BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Tampa Electric Company.	)	**DOCKET NO. 20240026-EI**
In re: Petition for approval of 2023 Depreciation and Dismantlement Study, by Tampa Electric Company.	)	**DOCKET NO. 20230139-EI**
In re: Petition to implement 2024 Generation Base Rate Adjustment provisions in Paragraph 4 of the 2021 Stipulation and Settlement Agreement, by Tampa Electric Company.	)	**DOCKET NO. 20230090-EI**

Direct Testimony and Exhibits of

Christopher C. Walters

On behalf of

Federal Executive Agencies

June 6, 2024

BRUBAKER & ASSOCIATES, INC.

Project 11662

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Direct Testimony of Christopher C. Walters

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Christopher C. Walters. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q WHAT IS YOUR OCCUPATION?

A I am a consultant in the field of public utility regulation and a Principal of Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A This information is included in Appendix A to my testimony.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing in this proceeding on behalf of the Federal Executive Agencies ("FEA").

Q ARE YOU SPONSORING ANY EXHIBITS IN CONNECTION WITH THIS TESTIMONY?

A Yes. I am sponsoring Exhibit CCW-1 through Exhibit CCW-15.

Q WHAT IS THE SUBJECT OF YOUR DIRECT TESTIMONY?

A In my testimony I make several recommendations concerning Tampa Electric Company's ("Tampa Electric" or "Company") rate filing in this proceeding. These recommendations include the following:

I. SUMMARY

Q PLEASE SUMMARIZE YOUR TESTIMONY.

A In Section II of my testimony, I review and analyze the regulated utility industry's access to capital, credit rating trends, and outlooks, as well as the overall trend in the authorized ROE for utilities throughout the country. I conclude that the trend in authorized ROEs for utilities has declined over the last several years and has remained below 10.0% in more recent history. I also review the impact that the Federal Reserve's (the "Fed") monetary policy actions have had on the cost of capital.

In Section III of my testimony, I outline how a fair ROE should be established, provide an overview of the market's perception of the Company's investment risk, comment on the Company's proposed capital structure, and

present the analyses I relied on to estimate an appropriate ROE for Tampa Electric. Based on the results of several cost of equity estimation methods performed on publicly traded utility companies, I estimate the current fair market ROE for the Company to fall within the range of 9.20% to 10.00%. Based on my assessment of the Company's overall risk profile and the results of the analytical methods, I recommend Tampa Electric be awarded an ROE of 9.60%, which is the mid-point of my estimated range.

In Section IV of my testimony, I respond to Company witness Mr. D'Ascendis' estimate of the current market cost of equity for Tampa Electric. Mr. D'Ascendis recommends the Company be authorized an ROE of 11.50%. I demonstrate that his ROE recommendations are excessive and should be rejected.

Based on all of the foregoing, I request this Commission adopt the following recommendations:

1. Reject Tampa Electric's proposed ROE of 11.50% and instead adopt my recommended ROE of 9.60%, which is based on my assessment of the current and expected capital market environment, the Company's overall risk profile, and the results of several analytical methods which I have analyzed, to determine a fair and reasonable ROE to be authorized for Tampa Electric.

2. Reject Tampa Electric's proposed permanent equity ratio of 54.00% and instead authorize Tampa Electric an equity ratio of 52.0%. Should an equity ratio higher than 52.0% be authorized, an ROE in the lower half of my range would be warranted.

3. My recommendations produce an overall ratemaking ROR of 6.36% and would reduce Tampa Electric's Florida electric retail revenue requirements by approximately $134.7 million.

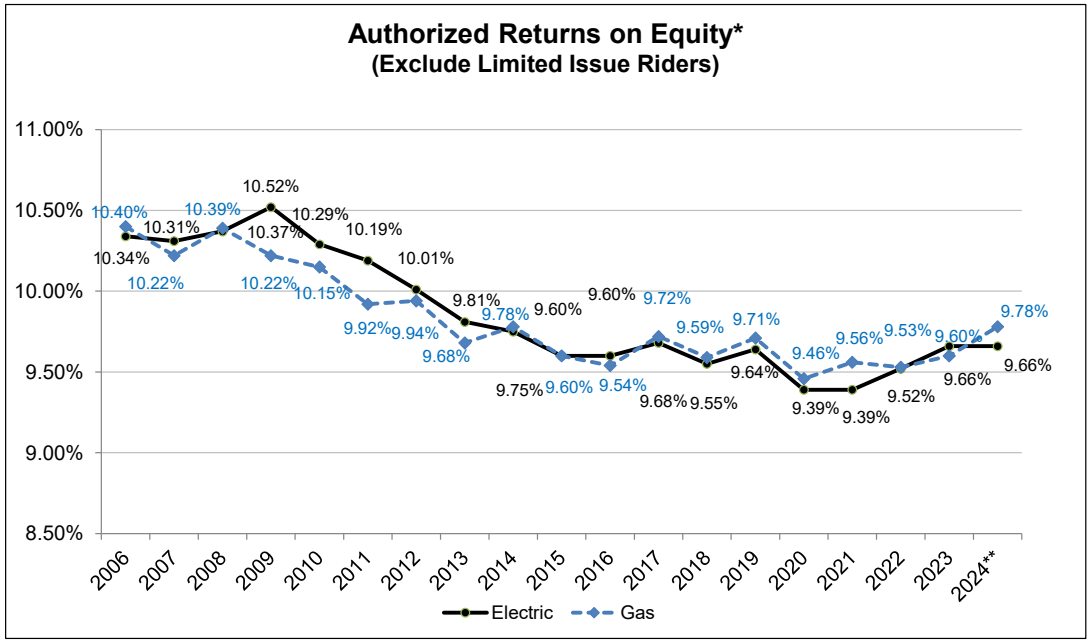
II. ACCESS TO CAPITAL AND ECONOMIC ENVIRONMENT

II.A. Regulated Utility Industry Authorized ROEs, Access to Capital, and Credit Strength

Q PLEASE DESCRIBE THE OBSERVABLE EVIDENCE ON TRENDS IN AUTHORIZED ROEs FOR ELECTRIC AND GAS UTILITIES.

A Authorized ROEs for both electric and gas utilities have declined over the last 10 years, as illustrated in Figure CCW-1, and have been below 10.0% for about the last nine years.

FIGURE CCW-1



Source and Notes:
* Electric Returns exclude Limited Issue Riders.
** *S&P Global Market Intelligence*, RRA Regulatory Focus, Major Rate Case Decisions -- January - March 2024, April 19, 2024 at page 3.

Q PLEASE DESCRIBE THE DISTRIBUTION OF AUTHORIZED ROEs FOR ELECTRIC UTILITIES FOR THE LAST FEW YEARS.

A The distribution of authorized returns, annually, since 2016 is summarized in Table CCW-1.

TABLE CCW-1

Distribution of Authorized ROEs
(All Electric Utilities)*

Line	Year (1)	Average (2)	Median (3)	Share of Decisions ≤ 9.5% (4)	Share of Decisions ≤ 9.7% (5)	Share of Decisions ≤ 10.0% (6)
1	2016	9.60%	9.60%	41%	53%	94%
2	2017[1]	9.67%	9.60%	42%	67%	81%
3	2018[2]	9.54%	9.57%	47%	63%	100%
4	2019	9.64%	9.65%	39%	58%	88%
5	2020[3]	9.38%	9.48%	64%	79%	100%
6	2021	9.39%	9.49%	58%	81%	97%
7	2022	9.52%	9.50%	53%	63%	84%
8	2023	9.66%	9.60%	38%	65%	85%
9	2024	9.70%	9.75%	9%	45%	100%
10	Average	9.57%	9.58%	44%	64%	92%
11	Median	9.60%	9.60%	42%	63%	94%

Source and Notes:
S&P Global Market Intelligence, data through May 10, 2024.
[1]Includes authorized base ROE of 9.4% for Nevada Power Company, which excludes incentives associated with the Lenzie facility.
[2]Includes authorized base ROE of 9.6% for Interstate Power & Light Co., which excludes allowed ROE for generating facilities subject to special ratemaking principles.
[3]Includes authorized base ROE of 9.8% for Interstate Power & Light Co., which excludes allowed ROE for generating facilities subject to special ratemaking principles.
*Excludes Limited Issue Rider Cases.

The distribution shows that over the last few years, the majority of authorized ROEs since 2016 have been below 9.7%, with many of those being below 9.5%.

Q HOW HAS THE AUTHORIZED COMMON EQUITY RATIO FLUCTUATED OVER THE SAME TIME PERIOD FOR UTILITIES?

A In general, the utility industry's common equity ratio has not really deviated too much from the range of 50.0% to 52.0%. As shown in Table CCW-2 below, I have provided the authorized common equity ratios for utilities around the country, excluding the reported common equity ratios for Arkansas, Florida, Indiana, and Michigan. For my overall market analysis, I have excluded the reported authorized common equity ratios for these states because these jurisdictions include sources of capital outside of investor-supplied capital such as accumulated deferred income taxes. As such, the reported common equity ratios in these states would result in a downward bias in the reported permanent common equity ratios authorized for ratemaking purposes within my trend analysis.

TABLE CCW-2

Trends in State Authorized Common Equity Ratios
(Industry)

Line	Year	Electric[1] Average	Electric[1] Median
	(1)	(2)	(3)
1	2016	49.70%	49.99%
2	2017	50.02%	49.85%
3	2018	50.60%	50.23%
4	2019	51.55%	51.37%
5	2020	50.94%	51.17%
6	2021	51.01%	52.00%
7	2022	51.57%	51.92%
8	2023	51.59%	52.27%
9	2024	50.62%	51.93%
10	Average	50.84%	51.19%
11	Median	50.94%	51.37%

Source and Notes:
[1] S&P Global Market Intelligence, data through May 10, 2024.
[2] Excludes Arkansas, Florida, Indiana, and Michigan, because they include non-investor capital.

Q HAVE REGULATED UTILITY COMPANIES BEEN ABLE TO MAINTAIN RELATIVELY STRONG CREDIT RATINGS DURING PERIODS OF DECLINING AUTHORIZED ROEs?

A Yes. As shown below in Table CCW-3, the credit ratings of the industry have improved since 2009. In 2009, approximately 53% of the industry was rated BBB+ or higher. Currently, 83% of the industry has a rating of BBB+ or higher.

TABLE CCW-3

S&P Ratings by Category
Electric Utility Subsidiaries
(Year End)

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
A or higher	12%	12%	12%	11%	13%	13%	13%	10%	10%	8%	14%	14%	10%	10%	12%	13%
A-	18%	20%	19%	22%	26%	26%	34%	43%	52%	54%	54%	53%	37%	37%	37%	33%
BBB+	23%	24%	28%	28%	25%	28%	24%	32%	21%	22%	18%	19%	35%	36%	36%	42%
BBB	36%	26%	24%	22%	26%	23%	18%	4%	7%	13%	12%	3%	16%	16%	15%	12%
BBB-	9%	16%	15%	17%	11%	11%	11%	11%	11%	2%	1%	1%	0%	0%	0%	0%
Below BBB-	2%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	10%	1%	1%	1%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: S&P CAPITAL IQ and Market Intelligence, downloaded 5/15/24.
Note: Subsidiary ratings used.

Q HAVE UTILITIES BEEN ABLE TO ACCESS EXTERNAL CAPITAL TO SUPPORT CAPITAL EXPENDITURE PROGRAMS?

A Yes. In Regulatory Research Associates' ("RRA") April 2, 2024 Utility Capital Expenditures report, *RRA Financial Focus*, a division of S&P Global Market Intelligence, made several relevant comments about utility investments generally:

- Multiple drivers are expected to elevate utility capital expenditures over the next several years. Pent-up demand to replace aging equipment continues to propel considerable utility investments in infrastructure, while artificial intelligence increases the power demands of datacenters daily.

- Projected 2024 capital expenditure for the 45 energy utilities included in the RRA representative sample of publicly traded, US-based utilities is $184 billion — an upswell of nearly 11% from the group's $166 billion of actual spending in 2023. The increase is largely driven by federal legislation enacted in 2021 and 2022 supporting infrastructure investment.

* * *

- Aggregated energy utility capex estimates for both 2024 and 2025 indicate successively higher spending levels, reaching $184 billion and $191 billion, respectively. Spending expectations for 2024 and beyond are likely to increase as the companies' plans for future projects continue to solidify around the new federal legislation supporting infrastructure investment.

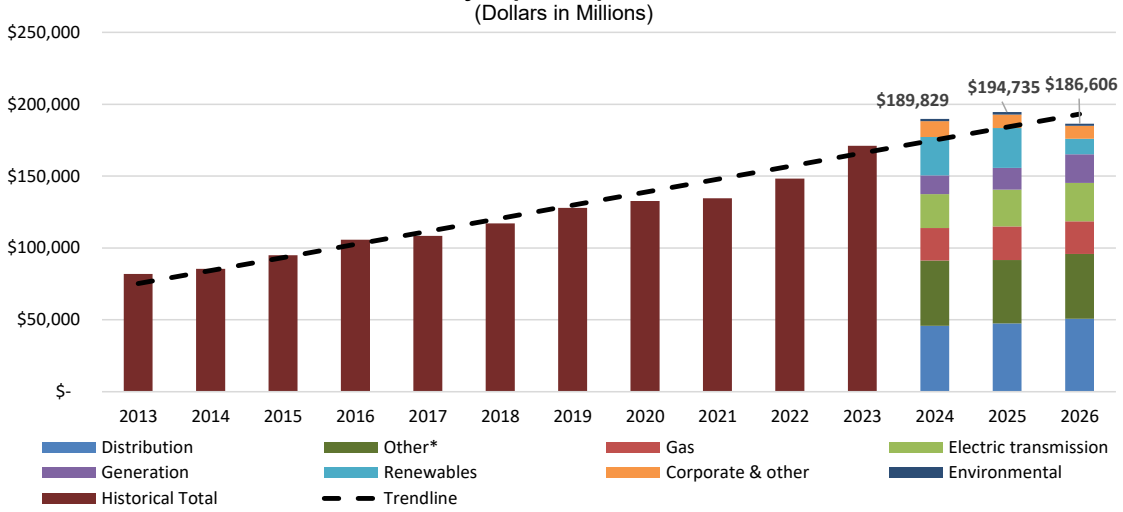
- Utilities have multiple opportunities to finance and support energy investments through mechanisms available within the Inflation Reduction Act and the Infrastructure Investment and Jobs Act of 2021. These pieces of legislation provide billions of dollars for

power infrastructure investments, financial incentives for nuclear power plants and funding for battery storage technology, among other provisions.[1]

As shown in Figure CCW-2 below, capital expenditures for the regulated electric and natural gas delivery utilities have increased considerably over the period 2023 into 2024, and the forecasted capital expenditures remain elevated through the end of 2025. The outlooks for electric and natural gas industries reasonably align with capital expenditure outlooks for water utilities as noted by RRA above.

FIGURE CCW-2

Utility Capital Expenditures
(Dollars in Millions)



*Other category consists of utilities that do not report capital expenditures by category: Avangrid, Hawaiian Electric, PG&E and Portland General Electric.
Source: *S&P Global Market Intelligence, RRA Financial Focus*, Utility Capital Expenditures Update, March 27, 2024, Tables 1 and 3.

As demonstrated in Figure CCW-2 above, and in the comments made by *RRA S&P Global Market Intelligence*, capital investments for the utility industry continue to stay at elevated levels, and these capital expenditures are expected to fuel utilities' profit growth into the foreseeable future. This is clear evidence that the capital investments are enhancing shareholder value and are attracting both

[1] *S&P Global Market Intelligence, RRA Financial Focus*: "Utility capex primed for profusion in 2024 and beyond," April 2, 2024.

equity and debt capital to the utility industry in a manner that allows for funding these elevated capital investments. While capital markets embrace these profit-driven capital investments, regulatory commissions also must be careful to maintain reasonable prices and tariff terms and conditions to protect customers' need for reliable utility service at reasonable rates. If this is not done, utility rates will expand beyond the ability of customers to pay, resulting in revenue constraints for utilities, which will impact their financial integrity.

Q WHAT IS THE SIGNIFICANCE OF THESE FINDINGS?

A This is clear evidence that the capital investments are enhancing shareholder value, and are attracting both equity and debt capital to the utility industry in a manner that allows for these elevated capital investments.

Q IS THERE EVIDENCE OF ROBUST VALUATIONS OF REGULATED UTILITY EQUITY SECURITIES?

A Yes. Robust valuations are an indication that utilities can sell securities at high prices, which is a strong signal that they can access equity capital under reasonable terms and conditions, and at relatively low cost. As shown on Exhibit CCW-1, the historical valuation of utilities followed by *The Value Line Investment Survey* ("*Value Line*"), based on a price-to-earnings ("P/E") ratio, price-to-cash flow ("P/CF") ratio, and market price-to-book value ("M/B") ratio, indicates utility security valuations today are very strong and robust relative to the last several years. These strong valuations of utility stocks indicate that utilities have access to equity capital under reasonable terms and at lower costs.

Q WHAT CONCLUSION DO YOU DRAW FROM THIS OBSERVABLE MARKET DATA IN FORMING YOUR RECOMMENDED ROE AND OVERALL RATE OF RETURN?

A Generally, authorized ROEs, credit standing, and access to capital have been quite robust for utilities over the last several years, even throughout the duration of the global pandemic. It is critical that this Commission ensure that utility rates are increased no more than necessary to provide fair compensation and maintain financial integrity.

II.B. Federal Reserve Monetary Policy

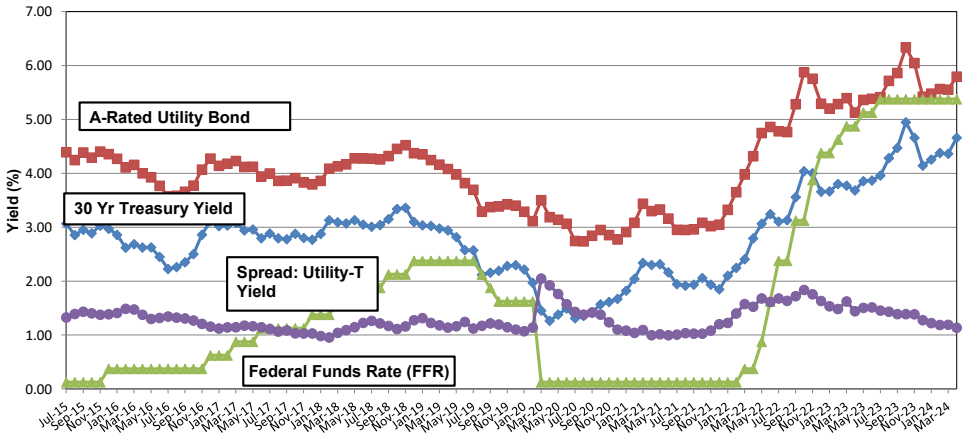
Q ARE THE FEDERAL OPEN MARKET COMMITTEE'S ("FOMC") ACTIONS KNOWN TO THE MARKET PARTICIPANTS, AND IS IT REASONABLE TO BELIEVE THEY ARE REFLECTED IN THE MARKET'S VALUATION OF BOTH DEBT AND EQUITY SECURITIES?

A Yes to both questions. The Fed has been transparent about its efforts to support the economy to achieve maximum employment, and to manage long-term inflation to around a 2% level. The Fed has implemented procedures to support the economy's efforts to achieve these policy objectives. Specifically, the Fed had previously lowered the Federal Overnight Rate for securities and had engaged in a Quantitative Easing program where the Fed was buying, on a monthly basis, Treasury and mortgage-backed securities in order to moderate the demand in the marketplaces and support the economy. Currently, the Fed is reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities. Such monetary policy actions include raising the target federal funds rate and allowing maturing bonds to roll off its balance sheet.

A visualization of the market's reaction to the Fed's actions on the federal funds rate is shown below in Figure CCW-3.

FIGURE CCW-3

Timeline of Federal Funds Rate Changes Since 2015



Fed FFR Actions:

1	December 2015	0.25	→	0.50	14	March 2020	0.00	→	0.25
2	December 2016	0.50	→	0.75	15	March 2022	0.25	→	0.50
3	March 2017	0.75	→	1.00	16	May 2022	0.75	→	1.00
4	June 2017	1.00	→	1.25	17	June 2022	1.50	→	1.75
5	December 2017	1.25	→	1.50	18	July 2022	2.25	→	2.50
6	March 2018	1.50	→	1.75	19	September 2022	3.00	→	3.25
7	June 2018	1.75	→	2.00	20	November 2022	3.75	→	4.00
8	September 2018	2.00	→	2.25	21	December 2022	4.25	→	4.50
9	December 2018	2.25	→	2.50	22	February 2023	4.50	→	4.75
10	August 2019	2.00	→	2.25	23	March 2023	4.75	→	5.00
11	September 2019	1.75	→	2.00	24	May 2023	5.00	→	5.25
12	October 2019	1.50	→	1.75	25	July 2023	5.25	→	5.50
13	March 2020	1.00	→	1.25					

Sources:
Federal Reserve Bank of New York, https://apps.newyorkfed.org/markets/autorates/fed-funds-search-page
Board of Governors of the Federal Reserve System, https://www.federalreserve.gov/datadownload/
Moody's Credit Trends, https://credittrends.moodys.com/

As shown in Figure CCW-3 above, the rise in the Federal Funds Rate has far outpaced the rise in Utility and Treasury yields while the spread of Utility bonds over Treasury bond yields have stabilized recently.

Q HAS THE FED MADE RECENT COMMENTS CONCERNING MONETARY POLICY AND THE POTENTIAL IMPACT ON INTEREST RATES?

A Yes. In its recent press release, the FOMC stated the following:

> Recent indicators suggest that economic activity has continued to expand at a solid pace. Job gains have remained strong, and the unemployment rate has remained low. Inflation has eased over the past year but remains elevated. In recent months, there has been a lack of further progress toward the Committee's 2 percent inflation objective.
>
> The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. The Committee judges that the risks to achieving its employment and inflation goals have moved toward better balance over the past year. The economic outlook is uncertain, and the Committee remains highly attentive to inflation risks.
>
> In support of its goals, the Committee decided to maintain the target range for the federal funds rate at 5-1/4 to 5-1/2 percent. In considering any adjustments to the target range for the federal funds rate, the Committee will carefully assess incoming data, the evolving outlook, and the balance of risks. The Committee does not expect it will be appropriate to reduce the target range until it has gained greater confidence that inflation is moving sustainably toward 2 percent. In addition, the Committee will continue reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities. Beginning in June, the Committee will slow the pace of decline of its securities holdings by reducing the monthly redemption cap on Treasury securities from $60 billion to $25 billion. The Committee will maintain the monthly redemption cap on agency debt and agency mortgage-backed securities at $35 billion and will reinvest any principal payments in excess of this cap into Treasury securities. The Committee is strongly committed to returning inflation to its 2 percent objective.
>
> In assessing the appropriate stance of monetary policy, the Committee will continue to monitor the implications of incoming information for the economic outlook. The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the Committee's goals. The Committee's assessments will take into account a wide range of information, including readings on labor market conditions, inflation pressures and inflation expectations, and financial and international developments.[2]

The above quotes suggest the FOMC has had some success in taming inflation over the last year, though not as much in recent months. It further reiterated its commitment to stabilizing consumer prices and promoting maximum employment through its monetary policy tools.

[2]Found here: https://www.federalreserve.gov/newsevents/pressreleases/monetary20240501a.htm, May 1, 2024.

Q WHAT DO INDEPENDENT ECONOMISTS' OUTLOOKS FOR FUTURE INTEREST RATES INDICATE?

A Independent economists, surveyed by *Blue Chip Financial Forecasts,* expect current capital costs to increase at mixed rates over the near term, while maintaining levels that are still low by historical standards. For example, independent projections show that the consensus is the federal funds rate will increase at a rate much faster than that of long-term interest rates as measured by the 30-year Treasury bond. Inflation, as measured through the Gross Domestic Product (GDP) price index, is expected to cool off in the near to intermediate term.

The consensus projections for the next several quarters are provided in Table CCW-4 below.

TABLE CCW-4

Blue Chip Financial Forecasts
Projected Federal Funds Rate, 30-Year Treasury Bond Yields, and GDP Price Index

Publication Date	4Q 2022	1Q 2023	2Q 2023	3Q 2023	4Q 2023	1Q 2024	2Q 2024	3Q 2024	4Q 2024	1Q 2025	2Q 2025	3Q 2025
Federal Funds Rate												
Jan-23	3.6	4.7	5.0	4.9	4.7	4.4	4.0					
Feb-23	3.7	4.7	5.0	4.9	4.7	4.3	4.0					
Mar-23	**3.7**	4.7	5.1	5.1	5.0	4.7	4.2					
Apr-23		4.5	5.0	5.1	4.9	4.6	4.2	3.8				
May-23		4.5	5.0	5.1	5.0	4.7	4.2	3.8				
Jun-23		**4.5**	5.0	5.1	5.0	4.6	4.2	3.9				
Jul-23			5.0	5.3	5.2	5.0	4.6	4.3	3.9			
Aug-23			5.0	5.4	5.4	5.2	4.9	4.4	4.0			
Sep-23			**5.0**	5.3	5.4	5.3	5.0	4.6	4.2			
Oct-23				5.3	5.4	5.4	5.1	4.7	4.3	4.0		
Nov-23				5.3	5.4	5.4	5.2	4.9	4.5	4.1		
Dec-23				**5.3**	5.4	5.4	5.2	4.9	4.6	4.2		
Jan-24					5.3	5.3	5.1	4.8	4.4	4.1	3.8	
Feb-24					5.3	5.3	5.1	4.7	4.4	4.1	3.8	
Mar-24					**5.3**	5.4	5.2	4.9	4.5	4.2	3.8	
Apr-24						5.3	5.2	5.0	4.6	4.2	3.9	3.7
May-24						5.3	5.4	5.2	4.9	4.6	4.3	4.0
T-Bond, 30 yr.												
Jan-23	3.9	4.0	4.0	3.9	3.9	3.8	3.8					
Feb-23	3.9	3.8	3.9	3.9	3.8	3.8	3.7					
Mar-23	**3.9**	3.9	4.0	3.9	3.9	3.8	3.8					
Apr-23		3.8	3.9	3.8	3.8	3.8	3.8	3.7				
May-23		3.7	3.8	3.8	3.8	3.8	3.7	3.7				
Jun-23		**3.7**	3.8	3.8	3.8	3.8	3.8	3.7				
Jul-23			3.8	3.9	3.9	3.9	3.8	3.8	3.8			
Aug-23			3.8	4.0	3.9	4.0	3.9	3.9	3.8			
Sep-23			**3.8**	4.1	4.2	4.1	4.0	4.0	3.9			
Oct-23				4.2	4.4	4.3	4.2	4.2	4.1	4.0		
Nov-23				4.2	4.8	4.7	4.5	4.5	4.3	4.2		
Dec-23				**4.2**	4.8	4.7	4.5	4.5	4.4	4.3		
Jan-24					4.6	4.3	4.3	4.2	4.1	4.0	4.0	
Feb-24					4.6	4.3	4.2	4.2	4.1	4.0	4.0	
Mar-24					**4.6**	4.4	4.3	4.2	4.2	4.1	4.1	
Apr-24						4.3	4.3	4.2	4.2	4.1	4.1	4.0
May-24						4.3	4.6	4.5	4.4	4.3	4.2	4.2
GDP Price Index												
Jan-23	4.3	3.6	3.0	2.7	2.5	2.3	2.2					
Feb-23	3.5	3.3	3.0	2.7	2.6	2.4	2.3					
Mar-23	**3.9**	3.2	2.8	2.6	2.5	2.5	2.3					
Apr-23		3.2	3.2	2.9	2.7	2.5	2.3	2.2				
May-23		4.0	3.2	2.9	2.7	2.5	2.3	2.2				
Jun-23		**4.2**	3.3	2.8	2.7	2.5	2.5	2.2				
Jul-23			3.3	2.9	2.8	2.5	2.4	2.2	2.2			
Aug-23			2.2	2.7	2.6	2.5	2.3	2.3	2.3			
Sep-23			**2.0**	2.7	2.6	2.4	2.3	2.2	2.2			
Oct-23				2.7	2.7	2.4	2.2	2.2	2.2	2.2		
Nov-23				3.5	2.7	2.4	2.3	2.2	2.2	2.3		
Dec-23				**3.6**	2.7	2.4	2.3	2.2	2.2	2.2		
Jan-24					2.7	2.3	2.3	2.3	2.2	2.2	2.1	
Feb-24					1.5	2.2	2.2	2.3	2.2	2.2	2.1	
Mar-24					**1.6**	2.2	2.3	2.2	2.2	2.1	2.1	
Apr-24						2.2	2.4	2.3	2.2	2.2	2.1	2.2
May-24						3.1	2.7	2.4	2.3	2.3	2.2	2.2

Source and Note:
Blue Chip Financial Forecasts, Jan 2022 through May 2024.
Actual Yields in Bold.

Further, the outlook for long-term interest rates in the intermediate to long term is also impacted by the current Fed actions and the expectation that eventually the Fed's monetary actions will return to more-normal levels. Long-term interest rate projections are illustrated in Table CCW-5 below.

TABLE CCW-5

30-Year Treasury Bond Yield Actual Vs. Projection

Description	Actual	Near-Term Projected*	5- to 10-Year Projected
2019			
Q1	3.01%	3.50%	
Q2	2.78%	3.17%	3.6% - 3.8%
Q3	2.30%	2.70%	
Q4	2.30%	2.50%	3.2% - 3.7%
2020			
Q1	1.88%	2.57%	
Q2	1.38%	1.90%	3.0% - 3.8%
Q3	1.36%	1.87%	
Q4	1.62%	1.97%	2.8% - 3.6%
2021			
Q1	2.07%	2.23%	
Q2	2.26%	2.77%	3.5% - 3.9%
Q3	1.93%	2.63%	
Q4	1.95%	2.70%	3.4% - 3.8%
2022			
Q1	2.25%	2.87%	
Q2	3.04%	3.47%	3.8% - 3.9%
Q3	3.26%	3.63%	
Q4	3.90%	3.87%	3.9% - 4.0%
2023			
Q1	3.74%	3.77%	
Q2	3.80%	3.70%	3.8% - 3.9%
Q3	4.24%	3.83%	
Q4	4.58%	4.17%	4.1% - 4.2%

Source and Note:
Blue Chip Financial Forecasts, January 2019 through March 2024.
*Average of all 3 reports in Quarter.

As outlined in Table CCW-5 above, the outlook for increases in interest rates has jumped more recently relative to 2020 and part of 2021, but is still relatively modest compared to time periods prior to the beginning of the worldwide pandemic. Indeed, relatively low capital market costs are expected to prevail at least in the near-term and out over the next five to ten years. While there is potential for some upward movement in the cost of capital, that upward movement is uncertain. In fact, as shown on Figure CCW-3 above, increases in the federal funds rate do not necessarily translate into increases in longer-term yields.

II.C. Market Sentiments and Utility Industry Outlook

Q PLEASE DESCRIBE THE CREDIT RATING OUTLOOK FOR REGULATED UTILITIES.

A All credit rating agencies see rate affordability as an important consideration in assessing utility credit, including Standard & Poor's ("S&P") and Moody's Investors Service ("Moody's") as discussed below.

In 2024, S&P updated its industry outlook to "Negative," stating the following:

> **Key Takeaways**
>
> - We are updating our 2024 outlook on the investor-owned North American regulated utility industry to negative.
>
> - Given the relatively high percentage of companies with negative outlooks, we expect that 2024 will likely be the fifth consecutive year that downgrades outpace upgrades.
>
> - The industry faces rising physical risks and high cash flow deficits that may not be sufficiently funded in a credit-supportive manner.
>
> - Still, we expect that the utility industry will maintain a median investment-grade rating of 'BBB+'.

> - We also expect that a smaller percentage of companies rated 'BBB' or lower are more likely to implement measures to maintain or even improve credit quality.[3]

Specifically, in S&P's utility report, it notes that the credit quality of the industry has changed to BBB+ from an A- rating over the last few years. It notes the recently increased interest rates, which are expected to stabilize and ease the pressure on utilities financial performance. S&P also comments on the narrowing spread between utilities authorized returns and the 10-year Treasury yield, which hinders the financial performance of the industry. The credit rating agency expects continued robust capital spending for utilities, projecting over $200 billion investment in 2025. S&P believes that the risks around the industry outlook include regulatory risks in responding to capital spending and the practice of many companies operating with minimal financial cushion from their downgrade thresholds.[4]

Q HAVE CREDIT AGENCIES NOTED CONCERN ABOUT RATE AFFORDABILITY AS A CREDIT RISK TO UTILITIES?

A Yes. Credit rating agencies have been emphasizing rate affordability, maintaining adequate financial coverages of debt obligations, and supporting utilities' overall investment grade bond ratings.

In a recent industry report, Moody's explained that the regulated electric and gas utilities' outlook remains "Negative" largely due to increased pricing pressures on customers. Moody's stated that it changed its outlook from "Positive" to "Negative" due to the following:

[3] *S&P Global Ratings*: "Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens," February 14, 2024 at 1.

[4] *Id*.

> We have revised our outlook on the US regulated utilities sector to negative from stable. We changed the outlook because of increasingly challenging business and financial conditions stemming from higher natural gas prices, inflation and rising interest rates. These developments raise residential customer affordability issues, increasing the level of uncertainty with regard to the timely recovery of costs for fuel and purchased power, as well as for rate cases more broadly.[5]

Also, in a report published in January of 2024, S&P specifically mentioned commodity price volatility, in combination with significant increases in capital investments, driving utility rate increases which may strain affordability concerns.[6]

Finally, Fitch opined that the regulated electric and gas utilities' outlook is deteriorating due to elevated capex that put pressure on credit metrics. Fitch also notes the bill affordability concerns for ratepayers, and regulators' ability to balance the rate requests with increasing customer bills.

Specifically, Fitch states:

> Fitch Ratings' deteriorating outlook for the North American Utilities, Power & Gas sector reflects continuing macroeconomic headwinds and elevated capex that are putting pressure on credit metrics in the high-cost funding environment. Bill affordability concerns for ratepayers continue to persist despite the pull back in natural gas prices and inflationary pressures. Fitch expects utility capex to grow by double digits in 2024, underpinned by investments needed to make the electric infrastructure more resilient against extreme weather events and to accommodate renewable generation, including distributed sources. Rate case outcomes are key to watch as regulators balance more rate requests with increases in customer bills. Authorized ROEs could prove to be sticky despite an increase in cost of capital. Higher weather-normalized retail electricity sales, driven by datacenter growth and onshoring of manufacturing activities, and tax transferability provisions of the Inflation Reduction Act could somewhat offset headwinds to utilities. Ongoing management actions to sell assets and issue equity, in some cases, is supportive of parent companies' ratings. Within Fitch's coverage, 90% of ratings hold Stable Rating Outlooks. We expect limited rating movement in 2024. The number

[5] *Moody's Investors Service Outlook*: "Regulated Electric and Gas Utilities – US 2023 outlook negative due to higher natural gas prices, inflation and rising interest rates," November 10, 2022 at 1. (emphasis added).

[6] *S&P Global Ratings*: "Industry Credit Outlook 2024: North America Regulated Utilities," January 9, 2024, at 8.

> of upgrades in 2023 so far exceeds the number of downgrades, and is driven by positive rating actions on several parent holding companies and their regulated subsidiaries.[7]

As outlined by Moody's, S&P and Fitch above, credit analysts are focusing on rate affordability as an important factor needed to support strong credit standing. Customers must be able to afford to pay their utility bills in order for utilities to maintain their financial integrity and strong investment grade credit standing. For this reason, this Commission should carefully assess the reasonableness of cost of service in this proceeding, including an appropriate overall rate of return necessitated by a reasonably cost-effective balanced ratemaking capital structure, and a return on equity that represents fair compensation but also maintains competitive, just and reasonable rates.

III.D. Additional Remarks

Q IN LIGHT OF HIGHER LEVELS OF INFLATION, EXPECTATIONS OF HIGHER INTEREST RATES, AND GEOPOLITICAL EVENTS AROUND THE WORLD, HOW HAS THE MARKET PERCEIVED UTILITIES AS INVESTMENT OPTIONS?

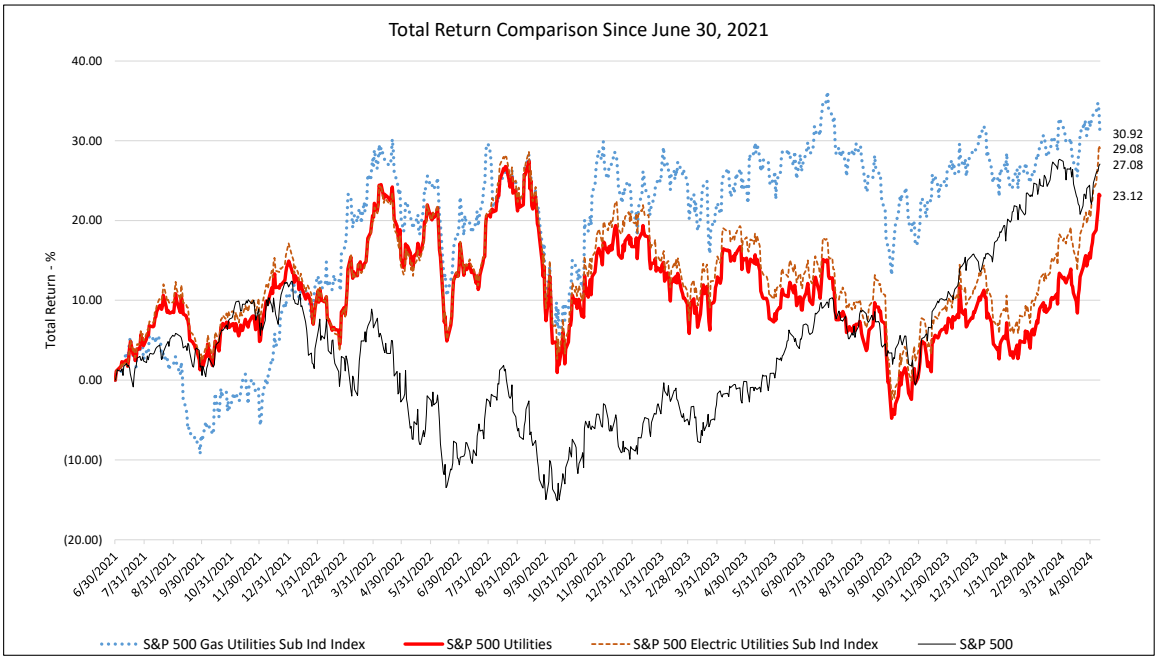
A In 2023, the utility sector underperformed the S&P 500 and has continued to do so in 2024. This is presented below in Figure CCW-4. However, it should be noted that the performance of the S&P 500 has largely been driven by a handful of "mega cap" companies. Because the S&P 500 is a market capitalization weighted index (meaning the higher the market capitalization a company has, the more influence it has on the index's performance). For example, in the S&P Dow Jones Indices report "U.S. Equity Market Attributes April 2024," it is noted that:

[7] *FitchRatings.* "North American Utilities, Power & Gas Outlook 2024," December 6, 2023 at 1. (emphasis added)

Year-to-date, the S&P 500 remained up 5.57% (with 10 of the 11 sectors up; Real Estate was down 9.86%), as breadth declined but remained positive (302 up and 199 down, compared to last March's 369 and 134 YTD, respectively). The Magnificent 7 as a group still dominated, accounting for 51% of the index return (which included Apple's 11.5% YTD decline and Tesla's 26.2% YTD decline), as NVIDIA (up 74.5% YTD) represented 41% of the S&P 500's YTD gain.[8]

Notwithstanding its recent underperformance relative to the S&P 500, the industry has been able to deliver generally positive and relatively stable returns during a period of elevated inflation, rising interest rates, and uncertainty because of geopolitical events around the world.

Figure CCW-4



[8]https://www.spglobal.com/spdji/en/documents/commentary/market-attributes-us-equities-202404.pdf

III. RETURN ON EQUITY

Q PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON EQUITY."

A A utility's cost of common equity is the expected return that investors require on an investment in the utility. Investors expect to earn their required return from receiving dividends and through stock price appreciation.

Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED UTILITY'S COST OF COMMON EQUITY.

A In general, determining a fair cost of common equity for a regulated utility has been framed by two hallmark decisions of the U.S. Supreme Court: Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944). In these decisions, the Supreme Court found that just compensation depends on many circumstances and must be determined by fair and enlightened judgments based on relevant facts. The Court also found that a utility is entitled to such rates as would permit it to earn a return on a property devoted to the convenience of the public that is generally consistent with the same returns available in other investments of corresponding risk. The Court continued that the utility has "no constitutional rights to profits" such as those "realized or anticipated in highly profitable enterprises or speculative ventures,"[9] and defined the ratepayer/investor balance as follows:

> The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its

[9] *Bluefield,* 262 U.S. at 692-93.

> credit and enable it to raise the money necessary for the proper discharge of its public duties.[10]

As such, a fair rate of return is based on the expectation that the utility costs reflect efficient and economical management, and the return will support its credit standing and access to capital, but the return will not be in excess of this level. Utility rates that are consistent with these standards will be just and reasonable, and compensation to the utility will be fair and support financial integrity and credit-standing, under economic management of the utility.

Q PLEASE DESCRIBE THE PROCESS YOU HAVE USED TO ESTIMATE TAMPA ELECTRIC'S COST OF COMMON EQUITY.

A First, I assessed the market's assessment of Tampa Electric's risk. Then, I developed a proxy group of publicly-traded utility companies that have similar risks and characteristics to Tampa Electric and compared potential differences in risks. I then performed several models based on financial theory to estimate Tampa Electric's cost of common equity. These models are: (1) a constant growth Discounted Cash Flow ("DCF") model using consensus analysts' growth rate projections; (2) a constant growth DCF model using sustainable growth rate estimates; (3) a multi-stage growth DCF model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM").

[10] *Id*. at 693 (emphasis added).

III.A. Tampa Electric's Investment Risk

Q PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF TAMPA ELECTRIC'S INVESTMENT RISK.

A The market's assessment of a company's investment risk is generally described by credit rating analysts' reports. The current credit ratings for Tampa Electric are BBB+ and A3, from S&P and Moody's respectively.[11] The Company currently has a "negative" outlook from S&P and a "stable" outlook from Moody's. In its August 2023 report covering Tampa Electric, S&P stated as follows:

> *We expect Tampa Electric Co. (TEC) to maintain its financial performance through our two-year outlook period.* Our base-case scenario assumes the implementation of the utility's most recent rate-case proposals, annual capital spending averaging about $1.2 billion, and dividend payments averaging about $530 million over the forecast period. TEC continues to have large capital expenditures--nearly triple its depreciation expense. This will likely strain financial measures for a least the next year or so during the construction of renewable energy transition projects. Overall, we forecast that TEC will maintain funds from operations (FFO) to debt of about 20%-22% through the 2023-2025 outlook period.
>
> **Business Risk**
> Our assessment of TEC's business risk reflects its lower-risk, rate-regulated, and vertically integrated electric and gas utility operations, as well as its management of regulatory risk, which we view as consistent with that of its peers. TEC is regulated by the FPSC, which, in our view, has been constructive for credit quality. The FPSC tariff framework uses various cost-recovery riders to allow timely recovery of capital investments. In addition, the FPSC established equity returns that tend to exceed industry averages, and the commission uses forecast test years and frequently authorizes interim rate increases. Furthermore, TEC will likely continue to benefit from above-average economic growth in Florida. TEC's business risk is offset by the lack of regulatory or geographical diversity because it operates only in Florida. Additionally, TEC's generation capacity relies heavily on fossil-based energy, with about 86% and 7% from gas and coal-fired generation respectively, as of 2022. As a result, we view TEC's business risk profile at the lower end of the category compared to other utility peers

[11] S&P Capital IQ, accessed on May 10, 2024.

> **Financial Risk**
> We assess TEC's financial risk profile using our medial volatility financial benchmark tables rather than the financial benchmarks we use for a typical corporate issuer, which reflects its lower-risk regulated utility operations and effective management of regulatory risk. TEC has a very large capital program, about triple that of depreciation expense, that will likely result in negative discretionary cash flow, indicative of the company's external funding needs. TEC has recently received approval for increases in base rates of about $191 million, $90 million, and $21 million, for 2022, 2023, and 2024, respectively. The outcome of the rate case was helpful for TEC to maintain its financial measures. Furthermore, our analysis of TEC's financial measures also incorporates recent regulatory outcomes.[12]

The "negative" outlook is clearly being driven by the outlook of Tampa Electric's ultimate parent company, Emera Inc., rather than by cash flow or other credit concerns at Tampa Electric. In fact, Tampa Electric's Stand-Alone-Credit-Profile ("SACP") rating from S&P, the rating that would otherwise be assigned to Tampa Electric if not for its affiliation with Emera Inc., is 'a' compared to its published rating of BBB+. In other words, Tampa Electric's credit rating is being hindered by two notches directly as a result of its affiliation with Emera Inc.

III.B. Tampa Electric's Proposed Capital Structure

Q WHAT IS TAMPA ELECTRIC'S PROPOSED CAPITAL STRUCTURE?

A Tampa Electric's proposed capital structure is summarized in Table CCW-6 below:

[12]S&P Global Ratings, RatingsDirect, Oklahoma Gas & Electric Co, July 21, 2023.

Table CCW-6

Investor-Supplied Capital Structure

Description	Weight
Debt	46.00%
Common Equity	54.00%
Total	100.00%

Q DO YOU HAVE ANY COMMENTS ON TAMPA ELECTRIC'S PROPOSED CAPITAL STRUCTURE?

A Yes. As I will discuss later, Tampa Electric's proposed equity ratio of 54.0% (including short-term debt) significantly exceeds the equity ratio for the proxy group used to estimate the cost of equity for Tampa Electric. As shown on Exhibit CCW-2, the proxy group has an average common equity ratio of 40.5% (including short-term debt) and 43.8% (excluding short-term debt).

Q ARE YOU AWARE OF OTHER REGULATORY COMMISSIONS RECOGNIZING THE NEED TO ALIGN THE COST OF EQUITY WITH THE CAPITAL STRUCTURE?

A Yes. In a recent Order, the Arkansas Public Service Commission imputed the capital structure of Southwestern Electric Power Company ("SWEPCO") to be more in-line with the comparable companies used to estimate the cost of equity.[13] The adjustment was to recognize that there must be *congruence* between the cost of equity and the capital structure. Specifically, the Order states as follows:

[13]APSC Docket No. 21-170-U, Doc. No. 323, May 23, 2022, Order No. 14.

> Consistent with our ruling in Order No. 10 of Docket No. 06-101-U, the Commission holds that there should be congruence between the estimated cost of equity and the [debt-to-equity "Tampa Electric")] ratio, whereby a lower Tampa Electric ratio decreases financial risk and decreases the cost of equity. The evidence of record supports imputing the average capital structure of companies with comparable risk to SWEPCO for the purposes of determining SWEPCO's overall cost of capital.[14]

As I described above, the proxy group has an average common equity ratio of 40.5% (including short-term debt) and 43.8% (excluding short-term debt) as calculated by S&P Global Market Intelligence and *Value Line*, respectively. The Company's proposed equity ratio of 54.00% (including short-term debt) exceeds that of the proxy group's comparable equity ratio of 40.5%.

Q ARE YOU RECOMMENDING AN ADJUSTMENT BE MADE TO TAMPA ELECTRIC'S PROPOSED CAPITAL STRUCTURE?

A Yes. The Company has not reasonably demonstrated a need to be awarded a common equity ratio well in excess of 52.0%. A common equity ratio of 52.0% is consistent with what is being awarded around the country to other electric utilities. As such, I recommend this Commission authorize Tampa Electric an equity ratio of 52.0%.

[14] *Id*. at 25.

III.C. Development of Proxy Group

Q PLEASE BRIEFLY DESCRIBE WHY A PROXY GROUP IS NEEDED IN ESTIMATING THE COST OF EQUITY.

A There are a few reasons why a proxy group is needed to estimate the cost of equity. As an initial matter, to be consistent with the *Hope* and *Bluefield* standards, as described above, the allowed return should be commensurate with returns on investments in other firms of comparable risk. A proxy group of similarly situated companies of comparable risk is needed to assess the Company's proposal under this standard.

Even if Tampa Electric were a publicly-traded company whose securities could be used to estimate its cost of equity, there exists the potential for certain errors and biases which would make the reliance on a single estimate undesirable and potentially less accurate. A proxy group of comparable risk companies adds reliability to the estimates by mitigating the potential for bias that may be introduced by measurement errors of model inputs.

Q PLEASE DESCRIBE HOW YOU IDENTIFIED A PROXY UTILITY GROUP THAT COULD BE USED TO ESTIMATE TAMPA ELECTRIC'S CURRENT MARKET COST OF EQUITY.

A I relied on the same proxy group developed by Tampa Electric's witness, Mr. D'Ascendis.

Q HOW DOES THE INVESTMENT RISK OF TAMPA ELECTRIC COMPARE TO THAT OF THE PROXY GROUP?

A As shown on my Exhibit CCW-2, the proxy group has average credit ratings of BBB+ and Baa2 from S&P and Moody's, respectively. The proxy group's average rating of BBB+ from S&P is identical Tampa Electric's rating of BBB+ from S&P. However, as I discussed earlier, Tampa Electric's SACP is 'a', meaning its credit rating is being hindered by two notches directly as a result of its affiliation with Emera Inc. Compared to its SACP rating of 'a', the proxy group's average rating of BBB+ from S&P is two notches lower than Tampa Electric's SACP. The proxy group's average rating of Baa2 from Moody's is two notches lower than Tampa Electric's rating of A3.

As shown on the same exhibit, the proxy group has an average common equity ratio of 40.5% (including short-term debt) and 43.8% (excluding short-term debt) as calculated by S&P Global Market Intelligence and *Value Line*, respectively. Tampa Electric's requested common equity ratio of 54.00% (including short-term debt) significantly exceeds the proxy group's equity ratio as described above.

Based on the two-notch difference in credit ratings, as well as the significant difference in equity ratios, the Company's cost of equity capital is most likely to be below the midpoint of the cost of equity range indicated for by the proxy group results. I will take these data into consideration in determining a fair and reasonable ROE for the Company.

III.D. DCF Model

Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price equals the sum of the present value of expected future cash flows discounted at the investor's required rate of return or cost of capital. This model is expressed mathematically as follows:

$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots . \frac{D_\infty}{(1+K)^\infty} \qquad \text{(Equation 1)}$$

P_0 = Current stock price
D = Dividends in periods 1 - ∞
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor-required return, known as "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D_1 = Dividend in first year
P_0 = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the annual "constant growth" DCF model.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A As shown in Equation 2 above, the DCF model requires a current stock price, the expected dividend, and the expected growth rate in dividends.

Q WHAT STOCK PRICE HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices of the utilities in the proxy group over a 13-week period ending on May 10, 2024. An average stock price is less susceptible to market price variations than a price at a single point in time. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not reflect the stock's long-term value.

Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A I used each proxy company's most recently paid quarterly dividend as reported in *Value Line*.[15] This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D_1 factor for use in Equation 2 above. In other words, I calculate D_1 by multiplying the annualized dividend (D_0) by (1+G).

Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A There are several methods that can be used to estimate the expected growth in dividends. However, regardless of the method, for purposes of determining the market-required return on common equity, one must attempt to estimate investors' expectations about what the dividend, or earnings growth rate, will be, and not what an individual investor or analyst may use to make individual investment decisions.

[15] *The Value Line Investment Survey*.

As predictors of future returns, securities analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data.[16] That is, assuming the market generally makes rational investment decisions, analysts' growth projections are more likely to influence investors' decisions, which are captured in observable stock prices, than growth rates derived only from historical data.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional securities analysts' earnings growth estimates as a proxy for investors' dividend growth rate expectations. I used the average of analysts' growth rate estimates from three sources: Zacks, S&P Capital IQ Market Intelligence ("MI"), and Yahoo! Finance. All such projections were available on May 10, 2024, and all were reported online.[17]

Each growth rate projection is based on a survey of independent securities analysts. There is no clear evidence whether a particular analyst is most influential on general market investors. Therefore, a single analyst's projection does not predict investor outlooks as reliably as does a consensus of market analysts' projections. The consensus of estimates is a simple arithmetic average, or mean, of surveyed analysts' earnings growth forecasts. A simple average of the growth forecasts gives equal weight to all surveyed analysts' projections. Therefore, a simple average, or arithmetic mean, of analysts' forecasts is a good proxy for investor expectations.

[16] *See*, e.g., David Gordon, Myron Gordon, and Lawrence Gould, Choice Among Methods of Estimating Share Yield, The Journal of Portfolio Management, Spring 1989.

[17] www.zacks.com; https://finance.yahoo.com; and https://www.capitaliq.spglobal.com/.

The growth rates I used in my DCF analysis are shown in Exhibit CCW-3. The average growth rate for my proxy group is 6.33% and a median growth rate of 6.20%.

Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A As shown in Exhibit CCW-4, page 1, the average and median constant growth DCF returns for my proxy group for the 13-week analysis are 10.98% and 10.50%, respectively.

Q ARE THERE LIMITATIONS OF THE CONSTANT GROWTH DCF ANALYSIS?

A Yes. The constant growth DCF analysis for my proxy group is based on a group average long-term growth rate of 6.33%. The three- to five-year growth rates are approximately 50% higher than the long-term projected GDP growth rate of 4.14%, described below. As I explain in detail below, a utility's growth rate cannot exceed the growth rate of the economy in which it provides services in perpetuity, which is the time period assumed by the DCF model.

Q HOW DID YOU IDENTIFY THE LONG-TERM PROJECTED GDP GROWTH RATE?

A Although there may be short-term peaks, the long-term sustainable growth rate for a utility stock cannot exceed the growth rate of the economy in which it sells its goods and services. The long-term maximum sustainable growth rate for a utility investment is limited by the projected long-term GDP growth rate, as that reflects the projected long-term growth rate of the economy as a whole. *Blue Chip Financial Forecasts* projects that over the next 5 and 10 years, the U.S. nominal

GDP will grow at an annual rate of approximately 4.14%.[18] As such, the average nominal growth rate over the next 10 years is around 4.14%, which I believe is a reasonable proxy of long-term growth.

Later in this testimony, I discuss academic and investment-practitioner support for using the projected long-term GDP growth outlook as a maximum long-term growth rate projection. Using the long-term GDP growth rate as a conservative projection for the maximum growth rate is logical, and is generally consistent with academic and economic-practitioner accepted practices.

III.E. Sustainable Growth DCF

Q PLEASE DESCRIBE WHAT THE SUSTAINABLE GROWTH DCF METHOD IS AND HOW YOU ESTIMATED A SUSTAINABLE GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.

A The sustainable growth rate, also referred to as the internal growth rate, is determined by the proportion of the utility's earnings that is retained and reinvested in its plant and equipment. These reinvested earnings enhance the earnings base, also known as the rate base. The earnings grow as the plant, funded by the reinvested earnings, is put into operation, allowing the utility to receive its authorized return on the additional rate base investment.

The internal growth approach is linked to the percentage of earnings retained within the company, as opposed to being paid out as dividends. The earnings retention ratio is calculated as 1 minus the dividend payout ratio. As the payout ratio decreases, the retention ratio increases, leading to stronger growth as the company funds more investments using retained earnings.

[18] Blue Chip Economic Indicators, March 11, 2024 at page 14.

The payout ratios of the proxy group are shown in my Exhibit CCW-5. These dividend-payout ratios and earnings-retention ratios then can be used to develop a long-term growth rate driven by earnings retention.

The data used to estimate the long-term sustainable growth rate is based on the Company's current market-to-book ratio and on *Value Line*'s three- to five-year projections of earnings, dividends, earned returns on book equity, and stock issuances.

As shown in Exhibit CCW-6, the average and median sustainable growth rates for the proxy group using this internal growth rate model are 4.80% and 4.76%, respectively.

Q WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE GROWTH RATES?

A A DCF estimate based on these sustainable growth rates is developed in Exhibit CCW-7. As shown there, and using the same formula in Equation 2 above, a sustainable growth DCF analysis produces proxy group average and median DCF results for the 13-week period of 9.37% and 9.28%, respectively.

III.F. Multi-Stage Growth DCF Model

Q HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?

A Yes. As previously noted, the DCF model is intended to represent the present value of an endless series of future cash flows. Nevertheless, the initial constant growth DCF that I created is based on analyst growth-rate projections, providing a plausible representation of rational investment expectations over the next three-to-five years. The limitation of this constant growth DCF model is that it cannot

reflect a reasonable expectation of a shift in growth from a high or low short-term rate to a rate that aligns more with long-term sustainable growth. To accommodate changing growth expectations, I conducted a multi-stage DCF analysis that reflects growth rate change over time.

Q WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?

A The growth rate projections by analysts for the next three-to-five years are subject to change as the outlook for utility earnings-growth evolves. Utility companies experience fluctuations in their investment cycles. When these companies are undertaking substantial investments, the growth of their rate base accelerates, leading to an increase in earnings growth. However, once a major construction cycle reaches completion or plateaus, the growth in the utility rate base slows down, and its earnings growth rate declines from an abnormally high three-to-five-year rate, to a lower, sustainable growth rate.

As construction cycles become longer in duration, even with an aggressive construction plan, the growth rate of the utility will naturally slow due to a decrease in rate base growth, as the utility has limited human and capital resources to expand its construction activities. Therefore, the three-to-five-year growth rate projection should be viewed as a long-term sustainable growth rate, but not without considering the current market conditions, industry trends, and determining whether the three-to-five-year growth outlook is feasible and sustainable.

Q PLEASE DESCRIBE YOUR MULTI-STAGE DCF MODEL.

A The multi-stage DCF model reflects the possibility of non-constant growth for a company over time. The multi-stage DCF model reflects three growth periods: (1)

a short-term growth period consisting of the first five years; (2) a transition period, consisting of the next five years (6 through 10); and (3) a long-term growth period starting in year 11 and extending into perpetuity.

For the short-term growth period, I relied on the consensus of analysts' growth projections described above in relationship to my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor reflecting the difference between the analysts' growth rates and the long-term sustainable growth rate. For the long-term growth period, I assumed each company's growth would converge to the maximum sustainable long-term growth rate.

Q WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR THE MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?

A Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the economy in which they sell services. A utilities' earnings and dividend growth is created by increased utility investment in its rate base. Examples of what can drive such investment are: service area economic growth, system reliability upgrades, or state and federal green energy initiatives. As such, nominal GDP growth is a reasonable upper limit for utility sales growth, rate base growth, and earnings growth in the long-run. Therefore, the U.S. GDP nominal growth rate is a conservative proxy for the highest sustainable long-term growth rate of a utility.

Q IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT A RATE GREATER THAN THE RATE OF GROWTH OF THE U.S. GDP?

A Yes. This concept is supported in published analyst literature and academic work. Specifically, in a textbook titled "Fundamentals of Financial Management," published by Eugene Brigham and Joel F. Houston, the authors state as follows:

> The constant growth model is most appropriate for mature companies with a stable history of growth and stable future expectations. Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation).[19]

The use of the economic growth rate is also supported by investment practitioners as outlined as follows:

> **Estimating Growth Rates**
>
> One of the advantages of a three-stage discounted cash flow model is that it fits with life cycle theories in regards to company growth. In these theories, companies are assumed to have a life cycle with varying growth characteristics. Typically, the potential for extraordinary growth in the near term eases over time and eventually growth slows to a more stable level.
>
> * * *
>
> Another approach to estimating long-term growth rates is to focus on estimating the overall economic growth rate. Again, this is the approach used in the *Ibbotson Cost of Capital Yearbook*. To obtain the economic growth rate, a forecast is made of the growth rate's component parts. Expected growth can be broken into two main parts: expected inflation and expected real growth. By analyzing these components separately, it is easier to see the factors that drive growth.[20]

[19] *Fundamentals of Financial Management*, Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298 (emphasis added).

[20] Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook at 51 and 52.

Q HOW DID YOU DETERMINE A LONG-TERM GROWTH RATE THAT REFLECTS THE CURRENT CONSENSUS OF INDEPENDENT MARKET PARTICIPANTS?

A I relied on the consensus of long-term GDP growth projections as projected by independent economists. *Blue Chip Financial Forecasts* publishes the consensus for GDP growth projections twice a year. These projections reflect current outlooks for GDP and are likely to be influential on investors' expectations of future growth outlooks. The consensus of projected GDP growth is about 4.14% over the next 10 years.[21]

Q DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP GROWTH?

A Yes, and these alternative sources corroborate the consensus analysts' projections I relied on. Several projections are shown in Table CCW-7 below.

[21]Blue Chip Economic Indicators, March 11, 2024 at page 14.

TABLE CCW-7

GDP Forecasts

Source	Projected Period	Real GDP	Inflation	Nominal GDP
Blue Chip Economic Indicators [1]	5-10 Yrs	1.9%	2.2%	4.1%
EIA - Annual Energy Outlook[2]	27 Yrs	1.9%	2.3%	4.3%
Congressional Budget Office[3]	30 Yrs	1.7%	2.0%	3.8%
Moody's Analytics[4]	31 Yrs	1.9%	2.1%	4.1%
Social Security Administration[5]	77 Yrs	1.6%	2.4%	4.1%
Economist Intelligence Unit[6]	31 Yrs	1.7%	2.2%	4.0%

Sources:
[1]Blue Chip Economic Indicators, March 11, 2024 at 14.
[2]U.S. EnergyInformation Administration (EIA), Annual Energy Outlook 2023, September, 2022.
[3]Congressional Budget Office, Long-Term Budget Outlook, June 28, 2023.
[4]Moody's Analytics Forecast, last updated March 11, 2024.
[5]Social Security Administration, "2023 OASDI Trustees Report," Table VI.G6. March 31, 2023.
[6]S&P MI, Economist Intelligence Unit, downloaded on April 26, 2024.

As shown in the table above, the real GDP and the inflation fall in the range of 1.6% to 2.0% and 2.0% to 2.4%, respectively. This results in a nominal GDP in the range of 3.8% to 4.3%. Therefore, the nominal GDP growth projections made by these independent sources support my use of 4.14% as a reasonable estimate of market participants' expectations for long-term GDP growth. The real GDP and nominal GDP growth projections made by these independent sources support my use of 4.14% as a reasonable estimate of market participants' expectations for long-term GDP growth.

Q WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN YOUR MULTI-STAGE DCF ANALYSIS?

A I relied on the same 13-week average stock prices and the most recent quarterly dividend payment data discussed above. For the first stage, I used the consensus of analysts' growth rate projections discussed above in my constant growth DCF model. The first stage covers the first five years, consistent with the time horizon of the securities analysts' growth rate projections. The second stage, or transition stage, begins in year 6 and extends through year 10. The second stage growth transitions the growth rate from the first stage to the third stage using a straight linear trend. For the third stage, or long-term sustainable growth stage, starting in year 11, I used a 4.14% long-term sustainable growth rate based on the consensus of economists' long-term projected nominal GDP growth rate.

Q WHAT ARE THE RESULTS OF YOUR MULTI-STAGE DCF MODEL?

A As shown in Exhibit CCW-8, the average and median DCF ROEs for my proxy group using the 13-week average stock price are 9.35% and 9.31%, respectively.

Q PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.

A The DCF results are summarized in Table CCW-8 below. As described above, the results of the constant growth DCF using analysts' growth rates assume an average long-term growth rate of 6.33%, which is approximately 50% higher than the long-term projected GDP growth rate of 4.14%. This is an unsustainable assumption, and likely leads to an overstatement in the cost of equity for a low-risk regulated utility. As such, it is my opinion that more weight should be given to the sustainable growth and multi-stage models of the DCF.

Table CCW-8

Summary of DCF Results

Description	Proxy Group Mean	Proxy Group Median
Constant Growth DCF Model (Analysts' Growth)	10.98%	10.50%
Constant Growth DCF Model (Sustainable Growth)	9.37%	9.28%
Multi-Stage DCF Model	9.35%	9.31%

III.G. Risk Premium Model

Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A This model is based on the principle that investors require a higher return to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends or guarantee returns on common equity investments. Therefore, common equity securities are considered to be riskier than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I quantify the difference between regulatory commission-authorized returns on common equity and contemporary U.S. Treasury bonds. The difference between the authorized return on common equity and the Treasury bond yield is the risk premium. I estimated the risk premium on an annual basis for each year since January 1986. The authorized ROEs were

based on regulatory commission-authorized returns for utility companies. Authorized returns are typically based on expert witnesses' estimates of the investor-required return at the time of the proceeding.

The second equity risk premium estimate is based on the difference between regulatory commission-authorized returns on common equity and contemporary "A" rated utility bond yields by Moody's. I selected the period 1986 through 2023 because public utility stocks consistently traded at a premium to book value during that period. This is illustrated in Exhibit CCW-9, which shows the market-to-book ratio since 1986 for the utility industry was consistently above a multiple of 1.0x. Over this period, an analyst can infer that authorized ROEs were sufficient to support market prices that at least exceeded book value. This is an indication that commission-authorized returns on common equity supported a utility's ability to issue additional common stock without diluting existing shares. It further demonstrates that utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown in Exhibit CCW-10, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.63%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity for a risk premium methodology.

I assessed the five-year and ten-year rolling average risk premiums over the study period to gauge the variability over time of risk premiums. These rolling average risk premiums mitigate the impact of anomalous market conditions and skewed risk premiums over an entire business cycle. As shown on my Exhibit

CCW-10, the five-year rolling average risk premium over Treasury bonds ranged from 4.17% to 7.17%, while the ten-year rolling average risk premium ranged from 4.30% to 6.92%.

As shown on my Exhibit CCW-11, the average indicated equity risk premium over contemporary "A" rated Moody's utility bond yields was 4.27%. The five-year and ten-year rolling average risk premiums ranged from 2.80% to 5.97% and 3.11% to 5.75%, respectively.

Q WHY ARE THE TIME PERIODS USED TO DERIVE THESE EQUITY RISK PREMIUM ESTIMATES APPROPRIATE TO FORM ACCURATE CONCLUSIONS ABOUT CONTEMPORARY MARKET CONDITIONS?

A Contemporary market conditions can change dramatically during the period that rates determined in this proceeding will be in effect. A relatively long period of time where stock valuations reflect premiums to book value indicates that the authorized ROEs and the corresponding equity risk premiums were supportive of investors' return expectations and provided utilities access to the equity markets under reasonable terms and conditions. Further, this time period is long enough to smooth abnormal market movement that might distort equity risk premiums. While market conditions and risk premiums do vary over time, this historical time period is a reasonable period to estimate contemporary risk premiums.

Q PLEASE EXPLAIN OTHER MARKET EVIDENCE YOU RELIED ON IN DETERMINING AN APPROPRIATE EQUITY RISK PREMIUM.

A The equity risk premium should reflect the market's perception of risk in the utility industry today. I have gauged investor perceptions in utility risk today in Exhibit

CCW-12, where I show the yield-spread between utility bonds and Treasury bonds since 1980. As shown in this schedule, the average utility bond yield-spreads over Treasury bonds for "A" and "Baa" rated utility bonds for this historical period are 1.48% and 1.90%, respectively.

A current 13-week average "A" rated utility bond yield of 5.66% when compared to the current Treasury bond yield of 4.50%, as shown in Exhibit CCW-13, page 1, implies a yield-spread of 1.16%. This current utility bond yield-spread is lower than the long-term average-spread for "A" rated utility bonds of 1.48%. The 13-week average yield on "Baa" rated utility bonds is 5.89%. This indicates a current spread for the "Baa" rated utility bond yield of 1.39%, which is lower than the long-term average of 1.90%.

Q WHAT ARE THE RESULTS BASED ON YOUR RISK PREMIUM ANALYSES?

A I give primary consideration to the Risk Premium results using Treasury bonds and A-rated utility bonds. My recommendation also takes the results of adding the Baa-rated utility bond yield to the equity risk premium over A-rated utility bonds into consideration.

Considering the current and projected economic environment, current yield spreads and equity risk premiums, as well as current levels of interest rates and interest rate projections, a more normalized equity risk premium is warranted. As such, I believe an average equity risk premium over Treasury yields of 5.63% is appropriate. Adding this risk premium to the projected Treasury yield of 4.20% produces an ROE of 9.63%.

Applying a similar methodology as described above, the average of the rolling five-year average risk premiums over A-rated utility bonds is 4.27%. The

A-rated utility bond yield has averaged 5.66% over the 13-week period ending May 10, 2024 while the Baa-rated utility bond yield has averaged 5.89% over the same period. Adding this risk premium to the 13-week A-rated utility bond yield of 5.66% produces an estimated cost of equity of 9.93%. Adding this risk premium to the 13-week Baa-rated utility bond yield of 5.89% produces an estimated cost of equity of 10.16%.

The A-rated utility bond yield has averaged 5.60% over the 26-week period ending May 10, 2024 while the Baa-rated utility bond yield has averaged 5.84% over the same period. Adding the equity risk premium of 4.27% to the 26-week A-rated utility bond yield of 5.60% produces an estimated cost of equity of 9.87%. Adding the equity risk premium of 4.27% to the 26-week Baa-rated utility bond yield of 5.84% produces an estimated cost of equity of 10.11%.

The results of my risk premium analyses are summarized in Table CCW-9.

Table CCW-9

Summary of Risk Premium Results

Description	
Projected Treasury Yield	9.63%
13-Week Yields	
A-Rated Utility Bond	9.93%
Baa-Rated Utility Bond	10.16%
26-Week Yields	
A-Rated Utility Bond	9.87%
Baa-Rated Utility Bond	10.11%

III.H. Capital Asset Pricing Model ("CAPM")

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$R_i = R_f + B_i \times (R_m - R_f)$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_i = Beta - Measure of the risk for stock

The term "beta" in the equation represents the stock-specific risk that cannot be reduced through diversification. In a well-diversified portfolio, specific risks related to individual stocks can be reduced by balancing the portfolio with securities that offset the impact of firm-specific factors, such as business cycle, competition, product mix, and production limitations.

Non-diversifiable risks, on the other hand, are related to market conditions and are referred to as systematic risks. These risks cannot be reduced through diversification and are considered market risks. Conversely, non-systematic risks, also known as business risks, can be reduced through diversification.

According to the CAPM, the market does not compensate investors for taking on risks that can be diversified away. Thus, investors are only compensated for taking on systematic, or non-diversifiable, risks. Beta is a measure of these systematic risks.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A The CAPM requires an estimate of the market risk-free rate, the company's beta, and the market risk premium.

Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

A As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield is 4.20%.[22] The current 30-year Treasury bond yield is 4.50%, as shown in Exhibit CCW-13 at page 1. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield of 4.20% for my CAPM analysis.

Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?

A Treasury securities are backed by the full faith and credit of the United States government, so long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

Treasury bond yields, however, do include risk premiums related to future inflation and liquidity. In this regard, a Treasury bond yield is not entirely risk-free. Risk premiums related to unanticipated inflation and interest rates reflect systematic market risks. Consequently, for a company with a beta less than 1.0,

[22]Blue Chip Financial Forecast May 1, 2024.

using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A As shown in Exhibit CCW-14, the current proxy group average and median *Value Line* beta estimates are 0.92 and 0.93, respectively. In my experience, these beta estimates are abnormally high and are unlikely to be sustained over the long-term. As such, I have also reviewed the historical average of the proxy group's *Value Line* betas. The historical average *Value Line* beta since 2014 is 0.76 and has ranged from 0.54 to 0.90. Prior to the recent pandemic, the high end of this range was 0.73.

In addition to *Value Line*, I have also included adjusted beta estimates as provided by Market Intelligence's Beta Generator Model. This model relied on a five-year period on a weekly basis ending May 10, 2024. The average and median Market Intelligence betas are 0.85 and 0.84, respectively. Market Intelligence betas, as calculated using its Beta Generator Model, are adjusted using the Vasicek method and calculated using the S&P 500 as the proxy for the investable market. This is in stark contrast with the *Value Line* beta estimates that are adjusted using a constant weighting of 67%/35% to the raw beta/market beta and use the New York Stock Exchange ("NYSE") as the proxy for the investable market. Because I rely on the S&P 500 to estimate the expected return on the investable market, it makes sense to rely on beta estimates that are calculated using the S&P 500 as the benchmark for the market. Further, as S&P explains:

> The Vasicek Method is a superior alternative to the Bloomberg Beta adjustment. The Bloomberg adjustment is not appropriate for a vast number of situations, as it assigns constant weighting regardless of the standard error in the raw beta estimation (Bloomberg Beta =

> 1/3*market beta + 2/3*Raw Beta). Given the statistical fact that a larger sample size yields a smaller error, the Vasicek method more appropriately adjusts the raw beta via weights determined by the variance of the individual security versus the variance of a larger sample of comparable companies. The weights are designed to bring the raw beta closer to whichever beta estimation has the smallest error. This is a feature the Bloomberg beta cannot replicate.[23]

Notably, while S&P makes reference to the Bloomberg method of applying 2/3 and 1/3 weights to the raw beta and market beta, respectively, the comparison still applies to *Value Line's* methodology of applying 67% and 35% weights. Both methods are forms of the Blume adjustment.[24] While the weights are slightly different between the Bloomberg and *Value Line* methods, they are similar and apply a constant weight without any regard to accuracy. As such, the criticisms of the betas offered by S&P apply to both Bloomberg betas and *Value Line* betas.

Q HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATES?

A My market risk premium estimates are derived using two general approaches: a risk premium approach and a DCF approach. I also consider the normalized market risk premium of 5.50% with the normalized risk-free rate of 4.61% as recommended by Kroll, formerly known as Duff & Phelps.[25] Based on this methodology and utilizing a "normalized" risk-free rate of 4.61%, Kroll concludes

[23]S&P Market Intelligence, Beta Generator Model.

[24]The Blume adjustment is a tool used to refine a beta measurement in finance. In general, Beta attempts to explain how much a particular investment's price moves compared to the overall market. But beta is often based on historical data, which may not be an accurate method for predicting the future. The Blume adjustment tries to address this by considering the idea that, in the long run, most investments tend to become more similar in their riskiness to the overall market (represented by a beta of 1).

[25]Kroll, and its predecessor Duff & Phelps, is a provider of economic, financial, and valuation data that is often relied on by finance professionals and cited in ROR testimony.

that the current expected, or forward-looking, market risk premium is 5.50%, implying an expected return on the market of 10.11%.[26]

Q PLEASE DESCRIBE YOUR MARKET RISK PREMIUM ESTIMATE DERIVED USING THE RISK PREMIUM METHODOLOGY.

A The forward-looking risk premium-based estimate was derived by estimating the expected return on the market (as represented by the S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

The Kroll *SBBI Yearbook* is no longer being published. As such, estimates of the historical, arithmetic-average, real-market return over the period 1926 to 2023 were calculated using data from Morningstar Direct. The arithmetic-average real return on the market since 1926 is 9.02%.[27] A current consensus for projected inflation, as measured by the Consumer Price Index ("CPI"), is 2.40%.[28] Using these estimates, the expected market return is 11.64%.[29] The market risk premium then is the difference between the 11.64% expected market return and the projected risk-free rate of 4.20%, or 7.44%.

[26]Kroll, *Kroll Increases U.S. Normalized Risk-Free Rate from 3.0% to 3.5%, but Spot 20-Year U.S. Treasury Yield Preferred When Higher*, June 16, 2022. The current 20-year yield of 4.61% exceeds the "normalized" yield of 3.5%. In accordance with Kroll's prescribed method, the greater of the two shall be used under the normalized Kroll methodology, i.e., 4.61%.

[27]Morningstar Direct.

[28]Blue Chip Financial Forecast May 1, 2024.

[29][(1 +9.02%) ∗ (1 + 2.40%) - 1] ∗ 100.

Q PLEASE DESCRIBE YOUR MARKET RISK PREMIUM ESTIMATES DERIVED USING THE DCF METHODOLOGY.

A I employed two versions of the constant growth DCF model to develop estimates of the market risk premium. I first employed the Federal Energy Regulatory Commission's ("FERC") method of estimating the expected return on the market that was established in its Opinion No. 569-A. FERC's method for estimating the expected return on the market is to perform a constant growth DCF analysis on each of the dividend-paying companies of the S&P 500 index. The growth rate component is based on the average of the growth projections excluding companies with growth rates that were negative or greater than 20%.[30] The weighted average growth rate for the remaining companies is 11.50%. After reflecting the FERC prescribed method of adjusting the dividend yield by (1+ 0.5g), the weighted average expected dividend yield is 1.90%. Thus, the DCF-derived expected return on the market is the sum of those two components, or 12.70%. The market risk premium then is the expected market return of 12.70%, less the projected risk-free rate of 4.20%, or 8.50%.

My second DCF-based market risk premium estimate was derived by performing the same DCF analysis described above, except I used all companies in the S&P 500 index rather than just the dividend-paying companies. The weighted average growth rate for these companies is 11.00%. After reflecting the FERC-prescribed method of adjusting the dividend yield by (1+ 0.5g), the weighted average expected dividend yield is 1.69%. Thus, the DCF-derived expected return on the market is the sum of those two components, or 12.69%. The market risk

[30]Opinion No. 569-A, at 210.

premium then is the expected market return of 12.69% less the projected risk-free rate of 4.20%, or 8.50%.

The average expected market return based on the DCF model is 12.70% and the average market risk premium based on the two DCF estimates is 8.50%.

Q HOW DO YOUR EXPECTED MARKET RETURNS COMPARE TO CURRENT EXPECTATIONS OF FINANCIAL INSTITUTIONS?

A As shown in Table CCW-10, my average expected market return of 11.48%[31] exceeds long-term market expectations of several financial institutions.

TABLE CCW-10

Long-Term Expected Return on the Market

Source	Term	Expected Return Large Cap Equities
BlackRock Capital Management[1]	30 Years	7.00%
JP Morgan Chase[2]	10 - 15 Years	7.00%
Vanguard[3]	10 Years	4.2% - 6.2%
Research Affiliates[4]	10 Years	4.00%

Sources:
[1]BlackRock Investment Institute, November 2023 report.
[2]JP Morgan Chase, Long-Term Capital Market Assumptions, 2024 Report.
[3]Vanguard economic and market outlook for 2024: A Return to Sound Money.
[4]Research Affiliates, Asset Allocation Interactive. Retrieved 1/05/2024.

[31]11.48% = (10.11% + 12.70% + 11.64%) / 3.

When compared to the expected market returns of financial institutions above, my average expected market return of 11.48% is greater than all of them. For these reasons, my expected market returns, and the associated market risk premiums, should be considered reasonable, if not high-end estimates.

Q HOW DO YOUR ESTIMATED MARKET RISK PREMIUMS COMPARE TO THAT ESTIMATED BY KROLL?

A The Kroll analysis indicates a market risk premium falls somewhere in the range of 5.50% to 7.17% utilizing data through 2023. My market risk premium estimates are in the range of 5.50% to 8.50%.

Q HOW DOES KROLL MEASURE A MARKET RISK PREMIUM?

A Kroll's range is based on several methodologies. First, Kroll estimated a market risk premium of 7.17% based on the difference between the total market return on common stocks (S&P 500) less the income return on 20-year Treasury bond investments over the 1926-2023 period.[32]

Second, Kroll used the Ibbotson & Chen supply-side model which produced a market risk premium estimate of 6.22%.[33] Kroll explains that the historical market risk premium based on the S&P 500 was influenced by an abnormal expansion of P/E ratios relative to earnings and dividend growth. In order to control for the volatility of extraordinary events and their impacts on P/E ratios, Kroll takes into consideration the three-year average P/E ratio as the current P/E ratio. Therefore, Kroll adjusted this market risk premium estimate to normalize the growth in the P/E ratio to be more in line with the growth in dividends and earnings.

[32]Kroll, *Cost of Capital Navigator*.
[33]*Id*.

Finally, Kroll developed its own recommended equity, or market risk premium, by employing an analysis that takes into consideration a wide range of economic information, multiple risk premium estimation methodologies, and the current state of the economy by observing measures such as the level of stock indices and corporate spreads as indicators of perceived risk. Based on this methodology, and utilizing a "normalized" risk-free rate of 4.61%, Kroll concludes that the current expected, or forward-looking, market risk premium is 5.50%, implying an expected return on the market of 10.11%.[34]

Q DO YOU HAVE ANY COMMENTS ON THE EXPECTED MARKET RETURNS AND MARKET RISK PREMIUMS DESCRIBED ABOVE?

A Yes. As described above, the average expected market return based on the DCF model is 12.70% and the average market risk premium is 8.50%. The expected market return of 12.70% is based on a constant perpetual growth rate of 11.00%. This is simply unsustainable for the same reasons described in greater detail above.

It simply is not reasonable to believe individual companies can sustain growth rate of 11.00% into perpetuity. In fact, in the CFA curriculum textbooks, the CFA Institute notes as follows with regard to earnings growth rates for companies within the composite indices (i.e., S&P 500):

> Earnings growth for the overall national economy can differ from the growth of earnings per share in a country's equity market composites. This is due to the presence of new businesses that are not yet included in the equity indices and are typically growing at a faster rate than the mature companies that make up the composites. **Thus, the earnings growth rate of**

[34] *Id*.

companies making up the composites should be lower than the earnings growth rate for the overall economy.[35]

In addition, a market risk premium in excess of 8.0% is significantly outside the range supported by empirical evidence. For example, Dr. Morin notes in his book, *Modern Regulatory Finance*, that several studies of the market risk premium have concluded that a market risk premium in the range of 5.0% to 8.0% is a reasonable estimate for the United States.[36] The Duarte and Rosa study he cites concludes that the historical mean is "quite difficult to improve upon when considering out-of-sample performance measures."[37] Dr. Morin also notes that a survey of professional practices showed that 71% of textbooks/tradebooks used a historical average as the market risk premium, and 60% of financial advisors used a market risk premium in the range of 7.0% to 7.4% (similar to a long-term arithmetic average market risk premium).[38]

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown in Exhibit CCW-15, I have provided the results of nine different applications of the CAPM. The first three results presented are based on the proxy group's current average *Value Line* beta of 0.92. The results of the CAPM based on these inputs range from 9.68% to 12.03%.

[35]CFA Program Curriculum, 2014 Level II Vol. 1, "Ethical and Professional Standards, Quantitative Methods, and Economics", Paul Kutasovic, Reading 15 – Economic Growth and the Investment Decision, page 609, footnote 5 (emphasis added).

[36]Dr. Morin references studies by Duarte & Rosa; Professors Ross, Westerfield, and Jordan; Mahera; and Brealey, Myers, and Allen. See *Modern Regulatory Finance*¸ Dr. Roger A. Morin, at pages 190-192. Dr. Morin notes in his textbook that there is a "slight preference" for the upper end of the range (i.e., 8%) during tumultuous times in capital markets with examples being the 2008-2009 credit crisis and the 2020 pandemic.

[37]See *Modern Regulatory Finance*¸ Dr. Roger A. Morin, at page 191, citing the Duarte and Rosa study.

[38]See *Modern Regulatory Finance*¸ Dr. Roger Morin, at page 190, footnote 35.

The next set of three results presented are based on the proxy group's historical *Value Line* beta of 0.76. The results of the CAPM based on these inputs range from 8.80% to 10.66%.

The last set of three results presented are based on the proxy group's current S&P Global Market Intelligence beta of 0.85. The results of the CAPM based on these inputs range from 9.29% to 11.43%. My CAPM results are summarized in Table CCW-11.

Because current beta estimates are based on the most recent five years of historical stock returns and volatility, they are being heavily impacted by the market fallout in early 2020 as the global pandemic set in and the market reacted, with this S&P 500 falling more than 40%. For this reason, it is not reasonable to assume current beta estimates, particularly Blume-adjusted betas such as those published by *Value Line*, are reflective of investor expectations at this time. As such, I am giving less consideration to the results of my CAPM analyses that rely on current *Value Line* betas. Finally, for the reasons detailed above, I believe it is also reasonable to give less consideration to the CAPM results that rely on market risk premium estimates of 8.50%.

Table CCW-11

CAPM Results Summary

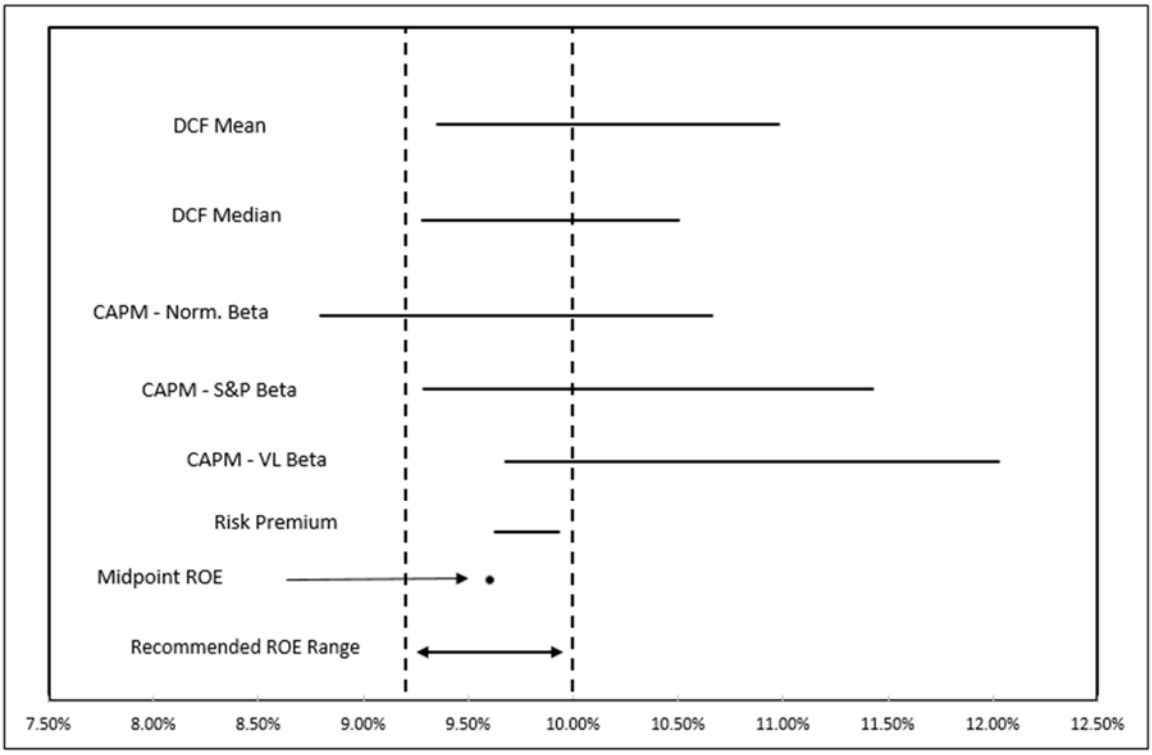
Description	Current VL Beta	Historical VL Beta	Current S&P Beta
Kroll Normalized Method	9.68%	8.80%	9.29%
Risk Premium Method	11.02%	9.83%	10.50%
FERC DCF Method	12.03%	10.66%	11.43%

III.I. Return on Equity Summary

Q BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR THE COMPANY?

A The results of my analyses are summarized in Figure CCW-5. In this figure, I present the various measures of central tendency for each of my analytical models.

FIGURE CCW-5



Based on my analyses of the various methodologies described above, I estimate the Company's current market cost of equity to be in the reasonable range of 9.20% to 10.00%. My recommended range takes into consideration the unsustainable growth rates assumed in the constant growth DCF model, the irrational assumption that Value Line's current beta estimates are reflective of current investor expectations, and the unsustainable growth rates assumed in the DCF-derived expected market return for the CAPM. Based on my assessment of Tampa Electric's overall risk profile and the results of these analytical methods, I would recommend that this Commission authorize Tampa Electric an ROE of 9.60%, which is the midpoint of my recommended range. Should the Commission authorize an equity ratio greater than my recommended level of 52.0%, an ROE in the lower half of my range would be warranted, particularly in light of the two-notch

ratings differences Tampa Electric enjoys over that of the typical company in my proxy group.

IV. RESPONSE TO MR. D'ASCENDIS

IV.A. Summary of Rebuttal

Q WHAT RETURN ON COMMON EQUITY IS TAMPA ELECTRIC PROPOSING FOR THIS PROCEEDING?

A Mr. D'Ascendis estimates a market ROE in the range of 9.89% to 12.48% based on the results of various financial models applied to a utility proxy group, as well as the results of market models applied to a non-price regulated proxy group. He then increases his range by 0.01% after accounting for Tampa Electric's relative risk compared to the proxy group and flotation costs. He estimates a downward adjustment of approximately 0.08% to account for the difference in credit ratings for Tampa Electric relative to the proxy group and an upward adjustment for flotation costs of approximately 0.10%. As such, Mr. D'Ascendis' adjusted range is 9.90% to 12.49%. Mr. D'Ascendis recommends an ROE of 11.50%, which is in the upper-end of his adjusted range also considers the Company's small service area, weather risk, high customer growth, and its substantial capital expenditure program.[39]

Q IS MR. D'ASCENDIS' ESTIMATED ROE REASONABLE?

A No. Mr. D'Ascendis' unadjusted estimated market return in the range of 9.90% to 12.49% is significantly overstated. In addition, his conclusion to award an ROE in the upper-half of his range based on the Company's small service area, weather

[39]D'Ascendis Direct Testimony 90-91.

risk, high customer growth, and its substantial capital expenditure program is unwarranted and should be rejected.

Q PLEASE DESCRIBE MR. D'ASCENDIS' METHODOLOGIES USED TO SUPPORT HIS ESTIMATE OF THE MARKET COST OF COMMON EQUITY.

A Mr. D'Ascendis estimates a ROE for Tampa Electric based on the DCF model, a bond yield plus risk premium model, as well as the traditional and empirical forms of the CAPM. Mr. D'Ascendis applies these models to both a utility proxy group and a non-price regulated proxy group. The low-end (9.90%) of his range is based on his proxy group's DCF results and the high-end (12.49%) is based on the results of his CAPM. His recommended ROE of 11.50% is in the upper-half of this range.

Q PLEASE SUMMARIZE MR. D'ASCENDIS' RESULTS.

A Mr. D'Ascendis' results are summarized in Table CCW-12 below.

TABLE CCW-12

Summary of Mr. D'Ascendis'
Return on Equity Estimates

Model	Proxy Group Estimate (1)	Estimate excl. PRPM (2)
DCF	9.89%	9.89%
RP	11.47%	11.46%
CAPM	12.48%	12.41%
Non-Price Regulated Companies	12.95%	12.89%
Indicated Return on Equity	9.89%-12.48%	
Business Risk Adjustment	-0.083%	
Flotation Cost Adjustment	0.097%	
Total Adders	0.01%	
Return on Equity Range	9.90%-12.49%	
Recommended Return on Equity	11.50%	

For the reasons outlined below, several flaws and assumptions used by Mr. D'Ascendis' have led to a significant overstatement in the Company's cost of equity and demonstrate that my recommended ROE of 9.60% is within the range of reasonable outcomes.

IV.B. An ROE in the Upper-Half of the Range is Unsupported

Q PLEASE DESCRIBE MR. D'ASCENDIS' REASONING TO AWARD THE COMPANY AN ROE IN THE UPPER HALF OF HIS RANGE.

A Mr. D'Ascendis proposes an ROE in the upper-half of his recommended range after consideration of the Company's small service area, weather risk, high customer growth, and its substantial capital expenditure program.

Q DO YOU BELIEVE AN ROE IN THE UPPER-HALF OF HIS RANGE IS WARRANTED GIVEN THOSE CONSIDERATIONS?

A No, I do not.

Q AS AN INITIAL MATTER, DO YOU BELIEVE THAT RATINGS AGENCIES CONSIDER A UTILITY'S GEOGRAPHIC SERVICE AREA, WEATHER RISK, CUSTOMER GROWTH, AND CAPITAL EXPENDITURES PROGRAM IN ASSESSING A COMPANY'S CREDIT RATINGS?

A Yes, they do. As shown below in Table CCW-13, S&P has identified multiple strengths and weaknesses of the Company that have been identified in S&P's most recent report, several of which are considerations that Mr. D'Ascendis has provided as his support for an ROE in the upper-half of his range.

Table CCW-13

Key strengths	Key risks
Tampa Electric Co. (TEC) is a low-risk, vertically integrated electric and gas distribution utility regulated by the Florida Public Service Commission (FPSC).	The company has limited geographic and regulatory diversity because the company only serves customers in the state of Florida.
TEC benefits from a supportive regulatory framework in Florida, which includes a cost-of-service methodology and a fuel adjustment mechanism to pass through commodity costs to customers.	TEC's high reliance on fossil fuel-based generation and higher-than-peers greenhouse gas emissions is considerable and exposes the company to potentially more stringent environmental regulations.
The company has a large residential customer base, which provides stable cash flows.	Very large capital programs over the next several years will pressure credit metrics, partially mitigated by cushion in the company's stand-alone financial measures.
Status as insulated subsidiary of Emera allows the utility to be rated higher than the group credit profile of Emera.	

In that same report, S&P also discusses the Company's exposure to hurricanes. Importantly, even after its consideration of these numerous strengths and weaknesses, S&P still awards Tampa Electric an SACP rating of 'a', which is two notches higher than the proxy group's credit rating from S&P. Even though Mr. D'Ascendis acknowledges the need to make a downward adjustment to reflect the differences in credit ratings, he more than offsets that credit risk adjustment by recommending an ROE that is 30 basis points above the midpoint. Because those

risks are already accounted for in the Company's credit ratings, making an upward adjustment for such risks is completely unnecessary and should be rejected.

IV.C. D'Ascendis Proposed Flotation Cost Adjustment

Q PLEASE DESCRIBE THE FLOTATION COST ADJUSTMENT ROE ADDER PROPOSED BY MR. D'ASCENDIS.

A Mr. D'Ascendis calculates actual equity issuance costs for EU's since its acquisition of Tampa Electric in 2016 and estimates it to be 2.41% on average. He then adjusts the dividend yield within the DCF model for the proxy group and calculates an adjusted DCF result of 9.89% and compares it to his proxy group's average DCF result of 9.80%. His flotation cost adjustment of 0.09% is the difference between the two model results.

Q IS MR. D'ASCENDIS' PROPOSED FLOTATION COST ADDER FOR TAMPA ELECTRIC REASONABLE?

A As an initial matter, I am unaware of this Commission allowing for the recovery of flotation costs in the allowed ROE. Second, Mr. D'Ascendis has not shown the flotation costs have been reasonably incurred and allocated to Tampa Electric.

Should the Commission authorize recovery of flotation costs, it should be for the prudently incurred and allocated amount and recovered through its cost of service. However, Tampa Electric has not provided any evidence that flotation costs are part of its cost of service.

Mr. D'Ascendis' use of EU's common stock issuance cost justifies my reasons for rejecting the small company adder. Tampa Electric is not a stand-alone small company. Rather, it is a subsidiary of a much larger company, EU.

The importance of rejecting the small company adder is emphasized by reviewing Mr. D'Ascendis' proposed method for developing a flotation cost adder to arrive at his proposed return for Tampa Electric, it is based on EU's access to equity markets, not Tampa Electric's.

IV.D. D'Ascendis DCF

Q PLEASE DESCRIBE MR. D'ASCENDIS' DCF ANALYSIS.

A Mr. D'Ascendis performed his traditional constant growth DCF analyses on his proxy group. He relied on analysts' earnings growth rate projections from *Value Line*, Zack's, and Yahoo! Finance. The average growth rate for his proxy group is 5.27%.[40] However, Mr. D'Ascendis excludes the results of IDACORP, Inc. because he deemed the result to be too low. As such, the average growth rate his proxy group, excluding IDACORP, Inc., is 5.37%. He used an annualized dividend and a 60-day average stock price to calculate the proxy group's dividend yield. The mean and median results of his unadjusted DCF analysis are 9.71% and 9.78%, respectively. The mean and median results of his adjusted DCF analysis are both 9.89%.

Q DO YOU HAVE ANY CONCERNS WITH MR. D'ASCENDIS' DCF RETURN ESTIMATES?

A Yes, I have two concerns. First, Mr. D'Ascendis biases his proxy group's results by excluding the results of IDACORP, Inc. There is no reasonable basis to exclude its results. Rather than excluding the results for IDACORP, Inc., he should have simply relied on the median of his results as the median is a measure of central

[40]Exhibit 4.

tendency that mitigates the effect outlier results have. The median result of his DCF analysis is 9.78%. This would reduce the low-end of Mr. D'Ascendis' recommended range of 9.89% by 11 basis points.

Second, Mr. D'Ascendis' DCF model consists entirely of a Constant Growth DCF analysis based on analysts' projected growth. His proxy group's average DCF return is based on a growth rate of 5.37%, which is higher than the consensus economists' projected growth rate of 4.14% for the economy described above. In other words, Mr. D'Ascendis thinks it is reasonable for the proxy group to grow, on average, at a rate of 1.30x that of the economy in perpetuity. As explained above, it is unrealistic to expect utilities to maintain a growth rate that is well in excess of the anticipated growth in GDP. Accordingly, relying solely on a Constant Growth DCF tends to overstate the DCF result.

IV.E. D'Ascendis Risk Premium

Q PLEASE DESCRIBE MR. D'ASCENDIS' RISK PREMIUM ANALYSIS.

A Mr. D'Ascendis estimated a risk premium return of 11.47% based on the results including his Predictive Risk Premium Model ("PRPM") analysis and 11.46% excluding his PRPM analysis.[41] Mr. D'Ascendis' Risk Premium results are derived using estimates of the equity risk premium based on the adjusted total market approach (7.36%/7.32% with/without PRPM), the holding period return/projected market appreciation approach (4.80%), and regression derived equity risk premium of 4.85%. Based on the three general approaches, Mr. D'Ascendis estimates the proxy group's equity risk premium to be 5.67% including the results of his PRPM and 5.66% excluding his PRPM results. Adding his average equity

[41]Exhibit 5, page 1.

risk premiums of 5.67% and 5.66% to his estimate of the adjusted prospective proxy group bond yield (5.80%) produce Risk Premium results of 11.47% and 11.46%, respectively.

Q DO YOU HAVE ANY CONCERNS WITH MR. D'ASCENDIS' RISK PREMIUM METHODOLOGY?

A Yes, I do. Mr. D'Ascendis' average estimates of the equity risk premium under the prospective bond yield and spot yield approaches are the results of 12 individual estimates.[42] When each equity risk premium result is considered in isolation, it is clear to see that the overwhelming majority of his results are in excess of any reasonable estimate. For example, if we look at the 12 estimates of the equity risk premium, they would produce Risk Premium result in the range of 10.00% to 16.02%. Notably, 11 of the 12 individual equity risk premium estimates produce ROE results greater than 10.50%. When individual results are looked at in isolation, it is clear that they produce excessive results that are unreliable.

Q IN YOUR OPINION, WHAT ARE THE MOST EGREGIOUS ROE RESULTS PRODUCED BY HIS RISK PREMIUM ANALYSIS?

A Considering the floor estimate based on his Risk Premium analysis starts at 10.0% is indicative that almost all of his Risk Premium results are excessive in light of where recent authorized ROEs for electric utilities has been recently. However, when looking at what each of Mr. D'Ascendis' Risk Premium results would be in isolation, of the 12 individual estimates, there are five that range from 11.69% to

[42] His analysis including the PRPM is based on 12 individual estimates of the equity risk premium. His analysis excluding the PRPM is based on 10 of the same individual estimates, excluding two PRPM derived equity risk premiums.

16.02%. These estimates are so far removed from observable benchmarks such as the allowed ROEs recently awarded to similar utilities, that it is hard to seriously conclude these results are based on reasonable methods of estimation.

IV.F. D'Ascendis CAPM

Q HOW DID MR. D'ASCENDIS DERIVE HIS CAPM RETURN ESTIMATE FOR TAMPA ELECTRIC?

A Mr. D'Ascendis developed his CAPM return estimate on his Exhibit 6. As shown on that schedule, he relied on a proxy group beta of 0.81 which was the average of the mean and median beta published by Bloomberg and *Value Line* for his proxy companies, market risk premiums of 10.02% (w/ PRPM) and 9.93% (excluding PRPM), and a risk-free rate of 4.15%. These inputs produce traditional CAPM return estimates of 12.28% (w/ PRPM) and 12.21% (w/o PRPM). He relies on the same input data to perform an Empirical CAPM ("ECAPM") analysis as well. The results of his ECAPM are 12.75% (w/ PRPM) and 12.68% (w/o PRPM).

Q DO YOU HAVE ANY ISSUES WITH MR. D'ASCENDIS' CAPM STUDY?

A I disagree with several aspects of his methodology. First, his market risk premiums of 9.93% and 10.02% are excessive and unreliable due to unsustainable growth rates he used to develop an expected market return.

Second, his market risk premium estimates suffer from many of the same previously described flaws surrounding his equity risk premium estimates.

Finally, I disagree with his use of adjusted betas in the ECAPM.

Q PLEASE DESCRIBE MR. D'ASCENDIS' ESTIMATED MARKET RISK PREMIUMS, GENERALLY.

A Mr. D'Ascendis averages six market risk premium estimates to develop his recommended market risk premium of 10.02%.

His first market risk premium estimate is based on historical Ibbotson data. With this methodology, he estimates a market risk premium of 7.03%. His second market risk premium is based on a regression analysis and produced a risk premium of 8.27%. His third market risk premium is based on the application of his PRPM method using historical Ibbotson data. This method produces a market risk premium of 10.44%. His fourth market risk premium is based on a *Value Line* 3-5 year projected market return of 15.15% less his risk-free rate of 4.15% to derive an expected market risk premium on the *Value Line* index of 11.00%. His fifth market risk premium is based on a *Value Line* projected return on the S&P 500 of 14.14%, which produced a risk premium of 9.99% after his risk-free rate is subtracted. Finally, he uses Bloomberg growth rates to perform a DCF on the S&P 500. This method produces a return on the market of 17.52% from which he subtracts his projected risk-free rate of 4.15% to produce a market risk premium of 13.37%. The average of these six market risk premiums is 10.02%.[43] He performs a similar analysis excluding his PRPM results which produce an average market risk premium estimate of 9.93%.

[43]Aqua Exhibit 5.04, page 2.

Q PLEASE COMMENT ON MR. D'ASCENDIS' MARKET RISK PREMIUM ESTIMATES.

A As an initial matter, his average market risk premiums of 9.93% and 10.02% fall well outside of the range 5.00% to 8.00% that is indicated by empirical evidence. I note that I agree with certain portions of his market risk premium estimates. It is the estimates that fall well outside of the range suggested by the empirical evidence that are a cause for concern.

In particular, his market risk premiums based on the application of the PRPM (10.44%), *Value Line*'s 3-5 year hence projections (11.00%), S&P 500 total return based on Value Line data (9.99%), and the S&P 500 total return based on Bloomberg data (13.37%). These market risk premium estimates exceed the high end of the empirical evidence by as much as 67%.[44] For example, Dr. Morin notes in his book, *Modern Regulatory Finance*, that several studies of the market risk premium have concluded that a market risk premium in the range of 5.0% to 8.0% is a reasonable estimate for the United States.[45] For example, the Duarte and Rosa study he cites concludes that the historical mean is "quite difficult to improve upon when considering out-of-sample performance measures."[46] Dr. Morin also notes that a survey of professional practices showed that 71% of textbooks/tradebooks used a historical average as the market risk premium, and

[44] 13.37% ÷ 8.00% = 67.1%

[45] Dr. Morin references studies by Duarte & Rosa; Professors Ross, Westerfield, and Jordan; Mahera; and Brealey, Myers, and Allen. See *Modern Regulatory Finance*¸ Dr. Roger A. Morin, at 190-192. Dr. Morin notes in his textbook that there is a "slight preference" for the upper end of the range (i.e., 8%) during tumultuous times in capital markets with examples being the 2008-2009 credit crisis and the 2020 pandemic.

[46] See *Modern Regulatory Finance*¸ Dr. Roger A. Morin, at 191, citing the Duarte and Rosa study.

60% of financial advisors used a market risk premium in the range of 7.0% to 7.4% (similar to a long-term arithmetic average market risk premium).[47]

Q DO YOU HAVE ANY ADDITIONAL CONCERNS WITH MR. D'ASCENDIS' CAPM ANALYSIS?

A Yes. In addition to his market risk premiums generally falling well outside of the empirical range, Mr. D'Ascendis' expected market return derived using the DCF model with Bloomberg data of 17.52% assumes a perpetual weighted growth rate of the 15.98% for the S&P 500. Importantly, this analysis relies on individual company growth rates as high as 184.34% (Boeing Corporation). Both assumed growth rates are simply irrational and cannot be sustained.

The DCF model requires a long-term sustainable growth rate. Mr. D'Ascendis' sustainable market growth rate of 15.98% is far too high to be a rational outlook for sustainable long-term market growth. This growth rate is 3.9x the growth rate of the U.S. GDP long-term growth outlook of 4.14%. The assumed perpetual growth rate of 184.34% for Boeing is 44.5x that of the forecasted GDP growth rate.

It simply is not reasonable to believe individual companies can sustain growth rates as high as Mr. D'Ascendis has assumed into perpetuity. In fact, in the CFA curriculum textbooks, the CFA Institute notes as follows with regard to earnings growth rates for companies within the composite indices (i.e., S&P 500):

> Earnings growth for the overall national economy can differ from the growth of earnings per share in a country's equity market composites. This is due to the presence of new businesses that are not yet included in the equity indices and are typically growing at a faster rate than the mature companies that make up the composites. **Thus, the earnings growth rate of companies**

[47]See *Modern Regulatory Finance*¸ Dr. Roger Morin, at 190, footnote 35.

making up the composites should be lower than the earnings growth rate for the overall economy.[48]

For these reasons, the overwhelming majority of Mr. D'Ascendis' traditional CAPM results are excessive and unreliable.

IV.G. D'Ascendis Empirical CAPM ("ECAPM")

Q PLEASE DESCRIBE MR. D'ASCENDIS' ECAPM ANALYSIS.

A Mr. D'Ascendis applies the same beta, market risk premium and risk-free rate that he used in his CAPM for his ECAPM. The ECAPM analysis modifies the traditional CAPM equation by including a risk premium weighted by the utility beta, and the overall market beta of 1.0. The original ECAPM analysis was designed to use raw, or unadjusted, regression betas. In Mr. D'Ascendis' ECAPM analysis, he adds two weighted risk premiums to a risk-free rate: a 75% weighted risk premium based on a 0.81 utility beta, and a 25% weighted risk premium based on a beta equal to the overall market beta of 1.0. The theory of the ECAPM is that a beta of less than 1.0 will increase toward the market beta of 1.0 over time, which is necessary because the risk of securities will be increasing over time. The ECAPM formula employed by Mr. D'Ascendis is as follows:

$R_i = R_f + [(.75) \times B_i \times (R_m - R_f)] + [(.25) \times B_m \times (R_m - R_f)]$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_i = Beta coefficient for the stock (0.95)
B_m = Beta coefficient for the market (1.0)

[48]CFA Program Curriculum, 2014 Level II Vol. 1, "Ethical and Professional Standards, Quantitative Methods, and Economics", Paul Kutasovic, Reading 15 – Economic Growth and the Investment Decision, page 609, footnote 5 (emphasis added).

Q WHAT ISSUES DO YOU TAKE WITH MR. D'ASCENDIS' ECAPM ANALYSIS?

A The biggest issue I have with Mr. D'Ascendis' ECAPM analysis is his use of an adjusted beta as published by *Value Line*. The impact of Mr. D'Ascendis' ECAPM adjustment is to increase his beta estimate from 0.81 to 0.86.[49] The weighting adjustments applied in the ECAPM are mathematically consistent with the adjustments made to create the *Value Line* adjusted betas since the inputs are all multiplicative as shown in the formula above.

Mr. D'Ascendis' reliance on an adjusted *Value Line* beta in his ECAPM study is inconsistent with the academic research that I am aware of supporting the development of the ECAPM.[50] The *Value Line* adjusted betas are already adjusted for a stock's long-term tendency to converge to 1.00. Importantly, the timing of that convergence is not known, and therefore a constant weighting is applied when adjusting raw betas using the Blume method, as done by *Value Line* and Bloomberg. Thus, the end result of using the *Value Line* adjusted betas in the ECAPM is essentially an expected return line that has been flattened by two duplicative adjustments. In other words, the vertical intercept has been raised twice and the security market line has been flattened twice: once through the adjustments *Value Line* made to the raw beta, and again by weighting the risk-adjusted market risk premium as Mr. D'Ascendis has done.

Moreover, Mr. D'Ascendis further increases the intercept and flattens the security market line by using projected long-term Treasury yields that are at odds

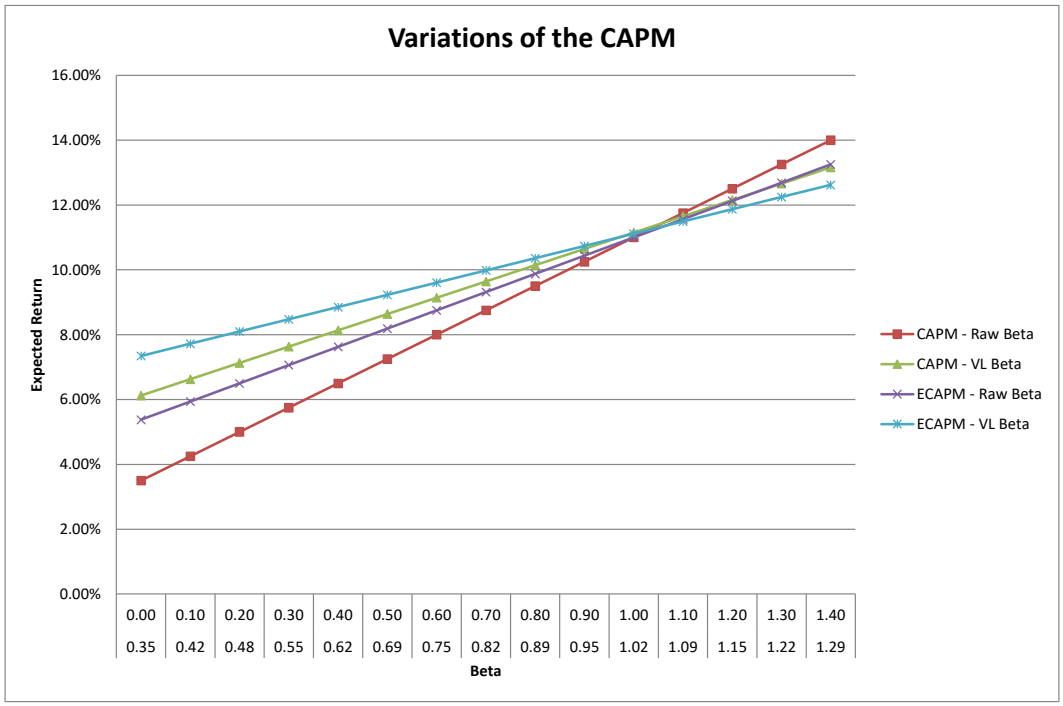
[49] 75% x 0.81 + 25% x 1 = 0.86.

[50] *See* Black, Fischer, "Beta and Return," *The Journal of Portfolio Management,* Fall 1993, 8-18; and Black, Fischer, Michael C. Jensen and Myron Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," 1972.

with current market expectations and inconsistent with the Federal Reserve's projections and monetary policy.

The ECAPM will raise the intercept point of the security market line and flatten the slope. Again, this has the effect of increasing CAPM return estimates for companies with betas less than 1, and decreasing the CAPM return estimates for companies with betas greater than 1. I have modeled the expected return line resulting from the application of the various forms of the CAPM/ECAPM below in Figure CCW-6.

FIGURE CCW-6



Along the horizontal axis in Figure CCW-6, I have provided the raw unadjusted beta (top row) and the corresponding adjusted *Value Line* beta (bottom row). As shown in Figure CCW-6, the CAPM using a *Value Line* beta compared to the CAPM using an unadjusted beta shows that the *Value Line* beta raises the intercept point and flattens the slope of the security market line. As shown in the figure above, the two variations with the most similar slope are the CAPM with the

Value Line beta, and the ECAPM with a raw beta. This evidence in shows that the ECAPM adjustment has a very similar impact on the expected return line as a *Value Line* adjusted beta. Another observation that can be made from the figure above is the magnifying effect that the ECAPM using a *Value Line* adjusted beta has on raising the vertical intercept and flattening the slope relative to all other variations. There is simply no legitimate basis to use an adjusted beta within an ECAPM because it unjustifiably alters the security market line and materially inflates a CAPM return for a company with a beta less than 1.

Finally, this Commission has routinely rejected the ECAPM with an adjusted beta. As such, Mr. D'Ascendis' use of an adjusted beta in the ECAPM should be rejected.

IV.H. D'Ascendis Non-Regulated Company Analysis

Q PLEASE DESCRIBE MR. D'ASCENDIS' NON-PRICE REGULATED COMPANIES' EARNED ROE METHODOLOGY.

A Mr. D'Ascendis' non-price regulated ROE estimate is based on the results from the same cost of equity studies described above using a proxy group of non-price regulated companies that he chose based solely on whether they had betas within two standard deviations of the beta of his utility proxy group. His DCF, Risk Premium, and CAPM model results for the non-price regulated firms are 10.26%, 12.57%, and 11.75%, respectively. For his spot data analysis on the same non-price regulated companies, the financial models produce results of 10.32%, 12.70%, and 12.06%.[51]

[51] Exhibit 8.

Q IS IT REASONABLE FOR MR. D'ASCENDIS TO USE HIS NON-PRICE REGULATED RISK PROXY GROUP TO ESTIMATE THE REQUIRED ROE FOR TAMPA ELECTRIC?

A No. Mr. D'Ascendis has not proven that these companies are risk-comparable to Tampa Electric. For example, Mr. D'Ascendis' non-price regulated proxy group includes large technology firms such as Cisco Systems and Oracle Corp. It is simply not credible to believe that these firms are comparable in business and operating risk to regulated utilities. To draw a valid comparison between Tampa Electric and any proxy group, it is necessary to show that these companies have comparable risk factors that are commonly used by investment professionals to compare investment risk between different investment alternatives. Because he has not shown that these companies are indeed risk comparable to Tampa Electric, his estimated return based on this proxy group is not reliable to estimate the cost of equity for Tampa Electric and should be disregarded.

Further, the RP and CAPM estimates on Mr. D'Ascendis' non-utility proxy group are flawed and biased for the same reasons described above concerning his utility proxy group. As such, his ROE estimates based on his non-utility proxy group do not reflect a reasonable risk proxy for Tampa Electric, and are based on flawed applications of DCF, the Risk Premium model and CAPM. Therefore, the Commission should reject the use of Mr. D'Ascendis' non-price regulated proxy group.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

Qualifications of Christopher C. Walters

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Christopher C. Walters. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation and a Principal with the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EMPLOYMENT EXPERIENCE.

A I received a Bachelor of Science Degree in Business Economics and Finance from Southern Illinois University Edwardsville. I have also received a Master of Business Administration Degree from Lindenwood University.

As a Principal at BAI, I perform detailed technical analyses and research to support regulatory projects including expert testimony covering various regulatory issues. Since my career at BAI began in 2011, I have held the positions of Analyst, Associate Consultant, Consultant, Senior Consultant, and Associate. Throughout my tenure, I have been involved with several regulated projects for electric, natural gas and water and wastewater utilities, as well as competitive procurement of electric power and gas supply. My regulatory project work includes estimating the cost of equity capital, capital structure evaluations, assessing financial integrity, merger and acquisition related issues, risk management related issues, depreciation rate studies, and other revenue requirement issues.

BAI was formed in April 1995. BAI and its predecessor firm have participated in more than 700 regulatory proceedings in 40 states and Canada.

BAI provides consulting services in the economic, technical, accounting, and financial aspects of public utility rates and in the acquisition of utility and energy services through RFPs and negotiations, in both regulated and unregulated markets. Our clients include large industrial and institutional customers, some utilities and, on occasion, state regulatory agencies. We also prepare special studies and reports, forecasts, surveys and siting studies, and present seminars on utility-related issues.

In general, we are engaged in energy and regulatory consulting, economic analysis and contract negotiation. In addition to our main office in St. Louis, the firm also has branch offices in Corpus Christi, Texas; Louisville, Kentucky and Phoenix, Arizona.

Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

A Yes. I have sponsored testimony before state regulatory commissions including: Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Texas, Utah, and Wyoming. In addition, I have also sponsored testimony before the City Council of New Orleans and an affidavit before the FERC.

Q PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANIZATIONS TO WHICH YOU BELONG.

A I earned the Chartered Financial Analyst ("CFA") designation from the CFA Institute. The CFA charter was awarded after successfully completing three examinations which covered the subject areas of financial accounting and reporting analysis, corporate finance, economics, fixed income and equity valuation, derivatives, alternative investments, risk management, and professional and ethical conduct. I am a member of the CFA Institute and the CFA Society of St. Louis.

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Tampa Electric Company.	)	**DOCKET NO. 20240026-EI**
In re: Petition for approval of 2023 Depreciation and Dismantlement Study, by Tampa Electric Company.	)	**DOCKET NO. 20230139-EI**
In re: Petition to implement 2024 Generation Base Rate Adjustment provisions in Paragraph 4 of the 2021 Stipulation and Settlement Agreement, by Tampa Electric Company.	)	**DOCKET NO. 20230090-EI**

STATE OF MISSOURI)
) SS
COUNTY OF ST. LOUIS)

Affidavit of Christopher C. Walters

Christopher C. Walters, being first duly sworn, on his oath states:

1. My name is Christopher C. Walters. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Federal Executive Agencies in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and exhibits which were prepared in written form for introduction into evidence in the Florida Public Service Commission Docket Nos. 20240026-EI, 20230139-EI and 20230090-EI.

3. I hereby swear and affirm that the testimony and exhibits are true and correct and that they show the matters and things that they purport to show.

Christopher C. Walters

Subscribed and sworn to before me this 6th day of June, 2024.

SALLY D. WILHELMS
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: Aug. 5, 2024
Commission # 20078050

Notary Public

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

		Price to Earnings (P/E) Ratio [1]																						
Line	Company	22-Year Average (1)	2023 [2] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)	2005 (20)	2004 (21)	2003 (22)	2002 (23)
1	ALLETE	18.14	15.40	18.10	20.60	18.30	24.70	22.20	23.00	18.60	15.10	17.20	18.60	15.90	14.70	16.00	16.10	13.90	14.80	16.55	17.91	25.21	N/A	N/A
2	Alliant Energy	16.97	16.50	21.40	21.20	21.20	21.20	19.10	20.60	22.30	18.10	16.60	15.30	14.50	14.50	12.50	13.90	13.40	15.10	16.82	12.59	14.00	12.69	19.93
3	Ameren Corp.	16.73	15.40	21.50	21.40	22.20	22.10	18.30	20.60	18.30	17.50	16.70	16.50	13.40	11.90	9.70	9.30	14.20	17.40	19.39	16.72	16.28	13.51	15.78
4	American Electric Power	15.13	14.20	21.10	17.10	19.60	21.40	18.00	19.30	15.20	15.80	15.90	14.50	13.80	11.90	13.40	10.00	13.10	16.30	12.91	13.70	12.42	10.66	12.68
5	Avangrid, Inc.	23.69	16.30	19.60	23.20	23.60	23.10	26.10	27.30	20.50	33.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	18.32	14.60	20.00	20.20	21.20	15.00	24.50	23.40	18.80	17.60	17.30	14.60	19.30	14.10	12.70	11.40	15.00	30.90	15.39	19.45	24.43	13.84	19.27
7	Black Hills	17.62	14.20	18.10	17.70	17.00	21.20	16.80	19.50	22.30	16.10	19.00	18.20	17.10	31.10	18.10	9.90	NMF	15.00	15.77	17.27	17.13	15.95	12.52
8	CenterPoint Energy	16.80	18.80	18.70	26.10	15.90	19.50	37.00	17.90	21.90	18.10	17.00	18.70	14.80	14.60	13.80	11.80	11.30	15.00	10.27	19.06	17.84	6.05	5.59
9	CMS Energy Corp.	18.28	17.40	22.90	23.60	23.30	24.30	20.30	21.30	20.90	18.30	17.30	16.30	15.10	13.60	12.50	13.60	10.90	26.80	22.18	12.60	12.39	N/A	N/A
10	Consol. Edison	16.12	17.70	20.30	17.20	19.00	19.70	17.10	19.80	18.80	15.60	15.90	14.70	15.40	15.10	13.30	12.50	12.30	13.80	15.49	15.13	18.21	14.30	13.28
11	Dominion Resources	18.34	18.30	18.70	19.50	22.60	18.20	17.50	22.20	21.30	22.10	23.00	19.20	18.90	17.30	14.30	12.70	13.80	20.60	15.98	24.89	15.07	15.24	12.05
12	DTE Energy	16.60	14.30	22.40	30.00	16.30	19.90	17.40	18.60	19.00	18.10	14.90	17.90	14.90	13.50	12.30	10.40	14.80	18.30	17.43	13.80	16.04	13.69	11.28
13	Duke Energy	17.19	16.50	19.60	18.90	17.10	17.70	17.00	19.90	21.30	18.20	17.90	17.40	17.50	13.80	12.70	13.30	17.30	16.10	N/A	N/A	N/A	N/A	N/A
14	Edison Int'l	17.08	14.30	40.60	29.70	34.90	16.70	N/A	17.20	17.90	14.80	13.00	12.70	9.70	11.80	10.30	9.70	12.40	16.00	12.99	11.74	37.59	6.97	7.78
15	El Paso Electric	17.68	N/A	N/A	N/A	N/A	N/A	26.85	21.78	18.66	18.33	16.38	15.88	14.47	12.60	10.72	10.79	11.89	15.26	16.92	26.72	22.03	18.26	22.99
16	Entergy Corp.	13.94	9.80	21.10	15.00	15.30	16.50	13.80	15.00	10.90	12.50	12.90	13.20	11.20	9.10	11.60	12.00	16.60	19.30	14.28	16.28	15.09	13.77	11.53
17	Eversource Energy	18.27	13.10	20.90	22.20	23.70	22.10	18.70	19.50	18.70	18.10	17.90	16.90	19.90	15.40	13.40	12.00	13.70	18.70	27.07	19.76	20.77	13.35	16.07
18	Evergy, Inc.	19.05	12.00	19.90	16.20	21.70	21.80	22.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	14.38	15.40	19.90	16.60	12.40	14.70	13.30	13.40	12.50	12.60	16.00	13.40	19.10	11.30	11.00	11.50	18.00	18.20	16.53	15.37	12.99	11.77	10.46
20	FirstEnergy Corp.	15.19	14.40	17.00	14.10	15.70	17.10	13.60	11.40	12.70	12.60	13.20	13.10	21.10	22.40	11.70	13.00	15.60	15.60	14.23	16.07	14.13	22.47	12.95
21	Fortis Inc.	19.24	16.70	21.10	21.20	20.60	19.20	17.10	16.80	21.60	18.00	24.30	20.00	20.10	18.80	18.20	16.40	17.50	21.10	17.68	N/A	N/A	N/A	N/A
22	Great Plains Energy	15.52	N/A	N/A	N/A	N/A	N/A	N/A	NMF	17.98	19.37	16.47	14.19	15.53	16.11	12.10	16.03	20.55	16.35	18.30	13.96	12.59	12.23	11.09
23	Hawaiian Elec.	17.65	6.00	18.50	18.20	21.50	21.30	18.90	20.70	13.60	20.40	15.90	16.20	15.80	17.10	18.60	19.80	23.20	21..6	20.33	18.27	19.18	13.76	13.47
24	IDACORP, Inc.	17.15	18.10	21.00	20.80	19.90	22.30	20.50	20.60	19.10	16.20	14.70	13.40	12.40	11.50	11.80	10.20	13.90	18.20	15.07	16.70	15.49	26.51	18.88
25	MGE Energy	19.98	18.60	24.70	25.50	26.40	28.40	25.10	29.40	24.90	20.30	17.20	17.00	17.20	15.80	15.00	15.10	14.20	15.00	15.88	22.40	17.98	17.55	15.96
26	NextEra Energy, Inc.	18.76	19.80	27.80	31.30	28.90	26.80	24.80	21.60	20.70	16.90	17.30	16.60	14.40	11.50	10.80	13.40	14.50	18.90	13.65	17.88	13.65	17.88	13.60
27	NorthWestern Corp	16.92	13.70	17.30	17.40	18.60	19.90	16.80	17.80	17.20	18.40	16.20	16.90	15.70	12.60	12.90	11.50	13.90	21.70	25.95	17.09	N/A	N/A	N/A
28	OGE Energy	15.31	15.30	17.20	14.30	16.20	19.00	16.50	18.30	17.70	17.70	18.30	17.70	15.20	14.40	13.30	10.80	12.40	13.80	13.68	14.95	14.13	11.84	14.12
29	Otter Tail Corp.	20.76	16.40	9.50	12.30	18.30	23.50	22.20	22.10	20.20	18.20	18.80	21.10	21.70	47.50	NMF	31.20	30.10	19.00	17.35	15.40	17.34	17.77	16.01
30	Pinnacle West Capital	15.88	15.80	17.10	14.10	16.70	19.40	17.80	19.30	18.70	16.00	15.90	15.30	14.30	14.60	12.60	13.70	16.10	14.90	13.69	19.24	15.80	13.96	14.43
31	PNM Resources	18.28	14.20	17.40	19.90	19.60	22.20	19.40	20.40	22.40	18.70	18.70	16.10	15.00	14.50	14.00	18.10	N/A	35.60	15.57	17.38	15.02	14.73	15.08
32	Portland General	16.71	14.30	18.20	17.70	16.60	22.30	18.40	20.00	19.10	17.70	15.30	16.90	14.00	12.40	12.00	14.40	16.30	11.90	23.35	N/A	N/A	N/A	N/A
33	PPL Corp.	16.24	16.20	20.00	54.10	13.90	13.30	11.30	17.60	12.80	13.90	14.10	12.80	10.90	10.50	11.90	25.70	17.60	17.30	14.10	15.12	12.51	10.59	11.06
34	Public Serv. Enterprise	14.51	18.80	18.50	16.80	15.70	18.00	16.60	16.30	15.30	14.10	12.60	13.50	12.80	10.40	10.40	10.00	13.60	16.50	17.81	16.74	14.26	10.58	10.00
35	SCANA Corp.	13.96	N/A	N/A	N/A	N/A	N/A	N/A	14.46	16.80	14.67	13.68	14.43	14.80	13.67	12.93	11.63	12.67	14.96	15.42	14.44	13.57	13.05	12.17
36	Sempra Energy	15.54	15.00	16.80	15.40	17.50	22.50	20.40	24.30	24.40	19.70	21.90	19.70	14.90	11.80	12.60	10.10	11.80	14.00	11.50	11.79	8.65	8.96	8.19
37	Southern Co.	16.28	18.60	19.60	18.40	17.90	17.60	15.10	15.50	17.80	15.80	16.00	16.20	17.00	15.80	14.90	13.50	16.10	16.00	16.19	15.92	14.68	14.83	14.63
38	Vectren Corp.	17.05	N/A	N/A	N/A	N/A	N/A	N/A	23.54	19.18	17.92	19.98	20.66	15.02	15.83	15.10	12.89	16.79	15.33	18.92	15.11	17.57	14.80	14.16
39	WEC Energy Group	17.37	15.20	21.90	22.30	24.90	23.50	19.60	20.00	19.90	21.30	17.70	16.50	15.80	14.20	14.00	13.30	14.80	16.50	15.97	14.46	17.51	12.43	10.46
40	Westar Energy	15.58	N/A	N/A	N/A	N/A	N/A	N/A	23.40	21.59	18.45	15.36	14.04	13.43	14.78	12.96	14.95	16.96	14.10	12.18	14.79	17.44	10.78	14.02
41	Xcel Energy Inc.	17.87	15.30	22.20	22.50	23.90	22.30	18.90	20.20	18.50	16.50	15.40	15.00	14.80	14.20	14.10	12.70	13.70	16.70	14.80	15.36	13.65	11.62	40.80
42	Average	17.00	15.46	20.29	20.91	19.95	20.51	19.43	19.85	18.75	17.58	16.77	16.19	15.56	15.30	13.16	13.57	15.27	17.66	16.51	16.56	16.65	13.83	14.31
43	Median	16.10	15.40	19.90	19.70	19.30	21.20	18.55	20.00	18.80	17.81	16.47	16.20	15.02	14.20	12.80	12.70	14.20	16.32	15.92	15.99	15.49	13.69	13.47

Sources:
The current year P/E ratio is based on the forward P/E (price over expected earnings per share). All historical year P/E ratios are based on annual average share price over achieved earnings per share.
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Market Price to Cash Flow (MP/CF) Ratio [1]

Line	Company	22-Year Average (1)	2023 [2] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)	2005 (20)	2004 (21)	2003 (22)	2002 (23)
1	ALLETE	9.17	6.69	7.56	8.61	8.14	11.38	10.16	10.95	8.26	7.49	8.80	9.15	8.18	7.91	8.04	8.51	9.29	10.30	11.06	11.54	11.46	N/A	N/A
2	Alliant Energy	8.25	9.43	10.43	10.31	10.66	10.74	9.71	13.21	10.67	8.86	8.40	7.52	7.50	7.21	6.59	6.23	7.49	7.92	8.00	5.09	5.52	4.76	5.20
3	Ameren Corp.	7.41	8.05	9.54	9.03	9.63	9.45	7.95	8.38	7.44	6.87	6.95	6.61	5.48	5.02	4.23	4.25	6.35	7.69	8.57	8.57	8.24	6.74	7.96
4	American Electric Power	6.72	7.68	8.67	7.57	8.41	9.34	8.03	8.81	7.57	7.09	7.00	6.57	5.93	5.46	5.54	4.71	5.71	6.84	5.54	6.07	5.50	4.69	5.19
5	Avangrid, Inc.	9.53	7.12	8.69	11.19	9.39	9.11	10.24	10.14	8.56	11.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	6.97	6.73	9.39	8.03	7.80	7.34	10.14	9.35	7.63	6.76	7.30	6.21	6.88	6.40	5.80	4.06	5.12	7.58	5.30	6.58	7.58	5.36	5.90
7	Black Hills	7.92	7.76	8.92	8.84	8.56	10.65	8.83	9.20	9.33	8.06	8.81	8.03	6.04	7.85	6.16	4.25	11.26	7.62	6.92	7.57	6.69	6.89	5.92
8	CenterPoint Energy	5.58	7.92	8.01	7.95	5.94	7.03	8.45	6.97	5.96	5.75	6.25	6.56	5.15	5.39	4.70	4.05	4.29	5.17	3.94	4.70	4.26	2.08	2.16
9	CMS Energy Corp.	6.51	8.28	9.43	9.27	9.87	9.85	8.40	8.75	8.50	7.53	7.13	6.68	6.03	5.41	4.48	3.64	3.45	5.57	4.40	4.04	3.20	2.88	NMF
10	Consol. Edison	8.24	8.26	8.70	7.26	8.35	9.46	8.73	9.64	9.39	7.96	7.89	7.77	8.31	8.15	7.39	6.72	6.89	8.31	8.65	8.59	9.31	7.90	7.64
11	Dominion Resources	9.89	9.24	9.35	11.15	14.59	13.47	10.94	11.35	11.59	11.84	12.27	10.88	9.92	9.45	8.12	6.98	8.27	8.65	7.81	10.09	7.68	7.51	6.53
12	DTE Energy	6.76	7.27	7.96	10.62	7.85	9.67	8.54	9.05	8.64	8.52	6.42	6.65	5.91	5.18	4.69	3.59	4.90	5.73	5.21	5.54	6.00	5.62	5.20
13	Duke Energy	7.61	7.17	7.75	7.89	8.06	7.40	7.65	8.40	8.57	7.95	8.12	8.11	9.53	6.56	6.01	5.96	7.13	7.16	N/A	N/A	N/A	N/A	N/A
14	Edison Int'l	6.02	5.67	6.83	7.14	7.57	7.25	13.46	7.05	6.77	5.92	5.68	5.46	4.59	4.22	4.11	3.95	5.63	7.01	5.87	5.61	6.84	2.82	2.96
15	El Paso Electric	5.93	N/A	N/A	N/A	N/A	N/A	9.43	8.54	7.46	6.47	6.33	6.19	5.78	5.16	4.31	3.98	4.95	6.44	6.25	6.67	4.65	3.90	4.39
16	Entergy Corp.	5.74	4.62	7.15	5.61	5.78	6.05	4.92	4.66	4.01	4.11	4.21	4.03	4.23	3.90	4.66	5.68	7.96	9.21	7.16	8.76	7.12	6.84	5.57
17	Eversource Energy	7.65	10.39	9.39	11.41	12.53	11.47	9.16	10.36	10.14	10.12	10.14	8.08	9.30	6.99	4.97	4.61	4.12	6.18	6.02	3.55	3.78	2.85	2.75
18	Evergy, Inc.	7.73	7.11	8.66	7.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	6.05	6.41	7.69	5.08	4.44	5.29	5.05	4.45	4.80	4.70	5.09	4.61	5.54	5.86	5.10	5.98	9.65	9.89	8.62	7.97	6.29	5.71	4.97
20	FirstEnergy Corp.	6.90	7.90	8.93	6.60	9.23	11.09	8.84	4.76	5.12	5.38	7.43	6.15	7.42	7.33	4.49	4.91	7.58	7.89	7.53	6.04	5.15	6.90	5.10
21	Fortis Inc.	8.47	8.34	9.10	9.57	9.50	9.46	7.97	8.23	10.46	7.29	9.25	7.93	8.09	8.38	7.40	6.76	7.58	9.18	7.89	N/A	N/A	N/A	N/A
22	Great Plains Energy	6.89	N/A	N/A	N/A	N/A	N/A	N/A	14.62	8.63	6.66	6.45	5.73	6.09	5.74	4.49	5.06	7.71	7.13	7.68	6.70	6.52	5.92	5.14
23	Hawaiian Elec.	7.96	5.70	7.95	8.23	8.69	9.30	8.34	9.21	7.44	9.25	7.64	8.15	8.05	7.73	7.81	6.95	9.10	7.95	8.47	8.29	8.44	6.12	6.20
24	IDACORP, Inc.	8.98	11.04	12.42	11.84	11.38	12.75	11.72	11.56	10.95	9.37	8.59	7.78	7.05	6.64	6.52	5.31	7.10	8.23	7.73	7.55	7.15	7.27	7.53
25	MGE Energy	11.68	12.28	13.63	N/A	14.90	15.58	15.04	17.33	15.66	12.53	11.42	11.20	10.77	9.48	9.05	8.40	8.42	9.23	9.30	11.73	11.04	10.20	8.09
26	NextEra Energy, Inc.	9.20	10.89	15.17	20.40	15.48	12.33	10.77	11.61	9.24	7.93	7.98	7.60	7.58	5.98	5.33	6.09	7.34	9.02	6.51	6.71	6.71	5.97	5.77
27	NorthWestern Corp	7.90	8.01	8.65	8.83	8.88	9.93	8.19	8.82	8.65	8.99	9.01	7.61	6.85	5.89	5.79	5.05	5.57	8.45	9.39	7.31	8.13	N/A	N/A
28	OGE Energy	7.94	7.88	8.36	7.64	8.38	10.58	9.36	10.52	9.03	9.25	10.65	9.93	7.35	7.48	6.61	5.37	6.43	7.58	7.50	7.04	6.73	5.62	5.39
29	Otter Tail Corp.	9.27	8.02	7.70	8.61	9.99	12.42	11.58	11.09	9.38	9.04	9.45	9.58	8.43	9.04	8.07	8.01	11.65	9.53	8.66	8.18	9.01	8.13	8.33
30	Pinnacle West Capital	6.21	6.47	5.19	6.19	7.49	8.30	7.09	8.73	7.89	6.91	7.03	6.85	6.34	5.80	5.65	3.84	4.19	4.76	4.48	7.48	5.88	4.80	5.21
31	PNM Resources	6.90	6.87	6.95	7.81	7.87	7.92	7.57	7.40	7.64	6.95	7.48	6.47	5.80	4.94	4.58	4.53	7.10	10.67	7.50	7.62	6.84	5.55	5.72
32	Portland General	6.00	6.56	6.65	6.48	6.72	7.65	6.56	7.45	7.12	6.73	5.49	6.06	5.08	4.86	4.13	4.63	4.81	5.34	5.74	N/A	N/A	N/A	N/A
33	PPL Corp.	7.84	7.83	8.82	13.74	7.46	7.99	7.02	10.11	8.37	8.73	7.32	6.59	5.87	5.98	7.46	8.82	9.17	8.90	7.58	7.57	6.49	5.41	5.30
34	Public Serv. Enterprise	7.95	9.68	10.53	11.32	8.22	8.72	9.48	8.67	8.56	6.66	6.48	6.40	6.40	6.03	6.04	6.20	8.46	9.83	8.41	8.59	7.17	6.79	6.24
35	SCANA Corp.	7.09	N/A	N/A	N/A	N/A	N/A	N/A	8.26	9.59	8.33	7.50	7.49	7.40	6.75	6.52	5.88	6.38	7.15	7.03	5.40	6.86	6.59	6.36
36	Sempra Energy	8.45	8.93	9.75	13.23	10.40	12.05	10.10	10.65	10.88	9.99	10.77	9.37	7.26	6.13	6.53	6.07	7.07	8.61	7.22	6.96	5.16	4.85	4.00
37	Southern Co.	8.29	8.64	9.63	8.72	8.34	8.80	7.05	7.49	8.83	8.23	8.42	8.30	8.75	8.22	7.79	7.08	8.18	8.62	8.47	8.41	8.28	8.28	7.83
38	Vectren Corp.	7.08	N/A	N/A	N/A	N/A	N/A	N/A	10.32	8.60	7.82	7.57	6.82	5.79	5.81	5.58	5.24	6.90	6.53	7.37	7.06	7.63	7.27	6.92
39	WEC Energy Group	9.24	10.12	11.81	11.99	13.67	12.88	10.82	11.04	10.95	12.90	10.27	9.58	9.24	8.43	8.15	6.87	7.57	7.84	7.27	6.40	6.27	4.91	4.27
40	Westar Energy	6.91	N/A	N/A	N/A	N/A	N/A	N/A	10.87	10.86	9.05	7.93	7.23	6.71	6.67	5.51	5.32	7.09	6.88	5.81	7.00	6.54	4.24	2.94
41	Xcel Energy Inc.	7.05	7.96	8.62	9.19	10.07	9.44	7.90	8.50	8.10	7.62	7.31	7.00	6.85	6.47	6.28	5.43	5.71	6.51	5.54	5.62	5.31	4.27	5.46
42	Average	7.65	8.03	9.00	9.28	9.26	9.78	9.03	9.41	8.68	8.07	7.90	7.41	7.01	6.56	6.02	5.61	7.01	7.77	7.17	7.18	6.82	5.75	5.58
43	Median	7.50	7.91	8.69	8.72	8.56	9.46	8.78	9.13	8.58	7.94	7.57	7.23	6.85	6.40	5.80	5.37	7.10	7.84	7.44	7.05	6.72	5.66	5.46

Sources:
The current year P/E ratio is based on the forward P/E (price over expected earnings per share). All historical year P/E ratios are based on annual average share price over achieved earnings per share.
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Note:
[a] Based on the average of the high and low price and the projected Cash Flow per share.

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

		Market Price to Book Value (MP/BV) Ratio [1]																			
Line	Company	19-Year Average	2023 [2]	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	ALLETE	1.55	1.19	1.24	1.43	1.39	1.91	1.79	1.78	1.53	1.37	1.42	1.51	1.34	1.35	1.28	1.15	1.55	1.89	2.09	2.22
2	Alliant Energy	1.81	1.92	2.25	2.26	2.30	2.32	2.16	2.38	2.17	1.86	1.86	1.70	1.57	1.46	1.31	1.04	1.33	1.67	1.52	1.33
3	Ameren Corp.	1.60	2.00	2.15	2.13	2.21	2.26	1.95	1.93	1.67	1.46	1.45	1.29	1.18	0.90	0.83	0.78	1.25	1.60	1.62	1.68
4	American Electric Power	1.64	1.73	1.99	1.87	2.09	2.20	1.82	1.88	1.81	1.55	1.54	1.40	1.31	1.23	1.23	1.08	1.48	1.85	1.56	1.57
5	Avangrid, Inc.	0.90	0.71	0.89	1.01	0.97	1.02	1.02	0.93	0.83	0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	1.33	1.19	1.33	1.42	1.37	1.54	1.88	1.73	1.57	1.36	1.33	1.25	1.21	1.19	1.07	0.94	1.11	1.29	1.30	1.13
7	Black Hills	1.51	1.28	1.54	1.52	1.55	1.95	1.61	2.06	1.94	1.59	1.79	1.62	1.21	1.14	1.07	0.83	1.22	1.57	1.47	1.63
8	CenterPoint Energy	2.27	1.86	1.99	1.74	1.90	2.21	2.18	2.59	2.73	2.43	2.27	2.30	1.99	1.87	1.96	1.77	2.49	3.13	2.75	3.06
9	CMS Energy Corp.	2.18	2.33	2.71	2.69	3.24	3.28	2.81	2.93	2.72	2.43	2.26	2.09	1.91	1.66	1.48	1.10	1.23	1.82	1.42	1.32
10	Consol. Edison	1.42	1.48	1.55	1.34	1.44	1.59	1.49	1.63	1.58	1.42	1.34	1.38	1.47	1.38	1.22	1.08	1.17	1.47	1.47	1.52
11	Dominion Resources	2.54	1.68	2.34	2.37	2.72	2.18	2.40	2.94	3.15	3.34	3.55	2.97	2.84	2.37	2.01	1.80	2.42	2.69	2.07	2.50
12	DTE Energy	1.65	1.97	2.41	2.82	1.80	2.07	1.91	2.01	1.82	1.65	1.62	1.51	1.35	1.20	1.16	0.89	1.10	1.35	1.29	1.39
13	Duke Energy	1.28	1.49	1.63	1.58	1.47	1.47	1.33	1.41	1.35	1.29	1.28	1.19	1.12	1.11	1.00	0.91	1.06	1.15	N/A	N/A
14	Edison Int'l	1.70	1.86	2.08	1.67	1.62	1.80	1.97	2.17	1.92	1.76	1.68	1.57	1.53	1.24	1.07	1.04	1.56	2.05	1.80	1.93
15	El Paso Electric	1.56	N/A	N/A	N/A	N/A	N/A	1.94	1.87	1.68	1.48	1.52	1.49	1.59	1.64	1.17	0.98	1.33	1.69	1.71	1.76
16	Entergy Corp.	1.74	1.45	1.81	1.75	1.93	2.03	1.74	1.76	1.67	1.40	1.33	1.21	1.31	1.35	1.62	1.66	2.44	2.65	1.89	2.01
17	Eversource Energy	1.55	1.71	1.86	2.00	2.11	1.99	1.68	1.73	1.64	1.53	1.47	1.38	1.28	1.50	1.31	1.12	1.31	1.60	1.22	1.05
18	Evergy, Inc.	1.45	1.31	1.52	1.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	2.08	1.52	1.88	1.37	1.20	1.43	1.31	1.20	1.20	1.14	1.28	1.17	1.46	1.95	2.07	2.57	4.39	4.79	3.89	3.60
20	FirstEnergy Corp.	2.06	2.08	2.37	2.33	2.81	3.39	2.67	3.53	2.37	1.16	1.15	1.28	1.44	1.33	1.36	1.54	2.52	2.23	1.92	1.64
21	Fortis Inc.	1.47	1.43	1.56	1.48	1.47	1.41	1.24	1.41	1.26	1.33	1.35	1.45	1.59	1.59	1.56	1.33	1.48	1.63	1.96	N/A
22	Great Plains Energy	1.21	N/A	N/A	N/A	N/A	N/A	N/A	1.33	1.17	1.12	1.11	1.02	0.96	0.93	0.87	0.80	1.11	1.66	1.77	1.86
23	Hawaiian Elec.	1.65	1.24	1.94	1.81	1.82	2.02	1.76	1.76	1.63	1.71	1.49	1.54	1.62	1.54	1.44	1.16	1.61	1.57	2.01	1.78
24	IDACORP, Inc.	1.52	1.75	1.91	1.88	1.84	2.10	1.96	1.94	1.76	1.54	1.45	1.33	1.19	1.17	1.13	0.92	1.09	1.26	1.37	1.22
25	MGE Energy	2.15	2.35	2.47	N/A	2.54	2.88	2.59	2.88	2.60	2.10	2.10	2.06	1.92	1.75	1.65	1.54	1.62	1.75	1.83	2.09
26	NextEra Energy, Inc.	2.38	2.89	4.07	4.27	3.58	2.75	2.32	2.35	2.30	2.09	2.15	1.93	1.74	1.55	1.49	1.70	2.06	2.34	1.80	1.93
27	NorthWestern Corp	1.44	1.18	1.25	1.43	1.45	1.74	1.48	1.64	1.68	1.60	1.54	1.56	1.42	1.35	1.22	1.07	1.15	1.48	1.65	1.42
28	OGE Energy	1.82	1.61	1.74	1.67	1.86	2.06	1.75	1.82	1.73	1.79	2.22	2.24	1.94	1.90	1.70	1.37	1.52	1.98	1.91	1.80
29	Otter Tail Corp.	1.93	2.55	2.30	2.33	2.04	2.62	2.49	2.33	1.90	1.78	1.90	1.96	1.58	1.35	1.19	1.18	1.71	1.93	1.76	1.74
30	Pinnacle West Capital	1.42	1.42	1.31	1.45	1.63	1.91	1.74	1.91	1.72	1.52	1.44	1.47	1.39	1.25	1.14	0.95	1.00	1.26	1.26	1.25
31	PNM Resources	1.37	1.75	1.81	1.86	1.87	2.28	1.83	1.84	1.56	1.33	1.21	1.09	0.98	0.80	0.69	0.56	0.66	1.23	1.21	1.45
32	Portland General	1.37	1.37	1.58	1.55	1.57	1.84	1.56	1.69	1.56	1.42	1.37	1.28	1.14	1.09	0.94	0.92	1.05	1.32	1.36	N/A
33	PPL Corp.	1.99	1.43	1.44	1.52	1.63	1.86	1.81	2.40	2.46	2.24	1.64	1.55	1.58	1.47	1.61	2.10	3.19	3.05	2.43	2.50
34	Public Serv. Enterprise	1.93	1.92	2.32	2.11	1.70	1.97	1.81	1.68	1.67	1.58	1.57	1.44	1.46	1.59	1.67	1.78	2.58	2.99	2.46	2.45
35	SCANA Corp.	1.51	N/A	N/A	N/A	N/A	N/A	N/A	1.65	1.74	1.47	1.48	1.48	1.48	1.36	1.33	1.20	1.45	1.62	1.64	1.72
36	Sempra Energy	1.79	1.65	1.84	1.64	1.84	2.22	2.06	2.24	2.00	2.17	2.20	1.84	1.53	1.28	1.35	1.32	1.60	1.87	1.70	1.73
37	Southern Co.	2.12	2.34	2.53	2.39	2.20	2.13	1.89	2.07	2.01	1.99	2.02	2.04	2.15	1.99	1.83	1.73	2.12	2.24	2.23	2.35
38	Vectren Corp.	1.83	N/A	N/A	N/A	N/A	N/A	N/A	2.75	2.29	2.11	2.08	1.82	1.57	1.53	1.41	1.34	1.64	1.74	1.77	1.82
39	WEC Energy Group	2.06	2.35	2.57	2.61	2.84	2.62	2.11	2.10	2.09	1.82	2.34	2.21	2.05	1.81	1.65	1.40	1.57	1.77	1.71	1.62
40	Westar Energy	1.37	N/A	N/A	N/A	N/A	N/A	N/A	1.94	1.95	1.49	1.44	1.33	1.26	1.20	1.10	0.93	1.10	1.36	1.30	1.41
41	Xcel Energy Inc.	1.73	2.00	2.22	2.27	2.46	2.34	1.97	2.06	1.88	1.66	1.55	1.50	1.51	1.41	1.32	1.19	1.30	1.53	1.40	1.38
42	Average	1.74	1.72	1.96	1.92	1.96	2.10	1.89	2.01	1.86	1.67	1.69	1.60	1.52	1.43	1.35	1.25	1.63	1.90	1.78	1.80
43	Median	1.69	1.69	1.89	1.75	1.84	2.06	1.86	1.92	1.75	1.57	1.54	1.50	1.47	1.36	1.31	1.15	1.48	1.69	1.71	1.73

Sources:

The current year P/E ratio is based on the forward P/E (price over expected earnings per share). All historical year P/E ratios are based on annual average share price over achieved earnings per share.

[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.

Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.

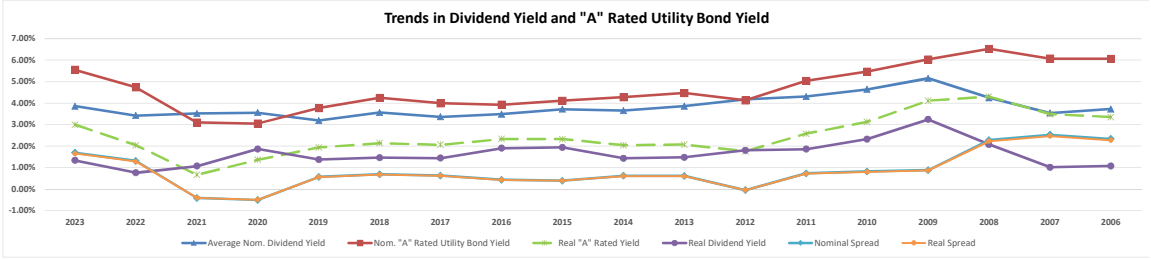
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Notes:

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Line	Company	18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
		Dividend Yield[1]																		
1	ALLETE	4.01%	4.67%	4.47%	3.88%	4.03%	2.85%	2.99%	2.97%	3.56%	3.97%	3.92%	3.89%	4.49%	4.58%	5.03%	5.79%	4.37%	3.60%	3.16%
2	Alliant Energy	3.61%	3.57%	3.04%	2.97%	2.90%	2.88%	3.20%	3.07%	3.21%	3.60%	3.53%	3.74%	4.07%	4.28%	4.61%	5.73%	4.10%	3.13%	3.32%
3	Ameren Corp.	4.11%	3.13%	2.74%	2.74%	2.57%	2.59%	3.04%	3.12%	3.50%	3.96%	4.02%	4.61%	4.97%	5.28%	5.76%	5.98%	6.21%	4.88%	4.93%
4	American Electric Power	3.97%	4.02%	3.41%	3.61%	3.28%	3.10%	3.60%	3.42%	3.54%	3.80%	3.83%	4.23%	4.58%	4.96%	4.90%	5.50%	4.20%	3.40%	4.06%
5	Avangrid, Inc.	3.89%	4.87%	3.94%	3.53%	3.69%	3.52%	3.49%	3.79%	4.26%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	3.86%	4.85%	4.26%	3.94%	4.03%	3.48%	2.93%	3.14%	3.39%	3.97%	3.99%	4.51%	4.55%	4.54%	4.76%	4.49%	3.39%	2.68%	2.52%
7	Black Hills	3.73%	4.15%	3.44%	3.50%	3.42%	2.74%	3.31%	2.75%	2.87%	3.55%	2.84%	3.19%	4.39%	4.64%	4.79%	6.17%	4.21%	3.40%	3.79%
8	CenterPoint Energy	4.15%	2.67%	2.46%	2.77%	4.38%	2.98%	4.09%	4.79%	4.70%	5.06%	3.94%	3.57%	4.04%	4.27%	5.29%	6.37%	4.98%	3.87%	4.39%
9	CMS Energy Corp.	3.20%	3.37%	2.92%	2.92%	2.65%	2.64%	3.03%	2.88%	2.99%	3.36%	3.59%	3.76%	4.16%	4.25%	3.98%	3.97%	2.69%	1.16%	N/A
10	Consol. Edison	4.29%	3.57%	3.51%	4.10%	3.87%	3.44%	3.68%	3.40%	3.62%	4.12%	4.38%	4.25%	4.07%	4.46%	5.16%	5.99%	5.67%	4.84%	5.04%
11	Dominion Resources	4.06%	5.18%	3.66%	3.38%	4.31%	4.76%	4.72%	3.88%	3.82%	3.66%	3.43%	3.78%	4.06%	4.13%	4.41%	5.20%	3.77%	3.32%	3.60%
12	DTE Energy	3.98%	3.67%	3.17%	3.06%	3.57%	3.07%	3.34%	3.15%	3.34%	3.53%	3.54%	3.84%	4.19%	4.68%	4.75%	6.29%	5.24%	4.36%	4.86%
13	Duke Energy	4.60%	4.28%	3.98%	4.02%	4.35%	4.17%	4.54%	4.15%	4.26%	4.34%	4.26%	4.45%	4.68%	5.21%	5.71%	6.25%	5.16%	4.44%	N/A
14	Edison Int'l	3.37%	4.47%	4.45%	4.39%	4.29%	3.73%	3.84%	2.87%	2.81%	2.83%	2.62%	2.85%	2.97%	3.37%	3.66%	3.95%	2.69%	2.21%	2.58%
15	El Paso Electric	2.74%	N/A	N/A	N/A	N/A	N/A	2.55%	2.49%	2.75%	3.13%	2.97%	2.99%	2.97%	2.11%	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp.	4.03%	4.36%	3.70%	3.84%	3.55%	3.52%	4.41%	4.49%	4.55%	4.59%	4.47%	5.07%	4.91%	4.85%	4.20%	3.97%	2.92%	2.39%	2.82%
17	Eversource Energy	3.27%	3.89%	3.09%	2.85%	2.63%	2.81%	3.32%	3.14%	3.22%	3.34%	3.40%	3.48%	3.52%	3.23%	3.64%	4.16%	3.25%	2.60%	3.27%
18	Evergy, Inc.	3.89%	4.42%	3.66%	3.59%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	3.75%	3.67%	2.89%	3.17%	3.82%	3.06%	3.32%	3.51%	3.75%	3.88%	3.69%	4.69%	5.73%	4.96%	4.95%	4.26%	2.78%	2.48%	2.83%
20	FirstEnergy Corp.	4.31%	4.24%	3.71%	4.39%	4.17%	3.50%	5.17%	4.62%	4.31%	4.23%	4.26%	4.26%	4.90%	5.23%	5.76%	5.09%	3.21%	3.12%	3.40%
21	Fortis Inc.	3.71%	4.09%	3.82%	3.77%	3.66%	3.60%	4.07%	3.69%	3.80%	3.76%	3.88%	3.84%	3.64%	3.58%	3.80%	4.21%	3.76%	3.01%	2.79%
22	Great Plains Energy	4.52%	N/A	N/A	N/A	N/A	N/A	N/A	3.58%	3.64%	3.76%	3.62%	3.84%	4.08%	4.15%	4.49%	5.03%	6.96%	5.49%	5.60%
23	Hawaiian Elec.	4.40%	4.09%	3.59%	3.44%	3.40%	3.02%	3.54%	3.65%	3.99%	4.05%	4.76%	4.72%	4.70%	5.04%	5.51%	6.89%	5.00%	5.18%	4.59%
24	IDACORP, Inc.	3.16%	3.18%	2.86%	2.89%	2.92%	2.49%	2.61%	2.58%	2.77%	3.06%	3.12%	3.21%	3.28%	3.10%	3.44%	4.46%	3.95%	3.55%	3.39%
25	MGE Energy	3.01%	2.25%	2.15%	N/A	2.10%	1.94%	2.16%	1.95%	2.23%	2.78%	2.78%	2.91%	3.25%	3.63%	3.98%	4.36%	4.24%	4.14%	4.25%
26	NextEra Energy, Inc.	2.89%	2.80%	2.11%	1.90%	2.10%	2.41%	2.68%	2.79%	2.91%	3.01%	3.02%	3.30%	3.65%	3.96%	3.90%	N/A	N/A	N/A	N/A
27	NorthWestern Corp	4.14%	4.78%	4.51%	4.00%	4.02%	3.28%	3.86%	3.52%	3.43%	3.61%	3.30%	3.66%	4.17%	4.51%	4.93%	5.75%	5.38%	4.09%	3.65%
28	OGE Energy	3.83%	4.63%	4.30%	4.81%	4.68%	3.54%	3.98%	3.61%	3.87%	3.51%	2.63%	2.48%	2.94%	3.06%	3.68%	4.96%	4.52%	3.77%	3.99%
29	Otter Tail Corp.	3.84%	2.33%	2.44%	2.81%	3.45%	2.74%	2.92%	3.12%	3.87%	4.33%	4.14%	4.11%	5.21%	5.57%	5.68%	5.38%	3.63%	3.46%	3.92%
30	Pinnacle West Capital	4.51%	4.51%	4.90%	4.44%	3.97%	3.29%	3.55%	3.16%	3.46%	3.88%	4.09%	3.98%	5.32%	4.81%	5.43%	6.76%	6.17%	4.75%	4.67%
31	PNM Resources	3.15%	3.27%	3.04%	2.09%	2.80%	2.45%	2.79%	2.53%	2.69%	2.90%	2.79%	2.99%	2.96%	3.19%	4.09%	4.76%	4.85%	3.36%	3.21%
32	Portland General	3.69%	4.20%	3.63%	3.62%	3.47%	2.85%	3.27%	2.92%	3.06%	3.27%	3.34%	3.67%	4.11%	4.37%	5.20%	5.36%	4.28%	3.34%	2.54%
33	PPL Corp.	4.48%	3.53%	3.23%	5.83%	5.84%	5.24%	5.61%	4.24%	4.25%	4.55%	4.45%	4.81%	5.07%	5.10%	5.12%	4.51%	3.10%	2.69%	3.41%
34	Public Serv. Enterprise	3.74%	3.83%	3.37%	3.37%	3.64%	3.19%	3.49%	3.74%	3.78%	3.81%	3.92%	4.35%	4.55%	4.24%	4.30%	4.30%	3.26%	2.73%	3.47%
35	SCANA Corp.	4.37%	N/A	N/A	N/A	N/A	N/A	N/A	4.03%	3.29%	3.90%	4.05%	4.15%	4.25%	4.78%	4.93%	5.67%	4.92%	4.29%	4.21%
36	Sempra Energy	3.00%	3.27%	2.99%	3.39%	3.24%	2.88%	3.20%	2.92%	2.92%	2.71%	2.61%	3.03%	3.71%	3.65%	3.08%	3.23%	2.62%	2.08%	2.47%
37	Southern Co.	4.58%	4.13%	3.82%	4.17%	4.36%	4.41%	5.27%	4.63%	4.42%	4.78%	4.69%	4.61%	4.29%	4.63%	5.13%	5.52%	4.58%	4.39%	4.52%
38	Vectren Corp.	4.38%	N/A	N/A	N/A	N/A	N/A	N/A	2.79%	3.31%	3.60%	3.62%	4.15%	4.82%	5.06%	5.53%	5.85%	4.79%	4.53%	4.52%
39	WEC Energy Group	3.06%	3.57%	3.08%	3.00%	2.68%	2.81%	3.38%	3.31%	3.35%	3.49%	3.40%	3.49%	3.24%	3.35%	2.97%	3.16%	2.41%	2.14%	2.18%
40	Westar Energy	4.37%	N/A	N/A	N/A	N/A	N/A	N/A	3.00%	2.90%	3.73%	3.88%	4.27%	4.57%	4.84%	5.32%	6.27%	5.22%	4.16%	4.28%
41	Xcel Energy Inc.	3.68%	3.28%	2.90%	2.81%	2.58%	2.75%	3.25%	3.10%	3.33%	3.69%	3.83%	3.86%	3.90%	4.20%	4.54%	5.14%	4.70%	4.05%	4.40%
42	**Average**	**3.83%**	**3.86%**	**3.42%**	**3.52%**	**3.56%**	**3.19%**	**3.56%**	**3.36%**	**3.49%**	**3.72%**	**3.66%**	**3.86%**	**4.18%**	**4.30%**	**4.64%**	**5.16%**	**4.25%**	**3.54%**	**3.73%**
43	Median	3.67%	3.95%	3.43%	3.50%	3.57%	3.06%	3.36%	3.16%	3.45%	3.73%	3.69%	3.84%	4.17%	4.46%	4.78%	5.20%	4.24%	3.46%	3.65%
44	20-Yr Treasury Yields[3]	3.25%	4.25%	3.30%	1.98%	1.35%	2.40%	3.02%	2.65%	2.23%	2.55%	3.07%	3.12%	2.54%	3.62%	4.03%	4.11%	4.36%	4.91%	4.99%
45	20-Yr TIPS[3]	1.07%	1.73%	0.64%	-0.43%	-0.30%	0.60%	0.94%	0.75%	0.66%	0.78%	0.87%	0.75%	0.21%	1.19%	1.73%	2.21%	2.19%	2.36%	2.31%
46	Implied Inflation[b]	2.16%	2.48%	2.64%	2.42%	1.66%	1.79%	2.06%	1.89%	1.56%	1.75%	2.19%	2.35%	2.33%	2.40%	2.26%	1.85%	2.13%	2.49%	2.62%
47	**Real Dividend Yield[c]**	**1.64%**	**1.34%**	**0.77%**	**1.07%**	**1.86%**	**1.37%**	**1.47%**	**1.44%**	**1.91%**	**1.94%**	**1.43%**	**1.48%**	**1.81%**	**1.86%**	**2.33%**	**3.24%**	**2.07%**	**1.02%**	**1.08%**
	A-Rated Utility																			
48	**Nominal "A" Rated Yield[4]**	**4.70%**	**5.55%**	**4.74%**	**3.10%**	**3.05%**	**3.77%**	**4.25%**	**4.00%**	**3.93%**	**4.12%**	**4.28%**	**4.48%**	**4.13%**	**5.04%**	**5.46%**	**6.04%**	**6.53%**	**6.07%**	**6.07%**
49	**Real "A" Rated Yield**	**2.49%**	**2.99%**	**2.05%**	**0.67%**	**1.37%**	**1.94%**	**2.14%**	**2.07%**	**2.34%**	**2.33%**	**2.04%**	**2.08%**	**1.76%**	**2.58%**	**3.13%**	**4.11%**	**4.31%**	**3.49%**	**3.36%**
	Baa-Rated Utility																			
50	**Nominal "Baa" Rated Yield**	**5.21%**	**5.85%**	**5.05%**	**3.36%**	**3.44%**	**4.19%**	**4.67%**	**4.38%**	**4.67%**	**5.03%**	**4.80%**	**4.98%**	**4.83%**	**5.57%**	**5.96%**	**7.06%**	**7.25%**	**6.33%**	**6.32%**
51	**Real "Baa" Rated Yield**	**2.98%**	**3.29%**	**2.35%**	**0.91%**	**1.74%**	**2.36%**	**2.55%**	**2.44%**	**3.07%**	**3.22%**	**2.55%**	**2.57%**	**2.44%**	**3.09%**	**3.62%**	**5.11%**	**5.01%**	**3.74%**	**3.60%**
	Spreads (A-Rated Utility Bond - Stock)																			
52	**Nominal Spread[d]**	**0.87%**	**1.69%**	**1.32%**	**-0.41%**	**-0.50%**	**0.58%**	**0.69%**	**0.64%**	**0.44%**	**0.40%**	**0.62%**	**0.61%**	**-0.05%**	**0.74%**	**0.82%**	**0.88%**	**2.28%**	**2.53%**	**2.34%**
53	**Real Spread[e]**	**0.85%**	**1.65%**	**1.28%**	**-0.40%**	**-0.49%**	**0.57%**	**0.68%**	**0.62%**	**0.43%**	**0.39%**	**0.61%**	**0.60%**	**-0.05%**	**0.72%**	**0.80%**	**0.87%**	**2.23%**	**2.47%**	**2.28%**
	Spreads (Baa-Rated Utility Bond - Stock)																			
54	**Nominal Spread[b]**	**1.37%**	**1.99%**	**1.63%**	**-0.16%**	**-0.12%**	**1.00%**	**1.11%**	**1.01%**	**1.18%**	**1.31%**	**1.14%**	**1.12%**	**0.65%**	**1.26%**	**1.32%**	**1.90%**	**3.00%**	**2.79%**	**2.58%**
55	**Real Spread[c]**	**1.34%**	**1.95%**	**1.58%**	**-0.16%**	**-0.12%**	**0.98%**	**1.09%**	**1.00%**	**1.16%**	**1.29%**	**1.12%**	**1.09%**	**0.63%**	**1.23%**	**1.29%**	**1.87%**	**2.93%**	**2.72%**	**2.52%**
	Spreads (Treasury Bond - Stock)																			
56	**Nominal[f]**	**-0.58%**	**0.40%**	**-0.12%**	**-1.54%**	**-2.20%**	**-0.79%**	**-0.54%**	**-0.71%**	**-1.27%**	**-1.17%**	**-0.58%**	**-0.74%**	**-1.63%**	**-0.68%**	**-0.61%**	**-1.05%**	**0.11%**	**1.37%**	**1.26%**
57	**Real[g]**	**-0.57%**	**0.39%**	**-0.12%**	**-1.50%**	**-2.17%**	**-0.77%**	**-0.53%**	**-0.70%**	**-1.25%**	**-1.15%**	**-0.57%**	**-0.73%**	**-1.60%**	**-0.67%**	**-0.60%**	**-1.03%**	**0.11%**	**1.33%**	**1.23%**



Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.
[3] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.
[4] www.moodys.com, Bond Yields and Key Indicators, through December 31, 2023.

Notes:
[a] Based on the average of the high and low price and the projected Dividends Declared per share, published in the Value Line Investment Survey.
[b] Line 47 = (1 + Line 45) / (1 + Line 46) - 1.
[c] Line 48 = (1 + Line 43) / (1 +Line 47) - 1.
[d] The spread being measured here is the nominal A-rated utility bond yield over the average nominal utility dividend yield; (Line 49 - Line 43).
[e] The spread being measured here is the real A-rated utility bond yield over the average real utility dividend yield; Line 50 - Line 48)
[f] The spread being measured here is the nominal 20-Year Treasury yield over the average nominal utility dividend yield; (Line 45 - Line 43).
[g] The spread being measured here is the real 20-Year TIPS yield over the average real utility dividend yield; Line 48 - Line 46)

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Line	Company	Dividend per Share[1] 18-Year Average	2023[2]	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1	ALLETE	2.05	2.71	2.60	2.52	2.47	2.35	2.24	2.14	2.08	2.02	1.96	1.90	1.84	1.78	1.76	1.76	1.72	1.64	1.45
2	Alliant Energy	1.12	1.81	1.71	1.61	1.52	1.42	1.34	1.26	1.18	1.10	1.02	0.94	0.90	0.85	0.79	0.75	0.70	0.64	0.58
3	Ameren Corp.	1.95	2.52	2.36	2.20	2.00	1.92	1.85	1.78	1.72	1.66	1.61	1.60	1.60	1.56	1.54	1.54	2.54	2.54	2.54
4	American Electric Power	2.23	3.37	3.17	3.00	2.84	2.71	2.53	2.39	2.27	2.15	2.03	1.95	1.88	1.85	1.71	1.64	1.64	1.58	1.50
5	Avangrid, Inc.	1.75	1.76	1.76	1.76	1.76	1.76	1.74	1.73	1.73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	1.25	1.84	1.76	1.69	1.62	1.55	1.49	1.43	1.37	1.32	1.27	1.22	1.16	1.10	1.00	0.81	0.69	0.60	0.57
7	Black Hills	1.75	2.50	2.41	2.29	2.17	2.05	1.93	1.81	1.68	1.62	1.56	1.52	1.48	1.46	1.44	1.42	1.40	1.37	1.32
8	CenterPoint Energy	0.85	0.76	0.72	0.66	0.90	0.86	1.12	1.35	1.03	0.99	0.95	0.83	0.81	0.79	0.78	0.76	0.73	0.68	0.60
9	CMS Energy Corp.	1.15	1.95	1.84	1.74	1.63	1.53	1.43	1.33	1.24	1.16	1.08	1.02	0.96	0.84	0.66	0.50	0.36	0.20	N/A
10	Consol. Edison	2.66	3.24	3.16	3.10	3.06	2.96	2.86	2.76	2.68	2.60	2.52	2.46	2.42	2.40	2.38	2.36	2.34	2.32	2.30
11	Dominion Resources	2.42	2.67	2.67	2.52	3.45	3.67	3.34	3.04	2.80	2.59	2.40	2.25	2.11	1.97	1.83	1.75	1.58	1.46	1.38
12	DTE Energy	2.93	3.88	3.54	3.88	4.12	3.85	3.59	3.36	3.06	2.84	2.69	2.59	2.42	2.32	2.18	2.12	2.12	2.12	2.08
13	Duke Energy	3.32	4.06	3.98	3.90	3.82	3.75	3.64	3.49	3.36	3.24	3.15	3.09	3.03	2.97	2.91	2.82	2.70	2.58	N/A
14	Edison Int'l	1.86	2.99	2.84	2.69	2.58	2.48	2.43	2.23	1.98	1.73	1.48	1.37	1.31	1.29	1.27	1.25	1.23	1.18	1.10
15	El Paso Electric	1.11	N/A	N/A	N/A	N/A	N/A	1.42	1.32	1.23	1.17	1.11	1.05	0.97	0.66	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp.	3.38	4.34	4.10	3.86	3.74	3.66	3.58	3.50	3.42	3.34	3.32	3.32	3.32	3.32	3.24	3.00	3.00	2.58	2.16
17	Eversource Energy	1.62	2.70	2.55	2.41	2.27	2.14	2.02	1.90	1.78	1.67	1.57	1.47	1.32	1.10	1.03	0.95	0.83	0.78	0.73
18	Evergy, Inc.	2.33	2.48	2.33	2.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	1.62	1.44	1.35	1.53	1.53	1.45	1.38	1.31	1.26	1.24	1.24	1.46	2.10	2.10	2.10	2.10	2.05	1.82	1.64
20	FirstEnergy Corp.	1.77	1.60	1.56	1.56	1.56	1.53	1.82	1.44	1.44	1.44	1.44	1.65	2.20	2.20	2.20	2.20	2.20	2.05	1.85
21	Fortis Inc.	1.46	2.29	2.17	2.08	1.97	1.86	1.75	1.65	1.55	1.43	1.30	1.25	1.21	1.17	1.12	1.04	1.00	0.82	0.67
22	Great Plains Energy	1.11	N/A	N/A	N/A	N/A	N/A	N/A	1.10	1.06	1.00	0.94	0.88	0.86	0.84	0.83	0.83	1.66	1.66	1.66
23	Hawaiian Elec.	1.25	1.08	1.40	1.36	1.32	1.28	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
24	IDACORP, Inc.	1.94	3.20	3.04	2.88	2.72	2.56	2.40	2.24	2.08	1.92	1.76	1.57	1.37	1.20	1.20	1.20	1.20	1.20	1.20
25	MGE Energy	1.18	1.67	1.59	N/A	1.45	1.38	1.32	1.26	1.21	1.16	1.11	1.07	1.04	1.01	0.99	0.97	0.96	0.94	0.93
26	NextEra Energy, Inc.	0.90	1.87	1.70	1.54	1.40	1.25	1.11	0.98	0.87	0.77	0.73	0.66	0.60	0.55	0.50	0.47	0.45	0.41	0.38
27	NorthWestern Corp	1.84	2.56	2.52	2.48	2.40	2.30	2.20	2.10	2.00	1.92	1.60	1.52	1.48	1.44	1.36	1.34	1.32	1.28	1.24
28	OGE Energy	1.10	1.66	1.64	1.63	1.58	1.51	1.40	1.27	1.16	1.05	0.95	0.85	0.80	0.76	0.73	0.71	0.70	0.68	0.67
29	Otter Tail Corp.	1.31	1.75	1.65	1.56	1.48	1.40	1.34	1.28	1.25	1.23	1.21	1.19	1.19	1.19	1.19	1.19	1.19	1.17	1.15
30	Pinnacle West Capital	2.60	3.49	3.42	3.36	3.23	3.04	2.87	2.70	2.56	2.44	2.33	2.23	2.67	2.10	2.10	2.10	2.10	2.10	2.03
31	PNM Resources	0.89	1.49	1.41	0.98	1.25	1.18	1.09	0.99	0.88	0.80	0.76	0.68	0.58	0.50	0.50	0.50	0.61	0.91	0.86
32	Portland General	1.26	1.88	1.79	1.70	1.59	1.52	1.43	1.34	1.26	1.18	1.12	1.10	1.08	1.06	1.04	1.01	0.97	0.93	0.68
33	PPL Corp.	1.40	0.95	0.88	1.66	1.66	1.65	1.64	1.58	1.52	1.50	1.49	1.47	1.44	1.40	1.40	1.38	1.34	1.22	1.10
34	Public Serv. Enterprise	1.61	2.28	2.16	2.04	1.96	1.88	1.80	1.72	1.64	1.56	1.48	1.44	1.42	1.37	1.37	1.33	1.29	1.17	1.14
35	SCANA Corp.	2.00	N/A	N/A	N/A	N/A	N/A	N/A	2.45	2.30	2.18	2.10	2.03	1.98	1.94	1.90	1.88	1.84	1.76	1.68
36	Sempra Energy	2.70	2.38	4.58	4.40	4.18	3.87	3.58	3.29	3.02	2.80	2.64	2.52	2.40	1.92	1.56	1.56	1.37	1.24	1.20
37	Southern Co.	2.13	2.78	2.70	2.62	2.54	2.46	2.38	2.30	2.22	2.15	2.08	2.01	1.94	1.87	1.80	1.73	1.66	1.60	1.54
38	Vectren Corp.	1.42	N/A	N/A	N/A	N/A	N/A	N/A	1.71	1.62	1.54	1.46	1.43	1.41	1.39	1.37	1.35	1.31	1.27	1.23
39	WEC Energy Group	1.66	3.12	2.91	2.71	2.53	2.36	2.21	2.08	1.98	1.74	1.56	1.45	1.20	1.04	0.80	0.68	0.54	0.50	0.46
40	Westar Energy	1.30	N/A	N/A	N/A	N/A	N/A	N/A	1.60	1.52	1.44	1.40	1.36	1.32	1.28	1.24	1.20	1.16	1.08	0.98
41	Xcel Energy Inc.	1.33	2.08	1.95	1.83	1.72	1.62	1.52	1.44	1.36	1.28	1.20	1.11	1.07	1.03	1.00	0.97	0.94	0.91	0.88
42	**Average**	**1.76**	**2.37**	**2.33**	**2.28**	**2.23**	**2.14**	**2.03**	**1.90**	**1.79**	**1.70**	**1.61**	**1.56**	**1.54**	**1.46**	**1.42**	**1.38**	**1.39**	**1.32**	**1.24**
43	**Industry Average Growth**	**3.89%**	**1.47%**	**2.08%**	**2.47%**	**4.36%**	**5.29%**	**6.91%**	**5.99%**	**5.44%**	**5.35%**	**3.49%**	**1.01%**	**5.77%**	**2.46%**	**3.13%**	**-0.48%**	**4.89%**	**6.45%**	

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Earnings per Share[1]

Line	Company	18-Year Average (1)	2023[2] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
1	ALLETE	3.01	4.30	3.38	3.23	3.35	3.33	3.38	3.13	3.14	3.38	2.90	2.63	2.58	2.65	2.19	1.89	2.82	3.08	2.77
2	Alliant Energy	1.82	2.78	2.73	2.63	2.47	2.33	2.19	1.99	1.65	1.69	1.74	1.65	1.53	1.38	1.38	0.95	1.27	1.35	1.03
3	Ameren Corp.	2.99	4.37	4.14	3.84	3.50	3.35	3.32	2.77	2.68	2.38	2.40	2.10	2.41	2.47	2.77	2.78	2.88	2.98	2.66
4	American Electric Power	3.67	5.24	5.09	4.96	4.42	4.08	3.90	3.62	4.23	3.59	3.34	3.18	2.98	3.13	2.60	2.97	2.99	2.86	2.86
5	Avangrid, Inc.	1.88	2.09	2.32	1.97	1.88	2.26	1.92	1.67	1.98	0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	1.83	2.24	2.12	2.10	1.90	2.97	2.07	1.95	2.15	1.89	1.84	1.85	1.32	1.72	1.65	1.58	1.36	0.72	1.47
7	Black Hills	2.71	3.91	3.97	3.74	3.73	3.53	3.47	3.38	2.63	2.83	2.89	2.61	1.97	1.01	1.66	2.32	0.18	2.68	2.21
8	CenterPoint Energy	1.24	1.37	1.59	0.94	1.29	1.49	0.74	1.57	1.00	1.08	1.42	1.24	1.35	1.27	1.07	1.01	1.30	1.17	1.33
9	CMS Energy Corp.	1.83	3.01	2.84	2.58	2.64	2.39	2.32	2.17	1.98	1.89	1.74	1.66	1.53	1.45	1.33	0.93	1.23	0.64	0.64
10	Consol. Edison	3.91	5.04	4.55	4.74	3.94	4.08	4.55	4.10	3.94	4.05	3.62	3.93	3.86	3.57	3.47	3.14	3.36	3.48	2.95
11	Dominion Resources	2.86	1.99	4.11	3.19	1.82	2.19	3.25	3.53	3.44	3.20	3.05	3.09	2.75	2.76	2.89	2.64	3.04	2.13	2.40
12	DTE Energy	4.57	6.76	5.52	4.10	7.08	6.31	6.17	5.73	4.83	4.44	5.10	3.76	3.88	3.67	3.74	3.24	2.73	2.66	2.45
13	Duke Energy	4.09	5.56	5.27	4.93	3.92	5.07	4.13	4.22	3.71	4.10	4.13	3.98	3.71	4.14	4.02	3.39	3.03	3.60	2.73
14	Edison Int'l	3.23	4.76	1.60	2.00	1.72	3.98	-1.26	4.51	3.94	4.15	4.33	3.78	4.55	3.23	3.35	3.24	3.68	3.32	3.28
15	El Paso Electric	2.02	N/A	N/A	N/A	N/A	N/A	2.07	2.42	2.39	2.03	2.27	2.20	2.26	2.48	2.07	1.50	1.73	1.63	1.27
16	Entergy Corp.	6.37	11.10	5.37	6.87	6.90	6.30	5.88	5.19	6.88	5.81	5.77	4.96	6.02	7.55	6.66	6.30	6.20	5.60	5.36
17	Eversource Energy	2.70	4.34	4.09	3.54	3.55	3.45	3.25	3.11	2.96	2.76	2.58	2.49	1.89	2.22	2.10	1.91	1.86	1.59	0.82
18	Evergy, Inc.	3.56	3.60	3.26	3.83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	2.84	2.38	2.26	1.74	2.60	3.01	2.07	2.78	1.80	2.54	2.10	2.31	1.92	3.75	3.87	4.29	4.10	4.03	3.50
20	FirstEnergy Corp.	2.57	2.56	2.41	2.69	1.85	1.84	1.33	2.73	2.10	2.00	0.85	2.97	2.13	1.88	3.25	3.32	4.38	4.22	3.82
21	Fortis Inc.	2.04	3.10	2.78	2.61	2.60	2.68	2.52	2.66	1.89	2.11	1.38	1.63	1.65	1.74	1.62	1.51	1.52	1.29	1.36
22	Great Plains Energy	1.33	N/A	N/A	N/A	N/A	N/A	N/A	-0.06	1.61	1.37	1.57	1.62	1.35	1.25	1.53	1.03	1.16	1.85	1.62
23	Hawaiian Elec.	1.63	1.81	2.20	2.25	1.81	1.99	1.85	1.64	2.29	1.50	1.64	1.62	1.67	1.44	1.21	0.91	1.07	1.11	1.33
24	IDACORP, Inc.	3.73	5.14	5.11	4.85	4.69	4.61	4.49	4.21	3.94	3.87	3.85	3.64	3.37	3.36	2.95	2.64	2.18	1.86	2.35
25	MGE Energy	2.12	3.25	3.07	N/A	2.60	2.51	2.43	2.20	2.18	2.06	2.32	2.16	1.86	1.76	1.67	1.47	1.59	1.51	1.37
26	NextEra Energy, Inc.	1.55	3.17	2.90	1.81	2.10	1.94	1.67	1.63	1.45	1.52	1.40	1.21	1.14	1.21	1.19	0.99	1.02	0.82	0.81
27	NorthWestern Corp	2.70	3.22	3.29	3.60	3.06	3.53	3.40	3.34	3.39	2.90	2.99	2.46	2.26	2.53	2.14	2.02	1.77	1.44	1.31
28	OGE Energy	1.80	2.07	2.25	2.36	2.08	2.24	2.12	1.92	1.69	1.69	1.98	1.94	1.79	1.73	1.50	1.33	1.25	1.32	1.23
29	Otter Tail Corp.	2.20	7.00	6.78	4.23	2.34	2.17	2.06	1.86	1.60	1.56	1.55	1.37	1.05	0.45	0.38	0.71	1.09	1.78	1.69
30	Pinnacle West Capital	3.77	4.41	4.26	5.47	4.87	4.77	4.54	4.43	3.95	3.92	3.58	3.66	3.50	2.99	3.08	2.26	2.12	2.96	3.17
31	PNM Resources	1.58	2.82	2.69	2.27	2.15	2.28	1.66	1.92	1.65	1.64	1.45	1.41	1.31	1.08	0.87	0.58	0.11	0.76	1.72
32	Portland General	2.02	2.38	2.74	2.72	1.72	2.39	2.37	2.29	2.16	2.04	2.18	1.77	1.87	1.95	1.66	1.31	1.39	2.33	1.14
33	PPL Corp.	2.15	1.60	1.41	0.53	2.04	2.37	2.58	2.11	2.79	2.37	2.38	2.38	2.61	2.61	2.29	1.19	2.45	2.63	2.29
34	Public Serv. Enterprise	2.96	3.48	3.47	2.55	3.61	3.90	2.76	2.82	2.83	3.30	2.99	2.45	2.44	3.11	3.07	3.08	2.90	2.59	1.85
35	SCANA Corp.	3.30	N/A	N/A	N/A	N/A	N/A	N/A	4.20	4.16	3.81	3.79	3.39	3.15	2.97	2.98	2.85	2.95	2.74	2.59
36	Sempra Energy	4.96	4.61	9.21	4.01	6.58	5.97	5.48	4.63	4.24	5.23	4.63	4.22	4.35	4.47	4.02	4.78	4.43	4.26	4.23
37	Southern Co.	2.83	3.64	3.61	3.42	3.25	3.17	3.00	3.21	2.83	2.84	2.77	2.70	2.67	2.55	2.36	2.32	2.25	2.28	2.10
38	Vectren Corp.	1.94	N/A	N/A	N/A	N/A	N/A	N/A	2.60	2.55	2.39	2.02	1.66	1.94	1.73	1.64	1.79	1.63	1.83	1.44
39	WEC Energy Group	2.76	4.63	4.46	4.11	3.79	3.58	3.34	3.14	2.96	2.34	2.59	2.51	2.35	2.18	1.92	1.60	1.52	1.42	1.32
40	Westar Energy	1.96	N/A	N/A	N/A	N/A	N/A	N/A	2.27	2.43	2.09	2.35	2.27	2.15	1.79	1.80	1.28	1.31	1.84	1.88
41	Xcel Energy Inc.	2.15	3.35	3.17	2.96	2.79	2.64	2.47	2.30	2.21	2.10	2.03	1.91	1.85	1.72	1.56	1.49	1.46	1.35	1.35
42	**Average**	**2.75**	**3.81**	**3.61**	**3.24**	**3.16**	**3.28**	**2.87**	**2.90**	**2.81**	**2.68**	**2.65**	**2.52**	**2.44**	**2.43**	**2.35**	**2.17**	**2.19**	**2.25**	**2.09**
43	**Industry Average Growth**	**3.68%**	**5.43%**	**11.50%**	**2.47%**	**-3.54%**	**14.00%**	**-0.78%**	**3.26%**	**4.58%**	**1.09%**	**5.23%**	**3.58%**	**0.03%**	**3.76%**	**8.23%**	**-0.89%**	**-2.75%**	**7.36%**	

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Line	Company	Cash Flow / Capital Spending[1] 2020 (1)	2021 (2)	2022 (3)	2023 (4)	2024[2] (5)	3 - 5 yr[2] Projection (6)
1	ALLETE	0.74x	0.80x	2.26x	1.42x	1.39x	1.33x
2	Alliant Energy	0.82x	0.97x	0.94x	0.95x	0.97x	1.20x
3	Ameren Corp.	0.51x	0.59x	0.72x	0.74x	0.84x	0.94x
4	American Electric Power	0.74x	0.69x	0.73x	0.72x	0.82x	1.09x
5	Avangrid, Inc.	0.56x	0.62x	0.61x	0.57x	0.71x	0.78x
6	Avista Corp.	0.85x	0.87x	0.83x	0.78x	0.84x	0.87x
7	Black Hills	0.72x	0.76x	0.85x	0.82x	0.68x	0.86x
8	CenterPoint Energy	0.88x	0.62x	0.62x	0.57x	0.55x	0.69x
9	CMS Energy Corp.	0.82x	0.77x	0.78x	0.92x	0.81x	0.87x
10	Consol. Edison	0.82x	0.89x	0.83x	0.72x	0.84x	0.94x
11	Dominion Resources	1.00x	0.89x	0.74x	0.63x	0.51x	0.88x
12	DTE Energy	0.67x	0.70x	0.75x	0.82x	0.87x	0.95x
13	Duke Energy	0.86x	0.93x	0.81x	0.79x	0.77x	0.90x
14	Edison Int'l	0.67x	0.74x	0.67x	0.75x	0.82x	0.88x
15	El Paso Electric	1.00x	0.83x	N/A	N/A	N/A	N/A
16	Entergy Corp.	0.81x	1.05x	0.98x	0.85x	0.83x	1.08x
17	Eversource Energy	0.95x	0.74x	0.72x	0.86x	0.76x	0.80x
18	Evergy, Inc.	1.06x	0.96x	0.94x	0.86x	0.89x	0.98x
19	Exelon Corp.	1.30x	1.32x	0.96x	0.99x	0.80x	0.94x
20	FirstEnergy Corp.	0.96x	0.91x	0.86x	0.80x	0.82x	0.95x
21	Fortis Inc.	0.60x	0.74x	0.75x	0.82x	0.85x	0.97x
22	Hawaiian Elec.	1.10x	1.42x	1.30x	1.51x	1.20x	1.09x
23	IDACORP, Inc.	1.25x	1.16x	0.83x	0.63x	0.56x	0.95x
24	MGE Energy	0.73x	0.87x	N/A	1.26x	1.09x	1.18x
25	NextEra Energy, Inc.	0.58x	0.69x	0.54x	0.59x	0.59x	0.65x
26	NorthWestern Corp	0.98x	0.82x	0.66x	0.75x	0.87x	1.04x
27	OGE Energy	1.43x	1.13x	0.99x	0.97x	1.00x	1.24x
28	Otter Tail Corp.	0.45x	1.42x	1.45x	1.08x	1.23x	1.15x
29	Pinnacle West Capital	0.98x	0.85x	0.78x	0.95x	0.74x	0.89x
30	PNM Resources	0.59x	0.51x	0.63x	0.63x	0.53x	0.64x
31	Portland General	0.75x	0.97x	1.01x	0.58x	0.62x	0.93x
32	PPL Corp.	1.06x	1.12x	1.35x	0.98x	0.97x	1.03x
33	Public Serv. Enterprise	1.00x	1.05x	0.82x	0.87x	0.90x	0.90x
34	Sempra Energy	0.92x	0.78x	0.92x	0.96x	0.63x	0.68x
35	Southern Co.	1.01x	0.93x	0.97x	0.97x	0.90x	1.09x
36	WEC Energy Group	0.70x	0.75x	0.87x	0.92x	1.01x	1.28x
37	Xcel Energy Inc.	0.99x	0.86x	0.80x	0.92x	0.65x	0.97x
38	Average	0.86x	0.88x	0.89x	0.86x	0.83x	0.96x
39	Median	0.85x	0.86x	0.83x	0.84x	0.83x	0.94x

Source:
[1] Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.
Notes:
Based on the projected Cash Flow per share and Capital Spending per share.

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Percent Dividends to Book Value [1]

Line	Company	18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
1	ALLETE	5.90%	5.56%	5.52%	5.56%	5.61%	5.44%	5.35%	5.29%	5.45%	5.45%	5.59%	5.86%	6.04%	6.18%	6.46%	6.67%	6.78%	6.80%	6.62%
2	Alliant Energy	6.39%	6.84%	6.84%	6.73%	6.68%	6.68%	6.90%	7.32%	6.96%	6.70%	6.56%	6.36%	6.37%	6.26%	6.06%	5.98%	5.48%	5.23%	5.04%
3	Ameren Corp.	6.03%	6.26%	5.88%	5.84%	5.67%	5.87%	5.92%	6.01%	5.86%	5.78%	5.82%	5.93%	5.87%	4.76%	4.79%	4.66%	7.74%	7.84%	7.97%
4	American Electric Power	6.35%	6.95%	6.80%	6.74%	6.86%	6.82%	6.56%	6.43%	6.42%	5.90%	5.91%	5.91%	5.99%	6.10%	6.04%	5.97%	6.23%	6.28%	6.32%
5	Avangrid, Inc.	3.15%	3.46%	3.51%	3.57%	3.58%	3.57%	3.57%	3.54%	3.53%	0.00%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	5.07%	5.78%	5.65%	5.61%	5.53%	5.37%	5.52%	5.41%	5.33%	5.38%	5.33%	5.65%	5.51%	5.42%	5.07%	4.23%	3.77%	3.44%	3.26%
7	Black Hills	5.33%	5.30%	5.32%	5.32%	5.32%	5.34%	5.31%	5.67%	5.55%	5.66%	5.06%	5.17%	5.31%	5.30%	5.14%	5.10%	5.15%	5.34%	5.58%
8	CenterPoint Energy	9.31%	4.96%	4.90%	4.82%	8.35%	6.59%	8.94%	12.39%	12.82%	12.30%	8.96%	8.23%	8.05%	7.97%	10.36%	11.28%	12.40%	12.12%	12.09%
9	CMS Energy Corp.	6.71%	7.84%	7.89%	7.87%	8.57%	8.66%	8.52%	8.43%	8.14%	8.16%	8.10%	7.86%	7.94%	7.05%	5.90%	4.38%	3.31%	2.11%	0.00%
10	Consol. Edison	5.97%	5.29%	5.42%	5.48%	5.56%	5.46%	5.49%	5.55%	5.72%	5.84%	5.87%	5.88%	5.97%	6.15%	6.27%	6.47%	6.60%	7.12%	7.40%
11	Dominion Resources	10.16%	8.69%	8.54%	8.00%	11.72%	10.39%	11.31%	11.41%	12.04%	12.20%	12.16%	11.24%	11.50%	9.81%	8.86%	9.38%	9.14%	8.95%	7.46%
12	DTE Energy	6.26%	7.25%	7.64%	8.64%	6.43%	6.34%	6.38%	6.34%	6.09%	5.81%	5.72%	5.79%	5.66%	5.60%	5.49%	5.59%	5.76%	5.91%	6.28%
13	Duke Energy	5.48%	6.37%	6.47%	6.34%	6.39%	6.12%	6.04%	5.85%	5.73%	5.61%	5.45%	5.28%	5.22%	5.81%	5.72%	5.66%	5.45%	5.12%	0.00%
14	Edison Int'l	5.65%	8.30%	9.24%	7.36%	6.96%	6.73%	7.56%	6.23%	5.39%	4.97%	4.41%	4.48%	4.54%	4.16%	3.90%	4.12%	4.19%	4.53%	4.65%
15	El Paso Electric	2.94%	N/A	N/A	N/A	5.13%	N/A	4.94%	4.67%	4.62%	4.63%	4.53%	4.46%	4.72%	3.47%	0.00%	0.00%	0.00%	0.00%	0.00%
16	Entergy Corp.	6.70%	6.32%	6.68%	6.72%	6.85%	7.13%	7.65%	7.90%	7.58%	6.44%	5.95%	6.15%	6.42%	6.53%	6.82%	6.59%	7.13%	6.34%	5.34%
17	Eversource Energy	5.09%	6.66%	5.74%	5.69%	5.54%	5.59%	5.57%	5.43%	5.27%	5.12%	4.99%	4.82%	4.49%	4.86%	4.75%	4.66%	4.26%	4.16%	4.00%
18	Evergy, Inc.	5.53%	5.81%	5.57%	5.41%	5.32%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	7.02%	5.59%	5.42%	4.36%	4.62%	4.38%	4.34%	4.23%	4.51%	4.42%	4.72%	5.49%	8.38%	9.68%	10.25%	10.96%	12.21%	11.87%	11.02%
20	FirstEnergy Corp.	8.79%	8.81%	8.78%	10.26%	11.70%	11.86%	13.82%	16.34%	10.21%	4.91%	4.88%	5.44%	7.03%	6.93%	7.85%	7.84%	8.10%	6.96%	6.54%
21	Fortis Inc.	5.42%	5.84%	5.95%	5.59%	5.39%	5.08%	5.03%	5.19%	4.80%	5.00%	5.22%	5.58%	5.81%	5.70%	5.91%	5.60%	5.55%	4.90%	5.47%
22	Great Plains Energy	5.31%	N/A	N/A	N/A	N/A	N/A	N/A	4.78%	4.27%	4.21%	4.02%	3.91%	3.93%	3.84%	3.90%	4.03%	7.76%	9.13%	9.94%
23	Hawaiian Elec.	7.09%	5.07%	6.96%	6.22%	6.17%	6.12%	6.24%	6.43%	6.51%	6.91%	7.10%	7.27%	7.62%	7.77%	7.91%	7.96%	8.08%	8.11%	9.22%
24	IDACORP, Inc.	4.70%	5.57%	5.48%	5.45%	5.36%	5.24%	5.11%	5.02%	4.87%	4.70%	4.53%	4.26%	3.91%	3.62%	3.87%	4.11%	4.32%	4.48%	4.66%
25	MGE Energy	6.11%	5.30%	5.32%	N/A	5.22%	5.59%	5.60%	5.61%	5.79%	5.82%	5.84%	6.01%	6.22%	6.36%	6.56%	6.72%	6.87%	7.24%	7.77%
26	NextEra Energy, Inc.	6.70%	8.08%	8.61%	8.13%	7.51%	6.61%	6.22%	6.55%	6.69%	6.29%	6.49%	6.36%	6.34%	6.12%	5.82%	5.99%	6.30%	6.22%	6.21%
27	NorthWestern Corp	5.82%	5.63%	5.65%	5.73%	5.84%	5.69%	5.70%	5.76%	5.77%	5.78%	5.08%	5.71%	5.90%	6.08%	6.01%	6.13%	6.21%	6.06%	6.00%
28	OGE Energy	6.86%	7.46%	7.47%	8.04%	8.71%	7.28%	6.96%	6.59%	6.70%	6.30%	5.84%	5.56%	5.70%	5.81%	6.24%	6.79%	6.89%	7.47%	7.61%
29	Otter Tail Corp.	7.03%	5.95%	5.61%	6.54%	7.05%	7.19%	7.29%	7.27%	7.34%	7.70%	7.86%	8.07%	8.25%	7.52%	6.77%	6.33%	6.22%	6.67%	6.90%
30	Pinnacle West Capital	6.21%	6.41%	6.40%	6.43%	6.47%	6.29%	6.16%	6.03%	5.93%	5.91%	5.89%	5.84%	7.38%	6.00%	6.20%	6.42%	6.15%	5.98%	5.87%
31	PNM Resources	4.03%	5.72%	5.52%	3.88%	5.23%	5.59%	5.12%	4.67%	4.18%	3.85%	3.37%	3.26%	2.89%	2.55%	2.84%	2.65%	3.20%	4.13%	3.89%
32	Portland General	4.90%	5.73%	5.75%	5.61%	5.45%	5.24%	5.09%	4.94%	4.78%	4.64%	4.56%	4.70%	4.70%	4.78%	4.90%	4.93%	4.48%	4.42%	3.45%
33	PPL Corp.	8.50%	5.03%	4.66%	8.89%	9.55%	9.74%	10.13%	10.18%	10.44%	10.19%	7.28%	7.43%	8.00%	7.48%	8.24%	9.47%	9.89%	8.20%	8.27%
34	Public Serv. Enterprise	6.97%	7.34%	7.82%	7.12%	6.18%	6.28%	6.31%	6.27%	6.31%	6.03%	6.14%	6.28%	6.66%	6.75%	7.20%	7.66%	8.40%	8.15%	8.54%
35	SCANA Corp.	6.44%	N/A	N/A	N/A	N/A	N/A	N/A	6.67%	5.74%	5.72%	6.01%	6.14%	6.29%	6.48%	6.54%	6.80%	7.12%	6.94%	6.89%
36	Sempra Energy	5.33%	5.41%	5.49%	5.56%	5.96%	6.39%	6.59%	6.53%	5.83%	5.89%	5.74%	5.60%	5.66%	4.68%	4.16%	4.27%	4.18%	3.89%	4.19%
37	Southern Co.	9.56%	9.65%	9.67%	9.96%	9.59%	9.42%	9.95%	9.59%	8.89%	9.53%	9.48%	9.39%	9.22%	9.22%	9.38%	9.55%	9.74%	9.83%	10.07%
38	Vectren Corp.	7.71%	N/A	N/A	N/A	N/A	N/A	N/A	7.67%	7.60%	7.57%	7.51%	7.55%	7.57%	7.74%	7.78%	7.84%	7.85%	7.86%	7.97%
39	WEC Energy Group	6.42%	8.38%	7.92%	7.83%	7.62%	7.36%	7.12%	6.94%	7.00%	6.35%	7.96%	7.71%	6.65%	6.05%	4.92%	4.42%	3.78%	3.77%	3.72%
40	Westar Energy	5.71%	N/A	N/A	N/A	N/A	N/A	N/A	5.82%	5.66%	5.57%	5.60%	5.70%	5.77%	5.81%	5.84%	5.83%	5.75%	5.64%	5.56%
41	Xcel Energy Inc.	6.19%	6.55%	6.43%	6.38%	6.34%	6.42%	6.39%	6.38%	6.26%	6.13%	5.94%	5.78%	5.88%	5.91%	5.97%	6.09%	6.13%	6.19%	6.16%
42	Average	6.34%	6.42%	6.46%	6.50%	6.65%	6.57%	6.69%	6.73%	6.46%	6.13%	6.09%	6.11%	6.29%	6.11%	6.07%	6.13%	6.37%	6.29%	6.10%
43	Median	6.09%	6.10%	5.92%	6.34%	6.18%	6.29%	6.23%	6.25%	5.85%	5.82%	5.84%	5.84%	5.99%	6.08%	6.01%	5.99%	6.22%	6.22%	6.21%

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.
[a] Based on the projected 2023 Dividend Declared per share and Book Value per share,
published in The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Dividends to Earnings Ratio [1]

Line	Company	18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
1	ALLETE	0.69	0.63	0.77	0.78	0.74	0.71	0.66	0.68	0.66	0.60	0.68	0.72	0.71	0.67	0.80	0.93	0.61	0.53	0.52
2	Alliant Energy	0.61	0.65	0.63	0.61	0.62	0.61	0.61	0.63	0.72	0.65	0.59	0.57	0.59	0.62	0.57	0.79	0.55	0.47	0.56
3	Ameren Corp.	0.66	0.58	0.57	0.57	0.57	0.57	0.56	0.64	0.64	0.70	0.67	0.76	0.66	0.63	0.56	0.55	0.88	0.85	0.95
4	American Electric Power	0.61	0.64	0.62	0.60	0.64	0.66	0.65	0.66	0.54	0.60	0.61	0.61	0.63	0.59	0.66	0.55	0.55	0.55	0.52
5	Avangrid, Inc.	0.88	0.84	0.76	0.89	0.94	0.78	0.91	1.03	0.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	0.68	0.82	0.83	0.80	0.85	0.52	0.72	0.73	0.64	0.70	0.69	0.66	0.88	0.64	0.61	0.51	0.51	0.83	0.39
7	Black Hills	1.06	0.64	0.61	0.61	0.58	0.58	0.56	0.54	0.64	0.57	0.54	0.58	0.75	1.45	0.87	0.61	7.78	0.51	0.60
8	CenterPoint Energy	0.72	0.55	0.45	0.70	0.70	0.58	1.51	0.86	1.03	0.92	0.67	0.67	0.60	0.62	0.73	0.75	0.56	0.58	0.45
9	CMS Energy Corp.	0.58	0.65	0.65	0.67	0.62	0.64	0.62	0.61	0.63	0.61	0.62	0.61	0.63	0.58	0.50	0.54	0.29	0.31	N/A
10	Consol. Edison	0.68	0.64	0.69	0.65	0.78	0.73	0.63	0.67	0.68	0.64	0.70	0.63	0.63	0.67	0.69	0.75	0.70	0.67	0.78
11	Dominion Resources	0.89	1.34	0.65	0.79	1.90	1.68	1.03	0.86	0.81	0.81	0.79	0.73	0.77	0.71	0.63	0.66	0.52	0.69	0.58
12	DTE Energy	0.66	0.57	0.64	0.95	0.58	0.61	0.58	0.59	0.63	0.64	0.53	0.69	0.62	0.63	0.58	0.65	0.78	0.80	0.85
13	Duke Energy	0.80	0.73	0.76	0.79	0.97	0.74	0.88	0.83	0.91	0.79	0.76	0.78	0.82	0.72	0.72	0.83	0.89	0.72	N/A
14	Edison Int'l	0.47	0.63	1.78	1.35	1.50	0.62	- 1.93	0.50	0.50	0.42	0.34	0.36	0.29	0.40	0.38	0.38	0.33	0.35	0.34
15	El Paso Electric	0.50	N/A	N/A	N/A	N/A	N/A	0.68	0.54	0.51	0.57	0.49	0.48	0.43	0.27	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp.	0.54	0.39	0.76	0.56	0.54	0.58	0.61	0.67	0.50	0.57	0.58	0.67	0.55	0.44	0.49	0.48	0.48	0.46	0.40
17	Eversource Energy	0.60	0.62	0.62	0.68	0.64	0.62	0.62	0.61	0.60	0.61	0.61	0.59	0.70	0.50	0.49	0.50	0.44	0.49	0.88
18	Evergy, Inc.	0.66	0.69	0.71	0.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	0.60	0.61	0.60	0.88	0.59	0.48	0.67	0.47	0.70	0.49	0.59	0.63	1.09	0.56	0.54	0.49	0.50	0.45	0.47
20	FirstEnergy Corp.	0.78	0.63	0.65	0.58	0.84	0.83	1.37	0.53	0.69	0.72	1.69	0.56	1.03	1.17	0.68	0.66	0.50	0.49	0.48
21	Fortis Inc.	0.71	0.74	0.78	0.80	0.76	0.69	0.69	0.62	0.82	0.68	0.94	0.77	0.73	0.67	0.69	0.69	0.66	0.64	0.49
22	Great Plains Energy	- 0.82	N/A	N/A	N/A	N/A	N/A	N/A	-18.33	0.66	0.73	0.60	0.54	0.63	0.67	0.54	0.81	1.43	0.90	1.02
23	Hawaiian Elec.	0.82	0.60	0.64	0.60	0.73	0.64	0.67	0.76	0.54	0.83	0.76	0.77	0.74	0.86	1.02	1.36	1.16	1.12	0.93
24	IDACORP, Inc.	0.51	0.62	0.59	0.59	0.58	0.56	0.53	0.53	0.53	0.50	0.46	0.43	0.41	0.36	0.41	0.45	0.55	0.65	0.51
25	MGE Energy	0.57	0.51	0.52	N/A	0.56	0.55	0.54	0.57	0.56	0.56	0.48	0.50	0.56	0.57	0.60	0.66	0.60	0.62	0.68
26	NextEra Energy, Inc.	0.56	0.59	0.59	0.85	0.67	0.64	0.66	0.60	0.60	0.51	0.52	0.55	0.53	0.45	0.42	0.47	0.44	0.50	0.47
27	NorthWestern Corp	0.69	0.80	0.77	0.69	0.78	0.65	0.65	0.63	0.59	0.66	0.54	0.62	0.65	0.57	0.64	0.66	0.75	0.89	0.95
28	OGE Energy	0.60	0.80	0.73	0.69	0.76	0.67	0.66	0.66	0.68	0.62	0.48	0.44	0.45	0.44	0.49	0.54	0.56	0.52	0.55
29	Otter Tail Corp.	0.98	0.25	0.24	0.37	0.63	0.65	0.65	0.69	0.78	0.79	0.78	0.87	1.13	2.64	3.13	1.68	1.09	0.66	0.68
30	Pinnacle West Capital	0.71	0.79	0.80	0.61	0.66	0.64	0.63	0.61	0.65	0.62	0.65	0.61	0.76	0.70	0.68	0.93	0.99	0.71	0.64
31	PNM Resources	0.85	0.53	0.52	0.43	0.58	0.52	0.65	0.52	0.53	0.49	0.52	0.48	0.44	0.46	0.57	0.86	5.50	1.20	0.50
32	Portland General	0.63	0.79	0.65	0.63	0.92	0.64	0.60	0.59	0.58	0.58	0.51	0.62	0.57	0.54	0.62	0.77	0.70	0.40	0.59
33	PPL Corp.	0.78	0.59	0.62	3.13	0.81	0.70	0.64	0.75	0.54	0.63	0.63	0.62	0.55	0.54	0.61	1.16	0.55	0.46	0.48
34	Public Serv. Enterprise	0.55	0.66	0.62	0.80	0.54	0.48	0.65	0.61	0.58	0.47	0.49	0.59	0.58	0.44	0.45	0.43	0.44	0.45	0.62
35	SCANA Corp.	0.61	N/A	N/A	N/A	N/A	N/A	N/A	0.58	0.55	0.57	0.55	0.60	0.63	0.65	0.64	0.66	0.62	0.64	0.65
36	Sempra Energy	0.54	0.52	0.50	1.10	0.64	0.65	0.65	0.71	0.71	0.54	0.57	0.60	0.55	0.43	0.39	0.33	0.31	0.29	0.28
37	Southern Co.	0.75	0.76	0.75	0.77	0.78	0.78	0.79	0.72	0.79	0.76	0.75	0.75	0.73	0.73	0.76	0.75	0.74	0.70	0.73
38	Vectren Corp.	0.75	N/A	N/A	N/A	N/A	N/A	N/A	0.66	0.64	0.64	0.72	0.86	0.72	0.80	0.84	0.75	0.80	0.69	0.85
39	WEC Energy Group	0.56	0.67	0.65	0.66	0.67	0.66	0.66	0.66	0.67	0.74	0.60	0.58	0.51	0.48	0.42	0.42	0.36	0.35	0.35
40	Westar Energy	0.68	N/A	N/A	N/A	N/A	N/A	N/A	0.70	0.63	0.69	0.60	0.60	0.61	0.72	0.69	0.94	0.89	0.59	0.52
41	Xcel Energy Inc.	0.62	0.62	0.62	0.62	0.62	0.61	0.62	0.63	0.62	0.61	0.59	0.58	0.58	0.60	0.64	0.65	0.64	0.67	0.65
42	Average	0.65	0.66	0.68	0.78	0.75	0.66	0.64	0.18	0.65	0.64	0.64	0.62	0.65	0.67	0.68	0.70	0.96	0.62	0.61
43	Median	0.63	0.63	0.64	0.68	0.67	0.64	0.65	0.63	0.64	0.62	0.60	0.61	0.63	0.62	0.62	0.66	0.61	0.60	0.57

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Note:
[b] Based on the projected 2023 Dividends Declared per share and Earnings per share,
published in The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Electric Utilities
(Valuation Metrics)

Cash Flow to Capital Spending Ratio [1]

Line	Company	18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
1	ALLETE	0.93	1.76	2.12	0.55	0.55	0.63	1.22	1.61	1.32	1.16	0.45	0.67	0.49	0.77	0.63	0.39	0.46	0.65	1.23
2	Alliant Energy	0.80	0.74	0.91	0.95	N/A	N/A	N/A	0.49	N/A	0.81	0.91	1.01	0.57	0.91	0.67	0.39	0.57	1.04	1.27
3	Ameren Corp.	0.87	0.77	0.71	0.62	0.62	0.79	0.80	0.75	0.75	0.75	0.75	0.89	1.07	1.31	1.36	0.81	0.66	0.97	1.21
4	American Electric Power	0.86	0.71	0.81	0.81	0.81	0.75	0.68	0.67	0.85	0.85	0.87	0.91	1.07	1.19	1.24	1.02	0.70	0.77	0.75
5	Avangrid, Inc.	0.71	0.66	0.79	0.56	0.56	0.62	0.85	0.57	0.86	0.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	0.89	0.88	0.73	0.88	0.88	0.92	0.78	0.77	0.84	0.76	0.80	0.86	0.80	0.90	0.99	1.15	0.97	0.73	1.36
7	Black Hills	0.68	0.95	0.86	0.61	0.61	0.53	0.87	1.17	0.71	0.64	0.70	0.74	0.71	0.40	0.41	0.61	0.35	0.76	0.55
8	CenterPoint Energy	0.98	0.52	0.52	0.73	0.73	0.83	0.98	1.22	1.12	0.92	1.20	1.18	1.37	1.12	0.88	0.99	1.16	0.98	1.08
9	CMS Energy Corp.	0.86	0.85	0.82	0.78	0.78	0.79	0.77	0.89	0.81	0.81	0.74	0.82	0.82	1.05	1.13	0.97	1.11	0.55	1.07
10	Consol. Edison	0.83	0.84	0.88	0.83	0.83	0.87	0.82	0.76	0.65	0.76	0.88	0.86	1.01	0.98	0.90	0.75	0.70	0.81	0.74
11	Dominion Resources	0.77	0.46	0.86	0.73	0.73	0.96	1.04	0.81	0.65	0.64	0.63	0.77	0.73	0.79	0.87	0.75	0.83	0.74	0.85
12	DTE Energy	0.98	0.85	0.86	0.74	0.74	0.83	0.84	0.94	0.93	0.84	1.02	0.96	0.93	1.09	1.51	1.50	0.98	1.07	1.03
13	Duke Energy	0.89	0.81	0.87	0.85	0.85	0.80	0.81	0.87	0.82	0.96	1.20	1.09	0.87	0.89	0.78	0.77	0.71	1.09	0.97
14	Edison Int'l	0.74	0.83	0.62	0.55	0.55	0.68	0.34	0.94	0.91	0.80	0.83	0.80	0.76	0.61	0.60	0.79	0.93	0.88	0.93
15	El Paso Electric	0.87	N/A	N/A	0.83	N/A	N/A	0.86	1.04	0.85	0.67	0.69	0.79	0.85	1.03	0.98	0.68	0.78	0.84	1.26
16	Entergy Corp.	0.96	1.03	0.62	0.74	0.74	0.79	0.73	0.76	1.08	1.05	1.19	1.03	0.88	1.15	1.24	1.02	0.93	1.14	1.13
17	Eversource Energy	0.83	0.54	0.89	0.80	0.80	0.75	0.83	0.79	0.87	0.91	0.90	1.13	0.86	0.80	1.05	0.96	0.77	0.68	0.67
18	Evergy, Inc.	0.89	0.86	0.78	1.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	1.20	0.82	0.84	1.09	1.09	1.20	1.05	1.06	0.76	0.82	0.93	1.07	0.98	1.19	1.66	1.66	1.61	1.84	1.86
20	FirstEnergy Corp.	1.00	0.82	0.98	0.83	0.83	0.80	0.76	1.03	0.94	0.93	0.54	0.91	0.85	1.05	1.32	1.22	0.95	1.56	1.75
21	Fortis Inc.	0.70	0.93	0.89	0.65	0.65	0.68	0.72	0.76	0.76	0.65	0.60	0.77	0.72	0.66	0.68	0.63	0.66	0.57	0.63
22	Great Plains Energy	0.79	N/A	N/A	N/A	N/A	N/A	N/A	0.78	1.17	0.90	0.79	0.91	0.86	1.03	0.86	0.50	0.35	0.69	0.64
23	Hawaiian Elec.	1.12	1.14	1.56	1.27	1.27	1.08	0.85	0.81	1.37	0.98	1.03	0.92	0.99	1.30	1.50	0.79	0.87	1.15	1.23
24	IDACORP, Inc.	1.09	0.75	1.00	1.33	1.33	1.46	1.42	1.33	1.16	1.15	1.21	1.34	1.24	0.86	0.78	0.96	0.82	0.64	0.89
25	MGE Energy	1.08	0.99	1.12	0.82	0.82	0.97	0.66	1.19	1.44	1.60	1.31	0.96	1.05	1.56	1.57	1.13	0.87	0.59	0.80
26	NextEra Energy, Inc.	0.61	0.50	0.55	0.58	0.58	0.67	0.56	0.53	0.63	0.71	0.77	0.68	0.39	0.58	0.69	0.60	0.63	0.56	0.73
27	NorthWestern Corp	1.00	0.72	0.75	0.84	0.84	1.13	1.23	1.21	1.13	1.01	0.93	0.92	0.88	1.04	0.76	0.88	1.27	1.23	1.29
28	OGE Energy	0.91	0.96	0.87	1.24	1.24	1.27	1.30	0.81	1.00	1.18	1.19	0.69	0.63	0.51	0.69	0.61	0.60	0.79	0.84
29	Otter Tail Corp.	0.97	1.98	2.13	0.48	0.48	0.80	1.49	1.10	0.84	0.74	0.70	0.67	0.85	1.16	1.09	0.56	0.37	0.65	1.44
30	Pinnacle West Capital	0.94	0.73	0.89	0.91	0.91	1.03	1.06	0.76	0.81	0.92	0.97	0.87	0.96	0.91	0.97	1.06	0.86	0.99	1.28
31	PNM Resources	0.70	0.55	0.63	0.72	0.72	0.78	0.82	0.84	0.57	0.57	0.63	0.80	0.87	0.77	0.82	0.70	0.44	0.43	0.89
32	Portland General	0.82	0.51	0.86	0.78	0.78	1.03	1.00	1.07	0.88	0.80	0.47	0.59	1.28	1.25	0.81	0.44	0.77	0.72	0.78
33	PPL Corp.	0.97	1.06	1.05	0.90	0.90	0.98	0.93	0.82	1.00	0.72	0.75	0.69	0.91	1.07	1.11	1.07	1.25	1.13	1.18
34	Public Serv. Enterprise	1.10	0.92	1.05	1.13	1.13	1.08	0.70	0.64	0.61	0.80	1.04	0.93	0.96	1.30	1.23	1.41	1.34	1.64	1.94
35	SCANA Corp.	0.86	N/A	N/A	N/A	N/A	N/A	N/A	0.86	0.66	0.83	0.90	0.83	0.77	0.88	0.86	0.76	0.76	0.92	1.26
36	Sempra Energy	0.80	0.61	0.92	0.77	0.77	0.88	0.80	0.67	0.56	0.81	0.74	0.84	0.73	0.72	0.90	1.02	0.87	0.90	0.93
37	Southern Co.	0.90	0.88	0.97	0.99	0.99	0.88	0.83	0.90	0.77	0.88	0.80	0.86	0.93	0.94	0.93	0.78	0.87	0.91	1.00
38	Vectren Corp.	1.00	N/A	N/A	N/A	N/A	N/A	N/A	0.82	0.87	0.95	0.98	1.05	1.13	1.20	1.31	0.83	0.82	0.98	1.00
39	WEC Energy Group	0.98	0.95	1.09	0.97	0.97	0.91	0.90	0.92	1.20	0.97	1.37	1.42	1.30	1.02	0.97	0.89	0.61	0.56	0.69
40	Westar Energy	0.72	N/A	N/A	N/A	N/A	N/A	N/A	0.91	0.63	0.86	0.70	0.72	0.67	0.71	0.88	0.68	0.36	0.48	1.00
41	Xcel Energy Inc.	0.76	0.75	0.93	0.66	0.66	0.78	0.77	0.84	0.79	0.63	0.68	0.60	0.76	0.83	0.76	0.89	0.75	0.71	0.90
42	Average	0.89	0.85	0.94	0.83	0.82	0.88	0.89	0.89	0.89	0.87	0.87	0.89	0.88	0.96	0.98	0.86	0.80	0.88	1.05
43	Median	0.83	0.83	0.87	0.81	0.79	0.83	0.83	0.84	0.85	0.83	0.83	0.86	0.87	0.98	0.90	0.81	0.78	0.81	1.00

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Notes:
[c] Based on the projected Cash Flow per share and Capital Spending per share
published in The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Natural Gas Utilities
(Valuation Metrics)

Price to Earnings (P/E) Ratio [1]

Line	Company	18-Year Average (1)	2023 [2] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
1	Atmos Energy	17.45	17.40	19.30	18.80	22.30	23.20	21.70	22.00	20.80	17.50	16.10	15.90	15.90	14.40	13.20	12.50	13.60	15.90	13.52
2	Chesapeake Utilities	19.34	20.80	25.80	25.60	21.60	24.70	22.90	27.80	22.30	19.10	17.70	15.60	14.80	14.20	12.20	14.20	14.20	16.70	17.85
3	New Jersey Resources	17.15	15.00	17.00	17.50	17.70	24.30	15.60	22.40	21.30	16.60	11.70	16.00	16.80	16.80	15.00	14.90	12.30	21.60	16.13
4	NiSource Inc.	21.99	15.40	19.60	18.00	18.70	21.30	19.30	64.40	23.20	37.30	22.70	18.90	17.90	19.40	15.30	14.30	12.10	18.80	19.16
5	Northwest Nat. Gas	20.53	13.80	19.60	19.50	25.00	30.90	26.60	NMF	26.90	23.70	20.70	19.40	21.10	19.00	17.00	15.20	18.10	16.70	15.85
6	ONE Gas Inc.	20.79	15.20	19.90	18.90	21.70	25.30	23.10	23.50	22.70	19.80	17.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Southwest Gas	17.40	15.40	NMF	14.30	16.80	21.30	20.60	22.20	21.60	19.40	17.90	15.80	15.00	15.70	14.00	12.20	20.30	17.30	15.94
8	Spire Inc.	18.33	14.50	17.50	13.60	51.10	22.80	16.70	19.80	19.60	16.50	19.80	21.30	14.50	13.00	13.70	13.40	14.30	14.20	13.60
9	UGI Corp.	15.29	8.30	14.10	13.90	13.80	23.40	17.80	20.80	19.30	17.70	15.80	15.40	16.40	15.00	10.90	10.30	13.30	15.10	13.97
10	Average	18.49	15.09	19.10	17.79	23.19	24.13	20.48	27.86	21.97	20.84	17.80	17.29	16.55	15.94	13.91	13.38	14.78	17.04	15.75
11	Median	17.25	15.20	19.45	18.00	21.60	23.40	20.60	22.30	21.60	19.10	17.80	15.95	16.15	15.35	13.85	13.80	13.90	16.70	15.89

Market Price to Cash Flow (MP/CF) Ratio [1]

Line	Company	18-Year Average (1)	2023 [2] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
12	Atmos Energy	9.33	11.27	11.87	10.99	13.11	13.35	12.02	11.99	11.36	9.30	8.79	7.72	7.02	6.87	6.15	5.76	6.48	7.44	6.36
13	Chesapeake Utilities	10.52	12.31	14.21	14.20	12.31	14.17	12.24	13.78	12.06	10.16	9.25	8.12	7.46	7.35	6.36	9.48	7.88	8.58	9.40
14	New Jersey Resources	11.93	11.22	11.55	11.56	11.10	15.98	11.44	14.45	13.94	11.71	8.95	11.29	12.29	12.71	11.32	11.34	9.15	13.76	11.01
15	NiSource Inc.	7.85	7.21	8.13	7.89	7.83	8.81	8.91	12.11	8.56	10.38	10.56	8.71	7.81	6.81	5.09	4.06	4.87	6.69	6.87
16	Northwest Nat. Gas	12.16	7.53	8.76	8.57	10.10	13.13	11.75	59.72	11.57	9.46	8.84	8.61	9.48	9.08	8.94	8.26	8.75	8.54	7.83
17	ONE Gas Inc.	10.27	7.68	9.91	9.32	10.85	12.75	11.85	11.89	11.10	9.19	8.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	Southwest Gas	7.19	6.66	19.83	6.87	7.05	8.92	9.32	9.10	7.41	6.56	6.35	5.94	5.55	5.60	4.91	3.84	4.89	5.42	5.28
19	Spire Inc.	9.60	7.53	8.34	7.55	14.01	11.27	9.60	10.39	10.32	8.47	12.03	13.76	8.80	8.08	8.12	8.58	8.95	8.46	8.46
20	UGI Corp.	7.87	5.84	7.20	9.56	7.39	12.95	9.01	10.09	9.02	8.47	7.49	6.55	6.30	7.51	6.02	5.74	7.11	7.92	7.48
21	Average	9.51	8.58	11.09	9.61	10.42	12.37	10.68	17.06	10.59	9.30	8.94	8.84	8.09	8.00	7.11	7.13	7.26	8.35	7.84
22	Median	8.60	7.53	9.91	9.32	10.85	12.95	11.44	11.99	11.10	9.30	8.84	8.37	7.64	7.43	6.26	7.01	7.50	8.19	7.65

Market Price to Book Value (MP/BV) Ratio [1]

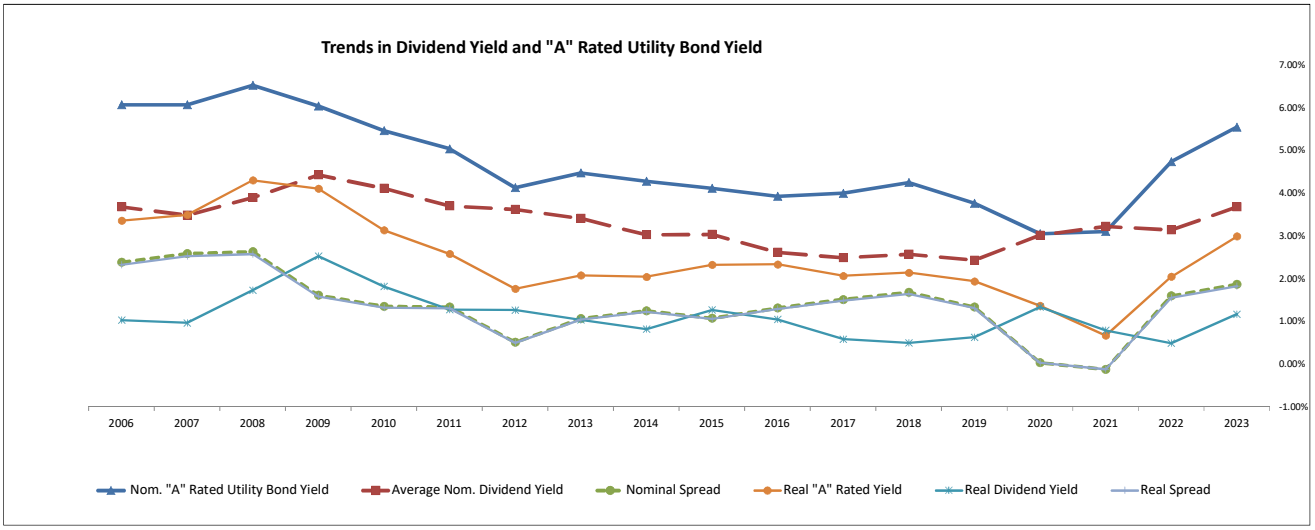
Line	Company	18-Year Average (1)	2023 [2] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
23	Atmos Energy	1.59	1.55	1.65	1.59	1.95	2.10	2.03	2.16	2.11	1.72	1.55	1.39	1.28	1.30	1.18	1.05	1.20	1.40	1.34
24	Chesapeake Utilities	2.08	2.20	2.69	2.77	2.27	2.69	2.50	2.51	2.28	2.19	2.12	1.83	1.66	1.61	1.40	1.37	1.64	1.84	1.85
25	New Jersey Resources	2.27	2.32	2.35	2.26	1.90	2.75	2.63	2.70	2.52	2.28	2.13	2.05	2.33	2.31	2.09	2.16	1.92	2.17	2.01
26	NiSource Inc.	1.55	1.33	2.15	1.86	1.95	2.09	1.92	1.96	1.84	1.95	1.94	1.58	1.37	1.15	0.92	0.69	0.94	1.16	1.19
27	Northwest Nat. Gas	1.82	1.39	1.51	1.45	1.98	2.38	2.35	2.41	1.92	1.63	1.59	1.56	1.72	1.70	1.78	1.73	1.96	2.05	1.69
28	ONE Gas Inc.	1.67	1.49	1.73	1.57	1.90	2.20	1.93	1.89	1.67	1.26	1.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29	Southwest Gas	1.53	1.22	1.62	1.32	1.49	1.84	1.79	2.13	1.96	1.68	1.68	1.61	1.51	1.43	1.24	0.97	1.20	1.46	1.46
30	Spire Inc.	1.54	1.29	1.43	1.47	1.67	1.78	1.63	1.65	1.64	1.44	1.33	1.34	1.51	1.46	1.39	1.68	1.71	1.66	1.71
31	UGI Corp.	1.97	1.59	1.39	1.64	1.87	2.92	2.30	2.62	2.41	2.29	1.97	1.69	1.45	1.75	1.55	1.66	2.01	2.16	2.21
32	Average	1.78	1.60	1.83	1.77	1.89	2.30	2.12	2.23	2.04	1.83	1.71	1.63	1.60	1.59	1.44	1.41	1.57	1.74	1.68
33	Median	1.68	1.49	1.65	1.59	1.90	2.20	2.03	2.16	1.96	1.72	1.68	1.59	1.51	1.54	1.40	1.51	1.67	1.75	1.70

Sources:
The current year P/E ratio is based on the forward P/E (price over expected earnings per share). All historical year P/E ratios are based on annual average share price over achieved earnings per share.
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, February 23, 2024.
Notes:
[a] Based on the average of the high and low price for year and the projected Cash Flow per share, published in The Value Line Investment Survey.
[b] Based on the average of the high and low price for the year and the projected Book Value per share, published in The Value Line Investment Survey.

Tampa Electric Company

Natural Gas Utilities
(Valuation Metrics)

Line	Company	Dividend Yield[1] 18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
1	Atmos Energy	3.35%	2.62%	2.46%	2.63%	2.19%	2.08%	2.23%	2.27%	2.39%	2.88%	3.11%	3.53%	4.13%	4.19%	4.70%	5.34%	4.78%	4.16%	4.66%
2	Chesapeake Utilities	2.65%	2.08%	1.61%	1.50%	1.86%	1.68%	1.76%	1.69%	1.91%	2.18%	2.44%	2.87%	3.25%	3.36%	3.91%	4.09%	4.10%	3.62%	3.76%
3	New Jersey Resources	3.22%	3.29%	3.25%	3.50%	3.47%	2.50%	2.61%	2.69%	2.86%	3.14%	3.50%	3.71%	3.38%	3.33%	3.69%	3.46%	3.35%	3.02%	3.19%
4	NiSource Inc.	3.95%	3.85%	3.33%	3.60%	3.41%	2.86%	3.10%	2.79%	2.76%	3.53%	2.69%	3.30%	3.84%	4.53%	5.66%	7.64%	5.69%	4.29%	4.21%
5	Northwest Nat. Gas	3.62%	4.40%	3.86%	3.90%	3.33%	2.81%	3.05%	3.02%	3.28%	4.01%	4.14%	4.22%	3.83%	3.85%	3.63%	3.73%	3.27%	3.12%	3.73%
6	ONE Gas Inc.	2.71%	3.72%	3.08%	3.21%	2.70%	2.25%	2.46%	2.37%	2.32%	2.71%	2.28%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Southwest Gas	3.00%	4.07%	3.20%	3.65%	3.28%	2.60%	2.74%	2.46%	2.62%	2.87%	2.72%	2.69%	2.75%	2.78%	3.15%	4.01%	3.19%	2.56%	2.60%
8	Spire Inc.	3.82%	4.44%	3.89%	3.79%	3.38%	2.95%	3.10%	3.09%	3.08%	3.53%	3.78%	3.96%	4.11%	4.31%	4.70%	3.91%	3.94%	4.43%	4.34%
9	UGI Corp.	3.00%	4.64%	3.61%	3.25%	3.56%	2.16%	2.09%	2.01%	2.35%	2.50%	2.61%	3.01%	3.68%	3.30%	3.48%	3.23%	2.85%	2.69%	2.96%
10	**Average**	**3.31%**	**3.68%**	**3.14%**	**3.23%**	**3.02%**	**2.43%**	**2.57%**	**2.49%**	**2.62%**	**3.04%**	**3.03%**	**3.41%**	**3.62%**	**3.71%**	**4.12%**	**4.43%**	**3.90%**	**3.48%**	**3.68%**
11	Median	3.39%	3.85%	3.25%	3.50%	3.33%	2.50%	2.61%	2.46%	2.62%	2.88%	2.72%	3.42%	3.75%	3.60%	3.80%	3.96%	3.65%	3.37%	3.75%
12	20-Yr Treasury Yields[3]	3.25%	4.25%	3.30%	1.98%	1.35%	2.40%	3.02%	2.65%	2.23%	2.55%	3.07%	3.12%	2.54%	3.62%	4.03%	4.11%	4.36%	4.91%	4.99%
13	20-Yr TIPS[3]	1.07%	1.73%	0.64%	-0.43%	-0.30%	0.60%	0.94%	0.75%	0.66%	0.78%	0.87%	0.75%	0.21%	1.19%	1.73%	2.21%	2.19%	2.36%	2.31%
14	Implied Inflation[b]	2.16%	2.48%	2.64%	2.42%	1.66%	1.79%	2.06%	1.89%	1.56%	1.75%	2.19%	2.35%	2.33%	2.40%	2.26%	1.85%	2.13%	2.49%	2.62%
15	**Real Dividend Yield[c]**	**1.13%**	**1.17%**	**0.49%**	**0.79%**	**1.33%**	**0.63%**	**0.50%**	**0.58%**	**1.05%**	**1.27%**	**0.82%**	**1.04%**	**1.27%**	**1.27%**	**1.82%**	**2.53%**	**1.73%**	**0.97%**	**1.03%**
	Utility																			
16	**Nominal "A" Rated Yield[4]**	**4.70%**	**5.55%**	**4.74%**	**3.10%**	**3.05%**	**3.77%**	**4.25%**	**4.00%**	**3.93%**	**4.12%**	**4.28%**	**4.48%**	**4.13%**	**5.04%**	**5.46%**	**6.04%**	**6.53%**	**6.07%**	**6.07%**
17	**Real "A" Rated Yield**	**2.49%**	**2.99%**	**2.05%**	**0.67%**	**1.37%**	**1.94%**	**2.14%**	**2.07%**	**2.34%**	**2.33%**	**2.04%**	**2.08%**	**1.76%**	**2.58%**	**3.13%**	**4.11%**	**4.31%**	**3.49%**	**3.36%**
	Spreads (Utility Bond - Stock)																			
18	**Nominal[d]**	**1.39%**	**1.87%**	**1.60%**	**-0.12%**	**0.03%**	**1.33%**	**1.68%**	**1.51%**	**1.31%**	**1.08%**	**1.25%**	**1.06%**	**0.51%**	**1.33%**	**1.35%**	**1.61%**	**2.63%**	**2.59%**	**2.39%**
19	**Real[e]**	**1.36%**	**1.82%**	**1.56%**	**-0.12%**	**0.03%**	**1.31%**	**1.64%**	**1.48%**	**1.29%**	**1.06%**	**1.22%**	**1.04%**	**0.50%**	**1.30%**	**1.32%**	**1.58%**	**2.58%**	**2.53%**	**2.33%**
	Spreads (Treasury Bond - Stock)																			
20	**Nominal[f]**	**-0.06%**	**0.57%**	**0.16%**	**-1.25%**	**-1.67%**	**-0.03%**	**0.45%**	**0.17%**	**-0.39%**	**-0.49%**	**0.05%**	**-0.29%**	**-1.08%**	**-0.09%**	**-0.09%**	**-0.32%**	**0.46%**	**1.42%**	**1.31%**
21	**Real[g]**	**-0.06%**	**0.56%**	**0.15%**	**-1.22%**	**-1.64%**	**-0.03%**	**0.44%**	**0.16%**	**-0.39%**	**-0.48%**	**0.04%**	**-0.29%**	**-1.05%**	**-0.08%**	**-0.08%**	**-0.31%**	**0.46%**	**1.39%**	**1.28%**



Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, February 23, 2024.
[3] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.
[4] www.moodys.com, Bond Yields and Key Indicators, through December 31, 2023.

Notes:
[a] Based on the average of the high and low price for the year and the projected Dividends Declared per share published in the Value Line Investment Survey.
[b] Line 16 = (1 + Line 14) / (1 + Line 15) - 1.
[c] Line 17 = (1 + Line 12) / (1 +Line 16) - 1.
[d] The spread being measured here is the nominal A-rated utility bond yield over the average nominal utility dividend yield; (Line 18 - Line 12).
[e] The spread being measured here is the real A-rated utility bond yield over the average real utility dividend yield; Line 19 - Line 17)
[f] The spread being measured here is the nominal 20-Year Treasury yield over the average nominal utility dividend yield; (Line 14 - Line 12).
[g] The spread being measured here is the real 20-Year TIPS yield over the average real utility dividend yield; Line 15 - Line 17)

Tampa Electric Company

Natural Gas Utilities
(Valuation Metrics)

		Dividend per Share[1]																				
Line	Company	18-Year Average	2023 [2]	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2018 CAGR	2017 CAGR
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1	Atmos Energy	1.76	2.96	2.72	2.50	2.30	2.10	1.94	1.80	1.68	1.56	1.48	1.40	1.38	1.36	1.34	1.32	1.30	1.28	1.26	2.16%	2.25%
2	Chesapeake Utilities	1.24	2.25	2.03	1.84	1.69	1.55	1.39	1.26	1.19	1.12	1.07	1.01	0.96	0.91	0.87	0.83	0.81	0.78	0.77	2.97%	3.13%
3	New Jersey Resources	0.94	1.56	1.45	1.36	1.27	1.19	1.11	1.04	0.98	0.93	0.86	0.81	0.77	0.72	0.68	0.62	0.56	0.51	0.48	4.26%	4.95%
4	NiSource Inc.	0.88	1.00	0.94	0.88	0.84	0.80	0.78	0.70	0.64	0.83	1.02	0.98	0.94	0.92	0.92	0.92	0.92	0.92	0.92	-0.82%	-1.69%
5	Northwest Nat. Gas	1.78	1.94	1.93	1.92	1.91	1.90	1.89	1.88	1.87	1.86	1.85	1.83	1.79	1.75	1.68	1.60	1.52	1.44	1.39	1.54%	1.91%
6	ONE Gas Inc.	1.85	2.60	2.48	2.32	2.16	2.00	1.84	1.68	1.40	1.20	0.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.66%	9.05%
7	Southwest Gas	1.60	2.48	2.48	2.38	2.28	2.18	2.08	1.98	1.80	1.62	1.46	1.32	1.18	1.06	1.00	0.95	0.90	0.86	0.82	4.73%	5.66%
8	Spire Inc.	1.97	2.88	2.74	2.60	2.49	2.37	2.25	2.10	1.96	1.84	1.76	1.70	1.66	1.61	1.57	1.53	1.49	1.45	1.40	2.38%	2.57%
9	UGI Corp.	0.89	1.47	1.41	1.35	1.31	1.15	1.02	0.96	0.93	0.89	0.79	0.74	0.71	0.68	0.60	0.52	0.50	0.48	0.46	4.09%	4.78%
10	**Average**	**1.39**	**2.13**	**2.02**	**1.91**	**1.81**	**1.69**	**1.59**	**1.49**	**1.38**	**1.32**	**1.24**	**1.22**	**1.17**	**1.13**	**1.08**	**1.04**	**1.00**	**0.97**	**0.94**	**3.11%**	**3.62%**
11	**Industry Average Growth**	**4.95%**	**5.28%**	**6.01%**	**5.54%**	**6.63%**	**6.56%**	**6.73%**	**7.63%**	**5.06%**	**6.54%**	**0.96%**	**4.33%**	**4.18%**	**4.04%**	**4.39%**	**3.76%**	**3.55%**	**3.02%**			

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, February 23, 2024.

Tampa Electric Company

Natural Gas Utilities
(Valuation Metrics)

		Earnings per Share[1]																		
Line	Company	18-Year Average	2023 [2]	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1	Atmos Energy	3.33	6.10	5.60	5.12	4.72	4.35	4.00	3.60	3.38	3.09	2.96	2.50	2.10	2.26	2.16	1.97	2.00	1.94	2.00
2	Chesapeake Utilities	2.77	4.85	4.97	4.70	4.21	3.72	3.45	2.68	2.86	2.68	2.47	2.26	1.99	1.91	1.82	1.43	1.39	1.29	1.15
3	New Jersey Resources	1.71	2.70	2.50	2.16	2.07	1.96	2.72	1.73	1.61	1.78	2.08	1.37	1.36	1.29	1.23	1.20	1.35	0.78	0.93
4	NiSource Inc.	1.20	1.60	1.47	1.35	1.32	1.31	1.30	0.39	1.00	0.63	1.67	1.57	1.37	1.05	1.06	0.84	1.34	1.14	1.14
5	Northwest Nat. Gas	2.16	2.65	2.54	2.50	2.30	2.19	2.33	-1.94	2.12	1.96	2.16	2.24	2.22	2.39	2.73	2.83	2.57	2.76	2.35
6	ONE Gas Inc.	3.25	4.15	4.08	3.85	3.68	3.51	3.25	3.02	2.65	2.24	2.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Southwest Gas	2.90	2.85	3.10	3.80	4.14	3.94	3.68	3.62	3.18	2.92	3.01	3.11	2.86	2.43	2.27	1.94	1.39	1.95	1.98
8	Spire Inc.	3.03	3.85	3.95	4.96	1.44	3.52	4.33	3.43	3.24	3.16	2.35	2.02	2.79	2.86	2.43	2.92	2.64	2.31	2.37
9	UGI Corp.	1.98	2.84	2.90	2.96	2.67	2.28	2.74	2.29	2.05	2.01	1.92	1.59	1.17	1.37	1.59	1.57	1.33	1.18	1.10
10	**Average**	**2.41**	**3.51**	**3.46**	**3.49**	**2.95**	**2.98**	**3.09**	**2.09**	**2.45**	**2.27**	**2.30**	**2.08**	**1.98**	**1.95**	**1.91**	**1.84**	**1.75**	**1.67**	**1.63**
11	**Industry Average Growth**	**5.27%**	**1.54%**	**-0.92%**	**18.27%**	**-0.86%**	**-3.67%**	**47.72%**	**-14.80%**	**7.91%**	**-1.06%**	**10.40%**	**5.02%**	**1.90%**	**1.83%**	**3.95%**	**4.98%**	**4.94%**	**2.53%**	

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, February 23, 2024.

Tampa Electric Company

Natural Gas Utilities
(Valuation Metrics)

		Cash Flow / Capital Spending[1]						
Line	Company	2019 (1)	2020 (2)	2021 (3)	2022 (4)	2023 (5)	2024[2] (6)	3 - 5 yr[2] Projection (7)
1	Atmos Energy	0.53x	0.53x	0.53x	0.54x	0.54x	0.57x	0.68x
2	Chesapeake Utilities	0.66x	0.64x	0.82x	1.23x	0.84x	0.81x	0.96x
3	New Jersey Resources	1.41x	0.65x	0.72x	0.59x	0.68x	0.85x	0.84x
4	NiSource Inc.	0.66x	0.65x	0.69x	0.55x	0.43x	0.54x	0.63x
5	Northwest Nat. Gas	0.77x	0.75x	0.61x	0.60x	0.68x	0.66x	0.76x
6	ONE Gas Inc.	0.78x	0.88x	0.86x	0.74x	0.83x	0.82x	1.11x
7	Southwest Gas	0.62x	0.53x	0.61x	0.31x	0.84x	0.75x	0.79x
8	Spire Inc.	0.65x	0.65x	0.70x	0.80x	0.71x	0.66x	0.76x
9	UGI Corp.	1.33x	1.54x	1.66x	1.42x	1.33x	1.24x	1.20x
10	Average	0.82x	0.76x	0.80x	0.75x	0.76x	0.77x	0.86x
11	Median	0.66x	0.65x	0.70x	0.60x	0.71x	0.75x	0.79x

Sources:
[1] The Value Line Investment Survey, various report dates.
[2] The Value Line Investment Survey, February 23, 2024.
Notes:
Based on the projected Cash Flow per share and Capital Spending per share.

Tampa Electric Company

Natural Gas Utilities
(Valuation Metrics)

Percent Dividends to Book Value [1]

Line	Company	18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
1	Atmos Energy	4.99%	4.04%	4.07%	4.19%	4.26%	4.36%	4.53%	4.90%	5.04%	4.96%	4.81%	4.92%	5.28%	5.44%	5.55%	5.61%	5.75%	5.82%	6.25%
2	Chesapeake Utilities	5.12%	4.56%	4.32%	4.15%	4.23%	4.53%	4.39%	4.23%	4.35%	4.78%	5.18%	5.25%	5.39%	5.42%	5.49%	5.60%	6.71%	6.66%	6.95%
3	New Jersey Resources	7.24%	7.65%	7.63%	7.92%	6.60%	6.85%	6.87%	7.26%	7.21%	7.16%	7.45%	7.60%	7.86%	7.69%	7.72%	7.48%	6.42%	6.54%	6.40%
4	NiSource Inc.	5.65%	5.14%	7.15%	6.69%	6.64%	5.99%	5.96%	5.46%	5.08%	6.89%	5.22%	5.22%	5.25%	5.19%	5.22%	5.25%	5.34%	4.97%	5.02%
5	Northwest Nat. Gas	6.47%	6.12%	5.83%	5.66%	6.57%	6.69%	7.16%	7.27%	6.30%	6.53%	6.58%	6.59%	6.57%	6.55%	6.44%	6.43%	6.41%	6.39%	6.32%
6	ONE Gas Inc.	4.49%	5.53%	5.31%	5.04%	5.14%	4.96%	4.73%	4.48%	3.88%	3.41%	2.44%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Southwest Gas	4.49%	4.96%	5.17%	4.80%	4.87%	4.79%	4.90%	5.25%	5.14%	4.82%	4.57%	4.33%	4.16%	3.98%	3.90%	3.89%	3.83%	3.74%	3.80%
8	Spire Inc.	5.86%	5.73%	5.58%	5.56%	5.63%	5.25%	5.06%	5.09%	5.06%	5.07%	5.04%	5.31%	6.22%	6.30%	6.53%	6.56%	6.74%	7.33%	7.43%
9	UGI Corp.	5.68%	7.35%	5.02%	5.34%	6.65%	6.30%	4.82%	5.28%	5.65%	5.72%	5.14%	5.07%	5.35%	5.77%	5.41%	5.35%	5.72%	5.82%	6.54%
10	Average	5.62%	5.68%	5.57%	5.48%	5.62%	5.52%	5.38%	5.47%	5.30%	5.48%	5.16%	5.54%	5.76%	5.79%	5.78%	5.77%	5.86%	5.91%	6.09%
11	Median	5.36%	5.53%	5.31%	5.34%	5.63%	5.25%	4.90%	5.25%	5.08%	5.07%	5.14%	5.24%	5.37%	5.61%	5.52%	5.60%	6.08%	6.11%	6.36%

Dividends to Earnings Ratio [1]

Line	Company	18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
12	Atmos Energy	0.55	0.49	0.49	0.49	0.49	0.48	0.49	0.50	0.50	0.50	0.50	0.56	0.66	0.60	0.62	0.67	0.65	0.66	0.63
13	Chesapeake Utilities	0.47	0.46	0.41	0.39	0.40	0.42	0.40	0.47	0.42	0.42	0.43	0.45	0.48	0.48	0.48	0.58	0.58	0.61	0.67
14	New Jersey Resources	0.55	0.58	0.58	0.63	0.61	0.61	0.41	0.60	0.61	0.52	0.41	0.59	0.57	0.56	0.55	0.52	0.41	0.65	0.51
15	NiSource Inc.	0.81	0.63	0.64	0.65	0.64	0.61	0.60	1.79	0.64	1.32	0.61	0.62	0.69	0.88	0.87	1.10	0.69	0.81	0.81
16	Northwest Nat. Gas	0.65	0.73	0.76	0.77	0.83	0.87	0.81	- 0.97	0.88	0.95	0.86	0.82	0.81	0.73	0.62	0.57	0.59	0.52	0.59
17	ONE Gas Inc.	0.56	0.63	0.61	0.60	0.59	0.57	0.57	0.56	0.53	0.54	0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	Southwest Gas	0.55	0.87	0.80	0.63	0.55	0.55	0.57	0.55	0.57	0.55	0.49	0.42	0.41	0.44	0.44	0.49	0.65	0.44	0.41
19	Spire Inc.	0.69	0.75	0.69	0.52	1.73	0.67	0.52	0.61	0.60	0.58	0.75	0.84	0.59	0.56	0.65	0.52	0.56	0.63	0.59
20	UGI Corp.	0.45	0.52	0.49	0.46	0.49	0.50	0.37	0.42	0.45	0.44	0.41	0.46	0.60	0.50	0.38	0.33	0.38	0.41	0.41
21	Average	0.59	0.63	0.61	0.57	0.70	0.59	0.53	0.50	0.58	0.65	0.54	0.60	0.60	0.59	0.57	0.60	0.56	0.59	0.58
22	Median	0.58	0.63	0.61	0.60	0.59	0.57	0.52	0.55	0.57	0.54	0.49	0.58	0.60	0.56	0.58	0.54	0.59	0.62	0.59

Cash Flow to Capital Spending Ratio [1]

Line	Company	18-Year Average (1)	2023 [2/a] (2)	2022 (3)	2021 (4)	2020 (5)	2019 (6)	2018 (7)	2017 (8)	2016 (9)	2015 (10)	2014 (11)	2013 (12)	2012 (13)	2011 (14)	2010 (15)	2009 (16)	2008 (17)	2007 (18)	2006 (19)
23	Atmos Energy	0.65	0.53	0.54	0.58	0.52	0.53	0.55	0.62	0.59	0.60	0.65	0.55	0.59	0.68	0.77	0.78	0.81	0.94	0.82
24	Chesapeake Utilities	0.77	0.81	1.23	0.81	0.78	0.62	0.39	0.50	0.50	0.53	0.71	0.65	0.79	1.12	1.10	1.14	0.83	0.82	0.45
25	New Jersey Resources	1.20	0.82	0.59	0.62	0.71	0.51	0.85	0.70	0.59	0.67	1.79	1.46	1.48	1.51	1.55	1.75	2.11	1.67	2.14
26	NiSource Inc.	0.73	0.45	0.55	0.68	0.66	0.61	0.58	0.41	0.59	0.53	0.56	0.57	0.65	0.75	1.11	1.06	0.94	1.11	1.37
27	Northwest Nat. Gas	0.90	0.65	0.60	0.68	0.66	0.69	0.71	0.14	1.01	1.12	1.15	0.98	1.01	1.33	0.55	1.02	1.35	1.21	1.34
28	ONE Gas Inc.	0.84	0.77	0.74	0.86	0.83	0.89	0.84	0.87	0.92	0.86	0.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29	Southwest Gas	0.82	0.71	0.31	0.86	0.69	0.53	0.56	0.68	0.83	0.84	0.99	1.05	0.90	0.82	1.37	1.28	0.85	0.78	0.72
30	Spire Inc.	1.03	0.69	0.80	0.75	0.42	0.44	0.77	0.72	0.96	0.92	0.98	0.78	0.95	1.53	1.61	1.93	1.64	1.42	1.28
31	UGI Corp.	1.45	1.18	1.42	1.32	1.59	1.22	1.64	1.29	1.35	1.48	1.53	1.32	1.52	1.28	1.36	1.52	1.72	1.62	1.69
32	Average	0.95	0.74	0.75	0.80	0.76	0.67	0.77	0.66	0.82	0.84	1.02	0.92	0.98	1.13	1.18	1.31	1.28	1.20	1.23
33	Median	0.86	0.71	0.60	0.75	0.69	0.61	0.71	0.68	0.83	0.84	0.98	0.88	0.93	1.20	1.23	1.21	1.15	1.16	1.31

Sources:
[1] Data for years 2019 and prior were retrieved from the Value Line Investment Survey Investment Analyzer Software, downloaded on June 18, 2021.
Data for the years 2020 - 2022 was retrieved from Value Line Investment Surveys.
[2] The Value Line Investment Survey, February 23, 2024.
Notes:
[a] Based on the projected Dividends Declared per share and Book Value per share, published in The Value Line Investment Survey.
[b] Based on the projected Dividends Declared per share and Earnings per share, published in The Value Line Investment Survey.
[c] Based on the projected Cash Flow per share and Capital Spending per share, published in The Value Line Investment Survey.

Tampa Electric Company

Proxy Group

Line	Company	Credit Ratings[1] S&P (1)	Credit Ratings[1] Moody's (2)	Common Equity Ratios MI[1] (3)	Common Equity Ratios Value Line[2] (4)
1	Alliant Energy Corporation	A-	Baa2	41.4%	45.0%
2	Ameren Corporation	BBB+	Baa1	40.8%	43.4%
3	American Electric Power Company, Inc.	BBB+	Baa2	36.2%	42.0%
4	Duke Energy Corporation	BBB+	Baa2	37.4%	42.5%
5	Edison International	BBB	Baa2	27.0%	30.6%
6	Entergy Corporation	BBB+	Baa2	32.2%	35.2%
7	Evergy, Inc.	BBB+	Baa2	43.8%	48.0%
8	IDACORP, Inc.	BBB	Baa2	56.0%	56.1%
9	NorthWestern Corporation	BBB	Baa2	50.3%	51.8%
10	OGE Energy Corp.	BBB+	Baa1	49.1%	52.4%
11	Pinnacle West Capital Corporation	BBB+	Baa2	40.2%	43.9%
12	Portland General Electric Company	BBB+	A3	41.1%	43.0%
13	Southern Company	A-	Baa2	32.5%	36.5%
14	Xcel Energy Inc.	BBB+	Baa1	39.0%	42.2%
15	**Average**	**BBB+**	**Baa2**	**40.5%**	**43.8%**
16	**Median**			**40.5%**	**43.2%**
17	**Tampa Electric Company[3,4]**	**BBB+**	**A3**		**54.00%**

Sources:
Note: If credit rating/common equity ratio unavailable for utility, subsidiary data used.
[1] S&P Global Market Intelligence, Downloaded on May 10, 2024.
[2] *The Value Line Investment Survey* , March 8, April 19, and May 10, 2024.
[3] D'Ascendis Direct, page 17.
[4] D'Ascendis Direct, page 20.

Tampa Electric Company

Consensus Analysts' Growth Rates

Line	Company	Zacks		MI		Yahoo! Finance		Average of Growth Rates
		Estimated Growth %[1]	Number of Estimates	Estimated Growth %[2]	Number of Estimates	Estimated Growth %[3]	Number of Estimates	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Alliant Energy Corporation	6.10%	N/A	6.60%	4	6.30%	N/A	6.33%
2	Ameren Corporation	6.48%	N/A	6.41%	5	4.80%	N/A	5.90%
3	American Electric Power Company, Inc.	5.80%	N/A	6.18%	7	6.19%	N/A	6.06%
4	Duke Energy Corporation	6.28%	N/A	6.19%	6	6.86%	N/A	6.44%
5	Edison International	N/A	N/A	6.70%	5	7.60%	N/A	7.15%
6	Entergy Corporation	7.46%	N/A	6.94%	5	6.80%	N/A	7.07%
7	Evergy, Inc.	5.00%	N/A	4.85%	4	2.50%	N/A	4.12%
8	IDACORP, Inc.	N/A	N/A	6.40%	4	4.40%	N/A	5.40%
9	NorthWestern Corporation	N/A	N/A	5.08%	4	4.50%	N/A	4.79%
10	OGE Energy Corp.	5.00%	N/A	5.37%	3	-12.34%	N/A	5.18%
11	Pinnacle West Capital Corporation	7.55%	N/A	6.77%	4	6.95%	N/A	7.09%
12	Portland General Electric Company	N/A	N/A	8.95%	4	12.50%	N/A	10.73%
13	Southern Company	4.50%	N/A	5.86%	5	7.30%	N/A	5.89%
14	Xcel Energy Inc.	6.41%	N/A	6.36%	5	6.73%	N/A	6.50%
15	**Average**	**6.06%**	**N/A**	**6.33%**	**5**	**6.42%**	**N/A**	**6.33%**
16	**Median**							**6.20%**

Sources:

[1] Zacks, http://www.zacks.com/, downloaded on May 10, 2024.

[2] S&P Global Market Intelligence, https://platform.mi.spglobal.com, downloaded on May 10, 2024.

[3] Yahoo! Finance, http://www.finance.yahoo.com/, downloaded on May 10, 2024.

Tampa Electric Company

Constant Growth DCF Model
(Consensus Analysts' Growth Rates)

Line	Company	13-Week AVG Stock Price[1] (1)	Analysts' Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	Alliant Energy Corporation	$49.06	6.33%	$1.92	4.16%	10.49%
2	Ameren Corporation	$72.27	5.90%	$2.52	3.69%	9.59%
3	American Electric Power Company, Inc.	$83.93	6.06%	$3.52	4.45%	10.51%
4	Duke Energy Corporation	$95.41	6.44%	$4.10	4.57%	11.02%
5	Edison International	$69.22	7.15%	$3.12	4.83%	11.98%
6	Entergy Corporation	$103.70	7.07%	$4.52	4.67%	11.73%
7	Evergy, Inc.	$51.59	4.12%	$2.57	5.19%	9.30%
8	IDACORP, Inc.	$91.47	5.40%	$3.32	3.83%	9.23%
9	NorthWestern Corporation	$49.40	4.79%	$2.60	5.51%	10.30%
10	OGE Energy Corp.	$33.79	5.18%	$1.67	5.21%	10.39%
11	Pinnacle West Capital Corporation	$72.03	7.09%	$3.52	5.23%	12.32%
12	Portland General Electric Company	$41.66	10.73%	$1.90	5.05%	15.77%
13	Southern Company	$70.31	5.89%	$2.88	4.34%	10.23%
14	Xcel Energy Inc.	$54.04	6.50%	$2.19	4.32%	10.82%
15	**Average**	**$66.99**	**6.33%**	**$2.88**	**4.65%**	**10.98%**
16	**Median**					**10.50%**

Sources:
[1] S&P Global Market Intelligence, Downloaded on May 10, 2024.
[2] Exhibit CCW-3
[3] *The Value Line Investment Survey* , March 8, April 19, and May 10, 2024.

Tampa Electric Company

Payout Ratios

Line	Company	Dividends Per Share		Earnings Per Share		Payout Ratio	
		2022	Projected	2022	Projected	2022	Projected
		(1)	(2)	(3)	(4)	(5)	(6)
1	Alliant Energy Corporation	$1.71	$2.43	$2.73	$3.90	62.64%	62.31%
2	Ameren Corporation	$2.36	$3.30	$4.14	$5.75	57.00%	57.39%
3	American Electric Power Company, Inc.	$3.17	$4.16	$5.09	$7.25	62.28%	57.38%
4	Duke Energy Corporation	$3.98	$4.30	$5.27	$7.60	75.52%	56.58%
5	Edison International	$2.84	$3.86	$4.63	$6.55	61.34%	58.93%
6	Entergy Corporation	$4.10	$5.00	$5.37	$8.05	76.35%	62.11%
7	Evergy, Inc.	$2.33	$3.05	$3.26	$4.75	71.47%	64.21%
8	IDACORP, Inc.	$3.04	$4.25	$5.11	$6.65	59.49%	63.91%
9	NorthWestern Corporation	$2.52	$2.76	$3.29	$4.25	76.60%	64.94%
10	OGE Energy Corp.	$1.64	$1.85	$2.25	$2.75	72.89%	67.27%
11	Pinnacle West Capital Corporation	$3.43	$3.79	$4.26	$6.00	80.52%	63.17%
12	Portland General Electric Company	$1.79	$2.46	$2.74	$3.85	65.33%	63.90%
13	Southern Company	$2.70	$3.10	$3.61	$5.10	74.79%	60.78%
14	Xcel Energy Inc.	$1.95	$2.67	$3.17	$4.70	61.51%	56.81%
15	**Average**	**$2.68**	**$3.36**	**$3.92**	**$5.51**	**68.41%**	**61.41%**

Source:
The Value Line Investment Survey, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Sustainable Growth Rate

Line	Company	3 to 5 Year Projections										Sustainable Growth Rate
		Dividends Per Share	Earnings Per Share	Book Value Per Share	Book Value Growth	ROE	Adjustment Factor	Adjusted ROE	Payout Ratio	Retention Rate	Internal Growth Rate	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Alliant Energy Corporation	$2.43	$3.90	$31.90	4.15%	12.23%	1.02	12.47%	62.31%	37.69%	4.70%	5.07%
2	Ameren Corporation	$3.30	$5.75	$52.65	4.64%	10.92%	1.02	11.17%	57.39%	42.61%	4.76%	5.89%
3	American Electric Power Company, Inc.	$4.16	$7.25	$62.55	5.03%	11.59%	1.02	11.87%	57.38%	42.62%	5.06%	5.97%
4	Duke Energy Corporation	$4.30	$7.60	$70.00	2.18%	10.86%	1.01	10.97%	56.58%	43.42%	4.77%	4.82%
5	Edison International	$3.86	$6.55	$48.25	5.15%	13.58%	1.03	13.92%	58.93%	41.07%	5.72%	6.03%
6	Entergy Corporation	$5.00	$8.05	$84.65	5.50%	9.51%	1.03	9.76%	62.11%	37.89%	3.70%	4.69%
7	Evergy, Inc.	$3.05	$4.75	$47.50	2.13%	10.00%	1.01	10.11%	64.21%	35.79%	3.62%	3.62%
8	IDACORP, Inc.	$4.25	$6.65	$69.80	3.89%	9.53%	1.02	9.71%	63.91%	36.09%	3.50%	4.01%
9	NorthWestern Corporation	$2.76	$4.25	$51.85	2.54%	8.20%	1.01	8.30%	64.94%	35.06%	2.91%	3.03%
10	OGE Energy Corp.	$1.85	$2.75	$26.25	3.03%	10.48%	1.01	10.63%	67.27%	32.73%	3.48%	3.48%
11	Pinnacle West Capital Corporation	$3.79	$6.00	$70.15	4.64%	8.55%	1.02	8.75%	63.17%	36.83%	3.22%	3.80%
12	Portland General Electric Company	$2.46	$3.85	$39.75	4.16%	9.69%	1.02	9.88%	63.90%	36.10%	3.57%	4.55%
13	Southern Company	$3.10	$5.10	$32.25	2.43%	15.81%	1.01	16.00%	60.78%	39.22%	6.28%	6.41%
14	Xcel Energy Inc.	$2.67	$4.70	$41.35	5.30%	11.37%	1.03	11.66%	56.81%	43.19%	5.04%	5.74%
15	**Average**	**$3.36**	**$5.51**	**$52.06**	**3.91%**	**10.88%**	**1.02**	**11.09%**	**61.41%**	**38.59%**	**4.31%**	**4.80%**
16	**Median**											**4.76%**

Sources and Notes:
Cols. (1), (2) and (3): *The Value Line Investment Survey* , March 8, April 19, and May 10, 2024.
Col. (4): [Col. (3) / Page 2 Col. (2)] ^ (1/number of years projected) - 1.
Col. (5): Col. (2) / Col. (3).
Col. (6): [2 * (1 + Col. (4))] / (2 + Col. (4)).
Col. (7): Col. (6) * Col. (5).
Col. (8): Col. (1) / Col. (2).
Col. (9): 1 - Col. (8).
Col. (10): Col. (9) * Col. (7).
Col. (11): Col. (10) + Page 2 Col. (9).

Tampa Electric Company

Sustainable Growth Rate

Line	Company	13-Week Average Stock Price[1] (1)	2022 Book Value Per Share[2] (2)	Market to Book Ratio (3)	Common Shares Outstanding (in Millions)[2] 2022 (4)	Common Shares Outstanding (in Millions)[2] 3-5 Years (5)	Growth (6)	S Factor[3] (7)	V Factor[4] (8)	S * V (9)
1	Alliant Energy Corporation	$49.06	$24.99	1.96	251.14	257.00	0.39%	0.76%	49.06%	0.37%
2	Ameren Corporation	$72.27	$40.11	1.80	262.00	285.00	1.41%	2.54%	44.50%	1.13%
3	American Electric Power Company, Inc.	$83.93	$46.60	1.80	513.87	550.00	1.14%	2.05%	44.48%	0.91%
4	Duke Energy Corporation	$95.41	$61.51	1.55	770.00	775.00	0.11%	0.17%	35.53%	0.06%
5	Edison International	$69.22	$35.70	1.94	382.21	390.00	0.34%	0.65%	48.42%	0.32%
6	Entergy Corporation	$103.70	$61.40	1.69	211.18	230.00	1.43%	2.42%	40.79%	0.99%
7	Evergy, Inc.	$51.59	$41.86	1.23	229.90	230.00	0.01%	0.01%	18.86%	0.00%
8	IDACORP, Inc.	$91.47	$55.52	1.65	50.56	53.00	0.79%	1.30%	39.31%	0.51%
9	NorthWestern Corporation	$49.40	$44.61	1.11	59.74	64.00	1.15%	1.28%	9.70%	0.12%
10	OGE Energy Corp.	$33.79	$21.95	1.54	200.20	200.20	0.00%	0.00%	35.04%	0.00%
11	Pinnacle West Capital Corporation	$72.03	$53.45	1.35	113.17	125.00	1.67%	2.25%	25.80%	0.58%
12	Portland General Electric Company	$41.66	$31.13	1.34	89.28	106.00	2.90%	3.88%	25.28%	0.98%
13	Southern Company	$70.31	$27.93	2.52	1,089.00	1,095.00	0.09%	0.23%	60.28%	0.14%
14	Xcel Energy Inc.	$54.04	$30.34	1.78	549.58	580.00	0.90%	1.61%	43.86%	0.70%
	Average	**$66.99**	**$41.22**	**1.66**	**340.85**	**352.87**	**0.88%**	**1.37%**	**37.21%**	**0.49%**

Sources and Notes:
[1] S&P Global Market Intelligence, Downloaded on May 10, 2024.
[2] *The Value Line Investment Survey* , March 8, April 19, and May 10, 2024.
[3] Expected Growth in the Number of Shares, Column (3) * Column (6).
[4] Expected Profit of Stock Investment, [1 - 1 / Column (3)].

Tampa Electric Company

Constant Growth DCF Model
(Sustainable Growth Rate)

Line	Company	13-Week AVG Stock Price[1] (1)	Sustainable Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	Alliant Energy Corporation	$49.06	5.07%	$1.92	4.11%	9.18%
2	Ameren Corporation	$72.27	5.89%	$2.52	3.69%	9.58%
3	American Electric Power Company, Inc.	$83.93	5.97%	$3.52	4.44%	10.42%
4	Duke Energy Corporation	$95.41	4.82%	$4.10	4.50%	9.33%
5	Edison International	$69.22	6.03%	$3.12	4.78%	10.81%
6	Entergy Corporation	$103.70	4.69%	$4.52	4.56%	9.25%
7	Evergy, Inc.	$51.59	3.62%	$2.57	5.16%	8.78%
8	IDACORP, Inc.	$91.47	4.01%	$3.32	3.78%	7.79%
9	NorthWestern Corporation	$49.40	3.03%	$2.60	5.42%	8.46%
10	OGE Energy Corp.	$33.79	3.48%	$1.67	5.12%	8.60%
11	Pinnacle West Capital Corporation	$72.03	3.80%	$3.52	5.07%	8.88%
12	Portland General Electric Company	$41.66	4.55%	$1.90	4.77%	9.32%
13	Southern Company	$70.31	6.41%	$2.88	4.36%	10.77%
14	Xcel Energy Inc.	$54.04	5.74%	$2.19	4.29%	10.03%
15	**Average**	**$66.99**	**4.80%**	**$2.88**	**4.58%**	**9.37%**
16	**Median**					**9.28%**

Sources:
[1] S&P Global Market Intelligence, Downloaded on May 10, 2024.
[2] Exhibit CCW-6, page 1.
[3] *The Value Line Investment Survey*, March 8, April 19, and May 10, 2024.

Tampa Electric Company

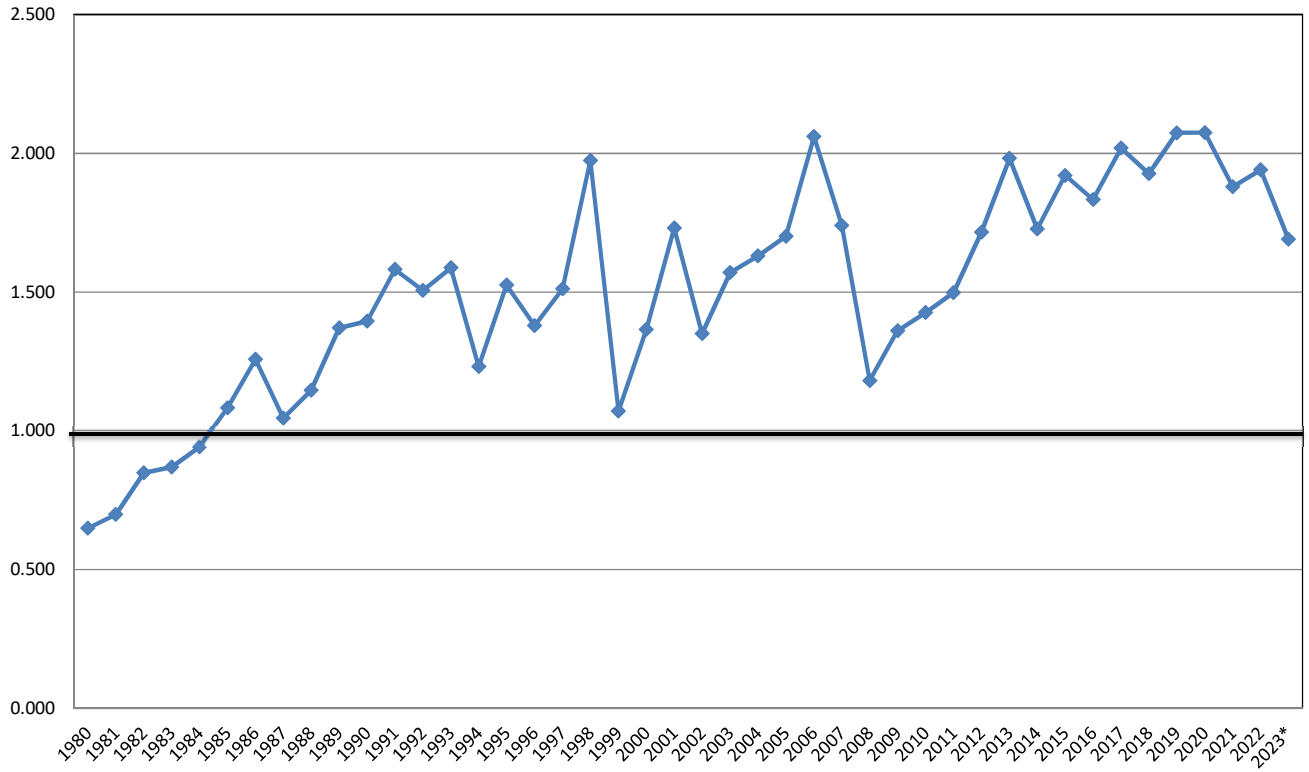
Multi-Stage Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Annualized Dividend[2] (2)	First Stage Growth[3] (3)	Second Stage Growth Year 6 (4)	Year 7 (5)	Year 8 (6)	Year 9 (7)	Year 10 (8)	Third Stage Growth[4] (9)	Multi-Stage Growth DCF (10)
1	Alliant Energy Corporation	$49.06	$1.92	6.33%	5.97%	5.60%	5.24%	4.87%	4.51%	4.14%	8.81%
2	Ameren Corporation	$72.27	$2.52	5.90%	5.60%	5.31%	5.02%	4.73%	4.43%	4.14%	8.20%
3	American Electric Power Company, Inc.	$83.93	$3.52	6.06%	5.74%	5.42%	5.10%	4.78%	4.46%	4.14%	9.06%
4	Duke Energy Corporation	$95.41	$4.10	6.44%	6.06%	5.68%	5.29%	4.91%	4.52%	4.14%	9.29%
5	Edison International	$69.22	$3.12	7.15%	6.65%	6.15%	5.65%	5.14%	4.64%	4.14%	9.77%
6	Entergy Corporation	$103.70	$4.52	7.07%	6.58%	6.09%	5.60%	5.12%	4.63%	4.14%	9.56%
7	Evergy, Inc.	$51.59	$2.57	4.12%	4.12%	4.12%	4.13%	4.13%	4.14%	4.14%	9.32%
8	IDACORP, Inc.	$91.47	$3.32	5.40%	5.19%	4.98%	4.77%	4.56%	4.35%	4.14%	8.23%
9	NorthWestern Corporation	$49.40	$2.60	4.79%	4.68%	4.57%	4.46%	4.36%	4.25%	4.14%	9.84%
10	OGE Energy Corp.	$33.79	$1.67	5.18%	5.01%	4.84%	4.66%	4.49%	4.31%	4.14%	9.63%
11	Pinnacle West Capital Corporation	$72.03	$3.52	7.09%	6.60%	6.11%	5.61%	5.12%	4.63%	4.14%	10.21%
12	Portland General Electric Company	$41.66	$1.90	10.73%	9.63%	8.53%	7.43%	6.34%	5.24%	4.14%	11.10%
13	Southern Company	$70.31	$2.88	5.89%	5.60%	5.31%	5.01%	4.72%	4.43%	4.14%	8.89%
14	Xcel Energy Inc.	$54.04	$2.19	6.50%	6.11%	5.71%	5.32%	4.93%	4.53%	4.14%	9.02%
15	**Average**	**$66.99**	**$2.88**	**6.33%**	**5.97%**	**5.60%**	**5.24%**	**4.87%**	**4.51%**	**4.14%**	**9.35%**
16	**Median**										**9.31%**

Sources:
[1] S&P Global Market Intelligence, Downloaded on May 10, 2024.
[2] *The Value Line Investment Survey*, March 8, April 19, and May 10, 2024.
[3] Exhibit CCW-3
[4] *Blue Chip Economic Indicators, March 11, 2024 at page 14.*

Tampa Electric Company

Common Stock Market/Book Ratio



Source:
1980 - 2000: Mergent Public Utility Manual.
2001 - 2015: AUS Utility Reports, multiple dates.
2016 - 2022: Value Line Investment Survey, multiple dates.
* Value Line Investment Survey Reports February 23, March 8, April 19, and May 10, 2024.

Tampa Electric Company

Equity Risk Premium - Treasury Bond

Line	Year	Authorized Electric Returns[1] (1)	30 yr. Treasury Bond Yield[2] (2)	Indicated Risk Premium (3)	Rolling 5 - Year Average (4)	Rolling 10 - Year Average (5)
1	1986	13.93%	7.80%	6.13%		
2	1987	12.99%	8.58%	4.41%		
3	1988	12.79%	8.96%	3.83%		
4	1989	12.97%	8.45%	4.52%		
5	1990	12.70%	8.61%	4.09%	4.60%	
6	1991	12.55%	8.14%	4.41%	4.25%	
7	1992	12.09%	7.67%	4.42%	4.26%	
8	1993	11.41%	6.60%	4.81%	4.45%	
9	1994	11.34%	7.37%	3.97%	4.34%	
10	1995	11.55%	6.88%	4.67%	4.46%	4.53%
11	1996	11.39%	6.70%	4.69%	4.51%	4.38%
12	1997	11.40%	6.61%	4.79%	4.59%	4.42%
13	1998	11.66%	5.58%	6.08%	4.84%	4.65%
14	1999	10.77%	5.87%	4.90%	5.03%	4.68%
15	2000	11.43%	5.94%	5.49%	5.19%	4.82%
16	2001	11.09%	5.49%	5.60%	5.37%	4.94%
17	2002	11.16%	5.43%	5.73%	5.56%	5.07%
18	2003	10.97%	4.96%	6.01%	5.55%	5.19%
19	2004	10.75%	5.05%	5.70%	5.71%	5.37%
20	2005	10.54%	4.65%	5.89%	5.79%	5.49%
21	2006	10.34%	4.87%	5.47%	5.76%	5.57%
22	2007	10.31%	4.83%	5.48%	5.71%	5.64%
23	2008	10.37%	4.28%	6.09%	5.73%	5.64%
24	2009	10.52%	4.07%	6.45%	5.88%	5.79%
25	2010	10.29%	4.25%	6.04%	5.90%	5.85%
26	2011	10.19%	3.91%	6.28%	6.07%	5.91%
27	2012	10.01%	2.92%	7.09%	6.39%	6.05%
28	2013	9.81%	3.45%	6.36%	6.44%	6.09%
29	2014	9.75%	3.34%	6.41%	6.44%	6.16%
30	2015	9.60%	2.84%	6.76%	6.58%	6.24%
31	2016	9.60%	2.60%	7.00%	6.72%	6.40%
32	2017	9.68%	2.90%	6.79%	6.66%	6.53%
33	2018	9.55%	3.11%	6.44%	6.68%	6.56%
34	2019	9.64%	2.58%	7.06%	6.81%	6.62%
35	2020	9.39%	1.56%	7.83%	7.02%	6.80%
36	2021	9.39%	2.05%	7.34%	7.09%	6.91%
37	2022	9.52%	3.12%	6.41%	7.01%	6.84%
38	2023	9.66%	4.09%	5.57%	6.84%	6.76%
39	2024 [3]	9.66%	4.33%	5.33%	6.49%	6.65%
40	**Average**	**10.84%**	**5.14%**	**5.70%**	**5.73%**	**5.75%**
41	**Minimum**				**4.25%**	**4.38%**
42	**Maximum**				**7.09%**	**6.91%**

Sources:
[1] *Regulatory Research Associates, Inc* ., Regulatory Focus, Major Rate Case Decisions, Jan. 1997 p. 5, and Jan. 2011 p. 3.
S&P Global Market Intelligence , RRA Regulatory Focus, Major Rate Case Decisions, January - March 2024, April 19, 2024 at page 3.
2006 - 2023 Authorized Returns exclude limited issue rider cases.
[2] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.
[3] Data represents January - March, 2024.

Tampa Electric Company

Equity Risk Premium - Utility Bond

Line	Year	Authorized Electric Returns[1] (1)	Average "A" Rated Utility Bond Yield[2] (2)	Indicated Risk Premium (3)	Rolling 5 - Year Average (4)	Rolling 10 - Year Average (5)
1	1986	13.93%	9.58%	4.35%		
2	1987	12.99%	10.10%	2.89%		
3	1988	12.79%	10.49%	2.30%		
4	1989	12.97%	9.77%	3.20%		
5	1990	12.70%	9.86%	2.84%	3.12%	
6	1991	12.55%	9.36%	3.19%	2.88%	
7	1992	12.09%	8.69%	3.40%	2.99%	
8	1993	11.41%	7.59%	3.82%	3.29%	
9	1994	11.34%	8.31%	3.03%	3.26%	
10	1995	11.55%	7.89%	3.66%	3.42%	3.27%
11	1996	11.39%	7.75%	3.64%	3.51%	3.20%
12	1997	11.40%	7.60%	3.80%	3.59%	3.29%
13	1998	11.66%	7.04%	4.62%	3.75%	3.52%
14	1999	10.77%	7.62%	3.15%	3.77%	3.52%
15	2000	11.43%	8.24%	3.19%	3.68%	3.55%
16	2001	11.09%	7.76%	3.33%	3.62%	3.56%
17	2002	11.16%	7.37%	3.79%	3.61%	3.60%
18	2003	10.97%	6.58%	4.39%	3.57%	3.66%
19	2004	10.75%	6.16%	4.59%	3.86%	3.82%
20	2005	10.54%	5.65%	4.89%	4.20%	3.94%
21	2006	10.34%	6.07%	4.27%	4.39%	4.00%
22	2007	10.31%	6.07%	4.24%	4.48%	4.04%
23	2008	10.37%	6.53%	3.84%	4.37%	3.97%
24	2009	10.52%	6.04%	4.48%	4.34%	4.10%
25	2010	10.29%	5.47%	4.82%	4.33%	4.26%
26	2011	10.19%	5.04%	5.15%	4.51%	4.45%
27	2012	10.01%	4.13%	5.88%	4.83%	4.66%
28	2013	9.81%	4.48%	5.33%	5.13%	4.75%
29	2014	9.75%	4.28%	5.47%	5.33%	4.84%
30	2015	9.60%	4.12%	5.48%	5.46%	4.90%
31	2016	9.60%	3.93%	5.67%	5.57%	5.04%
32	2017	9.68%	4.00%	5.68%	5.53%	5.18%
33	2018	9.55%	4.25%	5.30%	5.52%	5.33%
34	2019	9.64%	3.77%	5.87%	5.60%	5.47%
35	2020	9.39%	3.05%	6.34%	5.77%	5.62%
36	2021	9.39%	3.10%	6.29%	5.90%	5.73%
37	2022	9.52%	4.72%	4.80%	5.72%	5.62%
38	2023	9.66%	5.55%	4.11%	5.48%	5.50%
39	2024 [3]	9.66%	5.53%	4.13%	5.13%	5.37%
37	**Average**	**10.84%**	**6.50%**	**4.34%**	**4.39%**	**4.39%**
40	**Minimum**				**2.88%**	**3.20%**
41	**Maximum**				**5.90%**	**5.73%**

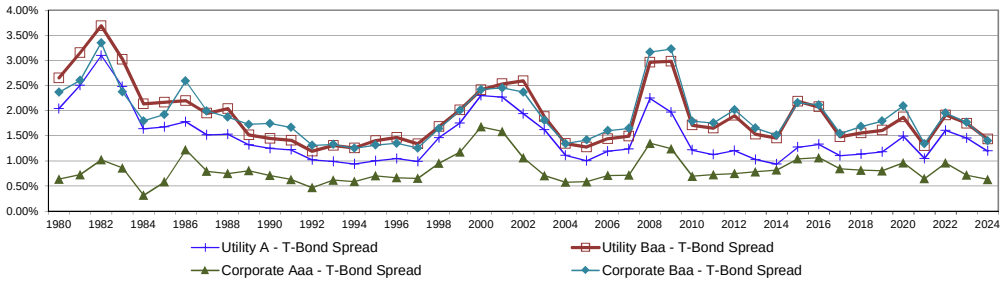
Sources:
[1] *Regulatory Research Associates, Inc* ., Regulatory Focus, Major Rate Case Decisions, Jan. 1997 p. 5, and Jan. 2011 p. 3.
S&P Global Market Intelligence, RRA Regulatory Focus, Major Rate Case Decisions, January - March 2024, April 19, 2024 at page 3.
2006 - 2023 Authorized Returns exclude limited issue rider cases.
[2] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.
[3] Data represents January - March, 2024.

Tampa Electric Company

Bond Yield Spreads

			Public Utility Bond				Corporate Bond				Utility to Corporate	
Line	Year	T-Bond Yield[1]	A[2]	Baa[2]	A-T-Bond Spread	Baa-T-Bond Spread	Aaa[3]	Baa[3]	Aaa-T-Bond Spread	Baa-T-Bond Spread	Baa Spread	A-Aaa Spread
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	1980	11.30%	13.34%	13.95%	2.04%	2.65%	11.94%	13.67%	0.64%	2.37%	0.28%	1.40%
2	1981	13.44%	15.95%	16.60%	2.51%	3.16%	14.17%	16.04%	0.73%	2.60%	0.56%	1.78%
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	1.03%	3.35%	0.34%	2.07%
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	0.86%	2.38%	0.65%	1.62%
5	1984	12.39%	14.03%	14.53%	1.64%	2.14%	12.71%	14.19%	0.32%	1.80%	0.34%	1.32%
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	0.58%	1.93%	0.24%	1.10%
7	1986	7.80%	9.58%	10.00%	1.78%	2.20%	9.02%	10.39%	1.22%	2.59%	-0.39%	0.56%
8	1987	8.58%	10.10%	10.53%	1.52%	1.95%	9.38%	10.58%	0.80%	2.00%	-0.05%	0.72%
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	0.75%	1.87%	0.17%	0.78%
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.81%	1.73%	-0.21%	0.51%
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	0.71%	1.75%	-0.30%	0.54%
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	0.63%	1.67%	-0.25%	0.59%
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.47%	1.31%	-0.12%	0.55%
14	1993	6.60%	7.59%	7.91%	0.99%	1.31%	7.22%	7.93%	0.62%	1.33%	-0.02%	0.37%
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.59%	1.25%	0.01%	0.35%
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.71%	1.32%	0.09%	0.30%
17	1996	6.70%	7.75%	8.17%	1.05%	1.47%	7.37%	8.05%	0.67%	1.35%	0.12%	0.38%
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.66%	1.26%	0.09%	0.34%
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.95%	1.64%	0.04%	0.51%
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	1.18%	2.01%	0.01%	0.58%
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	1.68%	2.42%	-0.01%	0.62%
22	2001	5.49%	7.76%	8.03%	2.27%	2.54%	7.08%	7.95%	1.59%	2.45%	0.08%	0.68%
23	2002	5.43%	7.37%	8.02%	1.94%	2.59%	6.49%	7.80%	1.06%	2.37%	0.22%	0.88%
24	2003	4.96%	6.58%	6.84%	1.62%	1.89%	5.67%	6.77%	0.71%	1.81%	0.08%	0.91%
25	2004	5.05%	6.16%	6.40%	1.11%	1.35%	5.63%	6.39%	0.58%	1.35%	0.00%	0.53%
26	2005	4.65%	5.65%	5.93%	1.00%	1.28%	5.24%	6.06%	0.59%	1.42%	-0.14%	0.41%
27	2006	4.87%	6.07%	6.32%	1.20%	1.44%	5.59%	6.48%	0.71%	1.61%	-0.16%	0.48%
28	2007	4.83%	6.07%	6.33%	1.24%	1.50%	5.56%	6.48%	0.72%	1.65%	-0.15%	0.52%
29	2008	4.28%	6.53%	7.25%	2.25%	2.97%	5.63%	7.45%	1.35%	3.17%	-0.20%	0.90%
30	2009	4.07%	6.04%	7.06%	1.97%	2.99%	5.31%	7.30%	1.24%	3.23%	-0.24%	0.73%
31	2010	4.25%	5.47%	5.96%	1.22%	1.71%	4.95%	6.04%	0.70%	1.79%	-0.08%	0.52%
32	2011	3.91%	5.04%	5.57%	1.13%	1.66%	4.64%	5.67%	0.73%	1.76%	-0.10%	0.40%
33	2012	2.92%	4.13%	4.83%	1.21%	1.90%	3.67%	4.94%	0.75%	2.02%	-0.11%	0.46%
34	2013	3.45%	4.48%	4.98%	1.03%	1.53%	4.24%	5.10%	0.79%	1.65%	-0.12%	0.24%
35	2014	3.34%	4.28%	4.80%	0.94%	1.46%	4.16%	4.86%	0.82%	1.52%	-0.06%	0.12%
36	2015	2.84%	4.12%	5.03%	1.27%	2.19%	3.89%	5.00%	1.05%	2.16%	0.03%	0.23%
37	2016	2.60%	3.93%	4.67%	1.33%	2.08%	3.66%	4.71%	1.07%	2.12%	-0.04%	0.27%
38	2017	2.90%	4.00%	4.38%	1.10%	1.48%	3.74%	4.44%	0.85%	1.55%	-0.06%	0.26%
39	2018	3.11%	4.25%	4.67%	1.14%	1.56%	3.93%	4.80%	0.82%	1.69%	-0.13%	0.32%
40	2019	2.58%	3.77%	4.19%	1.18%	1.61%	3.39%	4.38%	0.81%	1.79%	-0.18%	0.38%
41	2020	1.56%	3.05%	3.44%	1.49%	1.87%	2.53%	3.66%	0.96%	2.10%	-0.22%	0.53%
42	2021	2.05%	3.10%	3.36%	1.05%	1.30%	2.70%	3.39%	0.65%	1.34%	-0.04%	0.40%
43	2022	3.12%	4.72%	5.03%	1.61%	1.91%	4.08%	5.07%	0.96%	1.96%	-0.04%	0.65%
44	2023	4.09%	5.55%	5.84%	1.45%	1.75%	4.81%	5.86%	0.72%	1.77%	-0.02%	0.74%
45	2024[4]	4.33%	5.53%	5.77%	1.20%	1.43%	4.97%	5.73%	0.63%	1.40%	0.04%	0.56%
46	**Average**	**6.05%**	**7.53%**	**7.95%**	**1.48%**	**1.90%**	**6.88%**	**7.95%**	**0.83%**	**1.90%**	**0.00%**	**0.65%**

Yield Spreads
Treasury Vs. Corporate & Treasury Vs. Utility



Sources:
[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
[2] The utility yields for the period 1980-2000 were obtained from Mergent Public Utility Manual, Mergent Weekly News Reports, 2003.
The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record.
The utility yields for the period 2010-2023 were obtained from http://credittrends.moodys.com/.
[3] The corporate yields for the period 1980-2009 were obtained from the St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
The corporate yields from 2010-2024 were obtained from http://credittrends.moodys.com/.
[4] Data represents January - March, 2024.

Tampa Electric Company

13-Week Treasury and Utility Bond Yields

Line	Date	Treasury Bond Yield[1] (1)	"A" Rated Utility Bond Yield[2] (2)	"Baa" Rated Utility Bond Yield[2] (3)
1	05/10/24	4.64%	5.77%	6.00%
2	05/03/24	4.66%	5.78%	6.01%
3	04/26/24	4.78%	5.91%	6.14%
4	04/19/24	4.72%	5.85%	6.08%
5	04/12/24	4.61%	5.73%	5.95%
6	04/05/24	4.54%	5.67%	5.90%
7	03/28/24	4.34%	5.50%	5.72%
8	03/22/24	4.39%	5.55%	5.78%
9	03/15/24	4.43%	5.60%	5.83%
10	03/08/24	4.26%	5.48%	5.72%
11	03/01/24	4.33%	5.56%	5.79%
12	02/23/24	4.37%	5.56%	5.77%
13	02/16/24	4.45%	5.62%	5.85%
14	**Average**	**4.50%**	**5.66%**	**5.89%**
15	**Spread To Treasury**		**1.16%**	**1.39%**

Sources:
[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.
[2] http://credittrends.moodys.com/.

Tampa Electric Company

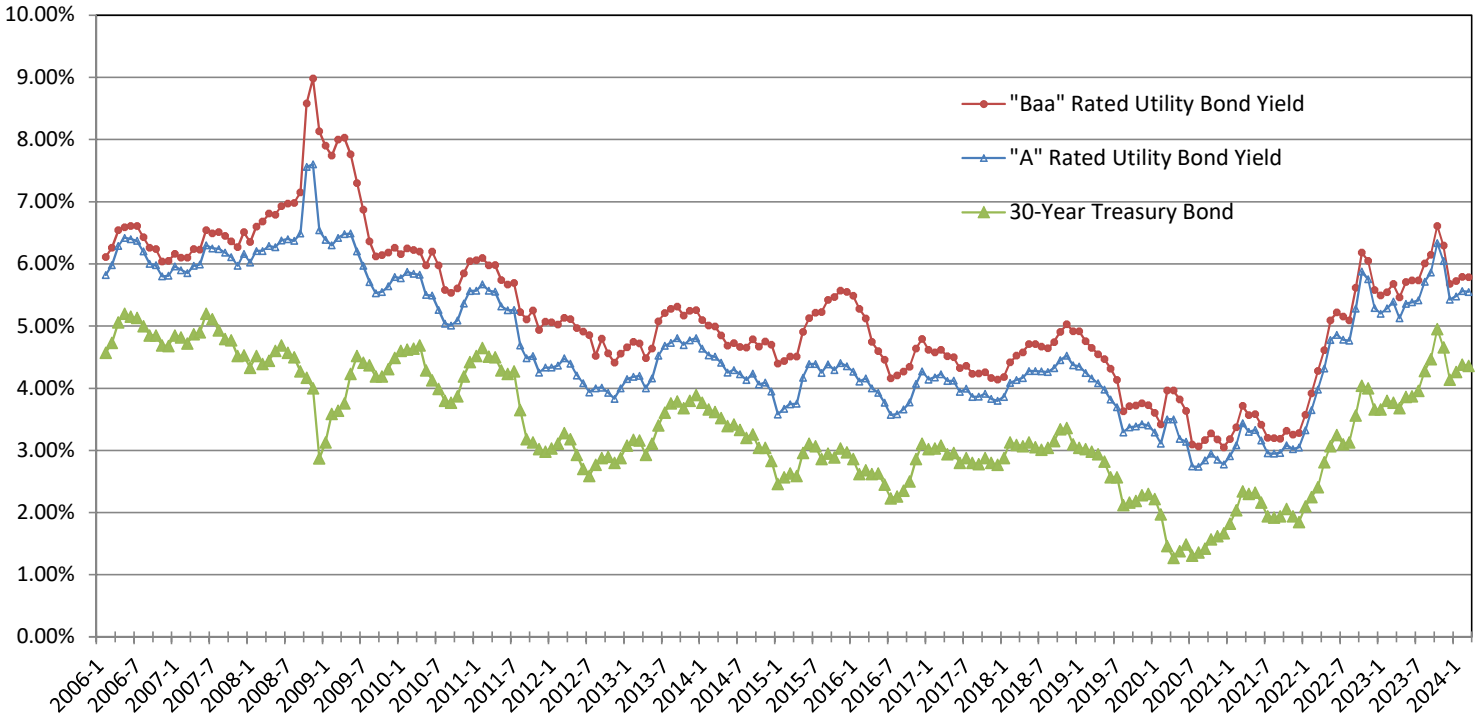
26-Week Treasury and Utility Bond Yields

Line	Date	Treasury Bond Yield[1] (1)	"A" Rated Utility Bond Yield[2] (2)	"Baa" Rated Utility Bond Yield[2] (3)
1	05/10/24	4.64%	5.77%	6.00%
2	05/03/24	4.66%	5.78%	6.01%
3	04/26/24	4.78%	5.91%	6.14%
4	04/19/24	4.72%	5.85%	6.08%
5	04/12/24	4.61%	5.73%	5.95%
6	04/05/24	4.54%	5.67%	5.90%
7	03/28/24	4.34%	5.50%	5.72%
8	03/22/24	4.39%	5.55%	5.78%
9	03/15/24	4.43%	5.60%	5.83%
10	03/08/24	4.26%	5.48%	5.72%
11	03/01/24	4.33%	5.56%	5.79%
12	02/23/24	4.37%	5.56%	5.77%
13	02/16/24	4.45%	5.62%	5.85%
14	02/09/24	4.37%	5.56%	5.79%
15	02/02/24	4.22%	5.42%	5.66%
16	01/26/24	4.38%	5.54%	5.78%
17	01/19/24	4.36%	5.55%	5.80%
18	01/12/24	4.20%	5.42%	5.66%
19	01/05/24	4.21%	5.47%	5.74%
20	12/29/23	4.03%	5.28%	5.54%
21	12/22/23	4.05%	5.32%	5.58%
22	12/15/23	4.00%	5.26%	5.52%
23	12/08/23	4.31%	5.62%	5.88%
24	12/01/23	4.40%	5.72%	5.97%
25	11/24/23	4.60%	5.96%	6.20%
26	11/17/23	4.59%	5.98%	6.22%
27	**Average**	**4.39%**	**5.60%**	**5.84%**
28	**Spread To Treasury**		**1.21%**	**1.45%**

Sources:
[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.
[2] http://credittrends.moodys.com/.

Tampa Electric Company

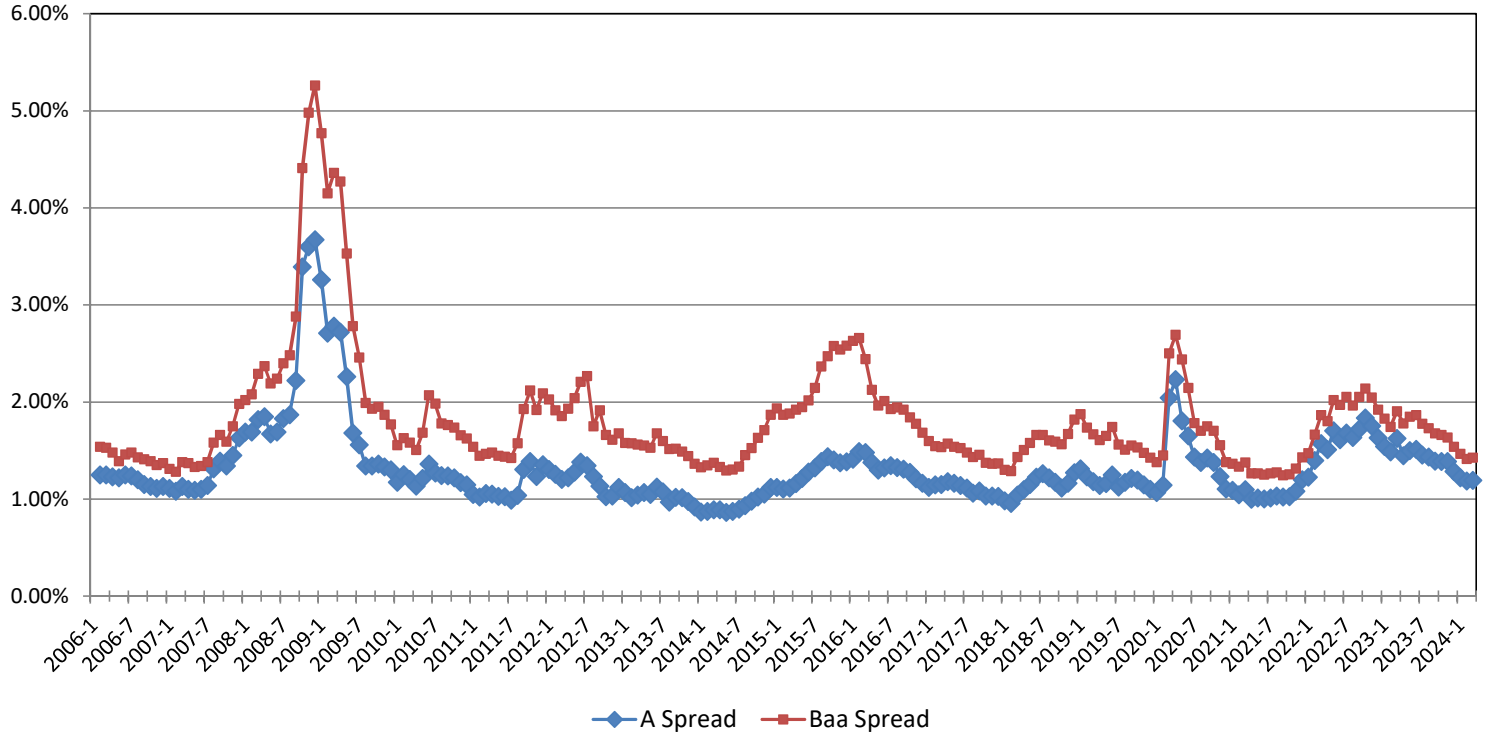
Trends in Bond Yields



Sources:
Mergent Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Tampa Electric Company

Yield Spread Between Utility Bonds and 30-Year Treasury Bonds



Sources:
Mergent Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Tampa Electric Company

Beta

Line	Company	Beta[1]	S&P Global Market Intelligence Beta[2]
1	Alliant Energy Corporation	0.90	0.83
2	Ameren Corporation	0.90	0.80
3	American Electric Power Company, Inc.	0.80	0.81
4	Duke Energy Corporation	0.90	0.79
5	Edison International	1.00	0.90
6	Entergy Corporation	0.95	0.90
7	Evergy, Inc.	0.95	0.85
8	IDACORP, Inc.	0.85	0.83
9	NorthWestern Corporation	0.95	0.92
10	OGE Energy Corp.	1.05	0.94
11	Pinnacle West Capital Corporation	0.95	0.88
12	Portland General Electric Company	0.90	0.84
13	Southern Company	0.95	0.85
14	Xcel Energy Inc.	0.85	0.80
15	**Average**	**0.92**	**0.85**
16	**Median**	**0.93**	**0.84**
17	**Historical Beta[3]**	**0.76**	

Source:

[1] *The Value Line Investment Survey,* March 8, April 19, and May 10, 2024.

[2] S&P Global Market Intelligence, betas for the period 5/10/2019 - 5/10/2024.

[3] Exhibit CCW-14, page 2.

Tampa Electric Company

Historical Betas
(Electric Utilities)

Line	Ticker	Company	Average	4Q23	3Q23	2Q23	1Q23	4Q22	3Q22	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17	4Q16	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14	3Q14
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
1	LNT	Alliant Energy Corporation	0.76	0.90	0.85	0.85	0.85	0.85	0.85	0.80	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.55	0.60	0.60	0.60	0.65	0.60	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80
2	AEE	Ameren Corporation	0.73	0.90	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.80	0.80	0.85	0.80	0.80	0.50	0.55	0.55	0.60	0.60	0.55	0.60	0.65	0.65	0.70	0.65	0.65	0.70	0.65	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.75
3	AEP	American Electric Power Company, Inc.	0.68	0.80	0.80	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.50	0.55	0.55	0.55	0.55	0.55	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.70
4	DUK	Duke Energy Corporation	0.68	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.85	0.85	0.85	0.85	0.85	0.45	0.50	0.50	0.50	0.50	0.55	0.55	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.50	0.60	0.60	0.60	0.60
5	EIX	Edison International	0.76	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.90	0.90	0.55	0.55	0.60	0.60	0.60	0.55	0.60	0.60	0.60	0.65	0.65	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.75
6	ETR	Entergy Corporation	0.77	0.95	0.95	0.90	0.95	0.95	0.95	0.90	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.70	0.65	0.70	0.70	0.70
7	EVRG	Evergy, Inc.	0.94	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.05	NMF	NMF	NMF	NMF	NMF	NMF	NMF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	IDA	IDACORP, Inc.	0.74	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.85	0.85	0.80	0.80	0.80	0.80	0.50	0.55	0.55	0.60	0.60	0.55	0.60	0.65	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80
9	NWE	NorthWestern Corporation	0.76	0.95	0.95	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.55	0.60	0.60	0.60	0.60	0.55	0.60	0.65	0.65	0.70	0.70	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.70	0.70	0.70
10	OGE	OGE Energy Corp.	0.95	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.10	1.05	1.05	0.70	0.75	0.80	0.80	0.85	0.85	0.90	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.85
11	PNW	Pinnacle West Capital Corporation	0.74	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.90	0.90	0.90	0.85	0.85	0.45	0.50	0.55	0.55	0.55	0.55	0.60	0.65	0.65	0.70	0.70	0.65	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.70	0.70	0.70	0.70
12	POR	Portland General Electric Company	0.76	0.90	0.90	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.85	0.85	0.55	0.55	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.75
13	SO	Southern Company	0.69	0.90	0.90	0.90	0.90	0.95	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.55	0.65	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.60	0.60	0.55	0.60	0.55	0.60
14	XEL	Xcel Energy Inc.	0.67	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75	0.45	0.50	0.50	0.50	0.50	0.50	0.55	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.65
15		**Average**	0.76	0.91	0.90	0.87	0.88	0.88	0.88	0.87	0.89	0.90	0.90	0.89	0.89	0.88	0.87	0.73	0.54	0.57	0.58	0.58	0.58	0.60	0.63	0.66	0.68	0.68	0.67	0.67	0.68	0.68	0.70	0.72	0.73	0.72	0.72	0.73	0.72	0.73	0.72

Source: Value Line Software Analyzer

Tampa Electric Company

CAPM Return

Line	Description	Kroll Normalized[2] MRP (1)	Risk Premium[3] Derived MRP (2)	Average FERC S&P 500 DCF[4] Derived MRP (3)
	Current Beta			
1	Risk-Free Rate[1,2]	4.61%	4.20%	4.20%
2	Market Risk Premium	5.50%	7.40%	8.50%
3	Beta[6]	0.92	0.92	0.92
4	**CAPM**	**9.68%**	**11.02%**	**12.03%**
	Historical Beta			
5	Risk-Free Rate[1,2]	4.61%	4.20%	4.20%
6	Market Risk Premium	5.50%	7.40%	8.50%
7	Beta[6]	0.76	0.76	0.76
8	**CAPM**	**8.80%**	**9.83%**	**10.66%**
	Current S&P Global Market Intelligence Beta			
9	Risk-Free Rate[1,2]	4.61%	4.20%	4.20%
10	Market Risk Premium	5.50%	7.40%	8.50%
11	Beta[6]	0.85	0.85	0.85
12	**CAPM**	**9.29%**	**10.50%**	**11.43%**

Sources:
[1] *Kroll Cost of Capital Navigator.*
[2] *Morningstar Direct.*
[3] *Kroll 2023 SBBI Yearbook*, page 138.
[4] S&P 500 1-Step DCF through May 10, 2024 for Dividend Paying Companies.
[5] S&P 500 1-Step DCF through May 10, 2024 for all Companies.
[6] Exhibit CCW-14, page 1.

Tampa Electric Company

Development of the Market Risk Premium

Line	Description	MRP	
Risk Premium Based Method:			
1	Lg. Co. Stock Real Market Return	9.02%	[1]
2	Projected Consumer Price Index	2.40%	[2]
3	Expected Market Return	11.64%	
4	Risk-Free Rate	4.20%	[2]
5	Market Risk Premium	**7.40%**	
FERC S&P 500 (Dividend Companies) 1-Step DCF Based Method:			
6	S&P 500 Growth	10.80%	[3]
7	Index Dividend Yield	1.80%	[3]
8	Adjusted Yield	1.90%	
9	Expected Market Return	12.70%	
10	Risk-Free Rate	4.20%	[2]
11	Market Risk Premium	**8.50%**	
FERC S&P 500 (All Companies) 1-Step DCF Based Method:			
12	Short-Term S&P 500 Growth	11.00%	[4]
13	Index Dividend Yield	1.60%	[4]
14	Adjusted Yield	1.69%	
15	Expected Market Return	12.69%	
16	Risk-Free Rate	4.20%	[2]
17	Market Risk Premium	**8.50%**	
18	Average DCF Based MRP	**8.50%**	

Sources & Note:

[1] Morningstar Direct.

[2] *Blue Chip Financial Forecast May 1, 2024.*

[3] S&P 500 1-Step DCF through May 10, 2024 for Dividend Paying Companies.

[4] S&P 500 1-Step DCF through May 10, 2024 for all Companies.