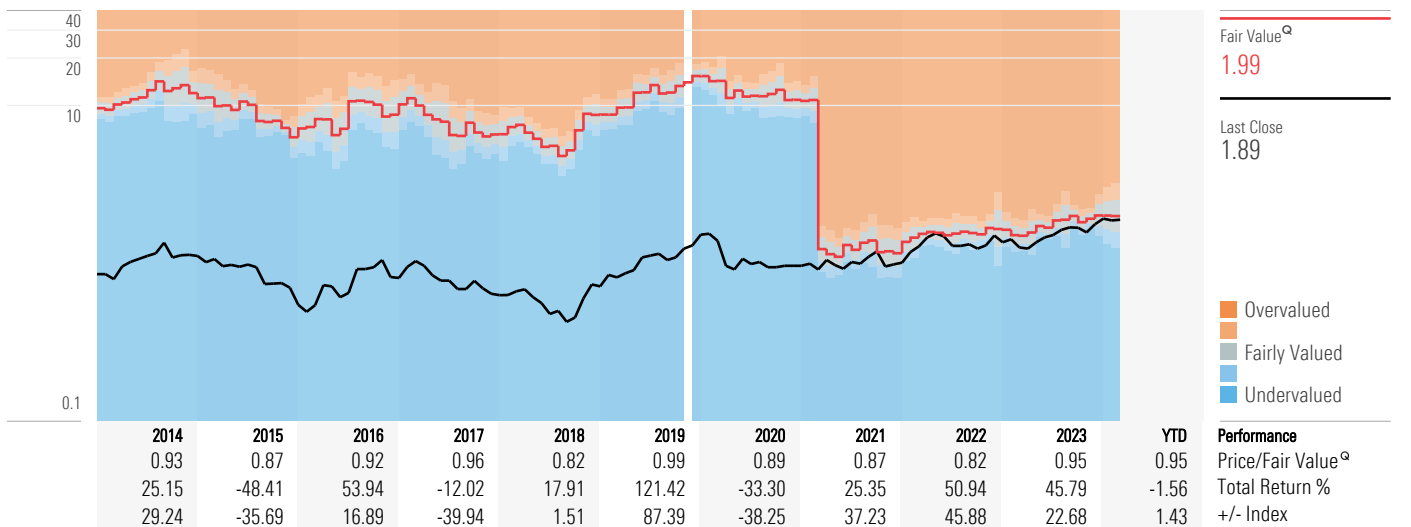


# Cia Paranaense De Energia Copel Class B **XCOP** ★★★ Q 23 Feb 2024, 23:33 UTC

<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	Very High	0.9	7 Feb 2024 06:00, UTC	3.29	5.4949 Bil	Large Value	Utilities	Utilities - Diversified



As of 23 Feb 2024 | Index: Morningstar Brazil GR BRL. Fair Value data as of 23 Feb 2024, 23:33 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 16 Feb 2024

Metrics	Value	Percentile in Sector
Earnings Yield (%)	7.2	63.0
Sales Yield (%)	74.2	61.0
Book Value Yield (%)	76.5	59.0
Return on Assets (%)*	4.0	70.0
Revenue(Bil)*	4.5	71.0
Market Value (Bil)	5.9	72.0
Enterprise Value (Bil)	7.9	66.0
EVMV Ratio	1.3	42.0
Volatility TTM (%)	17.4	26.0
Drawdown TTM (%)	7.8	6.0
Volume (Mil)	16.4	94.0

\*30 Sep 2023

## Business Description

Cia Paranaense De Energia Copel is primarily involved in the production of power in the Brazilian state of Parana. Specifically, the company's operating segments include power generation and transmission, gas, power distribution, power sale, and Holding and Services. Most of the company's revenue is derived from the sale of electricity. It generates electricity through renewable energy sources such as hydroelectric, wind plants, and thermo-electric plants. The company was designed to allow Parana to manage the distribution of power and related services, so the state is a major shareholder.

## Valuation <sup>Q</sup> as of 23 Feb 2024

Morningstar maintains a 3-star quantitative star rating for Cia Paranaense De Energia, derived from the firm's valuation and uncertainty scores. The company's shares last closed at 1.91, below our quantitative fair value estimate of 2.05. These shares have traded between a 20.18% and 2.12% discount to their fair value estimate over the past year. In Morningstar's equity coverage universe for this methodology, the company's valuation rating lands at the 82nd percentile; in the utilities sector, the firm's score lies at the 86th percentile (meaning the shares are more undervalued than 86% of stocks in the sector).

Furthermore, Cia Paranaense De Energia maintains a quantitative valuation uncertainty rating of Very High.

The company has held this star rating since the previous rating of 4, which was last assigned on 11/24/2023. The uncertainty rating for Cia Paranaense De Energia has remained Very High since the previous rating of High, which was last assigned on 02/19/2024.

The key factors behind these ratings are the com-

pany's earnings yield and return on assets. The earnings yield is 7.16%, and its maximum return on assets is 4.14. The earnings yield falls at the 64th percentile in the utilities sector while the return on assets is at the 70th percentile. Over the past year, the company's earnings yield has been between 4.13% and 8.87%; its return on assets has ranged between 2.08 and 4.14.

## Economic Moat <sup>Q</sup> as of 23 Feb 2024

Morningstar maintains a quantitative moat rating of None on the company. The firm's quantitative moat score of 0.3 sits at the 28th percentile in the utilities sector. This is a decrease from 0.58, the maximum of its moat scores over the past year. The quantitative financial health rating for Cia Paranaense De Energia is Moderate. Its financial health score, termed Distance to Default, sits at the 64th percentile in the universe and 80th percentile in the sector.

The significant drivers of these ratings are the company's book value yield and enterprise value-to-market value ratio. The book value yield for Cia Paranaense De Energia is 76.56%, and its enterprise value-to-market value ratio is 1.34. They sit at the 59th and 71st percentile in the global equity universe, respectively.


## Fundamentals as of 23 Feb 2024

Cia Paranaense De Energia maintains earnings per share of 0.71. The company further earns a return on invested capital of 5.86%. The shares offer a dividend yield of 3.32%. These values are calculated over a trailing 12-month period.

As of last market close, Cia Paranaense De Energia has a price-to-earnings ratio of 13.99, falling below the 48th percentile in its sector (where a lower percentile means a lower ratio) and ranging between

# Cia Paranaense De Energia Copel Class B XCOP ★★★

Q 23 Feb 2024, 23:33 UTC

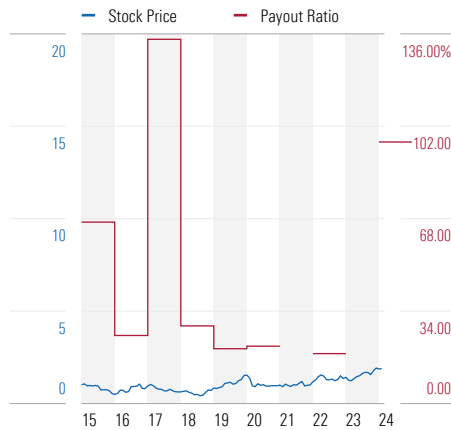
<b>Economic Moat</b> <sup>Q</sup>	<b>Uncertainty</b> <sup>Q</sup>	<b>Price/Fair Value</b> <sup>Q</sup>	<b>ESG Risk Rating Assessment</b> <sup>1</sup>	<b>Trailing Dividend Yield %</b>	<b>Market Cap</b>	<b>Investment Style</b>	<b>Sector</b>	<b>Industry</b>
None	Very High	0.9	 7 Feb 2024 06:00, UTC	3.29	5.4949 Bil	Large Value	Utilities	Utilities - Diversified

## Earnings as of 16 Feb 2024

Earnings	%	Percentile in Sector
Dividend Yield*	3.3	37.0
Payout Ratio*	96.2	83.0
Price to Earnings	13.9	50.0
Price to Cash Flow	13.0	57.0
ROIC**	5.9	57.0

\*31 Jan 2024  
\*\*30 Sep 2023

## Dividends as of 23 Feb 2024



## Valuation <sup>Q</sup> as of 23 Feb 2024



Fair Value <sup>Q</sup>  
**1.99**  
Uncertainty <sup>Q</sup> :  
Very High

Last Close  
**1.89**

XCOP is Undervalued at a 5% discount.

**Economic Moat** <sup>Q</sup>  
⊖ None  
**Financial Health** <sup>Q</sup>  
Moderate  
**1-Star Price** <sup>Q</sup>  
> 3.19  
**5-Star Price** <sup>Q</sup>  
< 1.24

11.43 and 23.69 over the past year. The company's price-to-free cash flow ratio is 13.03, falling at the 57th percentile in its sector and ranging between 6.1 and 13.17 over the past year.

## Contact

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<https://www.copel.com>

## Financials as of 23 Feb 2024 (Fiscal Year End 31 Dec 2023)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	Fiscal
Revenue (Bil)	14	15	13	14	15	16	19	24	22	—	16	Revenue (Bil)
Operating Income (Mil)	1,616	1,991	1,782	1,994	2,157	3,129	4,892	3,455	1,311	—	2,167	Operating Income (Mil)
Operating Margin (%)	11.54	13.32	13.6	14.22	14.82	19.72	26.25	14.4	5.98	—	13.62	Operating Margin (%)
Net Income (Mil)	1,206	1,110	896	1,034	1,407	1,990	3,904	4,953	1,112	—	1,521	Net Income (Mil)
Diluted Earnings/Share	0.42	0.39	0.31	0.36	0.49	0.69	1.36	1.61	0.39	—	0.51	Diluted Earnings/Share
Operating Cash Flow (Mil)	1,091	1,321	1,477	989	1,771	2,945	3,941	3,387	3,903	—	2,448	Operating Cash Flow (Mil)
Capital Spending (Mil)	-2,149	-1,721	-2,213	-2,012	-1,216	-373	-237	-343	-957	—	-154	Capital Spending (Mil)
Free Cash Flow (Mil)	-1,058	-401	-736	-1,023	555	2,572	3,704	3,044	2,945	—	2,294	Free Cash Flow (Mil)
Avg Shares Outstand(Mil)	2,737	2,737	2,737	2,737	2,737	2,737	2,737	2,737	2,737	—	2,983	Avg Shares Outstand(Mil)

## Valuation as of 23 Feb 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Current	Calendar
Price/Fair Value <sup>Q</sup>	0.93	0.87	0.92	0.96	0.82	0.99	0.89	0.87	0.82	0.95	0.95	Price/Fair Value <sup>Q</sup>
Price/Sales	0.92	0.41	0.58	0.54	0.57	1.21	0.96	0.78	0.92	1.36	1.34	Price/Sales
Price/Earnings	8.32	6.60	5.55	17.25	8.17	9.52	5.28	4.20	13.14	14.14	13.93	Price/Earnings
Price/Cash Flow	12.01	8.75	4.31	4.76	6.17	8.32	4.08	4.98	5.73	9.82	9.68	Price/Cash Flow
Price/Book	0.76	0.47	0.50	0.45	0.53	1.07	0.84	0.83	1.00	1.32	1.30	Price/Book

## Operating Performance as of 23 Feb 2024 (Fiscal Year End 31 Dec 2023)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Q3	Fiscal (%)
Return on Assets	4.95	4.37	3.23	3.25	4.07	5.36	9.18	10.28	2.24	—	0.81	Return on Assets
Return on Equity	9.28	8.65	6.59	6.87	9.01	11.96	20.98	23.7	5.21	—	1.96	Return on Equity
Rtn on Invested Capital	6.15	5.14	3.78	4.06	4.89	6.61	12.41	14.93	3.37	—	1.13	Rtn on Invested Capital

## Dividends as of 23 Feb 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Current	Calendar (%)
Dividend Per Share	0.24	0.09	0.13	0.30	0.12	0.28	0.31	1.31	0.89	0.33	0.13	Dividend Per Share
Trailing Dividend Yield	—	4.82	4.17	4.1	3.45	3.55	5.28	—	4.86	—	3.29	Trailing Dividend Yield
Buyback Yield	—	—	—	—	—	—	—	—	—	—	—	Buyback Yield

# Appendix

**Economic Moat** <sup>®</sup>History as of 23 Feb 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	0.34	0.32	—	—	—	—	—	—	—	—	—	—
2023	0.16	0.18	0.20	0.13	0.18	0.15	0.19	0.23	0.31	0.39	0.42	0.41
2022	0.18	0.23	0.30	0.26	0.21	0.39	0.66	0.64	0.66	0.33	0.25	0.29
2021	0.26	0.15	0.12	0.17	0.08	0.07	0.05	0.11	0.05	0.09	0.17	0.17
2020	0.69	0.32	0.24	0.31	0.63	0.62	0.69	0.21	0.25	0.39	0.30	0.20
2019	0.17	0.06	0.20	0.30	0.46	0.49	0.27	0.11	0.05	0.42	0.48	0.42

# 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.

i. **Quantitative Fair Value Estimate:** Intended to represent Morningstar's estimate of the per share dollar amount that a company's equity is worth today. Morningstar calculates the Quantitative Fair Value Estimate using a statistical model derived from the Fair Value Estimate Morningstar's equity analysts assign to companies. Please go to <http://global.morningstar.com/equitydisclosures> for information about Fair Value Estimate Morningstar's equity analysts assign to companies.

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

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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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