial activity.

Exhibit 7

**Fuel sales in Brazil**

Not including liquefied petroleum gas. LTM = Last 12 months.  
Source: ANP (National Petroleum Agency)

The consumption of gasoline and ethanol (lightweight vehicle fuels), which accounted for 37% of Vibra's sales volumes in 2024, is tied to the auto fleet in Brazil, which continues to increase. The lack of a well-developed public transportation system in Brazil, the still-low penetration of light vehicles in the country, the improvement in the population's standard of living and the low scrapping rates offer further long-term growth opportunities for companies in this sector. However, diesel consumption is linked to the level of economic activity and is highly correlated to GDP growth. In 2025, we expect the combined volume of gasoline and ethanol to advance around 2%, with a modest growth in gasoline volumes. We expect diesel volumes to advance 2.5%. In the next decade, diesel demand will be supported by the large agricultural sector in Brazil and our expectation of an increase in agricultural production, including soybean and corn harvests.

Although we also expect lightweight vehicle fuel volumes to continue to grow in the next decade, supported especially by demand for ethanol, a shift to a low-carbon environment poses a risk to this growth over the next 10 years. For more developed economies, including the US and Canada, we expect a decline in fuel demand over the next decade as environmental regulations improve fuel efficiency and there is an increased penetration of alternative fuel vehicles.

Currently, because of the strong biofuel infrastructure and ethanol participation in the Brazilian fuel matrix, the flex-fuel (run-on gasoline, ethanol or a blend of both) fleet in Brazil will continue to grow in the next decade, even as alternative fuel vehicles (100% electric, hybrid and plug-in hybrid) increase their participation. As the fuel distribution business in Brazil evolves, with a greater participation of electric and hybrid vehicles, diversification will increase its importance for the credit quality of the company.

#### Diffused ownership corporation

Vibra's shareholding structure is composed of Nova Futura (10.14%), Dynamo (10.0%), Samambaia Master Fundo (8.3% stake), Previ (5.2%), BlackRock, Inc. (5.2%), Lazard and other minority shareholders (56.1%). In April 2024, Vibra's shareholders approved a new board composition. It comprises eight members, all of which are independent. These board members are from diverse backgrounds, with well-known track records. In April 2022, Sergio Rial was appointed as chairman and was reelected in April 2024. He was formerly chief executive officer and vice chair of the board of [Banco Santander \(Brasil\) S.A](#) (Baa3 stable)<sup>2</sup>.

In 2019, Vibra accelerated its transition from a state-owned company to a publicly traded corporation. Therefore, it does not face the constraints of a state-owned company. Until December 2017, Vibra was 100% owned by Petrobras; following an IPO, the controlling shareholder reduced its stake to 71.3%. In a follow-on offering in July 2019, Petrobras' stake declined to 37.5%. In June 2021, Petrobras announced the sale of its remaining 37.5% stake in Vibra. The status of a privately owned company supports governance and operational improvements that can help the company's competitive position and agility in decision-making.

#### ESG considerations

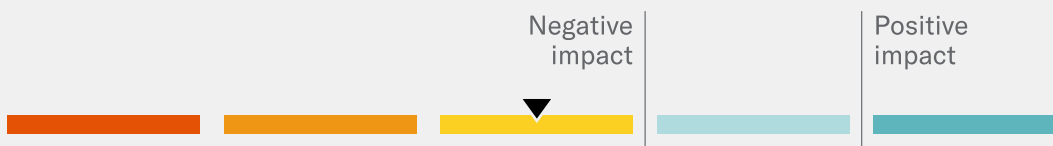
##### Vibra Energia S.A.'s ESG credit impact score is CIS-3

Exhibit 8

##### ESG credit impact score

# CIS-3

Score



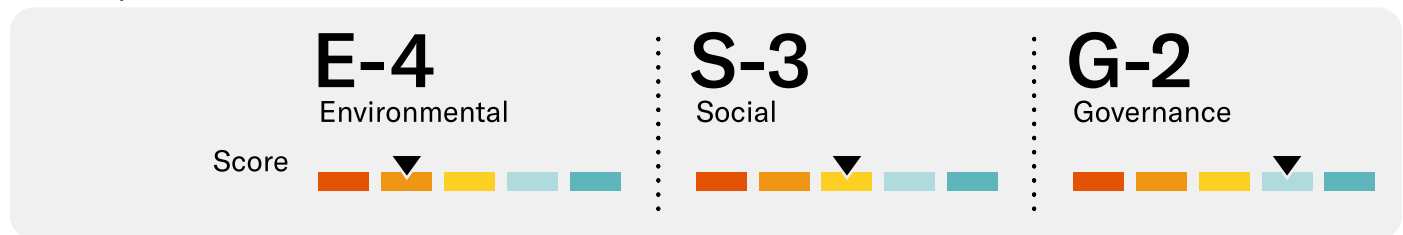
ESG considerations have a limited impact on the current rating, with potential for greater negative impact over time.

Source: Moody's Ratings

Fuel distributors present a high environmental and social risk exposure concerning carbon transition and climate risk, but distributors in Brazil will observe a benign volume trend because of the increasing use of renewable fuels in the local fuel matrix. We also consider Vibra conservative financial policies benefitting the company's sustainability.

Exhibit 9

## ESG issuer profile scores



Source: Moody's Ratings

## Environmental

The widespread and increasing usage of ethanol in Brazil mitigates carbon transition risk seen in other regions, but it leaves Brazilian fuel distributors more exposed to natural capital risk because of the nature of ethanol as an agricultural commodity derived from sugarcane and corn.

## Social

Vibra social exposure is driven by demographic and societal trends relating to carbon transition. Carbon transition pressure on Brazilian fuel distributors will be lower and more gradual than in other regions because the increase usage of ethanol will help to reduce auto fuel carbon footprint and delay a meaningful adoption of electric vehicles.

## Governance

Vibra has conservative financial policies and diffuse ownership where the largest shareholder holds less than 10% of total shares and board is at least 50% comprised of independent members.

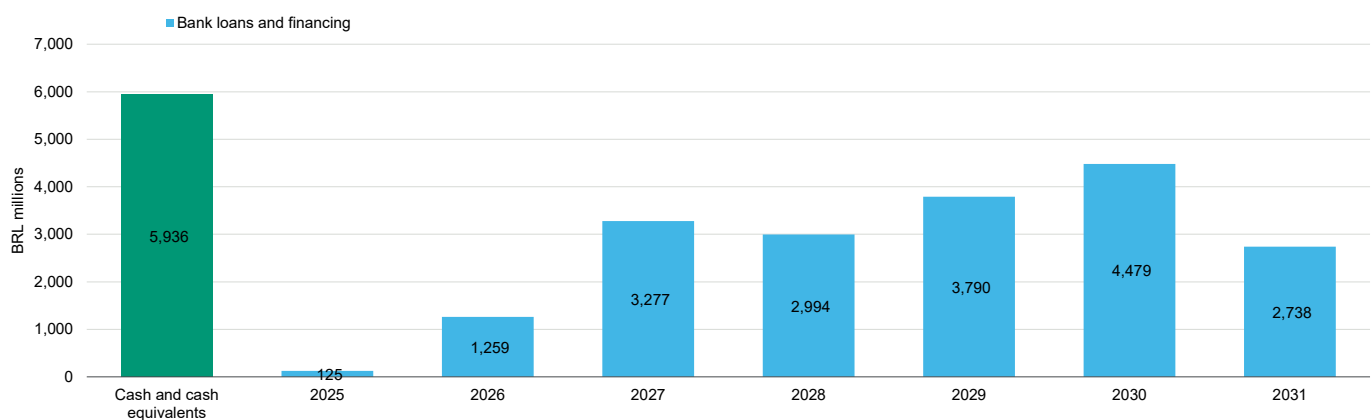
ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

## Liquidity analysis

As of September 2025, Vibra reported BRL5.9 billion in cash and cash equivalents, compared with BRL1.4 billion due in 2025 and 2026. Upcoming maturities for the following two years correspond mostly to Comerc's debt, consolidated at the acquisition. Vibra's debt amortization profile is comfortable, with an average term of 4.5 years. Average cost of debt is close to 15.7% (CDI+0.73%). We expect Vibra to maintain conservative liquidity.

Exhibit 10

## Vibra's debt amortization schedule



As of 30 September 2025.

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™

In September 2025, Vibra's Moody's-adjusted debt was BRL25.9 billion, compared with BRL21.7 billion in December 2024. The increase in debt is because of the consolidation of Comerc's debt, which brought about BRL6 billion in additional debt. Vibra's Moody's-adjusted debt includes BRL24.2 billion in bank loans and financing (including BRL5.6 billion in foreign-currency loans, fully hedged), BRL0.9 billion from unfunded defined benefit pension plan liabilities (see [Vibra S.A., Update to Credit Analysis](#), 24 June 2022) and BRL36 million in leasing. The company's adjusted gross leverage was 3.9x in September 2025. We expect the company to maintain its leverage around 3.0x to 3.5x over the next 12-18 months as it extracts synergies from Comerc's acquisition and repays debt.

In 2023 and 2024, Vibra's dividend payout represented between 26% and 33% of its net income. Its dividend payments are likely to remain aggressive, but we do not expect them to strain liquidity or prevent neutral-to-positive FCF. The company's dividend policy mandates the distribution of at least 40% of its net income.

## Methodology and scorecard

Vibra's scorecard-indicated outcome under our Retail Industry rating methodology maps to Ba1, with leverage metrics impacted by the consolidation of Comerc. In our 12-18 month forward view the indicated outcome is Baa3, one notch above the attributed rating of Ba1. The current rating reflects the expectation of higher-than-normal gross leverage over the next 12-18 months since Vibra has acquired and consolidated Comerc's operations and debt.

Exhibit 11

### Rating factors

Vibra Energia S.A.

Retail and Apparel Scorecard	Current As Of September 2025		12-18 Month Forward View As of November 2025	
	Measure	Score	Measure	Score
<b>Factor 1: Scale (15%)</b>				
a) Revenue (USD Billion)	32.1	A	32.4 - 32.7	A
<b>Factor 2: Business Profile (20%)</b>				
a) Market Characteristics	Baa	Baa	Baa	Baa
b) Market Position	Baa	Baa	Baa	Baa
<b>Factor 3: Profitability And Efficiency (10%)</b>				
a) Revenue & Earnings Stability	Baa	Baa	Baa	Baa
<b>Factor 4: Leverage And Coverage (40%)</b>				
a) Debt / EBITDA	3.9x	Ba	3.0x - 3.5x	Ba
b) RCF / Net Debt	11%	B	17.0% - 25.0%	Baa
c) (EBITDA - CAPEX) / Interest Expense	1.9x	B	2.4x - 2.8x	Ba
<b>Factor 5: Financial Policy (15%)</b>				
a) Financial Policy	Ba	Ba	Ba	Ba
<b>Rating:</b>				
a) Scorecard-Indicated Outcome		Ba1		Baa3
b) Actual Rating Assigned				Ba1

Source: Moody's Ratings



## Appendix

Exhibit 12

### Peer comparison

Vibra Energia S.A.

	Vibra Energia S.A.			Raizen S.A.			Ultrapar Participacoes S.A.		
	Ba1 Stable			Baa3 Stable			Ba1 Positive		
(in \$ millions)	FY Dec-23	FY Dec-24	LTM Sep-25	FY Mar-24	FY Mar-25	LTM Jun-25	FY Dec-23	FY Dec-24	LTM Jun-25
Revenue	32,648	32,107	32,148	44,684	45,613	44,000	25,255	24,881	24,146
Operating Profit	1,375	1,703	707	1,658	808	340	915	946	977
EBITDA	1,815	2,180	1,979	3,667	2,182	1,650	1,378	1,361	1,456
Total Debt	3,469	3,509	4,857	9,422	11,945	13,274	2,769	2,574	3,565
Cash & Cash Equiv.	1,372	1,696	1,118	2,961	3,792	2,674	1,280	749	733
EBIT / Int. Exp.	5.0x	6.9x	1.9x	1.6x	0.4x	-0.1x	2.9x	3.6x	3.6x
Debt / EBITDA	1.9x	1.9x	3.9x	2.6x	5.6x	7.7x	2.0x	2.2x	2.3x
RCF / Net Debt	41.9%	14.3%	11.0%	30.5%	14.5%	12.5%	62.1%	39.6%	27.1%
FCF / Debt	22.5%	1.0%	6.8%	1.7%	-18.7%	-19.9%	4.0%	-2.7%	-3.9%

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 13

### Moody's-adjusted debt reconciliation

Vibra Energia S.A.

(in BRL millions)	2020	2021	2022	2023	2024	LTM Sep-25
<b>As reported debt</b>	<b>8,553</b>	<b>13,833</b>	<b>17,391</b>	<b>15,518</b>	<b>20,808</b>	<b>25,419</b>
Pensions	1,687	848	913	1,334	869	869
Contingent Consideration	-	-	672	-	-	-
<b>Moody's-adjusted debt</b>	<b>10,240</b>	<b>14,681</b>	<b>18,976</b>	<b>16,852</b>	<b>21,677</b>	<b>26,288</b>

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 14

### Moody's-adjusted EBITDA reconciliation

Vibra Energia S.A.

(in BRL millions)	2020	2021	2022	2023	2024	LTM Sep-25
<b>As reported EBITDA</b>	<b>6,404</b>	<b>5,078</b>	<b>4,443</b>	<b>9,255</b>	<b>11,229</b>	<b>11,256</b>
Pensions	(17)	(150)	234	101	121	(18)
Unusual	(3,819)	273	615	(295)	346	30
<b>Moody's-adjusted EBITDA</b>	<b>2,568</b>	<b>5,201</b>	<b>5,292</b>	<b>9,061</b>	<b>11,696</b>	<b>11,320</b>

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™

Ratings

Exhibit 15

Category	Moody's Rating
VIBRA ENERGIA S.A.	
Outlook	Stable
Corporate Family Rating	Ba1

Source: Moody's Ratings

Endnotes

- 1 TRRs are companies that buy from distributors and sell diesel directly to end customers, usually agricultural and industrial companies.
- 2 LT Bank Deposits - Foreign Currency.

© 2025 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 INVESTMENT OR FINANCIAL 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 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 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 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](http://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., and Moody's Local PA Clasificadora de Riesgo 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. 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 1461454

Contacts

Vitoria Flosi  
Ratings Associate  
vitoria.flosi@moody.com +55.11.3956.8713

CLIENT SERVICES

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