
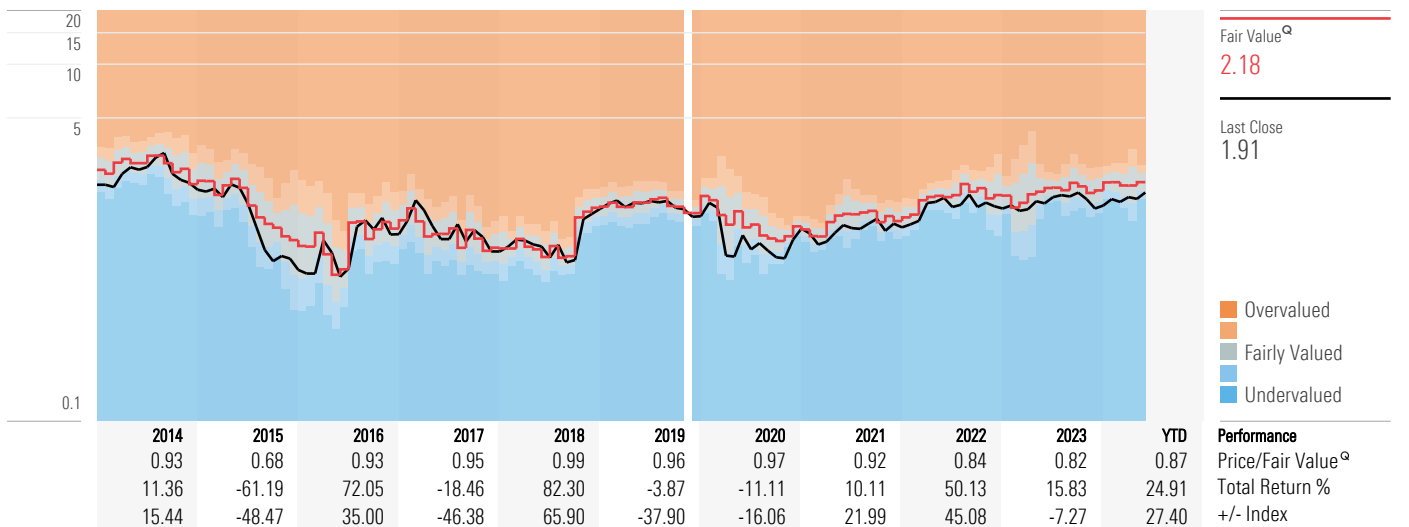


# Cia Energetica DE Minas Gerais - Cemig XCMIG ★★★ 8 May 2024, 22:39 UTC

|                                   |                                 |                                      |                                                                                                            |                                  |                   |                         |               |                         |
|-----------------------------------|---------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------|-------------------------|---------------|-------------------------|
| <b>Economic Moat</b> <sup>Q</sup> | <b>Uncertainty</b> <sup>Q</sup> | <b>Price/Fair Value</b> <sup>Q</sup> | <b>ESG Risk Rating Assessment</b> <sup>1</sup>                                                             | <b>Trailing Dividend Yield %</b> | <b>Market Cap</b> | <b>Investment Style</b> | <b>Sector</b> | <b>Industry</b>         |
| None                              | High                            | 0.9                                  | <br>1 May 2024 05:00, UTC | 11.60                            | 5.7216 Bil        | Mid Value               | Utilities     | Utilities - Diversified |



As of 8 May 2024 | Index: Morningstar Brazil GR BRL. Fair Value data as of 8 May 2024, 22:39 UTC.

<sup>1</sup>The ESG Risk Rating Assessment is a representation of Sustainalytics' ESG Risk Rating. Lee Davidson, Chief Analytics Officer for Morningstar, Inc, oversees the methodology that supports Quantitative Fair Value Estimates and Quantitative Star Ratings. Mr. Davidson is guided by the Morningstar, Inc. Code of Ethics in carrying out his responsibilities. For information regarding Conflicts of Interests, visit <http://global.morningstar.com/equitydisclosures>.

## Key Metrics as of 7 May 2024

| Metrics                | Value | Percentile in Sector |
|------------------------|-------|----------------------|
| Earnings Yield (%)     | 25.1  | 96.0                 |
| Sales Yield (%)        | 160.6 | 80.0                 |
| Book Value Yield (%)   | 82.6  | 64.0                 |
| Return on Assets (%)*  | 10.6  | 94.0                 |
| Revenue(Bil)*          | 7.3   | 77.0                 |
| Market Value (Bil)     | 6.2   | 71.0                 |
| Enterprise Value (Bil) | 7.6   | 65.0                 |
| EVMV Ratio             | 1.2   | 34.0                 |
| Volatility TTM (%)     | 21.6  | 41.0                 |
| Drawdown TTM (%)       | 21.3  | 44.0                 |
| Volume (Mil)           | 14.9  | 93.0                 |

\*31 Dec 2023

## Business Description

Cia Energetica DE Minas Gerais - Cemig Formerly Energy Company of Minas Gerais is a Brazilian power company that generates, transmits, and distributes electricity. As one of the largest power companies in Brazil, the firm operates across most Brazilian states and Chile. The company has various subsidiaries and operates chiefly through its generation, transmission, distribution, and gas segments. The majority of the company's revenue is derived from electricity sales to consumers. The company generates power primarily through hydroelectric resources and secondarily through thermal and wind resources.

## Valuation <sup>Q</sup> as of 8 May 2024

Morningstar affirms a 3-star quantitative rating for Cia Energetica DE Minas. We calculate this outcome using the company's underlying model-driven valuation and uncertainty scores.

The stock's last closing price was 1.89, a discount of 14.76% to its Quantitative Fair Value estimate of 2.22. This discount has ranged between 25.14% and 5.45% over the past year. The stock's price to fair value ratio is at the 66th percentile in our global equity coverage universe for this methodology and at the 56th percentile relative to its peers in the utilities sector.

Cia Energetica DE Minas furthermore holds a Very High quantitative uncertainty rating.

The company's quantitative star rating dates to after 05/02/2024, before which it was 4-star. Similarly, the firm's uncertainty rating changed from High to Very High after 05/01/2024.

We examine the financials and market statistics for Cia Energetica DE Minas to determine these ratings. Its earnings yield is 25.12% and its trailing 12-month maximum drawdown is 21.31%. These fall at the 95th and 33rd percentiles in the equity uni-

verse and at the 95th and 44th in the utilities sector, respectively.

## Economic Moat <sup>Q</sup> as of 8 May 2024

Quantitatively, we do not believe Cia Energetica DE Minas has an economic moat. Its moat score of 0.25 corresponds to the 18th percentile in the utilities sector. Furthermore, this rating has not changed over the past year, while the company's moat score fell from its maximum of 0.47 in this period (score of 1 indicates greatest economic moat).

The company also maintains a quantitative financial health rating of Moderate. Its score sits at the 57th percentile overall and the 71st percentile in the sector.


Examining the company's financials and market statistics, we find these ratings are principally driven by its book value yield and enterprise value-to-market value ratio. The book value yield is 82.62%, sitting at the 64th percentile in the utilities sector. The company's enterprise value-to-market value ratio is 1.23, corresponding to the 66th percentile in the equity coverage universe and the 34th percentile in the sector.

## Fundamentals as of 8 May 2024

Cia Energetica DE Minas maintains earnings per share of 2.62. The company further earns a return on invested capital of 18.89%. The shares offer a dividend yield of 12.59%. These values are calculated over a trailing 12-month period.

As of last market close, Cia Energetica DE Minas has a price-to-earnings ratio of 3.94, falling below the 6th percentile in its sector (where a lower percentile means a lower ratio) and ranging between 3.46 and 6.17 over the past year. The company's price-to-free cash flow ratio is 4.22, falling at the

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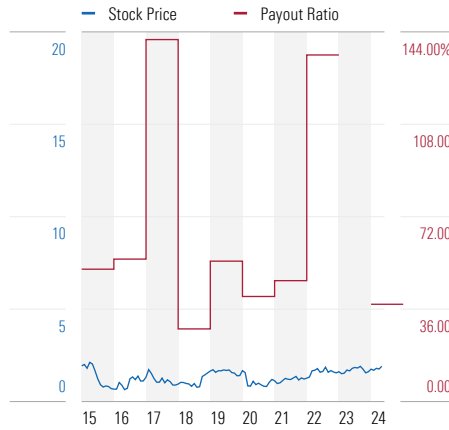
|                                   |                                 |                                      |                                                                                                            |                                  |                   |                         |               |                         |
|-----------------------------------|---------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------|-------------------------|---------------|-------------------------|
| <b>Economic Moat</b> <sup>Q</sup> | <b>Uncertainty</b> <sup>Q</sup> | <b>Price/Fair Value</b> <sup>Q</sup> | <b>ESG Risk Rating Assessment</b> <sup>1</sup>                                                             | <b>Trailing Dividend Yield %</b> | <b>Market Cap</b> | <b>Investment Style</b> | <b>Sector</b> | <b>Industry</b>         |
| None                              | High                            | 0.9                                  | <br>1 May 2024 05:00, UTC | 11.60                            | 5.7216 Bil        | Mid Value               | Utilities     | Utilities - Diversified |

## Earnings as of 7 May 2024

| Earnings           | %    | Percentile in Sector |
|--------------------|------|----------------------|
| Dividend Yield*    | 12.6 | 96.0                 |
| Payout Ratio*      | 37.9 | 29.0                 |
| Price to Earnings  | 3.9  | 6.0                  |
| Price to Cash Flow | 4.2  | 16.0                 |
| ROIC**             | 18.9 | 95.0                 |

\*30 Apr 2024  
\*\*31 Dec 2023

## Dividends as of 8 May 2024



## Valuation <sup>Q</sup> as of 8 May 2024

Fair Value <sup>Q</sup>  
**2.18**

Uncertainty <sup>Q</sup> :  
High

Last Close  
**1.91**

XCMIG is Undervalued at a 13% discount.

**Economic Moat** <sup>Q</sup>  
None

**Financial Health** <sup>Q</sup>  
Moderate

**1-Star Price** <sup>Q</sup>  
> 2.73

**5-Star Price** <sup>Q</sup>  
< 1.75

16th percentile in its sector and ranging between 3.09 and 13.17 over the past year.

### Contact

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<https://www.cemig.com.br>

## Financials as of 8 May 2024 (Fiscal Year End 31 Dec 2023)

|                           | 2014  | 2015   | 2016   | 2017   | 2018  | 2019   | 2020  | 2021  | 2022  | 2023   | YTD    | Fiscal                    |
|---------------------------|-------|--------|--------|--------|-------|--------|-------|-------|-------|--------|--------|---------------------------|
| Revenue (Bil)             | 20    | 22     | 19     | 22     | 22    | 25     | 25    | 34    | 34    | 37     | 37     | Revenue (Bil)             |
| Operating Income (Mil)    | 5,109 | 3,497  | 2,781  | 2,894  | 2,879 | 3,012  | 4,298 | 5,753 | 3,664 | 6,429  | 6,429  | Operating Income (Mil)    |
| Operating Margin (%)      | 26.07 | 15.99  | 14.81  | 13.33  | 12.91 | 11.82  | 17.04 | 17.1  | 10.63 | 17.45  | 17.45  | Operating Margin (%)      |
| Net Income (Mil)          | 3,137 | 2,469  | 335    | 1,001  | 1,722 | 3,194  | 2,864 | 3,751 | 4,092 | 5,764  | 5,764  | Net Income (Mil)          |
| Diluted Earnings/Share    | 1.65  | 1.30   | 0.05   | 0.25   | 0.70  | 1.45   | 1.30  | 1.70  | 1.86  | 2.62   | 2.62   | Diluted Earnings/Share    |
| Operating Cash Flow (Mil) | 3,734 | 3,008  | 1,213  | 580    | 1,008 | 2,036  | 8,607 | 3,685 | 6,544 | 6,646  | 6,646  | Operating Cash Flow (Mil) |
| Capital Spending (Mil)    | -920  | -1,083 | -1,141 | -1,117 | -878  | -1,002 | -173  | -233  | -292  | -1,264 | -1,264 | Capital Spending (Mil)    |
| Free Cash Flow (Mil)      | 2,814 | 1,925  | 72     | -537   | 130   | 1,034  | 8,434 | 3,452 | 6,252 | 5,382  | 5,382  | Free Cash Flow (Mil)      |
| Avg Shares Outstand(Mil)  | 1,899 | 1,899  | 1,899  | 2,201  | 2,454 | 2,203  | 2,203 | 2,201 | 2,201 | 2,201  | 2,201  | Avg Shares Outstand(Mil)  |

## Valuation as of 8 May 2024

|                               | 2014 | 2015 | 2016 | 2017  | 2018  | 2019 | 2020  | 2021 | 2022 | 2023 | Current | Calendar                      |
|-------------------------------|------|------|------|-------|-------|------|-------|------|------|------|---------|-------------------------------|
| Price/Fair Value <sup>Q</sup> | 0.93 | 0.68 | 0.93 | 0.95  | 0.99  | 0.96 | 0.97  | 0.92 | 0.84 | 0.82 | 0.87    | Price/Fair Value <sup>Q</sup> |
| Price/Sales                   | 1.04 | 0.35 | 0.50 | 0.34  | 0.90  | 0.78 | 0.90  | 0.69 | 0.55 | 0.53 | 0.62    | Price/Sales                   |
| Price/Earnings                | 3.67 | 1.52 | 7.52 | 18.38 | 24.86 | 8.50 | 17.27 | 4.44 | 6.74 | 3.65 | 3.99    | Price/Earnings                |
| Price/Cash Flow               | 4.33 | 2.69 | 3.11 | 2.19  | —     | 9.09 | 4.25  | 2.65 | 5.15 | 3.01 | 3.46    | Price/Cash Flow               |
| Price/Book                    | 1.27 | 0.54 | 0.68 | 0.76  | 1.33  | 1.18 | 1.30  | 1.14 | 1.23 | 1.02 | 1.21    | Price/Book                    |

## Operating Performance as of 8 May 2024 (Fiscal Year End 31 Dec 2023)

|                         | 2014  | 2015  | 2016 | 2017 | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | Q3   | Fiscal (%)              |
|-------------------------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|------|-------------------------|
| Return on Assets        | 9.68  | 6.51  | 0.81 | 2.38 | 3.33  | 5.7   | 5.51  | 7.07  | 7.74  | 10.61 | 3.39 | Return on Assets        |
| Return on Equity        | 26.23 | 20.35 | 2.59 | 7.35 | 11.76 | 20.53 | 17.17 | 20.31 | 19.85 | 24.83 | 7.68 | Return on Equity        |
| Rtn on Invested Capital | 16.46 | 13.53 | 7.76 | 7.02 | 8.13  | 12.34 | 10.93 | 14.93 | 18.31 | 18.89 | 5.66 | Rtn on Invested Capital |

## Dividends as of 8 May 2024

|                         | 2014  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Current | Calendar (%)            |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|---------|-------------------------|
| Dividend Per Share      | 1.35  | 0.22 | 0.36 | 0.06 | 0.33 | 0.37 | 0.32 | 0.66 | 1.51 | 0.99 | 0.22    | Dividend Per Share      |
| Trailing Dividend Yield | 22.03 | 7.3  | 9.18 | 6.59 | 1.07 | 1.56 | 1.98 | 8.34 | 7.23 | —    | 11.6    | Trailing Dividend Yield |
| Buyback Yield           | —     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —       | Buyback Yield           |

# Appendix

**Economic Moat** <sup>®</sup>History as of 8 May 2024 (No Moat: 0.00-0.70, Narrow Moat: 0.70-0.99, Wide Moat: 0.99-1.00)

| Year | January | February | March | April | May  | June | July | August | September | October | November | December |
|------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|
| 2024 | 0.18    | 0.22     | 0.13  | 0.27  | 0.21 | —    | —    | —      | —         | —       | —        | —        |
| 2023 | 0.17    | 0.30     | 0.33  | 0.23  | 0.21 | 0.17 | 0.15 | 0.16   | 0.17      | 0.14    | 0.22     | 0.16     |
| 2022 | 0.06    | 0.14     | 0.12  | 0.11  | 0.11 | 0.14 | 0.50 | 0.44   | 0.14      | 0.17    | 0.14     | 0.28     |
| 2021 | 0.20    | 0.03     | 0.03  | 0.07  | 0.08 | 0.03 | 0.03 | 0.20   | 0.11      | 0.14    | 0.13     | 0.04     |
| 2020 | 0.42    | 0.27     | 0.21  | 0.20  | 0.14 | 0.13 | 0.25 | 0.09   | 0.14      | 0.02    | 0.05     | 0.15     |
| 2019 | 0.20    | 0.37     | 0.12  | 0.06  | 0.28 | 0.46 | 0.17 | 0.18   | 0.06      | 0.05    | 0.24     | 0.14     |

## Quantitative Equity Report Overview

The quantitative report on equities consists of data, statistics and quantitative equity ratings on equity securities. Morningstar, Inc.'s quantitative equity ratings are forward looking and are generated by a statistical model that is based on Morningstar Inc.'s analyst-driven equity ratings and quantitative statistics. Given the nature of the quantitative report and the quantitative ratings, there is no one analyst in which a given report is attributed to; however, Mr. Lee Davidson, Head of Quantitative Research for Morningstar, Inc., is responsible for overseeing the methodology that supports the quantitative equity ratings used in this report. As an employee of Morningstar, Inc., Mr. Davidson is guided by Morningstar, Inc.'s Code of Ethics and Personal Securities Trading Policy in carrying out his responsibilities.

### Quantitative Equity Ratings

Morningstar's quantitative equity ratings consist of: (i) Quantitative Fair Value Estimate, (ii) Quantitative Star Rating, (iii) Quantitative Uncertainty, (iv) Quantitative Economic Moat, and (v) Quantitative Financial Health (collectively the "Quantitative Ratings").

The Quantitative Ratings are calculated daily and derived from the analyst-driven ratings of a company's peers as determined by statistical algorithms. Morningstar, Inc. ("Morningstar", "we", "our") calculates Quantitative Ratings for companies whether or not it already provides analyst ratings and qualitative coverage. In some cases, the Quantitative Ratings may differ from the analyst ratings because a company's analyst-driven ratings can significantly differ from other companies in its peer group.

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ii. **Quantitative Economic Moat:** Intended to describe the strength of a firm's competitive position. It is calculated using an algorithm designed to predict the Economic Moat rating a Morningstar analyst would assign to the stock. The rating is expressed as Narrow, Wide, or None.

**Narrow** – assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 70% but less than 99%.

**Wide** – assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 99%.

**None** – assigned when the probability of an analyst receiving a "Wide Moat" rating by an analyst is less than 70%.

iii. **Quantitative Star Rating:** Intended to be the summary rating based on the combination of our Quantitative Fair Value Estimate, current market price, Quantitative Uncertainty Rating, and momentum. The rating is expressed as One-Star, Two-Star, Three-Star, Four-Star, and Five-Star.

★ – the stock is overvalued with a reasonable margin of safety.

*Log (Quant FVE/Price) < -1\*Quantitative Uncertainty*

*Micro-Caps: Log (Quant FVE/Price) < -1.5\*Quantitative Uncertainty*

★★ – the stock is somewhat overvalued.

*Log (Quant FVE/Price) between (-1\*Quantitative Uncertainty, -0.5\*Quantitative Uncertainty)*

*Micro-Caps: Log (Quant FVE/Price) between (-1.5\*Quantitative Uncertainty, -0.75\*Quantitative Uncertainty)*

★★★ – the stock is approximately fairly valued.

*Log (Quant FVE/Price) between (-0.5\*Quantitative Uncertainty, 0.5\*Quantitative Uncertainty)*

*Micro-Caps: Log (Quant FVE/Price) between (-0.75\*Quantitative Uncertainty, 0.75\*Quantitative Uncertainty)*

★★★★ – the stock is somewhat undervalued.

*Log (Quant FVE/Price) between (0.5\*Quantitative Uncertainty, 1\*Quantitative*

*Uncertainty)*

*Micro-Caps: Log (Quant FVE/Price) between (0.75\*Quantitative Uncertainty, 1.5\*Quantitative Uncertainty)*

★★★★★ – the stock is undervalued with a reasonable margin of safety.

*Log (Quant FVE/Price) > 1\*Quantitative Uncertainty*

*Micro-Caps: Log (Quant FVE/Price) > 1.5\*Quantitative Uncertainty*

After the initial calculation for the star rating, there is a final filtering step based on the momentum of the company. We rank the companies based on their 12-1 month momentum, then restrict those below the 30th percentile to a maximum of 3 stars.

iv. **Quantitative Uncertainty:** Intended to represent Morningstar's level of uncertainty about the accuracy of the Quantitative Fair Value Estimate. Generally, the lower the Quantitative Uncertainty, the narrower the potential range of outcomes for that particular company. The rating is expressed as Low, Medium, High, Very High, and Extreme.

**Low** – the interquartile range for possible fair values is less than 10%

**Medium** – the interquartile range for possible fair values is less than 15% but greater than 10%

**High** – the interquartile range for possible fair values is less than 35% but greater than 15%

**Very High** – the interquartile range for possible fair values is less than 80% but greater than 35%

**Extreme** – the interquartile range for possible fair values is greater than 80%

v. **Quantitative Financial Health:** Intended to reflect the probability that a firm will face financial distress in the near future. The calculation uses a predictive model designed to anticipate when a company may default on its financial obligations. The rating is expressed as Weak, Moderate, and Strong.

**Weak** – assigned when Quantitative Financial Health < 0.2

**Moderate** – assigned when Quantitative Financial Health is between 0.2 and 0.7

**Strong** – assigned when Quantitative Financial Health > 0.7

### Other Definitions

i. **Last Close** – Price of the stock as of the close of the market of the last trading day before date of the report.

ii. **Quantitative Valuation** – Using the below terms, intended to denote the relationship between the security's **Last Price** and Morningstar's quantitative fair value estimate for that security.

**Undervalued – Last Price** is below Morningstar's quantitative fair value estimate.

**Fairly Valued – Last Price** is in line with Morningstar's quantitative fair value estimate.

**Fairly Valued – Last Price** is in line with Morningstar's quantitative fair value estimate.

**Overvalued – Last Price** is above Morningstar's quantitative fair value estimate.

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Sustainalytics analyzes over 1,300 data points to assess a company's exposure to and management of ESG risks. In other words, ESG Risk Ratings measures a company's unmanaged ESG Risks represented as a quantitative score. Unmanaged Risk is measured on an open-ended scale starting at zero (no risk) with lower scores representing less unmanaged risk and, for 95% of cases, the unmanaged ESG Risk score is below 50.

Based on their quantitative scores, companies are grouped into one of five Risk Categories (negligible, low, medium, high, severe). These risk categories are absolute, meaning that a 'high risk' assessment reflects a comparable degree

of unmanaged ESG risk across all subindustries covered.

The ESG Risk Rating Assessment is a visual representation of Sustainalytics ESG Risk Categories on a 1 to 5 scale. Companies with Negligible Risk = 5 Globes, Low Risk = 4, Medium Risk = 3 Globes, High Risk = 2 Globes, Severe Risk = 1 Globe. For more information, please visit [sustainalytics.com/esg-ratings/](https://sustainalytics.com/esg-ratings/)

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