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ELECTRONIC FILING

Mr. Adam J. Teitzman, Commission Clerk
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

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

Dear Mr. Teitzman:

Attached for filing on behalf of Tampa Electric Company in the above-referenced docket is the Rebuttal Testimony of Dylan D'Ascendis and Exhibit No. DWD-2.

Thank you for your assistance in connection with this matter.

(Document 10 of 14)

Sincerely,

J. Jeffry Wahlen

cc: All parties

JJW/ne
Attachment

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20240026-EI

IN RE: PETITION FOR RATE INCREASE

BY TAMPA ELECTRIC COMPANY

REBUTTAL TESTIMONY AND EXHIBIT

OF

DYLAN W. D'ASCENDIS, CRRA, CVA

ON BEHALF OF TAMPA ELECTRIC COMPANY

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PREPARED REBUTTAL TESTIMONY AND EXHIBIT

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I. INTRODUCTION AND PURPOSE

Q. Please state your name, affiliation, and business address.

A. My name is Dylan W. D'Ascendis. I am a Partner at ScottMadden, Inc. My business address is 3000 Atrium Way, Suite 200, Mount Laurel, New Jersey 08054.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this rebuttal testimony before the Florida Public Service Commission ("Commission") on behalf of Tampa Electric Company ("Tampa Electric" or "the company").

Q. Did you submit direct testimony in this proceeding?

A. Yes, I did.

Q. What is the purpose of your rebuttal testimony in this proceeding?

A. The purpose of my rebuttal testimony is twofold. First, I update the analysis presented in my direct testimony to reflect current data. Second, I respond to the direct testimonies of Dr. J. Randall Woolridge, witness for the Florida Office of Public Counsel ("OPC"), Mr. Christopher C. Walters, witness for the Federal Executive Agencies ("FEA"), Mr. Steve W. Chriss, witness for the Florida Retail Federation ("FRF"), Mr. Jeffry Pollock, witness for the Florida Industrial Power Users Group ("FIPUG"), and Mr. Karl R. Rábago, witness for Florida Rising and the League of United Latin American Citizens of Florida ("FL Rising/LULAC")(collectively, the "Opposing ROE Witnesses") concerning the appropriate return on common equity ("ROE") that the company should be given the opportunity to earn on its jurisdictional electric rate base.

II. SUMMARY

Q. Please summarize your conclusions.

A. Due to the passage of time since my direct testimony, which uses market data as of December 24, 2023, I have

updated my ROE analysis using data as of May 31, 2024. Based on these updated analyses, my reasonable ranges of ROEs attributable to Tampa Electric are between 10.31 percent and 11.93 percent (including Predictive Risk Premium Model ("PRPM") and 10.31 percent and 11.88 percent (excluding PRPM). Given these ranges, my recommended ROE of 11.50 percent continues to be reasonable. Conversely, recommended ROEs of 9.50 percent (OPC), 9.60 percent (FEA) are inadequate at this time.[1]

Q. Please summarize the key issues that you address in your rebuttal testimony.

A. My rebuttal testimony responds to the substantive recommendations offered by Dr. Woolridge and Mr. Walters and the application of the analytical models in their direct testimonies. For example, I generally disagree with Dr. Woolridge's and Mr. Walters' use of "sustainable" growth rates in their Discounted Cash Flow ("DCF") models and their applications of the Capital Asset Pricing Model ("CAPM"). These factors serve to bias Dr. Woolridge's and Mr. Walters' ROE recommendations downward. My rebuttal testimony discusses these factors and others in detail. My rebuttal testimony also addresses the Opposing ROE Witnesses' unfounded critiques of my direct

testimony.

Q. How is the remainder of your rebuttal testimony organized?

A. The remainder of my rebuttal testimony is organized as follows:

- Section III – Presents my updated ROE analysis;
- Section IV – Discusses the relevance of historical authorized ROEs;
- Section V – Responds to the direct testimony of Dr. Woolridge;
- Section VI – Responds to the direct testimony of Mr. Walters;
- Section VII – Responds to the direct testimony of Mr. Chriss;
- Section VIII – Responds to the direct testimony of Mr. Pollock;
- Section IX – Responds to the direct testimony of Mr. Rábago; and
- Section X – Presents my conclusions.

Q. Have you prepared Documents in support of your rebuttal testimony?

A. Yes. I have prepared Document Nos. 1 through 19, which

were completed under my direction and control and are included as Exhibit DWD-2.

III. UPDATED ANALYSIS AND RECOMMENDATION

Q. Have you updated your cost of common equity analyses for your rebuttal testimony?

A. Yes, I have. Due to the passage of time since my direct testimony analysis (data as of December 29, 2023), I have updated my analysis using data as of May 31, 2024.

Q. Have you applied ROE models in the same manner in your updated analyses?

A. Yes, I have.

Q. What are the results of your updated analyses?

A. Using data available as of May 31, 2024, my updated ROE model results are presented in page 1 Document No. 1.

My updated model results range from 10.29 percent (DCF) to 12.50 percent (Non-Price Regulated Proxy Group results). My recommended range is from 10.29 percent (DCF) to 11.91 percent (CAPM). Given these ranges, I maintain

my recommended ROE of 11.50 percent.

Q. Dr. Woolridge claims that you give little weight to your DCF results.[2] Do you agree with his claim?

A. No, I do not. My indicated ranges of results for Tampa Electric use the DCF at the low end of the range and the CAPM results for the high end of the range. While my recommended ROE of 11.50 percent is somewhat above the midpoint of the indicated range, it reflects the whole of my analyses. As shown on pages 1 through 4 of Document No. 2, 11.50 percent is at the 36th and 45th percentiles of all my indicated model results in my direct and updated analyses and the 56th and the 50th percentiles of those results excluding the PRPM, respectively. As such, a recommendation above the midpoint is reasonable.

Q. Likewise, Mr. Walters states that you double count Tampa Electric's business risks in your recommended ROE by recommending an ROE above the midpoint of your analyses.[3] Do you agree?

A. No, I do not. Mr. Walters inferred that me recommending an ROE over the midpoint of my range was based on various business risks.[4] Mr. Walters is mistaken. As I stated

in my direct testimony:

> Applying the 0.10 percent flotation cost adjustment and the negative 0.08 percent credit risk adjustment to the indicated range of common equity cost rates between 9.89 percent and 12.48 percent results in a company-specific range of common equity rates between 9.90 percent and 12.49 percent. Applying the same adjustments to the 9.89 percent to 12.89 percent range excluding the PRPM from the market risk premium produces a range of 9.90 percent to 12.42 percent. In consideration of these indicated ranges in addition to the company's relatively small service area, weather risk, high customer growth, and its substantial capital expenditure program, I recommend an ROE of 11.50 percent for Tampa Electric in this proceeding.[5]

In the statement above, I considered the ranges of my model results as well as the various business risks confronting Tampa Electric in making my recommendation. As noted above, and as illustrated in Document No. 2, the majority of my model results exceeded the midpoint of my analysis. Because of this, I selected a recommended ROE above the midpoint of my recommended range.

IV. RELEVANCE OF HISTORICAL AUTHORIZED RETURNS

Q. Your recommended ROE of 11.50 percent is above the average ROE approved for electric utilities over the past several years. Are historical ROEs a good measure of prospective ROEs?

A. No, they are not.

Q. Please summarize the Opposing ROE Witnesses' review of authorized ROEs.

A. Dr. Woolridge observes historical authorized ROEs since 2000, noting that authorized ROEs tend to move in the same direction as interest rates, albeit at a slower pace.[6] Dr. Woolridge also observes recent authorized ROEs as approved by the Commission.[7]

Dr. Woolridge uses these observations in conjunction with a working paper by Werner and Jarvis to justify his recommended ROE, which is far below recent average authorized ROEs in Florida.

Mr. Walters observes that authorized ROEs generally declined over the past ten years and that authorized equity ratios were generally in the 50.00 percent to 52.00

percent range.[8] Mr. Walters then states that despite lower authorized ROEs, utilities have maintained steady credit ratings.[9]

Like Dr. Woolridge, Mr. Chriss compares my recommended ROE with ROEs recently authorized in Florida and nationwide,[10] while Messrs. Pollock and Rábago compare my recommended ROE to various national averages over varying time periods.[11]

Q. Please discuss the applicability of historically authorized ROEs for cost of capital purposes.

A. While authorized ROEs may be reasonable benchmarks of acceptable ROEs, they do not reflect the current cost of common equity. The reason why historical authorized returns do not reflect the investor-required return is because authorized ROEs are a lagging indicator of investor-required returns, i.e., authorized ROEs are based on market data presented in an evidentiary record, which spans a period before the decision, sometimes lasting over a year in some cases. Simply put, historical authorized returns do not completely reflect as to the investor-required return because the economic conditions in the past are not representative of economic conditions

now. Because of this, the Opposing ROE Witnesses' simple comparisons of my recommended ROE to previously authorized ROEs are of little value.

A useful way to use historical authorized ROEs for cost of capital purposes would be to determine whether a relationship between authorized ROEs (or equity risk premiums) and interest rates exists so one can determine an expectational ROE or equity risk premium given an interest rate. Dr. Woolridge notes that in the period he studied, authorized ROEs did not move in lock-step with interest rates,[12] which indicates an inverse relationship between equity risk premiums and interest rates (i.e., as interest rates move, equity risk premiums move in the opposite direction, but not to the extent of the interest rate move). This inverse relationship is confirmed in the work of Harris and Marston (2001) and Brigham, Dilip, Shome, and Vinson (1985), as discussed in my direct testimony.[13]

As shown on page 33 of Document No. 1, using historical authorized ROEs and interest data in regression analyses produces statistically significant inverse relationships between interest rates and equity risk premiums, which can be used to determine expectational investor-required

returns. Given an expectational A2-rated Public Utility bond yield of 5.65 percent, an indicated equity risk premium of 4.83 percent is calculated using electric historical ROE data. Adding the expectational A2-rated public utility bond yield to that equity risk premium results in an indicated ROE of 10.48 percent.

Q. Please comment on Dr. Woolridge's reference to a recent article titled "Rate of Return Revisited" in support of his recommended ROE that he admits is "below other authorized ROEs".[14]

A. The paper referenced by Dr. Woolridge is a working paper written by academics at the University of California, Berkeley campus. As it is a working paper, I understand that it has not been peer reviewed nor published in any academic journals. Upon review of the CVs of the two authors, I did not observe any qualifications of either author in the areas of cost of capital or utility regulation. On that basis alone, I urge the Commission to afford the paper zero weight in this proceeding.

Dr. Woolridge notes that one of the key questions the paper seeks to address was "to what extent are utilities being allowed to earn excess returns on equity by their

regulators"?[15] Despite attempting to answer this question, the only measure of ROE considered by the paper was authorized ROE. The authors do not try to distinguish between the ROE authorized by regulators and the ROEs earned by utilities, instead basing the premise of their paper on the notion that every utility earns exactly their authorized ROE, which is not the case.

Dr. Woolridge notes the paper states that authorized ROEs have been "0.50% - 5.50%" above the cost of equity estimates selected (ROE spreads to Corporate bonds, ROE spreads to US Treasurys, CAPM low/high results, and ROEs authorized by the Office of Gas and Electricity Markets ("Ofgem") in the U.K.).[16] While I appreciate that the authors attempted to compare past ROEs to multiple measures of the cost of equity, only the CAPM is an actual cost of equity model used and recognized by regulatory commissions. As discussed in my Direct Testimony,[17] the use of multiple models adds reliability to the estimated cost of equity. Looking specifically at the inputs to the CAPM models used, the authors provided little to no support for their low and high Beta coefficients ("beta") of 0.6 and 0.9 or their market risk premiums ("MRP") of 6 percent and 8 percent. Nor, despite recognizing the forward-looking nature of the cost of equity, do the

authors consider projected Treasury rates.

I disagree with the other benchmarks used as cost of equity estimates. By comparing the spread of authorized ROEs to US Treasury bonds and corporate bonds in 1995, the authors acknowledge that an equity risk premium exists, which I support. However, as discussed previously, the equity risk premium is not constant over time, and movements reflect changes in risk of both debt and equity.

Turning to the published authorized electric and gas ROEs by Ofgem, the authors of the paper do not produce any comparison of macroeconomic factors, regulatory environments, or operational risks that may affect utilities operating in the U.S. compared to the U.K. Without a thorough comparison, it is difficult to make a true apples-to-apples comparison of returns between the two countries.

I also note that in the article's Table 2, which supports the claimed "0.50% - 5.50%" ROE gap, the table notes that the "gap percentage figures are a weighted average across utilities, weighted by rate base". As the authors do not provide the same table without weighting by rate base, it

is difficult to understand the extent to which larger utilities skew the data. Lastly, while the 2020 values in the table may approximate the 0.50 percent - 5.50 percent range, the long-term average (i.e., 1985-2020) variance range approximates -1.25 percent to 3.30 percent, with the 3.30 percent value being based on the "low" CAPM results. This variance is close to the long-term standard deviation of approved ROEs of 2.40 percent (Electric) and 2.25 percent (Natural Gas) as presented in the paper's Table 1. Because this paper is not peer reviewed (i.e., has not passed academic scrutiny) and due to the shortcomings of their study discussed above, the Commission should disregard this study and its purported findings.

Q. Mr. Walters states that utility companies have been able to maintain their credit quality despite declining authorized ROEs.[18] Do you agree?

A. No, I do not. Although Mr. Walters' statements regarding a supportive credit environment for utilities sounds reasonable, a closer look reveals that not to be the case. For example, in January of 2024, S&P noted:

Credit quality for North American investor-owned utilities has weakened over the last four years, with

downgrades outpacing upgrades by more than three times. We expect downgrades to again surpass upgrades in 2024 for the fifth consecutive year. In the decade prior to 2020, upgrades generally outpaced downgrades in the industry.[19]

Mr. Walters' Table CCW-3 proves this to be reality. Since 2020, there is significant downward movement in industry credit ratings. As shown in Mr. Walters Table CCW-3, the number of utilities rated A- or higher has decreased, while the number of BBB and BBB+ rated utilities has increased. That shift toward lower credit ratings indicates a deteriorating credit environment for the utility industry, and consequently increases overall investment risk.

Q. Please summarize this section.

A. The Opposing ROE Witnesses' simple comparisons of my recommended ROE and historically authorized ROEs are of little value because historical ROEs do not reflect current and expected capital market conditions. The only useful data that can be discerned by historically allowed ROEs would be the relationship between those ROEs and prevailing interest rates. Dr. Woolridge's support for

his recommendation is not peer-reviewed, and the shortcomings of the study should lead the Commission disregard it in its entirety. Finally, Mr. Walters' claim that lower ROEs authorized since 2020 have not affected utilities' credit quality is disproven by his own data (specifically Table CCW-3). For all of these reasons, the Commission should not rely on historically authorized ROEs in setting the ROE for Tampa Electric in this proceeding and instead focus on the market analyses put forth by each expert in their respective testimonies.

V. RESPONSE TO OPC WITNESS WOOLRIDGE

Q. Please briefly summarize Dr. Woolridge's analyses and recommendations.

A. Dr. Woolridge recommends the acceptance of Tampa Electric's proposed capital structure, which consists of 41.57 percent long-term debt at an embedded debt cost rate of 4.53 percent short-term debt at an embedded cost rate of 3.90 percent, and 54.00 percent common equity at his recommended ROE of 9.50 percent Regarding his ROE recommendation, Dr. Woolridge's models indicate Tampa Electric's ROE is within a range of 8.85 percent to 10.00 percent, and provides a specific recommendation of 9.50 percent, which is based primarily on the results of his

constant growth DCF model.[20]

Q. What are the specific areas in which you disagree with Dr. Woolridge's analyses and recommendations as they relate to Tampa Electric's ROE?

A. There are several areas in which I disagree with Dr. Woolridge, including: (1) his observations surrounding current capital market conditions; (2) his review of authorized ROEs; (3) his contention that Tampa Electric's parent company is engaging in double leverage; (4) his application of the DCF model; and (5) his application of the CAPM. I have already discussed the inapplicability of historical authorized ROEs in the context of this proceeding and will not repeat that discussion again here.

Capital Market Observations

Q. Please summarize Dr. Woolridge's testimony in regard to the capital market environment.

A. Dr. Woolridge reviews recent trends in Treasury yields, capital raised by public utilities, and measures of inflation.[21] Based on his review, Dr. Woolridge concludes that "the rebounding economy has put pressure on prices," which "has been further exacerbated by the post-COVID

supply chain issues and the higher energy prices brought on by the Russia-Ukraine conflict."[22] Dr. Woolridge also concludes that utilities were able to take advantage of low interest rates in 2020 and 2021.[23] However, inflation is expected to remain high in the short-term while longer term expectations are approximately 2.35 percent.[24] Finally, Dr. Woolridge states "with an inverted yield curve, the prospect of a recession is likely, which would lead to lower interest rates."[25]

Q. Do you agree with Dr. Woolridge's opinion of capital market conditions?

A. In part, however, I do not agree with the conclusion that these factors do not suggest an increased cost of capital for utilities.

Q. Dr. Woolridge states that since the yield curve is inverted, investors expect a recession.[26] Do recessions increase risk, and therefore, investor-required return?

A. Yes. Because there is inherently more risk (i.e., chance of loss) during recessions, as evidenced by negative market returns and negative Gross Domestic Product ("GDP") growth, and because investors require a return

commensurate with the level of risk, the ROE required by investors in Tampa Electric increases in a recession; it does not decrease. Dr. Woolridge's contention that recessions reduce equity risk is counterintuitive.

Q. What is your conclusion as it relates to the capital market environment?

A. Both interest rates and inflation are currently at multi-year highs. While both have moderated within the past year, their effects continue to have an upward impact on capital costs, both directly (interest rates) and indirectly (inflation). Dr. Woolridge does not provide evidence to the contrary.

Capital Structure

Q. Dr. Woolridge suggests that Emera Incorporated ("Emera") is using debt to drive returns at the expense of its operating subsidiaries such as Tampa Electric.[27] What is your response?

A. Dr. Woolridge appears to suggest that Emera is engaging in double leverage, to the detriment of Tampa Electric's customers.[28] My primary concern is that position runs counter to the widely accepted "stand-alone" regulatory

principle, which treats each utility subsidiary as its own company. Under the stand-alone approach, the cost of capital is determined using the subsidiary's capital structure and cost of debt and equity. The cost of common equity is generally estimated by reference to a proxy group of firms of comparable risk.

Consistent with the stand-alone principle as discussed previously, the ownership structure does not affect the operating utility's capital structure or cost of capital. Parent entities, like other investors, have capital constraints and must consider the attractiveness of the expected risk-adjusted return of each investment alternative as part of their capital budgeting process. This opportunity cost concept applies regardless of the source of the funding. When funding is provided by a parent entity, the return on that financing must still be sufficient to provide an incentive to the parent entity to allocate equity capital to the subsidiary or business unit rather than other internal or external investment opportunities. That is, the regulated subsidiary must compete for capital with its affiliates and with other similarly situated utility companies.

From an external investor's perspective, the combined

company must provide a return reflecting the risks of the company's constituent parts. Investors therefore value combined entities on a sum-of-the-parts basis, expecting each operating segment to provide its appropriate risk-adjusted return. That practical financial principle is consistent with the regulatory principle of treating utilities as stand-alone entities. From both perspectives, it is the utility's operating risk that defines the capital structure and cost of capital, not investors' sources of funds.

Contrary to those basic principles, Dr. Woolridge's double leverage argument assumes the required return depends on the source of financing, not on the risks of the underlying utility operations. The position that a company would have different cost rates depending on how its investors fund their equity investments violates the widely acknowledged economic "law of one price," which states that in an efficient market identical assets would have the same value. In other words, two utilities, identical in all respects but for their form of ownership, should have the same common equity cost rates.

Moreover, if the common equity of a subsidiary were held by both the parent and an external investor, the equity

held by the parent would have one required return, and the equity held by outside investors would have another. To the extent the required returns differ, so would the value of the equity. But in an efficient market, identical assets must have the same price (value). If not, the difference quickly would be arbitraged away. As Morin noted in New Regulatory Finance:

Carrying the double leverage standard to its logical conclusion leads to even more unreasonable prescriptions. If the common shares of the subsidiary were held by both the parent and by individual investors, the equity contributed by the parent would have one cost under the double leverage computation while the equity contributed by the public would have another.[29]

The double leverage argument also requires every affiliate within the corporate family to have the same cost of capital, regardless of differences in risk. Emera Incorporated reports five operating segments: Florida Electric Utility, Canadian Electric Utilities, Gas Utilities, Other Electric Utilities and Other.[30] Because they are separately reported, we reasonably can assume those segments face different risks. And because they face different risks, we reasonably may assume they require different returns. Morin further noted:

Just as individual investors require different returns from different assets in managing their personal affairs, why should regulation cause parent companies making investment decisions on behalf of their shareholders to act differently? A parent company normally invests money in many operating companies of varying sizes and varying risks. These operating subsidiaries pay different rates for the use of investor capital, such as long-term debt capital, because investors recognize the differences in capital structure, risk, and prospects between the subsidiaries. Yet, the double leverage calculation would assign the same return to each activity, based on the parent's cost of capital. Investors recognize that different subsidiaries are exposed to different risks, as evidenced by the different bond ratings and cost rates of operating subsidiaries. The same argument carries over to common equity. If the cost rate for debt is different because the risk is different, the cost rate for common equity is also different, and the double leverage adjustment should not obscure this fact.[31]

Longstanding academic literature has thoroughly discussed the flaws associated with the double leverage approach. For example:

1. Pettway and Jordan (1983), and Beranek and Miles

(1988) point out the flaws in the double leverage argument, particularly the excess return argument, and also demonstrate that the "stand-alone" method is the superior approach.[32]

2. Rozeff (1983) discusses the ratepayer cross-subsidies of one subsidiary by another when employing double leverage.[33]

3. Lerner (1973) concludes that the returns granted to equity investors must be based on the risks to which the investors' capital is exposed and not the investors' source of funds.[34]

Basic finance texts reach the same conclusions. In Principles of Corporate Finance, 8th edition, Brealey, Myers, and Allen state:

In principle, each project should be evaluated at its own opportunity cost of capital; the true cost of capital depends on the use to which the capital is put. If we wish to estimate the cost of capital for a particular project, it is project risk that counts.[35]

Likewise, in Modern Corporate Finance, 1st edition, Shapiro states:

Each project has its own required return, reflecting three basic elements: (1) the real or inflation-adjusted risk-

free interest rate; (2) an inflation premium approximately equal to the amount of expected inflation; and (3) a premium for risk. The first two cost elements are shared by all projects and reflect the time value of money, whereas the third component varies according to the risks borne by investors in the different projects. For a project to be acceptable to the firm's shareholders, its return must be sufficient to compensate them for all three cost components. This minimum or required return is the project's cost of capital and is sometimes referred to as a hurdle rate.[36]

The preceding paragraph bears a crucial message: the cost of capital for a project depends on the riskiness of the assets being financed, not on the identity of the firm undertaking the project. Simply put, the notion of double leverage runs counter to both financial and regulatory principles.

Lastly, double leverage arguments have been rejected by several regulatory commissions, including the Maryland Public Service Commission:

We reject People's Counsel's proposed capital structure [reflecting a double leverage adjustment] because it suffers from numerous flaws. First, it assumes that the

rate of return depends on the source of capital rather than the risks faced by the capital.[37]

In 2016, the Federal Energy Regulatory Commission ("FERC") reiterated its previous position on "double leveraging,"[38] stating that "the motivations of a parent company are irrelevant"[39] so long as the operating company passes the FERC's three-part test: (1) it issues its own debt without guarantees; (2) it has its own bond rating; and (3) it has a capital structure within the range of capital structures approved by the commission.[40] Under FERC guidance, Tampa Electric's capital structure is reasonable.

The Washington Utilities and Transportation Commission has cited to FERC's position on the use of double leverage in support of its decision in Docket No. UE 050684:

The FERC does not embrace the concept of double leverage. For purposes of calculating rate of return for wholly owned subsidiaries, FERC uses the stand-alone capital structure and return on equity of the subsidiary so long as the subsidiary issues its own debt, maintains its own credit ratings and meets other standards related to equity ratio. The courts have upheld this policy. *See Missouri Pub. Serv. Comm'n v. Federal Energy Reg Comm'n, 215 F.3d*

1, 342 U. S. App. DC. 1 (D.C. Cir. June 27, 2000).[41] In view of all of the above, the Commission should ignore Dr. Woolridge's double leverage arguments.

Application of the DCF Model

Q. Please summarize Dr. Woolridge's application of the constant growth DCF model.

A. For the dividend yield, Dr. Woolridge uses a current annual dividend and then divides that by the 30-, 90-, and 180-trading day average stock prices to derive a range of dividend yields between 4.00 percent to 4.20 percent, and 4.20 percent to 4.40 percent using his electric proxy group and my electric proxy group, respectively.[42] Dr. Woolridge reviewed a number of growth rates, including historical and projected dividends per share ("DPS"), book value per share ("BVPS"), and earnings per share ("EPS") growth rates as reported by *Value Line Investment Survey ("Value Line")*; analysts' consensus EPS growth rate projections from Yahoo! Finance, Zacks, and S&P Capital IQ; and an estimate of "sustainable growth" derived from data provided by *Value Line*.[43] Dr. Woolridge states that in arriving at his DCF estimates of 9.70 percent and 10.00 percent for his electric proxy group and my electric proxy group, respectively, he gave more

weight to projected EPS growth rates[44] despite stating that analysts' projected growth rates in EPS are biased.[45]

Q. Do you agree with Dr. Woolridge's position that analysts' earnings growth projections are consistently biased?

A. No, I do not. Dr. Woolridge argues analysts' earnings growth estimates are "overly optimistic and upwardly biased"[46] and asserts that "the DCF growth rate needs to be adjusted downward from the analysts' projected EPS growth rate"[47] as a result of that bias. Notably, despite his view that analysts' projected growth rates are biased, it was by "giving more weight to the projected growth rates of Wall Street analysts and *Value Line*" that Dr. Woolridge arrived at his assumed growth rates.[48]

As a practical matter, the October 2003 Global Research Analyst Settlement required financial institutions to insulate investment banking from analysis, prohibited analysts from participating in "road shows," and required the settling financial institutions to fund independent third-party research.[49] I have reviewed the Letters of Acceptance, Waiver, and Consent signed by financial institutions that were party to the Global Settlement, and found no reference to misconduct by analysts following

the utility sector.

Moreover, pursuant to Regulation AC, which became effective in April 2003, analysts must certify that " . . . the views expressed in the report accurately reflect his or her personal views, and disclose whether or not the analyst received compensation or other payments in connection with his or her specific recommendations or views."[50] I further understand industry practice is to avoid conflicts of interest by ensuring that compensation is not directly or indirectly linked to the opinions contained in those reports. Dr. Woolridge has not explained why any of the analysts covering our respective proxy companies, or the S&P 500 companies used in my market DCF, would bias their projections despite those certification requirements. Considering that The Regulation Fair Disclosure and Global Analysts Research Settlements were more than 20 years ago, investors have been fully aware since then of the steps that have been taken to eliminate and prevent analysts' bias.

In addition, there is no empirical evidence that investors would disregard analysts' estimates of growth in EPS. *Do Analyst Conflicts Matter? Evidence from Stock Recommendations* examines whether conflicts of interest

with investment banking "IB" and brokerage businesses induced sell-side analysts to issue optimistic stock recommendations and whether investors were misled by such biases. They conclude:

> Overall, our findings do not support the view that conflicted analysts are able to systematically mislead investors with optimistic stock recommendations.

Agrawal and Anup state:

> Overall, our empirical findings suggest that while analysts do respond to IB and brokerage conflicts by inflating their stock recommendations, the market discounts these recommendations after taking analysts' conflicts into account. These findings are reminiscent of the story of the nail soup told by Brealey and Myers (1991), except that here analysts (rather than accountants) are the ones who put the nail in the soup and investors (rather than analysts) are the ones to take it out. Our finding that the market is not fooled by biases stemming from conflicts of interest echoes similar findings in the literature on conflicts of interest in universal banking (for example, Kroszner and Rajan, 1994, 1997; Gompers and Lerner 1999) and on bias in the financial media (for examples, Bhattacharya et al. forthcoming; Reuter and Zitzewitz 2006). Finally, while

we cannot rule out the possibility that some investors may have been naïve, our findings do not support the notion that the marginal investor was systematically misled over the last decade by analysts' recommendations.[51]

Finally, while Easton and Sommers' article, *Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts,* does state that, on average, the difference between the estimate of the expected rate of return based on analysts' earnings forecasts and the estimates based on current earnings realizations is 2.84 percent, they also state that analysts' accuracy[52] and optimism[53] in the implied estimates of the expected rate of return differs with firm size:

…the mean scaled absolute forecast error, a measure of the accuracy of the forecasts, declines monotonically from 0.102 for the decile of smallest firms to 0.012 for the decile of largest firms. Similarly, the median absolute scaled forecast error declines monotonically from 0.042 to 0.006.

Analysts' optimism, measured as the mean (median) scaled forecast error, declines monotonically from -0.075

(-0.023) for the decile of the smallest firms to -0.005 (-0.002) for the decile of the largest firms.[54]

In plain language, as firm size increases, analyst accuracy increases and analyst optimism (i.e., bias) diminishes.

Q. Have you determined the levels of forecast error and bias in analyst-projected EPS growth rates for companies comparable in size to the Utility Proxy Group?

A. Yes, I have. Using market capitalizations as of May 31, 2024, both Dr. Woolridge's electric proxy group and my electric proxy group fall into the eighth decile of market capitalizations, respectively, as shown on Table 3, Panel A of the Easton and Sommers article.[55] Mean and median measures of forecast error (i.e., accuracy) of 0.017 and 0.008, respectively, for the 8th decile, indicates a high level of analyst accuracy. The bias of analyst-projected EPS growth rates for companies comparable in size to the average company in Dr. Woolridge's electric proxy group and my electric proxy groups is -0.009 (mean) and -0.003 (median), indicating a low level of bias in analyst-projected EPS growth rates.

Furthermore, two of my market risk premiums ("MRP") used in my CAPM use projected market returns which are derived by calculating a weighted DCF for the component companies of the S&P 500. The component companies of the S&P also have an average market capitalization that corresponds with the ninth decile as provided by Table 3, Panel A of the Easton and Sommers article.[56] Mean and median forecast errors for analyst-projected EPS growth rates for the average company in the S&P 500 are 0.015 and 0.007, respectively, which are more accurate than even the small forecast errors which coincide with companies in Dr. Woolridge's proxy groups. Likewise, mean and median measures of bias for companies in the S&P 500 are -0.007 and -0.002, respectively.

The analyst-projected EPS growth rates I used to derive my DCF results for my proxy group and my projected return on the market are confirmed to have high accuracy and limited bias.

In view of the foregoing, the use of analysts' forecasts of EPS growth should be used exclusively when estimating the cost rate of common equity capital, whether it be for my Utility Proxy Group or the entire market. Note that notwithstanding Dr. Woolridge's lengthy discussion about

the bias and inaccuracy of security analysts' forecasts of EPS growth, he himself gave "primary weight" to them in arriving at his conclusion of a DCF-derived cost rate.[57]

Q. Is the use of analysts' earnings growth projections in the DCF model supported by financial literature?

A. Yes, it is. Myron Gordon, the "father" of the standard regulatory version of the DCF model widely utilized throughout the United States in rate base/rate of return regulation, recognized the significance of analysts' forecasts of growth in EPS in a speech he gave in March 1990 before the Institute for Quantitative Research and Finance,[58] stating on page 12:

We have seen that earnings and growth estimates by security analysts were found by Malkiel and Cragg to be superior to data obtained from financial statements for the explanation of variation in price among common stocks… estimates by security analysts available from sources such as IBES are far superior to the data available to Malkiel and Cragg.

* * *

Eq (7) is not as elegant as Eq (4), but it has a good deal more intuitive appeal. It says that investors buy earnings, but what they will pay for a dollar of earnings

increases with the extent to which the earnings are reflected in the dividend or in appreciation through growth.

Professor Gordon recognized that the total return is largely affected by the terminal price, which is mostly affected by earnings (hence price-to-earnings ("P/E") multiples).

Studies performed by Cragg and Malkiel[59] demonstrate that analysts' forecasts are superior to historical growth rate extrapolations. While some question the accuracy of analysts' forecasts of EPS growth, the level of accuracy of those analysts' forecasts well after the fact does not really matter. What is important is the forecasts reflect widely held expectations influencing investors at the time they make their pricing decisions, and hence, the market prices they pay.

In addition, Jeremy J. Siegel also supports the use of security analysts' EPS growth forecasts when he states: For the equity holder, the source of future cash flows is the earnings of firms.

* * *

Some people argue that shareholders most value stocks'

cash dividends. But this is not necessarily true.

* * *

Since the price of a stock depends primarily on the present discounted value of all expected future dividends, it appears that dividend policy is crucial to determining the value of the stock. However, this is not generally true.

* * *

Since stock prices are the present value of future dividends, it would seem natural to assume that economic growth would be an important factor influencing future dividends and hence stock prices. However, this is not necessarily so. The determinants of stock prices are earnings and dividends on a *per-share* basis. Although economic growth may influence *aggregate* earnings and dividends favorably, economic growth does not necessarily increase the growth of per-share earnings of dividends. It is EPS that is important to Wall Street because per-share data, not aggregate earnings or dividends, are the basis of investor returns. (italics in original)[60]

Furthermore, over the long run, there can be no growth in DPS without growth in EPS. Earnings expectations have a more significant, but not sole, influence on market prices than dividend expectations. Thus, the use of earnings

growth rates in a DCF analysis provides a better match between investors' market appreciation expectations implicit in market prices and the growth rate component of the DCF. Consequently, earnings expectations have a significant influence on market prices which affect market price appreciation, and hence, the "growth" experienced by investors. This should be evident even to relatively unsophisticated investors just by listening to financial news reports on radio, TV, or reading newspapers. In fact, Morin states:

Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of g. The accuracy of these forecasts in the sense of whether they turn out to be correct is not at issue here, as long as they reflect widely held expectations. As long as the forecasts are typical and/or influential in that they are consistent with current stock price levels, they are relevant. The use of analysts' forecasts in the DCF model is sometimes denounced on the grounds that it is difficult to forecast earnings and dividends for only one year, let

alone for longer time periods. This objection is unfounded, however, because it is present investor expectations that are being priced; it is the consensus forecast that is embedded in price and therefore in required return, and not the future as it will turn out to be.

* * *

Published studies in the academic literature demonstrate that growth forecasts made by security analysts represent an appropriate source of DCF growth rates, are reasonable indicators of investor expectations and are more accurate than forecasts based on historical growth. These studies show that investors rely on analysts' forecasts to a greater extent than on historic data.[61]

However, while EPS is a significant factor influencing market prices, it is by no means the only factor that affects market prices, a fact recognized by Bonbright, who states:

In the first place, commissions cannot forecast, except within wide limits, the effect their rate orders will have on the market prices of the stocks of the companies they regulate. In the second place, *whatever the initial market prices may be, they are sure to change not only with the changing prospects for earnings, but with the*

changing outlook of an inherently volatile stock market. In short, market prices are beyond the control, though not beyond the influence of rate regulation. Moreover, even if a commission did possess the power of control, any attempt to exercise it ... would result in harmful, uneconomic shifts in public utility rate levels (emphasis added).[62]

In addition, studies performed by Cragg and Malkiel demonstrate that analysts' forecasts are superior to historical growth rate extrapolations. They state:

Efficient market hypotheses suggest that valuation should reflect the information available to investors. Insofar as analysts' forecasts are more precise than other types we should therefore expect their differences from other measures to be reflected in the market. It is therefore noteworthy that our regression results do support the hypothesis that analysts' forecasts are needed even when calculated growth rates are available. As we noted when we described the data, security analysts do not use simple mechanical methods to obtain their evaluations of companies. The growth-rate figures we obtained were distilled from careful examination of all aspects of the companies' records, evaluation of contingencies to which they might be subject, and whatever information about

their prospects the analysts could glean from the companies themselves of from other sources. It is therefore notable that the results of their efforts are found to be so much more relevant to the valuation than the various simpler and more "objective" alternatives that we tried.[63]

In addition, Vander Weide and Carleton conclude:

. . . our studies affirm the superiority of analyst's forecasts over simple historical growth extrapolations in the stock price formation process. Indirectly, this finding lends support to the use of valuation models whose input includes expected growth rates.[64]

Additionally, the level of accuracy of those analysts' forecasts does not matter. What matters is that they influence investors and hence the market prices they pay. Moreover, there is no empirical evidence that investors, consistent with the Efficient Market Hypothesis, would discount or disregard analysts' estimates of growth in EPS. Since investors are aware of the accuracy of such projections, as well as the literature supporting the superiority of such projections, security analysts' earnings growth projections should be used exclusively in a cost of common equity analysis.

In addition to the empirical and academic support discussed previously in this rebuttal testimony regarding the superiority of analysts' EPS growth forecasts, there should be no concern about the use of analysts' forecasts in 2023. Burton G. Malkiel, the Chemical Bank Chairman's Professor of Economics at Princeton University, is the author of the widely read national bestseller book on investing entitled, A Random Walk Down Wall Street (2011). In testimony before the Public Service Commission of South Carolina ("PSC SC"), in November 2002, Malkiel affirmed his belief in the superiority of analysts' earnings forecasts when he testified:

With all the publicity given to tainted analysts' forecasts and investigations instituted by the New York Attorney General, the National Association of Securities Dealers, and the Securities & Exchange Commission, I believe the upward bias that existed in the late 1990s has indeed diminished. In summary, I believe that current analysts' forecasts are more reliable than they were during the late 1990s. *Therefore, analysts' forecasts remain the proper tool to use in performing a Gordon Model DCF analysis.* (Rebuttal testimony, South Carolina Electric and Gas Co., pp. 16-17, Docket No. 2002-223-E) (italics added)

Q. Are dividend and book value growth rates appropriate inputs to the DCF model?

A. No, they are not. First, earnings growth enables both dividend and book value growth. Under the strict assumptions of the constant growth DCF model, earnings, dividends, book value, and stock prices all grow at the same, constant rate in perpetuity.

Simply, earnings are the fundamental driver of both book value and dividend growth. As noted earlier, book value increases with the amount of earnings not distributed as dividends (that is, retained earnings), and the price at which new equity is issued is a function of the EPS and the then-current P/E ratio. Similarly, the ability to pay dividends depends fundamentally on expected earnings.[65] Because dividend policy contemplates additional factors, including the disproportionately negative effect on prices resulting from dividend cuts, as opposed to dividend increases, in the short-run dividend growth may be disconnected from earnings growth.[66] In the long run, however, dividends cannot be increased without earnings growth.

Because investors often assess stock values on the basis

of P/E ratios, it is important to consider whether the growth rates used in the DCF model are related to those valuations. Therefore, relying on DPS and BVPS as Dr. Woolridge has done is wholly inappropriate.

Q. In reviewing the financial literature, did you discover any publications that supported the use of projected DPS or projected BVPS growth rates for use in a DCF model?

A. No, I did not.

Q. Likewise, are you aware of any sources of data which provide projected DPS or BVPS growth rates to investors?

A. *Value Line* is the only source of which I am aware that publishes projected DPS and BVPS growth rates. If investors indeed valued projected DPS and BVPS growth rates there would be a market for that data. As they are not relied on by investors to determine their required returns on investments, there is no such market. Conversely, projected EPS growth rates are widely available to investors through many sources.[67]

Q. Are historical growth rates appropriate measures of expected growth for the DCF model?

A. No, they are not. As to the applicability of historical growth rates, Dr. Woolridge himself points out that "to best estimate the cost of common-equity capital using the conventional DCF model, one must look to long-term growth rate expectations",[68] and I agree. The growth component of the constant growth DCF model is a forward-looking measure. To the extent historical growth influences investors' expectations of future growth, it already will be reflected in analysts' consensus earnings estimates. Professors Carleton and Vander Weide found "overwhelming evidence that consensus analysts' forecast of future growth is superior to historically oriented growth measures in predicting the firm's stock price."[69] Consequently, historical growth rates are not appropriate for the constant growth DCF model.

Q. Do you agree with Dr. Woolridge's use of a retention growth rate?

A. No, I do not. Morin discusses the sustainable growth model and shows that it relies on knowledge of several factors, including:

- "b": the fraction of earnings per share retained;
- "r": the rate of return on equity (ROE);
- "s": the growth rate in common equity due to the

sale of stock; and

- "v": the fraction of a stock sale that increases existing book value.

Specifically, Morin states the following:

There are three problems in the practical application of the sustainable growth method:

(1) It may be even more difficult to estimate what b, r, s and v investors have in mind than it is to estimate what g they envisage. It would appear far more economical and expeditious to use available growth forecasts and obtain g directly instead of relying on four individual forecasts of the determinants of such growth. *It seems only logical that the measurement and forecasting errors inherent in using four different variables to predict growth far exceed the forecasting error inherent in a direct forecast of growth itself.*

(2) *There is an element of circularity in estimating g by a forecast of b and ROE for the utility being regulated, since ROE is determined in large part by regulation. To estimate what ROE resides in the minds of investors is equivalent to estimating the market's assessment of the outcome of regulatory hearings.* Expected ROE is exactly what regulatory

commissions set in determining an allowed rate of return. In other words, the method requires an estimate of ROE before it can even be implemented. *Common sense would dictate the inconsistency of a return on equity recommendation that is different than the expected ROE that the method assumes the utility will earn forever.*

For example, using an expected return on equity of 11% to determine the growth rate and using that same growth rate to recommend a return on equity of 9% is inconsistent. *It is not reasonable to assume that this regulated utility company is expected to earn 11% forever, but estimate a 9% return on equity. The only way this utility can earn 11% is that rates be set by the regulator so that the utility will in fact earn 11%....*

(3) The empirical finance literature discussed earlier demonstrates that the sustainable growth method of determining growth is not as significantly correlated to measures of value, such as stock price and price/earnings ratios, as other historical growth measures or analysts' growth forecasts. *Other proxies for growth, such as historical growth rates and analysts' growth forecasts, outperform retention growth estimates.* (emphasis added)[70]

The circular nature of the sustainable growth DCF is illustrated in the following steps:

1. The sustainable growth rate relies on an expected ROE on book common equity;
2. That expected ROE on book common equity is then used in a DCF analysis to establish an ROE cost rate related to the market value of the common stock; and
3. That market-related ROE, if authorized as the allowed ROE in a regulatory proceeding, becomes the expected ROE on book common equity.

Put simply, the estimated ROEs Dr. Woolridge used to derive his sustainable growth rate become the regulatory outcome of this proceeding, even as those ROEs are themselves based on regulatory outcomes.

Q. Do you have any other concerns with the use of the sustainable growth rate as a measure of long-term growth?

A. Yes. The sustainable growth rate assumes increasing retention ratios necessarily are associated with increasing future growth. The underlying premise is that future earnings will increase as the retention ratio increases. That is, if future growth is modeled as "b x r" (where "b" is the retention ratio and "r" is the earned

return on book equity), growth will increase as "b" increases. There are several reasons, however, why that may not be the case. Consequently, it is appropriate to determine whether the data supports the assumption that higher earnings retention ratios necessarily are associated with higher future earnings growth rates.

Q. Does independent research support the finding that future earnings and the retention ratio are not positively related?

A. Yes. In 2006, for example, two articles in Financial Analysts Journal addressed the theory that high dividend payouts (i.e., low retention ratios) are associated with low future earnings growth.[71] Both articles cite a 2003 study by Arnott and Asness,[72] who found that over the course of 130 years of data, future earnings growth is associated with high, rather than low, payout ratios.[73] In essence, the findings of all three studies found that there is a negative, not a positive, relationship between the two.

Q. Did you perform any analyses to test that assumption?

A. Yes, I did. Using EPS and DPS data from *Value Line*, I

calculated the historical dividend payout ratio, retention ratio, and subsequent five-year average earnings growth rate for the companies included in the *Value Line* electric, natural gas, and water utility industries. I then performed a regression analysis in which the dependent variable was the five-year earnings growth rate, and the explanatory variable was the earnings retention ratio. The purpose of that analysis was to determine whether the data empirically supports the assumption that higher retention ratios necessarily produce higher earnings growth rates.

Q. What did that analysis reveal?

A. As shown on Document No. 3, there was a statistically significant negative relationship between the five-year average earnings growth rate and the earnings retention ratio. That is, based on *Value Line* data, earnings growth actually decreased as the retention ratio increased. Those findings clearly call into question Dr. Woolridge's use of the sustainable growth rate as a proxy for the long-term growth rate in his analysis.

Q. Do those results make practical sense?

A. Yes, they do. As a practical matter, dividend-paying companies (such as utilities) are reluctant to reduce dividends, given the often-disproportionate stock price reaction. Consequently, a higher than expected dividend increase may signal management's confidence in higher future earnings and cash flow. That is, a near-term reduction in the retention ratio supporting a higher dividend increase may provide information or "signaling" content regarding future growth prospects.[74] In view of the foregoing, Dr. Woolridge's use of a sustainable growth rate DCF analysis is an exercise in circularity which ignores the basic principle of rate base/rate of return regulation.

Q. Have you performed any analyses to determine which measures of growth are statistically related to the proxy companies' stock valuation levels?

A. Yes, I have. My analysis is based on the methodological approach used by Carleton and Vander Weide, who compared the predictive capability of historical growth estimates and analysts' forecasts on the valuation levels of 65 utility companies.[75] I structured the analysis to understand whether historical, or projected, earnings or dividend growth rates best explain utility stock

valuations. In particular, my analysis examined the statistical relationship between the P/E ratios of electric and natural gas utilities as classified by *Value Line*, and the historical and projected EPS, DPS, and BVPS growth rates in addition to B*R sustainable growth rates (calculated as the retention ratio multiplied by the projected ROE) as reported by *Value Line*. To determine which, if any, of those growth rates are statistically related to utility stock valuations, I performed a series of regression analyses in which the projected growth rates were explanatory variables and the P/E ratio was the dependent variable. The results of those analyses are presented in Document No. 4.

In that analysis, I performed 10 separate regressions with the P/E as the dependent variable, and historical and projected EPS, DPS, and BVPS, as well as a measure of sustainable growth, as the independent variables. I then reviewed the T- and F-Statistics to determine whether the variables and equations were statistically significant.[76]

Q. What did those analyses reveal?

A. As shown in Document No. 4, the only growth rate that was statistically significant and positively related to the

P/E ratio was the projected EPS growth rate. Because projected EPS growth is the only growth rate that is both statistically and positively related to utility valuation, projected earnings is the proper measure of growth in the constant growth DCF model.

Q. What is your conclusion of the appropriate growth rate for use in the DCF model?

A. In view of the above, I recommend the Commission rely solely on projected EPS growth rates when determining the indicated ROE for Tampa Electric using the DCF model.

Q. Do you have any corrections to Dr. Woolridge's DCF analysis?

A. Yes, I do. In his DCF analysis Dr. Woolridge used an approximate average dividend yield based on the 30-, 90-, and 180-day averages and projected growth rates of 5.50 percent and 5.60 percent based on what he believes to be an acceptable range of 5.00 percent to 5.95 percent and 5.10 percent to 6.10 percent for his electric proxy group and my electric proxy group, respectively.[77] Focusing solely on the average estimate of each of Dr. Woolridge's inputs ignores the range of individual DCF

results. That is, Dr. Woolridge's approach does not consider the variability in the DCF results of the proxy companies. A more appropriate approach, which I have used in my DCF analysis, is to calculate the individual proxy company DCF results. Doing so shows that the individual proxy company DCF results are not necessarily clustered around a central point. Relying on the average of each input, as Dr. Woolridge does, obscures that finding. As such, I calculated the company-specific DCF results for Dr. Woolridge's and my proxy groups based on the 30-, 90-, and 180-day dividend yields and analysts' growth rates. The corrected DCF results for Dr. Woolridge's electric and my electric proxy group, range from 10.34 percent to 10.49 percent and 10.59 percent to 10.72 percent respectively (see Document No. 5).

Capital Asset Pricing Model

Q. Please describe Dr. Woolridge's CAPM analysis and results.

A. Dr. Woolridge combines a risk-free rate of 4.65 percent and an MRP of 5.25 percent to the average *Value Line* and S&P Capital IQ beta of his proxy electric group (0.80) and my electric proxy group (0.80).[78] In estimating his MRP of 5.25 percent, Dr. Woolridge reviews a series of

studies that calculate the MRP using different methodologies; from which he places significant weight on the Kroll MRP (5.50 percent), KPMG MRP (5.00 percent), JP Morgan MRP (4.40 percent), Damodaran MRP (4.15 percent), and the Fernandez (5.50 percent) and Duke CFO (4.90 percent) surveys.[79] His indicated ROE using these inputs is 8.85 percent for his electric proxy group and my electric proxy group.[80] Dr. Woolridge gives his CAPM results less weight in the determination of his ROE recommendation.[81]

Q. Before you discuss Dr. Woolridge's application of the CAPM, in your experience, does Dr. Woolridge typically place any weight on the results of his CAPM analysis in his recommended ROE?

A. No.

Q. Likewise, in your experience, does Dr. Woolridge typically use beta coefficients calculated using monthly returns?

A. Not until recently. While Dr. Woolridge discusses the "issues" with *Value Line* betas on pages 62 through 64 of his direct testimony, those "issues" have been present

since *Value Line* published betas, and those "issues" never prevented Dr. Woolridge from exclusively relying on them in the past, including the post-pandemic period.[82]

Q. How do these two inconsistencies affect Dr. Woolridge's recommendation?

A. Dr. Woolridge's consideration of his CAPM results and use of monthly betas serve to lower his indicated ROE results and his recommendation. While I do believe in the use of multiple models, Dr. Woolridge's application of the CAPM is fatally flawed, as I will discuss below, and as such, should not be relied on.

Q. Please discuss your concerns with Dr. Woolridge's application of the CAPM.

A. My main concerns are (1) his MRP based on academic and professional studies; and (2) his failure to employ the empirical CAPM ("ECAPM"). In addition to the above concerns, I generally disagree with Dr. Woolridge's use of current interest rates and use of betas calculated using monthly returns, but those differences are not material at this time.

Q. Please summarize Dr. Woolridge's recommended MRP for use in his application of the CAPM in his direct testimony.

A. In his direct testimony, Dr. Woolridge reviews a number of MRPs for his analysis, and places the most weight on the Kroll recommended MRP (5.50 percent), KPMG MRP (5.00 percent), JP Morgan (4.40 percent), and Damodaran (4.15 percent, Fernandez Survey (5.50 percent) and the Duke-CFO Survey.[83] As discussed below, I do not believe any of the above are valid measures of the MRP and therefore they should be rejected by the Commission.

Q. What is your position on the 5.50 percent MRP quoted by Kroll?

A. The determination of the MRP as calculated by Kroll is not transparent, especially in view of the historical MRP and supply side MRP presented in Kroll's 2023 SBBI® Yearbook: Stocks, Bonds, Bills, and Inflation ("SBBI-2023"), which is already well known by investors. Because of the transparency of the historical data and how to gather and use the components of the supply side model, both the historical MRP (using the long-term arithmetic mean return on large company stocks less the long-term arithmetic income returns on long-term Government bonds)

and the supply side model are superior measures of the MRP, when compared to Kroll's simplistic and opaque MRP forecast.

Q. Why is the Kroll MRP more opaque than other measures of the MRP?

A. The MRP is calculated by subtracting a risk-free rate from the investor-required return on the market. Typically, the return on the market uses observable market measures (e.g., historical average returns), but the Kroll MRP does not define how they calculate their expected return on the market. Similarly, the risk-free rate is typically also based on market measures (e.g., historical interest rates, forecasted interest rates), but Kroll does not explain how they derive their 3.50 percent normalized risk-free rate. Because Kroll does not reveal how they derive their estimates, we do not know if they are indeed based on market measures.

Q. Did you conduct a study to determine the forecast accuracy of the Kroll recommended market return relative to the SBBI – 2023 historical market return?

A. Yes, I did. I have calculated the forecast bias[84] of the

long-term historical average return and the implied market returns from Kroll from 2008-2023 to determine the most accurate measure of the following years' market return.[85] For example, the long-term average market return from 1926-2008 was used to determine the forecasted return for 2009. The result of this analysis is shown in Document No. 6.

As shown in Document No. 6, the long-term arithmetic mean return is the more accurate predictor of the next year's return, as compared to the Kroll projected market return; while both measures understate the actual return (both forecast bias values are under 100.00 percent), the Kroll forecasted market return significantly and consistently understates the actual return. This result is consistent with Campbell, who states that when returns are serially uncorrelated, the arithmetic average represents the best forecast of future returns in any randomly selected future year.[86]

Q. What concerns do you have regarding the KPMG MRP?

A. Similar to the Kroll MRP, the KPMG MRP calculation is not transparent. Also, KPMG Corporate Finance & Valuations Netherland's Equity Market Risk Premium site clearly

states limiting conditions to its calculation:

Note: Other KPMG country practices may have a deviating view on the MRP, as it is dependent on other parameters of the cost of capital determination, which may differ from country to country. In addition, commonly applied local market practice or regulatory requirements may also lead to different conclusions on individual parameters such as the MRP.[87]

A further review of KMPG's report reveals that the MRP calculated by KPMG is a global MRP, not a U.S.-specific MRP. As noted in the summary of the report, KPMG gives more weight to "the S&P 500, FTSE and STOXX 600".[88] Dr. Woolridge has not provided any support for why a global MRP would be considered by U.S. investors. As a result of the lack of clarity of the MRP coupled with its limiting conditions and inapplicability to the U.S. market, the KPMG MRP should be rejected by the Commission.

Q. What are your concerns with the JP Morgan MRP?

A. I have three concerns with the JP Morgan MRP: (1) the "long-term" capital market assumptions in the JP Morgan document are not consistent with a going concern; (2) the market return recommended by JP Morgan is an expected

return, not a required return, which is the goal of cost of capital proceedings; and (3) the JP Morgan document is subject to similar limiting conditions and disclaimers as the KPMG MRP.

Q. How long is the investment time frame contemplated in JP Morgan's "long-term" capital market assumptions?

A. In the forward, JP Morgan states its "long-term" expectations for risks and returns cover a period of 10 to 15 years.

Q. Is that period consistent with a going concern investment such as Tampa Electric?

A. No. An investment horizon of 10 to 15 years is not consistent with a going concern such as Tampa Electric, whose equity is assumed to be outstanding in perpetuity.

Q. Are expected returns on the market by "financial professionals" valid for cost of capital (i.e., required returns) purposes?

A. No, they are not. Expected market returns from pension funds or investment houses try to predict what the

market's earned return will be, not the return that investors require in order to invest, which is the subject of this proceeding. For example, a benefit plan asset manager will match the **expected returns** available from various asset classes to the expected liabilities that must be funded. An investor seeking to maximize their risk-adjusted return will only invest in a security if the expected return is equal to or greater than the **required return**. Because expected returns may or may not equal required returns, one cannot assume pension funding assumptions or expected returns from investment houses (that is, expected returns) may be viewed as a measure of investors' required returns.

Benefit plan managers develop asset allocation and investment decisions based on expected risks and returns for various asset classes subject to the investment objective or expected timing and nature of the liabilities being funded by those investments. In the U.S., they must consider: (1) the diversification of the portfolio; (2) the liquidity and current return of the portfolio relative to the expected cash flow requirements under the plan; (3) the portfolio's projected return relative to the plan's funding objective; and (4) the return expected on alternative investments with similar risks.[89] Pension

asset managers, therefore, are concerned with investing funds at an expected return to meet expected liabilities. As to the documents cited by Dr. Woolridge in his Exhibit JRW-8, several contain clearly stated limiting assumptions and disclaimers, which call into question their use for the purpose of setting the ROE in this proceeding. For example, J.P. Morgan notes:

Assumptions, opinions and estimates are provided for illustrative purposes only. They should not be relied upon as recommendations to buy or sell securities. Forecasts of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. We believe the information provided here is reliable, but do not warrant its accuracy or completeness.[90]

Similarly, Blackrock notes:

References to future returns are not promises or even estimates of actual returns a client portfolio may achieve. Assumptions, opinions and estimates are provided for illustrative purposes only. They should not be relied upon as recommendations to buy or sell securities. Forecasts of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. We believe the

information provided here is reliable, but do not warrant its accuracy or completeness.[91]

Lastly, BNY Mellon notes:

This material should not be considered as investment advice or a recommendation of any investment manager or account arrangement, and should not serve as a primary basis for investment decisions… This is not investment research or a research recommendation for regulatory purposes as it does not constitute substantive research or analysis. To the extent that these materials contain statements about future performance, such statements are subject to a number of risks and uncertainties.[92]

Those limitations aside, the salient issue is whether investors rely on the sorts of broad market projections cited by Dr. Woolridge in establishing their return requirements, rather than those provided by the analysts that cover the individual stocks contained in the market indices.

Widely used finance texts recommend the use of multiple models in estimating the ROE, in particular the DCF, CAPM, and the RPM. To determine whether the use of broad market expected returns for the purposes of pension asset

management also is an approach recommended by finance texts, I reviewed articles published in financial journals, as well as additional texts that speak to the methods used by analysts to estimate the ROE. An article published in Financial Analysts Journal surveyed financial analysts to determine the analytical techniques that are used in practice.[93] Regarding stock price valuation and cost of capital estimation, the author asked respondents to comment only on the DCF, CAPM, and Economic Value-Added models. Nowhere in that article did the author consider asking whether surveys of expected returns or pension fund assumptions are relevant to the determination of the cost of common equity.

Q. Does the JP Morgan MRP have limiting conditions?

A. Yes, like the KPMG MRP, the JP Morgan MRP document contains clearly stated limiting assumptions and disclaimers as noted above, which call into question their use for the purpose of setting the ROE in this proceeding.

Q. Is there academic literature that supports the conclusion that MRPs using surveys (such as the IESE business school Survey and Duke-CFO Survey)[94] are not widely used by practitioners?

A. Yes. Damodaran, who was cited by Dr. Woolridge throughout his direct testimony, states the following about the applicability of survey MRPs:

While survey premiums have become more accessible, very few practitioners seem to be inclined to use the numbers from these surveys in computations and there are several reasons for this reluctance:

1. Survey risk premiums are responsive to recent stock prices movements, with survey numbers generally increasing after bullish periods and decreasing after market decline. Thus, the peaks in the SIA survey premium of individual investors occurred in the bull market of 1999, and the more moderate premiums of 2003 and 2004 occurred after the market collapse in 2000 and 2001.
2. Survey premiums are sensitive not only to whom the question is directed at but how the question is asked. For instance, individual investors seem to have higher (and more volatile) expected returns on equity than institutional investors and the survey numbers vary depending upon the framing of the question.[footnote omitted]
3. In keeping with other surveys that show differences across sub-groups, the premium seems to vary depending on who gets surveyed. Kaustia, Lehtoranta

and Puttonen (2011) surveyed 1,465 Finnish investment advisors and note that not only are male advisors more likely to provide an estimate but that their estimated premiums are roughly 2% lower than those obtained from female advisors, after controlling for experience, education and other factors.[footnote omitted]

4. Studies that have looked at the efficacy of survey premiums indicate that if they have any predictive power, it is in the wrong direction. Fisher and Statman (2000) document the negative relationship between investor sentiment (individual and institutional) and stock returns.[footnote omitted] In other words, investors becoming more optimistic (and demanding a larger premium) is more likely to be a precursor to poor (rather than good) market returns.

As technology aids the process, the number and sophistication of surveys of both individual and institutional investors will also increase. However, it is also likely that these survey premiums will be more reflective of the recent past rather than good forecasts of the future.[95]

As a result, Dr. Woolridge should not be relying on the

IESE Business School Survey or Duke-CFO Survey in his MRP.

Q. Please now respond to Dr. Woolridge's consideration of the average Damodaran 4.15 percent MRP.

A. Damodaran's method, which is a two-stage form of the DCF model, calculates the present value of cash flows over the five-year initial period, together with the terminal price (based on the Gordon Model), to be received in the last (i.e., fifth) year. The model's principal inputs include the following assumptions:

- Over the coming five years, the S&P 500 Index (the "Index") will appreciate at a rate equal to the compound growth rate in "Operating Earnings";
- Cash flows associated with owning the Index will be equal to the historical average Earnings, Dividends, and Buyback yields, applied to the projected Index value each year; and
- Beginning in the terminal year, the Index will appreciate, in perpetuity, at a rate equal to the 30-day average yield on 30-year Treasury securities.

In terms of historical experience, over the long-term the broad economy has grown at a long-term compound average

growth rate of 6.10 percent.[96] Considered from another perspective, Kroll reports the long-term rate of capital appreciation on Large Company stocks to be 7.90 percent.[97] Using current data as of May 2024,[98] Damodaran's model assumes, however, that the market index will grow by just 5.03 percent over the coming five years.[99]

Dr. Woolridge has not explained why growth beginning five years in the future, and extending in perpetuity, will be less than two-thirds of long-term historical growth. Nowhere in his testimony has Dr. Woolridge explained the fundamental, systemic changes that would so dramatically reduce long-term economic growth, or why they are best measured by the 30-day average long-term Treasury yield.

Further, research by the Federal Reserve Bank of San Francisco calls into question the relationship between interest rates and macroeconomic growth. As the authors noted, "[o]ver the past three decades, it appears that private forecasters have incorporated essentially no link between potential growth and the natural rate of interest: The two data series have a zero correlation."[100] In view of this, the Commission should reject Dr. Woolridge's Damodaran MRP.

Q. Does Dr. Woolridge include an ECAPM analysis?

A. No, he does not.

Q. Why doesn't Dr. Woolridge employ the ECAPM?

A. Dr. Woolridge does not employ the ECAPM for two reasons: (1) he claims that the ECAPM lacks theoretical or empirical validation; and (2) he believes that adjusted betas address any empirical issues within the CAPM, and thus the ECAPM is not necessary.[101]

Q. Have you provided any theoretical or empirical validation of the ECAPM?

A. Yes, I have provided validation of the ECAPM on pages 52-60 of my direct testimony. Dr. Woolridge did not address that evidence in his direct testimony.

Q. Does the use of adjusted betas in a CAPM analysis address the empirical issues with the CAPM?

A. No, they do not. By increasing the expected returns for low beta stocks and decreasing the expected returns for high beta stocks, Dr. Woolridge concludes there is no

need to use the ECAPM.[102] To the contrary, using adjusted betas in a CAPM analysis is not equivalent to using the ECAPM nor is it a duplicative adjustment.

Betas are adjusted because of their general regression tendency to converge toward 1.0 over time, i.e., over successive calculations of beta. As also noted above, numerous studies have determined that the Security Market Line ("SML") described by the CAPM formula at any given moment in time is not as steeply sloped as the predicted SML. Morin states:

…some critics of the ECAPM argue that the use of Value Line adjusted betas in the traditional CAPM amounts to using an ECAPM. This is incorrect. The use of adjusted betas in a CAPM analysis is not equivalent to the ECAPM. Betas are adjusted because of the regression tendency of betas to converge toward 1.0 over time.

* * *

The use of an adjusted beta by Value Line is correcting for a different problem than the ECAPM. The adjusted beta captures the fact that betas regress toward one over time. The ECAPM corrects for the fact that the CAPM under-predicts observed returns when beta is less than one and over-predicts observed returns when beta is greater than one.

* * *

Another way of looking at it is that the Empirical CAPM and the use of adjusted betas comprise two separate features of asset pricing. Assuming arguendo a company's beta is estimated accurately, the CAPM will still understate the return for low-beta stocks. Furthermore, if a company's beta is understated, the Empirical CAPM will also understate the return for low-beta stocks. Both adjustments are necessary.[103]

Moreover, the slope of the SML should not be confused with beta. As Brigham and Gapenski state:

The slope of the SML reflects the degree of risk aversion in the economy – the greater the average investor's aversion to risk, then (1) the steeper is the slope of the line, (2) the greater is the risk premium for any risky asset, and (3) the higher is the required rate of return on risky assets.[12]

Students sometimes confuse beta with the slope of the SML. This is a mistake. As we saw earlier in connection with Figure 6-8, and as is developed further in Appendix 6A, beta does represent the slope of a line, but not the Security Market Line. This confusion arises partly because the SML equation is generally written, in this

book and throughout the finance literature, as ki = RF + bi(kM – RF), and in this form bi looks like the slope coefficient and (kM – RF) the variable. It would perhaps be less confusing if the second term were written (kM – RF)bi, but this is not generally done.[104]

As noted in Appendix 6A of Brigham and Gapenski's textbook, beta, which accounts for regression bias, is not a return adjustment but rather is based on the slope of a different line.

A 1980 study by Litzenberger, et al. found the CAPM underestimates the ROE for companies, such as public utilities, with betas less than 1.00. In that study, the authors applied adjusted betas and still found the CAPM to underestimate the ROE for low-beta companies. Similarly, The Brattle Group's ("Brattle") Risk and Return for Regulated Industries supports the use of adjusted betas in the ECAPM:

Note that the ECAPM and the Blume adjustment are attempting to correct for different empirical phenomena and therefore both may be applicable. It is not inconsistent to use both, as illustrated by the fact that the Litzenberger et.al (1980) study relied on Blume adjusted betas and estimated an alpha of 2% points in a

short-term version of the ECAPM. This issue sometimes arises in regulatory proceedings.[105]

Hence, using adjusted betas does not address the previously discussed empirical issues with the CAPM. In view of the foregoing, my use of adjusted betas in both the traditional and empirical applications of the CAPM is neither incorrect or inconsistent with the financial literature, nor is it a duplicative adjustment.

Q. Have other jurisdictions considered the ECAPM?

A. Yes, it has been accepted in Alaska, Minnesota, Mississippi, Nevada, New York, and Virginia.[106]

Q. Please summarize this subsection.

A. Dr. Woolridge's application of the CAPM is fatally flawed due to his use of MRPs that are not applicable for cost of capital purposes. The use of these MRPs, which understate the required return on the market, serve to artificially reduce the indicated ROE using the CAPM for Dr. Woolridge's proxy groups. Given all of the above, I recommend the Commission reject Dr. Woolridge's CAPM.

Q. Does Dr. Woolridge consider a flotation cost adjustment?

A. No, he does not. Dr. Woolridge claims I "did not provide evidence that TECO has paid flotation costs."[107] Wholly owned subsidiaries such as Tampa Electric receive capital from their parents, and provide returns on the capital that roll up to the parent, which is designated to attract and raise capital based on the returns of those subsidiaries. As such, denying recovery of issuance costs would penalize the investors that fund the utility operations. As shown in Document No. 7, because of flotation costs, an authorized return of 10.85 percent would be required to realize an ROE of 10.75 percent (i.e., a 10-basis point flotation cost adjustment). If flotation costs are not recovered, the growth rate falls and the ROE decreases to 10.65 percent (i.e., below the required return).[108]

Response to Dr. Woolridge's Critiques

Q. Does Dr. Woolridge have any critiques of your analyses?

A. Yes, he does. Dr. Woolridge's critiques of my analyses are: (1) my weighting of DCF results in my recommended ROE; (2) my exclusive use of projected EPS growth rates in my DCF analysis; (3) my employment of the PRPM; (4)

the use of historical MRPs and equity risk premiums in my CAPM and RPM analyses; (5) the level of my required returns on the market have unrealistic assumptions about future earnings and economic growth; (6) my use of the ECAPM; (7) my use of Non-Price Regulated Proxy Groups in my analyses; and (8) my inclusion of a flotation cost adjustment.

I have already addressed critiques 1, 2, 6 and 8 previously in my rebuttal testimony, so I will not address them again here. I will address the remaining critiques in turn below.

Q. Please summarize Dr. Woolridge's concerns with your PRPM analysis.

A. Dr. Woolridge has the following concerns with my PRPM, specifically that: (1) the PRPM uses historical risk premiums to calculate prospective risk premiums; (2) he believes the PRPM has not been accepted by a regulatory commission; and (3) it is a "black box" method that cannot be calculated without proprietary software. I address Dr. Woolridge's concerns below.

Q. Dr. Woolridge cites his discussion of the "Peso Problem"

or U.S. stock market survivorship bias, as well as what he terms "unattainable return bias," as reason to reject the use of historical data to calculate prospective risk premiums.[109] Please respond.

A. There are two flaws with this "problem." The first is that the Peso Problem and unattainable return bias are not applicable to the individual company PRPM-derived equity risk premiums and ROEs, as the individual company results are based on the historical monthly company-specific equity risk premiums and not those of a broad-based index. Second, even relative to a broad-based index, these two "issues" are related to one another. Ibbotson® SBBI® 2013 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2012 notes: One common problem in working with financial data is properly accounting for survivorship. In working with company-specific historical data, it is important for researchers to include data from companies that failed as well as companies that succeeded before drawing conclusions from elements of that data.

The same argument can be made regarding markets as a whole. The equity risk premium data outlined in this book represent data on the United States stock market.

The United States has arguably been the most successful stock market of the twentieth century. That being the case, might equity risk premium statistics based only on U.S. data overstate the returns of equities as a whole because they only focus on one successful market?

In a recent paper, Goetzmann and Jorion study this question by looking at returns from a number of world equity markets over the past century.[6] (footnote omitted) The Goetzmann-Jorion paper looks at the survivorship bias from several different perspectives. They conclude that once survivorship is taken into consideration the U.S. equity risk premium is overstated by approximately 60 basis points.[7] (footnote omitted) The non-U.S. equity risk premium was found to contain significantly more survivorship bias.

While the survivorship bias evidence may be compelling on a worldwide basis, one can question its relevance to a purely U.S. analysis. If the entity being valued is a U.S. company, then the relevant data set should be the performance of equities in the U.S. market. (italics added)[110]

Thus, given that the "entity being valued" is Tampa

Electric, a U.S. company, the relevant data should be the performance of the U.S. equity market, and given that the thrust of Dr. Woolridge's criticism of the PRPM relates to the company-specific PRPM results, this first "problem" is not applicable and is therefore irrelevant.

Q. In addition to survivorship bias, Dr. Woolridge also provides a listing of "a myriad of empirical problems" which produce "inflated estimates of expected Risk Premiums".[111] Please comment.

A. In addition to survivorship bias, which was addressed above, Dr. Woolridge mentions that the measure of central tendency; the historical time horizon; the change in risk and required return over time; the downward bias in bond historical returns; and unattainable return bias as his "myriad of factors" that inflate the historical market return, and the risk premiums calculated from those returns. While he mentions them, he does not explain anything as to why these phenomena happen or how they affect the overall returns.

Regarding Dr. Woolridge's concern of the measure of central tendency (i.e., arithmetic versus geometric means) used in my MRP, I note that financial literature

endorses the use of the arithmetic mean in several instances. John Y. Campbell of Harvard University states: "When returns are serially uncorrelated, the arithmetic average represents the best forecast of future return in any randomly selected future year."[112] As shown on pages 136 and 137 of SBBI-2023, returns on large stocks and equity risk premiums have serial correlations of 0.00 and 0.01, respectively, showing serial uncorrelatedness.

Only arithmetic mean return rates, equity risk premium, and yields are appropriate for cost of capital purposes because *ex-post* (historical) total returns and equity risk premiums differ in size and direction over time, indicating volatility, i.e., variance or risk. The arithmetic mean captures the prospect for variance in returns and equity risk premiums, providing the valuable insight needed by investors in estimating risk in the *future* when making a *current* investment. Absent such valuable insight into the potential variance of returns, investors cannot meaningfully evaluate prospective risk. The geometric mean of *ex-post* equity risk premiums provide no insight into the potential variance of future returns because the geometric mean relates the change over many time periods to a constant rate of change, rather than the year-to-year fluctuations, or variance, *critical to*

risk analysis. Therefore, the geometric mean is of little to no value to investors seeking to measure risk. Moreover, from a statistical perspective, since stock returns and equity risk premiums are randomly generated, the arithmetic mean is expectational and consistent with the prospective nature of the cost of capital and ratemaking noted above.

The financial literature is quite clear that risk is measured by the variability of expected returns, i.e., the probability distribution of returns.[113] SBBI-2023[114] explains in detail why the arithmetic mean is the correct mean to use when estimating the cost of capital:

The equity risk premium data presented in this book are arithmetic average risk premiums as opposed to geometric average risk premiums. The arithmetic average equity risk premium can be demonstrated to be most appropriate when discounting future cash flows. For use as the expected equity risk premium in either the CAPM or the building-block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number.

This is because both the CAPM and the building-block approach are additive models, in which the cost of capital

is the sum of its parts. The geometric average is more appropriate for reporting past performance because it represents the compound average return. [115]

In addition, Weston and Brigham provide the standard financial textbook definition of the riskiness of an asset when they state:

The riskiness of an asset is defined in terms of the likely variability of future returns from the asset. (emphasis added) [116]

Furthermore, Morin states:

The geometric mean answers the question of what constant return you would have had to achieve in each year to have your investment growth match the return achieved by the stock market. The arithmetic mean answers the question of what growth rate is the best estimate of the future amount of money that will be produced by continually reinvesting in the stock market. It is the rate of return which, compounded over multiple periods, gives the mean of the probability distribution of ending wealth. (emphasis added) [117]

In addition, Brealey and Myers note:

The proper uses of arithmetic and compound rates of return

from past investments are often misunderstood... Thus the arithmetic average of the returns correctly measures the opportunity cost of capital for investments... *Moral*: If the cost of capital is estimated from historical returns or risk premiums, use arithmetic averages, not compound annual rates of return. (italics in original)[118]

As previously discussed, investors gain insight into relative riskiness by analyzing expected *future* variability. This is accomplished using the arithmetic mean of a random distribution of returns/premiums. Only the arithmetic mean considers all the returns/premiums over a period of time, hence, providing meaningful insight into the variance and standard deviation of those returns/premiums.

Q. Can it be demonstrated that the arithmetic mean takes into account all of the returns and, therefore, is the only appropriate mean to use when estimating the cost of capital?

A. Yes. Document No. 8 graphically demonstrates this. Page 1 charts the SBBI-2023 returns on large company stocks for every year from 1926 through 2023. It is clear from looking at the year-to-year variation of these returns

that stock market returns and, hence, MRPs vary.

The distribution of each of those returns for the period from 1926 through 2023 is shown on page 2 of Document No. 8. There is a bell-shaped pattern to the probability distribution of returns, an indication that they are randomly generated and not serially correlated. The arithmetic mean of this distribution of returns considers each and every return in the distribution. In doing so, the arithmetic mean takes into account the standard deviation or likely variance which may be experienced in the future when estimating the rate of return based on such historical returns.

In contrast, the geometric mean considers only two of the returns, the initial and terminal years, which, in this case, are 1926 and 2023. Based on only those two years, a constant rate of return is calculated by the geometric average. That constant return is graphically represented by a flat line showing no year-to-year variation for the entire 1926 to 2023 time period. This is obviously unrealistic, based on the histogram shown in Document No. 8.

Q. Do any of Dr. Woolridge's other concerns regarding the

use of historical data have any merit?

A. No, they do not. Turning to the change in risk and required return over time, the downward bias in bond historical returns, and unattainable return bias, those are all a function of the historical time horizon. As to the appropriate time horizon to use in a historical MRP or equity risk premium calculation; SBBI-2023 states:
Our equity risk premium covers 1926 to the present. The original data source for the time series comprising the equity risk premium is the Center for Research in Security Prices. CRSP chose to begin its analysis of market returns with 1926 for two main reasons. CRSP determined that 1926 was approximately when quality financial data became available. They also made a conscious effort to include the period of extreme market volatility from the late 1920s and early 1930s; 1926 was chosen because it includes one full business cycle of data before the market crash of 1929.

Implicit in using history to forecast the future is the assumption that investors' expectations for future outcomes conform to past results. This method assumes that the price of taking on risk changes only slowly, if at all, over time. This "future equals the past" assumption

is most applicable to a random time-series variable. A time-series variable is random if its value in one period is independent of its value in other periods.

The estimate of the equity risk premium depends on the length of the data series studied. A proper estimate of the equity risk premium requires a data series long enough to give a reliable average without being unduly influenced by very good and very poor short-term returns. When calculated using a long data series, the historical equity risk premium is relatively stable. Furthermore, because an average of the realized equity risk premium is quite volatile when calculated using a short history, using a long series makes it less likely that the analyst can justify any number he or she wants. The magnitude of how shorter periods can affect the result will be explored later in this chapter.

Some analysts estimate the expected equity risk premium using a shorter, more recent period on the basis that recent events are more likely to be repeated in the near future; furthermore, they believe that the 1920s, 1930s, and 1940s contain too many unusual events. This view is suspect because all periods contain unusual events. Some of the most unusual events of the last 100 years took

place quite recently, including the inflation of the late 1970s and early 1980s, the October 1987 stock market crash, the collapse of the high-yield bond market, the major contraction and consolidation of the thrift industry, the collapse of the Soviet Union, the development of the European Economic Community, the attacks of Sept. 11, 2001, and the more recent global financial crisis of 2008-2009, and most recently, the market crash in the first quarter of 2020 that was precipitated by the spread of the COVID-19 virus.

It is even difficult for economists to predict the economic environment of the future. For example, if one were analyzing the stock market in 1987 before the crash, it would be statistically improbable to predict the impending short-term volatility without considering the stock market crash and market volatility of the 1929-1931 period.

Without an appreciation of the 1920s and 1930s, no one would believe that such events could happen. The 97-year period starting with 1926 represents what can happen: It includes high and low returns, volatile and quiet markets, war and peace, inflation and deflation, and prosperity and depression. Restricting attention to a shorter

historical period underestimates the amount of change that could occur in a long future period. Finally, because historical event-types (not specific events) tend to repeat themselves, long-run capital market return studies can reveal a great deal about the future. Investors probably expect unusual events to occur from time to time, and their return expectations reflect this.[119]

To this point, Dr. Woolridge cites the downward bias in bond historical returns, which references the 1940s and the immediate post-war period, when the Federal Reserve artificially held down government bond yields, increasing historical MRPs for that period. It could be argued that in the period between 2008 and 2015, the Federal Reserve did the same (artificially held down lending rates) to spur growth. As Kroll stated above, without a view of the prior period, it would be improbable for an analyst to predict future events during similar circumstances. As far as unattainable return bias (that market returns cannot achieve the average return), such comments are meaningless given that the large company common stocks have consistently earned over the 12.04 percent long-term average market return recently. Specifically, out of the last ten years (2014-2023), large company stocks have earned over 12.04 percent in six of those years, as shown

in Document No. 9.

In view of all of the foregoing, it is indeed appropriate to use long-term historical equity risk premiums derived from the arithmetic mean long-term historical return on large company common stocks, and the arithmetic mean long-term historical income return on long-term U.S. government securities, for cost of capital purposes.

Q. Dr. Woolridge has stated that the PRPM has not been accepted by the regulatory community.[120] Has the PRPM been implicitly accepted by other regulatory commissions?

A. Yes. In Docket No. 2017-292-WS, the PSC SC accepted Blue Granite Water Company's entire requested ROE, which included the PRPM. The relevant portion states:

The Commission finds Mr. D'Ascendis' arguments persuasive. He provided more indicia of market returns, by using more analytical methods and proxy group calculations. Mr. D'Ascendis' use of analysts' estimates for his DCF analysis is supported by consensus, as is his use of the arithmetic mean. The Commission also finds that Mr. D'Ascendis' non-price regulated proxy group more accurately reflects the total risk faced [by] price regulated utilities and CWS. Furthermore, there is no

dispute that CWS is significantly smaller than its proxy group counterparts, and, therefore, it may present a higher risk. An appropriate ROE for CWS is 10.45% to 10.95%. The Company used an ROE of 10.50% in computing its Application, a return on the low end of Mr. D'Ascendis' range, and the Commission finds that ROE is supported by the evidence.[121]

In addition, in Docket No. W-354, Subs 363, 364 and 365, the State of North Carolina Utilities Commission ("NCUC") approved my RPM and CAPM analyses, which used PRPM analyses as presented in this proceeding. The relevant portion of the order states:

In doing so the Commission finds that the DCF (8.81%), Risk Premium (10.00%) and CAPM (9.29%) model results provided by witness D'Ascendis, as updated to use current rates in D'Ascendis Late-Filed Exhibit No. 1, as well as the risk premium (9.57%) analysis of witness Hinton, are credible, probative, and are entitled to substantial weight as set forth below.[122]

Q. Is the PRPM in limited use?

A. No, it is not. As discussed in my direct testimony, the PRPM is based on the research of Dr. Robert F. Engle,

dating back to the early 1980s, and is well represented in the academic literature and textbooks specializing in utility cost of capital.[123]

Q. What do textbooks that specialize in the cost of capital for utilities say about the PRPM?

A. On the subject of the PRPM, Pratt and Grabowski state:

> Empirical testing of this new model has yielded data allowing a comparison of results with other techniques including the DCF and CAPM. The results- combined with the stability of PRPM estimates- suggests that the model is robust when applied to electric, natural gas, combination electric and gas, and water utility companies.[124]

In addition, Morin states:

> PRPM cost of capital estimates then began to proliferate based on extensive work published in the Journal of Regulatory Economics, The Electricity Journal, and Energy Policy Journal. It is only a matter of time before the technique becomes even more mainstream in regulatory proceedings.
>
> ***
>
> It is well known that security markets exhibit periods of

relative calm and periods of high volatility for a variety of reasons. The GARCH technique does not explain the volatility but *models* its clustering. Investment analysts and financial institutions typically use models such as GARCH to estimate the volatility of returns for stocks, bonds, and market indices. They use the resulting information to help determine pricing decisions and judge which assets will potentially provide higher returns, as well as to forecast the returns. At its core, GARCH is a statistical modeling technique used in analyzing time-series data where the variance error is believed to be serially autocorrelated, and is used to help predict the volatility of returns on financial assets.[125]

Q. Dr. Woolridge claims the PRPM is a "black box" method, which can only be performed using your proprietary software. is that true?[126]

A. No, it is not. The GARCH methodology is available in various statistical packages such as EViews®, SAS, RATS, S-Plus and JMulti, which are not cost-prohibitive and provide instructions for using the various statistical methodologies in their software. I provided all parties in this proceeding the backup data to run their own GARCH models. While the software I used in this proceeding

costs approximately $1,500 for a single user commercial license,[127] JMulti is a free downloadable software with GARCH estimation applications.

Q. Do you include results of your analyses excluding the PRPM in this proceeding?

A. Yes, I do. My recommended range of ROEs including the PRPM is 10.31 percent to 11.93 percent and my recommended range of ROEs excluding the PRPM is 10.31 percent to 11.88 percent. The inclusion of the PRPM is not material to my analysis and does not change my recommendation.

Q. Dr. Woolridge believes that your MRP estimates derived from Bloomberg and *Value Line* data use excessive growth rates. Please respond.

A. I disagree with Dr. Woolridge's statement. The implied expected market returns using Bloomberg and *Value Line* data are only two out of six measures. The average implied market return for both my direct and rebuttal testimonies represents approximately the 49th and 48th percentile, respectively, of actual returns observed from 1926 to 2023, as shown on page 3 of Document No. 8. As will be discussed below, multiple measures give greater

insight into the investor-required return than a limited number of measures. The average implied market return for my Direct and Rebuttal Testimonies, including the PRPM, are 14.17 percent and 13.34 percent, respectively, which are comparable to the average historical market return of approximately 12.04 percent. Moreover, because market returns historically have been volatile, my market return estimates are statistically indistinguishable from the long-term arithmetic average market data.[128]

Q. Dr. Woolridge critiques your market DCF by comparing your implied growth rate with GDP growth, implying that they are equivalent measures.[129] Do you agree?

A. No, I do not. The goal of the market DCF is to calculate an investor-required return on the market, and market returns are not correlated with GDP growth (0.137).[130] Because GDP growth and market returns are not related, Dr. Woolridge's concerns should be dismissed.

Q. What is your response to Dr. Woolridge's concern with the use of a Non-Price Regulated Proxy Group?

A. As to the comparability of my Non-Price Regulated and Utility Proxy Groups, the selection criteria for my Non-

Price Regulated Proxy Group was based on ranges of two measures of risk: (1) the unadjusted beta of the Utility Proxy Group, which measures systematic, or market risk; and (2) the standard error of the regression, which gave rise to those betas, measuring unsystematic or diversifiable risk. Systematic plus unsystematic risk is one definition of total risk. This is agreed to by Dr. Woolridge in his direct testimony.[131]

As discussed in my direct testimony, business and financial risks may vary between companies and proxy groups, but if the collective average betas and standard errors of the regression of the groups are similar, then the total, or aggregate, non-diversifiable market risks and diversifiable risks are similar.[132]

Q. Is there a specific advantage to using your selection criteria, which uses measures of systematic and unsystematic risk, instead of using the combination of business and financial risk?

A. Yes. *Value Line* unadjusted betas and the standard error of the regressions giving rise to those betas are measurable objective values, whereas total business risk[133] and financial risk measures are more subjective.

Q. Have you used other measures of total risk to compare your Utility Proxy Group and your Non-Price Regulated Proxy Group?

A. Yes. I have compared the average and median *Value Line* Safety Ranking for the Utility Proxy Group and Non-Price Regulated Proxy Group. As shown in Document No. 10, the Safety Rankings of the Utility Proxy Group and the Non-Price Regulated Proxy Group are comparable, indicating comparable total risk.

Q. Did you directly consider your Non-Price Regulated Proxy Group results in your recommended range of ROEs in this proceeding?

A. No, I did not. As shown in my original and my updated results, the Non-Price Regulated Proxy Group's indicated results exceeded my recommended ranges.

VI. RESPONSE TO FEA WITNESS WALTERS

Q. Please summarize Mr. Walters' recommendation regarding Tampa Electric's ROE.

A. Mr. Walters recommends an ROE of 9.60 percent, within a range of 9.20 percent to 10.00 percent.[134] Mr. Walters'

range is derived using three versions of the DCF, a risk premium model, and the CAPM.

Q. Do you have any general comments on Mr. Walters' recommended range of ROEs and the indicated results of his models?

A. Yes, I do. As shown on his Figure CCW-5, the indicated results of Mr. Walters' cost of equity models generally exceed his recommended range. As shown on Document No. 11, Mr. Walters provided 20 individual cost of equity estimates; six DCF results; five RPM results; and nine CAPM results. Of those results, only one of those (8.80 percent) is below his recommended range, while nine exceed the top of his range, and 14 of 20 of his indicated results exceed his recommended ROE of 9.60 percent. While I do not agree with Mr. Walters' application of his models, as will be explained in detail below, his own model results indicate a higher ROE for Tampa Electric than he ultimately recommends.

Q. What are the areas of disagreement between you and Mr. Walters?

A. The principal areas in which I disagree with Mr. Walters

include: (1) his contention that utilities are maintaining their credit quality despite being awarded lower ROEs; (2) his recommended hypothetical capital structure; (3) specific inputs to his DCF model; (4) the assumptions and methods underlying his RPM; (5) specific assumptions and inputs to his CAPM; and (6) his decision to not reflect any flotation costs. I discussed (1) earlier in this testimony and will not repeat that discussion here.

Hypothetical Capital Structure

Q. Does Mr. Walters accept Tampa Electric's requested capital structure?

A. No, he does not. Mr. Walters recommends that the Commission authorize a hypothetical capital structure which includes a 52.00 percent equity ratio, stating Tampa Electric did not demonstrate a need to be awarded an equity ratio exceeding 52.00 percent, which is consistent with equity ratios awarded to other electric utilities around the country.[135]

Q. Do you agree with Mr. Walters' reasoning?

A. No, I do not. As discussed in my direct testimony,[136] Tampa

Electric's requested capital structure is how it is financed. If the Commission authorizes a capital structure that understates Tampa Electric's equity ratio, it will ultimately disadvantage customers and shareholders.

Also, as discussed in my direct testimony,[137] Tampa Electric's requested common equity ratio is within the range of common equity ratios maintained by the Utility Proxy Group companies and their operating subsidiaries.

Q. Is Tampa Electric's requested equity ratio within the range of equity ratios authorized by regulatory commissions?

A. Yes, it is. As shown on Document No. 12, Tampa Electric's requested equity ratio is within the range of equity ratios authorized by regulatory commissions for each year from 2016 to 2024.

Q. Given the above, should a hypothetical capital structure be considered for Tampa Electric?

A. No, it should not. The factors typically considered relative to the use of a regulated subsidiary's actual or

expected capital structure, or a hypothetical capital structure, are provided by David C. Parcell in The Cost of Capital – A Practitioner's Guide ("CRRA Guide") prepared for SURFA and provided as the study guide to candidates for SURFA's Certified Rate of Return Certification Examination. The CRRA Guide notes that there are circumstances where a hypothetical capital structure is used in favor of an actual or expected capital structure. They are:

(i) The utility's capital structure is deemed to be substantially different from the typical or "proper" utility capital structure; or

(ii) The utility is funded as part of a diversified organization whose overall capital structure reflects its diversified nature rather than its utility operations only.[138]

Phillips echoes the CRRA Guide when he states:

Debt ratios began to rise in the late 1960s and early 1970s, and the financial condition of the public utility sector began to deteriorate. It became the common practice to use actual or expected capitalizations; actual where a historic test year is used, expected when a projected or future test year is used. (footnote omitted)

The objective, in short, shifted from minimization of the

short-term cost of capital to protection of a utility's ability "to raise capital at all times. This objective requires that a public utility make every effort to keep indebtedness at a prudent and conservative level." (footnote omitted)

A hypothetical capital structure is used only where a utility's actual capitalization is clearly out of line with those of other utilities in its industry or where a utility is diversified. (footnote omitted) (italics added)[139]

As Tampa Electric's capital structure is within the range of typical utilities as represented by the Utility Proxy Group, their operating subsidiaries, and other regulated electric utilities around the country, a hypothetical capital structure should not be considered for Tampa Electric at this time.

Q. Is the use of an operating utility's actual capital structure consistent with FERC precedent?

A. Yes, it is. The use of an operating subsidiary's capital structure is consistent with the FERC precedent, under which they use the applicant's capital structure, where possible.[140] In particular, the FERC will use the utility

operating company's capital structure if it meets three criteria: (1) it issues its own debt without guarantees; (2) it has its own bond rating; and (3) it has a capital structure within the range of capital structures approved by the commission.[141] Tampa Electric meets all of these criteria, and therefore the Commission should approve Tampa Electric's request.

Discounted Cash Flow Model Analyses

Q. Please summarize Mr. Walters' DCF analyses.

A. Mr. Walters uses three DCF models; a constant growth DCF, a sustainable growth DCF analysis, and a multi-stage DCF ("MSDCF"), all using price data for the 13-week period ending May 10, 2024. For his projected three- to five-year EPS growth rates, Mr. Walters uses Zacks, S&P Capital IQ Market Intelligence, and Yahoo! Finance; and he uses *Blue Chip* for the terminal growth rate in his MSDCF.[142] Using these inputs, he derives indicated ROEs between 10.50 percent and 10.98 percent for his constant growth DCF models, 9.28 percent and 9.37 percent for his sustainable growth DCF, and between 9.31 percent and 9.35 percent for his MSDCF model. From these results, Mr. Walters concludes that more weight should be placed on his sustainable growth and MSDCF models.[143]

Q. Do you have any concerns with Mr. Walters' application of the DCF model and his interpretation of his results?

A. Yes, I do. I have concerns with (1) his reasoning to discount his constant growth DCF using analysts' growth; (2) his use of "sustainable" growth rates in a DCF model, and (3) his use of the MSDCF. I discussed why sustainable growth rates in a DCF analysis are inappropriate in my response to Dr. Woolridge, so I will not repeat that discussion here. I will discuss my remaining concerns below.

Q. Please summarize Mr. Walters' comments as they relate to the reasonableness of analyst growth rates in the constant growth DCF model.

A. Mr. Walters argues that "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."[144] Mr. Walters estimates the growth rate in GDP to be 4.14 percent relative to the 6.33 percent average growth rate based on analysts' growth rates in his constant growth DCF model.[145]

Q. Why is long-term growth in GDP not an upper limit for

growth, as Mr. Walters contends?

A. First, GDP is not a market measure – Rather it is a measure of the value of the total output of goods and services excluding inflation in an economy. While I understand that EPS growth is also not a market measure, it is well established in the financial literature that projected growth in EPS is the superior measure of dividend growth in a DCF model.[146] Furthermore, GDP is the sum of all private industry and government output in the United States, and its growth rate is simply an average of the value of those industries. To illustrate, Document No. 13 presents the compound growth rate of the industries that comprise GDP from 1947 to 2023. Of the 15 industries represented, seven industries, including utilities, grew faster than the overall GDP, and eight industries grew slower than the overall GDP.[147] Because of this, the GDP growth rate cannot be an upper limit for long-term growth, as several industries have grown faster than GDP for extended periods of time.

Q. How does the Utility Proxy Group's growth rate compare to the historical growth rate of the utility industry for the period 1947 to 2023?

A. The average growth rate used in my updated DCF analysis is 6.01 percent, which is comparable to the long-term growth rate of the utility industry of 6.55 percent. The comparability of these growth rates reinforces the maturity of the industry and that the multi-stage DCF model is not needed.

Q. Did you conduct another analysis that calculates the amount of time it would take an industry to overtake the entire economy?

A. Yes. I examined the value added by industry from 1947 to 2023 in Document No. 13 and used the compound annual growth rates for the highest growth rate industry (Educational Services, Healthcare, and Social Assistance, 8.55 percent / year) to see when that industry would comprise the entire economy. In the year 2290, or 343 years from the 1947 starting point, the industry would comprise over 50 percent of GDP; and in the year 8775, or 6,828 years after the 1947 starting point, the industry would comprise 100 percent of GDP.[148] Not only have individual companies or industries consistently grown at rates beyond GDP growth, but they have done so without overtaking the entire economy. While Mr. Walters' argument is technically correct, it is unrealistic at

best.

Q. Is Mr. Walters' MSDCF model a reasonable approach to estimating the company's ROE?

A. No, it is not. As described by Dr. Woolridge,[149] the multi-stage DCF model and its growth rates reflect the company/industry lifecycle, which is typically described in three stages: (1) the growth stage, which is characterized by rapidly expanding sales, profits, and earnings. In the growth stage, dividend payout ratios are low in order to grow the firm; (2) the transition stage, which is characterized by slower growth in sales, profits, and earnings. In the transition stage, dividend payout ratios increase, as their need for exponential growth diminishes; and (3) the maturity (steady-state) stage, which is characterized by limited, slightly attractive investment opportunities, and steady earnings growth, dividend payout ratios, and returns on equity.

Q. Are there examples in basic finance texts that support your position?

A. Yes. For example, in *Investments*, life cycles and multi-stage growth models are discussed:

As useful as the constant-growth DDM (dividend discount model) formula is, you need to remember that it is based on a simplifying assumption, namely, that the dividend growth rate will be constant forever. In fact, firms typically pass through life cycles with very different dividend profiles in different phases. In early years, there are ample opportunities for profitable reinvestment in the company. Payout ratios are low, and growth is correspondingly rapid. In later years, the firm matures, production capacity is sufficient to meet market demand, competitors enter the market, and attractive opportunities for reinvestment may become harder to find. In this mature phase, the firm may choose to increase the dividend payout ratio, rather than retain earnings. The dividend level increases, but thereafter it grows at a slower pace because the company has fewer growth opportunities.

Table 18.2 illustrates this pattern. It gives Value Line's forecasts of return on assets, dividend payout ratio, and 3-year growth in earnings per share for a sample of the firms in the computer software industry versus those of east coast electric utilities…

By in large, the software firms have attractive investment opportunities. The median return on assets of these firms

is forecast to be 19.5%, and the firms have responded with high plowback ratios. Most of these firms pay no dividends at all. The high return on assets and high plowback result in rapid growth. The median growth rate of earnings per share in this group is projected at 17.6%.

In contrast, the electric utilities are more representative of mature firms. Their median return on assets is lower, 6.5%; dividend payout is higher, 68%; and median growth is lower, 4.6%.

***

To value companies with temporarily high growth, analysts use a multistage version of the dividend discount model. Dividends in the early high-growth period are forecast and their combined present value is calculated. Then, once the firm is projected to settle down to a steady-growth phase, the constant-growth DDM is applied to value the remaining stream of dividends.[150] (Clarification and emphasis added)

As also described by Dr. Woolridge,[151] the economics of the public utility business indicate that the industry is in the steady-state, or constant-growth stage of a multi-stage DCF. This means that the three- to five-year projected growth rates for each company would be the

"steady-state" or terminal growth rate appropriate for the DCF model for utility companies, not the GDP growth rate, which is not a company-specific growth rate, nor is it an upward bound for growth.

Risk Premium Method

Q. Please briefly describe Mr. Walters' RPM.

A. Mr. Walters defines the "Risk Premium" as the difference between average annual authorized equity returns for electric utilities and a measure of long-term interest rates each year from 1986 through 2024.[152] Mr. Walters' first approach to estimating the RPM looks to the 30-year Treasury yield, and his second considers the average A-rated utility bond yield.[153] In each case, Mr. Walters establishes his risk premium estimate by reference to five-year and ten-year rolling averages.

Mr. Walters looks to 39 years of returns, arguing "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."[154] Mr. Walters considers the current and projected capital markets when selecting equity risk

premiums ("ERP") of 5.63 percent (over Treasury bonds) and 4.27 percent (over Utility bonds).[155] Applying a forecasted 30-year Treasury yield and 13- and 26-week average A-rated and Baa-rated public utility bond yields to those ERPs result in indicated ROEs ranging from 9.63 percent to 10.16 percent.[156]

Q. Do you know how Mr. Walters calculated his ERPs?

A. No, I do not. On page 45 of his direct testimony, he refers to "average" risk premiums of 5.63 percent and 4.27 percent, but they do not correspond to any of the average ERPs presented in Exhibits CCW-10 and CCW-11. For example, the average five-year rolling average ERP over Treasury bonds and A-rated Utility bonds are 5.73 percent and 4.39 percent, respectively, or 10 and 12 basis points higher than what Mr. Walters uses in his analysis. While I do not agree with Mr. Walters' application of the RPM, it appears that his results are understated based on this error.

Q. Do you have specific concerns with Mr. Walters' application of the RPM?

A. Yes. I have three concerns with Mr. Walters' analysis,

namely: (1) the use of the 1986 – 2024 time period; (2) Mr. Walters' method and recommendation ignore an important relationship revealed by his own data, i.e., that there is an inverse relationship between ERPs and interest rates (whether measured by U.S. Treasury bonds or public utility bond yields); and (3) his mismatched application of projected Treasury bond yields and current utility bond yields.

Q. What are your concerns with Mr. Walters 1986 – 2024 time period to determine an ERP?

A. Mr. Walters selected the period 1986 – 2024 "because public utility stocks consistently traded at a premium to book value during that period."[157] He concludes that "[o]ver this period, an analyst can infer authorized ROEs were sufficient to support market prices that at least exceeded book value."[158] Mr. Walters is mistaken. As discussed previously, market values can diverge from book values for a myriad of reasons as noted by Bonbright.[159] Phillips also notes:[160]

Many question the assumption that market price should equal book value, believing that 'the earnings of utilities should be sufficiently high to achieve market-to-book ratios which are consistent with those prevailing

for stocks of unregulated companies.[161]

In addition, relative to the 1986 – 2024 time period, SBBI – 2023 makes it clear that the arbitrary selection of short historical periods is highly suspect and unlikely to be representative of long-term trends in market data as discussed previously.

The academic literature demonstrates and confirms that while regulation is a substitute for marketplace competition, it has an effect on, but no direct control over market prices, and hence M/B ratios of regulated utilities. The academic literature also shows that a subset of data could be subject to data manipulation. Because of this, no valid conclusion of ERPs can be drawn for the 1986 – 2024 period.

Q. Is there a direct relationship between the M/B ratios of unregulated companies and their earned rates of return on book common equity?

A. No. Since regulation acts as a surrogate for competition, it is reasonable to look to the competitive environment for evidence of a direct relationship between M/B ratios and earned returns on common equity. To determine if Mr.

Walters' implicit assumption of such a direct relationship has any merit, I observed the M/B ratios and the earned returns on common equity of the S&P Industrial Index, and the S&P 500 Composite Index, over a long period of time. On Document No. 14, I have shown the M/B ratios, rates of return on book common equity (earnings / book ratios), annual inflation rates, and the earnings / book ratios net of inflation (real rate of earnings) annually for the years 1947 through 2023. In each year, the M/B ratios of the S&P Industrial Index equaled or exceeded 1.00 times (or 100 percent). In 1949, the only year in which the M/B ratio was 1.00, the real rate of earnings on book equity, adjusted for deflation, was 18.10 percent (16.30 percent + 1.80 percent). In contrast, in 1961, when the S&P Industrial Index experienced an M/B ratio of 2.01 times, the real rate of earnings on book equity for the S&P Industrial Index was only 9.10 percent (9.80 percent-0.70 percent). In 1997, the M/B ratio for the Index was 5.88 times, while the average real rate of earnings on book equity was 22.90 percent (24.60 percent-1.70 percent).

This analysis clearly demonstrates that competitive, unregulated companies have never sold below book value, on average, and have sold at book value in only one year

since 1947. Because this lack of a relationship between earnings / book ratios and M/B ratios covers a 77-year period, 1947 through 2023, it cannot be validly argued that going forward a relationship would exist between earnings / book ratios and M/B ratios. The analysis shown on Document No. 14 coupled with the supportive academic literature, demonstrate the following: (1) that while regulation is a substitute for marketplace competition, it can influence, but not directly control market prices, and hence, M/B ratios; and (2) that the rates of return investors expect to achieve, and which influence their willingness to pay market prices well in excess of book values have no meaningful, direct relationship to rates of earnings on book equity. Because of this, no valid conclusion of ERPs can be drawn for the 1986-2024 period because of M/B ratios in excess of one.

Q. Does Mr. Walters' RPM analysis ignore the inverse relationship between ERPs and interest rates?

A. Yes. Reviewing the data in Exhibits CCW-10 and CCW-11, I discovered that the ERP as presented by Mr. Walters tends to move inversely with changes in interest rates. In other words, as interest rates fall, the ERP increases.

Q. How does Mr. Walters' data show the inverse relationship between ERPs and interest rates?

A. As shown on Document No. 15, empirical analyses of the data presented in Exhibits CCW-10 and CCW-11, ERPs have moved inversely with changes in U.S. Treasury bond yields for 1986 – 2024.

When looking at the inverse relationship between ERP and interest rates, as shown on Document No. 15, which use Mr. Walters' data, the R-squareds are in excess of 83 percent. This means that the movement in interest rates explains over 83 percent of the movement in ERP, which I would consider to be a strong relationship.[162]

Q. Mr. Walters used current A- and Baa-rated public utility bond yields in his RPM analysis. Please comment.

A. Mr. Walters' use of a Baa-rated public utility bond yield is incorrect for two reasons. First, Mr. Walters applies a Baa-rated public utility bond yield to an ERP derived from A-rated public utility bonds, improperly matching the ERP measured relative to A-rated public utility bond yields with a Baa rated public utility bond yield. Second, Mr. Walters' use of <u>current</u> A- and Baa-rated public

utility bond yield is inconsistent with his entire return on common equity analysis. For example, Mr. Walters used an expected risk-free rate in both his CAPM analysis and his U.S. Treasury Bond-based ERP analysis, analyst projections of EPS and sustainable growth in his constant growth DCF model applications and projected inflation in his derivation of his projected market ERP. For internal consistency in his analyses and to be theoretically correct, as well as consistent with the prospective nature of both ratemaking and the cost of capital, a projected A-rated public utility bond yield should be used in Mr. Walters' RPM analyses.

Q. How can a projected A-rated public utility bond yield be estimated?

A. One source is *Blue Chip's*[163] forecasts of Aaa corporate bond yields adjusted to reflect a recent spread between A-rated public utility bond and Aaa corporate bond yield. *Blue Chip* forecasts Aaa-rated corporate bonds to yield an average 5.05 percent, based upon an average of the six quarters ending with the third quarter 2025 and 2025-2029 and 2030- 2034. However, the 5.05 percent projected Aaa corporate bond yield needs to be adjusted to estimate an equivalent A-rated public utility bond yield. Using a

three-month average bond yield spread (approximately 13 weeks, consistent with Mr. Walters' analysis), an upward adjustment of 40 basis points is necessary, resulting in a prospective A-rated public utility bond yield of 5.45 percent as derived in note 2 on page 3 of Document No. 15.

Q. Please summarize the range of RPM indicated common equity cost rates after correcting Mr. Walters' RPM analysis.

A. As shown on Document 15, applying a projected risk-free rate of 4.31 percent[164] and prospective A2-rated public utility bond yield of 5.45 percent[165] to the regression equations in Document No. 15 produces results of 6.07 percent and 4.83 percent, respectively. This results in an ROE of 10.38 percent and 10.28 percent using the projected 30-year Treasury and the prospective A-rated public utility bond yield, respectively. As discussed previously, while I do not agree with Mr. Walters' basic RPM, the corrected RPM results based upon regression analyses of his data are more appropriate indicators of common equity cost rate.

Capital Asset Pricing Model

Q. Please briefly summarize Mr. Walters' CAPM analysis and

results.

A. Mr. Walters' CAPM analysis combines three estimates of the MRP and three estimates of beta, along with his projected risk-free rate of 4.20 percent from *Blue Chip*[166] and a recent 30-year Treasury bond yield of 4.61 percent,[167] to calculate nine CAPM estimates that range from 8.80 percent to 12.03 percent.[168]

Mr. Walters' first MRP estimate is based on the historical average real market return over the 1926-2023 period as reported by Morningstar Direct, combined with an expected inflation rate of 2.40 percent to calculate an expected market return of 11.64 percent. Subtracting his 4.20 percent projected risk-free rate results in an MRP of 7.44 percent.[169]

In the second calculation, he applies a modified version of FERC's DCF method to the S&P 500 Index to calculate the total expected market return. Mr. Walters calculates the weighted average dividend yield and growth rate for each company in the S&P 500, excluding non-dividend paying companies and companies with growth rates that are negative or above 20 percent. Mr. Walters then applies a one-half growth rate adjustment to the resulting

dividend yield to arrive at the expected dividend yield for the S&P 500 of 1.90 percent. Adding the expected dividend yield to the weighted average growth rate of 10.80 percent results in a market return of 12.70 percent.[170] Subtracting his 4.20 percent projected risk-free rate from his DCF-based market return of 12.70 percent results in an MRP of 8.50 percent.[171] Mr. Walters then performed the same analysis including all companies in the S&P 500, which resulted in an MRP of 8.50 percent.[172]

Mr. Walters' final MRP is the 5.50 percent "normalized" MRP recommended by Kroll.[173]

Q. Is Mr. Walters' CAPM methodology and result sound?

A. No. Mr. Walters' CAPM analysis is flawed in at least five respects: (1) while Mr. Walters does use a short-term projected risk-free rate in his CAPM analysis, he does not consider the long-term projection of the risk-free rate published by *Blue Chip*; (2) he relies, in part, on Vasicek betas; (3) he relies, in part, on historical betas; (4) his choice and calculation of his MRP are flawed; and (5) he did not perform an ECAPM analysis.

Q. Does Mr. Walters rely on *Blue Chip* throughout his analysis?

A. Yes, he does. Specifically, Mr. Walters uses *Blue Chip* for his short-term projected interest yield on 30-year Treasury bonds for his CAPM analysis, his terminal growth rate in his multi-stage DCF model analysis, and also discusses five- and ten-year projected interest rates in the capital markets section of his direct testimony.[174] Because of Mr. Walters' reliance on *Blue Chip*, I find it curious that he does not use the long-term projections published by *Blue Chip* for his analysis.

Not incorporating the longest projection available is inconsistent with Mr. Walters' application of the DCF model in which there is an assumption that the projected "g" is constant into perpetuity, creating a mismatch between the application of his models. It is also inconsistent with the Efficient Market Hypothesis ("EMH").

Q. What is the EMH?

A. According to Eugene F. Fama,[175] a market in which prices always "fully reflect" available information is called

"efficient." There are three forms of the EMH, namely:

- The "weak" form asserts that all past market prices and data are fully reflected in securities prices. In other words, technical analysis cannot enable an investor to "outperform the market."
- The "semi-strong" form asserts that all publicly available information is fully reflected in securities prices. In other words, fundamental analysis cannot enable an investor to "outperform the market."
- The "strong" form asserts that all information, both public and private, is fully reflected in securities prices. In other words, even insider information cannot enable an investor to "outperform the market."

The "semi-strong" form is generally considered the most realistic because the illegal use of insider information can enable an investor to "beat the market" and earn excessive returns, thereby disproving the "strong" form. The semi-strong form of the EMH assumes that all information (including long-term forecasts of interest rates) are available to the investor, which means the long-term forecasted interest rate would be considered by investors when making investment decisions and,

therefore, should be included in Mr. Walters' CAPM analysis.

Q. Do you agree with Mr. Walters' use of Vasicek-adjusted betas in his CAPM analysis?

A. No, I do not. First, Vasicek-adjusted betas are not widely available in the market or known to investors compared to Blume-adjusted betas. Second, the Vasicek adjustment looks to standard errors of betas; the higher the standard error, the less reliable the beta estimate is, and the larger the adjustment of the beta to the market, peer group, or industry average beta. While the Vasicek-adjusted beta adjusts beta toward the industry average, it does not account for the tendency of low-beta stocks to understate expected risk. Third and finally, Duff & Phelps cites to a Delaware Court of Chancery decision that may support that more extreme betas tend to revert to the industry mean over time,[176] but Mr. Walters has provided no evidence that utility betas are extreme, nor has he provided any evidence that utility betas do not revert to 1.0. In fact, the recent movement of utility betas toward 1.0 shows that utility betas should be Blume-adjusted and not Vasicek-adjusted.

Q. Do you agree with Mr. Walters' use of historical betas in his CAPM analysis?

A. No, I do not. The determination of the ROE is a measure of the investor expected return at any given point of time using current and expected measures. The use of historical betas is neither current nor expected. The analytical models that form the basis of the recommended ROE represent a snapshot of Tampa Electric's investor-required return at the time of the analysis and should not be normalized based on speculation that current market conditions may change in the future that are not based on publicly-available data.

Q. Do you agree with Mr. Walters' exclusion of companies with negative growth rates and growth rates greater than 20.00 percent in his DCF-based market return estimate?

A. No, I do not. As a preliminary matter, the expected market return is meant to reflect just that – all companies in the market. Furthermore, excluding companies with growth rates outside a certain band causes the estimate of the market return to also no longer reflect the overall market, but rather an arbitrary subset of companies within the market.

In addition, investors recognize the market includes both dividend and non-dividend paying companies. Some of the largest companies, based on market capitalization, would be excluded from the MRP calculation because they do not pay dividends. For example, based on Mr. Walters' workpapers, there would be 190 excluded companies from his market return calculation based on the exclusion of both non-dividend paying companies and companies with growth rates below 0.00 percent or above 20.00 percent. Those 190 companies comprise approximately 38.00 percent of the entire S&P 500 market capitalization. As shown on Document No. 16, of the 190 companies that were excluded, 99 do not pay dividends and comprise 16.34 percent of the S&P 500 market capitalization. Regarding growth rates below 0.00 percent or above 20.00 percent, based on Mr. Walters' workpapers, Mr. Walters excluded 120 companies which comprise 27.21 percent of the entire S&P 500 market capitalization, also shown on Document No. 16. Excluding either set of companies, as noted above, has a significant effect on the calculated expected market return and by extension, the MRP. That is, because the companies Mr. Walters removes tend to have higher growth rates, his methodology biases the estimate of the market return downward. More importantly, the resulting estimate does not represent an estimate of the market.

Q. Is there another effect on CAPM inputs by removing companies from the market DCF calculation?

A. Yes. My methodological concern is with internal consistency in the model's application. A fundamental assumption of the CAPM is that the required return is proportional to the risk of the investment. Under the CAPM, the beta is the measure of risk, and is calculated by comparing the subject security's returns to the overall market returns. Because the beta is calculated relative to the overall market, which includes both dividend paying and non-dividend paying companies, as well as companies outside of the bounds of 0.00 percent to 20.00 percent, it is important that the expected market return also reflect the overall market. As noted above, Mr. Walters' proposed estimate of the market return includes only approximately 63.00 percent of the overall S&P 500 on an absolute and market capitalization basis. As such, I do not believe it is appropriate to combine betas calculated relative to the entire market with a MRP calculated using only a subset of the market (i.e., dividend paying companies with growth rates within a range of 0.00 percent to 20.00 percent).

If Mr. Walters chooses to remove non-dividend paying

companies, and companies with growth rates below 0 percent and above 20.00 percent from the expected market return, he likewise should remove them from the index used to calculate the beta, which would require significant adjustments and calculations. Because betas are a positive function of the correlation of returns between the subject company and the index, removing those companies may increase the correlation, thereby increasing the beta.

In addition, dividend paying companies, or companies with non-negative growth rates less than 20.00 percent, may have lower volatility than non-dividend paying companies. Because the beta also reflects relative volatility (i.e., subject company relative to the index), if the volatility of the index falls, the relative volatility will increase, again increasing the beta. Mr. Walters' position inherently assumes the proxy companies' correlation coefficients and relative volatility would remain constant, and their betas would remain unchanged if non-dividend paying companies, or companies with non-negative growth rates less than 20.00 percent, are removed from the market index. Mr. Walters has not shown that to be the case.

For all of these reasons, Mr. Walters' adjustments to his market DCF should be ignored by the Commission.

Q. What is your position on the 5.50 percent MRP quoted by Kroll?

A. As discussed previously in this rebuttal testimony, the Kroll MRP is not transparent and is not accurate as compared to other Kroll data, such as the long-term historical arithmetic average MRP and the Ibbotson and Chen build up method. Because of this, the Commission should ignore this data in its contemplation of the ROE for Tampa Electric.

Q. Did Mr. Walters conduct an ECAPM analysis?

A. No, he did not. Mr. Walters does not conduct an ECAPM analysis because he does not agree with the use of adjusted betas in the ECAPM.[177]

Q. What is your response to Mr. Walters' concern with the use of adjusted betas in the ECAPM structure?

A. As discussed in my response to Dr. Woolridge, the use of adjusted betas in both the traditional and empirical

applications of the CAPM is neither incorrect or inconsistent with the financial literature, nor is it an unnecessary redundancy.

Q. What would the results of Mr. Walters' CAPM analysis be had he relied on proper inputs?

A. As shown in Document No. 17, using Mr. Walters' Value Line betas from page 1 of CCW-15, I have corrected Mr. Walters CAPM analysis by: (1) including both the short-term and long-term projections of the 30-year Treasury yield in the estimation of the risk-free rate; (2) excluding his market returns based on the "D&P Normalized" method and "Risk Premium Method"; (3) excluding his historical and S&P Capital IQ betas; (4) correcting his estimate of the "FERC DCF" market return to include all companies in the S&P 500; and (5) estimating the ECAPM. Those corrections result in a CAPM estimate of 15.91 percent and an ECAPM estimate of 16.16 percent, which is somewhat above my CAPM results and my analytical results.

Adjustments to Common Equity Cost Rate

Q. Did Mr. Walters include flotation costs in his recommended ROE?

A. No, he did not. Mr. Walters states that he is unaware of the Commission allowing the recovery of flotation costs in the allowed ROE.[178]

Q. Has the Commission allowed flotation costs in the allowed ROE?

A. Yes, it has. As described in my direct testimony,[179] the Commission stated the following regarding my proposed flotation cost adjustment:

In PGS's last rate case in 2008, we did not make a specific adjustment for flotation costs, but in our order we stated that we have traditionally recognized a reasonable adjustment for flotation costs in the determination of the investor required return...We find witness D'Ascendis's method to determine the flotation cost is credible and provided persuasive evidence for his recommendation to include a flotation cost of 9 basis points.[180]

Given the above, I recommend the Commission to continue correctly including flotation costs in the allowed ROE.

Response to Mr. Walters' Critiques

Q. Does Mr. Walters have any critiques of your analyses?

A. Yes, he does. Mr. Walters' critiques of my direct testimony are as follows: (1) that I am double counting business risk; (2) that my recommendation at the upper end of the range is unsupported; (3) my use of a flotation cost adjustment; (4) that I rely solely on the constant growth DCF; (5) that I exclude IDACORP, Inc. ("IDA") in my DCF results; (6) the level of my ERPs and MRPs in my RPM and CAPM analyses; (7) my use of adjusted betas in the ECAPM model; and (8) my use of non-price regulated risk proxy group.

I have addressed critiques 1, 2, 3, 4, 6, 7 and 8 during the course of this rebuttal testimony. I will discuss Mr. Walters' remaining critique below.

Q. You excluded IDA's DCF results in your initial analysis because it was over two standard deviations below the DCF average result.[181] Is IDA's DCF result in your updated analysis within two standard deviations from the DCF average result?

A. Yes, it is. As such, Mr. Walters' concerns are no longer relevant.

VII. RESPONSE TO WALMART WITNESS CHRISS

Q. Please summarize Mr. Chriss' testimony regarding Tampa Electric's ROE.

A. Mr. Chriss opposes Tampa Electric's proposed ROE based on his review of authorized ROEs nationwide and within Florida. He recommends the Commission "closely examine" Tampa Electric's proposed ROE:

> [I]n light of: (a) The customer impact of the resulting revenue requirement increases; (b) the use of a future test year, which reduces regulatory lag by allowing the utility to include the most current information in its rates at the time they will be in effect; (c) the high degree of revenue certainty realized by TECO through recovery of a substantial proportion of total retail revenues through cost recovery clauses; (d) recent rate case ROEs approved by the Commission; and (e) recent rate case ROEs approved by other commissions nationwide.[182]

However, Mr. Chriss did not undertake an independent, market-based analysis of Tampa Electric's ROE. As I discussed the relevance of parts (d) and (e) previously in this testimony, I will not repeat those discussions here.

Q. Should the Commission consider Tampa Electric's use of a

future test year ("FTY") or its cost recovery mechanisms in setting the ROE?

A. The Commission should consider Tampa Electric's test year and regulatory mechanisms relative to the proxy group used to derive its ROE.

Q. Does Tampa Electric's utilization of a FTY or cost recovery mechanisms affect its risk relative to your Utility Proxy Group?

A. No. As noted in my direct testimony, the *Hope* and *Bluefield* "Comparable Earnings" standard requires the allowed ROE to be commensurate with the returns on investments of similar risk. The cost of capital is a comparative exercise, so if the use of a FTY or cost recovery mechanism is common throughout the companies on which one bases their analyses, the comparative risk is zero; any effect of the perceived reduced risk of a FTY or cost recovery mechanism by investors would be reflected in the market data of the proxy group. To the extent the proxy companies utilize FTYs or cost recovery mechanisms only serve to make it more comparable to its peers and has no impact on comparative risk.

To that point, Document No. 18 provides a summary of the Utility Proxy Group operating companies that may utilize FTYs and cost recovery mechanisms like Tampa Electric. As Document No. 18 demonstrates, substantially all the proxy companies use a FTY or make known or measurable adjustments to their revenues and expenses. Likewise, the vast majority of Utility Proxy Group companies have similar cost recovery mechanisms to those present in Tampa Electric's rates.

VIII. RESPONSE TO FIPUG WITNESS POLLOCK

Q. Please summarize Mr. Pollock's testimony as it relates to Tampa Electric's ROE.

A. Mr. Pollock's opinion is that my recommended ROE of 11.50 percent exceeds the national average ROE for vertically integrated electric utilities for 2023 and 2024 of 9.78 percent.[183] Mr. Pollock also discusses Tampa Electric's regulatory environment and cost recovery mechanisms as justification for the Commission to authorize an ROE below the national average.[184] Like Mr. Chriss, Mr. Pollock does not undertake an independent, market-based analysis of Tampa Electric's ROE.

Q. Does Mr. Pollock make any unique argument from others you

have already addressed so far in your rebuttal testimony?

A. No. I have addressed the relevance of historical authorized ROEs for cost of capital purposes and the comparative nature of risk elsewhere in this testimony. I will not address these issues again here.

IX. RESPONSE TO FL RISING/LULAC WITNESS RÁBAGO

Q. Please summarize Mr. Rábago's testimony as it relates to Tampa Electric's ROE.

A. Mr. Rábago compares my requested ROE of 11.50 percent to historical ROEs from the last five and ten years stating my recommendation is "out of step" with those awarded ROEs.[185] Like Messrs. Chriss and Pollock, Mr. Rábago does not conduct an independent, market-based analysis of Tampa Electric's ROE, but nonetheless, recommends an ROE of no higher than 9.50 percent.[186]

Q. Mr. Rábago attempts to summarize your direct testimony into four arguments.[187] Do you believe his summary of your testimony is accurate?

A. No. Mr. Rábago's "summary" includes four points:[188]

(1) Interest rates and inflation were higher when this

rate application was filed than previously;

(2) TECO proposes to spend a lot of money;

(3) TECO should earn profits at levels that are indexed against those of unregulated companies; and

(4) TECO's profits should be inflated based on high risk based on extreme weather.

Regarding Mr. Rábago's first point, while interest rates and inflation are higher than in previous years, that data is reflected in the market data used to conduct cost of common equity models. I used the model results to inform my judgment as to the appropriate ROE for Tampa Electric at this time. Similarly, while I do generally rely on similar risk, non-price regulated companies in my analyses, I do not in this proceeding based on previous rulings by the Commission. This makes Mr. Rábago's summary point (3) inaccurate and incorrect.

As Mr. Rábago's summary points (1) and (3) are related, so are his points (2) and (4). These summary points reflect Tampa Electric's business risk, as represented by its fast growth and vulnerability to extreme weather. As discussed previously, and discussed by Mr. Walters, these business risks are reflected in Tampa Electric's bond rating, which is less risky than my Utility Proxy Group.

This results in a deduction in my recommended ROE, not an inflation of it. Again, Mr. Rábago's "summary" of my testimony is inaccurate and incorrect.

X. CONCLUSION

Q. Should any or all of the arguments made by the Opposing ROE Witnesses persuade the Commission to lower the return on common equity it approves for Tampa Electric below your recommendation?

A. No, they should not. My recommended cost of common equity of 11.50 percent for Tampa Electric will provide it with sufficient earnings to enable it to attract necessary new capital efficiently, and at a reasonable cost, to the benefit of both customers and investors.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

DOCKET NO. 20240026-EI
WITNESS: D'ASCENDIS
FILED: 07/02/2024

REBUTTAL EXHIBIT

OF

DYLAN W. D'ASCENDIS, CRRA, CVA

ON BEHALF OF TAMPA ELECTRIC COMPANY

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Tampa Electric Company, Inc.
Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Fifteen Electric Utilities	Proxy Group of Fifteen Electric Utilities (excl. PRPM)
1.	Discounted Cash Flow Model (DCF) (1)	10.29%	10.29%
2.	Risk Premium Model (RPM) (2)	11.09%	11.07%
3.	Capital Asset Pricing Model (CAPM) (3)	11.91%	11.86%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	12.50%	12.42%
5.	Indicated Common Equity Cost Rate before Adjustment for Unique Risk	10.29% - 11.91%	10.29% - 11.86%
6.	Credit Risk Adjustment (5)	-0.08%	-0.08%
7.	Flotation Cost Adjustment (6)	0.10%	0.10%
8.	Indicated Common Equity Cost Rate after Adjustment	10.31% - 11.93%	10.31% - 11.88%
9.	Recommended Common Equity Cost Rate	11.50%	11.50%

Notes:
(1) From page 7 of this Document.
(2) From page 23 of this Document.
(3) From page 34 of this Document.
(4) From page 39 of this Document.
(5) Company-specific risk adjustment to reflect TECO's lower risk due to a less risky long-term credit rating relative to the proxy group as detailed in Mr. D'Ascendis' Direct Testimony.
(6) From page 46 of this Document.

Tampa Electric Company, Inc.
Capitalization and Financial Statistics (1)
2018 - 2023, Inclusive

	2023	2022	2021	2020	2019	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
Capitalization Statistics						
Amount of Capital Employed						
Total Permanent Capital	$ 8,487.096	$ 7,624.742	$ 6,900.873	$ 6,111.880	$ 5,721.456	
Short-Term Debt	706.000	1,048.003	555.478	560.648	256.861	
Total Capital Employed	$ 9,193.096	$ 8,672.744	$ 7,456.351	$ 6,672.528	$ 5,978.317	
Indicated Average Capital Cost Rates (2)						
Total Debt	3.76 %	3.44 %	3.78 %	3.99 %	4.28 %	
Capital Structure Ratios						
Based on Total Permanent Capital:						
Long-Term Debt	44.35 %	41.91 %	41.95 %	41.85 %	44.70 %	42.95 %
Preferred Stock	-	-	-	-	-	-
Common Equity	55.65	58.09	58.05	58.15	55.30	57.05
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Based on Total Capital:						
Total Debt, Including Short-Term Debt	48.63 %	48.93 %	46.28 %	46.74 %	47.08 %	47.53 %
Preferred Stock	-	-	-	-	-	-
Common Equity	51.37	51.07	53.72	53.26	52.92	52.47
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Dividend Payout Ratio	101.43 %	94.82 %	106.16 %	95.97 %	100.86 %	99.85 %
Rate Of Return On Average Book Common Equity	10.17 %	10.86 %	9.40 %	11.07 %	10.48 %	10.40 %
Total Debt / EBITDA (3)	3.66 x	3.90 x	3.93 x	3.72 x	3.82 x	3.81 x
Funds From Operations / Total Debt (4)	24.22 %	6.84 %	18.99 %	22.33 %	25.69 %	19.61 %
Total Debt / Total Capital	48.63 %	48.93 %	46.28 %	46.74 %	47.08 %	47.53 %

Notes:
(1) All capitalization and financial statistics are based upon financial statements as originally reported in each year.
(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).
(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company audited financial statements

Proxy Group of Fifteen Electric Utilities
Capitalization and Financial Statistics (1)
2019 - 2023, Inclusive

	2023	2022	2021	2020	2019	
			(MILLIONS OF DOLLARS)			
Capitalization Statistics						
Amount of Capital Employed						
Total Permanent Capital	$35,135.635	$33,005.151	$30,958.714	$28,756.784	$26,766.057	
Short-Term Debt	$1,060.785	$1,196.389	$998.605	$820.719	$880.673	
Total Capital Employed	$36,196.420	$34,201.540	$31,957.319	$29,577.503	$27,646.730	
Indicated Average Capital Cost Rates (2)						
Total Debt	4.33 %	3.78 %	3.65 %	4.09 %	4.31 %	
Preferred Stock	5.13 %	5.86 %	7.09 %	5.58 %	5.44 %	
Capital Structure Ratios						5 YEAR AVERAGE
Based on Total Permanent Capital:						
Long-Term Debt	58.19 %	57.43 %	56.89 %	55.65 %	54.09 %	56.45 %
Preferred Stock	0.54	0.49	0.54	0.71	0.83	0.62
Common Equity	41.28	42.08	42.57	43.64	45.08	42.93
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Based on Total Capital:						
Total Debt, Including Short-Term Debt	59.31 %	58.56 %	58.04 %	56.67 %	55.17 %	57.55 %
Preferred Stock	0.52	0.47	0.52	0.68	0.81	0.60
Common Equity	40.17	40.97	41.45	42.66	44.02	41.85
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Financial Statistics						
Financial Ratios - Market Based						
Earnings / Price Ratio	5.41 %	4.95 %	5.43 %	4.30 %	5.31 %	5.08 %
Market / Average Book Ratio	177.32	194.85	194.85	184.99	197.56	189.91
Dividend Yield	3.93	3.79	3.77	3.68	3.40	3.71
Dividend Payout Ratio	79.39	79.13	69.93	64.92	66.11	71.89
Rate of Return on Average Book Common Equity	9.19 %	9.21 %	10.12 %	8.03 %	10.24 %	9.36 %
Total Debt / EBITDA (3)	5.53 x	5.51 x	5.31 x	5.98 x	4.73 x	5.41 x
Funds from Operations / Total Debt (4)	12.87 %	10.48 %	6.06 %	12.20 %	13.34 %	10.99 %
Total Debt / Total Capital	59.31 %	58.56 %	58.04 %	56.67 %	55.17 %	57.55 %

Notes:
(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).
(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K.

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Fifteen Electric Utilities
2019 - 2023, Inclusive

	2023	2022	2021	2020	2019	5 YEAR AVERAGE
Alliant Energy Corporation						
Long-Term Debt	55.47 %	53.86 %	53.11 %	51.92 %	51.88 %	53.25 %
Short-Term Debt	2.92	4.28	3.71	2.98	2.83	3.34
Preferred Stock	-	-	-	1.53	1.68	0.64
Common Equity	41.61	41.86	43.18	43.57	43.61	42.77
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Ameren Corporation						
Long-Term Debt	57.07 %	54.50 %	55.75 %	53.67 %	51.99 %	54.60 %
Short-Term Debt	1.92	4.16	2.32	2.37	2.44	2.64
Preferred Stock	0.46	0.50	0.55	0.69	0.79	0.60
Common Equity	40.55	40.84	41.38	43.27	44.78	42.16
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
American Electric Power Corporation						
Long-Term Debt	58.84 %	55.99 %	57.19 %	57.43 %	54.01 %	56.69 %
Short-Term Debt	4.15	6.46	4.47	4.58	5.74	5.08
Preferred Stock	-	-	-	-	-	-
Common Equity	37.01	37.55	38.34	37.99	40.25	38.23
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Duke Energy Corporation						
Long-Term Debt	58.49 %	57.21 %	54.82 %	54.08 %	53.78 %	55.68 %
Short-Term Debt	3.33	3.17	2.84	2.60	2.89	2.97
Preferred Stock	1.53	1.58	1.69	1.76	1.82	1.67
Common Equity	36.65	38.04	40.65	41.56	41.51	39.68
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Edison International						
Long-Term Debt	65.55 %	62.80 %	58.16 %	52.97 %	53.34 %	58.56 %
Short-Term Debt	2.14	4.27	5.42	6.15	1.60	3.92
Preferred Stock	4.85	4.03	4.38	4.87	6.38	4.90
Common Equity	27.46	28.90	32.04	36.01	38.68	32.62
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Entergy Corporation						
Long-Term Debt	60.93 %	64.76 %	66.47 %	63.59 %	58.99 %	62.95 %
Short-Term Debt	2.76	2.07	3.08	4.63	6.43	3.79
Preferred Stock	0.82	0.79	0.56	0.72	0.84	0.75
Common Equity	35.49	32.38	29.89	31.06	33.74	32.51
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Evergy, Inc.						
Long-Term Debt	52.76 %	48.89 %	48.22 %	51.60 %	49.27 %	50.15 %
Short-Term Debt	4.23	6.30	5.77	1.68	4.82	4.56
Preferred Stock	-	-	-	-	-	-
Common Equity	43.01	44.81	46.01	46.72	45.91	45.29
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
IDACORP, Inc.						
Long-Term Debt	49.29 %	43.87 %	42.85 %	43.86 %	42.70 %	44.51 %
Short-Term Debt	-	-	-	-	-	-
Preferred Stock	-	-	-	-	-	-
Common Equity	50.71	56.13	57.15	56.14	57.30	55.49
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Fifteen Electric Utilities
2019 - 2023, Inclusive

	2023	2022	2021	2020	2019	5 YEAR AVERAGE
NorthWestern Corporation						
Long-Term Debt	49.99 %	49.56 %	52.09 %	51.54 %	52.27 %	51.09 %
Short-Term Debt	-	-	-	2.23	-	0.45
Preferred Stock	-	-	-	-	-	-
Common Equity	50.01	50.44	47.91	46.23	47.73	48.46
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
OGE Energy Corporation						
Long-Term Debt	46.42 %	50.75 %	49.74 %	48.39 %	42.91 %	47.64 %
Short-Term Debt	5.34	-	5.39	1.32	1.50	2.71
Preferred Stock	-	-	-	-	-	-
Common Equity	48.25	49.25	44.87	50.29	55.59	49.65
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Pinnacle West Capital Corporation						
Long-Term Debt	55.36 %	54.95 %	53.26 %	52.11 %	50.39 %	53.21 %
Short-Term Debt	4.00	2.40	2.20	1.40	1.03	2.21
Preferred Stock	-	-	-	-	-	-
Common Equity	40.64	42.65	44.54	46.49	48.58	44.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
PNM Resources, Inc.						
Long-Term Debt	63.31 %	62.61 %	62.26 %	61.16 %	61.60 %	62.19 %
Preferred Stock	3.67	3.55	1.06	0.59	3.78	2.53
Common Equity	0.16	0.18	0.19	0.21	0.24	0.19
Total Capital	32.86	33.66	36.49	38.04	34.38	35.09
	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Portland General Electric Company						
Long-Term Debt	53.49 %	56.75 %	54.82 %	52.44 %	50.06 %	53.51 %
Short-Term Debt	1.96	-	-	2.58	-	0.91
Preferred Stock	-	-	-	-	-	-
Common Equity	44.55	43.25	45.18	44.98	49.94	45.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Southern Company						
Long-Term Debt	63.87 %	62.46 %	63.84 %	62.71 %	60.01 %	62.58 %
Short-Term Debt	2.48	2.97	1.76	0.79	2.75	2.15
Preferred Stock	-	-	0.36	0.38	0.39	0.22
Common Equity	33.65	34.57	34.04	36.12	36.85	35.05
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Xcel Energy Inc.						
Long-Term Debt	58.05 %	57.81 %	57.39 %	56.96 %	56.69 %	57.38 %
Short-Term Debt	1.79	1.96	2.58	1.66	1.86	1.97
Preferred Stock	-	-	-	-	-	-
Common Equity	40.16	40.23	40.03	41.38	41.45	40.65
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Fifteen Electric Utilities						
Long-Term Debt	56.59 %	55.78 %	55.33 %	54.30 %	52.66 %	54.93 %
Short-Term Debt	2.71	2.77	2.71	2.37	2.51	2.62
Preferred Stock	0.52	0.47	0.52	0.68	0.81	0.60
Common Equity	40.17	40.97	41.45	42.66	44.02	41.85
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information: Annual Forms 10-K.

Tampa Electric Company, Inc.
Operating Subsidiary Company Capital Structures of the
Proxy Group of Fifteen Electric Utilities

		2023				
Company Name	Parent Company Ticker	Common Equity	Preferred Equity	Short-Term Debt	Long-Term Debt	Total Capital
Interstate Power and Light Company	LNT	50.10%	0.00%	0.00%	49.90%	100.00%
Wisconsin Power and Light Company	LNT	51.81%	0.00%	4.23%	43.96%	100.00%
Ameren Illinois Company	AEE	53.96%	0.39%	3.99%	41.66%	100.00%
Union Electric Company	AEE	51.08%	0.59%	1.26%	47.06%	100.00%
AEP Texas Inc.	AEP	44.00%	0.00%	0.95%	55.05%	100.00%
Appalachian Power Company	AEP	46.68%	0.00%	3.00%	50.32%	100.00%
Indiana Michigan Power Company	AEP	46.25%	0.00%	0.93%	52.81%	100.00%
Kentucky Power Company	AEP	41.40%	0.00%	2.15%	56.45%	100.00%
Kingsport Power Company	AEP	NA	NA	NA	NA	NA
Ohio Power Company	AEP	50.04%	0.00%	1.55%	48.41%	100.00%
Public Service Company of Oklahoma	AEP	50.01%	0.00%	1.06%	48.93%	100.00%
Southwestern Electric Power Company	AEP	49.14%	0.00%	1.21%	49.64%	100.00%
Wheeling Power Company	AEP	NA	NA	NA	NA	0.00%
Duke Energy Carolinas, LLC	DUK	50.20%	0.00%	1.98%	47.81%	100.00%
Duke Energy Florida, LLC	DUK	48.06%	0.00%	0.73%	51.21%	100.00%
Duke Energy Indiana, LLC	DUK	51.03%	0.00%	2.61%	46.36%	100.00%
Duke Energy Kentucky, Inc.	DUK	58.40%	0.00%	4.80%	36.80%	100.00%
Duke Energy Ohio, Inc.	DUK	55.15%	0.00%	6.63%	38.22%	100.00%
Duke Energy Progress, LLC	DUK	45.50%	0.00%	3.75%	50.75%	100.00%
Southern California Edison Company	EIX	36.40%	4.80%	1.60%	57.19%	100.00%
Entergy Arkansas, LLC	ETR	44.03%	0.00%	0.00%	55.97%	100.00%
Entergy Louisiana, LLC	ETR	54.83%	0.00%	0.00%	45.17%	100.00%
Entergy Mississippi, LLC	ETR	49.01%	0.00%	0.00%	50.99%	100.00%
Entergy New Orleans, LLC	ETR	53.96%	0.00%	0.00%	46.04%	100.00%
Entergy Texas, Inc.	ETR	48.32%	0.61%	0.00%	51.07%	100.00%
Evergy Kansas Central, Inc.	EVRG	49.09%	0.00%	4.00%	46.91%	100.00%
Evergy Kansas South, Inc.	EVRG	NA	NA	NA	NA	NA
Evergy Metro, Inc.	EVRG	47.53%	0.00%	8.18%	44.29%	100.00%
Evergy Missouri West, Inc.	EVRG	NA	NA	NA	NA	NA
Westar Energy (KPL)	EVRG	NA	NA	NA	NA	NA
Idaho Power Company	IDA	49.61%	0.00%	0.00%	50.39%	100.00%
NorthWestern Corporation	NWE	49.93%	0.00%	0.00%	50.07%	100.00%
Oklahoma Gas and Electric Company	OGE	52.68%	0.00%	1.56%	45.76%	100.00%
Public Service Co. of New Mexico	PNM	42.85%	0.25%	3.02%	53.88%	100.00%
Texas-New Mexico Power Company	PNM	48.20%	0.00%	2.15%	49.66%	100.00%
Arizona Public Service Company	PNW	44.31%	0.00%	3.26%	52.43%	100.00%
Portland General Electric Company	POR	42.67%	0.00%	1.88%	55.45%	100.00%
Alabama Power Company	SO	52.15%	0.00%	0.17%	47.68%	100.00%
Georgia Power Company	SO	53.08%	0.00%	3.30%	43.62%	100.00%
Mississippi Power Company	SO	54.79%	0.00%	0.00%	45.21%	100.00%
Northern States Power Company	XEL	50.77%	0.00%	1.02%	48.21%	100.00%
Northern States Power Company	XEL	51.80%	0.00%	2.28%	45.92%	100.00%
Public Service Company of Colorado	XEL	54.07%	0.00%	1.78%	44.16%	100.00%
Southwestern Public Service Company	XEL	51.09%	0.00%	1.31%	47.60%	100.00%
	Average	49.33%	0.17%	1.96%	48.54%	
	Minimum	36.40%	0.00%	0.00%	36.80%	
	Maximum	58.40%	4.80%	8.18%	57.19%	

Source: S&P Global Market Intelligence.

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the
Utility Proxy Group

Proxy Group of Fifteen Electric Utilities	[1] Average Dividend Yield (1)	[2] Value Line Projected Five Year Growth in EPS (2)	[3] Zack's Five Year Projected Growth Rate in EPS	[4] Yahoo! Finance Projected Five Year Growth in EPS	[5] Average Projected Five Year Growth in EPS (3)	[6] Adjusted Dividend Yield (4)	[7] Indicated Common Equity Cost Rate (5)	
Alliant Energy Corporation	3.85 %	6.50 %	6.10 %	6.30 %	6.30 %	3.97 %	10.27 %	
Ameren Corporation	3.67	6.50	6.20	4.80	5.83	3.78	9.61	
American Electric Power Corporation	4.09	6.50	6.10	6.36	6.32	4.22	10.54	
Duke Energy Corporation	4.17	5.00	6.10	6.66	5.92	4.29	10.21	
Edison International	4.37	6.00	NA	7.60	6.80	4.52	11.32	
Entergy Corporation	4.24	0.50	7.30	6.80	4.87	4.34	9.21	
Evergy, Inc.	4.87	7.50	5.00	6.00	6.17	5.02	11.19	
IDACORP, Inc.	3.55	5.00	NA	4.40	4.70	3.63	8.33	
NorthWestern Corporation	5.17	4.00	NA	4.50	4.25	5.28	9.53	
OGE Energy Corporation	4.83	6.50	5.00	(12.34)	5.75	4.97	10.72	
Pinnacle West Capital Corporation	4.73	4.50	8.20	7.20	6.63	4.89	11.52	
PNM Resources, Inc.	4.16	5.00	2.50	4.42	3.97	4.24	8.21	
Portland General Electric Company	4.69	6.00	NA	12.50	9.25	4.91	14.16	(6)
Southern Company	3.93	6.50	6.10	7.30	6.63	4.06	10.69	
Xcel Energy Inc.	4.07	7.00	6.40	6.73	6.71	4.21	10.92	
						Average	10.16 %	
						Median	10.41 %	
						Average of Mean and Median	10.29 %	

Notes:

(1) Indicated dividend at 05/31/2024 divided by the average closing price of the last 60 trading days ending 05/31/2024 for each company.

(2) From pages 8 through 22 of this Document

(3) Average of columns 2 through 4 excluding negative growth rates.

(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 5) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for Alliant Energy Corporation, 3.85% x (1+(1/2 x 6.30%)) = 3.97%.

(5) Column 5 + Column 6.

(6) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Source of Information: Value Line Investment Survey.
www.zacks.com, Downloaded on 05/31/2024.
www.yahoo.com, Downloaded on 05/31/2024.

ALLIANT ENERGY NDQ-LNT

RECENT PRICE 47.43 | P/E RATIO 16.5 (Trailing: 17.1 Median: 21.0) | RELATIVE P/E RATIO 0.95 | DIV'D YLD 3.8% | VALUE LINE

TIMELINESS 4 Lowered 10/27/23
SAFETY 2 Raised 9/28/07
TECHNICAL 3 Raised 3/1/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

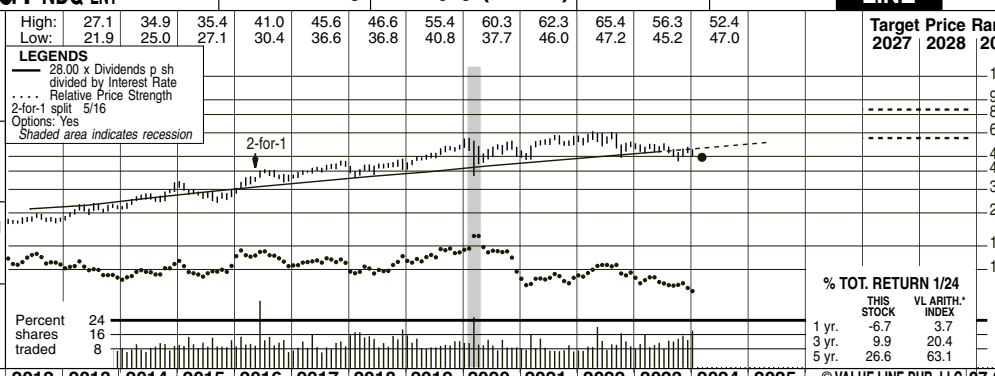
Low-High	Midpoint (% to Mid)
$40-$68	$54 (15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+80%)	*19%*
Low	60	(+25%)	*10%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	303	270	277
to Sell	259	267	282
Hld's(000)	193788	196380	204187



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
16.67	15.51	15.40	16.51	13.94	14.77	15.10	14.34	14.58	14.62	14.97	14.89	13.67	14.65	16.74	15.72	*16.75*	*17.30*	Revenues per sh	*18.35*
2.28	2.10	2.60	2.75	2.95	3.34	3.49	3.45	3.43	3.97	4.32	4.59	4.92	5.25	5.40	5.38	*5.65*	*5.85*	"Cash Flow" per sh	*6.50*
1.27	.95	1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99	2.19	2.33	2.47	2.63	2.73	2.78	*3.05*	*3.25*	Earnings per sh [A]	*3.90*
.70	.75	.79	.85	.90	.94	1.02	1.10	1.18	1.26	1.34	1.42	1.52	1.61	1.71	1.81	*1.92*	*2.04*	Div'd Decl'd per sh [B] ■ †	*2.43*
3.98	5.43	3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.92	6.69	5.47	4.67	5.91	7.24	*5.80*	*5.60*	Cap'l Spending per sh	*5.40*
12.78	12.54	13.05	13.57	14.12	14.79	15.54	16.41	16.96	18.08	19.43	21.24	22.76	23.91	24.99	26.46	*27.65*	*28.85*	Book Value per sh [C]	*31.90*
220.90	221.31	221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	245.02	249.87	250.47	251.14	256.10	*256.70*	*256.70*	Common Shs Outst'g [D]	*257.00*
13.4	13.9	12.5	14.5	14.5	15.3	16.6	18.1	22.3	20.6	19.1	21.2	21.2	21.2	21.4	18.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
.81	.93	.80	.91	.92	.86	.87	.91	1.17	1.04	1.03	1.13	1.09	1.15	1.24	1.05			Relative P/E Ratio	*1.00*
4.1%	5.7%	4.6%	4.3%	4.1%	3.7%	3.5%	3.6%	3.2%	3.1%	3.2%	2.9%	2.9%	2.9%	2.9%	3.5%			Avg Ann'l Div'd Yield	*3.7%*
3350.3	3253.6	3320.0	3382.2	3534.5	3647.7	3416.0	3669.0	4205.0	4027.0	*4300*	*4440*	Revenues ($mill)	*4720*
395.7	390.9	384.0	466.1	522.3	567.4	624.0	674.0	686.0	703.0	*780*	*835*	Net Profit ($mill)	*975*
10.1%	15.3%	13.4%	12.5%	8.4%	10.8%	- -	- -	3.1%	.6%	*2.0%*	*2.0%*	Income Tax Rate	*2.0%*
8.8%	9.4%	16.3%	10.7%	14.5%	16.3%	8.8%	3.7%	8.7%	14.2%	*6.0%*	*6.0%*	AFUDC % to Net Profit	*4.0%*
49.7%	47.3%	51.5%	47.8%	52.3%	50.6%	53.5%	52.9%	55.0%	54.8%	*56.5%*	*55.0%*	Long-Term Debt Ratio	*52.0%*
47.5%	50.0%	46.1%	49.8%	45.7%	47.6%	44.9%	47.1%	45.0%	45.2%	*43.5%*	*45.0%*	Common Equity Ratio	*48.0%*
7257.2	7446.3	8377.6	8392.8	10032	10938	12657	12725	13944	15002	*16220*	*16530*	Total Capital ($mill)	*17070*
6442.0	8970.2	9809.9	10798	12462	13527	14336	14987	16247	17157	*18300*	*18600*	Net Plant ($mill)	*19180*
6.5%	6.3%	5.6%	6.7%	6.3%	6.3%	5.9%	6.3%	6.1%	6.0%	*6.0%*	*6.5%*	Return on Total Cap'l	*7.0%*
10.8%	10.0%	9.5%	10.6%	10.9%	10.5%	10.6%	11.3%	10.9%	10.4%	*11.0%*	*11.5%*	Return on Shr. Equity	*12.0%*
11.2%	10.2%	9.7%	10.9%	11.2%	10.7%	10.8%	11.0%	10.9%	10.4%	*11.0%*	*11.5%*	Return on Com Equity [E]	*12.0%*
4.6%	3.6%	2.8%	4.0%	4.4%	4.2%	4.2%	4.3%	4.1%	3.6%	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
60%	66%	72%	64%	62%	61%	62%	62%	62%	65%	*63%*	*63%*	All Div'ds to Net Prof	*62%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $9509 mill. **Due in 5 Yrs** $2984 mill.
LT Debt $8225 mill. **LT Interest** $370 mill.
(LT interest earned: 2.8x)

Leases, Uncapitalized Annual rentals $3 mill.

Pension Assets-12/23 $732 mill. **Oblig** $876 mill.

Pfd Stock None

Common Stock 256,100,293 shs.

MARKET CAP: $12.1 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	+3.7	-.7	
Avg. Indust. Use (MWH)	11696	11494	11435
Avg. Indust. Revs. per KWH (¢)	7.64	8.39	8.47
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	5486	5629	5856
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.8	+.7	+.7
Fixed Charge Cov. (%)	259	NA	NA

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	.5%	1.5%	*2.0%*
"Cash Flow"	6.0%	6.5%	*3.5%*
Earnings	6.0%	7.0%	*6.5%*
Dividends	6.5%	6.5%	*6.0%*
Book Value	6.0%	6.5%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	901	817	1024	927	3669
2022	1068	943	1135	1059	4205
2023	1077	912	1077	961	4027
2024	*1150*	*975*	*1150*	*1025*	*4300*
2025	*1185*	*1005*	*1185*	*1065*	*4440*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.68	.57	1.02	.35	2.63
2022	.77	.63	.90	.43	2.73
2023	.65	.64	1.02	.47	2.78
2024	*.69*	*.65*	*1.07*	*.64*	*3.05*
2025	*.74*	*.69*	*1.14*	*.68*	*3.25*

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.38	.38	.38	.38	1.52
2021	.4025	.4025	.4025	.4025	1.61
2022	.4275	.4275	.4275	.4275	1.71
2023	.4525	.4525	.4525	.4525	1.81
2024	.48				

BUSINESS: Alliant Energy Corporation is the parent company of Interstate Power and Light Company (IPL) and Wisconsin Power and Light Company (WPL). Together, the utility subsidiaries serve approximately one million electric and 425,000 natural gas customers in Wisconsin and Iowa. Electric revenue: residential, 36%; commercial, 25%; industrial, 29%; wholesale, 8%; other, 2%. Generating sources: coal, 32%; gas, 32%; wind, 16%; other, 1%; purchased, 19%. Fuel costs: 25% of revs. '22 reported deprec. rates: 2.9%-6.1%. Has 3,300 employees. Chairman, President & CEO: John O. Larsen. Inc.: Wisconsin. Address: 4902 N. Biltmore Lane, Madison, WI 53718-2148. Tel.: 608-458-3311. Internet: www.alliantenergy.com.

Alliant Energy posted fairly modest bottom-line growth last year. Indeed, on a GAAP basis, earnings rose just 2% to $2.78 a share in 2023, well below the 6% average annual gains that the Madison, Wisconsin-based electric and natural gas utility enjoyed over the past decade. Relatively mild weather across Alliant's two-state service area hurt heating and cooling demand. The modest earnings gain also reflected the further write down of tax assets on Alliant's balance sheet after Iowa's Department of Revenue reduced state levies on corporate income. That said, on a normalized basis, excluding the two aforementioned factors, EPS growth was approximately 5.5%, within the utility company's long-term target range.

We have profits rising roughly 8%, to $3.05 a share, in 2024. Underpinning our optimism is, in part, an expectation that Alliant will continue to exhibit good cost discipline. To that point, operating and maintenance expenses declined $30 million in 2023, helped by the retirement of the Lansing coal-fired power plant in northeast Iowa.

Leadership is budgeting more than $4 billion for renewable-energy and battery-storage projects between 2023 and 2027. Importantly, going green will greatly reduce the utility's reliance on fossil fuels, the price of which can fluctuate significantly. At the same time, Alliant stands to earn sizable tax credits, which it can monetize and use to further lower service costs.

Power demand may increase at a fairly modest clip over the next decade or two. A recent study ranked Wisconsin 39th among the 50 states for likely population growth between 2020 and 2040. Iowa, meanwhile, was just a bit better, at 28th. That said, word that Alliant has recently seen an uptick in economic development interest augurs well not only for commercial activity across the utility company's service area but also for the Midwest as a destination for job seekers.

Alliant shares remain an untimely selection for relative year-ahead price performance. Still, the utility company boasts both a fairly attractive dividend (current yield: 3.8%) and solid long-term total return potential.

Nils C. Van Liew *March 8, 2024*

(A) Diluted EPS. Excl. nonrecurring losses: '11, 1¢; '12, 8¢. '20 & '21 EPS don't sum due to rounding. Next earnings report due early May. **(B)** Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Dividend reinvestment plan avail. † Shareholder investment plan avail. **(C)** Incl. deferred charges. In '21: $1,980 mill., $7.91/sh. **(D)** In millions, adj. for split. **(E)** Rate base: Orig. cost. Rates all'd on com. eq. in IA in '20: various; in WI in '22: 10%; earned on avg. com. eq., '21: 11.3%. Regulatory Climate: Wisconsin, Above Average; Iowa, Average.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	100

AMEREN NYSE-AEE

RECENT PRICE 70.83 | P/E RATIO 15.4 (Trailing: 16.2 Median: 20.0) | RELATIVE P/E RATIO 0.89 | DIV'D YLD 3.8% | VALUE LINE

TIMELINESS 4 Lowered 12/29/23
SAFETY 1 Raised 9/10/21
TECHNICAL 4 Lowered 3/8/24
BETA .90 (1.00 = Market)

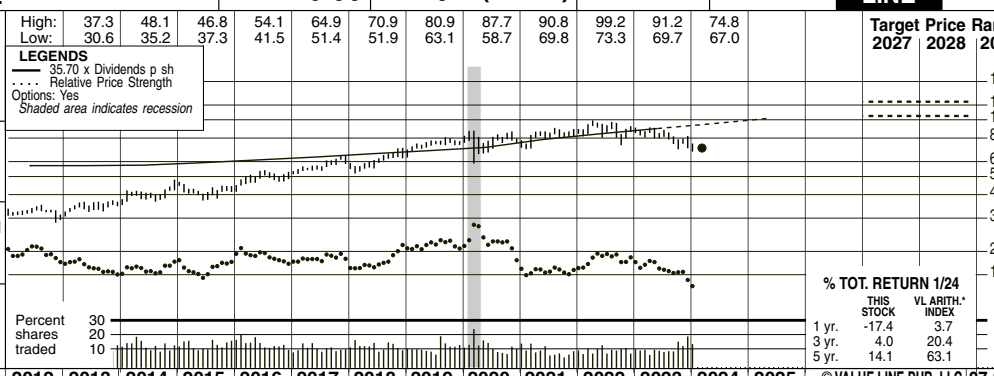
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$61-$116 $89 (25%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(+75%)	*18%*
Low	105	(+50%)	*13%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	296	289	280
to Sell	268	287	314
Hld's(000)	205221	204708	210352



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
36.92	29.87	31.77	31.04	28.14	24.06	24.95	25.13	25.04	25.46	25.73	24.00	22.87	24.81	30.37	28.10	*30.85*	*32.35*	Revenues per sh	*33.70*
6.44	6.06	6.33	5.87	5.87	5.25	5.77	6.08	6.59	6.80	7.64	7.83	8.08	8.89	9.59	9.99	*10.55*	*11.15*	"Cash Flow" per sh	*12.25*
2.88	2.78	2.77	2.47	2.41	2.10	2.40	2.38	2.68	2.77	3.32	3.35	3.50	3.84	4.14	4.37	*4.60*	*4.90*	Earnings per sh A	*5.75*
2.54	1.54	1.54	1.56	1.60	1.60	1.61	1.66	1.72	1.78	1.85	1.92	2.00	2.20	2.36	2.52	*2.68*	*2.86*	Div'd Decl'd per sh B ■	*3.30*
9.75	7.51	4.66	4.50	5.49	5.87	7.66	8.12	8.78	9.05	9.56	9.92	13.02	13.67	12.79	*12.90*	*12.55*	*12.80*	Cap'l Spending per sh	*13.00*
32.80	33.08	32.15	32.64	27.27	26.97	27.67	28.63	29.27	29.61	31.21	32.73	35.29	37.64	40.11	40.26	*42.90*	*45.95*	Book Value per sh C	*52.65*
212.30	237.40	240.40	242.60	242.63	242.63	242.63	242.63	242.63	242.63	244.50	246.20	253.30	257.70	262.00	267.00	*269.00*	*272.00*	Common Shs Outst'g D	*285.00*
14.2	9.3	9.7	11.9	13.4	16.5	16.7	17.5	18.3	20.6	18.3	22.1	22.2	21.4	21.5	18.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.0*
.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.18	1.14	1.16	1.24	1.07			Relative P/E Ratio	*1.10*
6.2%	6.0%	5.8%	5.3%	5.0%	4.6%	4.0%	4.0%	3.5%	3.1%	3.0%	2.6%	2.6%	2.7%	2.7%	3.3%			Avg Ann'l Div'd Yield	*3.0%*
6053.0	6098.0	6076.0	6177.0	6291.0	5910.0	5794.0	6394.0	7957.0	7502.0	*8300*	*8800*	Revenues ($mill)	*9600*
593.0	585.0	659.0	683.0	821.0	834.0	877.0	995.0	1074.0	1166.8	*1235*	*1330*	Net Profit ($mill)	*1640*
38.9%	38.3%	36.7%	38.2%	22.4%	17.9%	15.0%	13.6%	14.0%	12.0%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
5.7%	5.1%	4.1%	5.6%	6.9%	5.8%	5.5%	6.0%	5.0%	6.0%	*5.0%*	*5.0%*	AFUDC % to Net Profit	*4.0%*
47.2%	49.3%	47.7%	49.2%	50.3%	52.1%	55.0%	56.1%	56.6%	55.7%	*53.5%*	*52.5%*	Long-Term Debt Ratio	*51.0%*
51.7%	49.7%	51.3%	49.8%	48.8%	47.1%	44.3%	43.3%	43.4%	43.8%	*46.0%*	*47.0%*	Common Equity Ratio	*48.5%*
12975	13968	13840	14420	15632	17116	20158	22391	24193	*24950*	*25750*	*26450*	Total Capital ($mill)	*29500*
17424	18799	20113	21466	22810	24376	26807	29261	31262	*33050*	*35000*	*36300*	Net Plant ($mill)	*38400*
5.8%	5.3%	6.0%	6.0%	6.4%	6.0%	5.3%	5.3%	5.4%	5.5%	*5.0%*	*5.0%*	Return on Total Cap'l	*6.0%*
8.7%	8.3%	9.1%	9.3%	10.6%	10.2%	9.7%	10.1%	10.2%	11.0%	*11.0%*	*11.0%*	Return on Shr. Equity	*10.0%*
8.7%	8.3%	9.2%	9.4%	10.7%	10.3%	9.7%	10.2%	10.2%	11.0%	*11.0%*	*11.0%*	Return on Com Equity E	*10.0%*
2.9%	2.5%	3.3%	3.4%	4.8%	4.4%	4.2%	4.4%	4.4%	5.0%	*5.0%*	*5.0%*	Retained to Com Eq	*4.0%*
67%	70%	64%	64%	56%	57%	57%	57%	57%	57%	*56%*	*56%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $16018 mill. **Due in 5 Yrs** $2789 mill.
LT Debt $13829 mill. **LT Interest** $450 mill.
(LT interest earned: 3.8x)
Pension Assets-12/22 $5745 mill.
Oblig $5457 mill.
Pfd Stock $129 mill. **Pfd Div'd** $5 mill.
807,595 sh. $3.50 to $5.50 cum. (no par), $100 stated val., redeem. $102.176-$110/sh.; 487,508 sh. 4.00% to 5.16%, $100 par, redeem. $100-$104.30/sh.
Common Stock 262,945,048 shs.
as of 10/31/23
MARKET CAP: $18.6 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-3.5	-5.6	+2.1
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	307	291	325

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	-1.5%	.5%	*4.0%*
"Cash Flow"	4.0%	6.5%	*5.5%*
Earnings	4.0%	8.0%	*6.5%*
Dividends	3.5%	5.0%	*6.5%*
Book Value	2.0%	5.5%	*6.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1566	1472	1811	1545	6394
2022	1879	1726	2306	2046	7957
2023	2062	1760	2060	1620	7502
2024	*2100*	*1800*	*2400*	*2000*	*8300*
2025	*2200*	*1800*	*2500*	*2300*	*8800*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.91	.80	1.65	.48	3.84
2022	.97	.80	1.74	.63	4.14
2023	1.00	.90	1.87	.60	4.37
2024	*1.15*	*.90*	*1.95*	*.60*	*4.60*
2025	*1.20*	*.95*	*2.00*	*.75*	*4.90*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.495	.495	.495	.515	2.00
2021	.55	.55	.55	.55	2.20
2022	.59	.59	.59	.59	2.36
2023	.63	.63	.63	.63	2.52
2024					

BUSINESS: Ameren Corporation is a holding company formed through the merger of Union Electric and CIPSCO. Has 1.2 million electric and 127,000 gas customers in Missouri; 1.2 million electric and 813,000 gas customers in Illinois. Discontinued nonregulated power-generation operation in '13. Electric revenue breakdown: residential, 49%; commercial, 34%; industrial, 8%; other, 9%. Generating sources: coal, 73%; nuclear, 11%; hydro & other, 9%; purchased, 7%. Fuel costs: 25% of revenues. Has approximately 9,250 employees. Chairman: Warner L. Baxter. President & CEO: Martin J. Lyons, Jr. Inc.: Missouri. Address: One Ameren Plaza, 1901 Chouteau Ave., P.O. Box 66149, St. Louis, MO 63166-6149. Tel.: 314-621-3222. Internet: www.ameren.com.

Ameren has continued to perform consistently well over the past decade. Over the past 10 years, weather-normalized core earnings per share have risen at a compound annual growth rate of 7.8% while annual dividends paid per share have increased approximately 58%. The board of directors approved a quarterly dividend increase of 6.3%, representing more than a decade of consecutive hikes. Meanwhile, Ameren remains committed to its goals for increases to be in a range of 6%-8% annually (matching its target for earnings growth), with a payout ratio of 55%-65%.

Recent financial results and the 2024 outlook appear to be solid. Indeed, the company reported a 10% year over year rise in earnings per share in 2023, on a weather-normalized basis. The utility continues to benefit from increased infrastructure investments, higher electric service rates, lower tax expenses, and strong rate base growth. And, these catalysts will likely remain prevalent over the next few years. We expect 2024 earnings to come in at $4.60 a share, within management's EPS growth target of 6%-8%.

We are introducing our 2025 bottom-line estimate of $4.90 per share. Ameren will have a full year's effect of rate relief in Missouri and Illinois, and will continue to benefit from rate base growth and increased infrastructure investment over that interim. Too, the Inflation Reduction Act should continue to support the clean energy transition, reducing the costs of related infrastructure investments for customers over the long term. The utility expects to invest approximately $4.4 billion during 2024 in electric, natural gas, and transmission infrastructure compared to $3.5 billion last year. We also think the company will earn $5.75 per share by 2027-2029.

This stock is best suited for conservative income-oriented investors. Indeed, the dividend yield of this untimely but high-quality stock is about average for a utility, which is one of the highest dividend-paying industries in the market. What's more, capital appreciation potential for both the 18-month and 3- to 5-year time frames is solid compared to most of its peers.

Zachary J. Hodgkinson *March 8, 2024*

(A) Diluted EPS. Excl. nonrec. gain (losses): '10, ($2.19); '11, (32¢); '12, ($6.42); '17, (63¢); gain (loss) from discontinued ops.: '13, (92¢); '15, 21¢. Next earnings report due mid-May. **(B)** Div'ds paid late Mar., June, Sept., & Dec. ■ Div'd reinvest. plan avail. **(C)** Incl. intang. In '21: $6.60/sh. **(D)** In mill. **(E)** Rate base: Orig. cost depr. Rate allowed on com. eq. in MO in '22: elec. & gas, none specified; in IL: electric, varies; in '21: gas, 9.67%; earned on avg. com. eq., '21: 10.6%.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	100

AMERICAN ELEC. PWR. NDQ-AEP

RECENT PRICE 80.77 | P/E RATIO 14.2 (Trailing: 17.0 Median: 18.0) | RELATIVE P/E RATIO 0.82 | DIV'D YLD 4.4% | VALUE LINE

TIMELINESS 4 Lowered 12/15/23
SAFETY 1 Raised 3/17/17
TECHNICAL 4 Raised 2/9/24
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$70-$125	$98 (20%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	145	(+80%)	*19%*
Low	115	(+40%)	*13%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	635	596	599
to Sell	532	572	557
Hld's(000)	381232	386016	391405

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	51.6	63.2	65.4	71.3	78.1	81.1	96.2	105.0	91.5	105.6	98.3	84.6						
Low:	41.8	45.8	52.3	56.8	61.8	62.7	72.3	65.1	74.8	80.3	69.4	75.2						

Target Price Range 2027 2028 2029

LEGENDS
29.40 x Dividends p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-13.4	3.7
3 yr.	67.3	20.4
5 yr.	5.5	63.1

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	35.56	28.22	30.01	31.27	30.77	31.48	34.78	33.51	33.31	31.35	32.84	31.49	30.04	33.30	38.20	36.08	*38.75*	*40.20*	Revenues per sh	*42.75*
	6.84	6.32	6.29	6.83	6.92	7.02	7.57	7.98	8.47	7.95	8.77	9.35	10.28	10.98	10.72	10.92	*11.65*	*12.35*	"Cash Flow" per sh	*15.20*
	2.99	2.97	2.60	3.13	2.98	3.18	3.34	3.59	4.23	3.62	3.90	4.08	4.42	4.96	5.09	5.24	*5.60*	*6.00*	Earnings per sh A	*7.25*
	1.64	1.64	1.71	1.85	1.88	1.95	2.03	2.15	2.27	2.39	2.53	2.71	2.84	3.00	3.17	3.37	*3.60*	*3.81*	Div'd Decl'd per sh B ■ †	*4.16*
	9.83	6.19	5.07	5.74	6.45	7.75	8.68	9.37	9.98	11.79	12.89	12.43	12.72	11.43	13.18	*15.35*	*14.15*	*14.10*	Cap'l Spending per sh	*14.00*
	26.33	27.49	28.33	30.33	31.37	32.98	34.37	36.44	35.38	37.17	38.58	39.73	41.38	44.49	46.60	48.46	*55.05*	*58.90*	Book Value per sh C	*62.55*
	406.07	478.05	480.81	483.42	485.67	487.78	489.40	491.05	491.71	492.01	493.25	494.17	496.60	504.21	513.87	526.18	*530.00*	*535.00*	Common Shs Outst'g D	*550.00*
	13.1	10.0	13.4	11.9	13.8	14.5	15.9	15.8	15.2	19.3	18.0	21.4	19.6	17.1	21.1	16.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
	.79	.67	.85	.75	.88	.81	.84	.80	.80	.97	.97	1.14	1.01	.92	1.23	.93			Relative P/E Ratio	*1.00*
	4.2%	5.5%	4.9%	5.0%	4.6%	4.2%	3.8%	3.8%	3.5%	3.4%	3.6%	3.1%	3.3%	3.5%	3.3%	4.5%			Avg Ann'l Div'd Yield	*3.3%*
	17020	16453	16380	15425	16196	15561	14919	16792	19640	18982	*20550*	*21500*	Revenues ($mill)	*23500*
	1634.0	1763.4	2073.6	1783.2	1923.8	2019.0	2200.1	2448.1	2307.2	2757.2	*2970*	*3210*	Net Profit ($mill)	*3990*
	37.8%	35.1%	26.8%	33.7%	5.8%	.7%	1.9%	4.6%	NMF	*21.0%*	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
	9.0%	11.0%	8.0%	8.0%	10.7%	12.7%	9.7%	7.8%	7.0%	7.0%	*7.0%*	*6.5%*	AFUDC % to Net Profit	*5.0%*
	49.0%	49.8%	50.0%	51.5%	53.2%	56.1%	58.5%	58.3%	58.5%	58.2%	*58.0%*	*58.0%*	Long-Term Debt Ratio	*57.5%*
	51.0%	50.2%	50.0%	48.5%	46.8%	43.9%	41.5%	41.7%	42.0%	42.0%	*42.0%*	*42.0%*	Common Equity Ratio	*42.5%*
	33001	35633	34775	37707	40677	44759	49537	53734	57520	*62950*	*68900*	*70730*	Total Capital ($mill)	*75900*
	44117	46133	45639	50262	55099	60138	63902	66001	71283	*74600*	*78000*	*81250*	Net Plant ($mill)	*87300*
	6.3%	6.1%	7.2%	5.9%	5.9%	5.6%	5.6%	5.6%	4.0%	*4.5%*	*4.5%*	*4.5%*	Return on Total Cap'l	*5.0%*
	9.7%	9.9%	11.9%	9.8%	10.1%	10.3%	10.7%	11.1%	9.7%	*10.0%*	*10.0%*	*10.0%*	Return on Shr. Equity	*11.0%*
	9.7%	9.9%	11.9%	9.8%	10.1%	10.3%	10.7%	11.1%	9.7%	*10.0%*	*10.0%*	*10.0%*	Return on Com Equity	*11.0%*
	3.8%	3.9%	5.5%	3.2%	3.5%	3.4%	3.8%	4.3%	2.9%	*4.0%*	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
	61%	60%	54%	67%	65%	67%	65%	61%	70%	*63%*	*63%*	*63%*	All Div'ds to Net Prof	*61%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $40483 mill. **Due in 5 Yrs** $12886 mill.
LT Debt $37653 mill. **LT Interest** $1400 mill.

Leases, Uncapitalized Annual rentals $119.6 mill.

Pfd Stock None

Common Stock 526,184,585 shs.

MARKET CAP: $42.5 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	- -	+3.0	- -
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.0	NA	NA
Fixed Charge Cov. (%)	243	272	285

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	.5%	-.5%	*3.0%*
"Cash Flow"	5.0%	5.5%	*5.5%*
Earnings	5.0%	4.0%	*6.5%*
Dividends	5.0%	5.0%	*5.5%*
Book Value	3.5%	3.5%	*6.0%*

Calendar	QUARTERLY REVENUES ($ mill.) E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	4281	3826	4623	4061	16792
2022	4593	4640	5526	4881	19640
2023	4690	4373	5342	4577	18982
2024	*4820*	*4750*	*5375*	*5605*	*20550*
2025	*4950*	*4850*	*5800*	*5900*	*21500*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.15	1.15	1.59	1.07	4.96
2022	1.22	1.20	1.62	1.05	5.09
2023	1.11	1.13	1.77	1.23	5.24
2024	*1.35*	*1.35*	*1.75*	*1.15*	*5.60*
2025	*1.50*	*1.40*	*1.80*	*1.30*	*6.00*

Calendar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.70	.70	.70	.74	2.84
2021	.74	.74	.74	.78	3.00
2022	.78	.78	.78	.83	3.17
2023	.83	.83	.83	.88	3.37
2024					

BUSINESS: American Electric Power Company Inc. (AEP), through 10 operating utilities, serves 5.5 million customers in Arkansas, Kentucky, Indiana, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, & West Virginia. Has a transmission subsidiary. Electric revenue breakdown: residential, 43%; commercial, 23%; industrial, 18%; wholesale, 10%; other, 6%. Sold commercial barge operation in '15. Generating sources not available. Fuel costs: 33% of revenues. '22 reported depreciation rates (utility): 2.6%-12.5%. Has approximately 16,700 employees. Interim Chief Executive Officer: Benjamin G.S. Fowke III. Incorporated: New York. Address: 1 Riverside Plaza, Columbus, Ohio 43215-2373. Telephone: 614-716-1000. Internet: www.aep.com.

We think American Electric Power will post strong earnings growth in 2024 and 2025. The company has a number of rate cases pending, and will likely continue to benefit from rate relief. AEP is also well positioned to take advantage of increased investment in its transmission business, and volume growth over that interim. Our 2024 bottom-line estimate, which is staying put at $5.60 per share, is right near the midpoint of AEP's targeted range of $5.53-$5.73, which management unveiled upon reporting fourth-quarter results in late February. We look for comparable growth, to $6.00, in 2025. The utility remains committed to its long-term growth rate target of 6%-7%.

The company was granted a partial rate increase in Kentucky, and is trying to reach settlements in its cases in Indiana & Michigan. In January, Kentucky Power received approval for a 5.66% residential rate increase. The utility was also granted an order for the securitization portion of its pending rate case. Meanwhile, Indiana & Michigan requested hikes in 2023, based on a 10.5% ROE. The utility expects rates to go into effect by this year.

A well-known billionaire investor activist is looking to shake things up at the utility company. In February, activist investor and founder of Icahn Capital L.P., Carl Icahn took a $120 million stake in American Electric Power. In turn, AEP recently entered into an agreement with Icahn Capital to appoint two new directors to its board. Hunter Gary, senior managing director, and Henry Linginfelter, former Vice President of Southern Company Gas have both joined the board effective immediately. The company also just replaced CEO Julie Sloat with interim chief executive Benjamin G.S. Fowke III until a permanent replacement is found.

These untimely shares are best suited for risk-averse, income-oriented investors. The dividend yield of this top-quality stock is above the high-paying industrywide average. Too, capital appreciation potential over both the 18-month and 3- to 5-year time frames is attractive compared to most of its peers. Indeed, we look for the stock to trade around $115-$145 by 2027-2029.

Zachary J. Hodgkinson *March 8, 2024*

(A) Diluted EPS. Excl. nonrec. gains (losses): '08, 40¢; '10, (7¢); '11, 89¢; '12, (38¢); '13, (14¢); '16, ($2.99); '17, 26¢; '19, (20¢); gains (loss) from disc. ops.: '06, 2¢; '08, 3¢; '15, 58¢; '16, (1¢); '22, (58¢); '23, (34¢). Next earnings report due late April. **(B)** Div'ds paid early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. † Shareholder invest. plan avail. **(C)** Incl. intang. In '22: $52.5 million **(D)** In mill. **(E)** Rev. may not sum due to rounding.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	55
Earnings Predictability	95

DUKE ENERGY NYSE-DUK

RECENT PRICE **98.73** | P/E RATIO **16.5** (Trailing: 17.8 Median: 18.0) | RELATIVE P/E RATIO **0.95** | DIV'D YLD **4.2%** | **VALUE LINE**

TIMELINESS 3 Raised 11/24/23
SAFETY 2 New 6/1/07
TECHNICAL 4 Lowered 3/29/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$87-$133	$110 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	150	(+50%)	*14%*
Low	110	(+10%)	*7%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	852	830	838
to Sell	753	745	864
Hld's(000)	495714	500344	505574

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	75.5	87.3	90.0	87.8	91.8	91.4	97.4	103.8	108.4	116.3	106.4	99.9						
Low:	64.2	67.1	65.5	70.2	76.1	72.0	82.5	62.1	85.6	83.8	83.1	90.1						

LEGENDS
25.60 x Dividends p sh
Relative Price Strength
1-for-3 Rev split 7/12
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029

% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	4.7	16.9
3 yr.	13.1	16.2
5 yr.	30.8	71.5

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	31.15	29.18	32.22	32.63	27.88	34.84	33.84	34.10	32.49	33.66	33.73	34.21	31.04	32.64	37.36	37.69	*38.85*	*40.25*	Revenues per sh	*42.40*
	7.34	7.58	8.49	8.68	6.80	8.56	9.11	9.40	9.20	10.01	11.05	12.12	12.04	12.60	12.91	13.22	*13.55*	*13.90*	"Cash Flow" per sh	*15.05*
	3.03	3.39	4.02	4.14	3.71	3.98	4.13	4.10	3.71	4.22	4.72	5.06	5.12	5.24	5.27	5.56	*6.00*	*6.35*	Earnings per sh [A]	*7.60*
	2.70	2.82	2.91	2.97	3.03	3.09	3.15	3.24	3.36	3.49	3.64	3.75	3.82	3.90	3.98	4.06	*4.14*	*4.22*	Div'd Decl'd per sh [B] ■	*4.30*
	10.35	9.85	10.84	9.80	7.81	7.83	7.62	9.83	11.29	11.50	12.91	15.17	12.88	12.63	14.76	16.35	*17.60*	*17.75*	Cap'l Spending per sh	*16.75*
	49.51	49.85	50.84	51.14	58.04	58.54	57.81	57.74	58.62	59.63	60.27	61.20	59.82	61.55	61.51	63.70	*66.25*	*68.65*	Book Value per sh [C]	*70.00*
	423.96	436.29	442.96	445.29	704.00	706.00	707.00	688.00	700.00	700.00	727.00	733.00	769.00	769.00	770.00	771.00	*772.00*	*773.00*	Common Shs Outst'g [D]	*775.00*
	17.3	13.3	12.7	13.8	17.5	17.4	17.9	18.2	21.3	19.9	17.0	17.7	17.1	18.9	19.6	16.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
	1.04	.89	.81	.87	1.11	.98	.94	.92	1.12	1.00	.92	.94	.88	1.02	1.14	.94			Relative P/E Ratio	*.95*
	5.2%	6.2%	5.7%	5.2%	4.7%	4.4%	4.3%	4.3%	4.3%	4.2%	4.5%	4.2%	4.4%	3.9%	3.9%	4.3%			Avg Ann'l Div'd Yield	*3.9%*
	23925	23459	22743	23565	24521	25079	23868	25097	28768	29060	*30000*	*31100*	Revenues ($mill)	*32850*
	2934.0	2854.0	2560.0	2963.0	3339.0	3748.0	1377.0	3908.0	2550.0	2841.0	*3350*	*3825*	Net Profit ($mill)	*4775*
	30.6%	32.2%	31.0%	30.4%	14.1%	12.7%	.3%	5.1%	7.4%	9.2%	*9.0%*	*9.0%*	Income Tax Rate	*9.0%*
	7.2%	9.2%	11.7%	12.3%	11.4%	8.0%	6.9%	5.9%	8.1%	7.1%	*7.0%*	*7.0%*	AFUDC % to Net Profit	*7.0%*
	47.7%	48.6%	52.6%	54.0%	53.8%	54.0%	53.7%	55.1%	56.1%	59.6%	*58.5%*	*58.5%*	Long-Term Debt Ratio	*61.0%*
	52.3%	51.4%	47.4%	46.0%	46.2%	44.1%	44.4%	43.1%	42.5%	40.4%	*41.0%*	*40.5%*	Common Equity Ratio	*37.5%*
	78088	77222	86609	90774	94940	101807	103589	109744	115235	121564	*124525*	*125500*	Total Capital ($mill)	*144100*
	70046	75709	82520	86391	91694	102127	106782	111408	111748	115315	*124375*	*132500*	Net Plant ($mill)	*141100*
	4.8%	4.8%	4.0%	4.3%	4.6%	4.7%	4.8%	4.8%	2.0%	2.3%	*4.5%*	*4.5%*	Return on Total Cap'l	*4.5%*
	7.2%	7.2%	6.2%	7.1%	7.6%	8.0%	8.1%	8.4%	5.2%	5.8%	*9.0%*	*9.0%*	Return on Shr. Equity	*9.0%*
	7.2%	7.2%	6.2%	7.1%	7.6%	8.3%	8.2%	8.5%	5.2%	5.8%	*9.0%*	*9.0%*	Return on Com Equity [E]	*9.0%*
	1.7%	1.5%	.6%	1.2%	2.0%	2.4%	2.3%	1.9%	1.5%	1.8%	*2.5%*	*2.5%*	Retained to Com Eq	*3.0%*
	76%	79%	91%	83%	74%	71%	73%	78%	76%	73%	*73%*	*73%*	All Div'ds to Net Prof	*68%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $75252 mill. **Due in 5 Yrs** $19536 mill.
LT Debt $72452 mill. **LT Interest** $2206 mill.
Incl. $915 mill. finance leases.
(LT interest earned: 2.7x)
Leases, Uncapitalized Annual rentals $225 mill.
Pension Assets-12/23 $6993 mill.
Oblig $8207 mill.
Pfd Stock $1962 mill. **Pfd Div'd** $107 mill.
40 mill. shs. 5.75%, cum., $25 liq. value, redeemable at $25.50 prior to 6/15/24; 1 mill. shs. 4.875%, cum., $1000 liq. value.
Common Stock 770,811,446 shs. **as of 1/31/24**
MARKET CAP: $76.1 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	+2.0	NA	NA
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	NA	NA	NA
Fixed Charge Cov. (%)	209	285	NA

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	.5%	-.5%	*2.5%*
"Cash Flow"	4.0%	5.0%	*5.0%*
Earnings	3.0%	4.5%	*5.0%*
Dividends	3.0%	3.5%	*2.0%*
Book Value	2.0%	1.0%	*2.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	6150	5758	6951	6238	25097
2022	7132	6685	7968	6983	28768
2023	7276	6578	7994	7212	29060
2024	*7350*	*6650*	*8250*	*7750*	*30000*
2025	*7700*	*6850*	*8450*	*8100*	*31100*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.26	1.15	1.88	.94	5.24
2022	1.30	1.14	1.78	1.11	5.27
2023	1.20	.91	1.94	1.51	5.56
2024	*1.40*	*1.05*	*2.05*	*1.50*	*6.00*
2025	*1.40*	*1.35*	*2.10*	*1.50*	*6.35*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.945	.945	.965	.965	3.82
2021	.965	.965	.985	.985	3.90
2022	.985	.985	1.005	1.005	3.98
2023	1.005	1.005	1.025	1.025	4.06
2024	1.025				

BUSINESS: Duke Energy Corporation is a holding company for utilities with 7.6 mill. elec. customers in NC, FL, IN, SC, OH, and KY, and 1.6 mill. gas customers in OH, KY, NC, SC, and TN. Owns independent power plants & has 25% stake in National Methanol in Saudi Arabia. Acq'd Progress Energy 7/12; Piedmont Natural Gas 10/16; discontinued most int'l ops. in '16. Elec. rev. breakdown: residential, 45%; commercial, 28%; industrial, 13%; other, 14%. Generating sources: gas, 32%; nuclear, 30%; coal, 18%; other, 1%; purchased, 19%. Fuel costs: 28% of revs. '22 reported deprec. rate: 3.6%. Has 27,600 employees. Chairman, President & CEO: Lynn J. Good. Inc.: DE. Address: 550 South Tryon St., Charlotte, NC 28202-1803. Tel.: 704-382-3853. Internet: www.duke-energy.com.

Duke Energy recently filed some rate cases. In Indiana, the utility filed for a hike of $492 million (16%) over 2026 for its investments in improving the electric grid. In North Carolina, Piedmont Gas is seeking recovery for its infrastructure investments to improve reliability, an overall 11.7% increase. And, Duke Energy Florida requested an increase of approximately $820 million between 2025-2027 to increase efficiency, reduce outages, and add 14 new solar sites.

We are sticking with our 2024 earnings-per-share estimate of $6.00. This is around the midpoint of the company's targeted range of $5.85-$6.10 per share. Management also reaffirmed its long-term profit growth target of 5%-7% annually through 2028. We think rate relief and growing power demand will produce a 8% rise in earnings this year, and a 6% increase in 2025. Duke Energy expects its power demand to grow by 1.5%-2% annually in the near-term and looks for a sharper rise of 2.5% a year over the next decade or so. The adoption of electric vehicles should make up about 40% of this increase. Meanwhile, the company's earnings over the next few years should benefit from the aforementioned pending rate cases and energy-efficiency programs.

Duke remains focused on improving the electricity grid and providing solar investments. The utility recently completed its Bad Creek upgrade, which added 320 MWh of energy to support electricity demand. The upgrades took four years to complete and the total capacity of the station is now 1,680 MWh, enough to power over a million homes. The company is looking to extend its license of the Bad Creek facility and potentially add a second powerhouse at the site.

This issue is tailor made for income-oriented accounts. Duke stock has an above-average dividend yield for a utility. And, the company has proven to be one of the better-managed and best-performing utilities in the industry. We also slightly increased our 3- to 5-year Target Price Range, and now look for these shares to trade around $110-$150 over that interim. At the current quotation, however, long-term capital appreciation potential is nothing to write home about.

Zachary J. Hodgkinson *May 10, 2024*

Company's Financial Strength A
Stock's Price Stability 95
Price Growth Persistence 45
Earnings Predictability 100

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(A) Dil. EPS. Excl. net nonrec. losses: '12, 64¢; '13, 22¢; '14, 59¢; '15, 5¢; '16, 60¢; '18, 96; '20, $3.40; '21, 30¢; net nonrec gain: '17, 14¢. 2021 EPS may not sum to annual due to rounding. Next egs. due early Aug. **(B)** Div'ds paid mid-Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. **(C)** Incl. intang. In '22: $41.34/sh. **(D)** In mill., **(E)** Rate base: Net orig. cost. Rate all'd on com. eq. in '21 in NC: 9.6%; 9.5%; in '20 in FL: 9.5%-11.5%; in '20 in IN: 9.7%. in '19 in SC:9.5%; Reg. Clim.: NC, SC Avg.; OH, IN Above Avg.

EDISON INTERNAT'L NYSE-EIX

RECENT PRICE 70.68 | P/E RATIO 14.3 (Trailing: 14.8 Median: 14.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 4.5% | VALUE LINE

TIMELINESS 3 Raised 3/1/24
SAFETY 3 Lowered 11/23/18
TECHNICAL 3 Lowered 3/22/24
BETA 1.00 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$55-$90	$73 (5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	115	(+65%)	*16%*
Low	75	(+5%)	*6%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	369	361	356
to Sell	304	299	362
Hld's(000)	340122	336919	342030

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	54.2	68.7	69.6	78.7	83.4	71.0	76.4	78.9	68.6	73.3	74.9	73.3								
Low:	44.3	44.7	55.2	58.0	62.7	45.5	53.4	43.6	53.9	54.4	58.8	63.2								
	43.31	37.98	38.09	39.16	36.41	38.61	41.17	35.37	36.43	37.81	38.85	34.11	35.83	39.18	45.05	42.56	*44.95*	*47.40*	Revenues per sh	*53.85*
	8.08	7.96	8.41	9.03	9.63	8.80	9.95	10.35	10.43	11.03	4.69	9.39	9.80	10.59	11.51	11.80	*12.85*	*13.60*	"Cash Flow" per sh	*15.00*
	3.68	3.24	3.35	3.23	4.55	3.78	4.33	4.15	3.94	4.51	d1.26	4.70	4.52	4.59	4.63	4.76	*4.95*	*5.50*	Earnings per sh [A]	*6.55*
	1.23	1.25	1.27	1.29	1.31	1.37	1.48	1.73	1.98	2.23	2.43	2.48	2.58	2.69	2.84	2.99	*3.14*	*3.29*	Div'd Decl'd per sh [B] ■	*3.86*
	8.67	10.07	13.94	14.76	12.73	11.05	11.99	12.97	11.46	11.75	13.84	13.47	14.47	14.47	15.12	14.19	*15.75*	*16.25*	Cap'l Spending per sh	*17.00*
	29.21	30.20	32.44	30.86	28.95	30.50	33.64	34.89	36.82	35.82	32.10	36.75	37.08	36.57	35.70	36.02	*38.00*	*40.40*	Book Value per sh [C]	*48.25*
	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	361.99	378.91	380.38	382.21	383.93	*386.00*	*388.00*	Common Shs Outst'g [D]	*390.00*
	12.4	9.7	10.3	11.8	9.7	12.7	13.0	14.8	17.9	17.2	- -	14.1	13.3	12.9	14.0	14.4	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.5*
	.75	.65	.66	.74	.62	.71	.68	.75	.94	.87	- -	.75	.68	.70	.81	.80			Relative P/E Ratio	*.80*
	2.7%	4.0%	3.7%	3.4%	3.0%	2.8%	2.6%	2.8%	2.8%	2.9%	3.8%	3.7%	4.3%	4.5%	4.4%	4.4%			Avg Ann'l Div'd Yield	*4.1%*
	13413	11524	11869	12320	12657	12347	13578	14905	17220	16338	*17350*	*18400*	Revenues ($mill)	*21000*
	1539.0	1480.0	1422.0	1603.0	d290.0	1716.0	1818.0	1907.0	1977.0	2035.0	*2120*	*2345*	Net Profit ($mill)	*2770*
	22.4%	6.6%	11.1%	5.0%	- -	1.2%	5.0%	18.0%	12.5%	14.9%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
	5.8%	8.0%	6.8%	7.2%	- -	9.6%	9.6%	8.8%	9.6%	11.4%	*11.0%*	*10.5%*	AFUDC % to Net Profit	*10.0%*
	44.1%	45.0%	41.8%	45.6%	53.6%	53.5%	55.2%	57.6%	60.7%	62.8%	*64.0%*	*64.0%*	Long-Term Debt Ratio	*65.0%*
	47.2%	46.7%	49.2%	45.8%	38.3%	39.9%	39.5%	33.2%	30.6%	28.7%	*28.0%*	*28.5%*	Common Equity Ratio	*28.5%*
	23216	24352	24362	25506	27284	33360	35581	41959	44547	48260	*52150*	*55350*	Total Capital ($mill)	*65650*
	32981	35085	37000	39050	41348	44285	47839	50700	53486	56084	*59100*	*62250*	Net Plant ($mill)	*72200*
	7.7%	7.1%	6.9%	7.3%	.1%	6.4%	6.3%	5.6%	5.7%	5.8%	*5.0%*	*5.5%*	Return on Total Cap'l	*5.5%*
	11.9%	11.1%	10.0%	11.6%	NMF	11.1%	11.4%	10.7%	11.3%	11.3%	*11.5%*	*12.0%*	Return on Shr. Equity	*12.0%*
	13.0%	12.0%	10.8%	12.7%	NMF	12.0%	12.0%	12.5%	12.9%	13.1%	*13.0%*	*13.5%*	Return on Com Equity [E]	*13.5%*
	8.8%	7.2%	5.6%	6.6%	NMF	5.9%	5.4%	5.4%	5.2%	5.0%	*5.0%*	*5.5%*	Retained to Com Eq	*5.5%*
	37%	44%	53%	52%	NMF	54%	58%	61%	64%	66%	*67%*	*63%*	All Div'ds to Net Prof	*62%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $34090 mill. **Due in 5 Yrs** $10489 mill.
LT Debt $30316 mill. **LT Interest** $1565 mill.
(Total Interest Coverage: 2.4x)
Leases, Uncapitalized Annual rentals $166 mill.

Pension Assets-12/22 $3609 mill.
Oblig $3647 mill.

Pfd Stock $4116 mill. **Pfd Div'd** $225 mill.

Common Stock 384,524,276 shs.
as of 2/15/24
MARKET CAP: $27.2 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	-3.9	+.9	-6.3
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	21190	24345	21254
Annual Load Factor (%)	52.7	45.8	49.7
% Change Customers (yr-end)	+.3	+.8	+.7
Fixed Charge Cov. (%)	113	135	166

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	1.0%	2.5%	*4.0%*
"Cash Flow"	2.0%	5.5%	*5.0%*
Earnings	2.0%	14.0%	*6.0%*
Dividends	8.0%	5.0%	*5.5%*
Book Value	2.0%	0.5%	*5.0%*

QUARTERLY REVENUES ($ mill.)

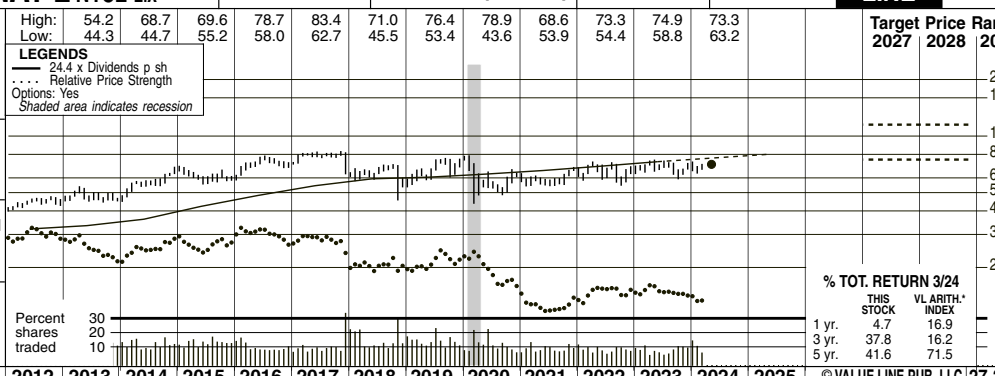
Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	2960	3315	5299	3331	14905
2022	3968	4008	5228	4016	17220
2023	3966	3964	4702	3706	16338
2024	*4250*	*4300*	*4950*	*3850*	*17350*
2025	*4500*	*4550*	*5250*	*4100*	*18400*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.79	.94	1.69	1.16	4.59
2022	1.07	.94	1.48	1.15	4.63
2023	1.09	1.01	1.38	1.28	4.76
2024	*1.15*	*1.05*	*1.45*	*1.30*	*4.95*
2025	*1.30*	*1.15*	*1.60*	*1.45*	*5.50*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.6375	.6375	.6375	.6375	2.55
2021	.6625	.6625	.6625	.6625	2.65
2022	.70	.70	.70	.70	2.80
2023	.7375	.7375	.7375	.7375	2.95
2024	.78				



BUSINESS: Edison International is a holding company for Southern California Edison Company (SoCal Edison), which supplies electricity to 5.28 mill. customers in a 50,000-sq.-mi. area in central, coastal, & southern CA (excl. Los Angeles & San Diego). Edison Energy is an energy svcs. co. Disc. Edison Mission Energy (independent power producer) in '12. Elec. rev. breakdown: residential, 40%; commercial, 43%; industrial, 3%; other, 14%. Generating sources: nuclear, 9%; gas, 5%; hydroelectric, 6%; purchased, 80%. Power costs: 34% of revs. '23 reported depr. rate: 4.1%. Employs 14,316. Board Chair: Peter J. Taylor. President & CEO: Pedro J. Pizzaro. Inc.: CA. Address: 2244 Walnut Grove Ave., P.O. Box 976, Rosemead, CA 91770. Tel.: 626-302-2222. Web: www.edison.com.

Edison International should see decent earnings gains in 2024. This year's weather comparisons are not particularly difficult. And, the utility ought to continue to prosper from the escalation mechanism set forth in the 2021 General Rate Case (GRC) decision that allows it to bill for certain types of expenses, alleviating regulatory lag to a large degree. Load growth in California is healthy, at about 3% due to trends in electrification for vehicles and heavy equipment. This leads to plenty of transmission and distribution work that pays off rapidly in terms of return on investment for regulated utilities in California. Fire mitigation work also keeps the rate base growing. Edison's current authorized return on equity (ROE) is 10.3%, which is fairly generous relative to the rates that peers have been receiving in other states. That said, the company may get a further lift next year in that regard.

Edison has a general rate case decision coming its way in 2025. State peer, PG&E, received favorable terms from the California Public Utilities Commission, with a recent boost to its authorized ROE to 10.7% without too much public backlash. There's a reasonable chance that Edison will get a lift in its investment returns, as well. As such, we're projecting a 6% gain in earning per share next year.

Wildfire headline risk comes with the territory here. In October, Orange County filed a lawsuit alleging EIX's equipment caused forest fires in 2020 and 2022. Dollar amounts sought weren't given. In February, the company agreed to pay an $80 million settlement to the federal government for forestland burned in the 2017 Thomson fire. In recent years, EIX has paid out billions of dollars in lawsuit settlements associated with the role its power lines played in 2017 and 2018 forest fires. Notably, management recently said the settlement payout process has nearly run its course. The company also believes it has reduced its risk of causing a blaze by 88% as a result of its ongoing mitigation work.

This neutrally ranked equity (Timeliness: 3, Average) doesn't stand out from the crowd at the recent quotation. On a total-return basis, EIX is right at the utility industry median.

Anthony J. Glennon *April 19, 2024*

(A) Adjusted (non-GAAP) EPS from 2019 on. Excl. gains/(losses): nonrecur's ; '10, 54¢; '11, ($3.33); '13, ($1.12); '15, ($1.18); '17, ($1.37); '18, (14¢); '19, (92¢); '20, ($2.54); '21, ($2.59); '22, ($3.02); '23, ($1.34); disc. ops.: '13, 11¢; '14, 57¢; '15, 11¢; '18, 10¢. Qtly. EPS may not sum to full yr. due to rounding. Next egs. report due early May. **(B)** Div'ds paid late Jan., Apr., July, & Oct. ■ Div'd reinv. plan avail. **(C)** Incl. def'd chgs. In '23: $4.36/sh. **(D)** In mill. **(E)** Rate base: net orig. cost. Rate all'd on com. eq. in '20: 10.3%; Regulatory Climate: Avg.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	25
Earnings Predictability	10

ENTERGY CORP. NYSE-ETR

RECENT PRICE 99.95 | P/E RATIO 9.8 (Trailing: 9.0 Median: 14.0) | RELATIVE P/E RATIO 0.56 | DIV'D YLD 4.5% | VALUE LINE

TIMELINESS 3 Lowered 3/8/24
SAFETY 2 Raised 12/13/19
TECHNICAL 4 Lowered 3/8/24
BETA .95 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$84-$129	$107 (5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	175	(+75%)	*18%*
Low	115	(+15%)	*8%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	367	405	402
to Sell	287	270	304
Hld's(000)	184354	181973	184676

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	72.6	92.0	90.3	82.1	87.9	90.8	122.1	135.5	115.0	126.8	111.9	104.9						
Low:	60.2	60.4	61.3	65.4	69.6	71.9	83.2	75.2	85.8	94.9	87.1	96.1						

Target Price Range 2027 2028 2029

LEGENDS
27.00 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded area indicates recession

% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-3.8	3.7
3 yr.	17.6	20.4
5 yr.	34.0	63.1

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	69.15	56.82	64.27	63.67	57.94	63.86	69.71	64.54	60.55	61.35	58.23	54.63	50.51	57.95	65.18	57.07	*57.80*	*60.80*	Revenues per sh	*69.90*
	12.89	13.29	16.54	17.53	15.98	16.25	17.68	17.71	18.72	16.70	16.50	17.19	18.21	17.90	15.51	21.53	*17.45*	*18.40*	"Cash Flow" per sh	*21.35*
	6.20	6.30	6.66	7.55	6.02	4.96	5.77	5.81	6.88	5.19	5.88	6.30	6.90	6.87	5.37	11.10	*6.45*	*6.85*	Earnings per sh [A]	*8.05*
	3.00	3.00	3.24	3.32	3.32	3.32	3.32	3.34	3.42	3.50	3.58	3.66	3.74	3.86	4.10	4.34	*4.56*	*4.70*	Div'd Decl'd per sh [B] ■ †	*5.00*
	13.92	12.99	13.33	15.21	18.18	15.73	14.82	16.79	17.28	22.07	22.45	21.72	24.52	30.86	25.04	20.86	*21.00*	*22.00*	Cap'l Spending per sh	*19.75*
	42.07	45.54	47.53	50.81	51.73	54.00	55.83	51.89	45.12	44.28	46.78	51.34	54.56	57.42	61.40	68.70	*70.65*	*73.65*	Book Value per sh [C]	*84.65*
	189.36	189.12	178.75	176.36	177.81	178.37	179.24	178.39	179.13	180.52	189.06	199.15	200.24	202.65	211.18	212.85	*218.00*	*222.00*	Common Shs Outst'g [D]	*230.00*
	16.6	12.0	11.6	9.1	11.2	13.2	12.9	12.5	10.9	15.0	13.8	16.5	15.3	15.0	21.1	9.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.75	.88	.79	.81	1.22	.51			Relative P/E Ratio	*1.00*
	2.9%	4.0%	4.2%	4.9%	4.9%	5.1%	4.5%	4.6%	4.6%	4.5%	4.4%	3.5%	3.6%	3.7%	3.6%	4.3%			Avg Ann'l Div'd Yield	*3.7%*
	12495	11513	10846	11074	11009	10879	10114	11743	13764	12147	*12600*	*13500*	Revenues ($mill)	*16070*
	1060.0	1061.2	1249.8	950.7	1092.1	1258.2	1406.7	1402.8	1103.2	2356.5	*1405*	*1520*	Net Profit ($mill)	*1850*
	37.8%	2.2%	11.3%	1.8%	--	--	--	16.1%	16.1%	16.1%	*23.0%*	*23.0%*	Income Tax Rate	*23.0%*
	9.3%	7.4%	8.1%	14.7%	17.5%	16.7%	12.2%	7.1%	2.5%	1.7%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
	54.9%	57.8%	63.6%	63.6%	63.2%	62.0%	65.5%	67.6%	64.2%	60.8%	*61.0%*	*61.0%*	Long-Term Debt Ratio	*61.0%*
	43.8%	40.8%	35.5%	35.5%	35.9%	37.1%	33.7%	31.7%	35.2%	38.6%	*39.0%*	*39.0%*	Common Equity Ratio	*39.0%*
	22842	22714	22777	22528	24602	27557	32386	36733	36810	37851	*40030*	*42445*	Total Capital ($mill)	*50555*
	28723	27824	27921	29664	31974	35183	38853	42244	42477	43834	*46465*	*49255*	Net Plant ($mill)	*58660*
	6.0%	6.0%	6.9%	5.7%	5.8%	5.9%	5.6%	4.9%	4.3%	7.6%	*4.5%*	*4.5%*	Return on Total Cap'l	*6.0%*
	10.3%	11.1%	15.1%	11.6%	12.0%	12.0%	12.6%	11.8%	8.4%	15.9%	*9.0%*	*9.0%*	Return on Shr. Equity	*9.5%*
	10.4%	11.2%	15.2%	11.7%	12.2%	12.1%	12.7%	11.9%	8.4%	16.0%	*9.0%*	*9.0%*	Return on Com Equity [E]	*9.5%*
	4.4%	4.8%	7.7%	3.9%	4.9%	5.2%	5.9%	5.2%	1.9%	9.7%	*2.5%*	*3.0%*	Retained to Com Eq	*3.5%*
	58%	58%	50%	68%	61%	58%	55%	57%	78%	40%	*71%*	*69%*	All Div'ds to Net Prof	*62%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $26246 mill. **Due in 5 Yrs** $11117 mill.
LT Debt $23009 mill. **LT Interest** $1046.0 mill.
Incl. $54.7 mill. of securitization bonds.
(LT interest earned: 2.5x)
Leases, Uncapitalized Annual rentals $67.4 mill.
Pension Assets-12/23 $5469.6 mill.
Oblig $5915.4 mill.
Pfd Stock $219.4 mill. **Pfd Div'd** $18.3 mill.
200,000 shs. 6.25%-7.5%, $100 par; 250,000 shs. 8.75%, 1.4 mill. shs. 5.375%; all cum., without sinking fund.
Common Stock 213,237,552 shs. **as of 1/31/24**
MARKET CAP: $21.5 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	+3.2	+1.1	+4.5
Total Indust. Use (GWH)	49819	52501	52807
Avg. Indust. Revs. per KWH(¢)	5.91	7.08	6.00
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.0	+1.0	+.4
Fixed Charge Cov. (%)	243	209	250

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	-.5%	--	*2.5%*
"Cash Flow"	1.0%	1.0%	*2.5%*
Earnings	2.5%	5.5%	*.5%*
Dividends	2.0%	3.0%	*3.5%*
Book Value	2.0%	6.5%	*4.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	2845	2822	3353	2723	11743
2022	2878	3395	4219	3273	13764
2023	2981	2846	3596	2725	12147
2024	*2900*	*3300*	*3300*	*3100*	*12600*
2025	*3100*	*3600*	*3600*	*3200*	*13500*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.66	1.30	2.63	1.28	6.87
2022	1.36	.78	2.74	.51	5.37
2023	1.47	1.84	3.14	4.66	11.10
2024	*1.50*	*1.05*	*2.95*	*.95*	*6.45*
2025	*1.60*	*1.15*	*3.05*	*1.05*	*6.85*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.93	.93	.93	.95	3.74
2021	.95	.95	.95	1.01	3.86
2022	1.01	1.01	1.01	1.07	4.10
2023	1.07	1.07	1.07	1.13	4.34
2024	1.13				

BUSINESS: Entergy Corporation supplies electricity to 3 million customers through subsidiaries in Arkansas, Louisiana, Mississippi, Texas, and New Orleans (regulated separately from Louisiana). Distributes gas to 206,000 customers in Louisiana. Is selling its last nonutility nuclear unit (shut down 5/22). Electric revenue breakdown: residential, 37%; commercial, 24%; industrial, 27%; other, 12%. Generating sources: gas, 68%; nuclear, 22%; coal, 9%; hydro and solar, 1%. Fuel costs: 32% of revenues. '22 reported depreciation rate: 2.7%. Has 11,707 employees. Chairman & CEO: Leo P. Denault. Incorporated: Delaware. Address: 639 Loyola Avenue, P.O. Box 61000, New Orleans, Louisiana 70161. Telephone: 504-576-4000. Internet: www.entergy.com.

Entergy posted much stronger 2023 fourth-quarter earnings results than we expected. Though revenues fell slightly to $2.72 billion, based on lower fuel price surcharges, the company signed 61 new electric service contracts with large customers in 2023. Though fuel costs and purchased power expenses declined, operating margins fell a bit in the quarter as maintenance, depreciation, and interest costs rose. Still, the company benefited from a large tax gain during the quarter as well as from a regulatory reversal of liability related to Hurricane Isaac. Overall, these factors caused earnings to advance to $4.66 per share during the quarter.

The company will likely show decent operating advancement in the years ahead. Revenues ought to increase as Entergy benefits from growth in its residential business as people move into the coverage area. Significant expansion will probably occur in the industrial space, as manufacturing facilities move to the U.S. This will likely be headlined by a new Amazon Web Services building a large facility in Mississippi. Growth should also come from positive developments in rate cases, especially as Entergy gains from higher resilience spending in its New Orleans coverage area. Other rate decisions, such as one in Louisiana, should occur shortly. Additionally, we think that the company will continue to benefit from increased demand for green energy projects as Entergy plans to build out its solar capabilities. We think maintenance and depreciation expenses will rise as it builds out its power generation footprint. Interest expenses ought to remain stable in the short term as interest rates decline, offsetting a higher debt load. Still, we don't foresee any recurrence of the tax benefits. Thus, we have earnings per share slipping to $6.45 in 2024, but rising to $6.85 in 2025, and $8.05 per share by 2027-2029.

Shares of Entergy are neutrally ranked for Timeliness. The stock also offers about-average appreciation potential over the next three to five years, though the dividend is attractive here. The yield is above average for the industry, and we think the payout will continue to grow at a good clip.

John E. Seibert III *March 8, 2024*

(A) Diluted EPS. GAAP starting in 2022. Excl. nonrec. losses: '12, $1.26; '13, $1.14; '14, 56¢; '15, $6.99; '16, $10.14; '17, $2.91; '18, $1.25; '21, $1.33. Next earnings report due early May.
(B) Div'ds historically paid in early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. † Shareholder investment plan avail.
(C) Incl. deferred charges. In '22: $26.66/sh.
(D) In mill. **(E)** Rate base: Net original cost. Allowed ROE (blended): 9.71%; earned on avg. com. eq., '23: 16.0%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	45
Earnings Predictability	80

EVERGY, INC. NYSE-EVRG

RECENT PRICE 49.47 | P/E RATIO 12.0 (Trailing: 16.7 Median: NMF) | RELATIVE P/E RATIO 0.69 | DIV'D YLD 5.3% | VALUE LINE

TIMELINESS 4 Lowered 2/16/24
SAFETY 2 New 9/14/18
TECHNICAL 4 Lowered 3/8/24
BETA .95 (1.00 = Market)

18-Month Target Price Range

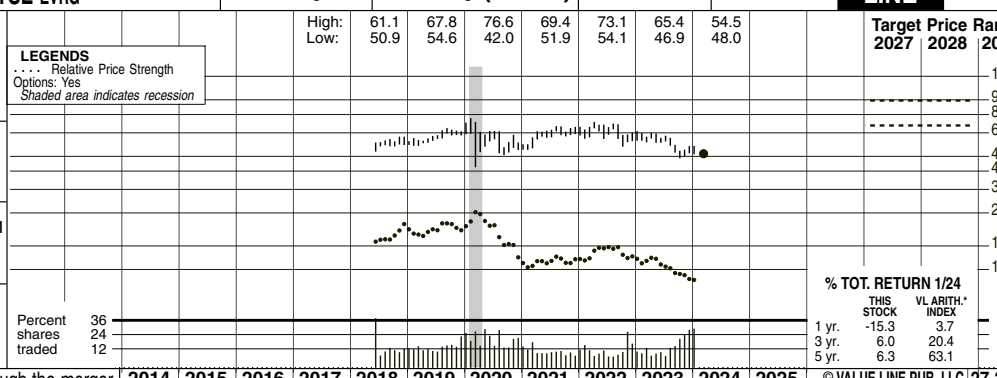
Low-High	Midpoint (% to Mid)
$43-$77	$60 (20%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	95	(+90%)	*21%*
Low	70	(+40%)	*14%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	310	298	320
to Sell	284	272	273
Hld's(000)	194561	192350	196134



Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Great Plains Energy holders received .5981 of a share of Evergy for each of their shares, and Westar Energy holders received one share of Evergy for each of their shares. The merger was completed on June 4, 2018. Shares of Evergy began trading on the New York Stock Exchange one day later.

CAPITAL STRUCTURE as of 9/30/23
Total Debt $10187 mill. **Due in 5 Yrs** $4388 mill.
LT Debt $9298 mill. **LT Interest** $306 mill.
Incl. $40.9 mill. finance leases.
(LT interest earned: 3.8x)

Leases, Uncapitalized Annual rentals $18.8 mill.

Pension Assets-12/22 $1714.7 mill.
Oblig $2561.7 mill.

Pfd Stock None

Common Stock 229,720,757 shs.
MARKET CAP: $11.4 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-3.9	+3.1	+6.7
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	7.14	6.94	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	286	350	382

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	--	--	*2.5%*
"Cash Flow"	--	--	*5.0%*
Earnings	--	--	*7.5%*
Dividends	--	--	*7.0%*
Book Value	--	--	*3.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1611	1236	1616	1122	5586.7
2022	1223	1446	1909	1281	5859.1
2023	1297	1354	1669	***1460***	***5780***
2024	***1250***	***1500***	***1850***	***1300***	***5900***
2025	***1300***	***1500***	***1900***	***1300***	***6000***

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.84	.81	1.95	.23	3.83
2022	.53	.84	1.86	.03	3.26
2023	.62	.78	1.53	***.67***	***3.60***
2024	***.65***	***.80***	***2.00***	***.40***	***3.85***
2025	***.70***	***.85***	***2.00***	***.45***	***4.00***

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.505	.505	.505	.535	2.05
2021	.535	.535	.535	.5725	2.18
2022	.5725	.5725	.5725	.6125	2.33
2023	.6125	.6125	.6125	.6425	2.48
2024					

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	--	--	--	--	16.75	22.71	21.66	24.36	25.49	***25.15***	***25.65***	***26.10***	Revenues per sh	***29.15***
	--	--	--	--	4.89	7.18	7.06	8.18	7.34	***7.90***	***8.20***	***8.50***	"Cash Flow" per sh	***9.35***
	--	--	--	--	2.50	2.79	2.72	3.83	3.26	***3.60***	***3.85***	***4.00***	Earnings per sh A	***4.75***
	--	--	--	--	1.74	1.93	2.05	2.18	2.33	2.48	***2.61***	***2.74***	Div'd Decl'd per sh B ■	***3.05***
	--	--	--	--	4.19	5.34	6.88	8.60	9.41	***9.20***	***9.25***	***9.30***	Cap'l Spending per sh	***9.50***
	--	--	--	--	39.28	37.82	38.50	40.32	41.86	***42.70***	***44.10***	***45.65***	Book Value per sh C	***47.50***
	--	--	--	--	255.33	226.64	226.84	229.30	229.90	***230.00***	***230.00***	***230.00***	Common Shs Outst'g D	***230.00***
	--	--	--	--	22.7	21.8	21.7	16.2	19.9	***15.8***	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***17.5***
	--	--	--	--	1.23	1.16	1.11	.88	1.15	***.91***			Relative P/E Ratio	***.95***
	--	--	--	--	3.1%	3.2%	3.5%	3.5%	4.0%	5.1%			Avg Ann'l Div'd Yield	***3.7%***
	--	--	--	--	4275.9	5147.8	4913.4	5586.7	5859.1	***5780***	***5900***	***6000***	Revenues ($mill)	***6700***
	--	--	--	--	535.8	669.9	618.3	879.7	752.7	***830***	***885***	***920***	Net Profit ($mill)	***1095***
	--	--	--	--	9.8%	12.6%	14.1%	11.7%	5.8%	***9.0%***	***9.0%***	***9.0%***	Income Tax Rate	***9.0%***
	--	--	--	--	2.5%	2.5%	5.5%	5.0%	5.1%	***6.0%***	***6.0%***	***6.0%***	AFUDC % to Net Profit	***5.0%***
	--	--	--	--	40.0%	50.6%	51.3%	50.1%	50.0%	***51.5%***	***51.5%***	***52.0%***	Long-Term Debt Ratio	***53.5%***
	--	--	--	--	60.0%	49.4%	48.7%	49.9%	48.0%	***48.5%***	***48.5%***	***48.0%***	Common Equity Ratio	***46.5%***
	--	--	--	--	16716	17337	17924	18542	19668	***20175***	***21250***	***22500***	Total Capital ($mill)	***23400***
	--	--	--	--	18952	19346	20106	21150	22137	***23150***	***24200***	***25300***	Net Plant ($mill)	***26300***
	--	--	--	--	4.0%	4.8%	4.5%	5.7%	6.9%	***5.5%***	***5.5%***	***5.5%***	Return on Total Cap'l	***6.0%***
	--	--	--	--	5.3%	7.8%	7.1%	9.5%	8.1%	***9.0%***	***9.0%***	***9.0%***	Return on Shr. Equity	***10.0%***
	--	--	--	--	5.3%	7.8%	7.1%	9.5%	8.1%	***9.0%***	***9.0%***	***9.0%***	Return on Com Equity E	***10.0%***
	--	--	--	--	.6%	2.4%	1.8%	4.1%	3.1%	***3.0%***	***3.0%***	***3.0%***	Retained to Com Eq	***3.5%***
	--	--	--	--	89%	69%	75%	57%	73%	***69%***	***68%***	***68%***	All Div'ds to Net Prof	***63%***

BUSINESS: Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Through its subsidiaries (now doing business under the Evergy name), provides electric service to 1.6 million customers in Kansas and Missouri, including the greater Kansas City area. Electric revenue breakdown: residential, 32%; commercial, 27%; industrial, 15%; wholesale, 13%; other, 13%. Generating sources: coal, 54%; nuclear, 17%; purchased, 29%. Fuel costs: 28% of revenues. '22 reported deprec. rate: 3%. Has 4,900 employees. Chairman: Mark A. Ruelle. President & CEO: David A. Campbell. COO: Kevin E. Bryant. Inc.: Missouri. Address: 1200 Main Street, Kansas City, Missouri 64105. Tel.: 816-556-2200. Internet: www.evergy.com.

Evergy's Missouri West subsidiary filed a general rate case. Indeed, the company's Missouri West utility requested an increase of $104 million (13.4%), excluding fuel. The utility is seeking to recover investments made in generation capacity and grid modernization. If approved, new rates will go into effect at the start of 2025. The company plans to continue filing rate cases in Kansas and Missouri every two years. Note, Evergy is not requesting rate changes in the Missouri Metro service area.

Evergy was scheduled to report its fourth-quarter results after this issue went to press. For the fourth quarter and full-year 2023, we are expecting the company to post earnings per share of $0.67 and $3.60, respectively, implying significant year-over-year improvement. The utility continues to benefit from rate relief and investment in its transmission system, and we think this will likely remain a driver to the bottom-line over the next few years. As a result, we are sticking with our 2024 profit estimate of $3.85 a share, which is within Evergy's long term share-earnings growth target of 4%-6%, based off original 2023 guidance of $3.65.

We are introducing our 2025 earnings per share estimate of $4.00. The company will likely benefit from the aforementioned Missouri West rate case, and other regulatory and legislative matters over that interim. Evergy should also take advantage of an improved operating environment and ongoing investments in its transmission infrastructure over the long-term, as well as modest growth in kilowatt-hour sales. Meanwhile, the interest rate environment will likely improve over the next few years, lowering borrowing costs. This is important as the company generally has low return rates on total capital and relies heavily on high debt levels. Accordingly, we think the company will earn $4.75 per share by 2027-2029.

Those seeking income should look here. This untimely stock has a dividend yield of 5.3%, which stands comfortably above the high-paying utility average. Too, 18-month and 3- to 5-year capital appreciation prospects remain attractive for a utility. We look for the stock to trade around $70-$95 by 2027-2029.

Zachary J. Hodgkinson *March 8, 2024*

(A) Diluted earnings. Next earnings report due early May. (B) Dividends paid in mid-March, June, September, and December. ■ Dividend reinvestment plan available. (C) Incl. intangibles. (D) In millions. (E) Rate base: Original cost depreciated. Rate allowed on common equity in Missouri in '18: none specified; in Kansas in '18: 9.3%; earned on average common equity, '22: 9.8%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	30
Earnings Predictability	85

IDACORP, INC. NYSE-IDA

RECENT PRICE 93.19 | P/E RATIO 18.1 (Trailing: 18.1 Median: 20.0) | RELATIVE P/E RATIO 0.98 | DIV'D YLD 3.6% | VALUE LINE

TIMELINESS 5 Lowered 3/1/24
SAFETY 1 Raised 4/19/24
TECHNICAL 5 Lowered 3/29/24
BETA .85 (1.00 = Market)

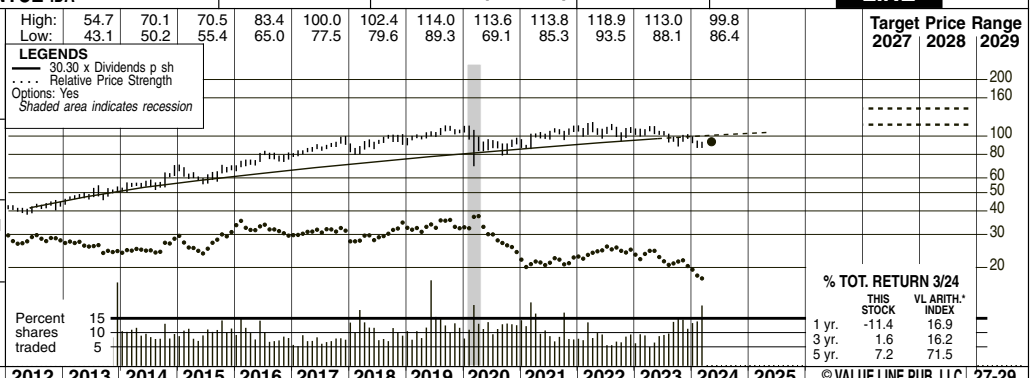
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$78-$132 $105 (15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	140	(+50%)	*14%*
Low	115	(+25%)	*9%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	168	160	192
to Sell	170	177	168
Hld's(000)	42011	43079	45178



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	54.7	70.1	70.5	83.4	100.0	102.4	114.0	113.6	113.8	118.9	113.0	99.8								
Low:	43.1	50.2	55.4	65.0	77.5	79.6	89.3	69.1	85.3	93.5	88.1	86.4								
Revenues per sh	20.47	21.92	20.97	20.55	21.55	24.81	25.51	25.23	25.04	26.76	27.19	26.70	26.77	28.86	32.51	34.90	*34.30*	*35.90*	Revenues per sh	*39.60*
"Cash Flow" per sh	4.27	5.07	5.35	5.84	5.93	6.29	6.58	6.70	6.86	7.50	7.85	8.07	8.19	8.41	8.55	9.11	*9.50*	*10.10*	"Cash Flow" per sh	*11.40*
Earnings per sh A	2.18	2.64	2.95	3.36	3.37	3.64	3.85	3.87	3.94	4.21	4.49	4.61	4.69	4.85	5.11	5.14	*5.40*	*5.75*	Earnings per sh A	*6.65*
Div'd Decl'd per sh B ■ †	1.20	1.20	1.20	1.20	1.37	1.57	1.76	1.92	2.08	2.24	2.40	2.56	2.72	2.88	3.04	3.20	*3.34*	*3.46*	Div'd Decl'd per sh B ■ †	*4.25*
Cap'l Spending per sh	5.19	5.26	6.85	6.76	4.78	4.68	5.45	5.84	5.89	5.66	5.51	5.53	6.16	5.94	8.56	12.07	*17.00*	*14.00*	Cap'l Spending per sh	*12.00*
Book Value per sh C	27.76	29.17	31.01	33.19	35.07	36.84	38.85	40.88	42.74	44.65	47.01	48.88	50.73	52.82	55.52	57.44	*59.30*	*63.10*	Book Value per sh C	*69.80*
Common Shs Outst'g D	46.92	47.90	49.41	49.95	50.16	50.23	50.27	50.34	50.40	50.42	50.42	50.42	50.46	50.52	50.56	50.62	*51.00*	*51.50*	Common Shs Outst'g D	*53.00*
Avg Ann'l P/E Ratio	13.9	10.2	11.8	11.5	12.4	13.4	14.7	16.2	19.1	20.6	20.5	22.3	19.9	20.8	21.0	19.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*19.0*
Relative P/E Ratio	.84	.68	.75	.72	.79	.75	.77	.82	1.00	1.04	1.11	1.19	1.02	1.12	1.21	1.11			Relative P/E Ratio	*1.05*
Avg Ann'l Div'd Yield	4.0%	4.5%	3.4%	3.1%	3.3%	3.2%	3.1%	3.1%	2.8%	2.6%	2.6%	2.5%	2.9%	2.9%	2.8%	3.1%			Avg Ann'l Div'd Yield	*3.3%*
Revenues ($mill)	1282.5	1270.3	1262.0	1349.5	1370.8	1346.4	1350.7	1458.1	1644.0	1766.4	*1750*	*1850*	Revenues ($mill)	*2100*
Net Profit ($mill)	193.5	194.7	198.3	212.4	226.8	232.9	237.4	245.6	259.0	261.2	*275*	*295*	Net Profit ($mill)	*355*
Income Tax Rate	8.0%	19.0%	15.5%	18.6%	7.1%	9.5%	10.8%	13.1%	12.7%	9.4%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
AFUDC % to Net Profit	13.6%	16.3%	16.3%	13.9%	15.2%	16.2%	17.3%	17.7%	19.8%	8.8%	*15.0%*	*15.0%*	AFUDC % to Net Profit	*16.0%*
Long-Term Debt Ratio	45.3%	45.6%	44.8%	43.7%	43.6%	41.3%	43.9%	42.8%	43.9%	48.8%	*49.0%*	*49.5%*	Long-Term Debt Ratio	*49.5%*
Common Equity Ratio	54.7%	54.4%	55.2%	56.3%	56.4%	58.7%	56.1%	57.2%	56.1%	51.2%	*51.0%*	*50.5%*	Common Equity Ratio	*50.5%*
Total Capital ($mill)	3567.6	3783.3	3898.5	3997.5	4205.1	4201.3	4560.4	4669.1	5001.4	5683.4	*6000*	*6325*	Total Capital ($mill)	*7300*
Net Plant ($mill)	3833.5	3992.4	4172.0	4283.9	4395.7	4531.5	4709.5	4901.8	5173.0	5745.2	*6100*	*6425*	Net Plant ($mill)	*7400*
Return on Total Cap'l	6.6%	6.2%	6.1%	6.3%	6.4%	6.5%	6.1%	6.2%	6.1%	5.4%	*5.5%*	*6.0%*	Return on Total Cap'l	*6.0%*
Return on Shr. Equity	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	9.3%	9.2%	9.2%	9.0%	*9.0%*	*9.0%*	Return on Shr. Equity	*9.0%*
Return on Com Equity E	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	9.3%	9.2%	9.2%	9.0%	*9.0%*	*9.0%*	Return on Com Equity E	*9.0%*
Retained to Com Eq	5.4%	4.8%	4.3%	4.4%	4.4%	4.2%	3.9%	3.7%	3.7%	3.4%	*3.5%*	*3.5%*	Retained to Com Eq	*3.5%*
All Div'ds to Net Prof	46%	50%	53%	53%	54%	56%	58%	60%	60%	63%	*62%*	*60%*	All Div'ds to Net Prof	*64%*

% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-11.4	16.9
3 yr.	1.6	16.2
5 yr.	7.2	71.5

CAPITAL STRUCTURE as of 12/31/23
Total Debt $2825.6 mill. **Due in 5 Yrs** $186.0 mill.
LT Debt $2775.8 mill. **LT Interest** $96.4 mill.
(Total Interest Coverage: 2.6x)

Pension Assets-12/23 $917.5 mill.
Oblig $1028.0 mill.

Pfd Stock None

Common Stock 50,628,079 shs.
as of 2/9/24

MARKET CAP: $4.7 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	+3.9	+9.6	+7.3
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	3751	3568	3615
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+2.8	+2.4	+2.4
Fixed Charge Cov. (%)	390	395	315

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	3.5%	4.0%	*3.5%*
"Cash Flow"	3.5%	3.5%	*4.5%*
Earnings	4.0%	3.5%	*5.0%*
Dividends	8.0%	6.5%	*5.5%*
Book Value	4.5%	4.5%	*4.0%*

QUARTERLY REVENUES($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	316.1	360.1	446.9	335.0	1458.1
2022	344.3	358.7	518.0	422.9	1644.0
2023	429.7	413.8	510.9	412.0	1766.4
2024	*365*	*415*	*560*	*410*	*1750*
2025	*390*	*440*	*585*	*435*	*1850*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.89	1.38	1.93	.65	4.85
2022	.91	1.27	2.10	.83	5.11
2023	1.11	1.35	2.07	.61	5.14
2024	*1.10*	*1.35*	*2.10*	*.85*	*5.40*
2025	*1.15*	*1.45*	*2.25*	*.90*	*5.75*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.67	.67	.67	.71	2.72
2021	.71	.71	.71	.75	2.88
2022	.75	.75	.75	.79	3.04
2023	.79	.79	.79	.83	3.20
2024	.83				

BUSINESS: IDACORP, Inc. is a holding company for Idaho Power Company, a regulated electric utility that serves 633,000 customers throughout a 24,000-square-mile area in southern Idaho and eastern Oregon (population: 1.4 million). Most of the company's revenues are derived from the Idaho portion of its service area. Revenue breakdown: residential, 39%; commercial, 21%; industrial, 14%; irrigation, 10%; other, 16%. Generating sources: hydro, 35%; coal, 13%; gas, 15%; purchased, 37%. Fuel costs: 40% of revenues. '23 reported depreciation rate: 3.1%. Has 2,112 employees. Chairman: Richard J. Dahl. President & CEO: Lisa Grow. Incorporated: Idaho. Address: 1221 W. Idaho St., Boise, Idaho 83702. Telephone: 208-388-2200. Internet: www.idacorpinc.com.

IDACORP's management has set its earnings target for 2024 in a range of $5.25 to $5.45 a share. The company extended its streak of 15 years when it comes to annual earnings growth in 2023, but not by a whole lot. Our 2024 estimate is being placed at $5.40, which assumes a 5% annual gain, which is in line with the company's in-house goal. Most utilities strive for something in the 4%-6% or 5%-7% spread. Digging deeper, our estimate assumes Idaho Power will use between $35 million and $60 million of additional tax credits available under its regulatory mechanism. A good portion of this figure is tied to battery storage projects approved by the Idaho Public Utilities Commission in the general rate case last December.

A rate case in Oregon is now on the table. IDACORP has filed with the Oregon Public Utilities Commission for a rate increase to go into effect in October of this year. The company is requesting an ROE of 10.4%, and a 7.8% rate of return with a capital structure comprised of 51% equity and 49% debt. Infrastructure investments have been made in this service area and the last general rate case was filed in 2011. Since then, there has been an 8% increase in the number of customers. We expect the parties to mutually agree on a pact that is fair to both IDA and its constituents.

Capital expenditures are expected to peak this year at above $900 million. New capacity resources are pushing the spending up, but management has cast a wide net ($20 million to $200 million), so the total could be somewhat lower. Still, the average over the next five years is apt to come in around the $800 million threshold. Distribution and transmission will be areas of heavy outlays, as will high voltage transmission, one of the driving forces behind IDA's heavier spending coming off an average of about $400 million in the previous five-year window.

These untimely shares lack real investment appeal at this juncture. Even with the quotation down 7% in value since our January review, capital appreciation potential three to five years out is below average. Yes, the yield is handsomely above the *Value Line* median, but does not stand out for a utility.

Erik M. Manning *April 19, 2024*

(A) Diluted EPS. Earnings may not sum due to rounding. Next earnings report due early May. **(B)** Dividends historically paid in late February, May, August, and November. ■ Dividend reinvestment plan available. † Shareholder investment plan available. **(C)** Incl. intangibles. In '23: $882.7 mill., $17.44/sh. **(D)** In millions. **(E)** Rate base: Net original cost. Rate allowed on common equity in '12: 10% (imputed); Regulatory Climate: Above Average.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	100

NORTHWESTERN NDQ-NWE

RECENT PRICE 50.25 | P/E RATIO 13.7 (Trailing: 15.6 Median: 17.0) | RELATIVE P/E RATIO 0.74 | DIV'D YLD 5.2% | VALUE LINE

TIMELINESS 2 Raised 4/12/24
SAFETY 3 Lowered 1/19/24
TECHNICAL 5 Lowered 4/12/24
BETA .95 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$41-$70 $56 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	75	(+50%)	*14%*
Low	50	(Nil)	*5%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	157	123	144
to Sell	113	151	130
Hld's(000)	58238	59029	59945

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	47.2	58.7	59.7	63.8	64.5	65.7	76.7	80.5	70.8	63.1	61.2	51.8						
Low:	35.1	42.6	48.4	52.2	55.7	50.0	57.3	45.1	53.2	48.7	46.0	46.2						

Target Price Range 2027 2028 2029

LEGENDS
22.2 x Dividends p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Percent shares traded 30 20 10

% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-7.6	16.9
3 yr.	-10.6	16.2
5 yr.	-10.6	71.5

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35.09	31.72	30.66	30.80	28.76	29.80	25.68	25.21	26.01	26.45	23.81	24.93	23.70	25.38	24.74	23.22	*25.60*	*26.60*	Revenues per sh	*28.90*
4.40	4.62	4.76	5.42	5.18	5.45	5.39	5.92	6.74	6.76	6.96	7.07	6.86	6.92	6.46	6.69	*7.10*	*7.45*	"Cash Flow" per sh	*8.55*
1.77	2.02	2.14	2.53	2.26	2.46	2.99	2.90	3.39	3.34	3.40	3.53	3.21	3.50	3.29	3.22	*3.50*	*3.70*	Earnings per sh [A]	*4.25*
1.32	1.34	1.36	1.44	1.48	1.52	1.60	1.92	2.00	2.10	2.20	2.30	2.40	2.48	2.52	2.56	*2.60*	*2.64*	Div'd Decl'd per sh [B] ■ †	*2.76*
3.47	5.26	6.30	5.20	5.89	5.95	5.76	5.89	5.96	5.60	5.64	6.26	8.02	8.03	8.62	9.26	*8.15*	*8.15*	Cap'l Spending per sh	*8.25*
21.25	21.86	22.64	23.68	25.09	26.60	31.50	33.22	34.68	36.44	38.60	40.42	41.10	43.28	44.61	45.48	*46.40*	*47.50*	Book Value per sh [C]	*51.85*
35.93	36.00	36.23	36.28	37.22	38.75	46.91	48.17	48.33	49.37	50.32	50.45	50.59	54.06	59.74	61.25	*61.50*	*62.00*	Common Shs Outst'g [D]	*64.00*
13.9	11.5	12.9	12.6	15.7	16.9	16.2	18.4	17.2	17.8	16.8	19.9	18.6	17.4	17.3	17.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.5*
.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	1.06	.96	.94	1.00	.95			Relative P/E Ratio	*.80*
5.4%	5.7%	4.9%	4.5%	4.2%	3.7%	3.3%	3.6%	3.4%	3.5%	3.9%	3.3%	4.0%	4.1%	4.4%	4.7%			Avg Ann'l Div'd Yield	*4.5%*
1204.9	1214.3	1257.2	1305.7	1198.1	1257.9	1198.7	1372.3	1477.8	1422.1	*1575*	*1650*	Revenues ($mill)	*1850*
120.7	138.4	164.2	162.7	171.1	179.3	162.6	181.6	185.5	194.1	*215*	*230*	Net Profit ($mill)	*270*
- -	13.7%	- -	7.6%	- -	1.6%	- -	.9%	.9%	3.7%	*6.0%*	*9.0%*	Income Tax Rate	*12.0%*
8.9%	9.8%	4.3%	5.2%	3.4%	4.6%	6.0%	14.9%	18.5%	21.6%	*20.0%*	*20.0%*	AFUDC % to Net Profit	*20.0%*
53.4%	53.1%	52.0%	50.2%	52.2%	52.5%	52.8%	52.2%	48.2%	49.1%	*50.0%*	*51.0%*	Long-Term Debt Ratio	*50.5%*
46.6%	46.9%	48.0%	49.8%	47.8%	47.5%	47.2%	47.8%	51.8%	50.9%	*50.0%*	*49.0%*	Common Equity Ratio	*49.5%*
3168.0	3408.6	3493.9	3614.5	4064.6	4289.8	4409.1	4893.1	5148.3	5475.4	*5725*	*5975*	Total Capital ($mill)	*6700*
3758.0	4059.5	4214.9	4358.3	4521.3	4700.9	4952.9	5247.2	5657.5	6039.8	*6300*	*6600*	Net Plant ($mill)	*7300*
4.8%	5.2%	5.9%	5.6%	5.2%	5.2%	4.6%	4.6%	4.5%	4.5%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.0%*
8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	7.8%	7.8%	7.0%	7.0%	*7.5%*	*8.0%*	Return on Shr. Equity	*8.0%*
8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	7.8%	7.8%	7.0%	7.0%	*7.5%*	*8.0%*	Return on Com Equity [E]	*8.0%*
3.8%	3.0%	4.1%	3.4%	3.2%	3.1%	2.0%	2.3%	1.7%	1.4%	*2.0%*	*2.5%*	Retained to Com Eq	*3.0%*
54%	65%	58%	62%	64%	64%	74%	71%	76%	79%	*74%*	*71%*	All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $2820.8 mill. **Due in 5 Yrs** $1011.5 mill.
LT Debt $2690.5 mill. **LT Interest** $109.0 mill.
Incl. $5.5 mill. finance leases.
(Total Interest Coverage: 2.4x)

Pension Assets-12/23 $402.7 mill.
Oblig $477.0 mill.

Pfd Stock None

Common Stock 61,256,549 shs.
as of 2/9/24

MARKET CAP: $3.1 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	+.7	+3.7	-.3
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	2000	2073	1992
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.6	+1.5	+1.6
Fixed Charge Cov. (%)	245	219	216

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	-2.0%	-1.0%	*2.5%*
"Cash Flow"	2.5%	-.5%	*3.5%*
Earnings	3.5%	- -	*4.0%*
Dividends	5.5%	3.5%	*2.0%*
Book Value	6.0%	4.0%	*3.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	400.8	298.2	326.0	347.3	1372.3
2022	394.5	323.0	335.1	425.2	1477.8
2023	454.5	290.5	321.1	356.0	1422.1
2024	*475*	*325*	*370*	*405*	*1575*
2025	*500*	*340*	*385*	*425*	*1650*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.24	.59	.70	.97	3.50
2022	1.08	.58	.47	1.16	3.29
2023	1.10	.32	.48	1.32	3.22
2024	*1.25*	*.50*	*.60*	*1.15*	*3.50*
2025	*1.30*	*.55*	*.65*	*1.20*	*3.70*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.60	.60	.60	.60	2.40
2021	.62	.62	.62	.62	2.48
2022	.63	.63	.63	.63	2.52
2023	.64	.64	.64	.64	2.56
2024	.65				

BUSINESS: NorthWestern Energy Group, Inc. supplies electricity & gas in the Upper Midwest and Northwest, serving 467,700 electric customers in Montana and South Dakota and 307,600 gas customers in Montana, South Dakota, and Nebraska. Electric revenue breakdown for 2023: residential, 44%; commercial, 50%; industrial, 4%; and other, 2%. Generating sources: coal, 18%; hydro, 37%; wind, 4%; natural gas, 12%; purchased power, 29%. Fuel costs: 30% of revenues. 2023 reported depreciation rate: 2.8%. Had 1,573 employees as of 12/31/23. Chair of the board of directors: Dana J. Dykhouse. President and CEO: Brian B. Bird. Incorporated: DE. Address: 3010 West 69th Street, Sioux Falls, SD 57108. Telephone: 605-978-2900. Internet: www.northwesternenergy.com.

NorthWestern Energy's profits should be on the rise this year from higher electric and natural gas delivery rates. In October, Montana regulators approved the settlement agreement the utility had negotiated with key members of the state's business community. The new prices lift annual electric and natural gas revenues by $67.4 million and $14.1 million, respectively. Those levels are based on an authorized return on equity (ROE) of 9.65% for electric and 9.55% for gas. The utility also received pricing mechanisms that allow for the expedient pass through of changes in both fuel/purchased power costs and property taxes. Those will reduce regulatory lag. In January, South Dakota officials came to terms with the company on electric rates that will raise annual revenue by $21.5 million based on a 6.81% rate of return. Management is targeting a range of $3.42 to $3.62 for 2024 earnings per share. The company raised the quarterly dividend to an annualized rate of $2.60 a share from $2.56.

Leadership affirmed its 4% to 6% annual earnings growth expectation. It provided an updated five-year capital investment plan that calls for average expenditures of $500 million per year from 2024 through 2028. The $2.5 billion total investment should grow the company's rate base (the dollar value of assets for which a utility is allowed to earn a regulated return on) by about 4% to 6% per annum. That, in turn, should translate to 4% to 6% yearly earnings-per-share gains. The fairly conservative plan assumes no equity needs are necessary unless there are opportunities to expand generation build beyond the $143 million budgeted for that category. We're projecting there will be some on both fronts. The plan also calls for $1.8 billion to be spent on the expansion and modernization of electric and gas transmission and distribution systems across its territories, with the remainder on infrastructure maintenance.

This equity is timely. Longer term, however, it doesn't really stand out relative to its peer group on an annual total-return basis. This is partially because it's growth prospects are about average and dividend hikes will likely remain limited until the payout ratio returns to the mid-60% area.

Anthony J. Glennon *April 19, 2024*

(A) Diluted egs. Excl. nonrec. gains/(losses): '12, 40¢; '15, 27¢; '18, 52¢; '19, 45¢; '20, (15¢); '21, 10¢; '22, (4¢). Qtly EPS may not sum to full yr. due to rounding. Next egs. report due early May. **(B)** Div'ds paid late Mar., June, Sept. & Dec. ■ Div'd reinvest. plan avail. † Shrhldr. invest. plan avail. **(C)** Incl. def'd charges and intag. '23: $17.90/sh. **(D)** In mill. **(E)** Rate base: Net orig. cost. Rate allowed on com. eq. in MT in '22 (elec.): 9.65%; in '22 (gas): 9.55%; in SD in '24: 6.81%; in NE in '07: 10.4%. Reg. Climate: Below Avg.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	25
Earnings Predictability	95

OGE ENERGY CORP. NYSE-OGE

RECENT PRICE 32.82 | P/E RATIO 15.3 (Trailing: 15.9 Median: 18.0) | RELATIVE P/E RATIO 0.88 | DIV'D YLD 5.1% | VALUE LINE

TIMELINESS 3 Lowered 12/22/23
SAFETY 3 Lowered 3/8/24
TECHNICAL 4 Lowered 3/8/24
BETA 1.05 (1.00 = Market)

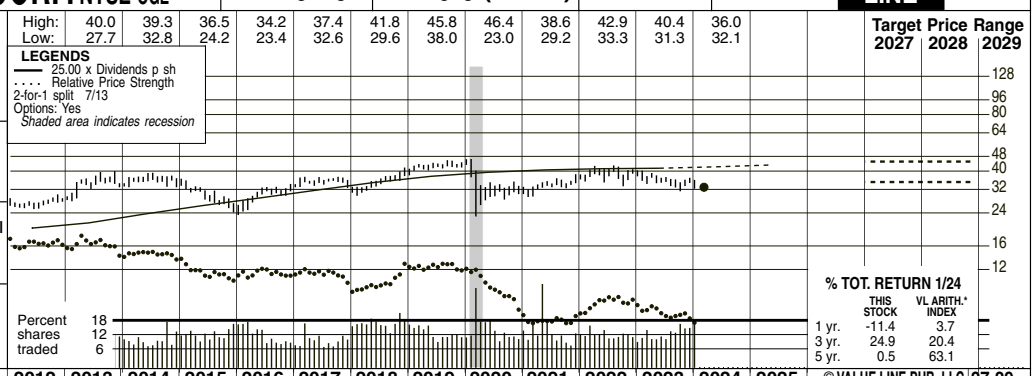
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$28-$46 $37 (15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+35%)	*12%*
Low	35	(+5%)	*7%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	183	174	197
to Sell	211	216	199
Hld's(000)	139715	134247	138173



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
21.77	14.79	19.04	19.96	18.58	14.45	12.30	11.00	11.31	11.32	11.37	11.15	10.61	18.26	16.86	13.36	*16.50*	*17.50*	Revenues per sh	*18.75*
2.40	2.69	3.01	3.31	3.69	3.46	3.40	3.23	3.31	3.34	3.74	4.02	4.03	4.44	4.56	*4.55*	*4.75*	*5.05*	"Cash Flow" per sh	*5.90*
1.25	1.33	1.50	1.73	1.79	1.94	1.98	1.69	1.69	1.92	2.12	2.24	2.08	2.36	2.25	2.07	*2.15*	*2.30*	Earnings per sh [A]	*2.75*
.70	.71	.73	.76	.80	.85	.95	1.05	1.16	1.27	1.40	1.51	1.58	1.63	1.64	1.66	*1.69*	*1.73*	Div'd Decl'd per sh [B] ■	*1.85*
4.01	4.37	4.36	6.48	5.85	4.99	2.86	2.74	3.31	4.13	2.87	3.18	3.25	3.89	5.25	*4.75*	*4.75*	*4.75*	Cap'l Spending per sh	*4.75*
10.14	10.52	11.73	13.06	14.00	15.30	16.27	16.66	17.24	19.28	20.06	20.69	18.15	20.27	21.95	*22.25*	*23.10*	*23.75*	Book Value per sh [C]	*26.25*
187.00	194.00	195.20	196.20	197.60	198.50	199.40	199.70	199.70	199.70	199.70	200.10	200.10	200.10	200.20	200.20	*200.20*	*200.20*	Common Shs Outst'g [D]	*200.20*
12.4	10.8	13.3	14.4	15.2	17.7	18.3	17.7	17.7	18.3	16.5	19.0	16.2	14.3	17.2	*17.4*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.0*
.75	.72	.85	.90	.97	.99	.96	.89	.93	.92	.89	1.01	.83	.77	1.00	*1.00*			Relative P/E Ratio	*.80*
4.5%	5.0%	3.7%	3.1%	2.9%	2.5%	2.6%	3.5%	3.9%	3.6%	4.0%	3.5%	4.7%	4.8%	4.5%	5.1%			Avg Ann'l Div'd Yield	*4.4%*
2453.1	2196.9	2259.2	2261.1	2270.3	2231.6	2122.3	3653.7	3375.7	2674.3	*3300*	*3500*	Revenues ($mill)	*3750*
395.8	337.6	338.2	384.3	425.5	449.6	415.9	472.5	452.5	414.4	*430*	*460*	Net Profit ($mill)	*550*
30.4%	29.2%	30.5%	32.5%	14.5%	7.4%	13.2%	11.5%	12.0%	12.0%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
1.7%	3.7%	6.4%	15.0%	8.3%	1.6%	1.6%	2.2%	2.0%	2.0%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
45.9%	44.3%	41.1%	41.7%	42.0%	43.6%	49.0%	52.6%	49.8%	*52.0%*	*52.0%*	*51.5%*	Long-Term Debt Ratio	*50.0%*
54.1%	55.7%	58.9%	58.3%	58.0%	56.4%	51.0%	47.4%	52.4%	*48.0%*	*48.0%*	*48.5%*	Common Equity Ratio	*50.0%*
5999.7	5971.6	5849.6	6600.7	6902.0	7334.7	7126.2	8552.7	8962.0	*9400*	*9750*	*9935*	Total Capital ($mill)	*10400*
6979.9	7322.4	7696.2	8339.9	8643.8	9044.6	9374.6	9832.9	10546.8	*10830*	*11000*	*11250*	Net Plant ($mill)	*12075*
7.8%	6.9%	7.0%	7.0%	7.3%	7.1%	6.9%	6.4%	5.9%	*6.5%*	*7.0%*	*7.0%*	Return on Total Cap'l	*7.5%*
12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	11.0%	*12.0%*	*12.5%*	*12.5%*	Return on Shr. Equity	*13.0%*
12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	11.0%	*12.0%*	*12.5%*	*12.5%*	Return on Com Equity [E]	*13.0%*
6.5%	4.0%	3.3%	3.5%	3.8%	3.6%	2.8%	3.6%	3.0%	*3.5%*	*4.5%*	*4.5%*	Retained to Com Eq	*5.5%*
47%	61%	67%	64%	64%	67%	76%	69%	73%	*81%*	*75%*	*75%*	All Div'ds to Net Prof	*57%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $4839.7 mill. **Due in 5 Yrs** $1731.5 mill.
LT Debt $4340.5 mill. **LT Interest** $158.7 mill.
(LT interest earned: 4.3x)

Leases, Uncapitalized Annual rentals $5.7 mill.

Pension Assets-12/22 $486.0 mill.
Oblig $502.9 mill.

Pfd Stock None

Common Stock 200,330,340 shs.

MARKET CAP: $6.6 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-4.9	+2.6	+8.3
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	4.40	7.68	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	6437	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.1	+1.4	NA
Fixed Charge Cov. (%)	326	336	335

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	-3.0%	5.0%	*5.5%*
"Cash Flow"	2.5%	5.0%	*7.0%*
Earnings	3.0%	4.5%	*6.5%*
Dividends	7.5%	6.5%	*3.0%*
Book Value	4.0%	1.5%	*5.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1630.0	577.4	864.4	581.3	3653.7
2022	589.3	803.7	1270.0	711.9	3375.7
2023	557.2	605.0	945.4	566.7	2674.3
2024	*630*	*750*	*1200*	*720*	*3300*
2025	*700*	*800*	*1250*	*750*	*3500*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.26	.56	1.26	.28	2.36
2022	.33	.36	1.31	.25	2.25
2023	.19	.44	1.20	.24	2.07
2024	*.35*	*.30*	*1.25*	*.25*	*2.15*
2025	*.40*	*.35*	*1.30*	*.25*	*2.30*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.3875	.3875	.3875	.4025	1.57
2021	.4025	.4025	.4025	.41	1.62
2022	.41	.41	.41	.4141	1.64
2023	.4141	.4141	.4141	.4182	1.66
2024					

BUSINESS: OGE Energy Corp. is a holding company for Oklahoma Gas and Electric Company (OG&E), which supplies electricity to 879,000 customers in Oklahoma (84% of electric revenues) and western Arkansas (8%); wholesale is (8%). Owns 3% of Energy Transfer's limited partnership units. Electric revenue breakdown: residential, 44%; commercial, 25%; industrial, 11%; oilfield, 10%; other, 10%. Generating sources: gas, 25%; coal, 21%; wind, 6%; purchased, 48%. Fuel costs: 58% of revenues. '23 reported depreciation rate (utility): 2.6%. Has 2,200 employees. Chairman, President and Chief Executive Officer: Sean Trauschke. Incorporated: Oklahoma. Address: 321 North Harvey, P.O. Box 321, Oklahoma City, OK 73101-0321. Tel.: 405-553-3000. Internet: www.oge.com.

OGE Energy's utility subsidiary filed a general rate case in Oklahoma. Oklahoma Gas and Electric requested a hike of $332 million (13.8%), based on a return on equity of 10.5% and a common-equity ratio of 53.5%. If approved, new rates are expected to be implemented by July. In Arkansas, the utility reached a settlement for a 1.4% hike starting April 1st, under the state's formula rate plan. OGE also continues to make progress in replacing two aging power generation units at the Horseshoe Lake power plant. The units are the oldest in the utility's generation fleet, and have been in service for over 60 years. A hearing with the Oklahoma Corporation Commission is set to take place in October, and the company hopes to have its new units operational by late 2026.

We are maintaining our 2024 earnings estimate of $2.15 a share. The utility earned $2.07 a share last year, and the company's target for 2024 is $2.06-$2.18, representing 6% growth from original 2023 guidance. OGE is benefiting from customer growth, as well as its transformation to a fully focused electric utility. A partial year of rate relief in Oklahoma should also help boost the bottom line this year. OGE's long-term earnings growth rate target remains at 5%-7% annually.

Bottom-line growth ought to pick up over the next few years. The company's prospects as a pure-play electric utility will likely improve over that interim, as investments in infrastructure and the grid bear fruit. The Inflation Reduction Act should also provide assistance in the utility's transition to offering affordable, clean energy over that interim. Too, OGE is well positioned in 2025 and beyond to take advantage of a full-year's rate relief in Oklahoma and Arkansas. As a result, we are introducing our 2025 EPS estimate of $2.30. We also think OGE will earn $2.75 a share by 2027-2029.

Income-oriented investors should consider this stock. Indeed, these shares boast a dividend yield of about 5.0%. This stands comfortably above the utility average, which is one of the highest dividend-paying industries in the market. But, total return prospects are nothing to write home about over both the 18-month and 3- to 5-year time frames.

Zachary J. Hodgkinson *March 8, 2024*

(A) Diluted EPS. Excl. nonrecurring gains (losses): '15, (33¢); '17, $1.18; '19, (8¢); '20, ($2.95); '21, $1.32; '22, $1.06; gain on discont. ops.: '19 & '21 EPS don't sum due to rounding. Next earnings report due early May. **(B)** Div'ds historically paid in late Jan., Apr., July, & Oct. ■ Div'd reinvestment plan avail. **(C)** Incl. deferred charges. In '22: $6.15/sh. **(D)** In mill., adj. for split. **(E)** Rate base: Net original cost. Rate allowed on com. eq. in OK in '19: 9.5%; in AR in '18: 9.5%; earned on avg. com. eq., '21: 12.7%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	30
Earnings Predictability	95

PNM RESOURCES NYSE-PNM

RECENT PRICE 37.45 | P/E RATIO 14.2 (Trailing: 13.3 Median: 19.0) | RELATIVE P/E RATIO 0.77 | DIV'D YLD 4.2% | VALUE LINE

TIMELINESS 3 Lowered 2/2/24
SAFETY 3 Lowered 1/19/24
TECHNICAL 4 Lowered 3/1/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

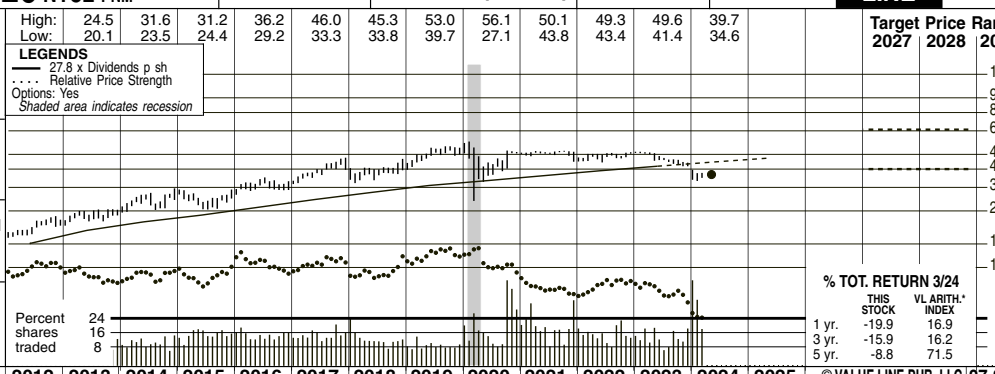
Low-High	Midpoint (% to Mid)
$34-$56	$45 (20%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+75%)	*18%*
Low	40	(+5%)	*6%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	134	140	151
to Sell	146	139	144
Hld's(000)	78139	81263	82439



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
22.65	19.01	19.31	21.35	16.85	17.42	18.03	18.07	17.11	18.14	18.04	18.30	17.74	20.74	26.21	21.50	*23.90*	*25.25*	Revenues per sh	*29.45*
1.76	2.32	2.67	3.18	3.39	3.52	4.09	4.28	4.51	5.30	5.47	5.95	5.80	6.19	6.67	6.62	*6.80*	*7.25*	"Cash Flow" per sh	*8.70*
.11	.58	.87	1.08	1.31	1.41	1.45	1.48	1.46	1.92	2.00	2.16	2.28	2.45	2.69	2.82	*2.70*	*2.85*	Earnings per sh A	*3.40*
.61	.50	.50	.50	.58	.68	.76	.82	.90	.99	1.09	1.18	1.25	1.33	1.41	1.49	*1.57*	*1.65*	Div'd Decl'd per sh B ■ †	*1.89*
3.99	3.32	3.25	4.10	3.88	4.37	5.78	7.01	7.53	6.28	6.29	7.74	7.91	10.89	10.63	11.93	*12.90*	*13.85*	Cap'l Spending per sh	*13.50*
18.89	18.90	17.60	19.62	20.05	20.87	22.39	20.78	21.04	21.28	21.20	21.08	23.88	25.25	25.54	26.04	*27.40*	*28.80*	Book Value per sh C	*33.60*
86.53	86.67	86.67	79.65	79.65	79.65	79.65	79.65	79.65	79.65	79.65	79.65	85.83	85.83	85.83	90.20	*91.00*	*92.00*	Common Shs Outst'g D	*95.00*
NMF	18.1	14.0	14.5	15.0	16.1	18.7	18.7	22.4	20.4	19.4	22.2	19.6	19.9	17.4	16.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.5*
NMF	1.21	.89	.91	.95	.90	.98	.94	1.18	1.03	1.05	1.18	1.01	1.08	1.01	.91			Relative P/E Ratio	*.85*
4.9%	4.8%	4.1%	3.2%	3.0%	3.0%	2.8%	3.0%	2.8%	2.5%	2.8%	2.5%	2.8%	2.7%	3.0%	3.2%			Avg Ann'l Div'd Yield	*3.6%*
1435.9	1439.1	1363.0	1445.0	1436.6	1457.6	1523.0	1779.9	2249.6	1939.2	*2175*	*2325*	Revenues ($mill)	*2800*
116.8	118.8	117.4	154.4	160.6	173.1	183.4	211.6	232.0	244.1	*245*	*265*	Net Profit ($mill)	*325*
34.8%	36.9%	32.4%	33.0%	12.9%	8.1%	9.5%	13.4%	14.6%	13.6%	*14.5%*	*15.0%*	Income Tax Rate	*16.0%*
10.7%	17.0%	11.0%	11.9%	12.1%	9.8%	8.9%	8.6%	9.0%	12.3%	*12.0%*	*13.0%*	AFUDC % to Net Profit	*13.0%*
47.8%	54.1%	55.7%	56.1%	61.1%	59.8%	56.9%	61.8%	63.9%	64.2%	*66.0%*	*67.5%*	Long-Term Debt Ratio	*69.0%*
51.9%	45.5%	44.0%	43.6%	38.6%	39.9%	42.9%	38.0%	36.0%	35.6%	*33.5%*	*32.0%*	Common Equity Ratio	*30.5%*
3437.1	3633.3	3806.8	3887.5	4370.0	4207.7	4780.6	5698.6	6096.1	6602.3	*7400*	*8250*	Total Capital ($mill)	*10400*
4270.0	4535.4	4904.7	4980.2	5234.6	5466.0	5965.1	6752.9	6972.8	7609.9	*8400*	*9300*	Net Plant ($mill)	*11500*
5.1%	4.8%	4.7%	5.3%	5.0%	5.5%	4.9%	4.6%	4.9%	5.0%	*4.5%*	*4.5%*	Return on Total Cap'l	*4.5%*
6.5%	7.1%	7.0%	9.0%	9.4%	10.2%	8.9%	9.7%	10.5%	10.3%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.0%*
6.5%	7.1%	7.0%	9.1%	9.5%	10.3%	8.9%	9.7%	10.6%	10.4%	*10.0%*	*10.0%*	Return on Com Equity E	*10.0%*
3.2%	3.3%	2.8%	4.5%	4.5%	4.8%	4.1%	4.6%	5.1%	5.0%	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
51%	54%	61%	51%	53%	54%	54%	53%	52%	52%	*58%*	*58%*	All Div'ds to Net Prof	*55%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $4783.7 mill. **Due in 5 Yrs** $2177.6 mill.
LT Debt $4241.6 mill. **LT Interest** $169.0 mill.
(Total Interest Coverage: 2.4x)

Leases, Uncapitalized Annual rentals $12.0 mill.

Pension Assets-12/22 $448.6 mill.
Oblig $461.2 mill.
Pfd Stock $11.5 mill. **Pfd Div'd** $.5 mill.

Common Stock 90,200,384 shs.
as of 2/16/24
MARKET CAP: $3.4 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	1.0	5.2	1.0
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	1968	2139	2162
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	1.2	1.0	1.0
Fixed Charge Cov. (%)	317	289	230

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	2.0%	5.0%	*4.5%*
"Cash Flow"	7.0%	5.0%	*5.0%*
Earnings	7.5%	8.0%	*5.0%*
Dividends	9.0%	7.0%	*5.0%*
Book Value	2.5%	4.0%	*4.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	364.7	426.5	554.6	434.1	1779.9
2022	444.1	499.7	729.9	575.9	2249.6
2023	544.1	477.2	505.9	412.0	1939.2
2024	*560*	*525*	*580*	*510*	*2175*
2025	*595*	*560*	*630*	*540*	*2325*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.32	.55	1.37	.21	2.45
2022	.50	.57	1.46	.15	2.69
2023	.55	.55	1.54	.18	2.82
2024	*.45*	*.55*	*1.45*	*.25*	*2.70*
2025	*.50*	*.60*	*1.50*	*.25*	*2.85*

Calendar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.3075	.3075	.3075	.3075	1.23
2021	.3275	.3275	.3275	.3275	1.31
2022	.3475	.3475	.3475	.3475	1.39
2023	.3675	.3675	.3675	.3675	1.47
2024	.3875				

BUSINESS: PNM Resources, Inc. is a holding company with two regulated electric utilities. Public Service Company of New Mexico (PNM) serves 548,000 customers in north central New Mexico, including Albuquerque and Santa Fe. Texas-New Mexico Power Company (TNMP) transmits and distributes power to 272,000 consumers in Texas. Electric revenue breakdown: residential, 32%; commercial, 28%; industrial, 7%; other, 33%. Generating sources not available. Fuel costs: 46% of revenues. '23 reported depreciation rates: 2.67%-7.64%. Has 1,600 employees. Chairman and CEO: Patricia K. Collawn. Incorporated: New Mexico. Address: 414 Silver Ave. SW, Albuquerque, New Mexico 87102-3289. Telephone: 505-241-2700. Internet: www.pnmresources.com.

PNM Resources' stock has been reeling after the company was left at the alter by its former merger partner. Investors may recall that PNM stockholders were to receive $50.30 per share in an all-cash deal from Northeast utility, Avangrid, Inc. (NYSE: AGR). At various stages of a lengthy courtship it looked as if the marriage would eventually be consummated despite regulators standing in the way. Ultimately, it was Avangrid's parent company, Iberdrola of Spain, who nixed the deal. The Spanish energy giant decided that buying the 18.4% minority stake in Avangrid itself for $34.25 a share is a better use of funds, as that deal is now on the table for AGR shareholders. Year to date, PNM stock is down 11%.

New Mexico regulators' early January rate decision didn't help matters. The New Mexico Public Regulation Commission ruled against the company on every front, making good on the state's reputation for being a difficult regulatory environment. Instead of the rise in its return on equity (ROE) that PNM was seeking, the company instead received a cut from 9.575% to 9.26%. Overall, $64 million in additional revenue was sought, much of that to recoup various investments made in the past to extend the lives of a coal-fired generating facility and a nuclear power plant. Regulators ruled that those investments were "imprudent" and disallowed them. The poor rate-base outcome and increased interest expense on an expanding debt load will likely weigh on this year's bottom line.

Even so, this equity may appeal to utility investors. The New Mexico operation is an average business of this sort, as it has reasonable long-term growth prospects, but is in a tough regulatory climate. Meanwhile, PNM's smaller, interstate long-range transmission & distribution (T&D) businesses, which serve around 300,000 consumers in Texas and New Mexico, are engines of growth for the company and suffer little regulatory lag. Beyond 2024, the recoupment of substantial T&D investments, via regulatory pricing mechanisms, can drive 5%-6% annual earnings and dividend gains. That should translate to worthwhile total return prospects out to late decade.

Anthony J. Glennon *April 19, 2024*

(A) Dil. EPS. Excl. nonrec. gain/(loss): '08, ($3.77); '10, ($1.36); '11, 88¢; '13, (16¢); '15, ($1.28); '17, (92¢); '18, (93¢); '19, ($1.19); '20, (13¢); '21, (18¢); '22, (72¢); '23, ($1.80). Excl. disc. op. gains: '08, 42¢; '09, 78¢. Next egs. report due early May. **(B)** Div'ds paid mid-Feb., May, Aug., & Nov. ■ Div'd reinv. plan avail. **(C)** Incl. def. charges/other intang. In '23: $15.45/sh. **(D)** In mill. **(E)** Rate base: net orig. cost. Rate allowed on com. eq. in NM in '23: 9.26%; in TX in '18: 9.65%; Regulatory Climate: NM, Below Average.; TX, Average.

Company's Financial Strength	B+
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	95

PINNACLE WEST NYSE-PNW

RECENT PRICE **74.08** | P/E RATIO **15.8** (Trailing: 16.8 Median: 17.0) | RELATIVE P/E RATIO **0.86** | DIV'D YLD **4.8%** | **VALUE LINE**

TIMELINESS 4 Lowered 3/22/24
SAFETY 3 Lowered 1/19/24
TECHNICAL 5 Lowered 3/22/24
BETA .95 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$59-$97 $78 (5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	115	(+55%)	*15%*
Low	75	(Nil)	*5%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	201	225	240
to Sell	237	250	253
Hld's(000)	97185	97254	97685

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	61.9	71.1	73.3	82.8	92.5	92.6	99.8	105.5	88.5	80.6	86.0	75.2								
Low:	51.5	51.2	56.0	62.5	75.8	73.4	81.6	60.1	62.8	59.0	68.6	65.2								
	33.37	32.50	30.01	29.67	30.09	31.35	31.58	31.50	31.42	31.90	32.93	30.87	31.81	33.66	38.21	41.40	*41.70*	*42.45*	Revenues per sh	*46.00*
	8.13	8.08	6.85	7.52	7.92	8.15	8.09	9.09	9.39	9.92	10.37	10.69	10.97	11.84	11.50	11.95	*12.50*	*13.10*	"Cash Flow" per sh	*15.35*
	2.12	2.26	3.08	2.99	3.50	3.66	3.58	3.92	3.95	4.43	4.54	4.77	4.87	5.47	4.26	4.41	*4.70*	*5.00*	Earnings per sh [A]	*6.00*
	2.10	2.10	2.10	2.10	2.67	2.23	2.33	2.44	2.56	2.70	2.87	3.04	3.23	3.36	3.43	3.49	*3.55*	*3.61*	Div'd Decl'd per sh [B] ■	*3.79*
	9.46	7.64	7.03	8.26	8.24	9.36	8.38	9.84	11.64	12.80	10.73	10.76	11.93	13.04	15.09	16.28	*16.80*	*16.80*	Cap'l Spending per sh	*17.20*
	34.16	32.69	33.86	34.98	36.20	38.07	39.50	41.30	43.15	44.80	46.59	48.30	49.96	52.26	53.45	54.47	*59.85*	*60.55*	Book Value per sh [C]	*70.15*
	100.89	101.43	108.77	109.25	109.74	110.18	110.57	110.98	111.34	111.75	112.10	112.44	112.76	113.01	113.17	113.42	*116.00*	*119.00*	Common Shs Outst'g [D]	*125.00*
	16.1	13.7	12.6	14.6	14.3	15.3	15.9	16.0	18.7	19.3	17.8	19.4	16.7	14.1	17.1	17.4	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.0*
	.97	.91	.80	.92	.91	.86	.84	.81	.98	.97	.96	1.03	.86	.76	.99	.97			Relative P/E Ratio	*.90*
	6.2%	6.8%	5.4%	4.8%	5.3%	4.0%	4.1%	3.9%	3.5%	3.2%	3.5%	3.3%	4.0%	4.3%	4.7%	4.5%			Avg Ann'l Div'd Yield	*3.9%*
	3491.6	3495.4	3498.7	3565.3	3691.2	3471.2	3587.0	3803.8	4324.4	4696.0	*4840*	*5050*	Revenues ($mill)	*5750*
	397.6	437.3	442.0	497.8	511.0	538.3	550.6	618.7	483.6	501.6	*540*	*590*	Net Profit ($mill)	*750*
	34.2%	34.3%	33.9%	32.5%	20.2%	- -	12.1%	14.8%	13.0%	12.9%	*14.0%*	*14.0%*	Income Tax Rate	*14.0%*
	11.6%	11.8%	14.1%	13.9%	15.2%	9.3%	9.5%	10.1%	15.2%	19.3%	*19.0%*	*19.0%*	AFUDC % to Net Profit	*19.0%*
	41.0%	43.0%	45.6%	48.9%	47.0%	47.1%	52.8%	53.9%	56.1%	55.0%	*52.5%*	*54.0%*	Long-Term Debt Ratio	*52.0%*
	59.0%	57.0%	54.4%	51.1%	53.0%	52.9%	47.2%	46.1%	43.9%	45.0%	*47.5%*	*46.0%*	Common Equity Ratio	*48.0%*
	7398.7	8046.3	8825.4	9796.4	9861.1	10263	11948	12820	13790	13718	*14625*	*15625*	Total Capital ($mill)	*18350*
	11194	11809	12714	13445	14030	14523	15159	15987	16854	17980	*19025*	*20050*	Net Plant ($mill)	*23050*
	6.4%	6.4%	6.0%	6.1%	6.2%	6.3%	5.5%	5.8%	4.5%	5.0%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	9.8%	10.5%	8.0%	8.1%	*8.0%*	*8.0%*	Return on Shr. Equity	*8.5%*
	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	9.8%	10.5%	8.0%	8.1%	*8.0%*	*8.0%*	Return on Com Equity [E]	*8.5%*
	3.5%	3.9%	3.5%	4.2%	3.9%	3.8%	3.5%	4.2%	1.7%	1.9%	*2.0%*	*2.5%*	Retained to Com Eq	*3.0%*
	62%	59%	62%	58%	60%	61%	64%	60%	78%	77%	*75%*	*72%*	All Div'ds to Net Prof	*63%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $9025.1 mill. **Due in 5 Yrs** $2225.0 mill.
LT Debt $7540.6 mill. **LT Interest** $355.0 mill.
(Total Interest Coverage: 2.6x)

Leases, Uncapitalized Annual rentals $19.2 mill.

Pension Assets-12/22 $2835.5 mill.
Oblig $2908.1 mill.

Pfd Stock None

Common Stock 113,427,367 shs.
as of 2/21/24
MARKET CAP: $8.4 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	-.1	+4.4	+2.8
Avg. Indust. Use (MWH)	808	849	874
Avg. Indust. Revs. per KWH (¢)	8.11	9.20	10.38
Capacity at Peak (Mw)	8726	8612	9629
Peak Load, Summer (Mw)	7580	7587	8159
Annual Load Factor (%)	45.1	48.1	45.7
% Change Customers (yr-end)	+2.2	+2.1	+1.8
Fixed Charge Cov. (%)	317	226	220

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	2.0%	3.5%	*4.0%*
"Cash Flow"	4.0%	3.5%	*3.5%*
Earnings	3.5%	2.0%	*4.5%*
Dividends	4.0%	5.0%	*1.5%*
Book Value	4.0%	3.5%	*4.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	696.5	1000.2	1308.2	798.9	3803.8
2022	783.5	1061.7	1469.9	1009.3	4324.4
2023	945.0	1121.7	1637.8	991.5	4696.0
2024	*1000*	*1190*	*1640*	*1010*	*4840*
2025	*1045*	*1240*	*1710*	*1055*	*5050*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.32	1.91	3.00	.24	5.47
2022	.15	1.45	2.88	d.21	4.26
2023	d.03	.94	3.50	Nil	4.41
2024	*.05*	*1.25*	*3.40*	*Nil*	*4.70*
2025	*.05*	*1.33*	*3.62*	*Nil*	*5.00*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.783	.783	.783	.83	3.18
2021	.83	.83	.83	.85	3.34
2022	.85	.85	.85	.865	3.42
2023	.865	.865	.865	.88	3.48
2024	.88				

BUSINESS: Pinnacle West Capital Corporation is a holding company for Arizona Public Service Company (APS), which supplies electricity to 1.4 million customers in most of Arizona, except about half of the Phoenix metro area, the Tucson metro area, and Mohave County in northwestern Arizona. Discontinued SunCor real estate subsidiary in '10. Electric revenue breakdown: residential, 49%; commercial/industrial, 44%; other, 7%. Generating sources: gas, 25%; nuclear, 25%; coal, 18%; renewables, 2%; purchased, 30%. Fuel costs: 38% of revenues. '23 reported deprec. rate: 2.98%. Has 6,133 employees. Chairman, President & CEO: Jeffrey B. Guldner. Inc.: AZ. Address: 400 North Fifth St., P.O. Box 53999, Phoenix, AZ 85072-3999. Tel.: 602-250-1000. Internet: www.pinnaclewest.com.

In late February, Pinnacle West received a constructive general rate case (GRC) decision. Investors may recall that from early 2022, the utility had been operating under revised regulatory parameters that cut its authorized return on equity (ROE) from 10% to 8.7% (one of the lowest levels for a major market at that time). The change effectively reduced Pinnacle's annual earnings power by over $1.00 per share. A revamped state regulatory commission, which has some new members and a different chairperson (due to term limits), heeded the recommendation of a state administrative law judge who consulted on the case. The newly established ROE of 9.55% plus an additional fair value increment (FVI) of .25% passed by a 4-1 vote. According to Pinnacle's CEO, assuming certain criteria are met for the FVI to kick in, the company's effective ROE will be 9.85%. The net effect of the GRC lifts the company's earning power by $1.33 per share. We're raising our rating on the Arizona regulatory climate back to "average." The 2021 GRC decision landed it in the below-average camp.

We've raised our 2024 share-earnings estimate. It's only going up by a dime, but that's because we expected a favorable GRC outcome from PNW's perspective. Notably, the additional earnings power is substantial, though not readily apparent in our estimates because the company benefited by $0.48 a share last year from an extreme heat wave. Moreover, there are a number of factors this year that are likely to offset the additional revenue from the increased ROE. The utility had been tightening its belt on operating and maintenance expense and that's set to rise, as are depreciation/amortization and interest expense. On the positive side of the ledger, weather-normalized retail sales growth in Arizona comes to about $0.25 a share annually on average. Pinnacle has a premium service area in terms of growth from interstate migration and rising energy demand from a thriving economy. There's no lack of capital investment prospects to drive rate-base growth there.

Though untimely, we think long-term utility investors should keep this stock on their watch list and target a pullback as an entry point.

Anthony J. Glennon *April 19, 2024*

(A) Diluted EPS. Excl. nonrec. gain/(loss): '09, ($1.45); '17, 8¢; gains/(losses) from discont. ops.: '08, 28¢; '09, (13¢); '10, 18¢; '11, 10¢; '12, (5¢). Qtly. EPS may not sum to full year due to rounding. Next egs. report due early May. **(B)** Div'ds historically paid in early Mar., June, Sept., & Dec. There were 5 declarations in '12. ■ Div'd reinvestment plan avail. **(C)** Incl. deferred charges/other intangibles. In '23: $27.22/sh. **(D)** In mill. **(E)** Rate base: Fair value. Rate allowed on common equity in '23: 9.55%-9.85%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	40
Earnings Predictability	90

PORTLAND GENERAL NYSE-POR

RECENT PRICE 41.66 | P/E RATIO 14.3 (Trailing: 17.6 Median: 18.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 4.8% | VALUE LINE

TIMELINESS 5 Lowered 8/11/23
SAFETY 3 Lowered 1/19/24
TECHNICAL 4 Lowered 3/8/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

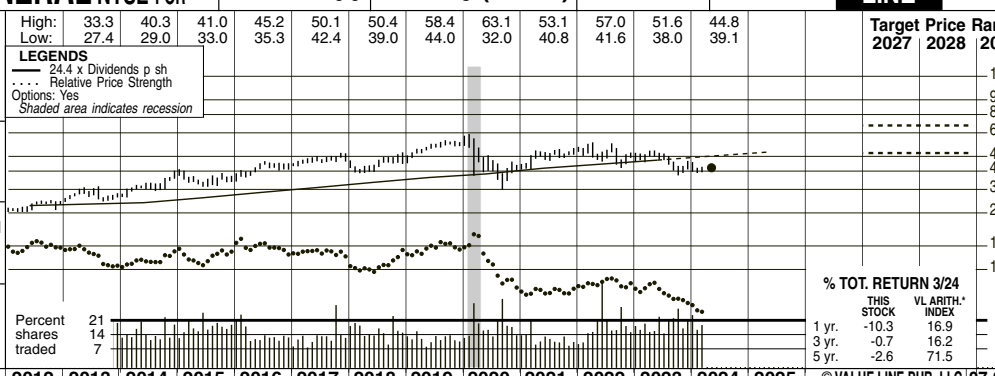
Low-High	Midpoint (% to Mid)
$35-$62	$49 (15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+70%)	*17%*
Low	50	(+20%)	*9%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	189	173	213
to Sell	170	186	164
Hld's(000)	103597	100907	103294



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
27.89	23.99	23.67	24.06	23.89	23.18	24.29	21.38	21.62	22.54	22.30	23.75	23.96	26.80	29.65	28.90	*30.30*	*31.55*	Revenues per sh	*34.90*
4.71	4.07	4.82	4.96	5.15	4.93	6.08	5.37	5.78	6.16	6.65	6.97	7.83	7.25	7.41	6.83	*8.00*	*8.55*	"Cash Flow" per sh	*10.20*
1.39	1.31	1.66	1.95	1.87	1.77	2.18	2.04	2.16	2.29	2.37	2.39	2.75	2.72	2.74	2.38	*3.05*	*3.25*	Earnings per sh [A]	*3.85*
.97	1.01	1.04	1.06	1.08	1.10	1.12	1.18	1.26	1.34	1.43	1.52	1.59	1.70	1.79	1.88	*1.98*	*2.08*	Div'd Decl'd per sh [B] ■ †	*2.46*
6.12	9.25	5.97	3.98	4.01	8.40	12.87	6.73	6.57	5.77	6.67	6.78	8.76	7.11	8.58	13.42	*12.90*	*11.75*	Cap'l Spending per sh	*11.00*
21.64	20.50	21.14	22.07	22.87	23.30	24.43	25.43	26.35	27.11	28.07	28.99	29.18	30.28	31.13	32.81	*34.00*	*35.25*	Book Value per sh [C]	*39.75*
62.58	75.21	75.32	75.36	75.56	78.09	78.23	88.79	88.95	89.11	89.27	89.39	89.54	89.41	89.28	101.16	*101.50*	*102.00*	Common Shs Outst'g [D]	*106.00*
16.3	14.4	12.0	12.4	14.0	16.9	15.3	17.7	19.1	20.0	18.4	22.3	16.6	17.7	18.2	19.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.5*
.98	.96	.76	.78	.89	.95	.81	.89	1.00	1.01	.99	1.19	.85	.96	1.05	1.08			Relative P/E Ratio	*.85*
4.3%	5.4%	5.2%	4.4%	4.1%	3.7%	3.3%	3.3%	3.1%	2.9%	3.3%	2.8%	3.5%	3.5%	3.6%	4.1%			Avg Ann'l Div'd Yield	*4.1%*
1900.0	1898.0	1923.0	2009.0	1991.0	2123.0	2145.0	2396.0	2647.0	2923.0	*3075*	*3220*	Revenues ($mill)	*3700*
175.0	172.0	193.0	204.0	212.0	214.0	247.0	244.0	245.0	233.0	*310*	*330*	Net Profit ($mill)	*405*
26.0%	20.7%	20.6%	25.3%	7.4%	11.2%	12.4%	8.6%	15.2%	16.8%	*17.5%*	*17.5%*	Income Tax Rate	*17.5%*
33.7%	19.8%	16.6%	8.8%	8.0%	7.0%	9.7%	10.2%	8.6%	13.7%	*11.0%*	*11.0%*	AFUDC % to Net Profit	*11.0%*
52.7%	47.8%	48.4%	50.1%	46.5%	51.3%	53.6%	56.8%	57.0%	55.8%	*58.5%*	*60.0%*	Long-Term Debt Ratio	*60.0%*
47.3%	52.2%	51.6%	49.9%	53.5%	48.7%	46.4%	43.2%	43.0%	44.2%	*41.5%*	*40.0%*	Common Equity Ratio	*40.0%*
4037.0	4329.0	4544.0	4842.0	4684.0	5323.0	5628.0	6265.0	6459.0	7513.0	*8325*	*8975*	Total Capital ($mill)	*10500*
5679.0	6012.0	6434.0	6741.0	6887.0	7161.0	7539.0	8005.0	8465.0	9546.0	*10350*	*11000*	Net Plant ($mill)	*12600*
5.8%	5.4%	5.6%	5.5%	5.8%	5.1%	5.6%	4.9%	4.9%	4.2%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.0%*
9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	9.5%	9.0%	8.8%	7.0%	*9.0%*	*9.0%*	Return on Shr. Equity	*9.5%*
9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	9.5%	9.0%	8.8%	7.0%	*9.0%*	*9.0%*	Return on Com Equity [E]	*9.5%*
4.6%	3.3%	3.5%	3.6%	3.5%	3.1%	4.1%	3.5%	3.1%	1.6%	*3.0%*	*3.5%*	Retained to Com Eq	*3.5%*
50%	56%	57%	58%	59%	63%	57%	61%	64%	77%	*65%*	*64%*	All Div'ds to Net Prof	*64%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $4440 mill. **Due in 5 Yrs** $467 mill.
LT Debt $4194 mill. **LT Interest** $166 mill.
Incl. $289 mill. finance leases.
(Total Interest Coverage: 2.5x)
Leases, Uncapitalized Annual rentals $3 mill.
Pension Assets-12/23 $530 mill.
Oblig $690 mill.
Pfd Stock None

Common Stock 101,162,366 shs.
as of 2/8/24

MARKET CAP: $4.2 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	+5.1	+3.4	+.9
Avg. Indust. Use (MWH)	20002	22097	23052
Avg. Indust. Revs. per KWH (¢)	5.22	5.23	5.85
Capacity at Peak (MW)	NA	NA	NA
Peak Load, Summer (MW)	4453	4255	4498
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.6	+1.1	+.7
Fixed Charge Cov. (%)	261	254	217

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	2.0%	5.0%	*3.5%*
"Cash Flow"	3.5%	3.0%	*6.0%*
Earnings	3.5%	3.0%	*6.0%*
Dividends	5.0%	6.0%	*5.5%*
Book Value	3.5%	3.0%	*4.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	609	537	642	608	2396
2022	626	591	743	687	2647
2023	748	648	802	725	2923
2024	*750*	*700*	*850*	*775*	*3075*
2025	*785*	*735*	*890*	*810*	*3220*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.07	.36	.56	.73	2.72
2022	.67	.72	.65	.70	2.74
2023	.80	.44	.46	.67	2.38
2024	*.95*	*.60*	*.70*	*.80*	*3.05*
2025	*1.00*	*.65*	*.75*	*.85*	*3.25*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.385	.385	.385	.4075	1.56
2021	.4075	.4075	.43	.43	1.68
2022	.43	.43	.4525	.4525	1.77
2023	.4525	.4525	.475	.475	1.86
2024	.475	.475			

BUSINESS: Portland General Electric Company provides electricity to 934,000 customers in 51 cities in a 4,000-square-mile area of Oregon, including Portland and Salem (population: 1.9 million). The company is in the process of decommissioning the Trojan nuclear plant, which was closed in 1993. Electric revenue breakdown: residential, 52%; commercial, 33%; industrial, 15%; other, less than 1%. Generating sources: gas, 40%; wind, 7%; coal, 8%; hydro, 4%; purchased, 41%. Fuel costs: 40% of revenues. '23 reported depreciation rate: 3.4%. Has 2,842 full-time employees. Chair: James P. Torgerson. President and CEO: Maria M. Pope. Incorporated: Oregon. Address: 121 S.W. Salmon Street, Portland, OR 97204. Tel.: 503-464-8000. Internet: www.portlandgeneral.com.

Portland General Electric's per-share profits should bounce back this year and next. In 2023, the company suffered from weather that was exceedingly mild, resulting in less than 1% volume growth for a service area that is accustomed to 2% or better. On top of that, purchased-power costs were excessively high, as mild weather is not ideal for hydroelectric and wind power production in the Pacific Northwest. This resulted in a tight supply situation that drove up pricing. Management expects the utility will earn $2.98-$3.18 a share in 2024. To a large extent, the recovery is based on normalized weather conditions, as well as utility rate relief, to address last year's rise in costs and investments made in the electric grid. In 2025, a general rate case decision is due. Portland General is seeking $225 million in additional annual revenues for recoupment of investments made, plus timely recovery mechanisms via customer billing pass-throughs. The company appears to have a reasonably good partnership with the state of Oregon in terms of addressing the state's "green" energy commitments. We think that will translate to a constructive rate-case outcome.

Longer term, the utility's 5%-7% earnings and dividend growth targets seem achievable. Over time, Portland General's bottom line should be less volatile, as the company reduces its reliance on open market power purchases, which have a tendency to spike in price. The company has the green light from regulators to add at least 375-500 megawatts of nonemitting annual power generation in the intermediate term, plus significant battery storage capacity. Projects committed to appear to have solid partnerships in place with lengthy annual purchased-power agreements on portions of generating capacity the company does not directly own. There should be several years of 8%-plus rate base growth, as the general outline of the projects described above are replicated six-fold into the 2030s. On the demand front, 2% annual load growth is supported by a healthy high-tech industrial segment in Portland General's service area.

Though untimely, patient utility investors can do well here, as the stock offers good total return prospects.

Anthony J. Glennon *April 19, 2024*

(A) Diluted earnings. Excl. nonrecurring gains/(losses): '13, (42¢); '17, (19¢); '20, ($1.03); '22, (14¢); '23, (5¢). Quarterly EPS many not sum to full year due to rounding. Next earnings report due early May. **(B)** Dividends paid mid-Jan., Apr., July, and Oct. ■ Dividend reinvestment plan available. † Shareholder investment plan available. **(C)** Incl. deferred charges. In '23: $492 mill., $4.86/sh. **(D)** In mill. **(E)** Rate base: Net original cost. Rate allowed on common equity in '22: 9.5%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	40
Earnings Predictability	95

SOUTHERN COMPANY NYSE-SO

RECENT PRICE 74.39 | P/E RATIO 18.6 (Trailing: 20.4 Median: 17.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 3.8% | VALUE LINE

TIMELINESS 3 Raised 3/1/24
SAFETY 2 Lowered 2/21/14
TECHNICAL 4 Raised 4/19/24
BETA .95 (1.00 = Market)

18-Month Target Price Range

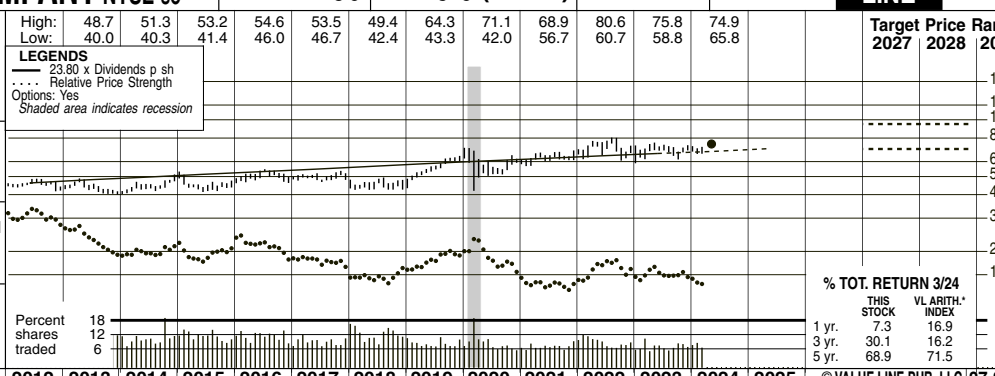
Low-High	Midpoint (% to Mid)
$64-$101	$83 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	95	(+30%)	*10%*
Low	70	(-5%)	*3%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	773	753	841
to Sell	703	757	776
Hld's(000)	688021	689919	708610



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
22.04	19.21	20.70	20.41	19.06	19.26	20.34	19.18	20.09	22.86	22.73	20.34	19.29	21.80	26.89	23.15	*24.66*	*25.85*	Revenues per sh	*29.20*
4.43	4.43	4.51	4.91	5.18	5.27	5.28	5.47	5.69	6.64	6.41	6.33	6.98	7.20	7.34	7.79	*8.00*	*8.30*	"Cash Flow" per sh	*9.25*
2.25	2.32	2.36	2.55	2.67	2.70	2.77	2.84	2.83	3.21	3.00	3.17	3.25	3.42	3.61	3.64	*4.00*	*4.30*	Earnings per sh [A]	*5.10*
1.66	1.73	1.80	1.87	1.94	2.01	2.08	2.15	2.22	2.30	2.38	2.46	2.54	2.62	2.70	2.78	*2.86*	*2.96*	Div'd Decl'd per sh [B] ■	*3.10*
5.10	5.70	4.85	5.23	5.54	6.16	6.58	6.22	7.38	7.37	7.74	7.17	7.04	6.83	7.87	8.88	*8.85*	*8.75*	Cap'l Spending per sh	*8.50*
17.08	18.15	19.21	20.32	21.09	21.43	21.98	22.59	25.00	23.98	23.92	26.11	26.48	26.30	27.93	28.82	*29.90*	*31.75*	Book Value per sh [C]	*32.25*
777.19	819.65	843.34	865.13	867.77	887.09	907.78	911.72	990.39	1007.6	1033.8	1053.3	1056.5	1060.0	1089.0	1091.0	*1095.0*	*1095.0*	Common Shs Outst'g [D]	*1095.0*
16.1	13.5	14.9	15.8	17.0	16.2	16.0	15.8	17.8	15.5	15.1	17.6	17.9	18.4	19.6	19.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.5*
.97	.90	.95	.99	1.08	.91	.84	.80	.93	.78	.82	.94	.92	1.00	1.14	1.06			Relative P/E Ratio	*.90*
4.6%	5.5%	5.1%	4.6%	4.3%	4.6%	4.7%	4.8%	4.4%	4.6%	5.3%	4.4%	4.4%	4.2%	4.1%	4.1%			Avg Ann'l Div'd Yield	*3.6%*
18467	17489	19896	23031	23495	21419	20375	23113	29279	25253	*27000*	*28300*	Revenues ($mill)	*32000*
2567.0	2647.0	2757.0	3269.0	3096.0	3354.0	3481.0	3670.0	3931.3	3976.0	*4280*	*4600*	Net Profit ($mill)	*5510*
33.8%	33.4%	28.5%	25.2%	21.3%	15.9%	14.3%	16.3%	18.9%	11.4%	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*
13.9%	13.2%	11.9%	7.6%	6.8%	6.0%	6.6%	7.7%	8.0%	7.9%	*8.0%*	*8.0%*	AFUDC % to Net Profit	*6.0%*
49.5%	52.8%	61.5%	64.5%	62.0%	60.1%	61.5%	64.0%	63.0%	65.6%	*64.0%*	*64.0%*	Long-Term Debt Ratio	*63.0%*
47.3%	44.0%	35.7%	35.0%	37.6%	39.5%	38.1%	35.6%	36.5%	37.6%	*36.0%*	*36.0%*	Common Equity Ratio	*37.0%*
42142	46788	69359	68953	65750	69594	73336	78285	80558	83654	*85000*	*87500*	Total Capital ($mill)	*93500*
54868	61114	78446	79872	80797	83080	87634	91108	94570	99844	*100000*	*100500*	Net Plant ($mill)	*110000*
7.1%	6.6%	4.9%	5.9%	5.9%	6.0%	5.9%	5.8%	5.5%	4.6%	*5.5%*	*5.5%*	Return on Total Cap'l	*6.5%*
12.1%	12.0%	10.3%	13.3%	12.4%	12.1%	12.3%	13.0%	12.5%	12.6%	*13.0%*	*13.0%*	Return on Shr. Equity	*14.5%*
12.5%	12.6%	11.0%	13.4%	12.5%	12.1%	12.4%	13.1%	12.5%	12.6%	*13.0%*	*13.0%*	Return on Com Equity [E]	*14.5%*
3.2%	3.1%	2.5%	3.9%	2.6%	2.8%	2.8%	3.1%	3.0%	3.2%	*3.5%*	*3.5%*	Retained to Com Eq	*5.0%*
75%	76%	78%	72%	79%	77%	78%	76%	78%	77%	*77%*	*77%*	All Div'ds to Net Prof	*67%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $57210 mill. **Due in 5 Yrs** $15427 mill.
LT Debt $54745 mill. **LT Interest** $1754 mill.
Incl. $215 mill. finance leases.
(LT interest earned: 3.3x)
Leases, Uncapitalized Annual rentals $307 mill.
Pension Assets-12/23 $14218 mill.
Oblig $16382 mill.
Pfd Stock $242 mill. **Pfd Div'd** $15 mill.
Incl. 10 mill. shs. 5.83% cum. pfd. ($25 stated value); 475,115 shs. 4.2%-5.44% cum. pfd. ($100 par).
Common Stock 1,091,015,113 shs.
MARKET CAP: $81.2 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	-5.3	+2.0	NA
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Yearend (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.3	+1.5	NA
Fixed Charge Cov. (%)	270	275	NA

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	- -	.5%	*6.0%*
"Cash Flow"	4.0%	4.5%	*5.0%*
Earnings	3.0%	3.0%	*6.5%*
Dividends	3.5%	3.5%	*3.5%*
Book Value	3.0%	2.5%	*3.5%*

Calendar	QUARTERLY REVENUES (mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	5910	5198	6238	5767	23113
2022	6648	7206	8378	7047	29279
2023	6480	5748	6980	6045	25253
2024	*6550*	*6100*	*7300*	*7050*	*27000*
2025	*6800*	*6500*	*7600*	*7400*	*28300*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.09	.67	1.22	.44	3.42
2022	.97	1.07	1.31	.26	3.61
2023	.79	.79	1.42	.64	3.64
2024	*.90*	*1.00*	*1.45*	*.65*	*4.00*
2025	*1.00*	*1.10*	*1.50*	*.70*	*4.30*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.62	.64	.64	.64	2.54
2021	.64	.66	.66	.66	2.62
2022	.66	.68	.68	.68	2.70
2023	.68	.70	.70	.70	2.78
2024	.70	.72			

BUSINESS: The Southern Company, through its subsidiaries, supplies electricity to 4.4 mill. customers in GA, AL, and MS. Also has a competitive generation business. Acq'd AGL Resources (renamed Southern Company Gas, 4.4 mill. customers in GA, NJ, IL, VA, & TN) 7/16. Sold Gulf Power 1/19. Electric revenue breakdown: residential, 43%; commercial, 35%; industrial, 21%; other, 1%. Generating sources: gas, 51%; coal, 19%; nuclear, 10%; other, 11%; purchased, 9%. Fuel costs: 26% of revenues. '23 reported deprec. rates (utility): 2.7%-3.4%. Has 27,300 employees. President and CEO: Chris Womack. Incorporated.: Delaware. Address: 30 Ivan Allen Jr. Blvd., N.W., Atlanta, Georgia 30308. Telephone: 404-506-0747. Internet: www.southerncompany.com.

Southern Company's Georgia Power subsidiary has completed its nuclear construction project. In late April, unit 4 entered commercial operation, and plant Vogtle became the largest generator of clean energy in the U.S. Units 3 and 4 will combine to produce enough electricity to power approximately 1 million homes for at least 60-80 years. The construction project faced significant delays and reached completion seven years later than Southern's initial forecast, while costing more than $20 billion over original budget estimates. We look for the Vogtle station to greatly improve earnings prospects moving forward, as the project will provide clean, reliable, cost-effective energy amid greater demand for energy and growing power volumes. The transition to cleaner energy should also begin to accelerate with earnings and dividend growth as units 3 and 4 start to pick up steam this year.

We look for full-year 2024 earnings of $4.00 a share. This is the midpoint of management's initial profit target range of $3.95-$4.05 per share, which was released in February. Too, Southern reaffirmed its long-term EPS growth estimate of 5%-7%. We expect even greater growth of 10% this year due to an almost full year of operations from Vogtle units 3 and 4, as well as rate relief and an improved macroeconomic environment. As a result, we project earnings of $4.30 per share on revenues of $28.3 billion for full-year 2025.

The board of directors recently raised the dividend. The increase was $0.02 a share, making the quarterly distribution $0.72 per share. The dividend has now been raised in 23 consecutive years, and the yield of 3.8% sits above the utility average.

This issue is best-suited to conservative, income-oriented accounts. Indeed, the consistently raised dividend remains Southern's most notable feature. These shares also hold a strong financial strength rating (A), and an Above Average (2) Safety rank. Plus, risks from the nuclear construction project have concluded and prospects ahead for the Vogtle station are bright. On the other hand, the current quotation is already trading on the low-end of our 3- to 5-year Target Price range, as long-term prospects are weak.

Zachary J. Hodgkinson *May 10, 2024*

(A) Diluted EPS. Excl. nonrec. gain (losses): '09, (25¢); '13, (83¢); '14, (59¢); '15, (25¢); '16, (28¢); '17, ($2.37); '18, (78¢); '19, $1.30; '20, (17¢); '21, (54¢). Next earnings report due in mid-May. **(B)** Div'ds paid in early Mar., June, Sept., and Dec. ■ Div'd reinvestment plan avail. **(C)** Incl. def'd charges. In '23: $17.35/sh. **(D)** In mill. **(E)** Rate base: AL, MS, fair value; FL, GA, orig. cost. Allowed return on common eq. (blended): 12.5%; earned on avg. com. eq., '21: 12.8%. Regulatory Climate: GA, AL Above Average; MS, FL Average.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	95

XCEL ENERGY NDQ-XEL

RECENT PRICE 54.08 | P/E RATIO 15.3 (Trailing: 16.2 Median: 20.0) | RELATIVE P/E RATIO 0.83 | DIV'D YLD 4.2% | VALUE LINE

TIMELINESS 4 Lowered 12/1/23
SAFETY 2 Lowered 1/19/24
TECHNICAL 4 Lowered 4/12/24
BETA .85 (1.00 = Market)

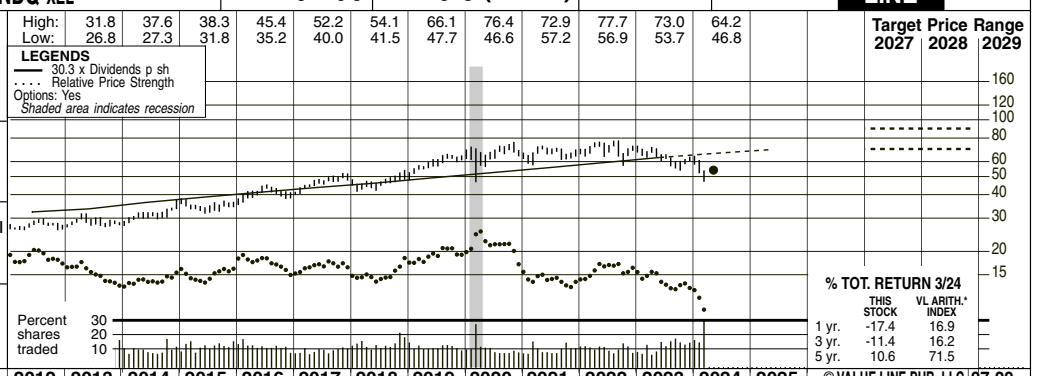
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$51-$91 $71 (30%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+65%)	*17%*
Low	70	(+30%)	*10%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	426	448	514
to Sell	422	404	387
Hld's(000)	432509	434495	438235



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
24.69	21.08	21.38	21.90	20.76	21.92	23.11	21.72	21.90	22.46	22.44	21.98	21.45	24.69	27.86	25.60	*27.70*	*28.65*	Revenues per sh	*32.05*
3.50	3.48	3.51	3.79	4.00	4.10	4.28	4.56	5.04	5.47	5.92	6.25	6.61	7.08	7.81	7.96	*8.60*	*9.25*	"Cash Flow" per sh	*11.25*
1.46	1.49	1.56	1.72	1.85	1.91	2.03	2.10	2.21	2.30	2.47	2.64	2.79	2.96	3.17	3.35	*3.55*	*3.80*	Earnings per sh A	*4.70*
.94	.97	1.00	1.03	1.07	1.11	1.20	1.28	1.36	1.44	1.52	1.62	1.72	1.83	1.95	2.08	*2.19*	*2.30*	Div'd Decl'd per sh B ■ †	*2.67*
4.66	3.91	4.60	4.53	5.27	6.82	6.33	7.26	6.42	6.54	7.70	8.05	9.99	7.80	8.44	10.55	*13.25*	*16.40*	Cap'l Spending per sh	*11.65*
15.35	15.92	16.76	17.44	18.19	19.21	20.20	20.89	21.73	22.56	23.78	25.24	27.12	28.70	30.34	31.74	*33.30*	*35.00*	Book Value per sh C	*41.35*
453.79	457.51	482.33	486.49	487.96	497.97	505.73	507.54	507.22	507.76	514.04	524.54	537.44	544.03	549.58	554.94	*560.00*	*565.00*	Common Shs Outst'g D	*580.00*
13.7	12.7	14.1	14.2	14.8	15.0	15.4	16.5	18.5	20.2	18.9	22.3	23.9	22.5	22.2	19.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
.82	.85	.90	.89	.94	.84	.81	.83	.97	1.02	1.02	1.19	1.23	1.22	1.28	1.06			Relative P/E Ratio	*.95*
4.7%	5.1%	4.5%	4.2%	3.9%	3.9%	3.8%	3.7%	3.3%	3.1%	3.3%	2.7%	2.6%	2.8%	2.8%	3.3%			Avg Ann'l Div'd Yield	*3.3%*
11686	11024	11107	11404	11537	11529	11526	13431	15310	14206	*15500*	*16200*	Revenues ($mill)	*18600*
1021.3	1063.6	1123.4	1171.0	1261.0	1372.0	1473.0	1597.0	1736.0	1851.0	*1985*	*2140*	Net Profit ($mill)	*2725*
33.9%	35.8%	34.1%	30.7%	12.6%	8.5%	--	--	--	--	*NMF*	*NMF*	Income Tax Rate	*NMF*
12.5%	7.7%	7.8%	9.4%	12.4%	8.3%	10.7%	6.2%	5.9%	7.7%	*10.0%*	*9.0%*	AFUDC % to Net Profit	*8.0%*
53.0%	54.1%	56.3%	55.9%	56.4%	56.8%	57.4%	58.2%	57.8%	58.6%	*60.5%*	*62.5%*	Long-Term Debt Ratio	*62.5%*
47.0%	45.9%	43.7%	44.1%	43.6%	43.2%	42.6%	41.8%	42.2%	41.4%	*39.5%*	*37.5%*	Common Equity Ratio	*37.5%*
21714	23092	25216	25975	28025	30646	34220	37391	39488	42529	*46975*	*53000*	Total Capital ($mill)	*64200*
28757	31206	32842	34329	36944	39483	42950	45457	48253	51642	*56225*	*62450*	Net Plant ($mill)	*74000*
6.0%	5.8%	5.7%	5.8%	5.7%	5.6%	5.4%	5.3%	5.5%	5.4%	*5.5%*	*5.0%*	Return on Total Cap'l	*5.5%*
10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	10.1%	10.2%	10.4%	10.5%	*10.5%*	*11.0%*	Return on Shr. Equity	*11.5%*
10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	10.1%	10.2%	10.4%	10.5%	*10.5%*	*11.0%*	Return on Com Equity E	*11.5%*
4.5%	4.3%	4.0%	3.9%	4.3%	4.4%	4.2%	4.2%	4.3%	4.3%	*4.0%*	*4.5%*	Retained to Com Eq	*5.0%*
55%	57%	61%	62%	58%	58%	58%	59%	58%	59%	*61%*	*60%*	All Div'ds to Net Prof	*57%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $26250 mill. **Due in 5 Yrs** $3790 mill.
LT Debt $24913 mill. **LT Interest** $904 mill.
Incl. $218 mill. finance leases.
(Total Interest Coverage: 2.8x)

Leases, Uncapitalized Annual rentals $277 mill.
Pension Assets-12/23 $2690 mill.
Oblig $2943 mill.

Pfd Stock None

Common Stock 555,155,770 shs.
as of 2/15/24
MARKET CAP: $30.0 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2021	2022	2023
% Change Retail Sales (KWH)	+1.4	+1.2	-1.6
Resid'l Revs. per KWH (¢)	12.94	13.41	13.80
C & I Revs. per KWH (¢)	8.73	9.02	8.82
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	19849	20346	20512
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	262	255	245

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	2.0%	3.0%	*3.5%*
"Cash Flow"	7.0%	7.0%	*7.0%*
Earnings	5.5%	6.5%	*7.0%*
Dividends	6.0%	6.5%	*5.5%*
Book Value	5.0%	6.0%	*5.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	3541	3068	3467	3355	13431
2022	3751	3424	4082	4053	15310
2023	4080	3022	3662	3442	14206
2024	*4100*	*3325*	*4050*	*4025*	*15500*
2025	*4275*	*3475*	*4230*	*4220*	*16200*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.67	.58	1.13	.58	2.96
2022	.70	.60	1.18	.69	3.17
2023	.76	.52	1.23	.83	3.35
2024	*.80*	*.60*	*1.30*	*.85*	*3.55*
2025	*.85*	*.65*	*1.40*	*.90*	*3.80*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.405	.43	.43	.43	1.70
2021	.43	.4575	.4575	.4575	1.80
2022	.4575	.4875	.4875	.4875	1.92
2023	.4875	.52	.52	.52	2.05
2024	.52	.5475			

BUSINESS: Xcel Energy Inc. is the parent of Northern States Power Company (NSP), which supplies electricity to MN, WI, ND, SD & MI & gas to MN, WI, ND & MI; Public Service Company of Colorado (PSCo), which supplies electricity & gas to CO; & Southwestern Public Service Company (SPS), which supplies electricity to TX and NM. Customers: 3.8 mill. electric, 2.2 mill. gas. Electric revenues: resid'l, 31%; comm'l & ind'l, 50%; other, 19%. Purchases 34% of power, owns 66%. Total electric mix: wind, 29%; gas, 23%; coal, 13%, nuclear, 24%, solar/other, 11%. Fuel cost: 40% of revenues. '23 deprec. rate: 3.6%. Employs 11,311. Chrmn., President, and CEO: Robert Frenzel. Inc.: MN. Addr.: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Int.: www.xcelenergy.com.

Xcel Energy stock is down sharply this year due to the company's role in the recent Texas Panhandle wildfires. There are multiple ongoing blazes in this region under various names with different levels of containment. The utility holding company disputes it's subsidiary acted negligently, but has acknowledged that its equipment had a part in igniting what's being called the Smokehouse Creek fire. That blaze has scorched more than one million acres, destroyed about 80 homes, and caused at least two deaths. Xcel does not believe that its equipment had a part in other contiguous wildfires, such as the Windy Deuce blaze. At one point, the equity was down nearly 25% in value on a year-to-date basis. As the fires have become contained and liabilities reasonably assessed Xcel shares have started to recover, but are still down 13% year to date. These drops are off of what were already discount levels late last year from the pressure higher interest rates unleashed on the rate-sensitive utility sector. We doubt that this unfortunate disaster will result in claims that exceed Xcel's $560 million of liability insurance.

Meanwhile, little has changed on the Marshall Wildfire litigation scene in Colorado. There, Xcel faces 14 complaints with 675 plaintiffs, which have been consolidated into a single case. There were two deaths and nearly 1,100 structures were either damaged or fully destroyed in the December, 2021 fire. The state of Colorado estimated the damages to be over $2 billion. Xcel has $560 million of liability coverage associated with that incident. The company expects to get a litigation calender some time this year with a trial most likely taking place in 2025. Management strongly disputes the findings of Colorado officials regarding Xcel's equipment being a source of ignition.

On an operating basis, this company has been a model of consistency few utilities can match. It almost always delivers solid annual earnings and dividend increases to shareholders. We think the valuation hit the company has taken recently is likely overdone. Although ranked to underperform over the near term, the shares offer significant recovery potential in the 18-month timeframe.

Anthony J. Glennon *April 19, 2024*

(A) Diluted EPS. Excl. nonrec. gain/(losses): '10, 5¢; '15, (16¢); '17, (5¢); '23, (14¢); gain/(loss) on discontinued ops.: '09, (1¢); '10, 1¢. Qtly. EPS may not sum to full yr. due to rounding. Next egs. report due April 25th. **(B)** Div'ds typically paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan available. † Shareholder investment plan available. **(C)** Incl. intangibles. In '23: $2798 mill., $5.04/sh. **(D)** In mill. **(E)** Rate base: Varies. Rate allowed on common equity (blended): 9.6%. Regulatory Climate: Average.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	65
Earnings Predictability	100

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Fifteen Electric Utilities	Proxy Group of Fifteen Electric Utilities (excl. PRPM)
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.14 %	5.14 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds (2)	0.51	0.51
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	5.65 %	5.65 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group (3)	0.15	0.15
5.	Adjusted Prospective Bond Yield	5.80 %	5.80 %
6.	Equity Risk Premium (4)	5.29	5.27
7.	Risk Premium Derived Common Equity Cost Rate	11.09 %	11.07 %

Notes:
(1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 30 and 31 of this Document).
(2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.51% from page 24 of this Document.
(3) Adjustment to reflect the Baa1 Moody's LT issuer rating of the Utility Proxy Group as shown on page 25 of this Document. The 0.15% adjustment is derived by taking 2/3 of the spread between A2 and Baa2 Public Utility Bonds (2/3 * 0.23% = 0.15%) as derived from page 24 of this Document.
(4) From page 27 of this Document.

Tampa Electric Company, Inc.
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1] Aaa Rated Corporate Bond	[2] A2 Rated Public Utility Bond	[3] Baa2 Rated Public Utility Bond
May-2024	5.25 %	5.74 %	5.97 %
Apr-2024	5.28	5.79	6.01
Mar-2024	5.01	5.55	5.79
Average	5.18 %	5.69 %	5.92 %

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds: 0.51 % (1)

Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds: 0.23 % (2)

Notes:
(1) Column [2] - Column [1].
(2) Column [3] - Column [2].

Source of Information:
Bloomberg Professional Services.

Tampa Electric Company, Inc.
Comparison of Long-Term Issuer Ratings for the
Utility Proxy Group

	Moody's Long-Term Issuer Rating May 2024		Standard & Poor's Long-Term Issuer Rating May 2024	
Proxy Group of Fifteen Electric Utilities	Long-Term Issuer Rating (1)	Numerical Weighting (2)	Long-Term Issuer Rating (1)	Numerical Weighting (2)
Alliant Energy Corporation	Baa1	8.0	A/A-	6.5
Ameren Corporation	A3	7.0	BBB+	8.0
American Electric Power Corporation	Baa1	8.0	BBB+	8.0
Duke Energy Corporation	A3	7.0	BBB+	8.0
Edison International	Baa1	8.0	BBB	9.0
Entergy Corporation	Baa1	8.0	BBB+	8.0
Evergy, Inc.	Baa1	8.0	BBB+	8.0
IDACORP, Inc.	Baa1	8.0	BBB	9.0
NorthWestern Corporation	Baa2	9.0	BBB	9.0
OGE Energy Corporation	A3	7.0	A-	7.0
Pinnacle West Capital Corporation	Baa1	8.0	BBB+	8.0
PNM Resources, Inc.	Baa1/Baa2	8.5	BBB+/BBB	8.5
Portland General Electric Company	A3	7.0	BBB+	8.0
Southern Company	A3	7.0	A-	7.0
Xcel Energy Inc.	A3	7.0	A-/BBB+	7.5
Average	Baa1	7.7	BBB+	8.0
Tampa Electric Company, Inc.	A3	7.0	BBB+	8.0

Notes:
(1) Ratings are that of the average of each company's utility operating subsidiaries.
(2) From page 26 of this Document.

Source Information: Moody's Investors Services.
Standard & Poor's Global Utilities Rating Services.

Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings

Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond Rating
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-
B1	14	B+
B2	15	B
B3	16	B-

Tampa Electric Company, Inc.
Judgment of Equity Risk Premium for the
Utility Proxy Group

Line No.		Proxy Group of Fifteen Electric Utilities	Proxy Group of Fifteen Electric Utilities (excl. PRPM)
1.	Calculated equity risk premium based on the total market using the beta approach (1)	6.58 %	6.51 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A2 rated bonds (2)	4.46	4.47
3.	Predicted Equity Risk Premium Based on Regression Analysis of 1,237 Fully-Litigated Electric Cases (3)	4.83	4.83
4.	Average equity risk premium	5.29 %	5.27 %

Notes: (1) From page 28 of this Document.
(2) From page 32 of this Document.
(3) From page 33 of this Document.

Tampa Electric Company, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Utility Proxy Group

Line No.	Equity Risk Premium Measure	Proxy Group of Fifteen Electric Utilities	Proxy Group of Fifteen Electric Utilities (excl. PRPM)
1.	Kroll Equity Risk Premium (1)	5.96 %	5.96 %
2.	Regression on Kroll Risk Premium Data (2)	6.92	6.92
3.	Kroll Equity Risk Premium based on PRPM (3)	8.46	NA
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	6.91	6.91
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	8.64	8.64
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	11.29	11.29
7.	Conclusion of Equity Risk Premium	8.03 %	7.94 %
8.	Adjusted Beta (7)	0.82	0.82
9.	Forecasted Equity Risk Premium	6.58 %	6.51 %

Notes provided on page 29 of this Document.

Tampa Electric Company, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Utility Proxy Group

Notes:

(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Kroll minus the arithmetic mean monthly yield of Moody's average Aaa and Aa2 corporate bonds from 1928-2023.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa rated corporate bond yields from 1928-2023 referenced in note 1 above.

(3) The Predictive Risk Premium Model (PRPM) is discussed in Mr. D'Ascendis' Direct Testimony. The PRPM risk premium is derived by applying the PRPM to the monthly risk premiums between Kroll large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through May 2024.

(4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 5.14% (from page 23 of this Document) from the projected 3-5 year total annual market return of 12.05% (described fully in note 1 on page 35 of this Document).

(5) Using data from Value Line for the S&P 500, an expected total return of 13.78% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 5.14% results in an expected equity risk premium of 8.64%.

(6) Using data from Bloomberg for the S&P 500, an expected total return of 16.43% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 5.14% results in an expected equity risk premium of 11.29%.

(7) Average of mean and median beta from page 34 of this Document.

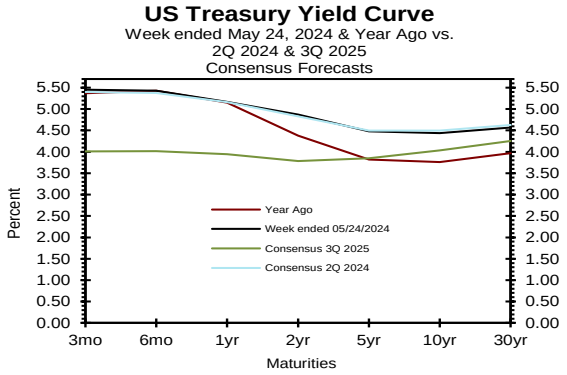
Sources of Information:

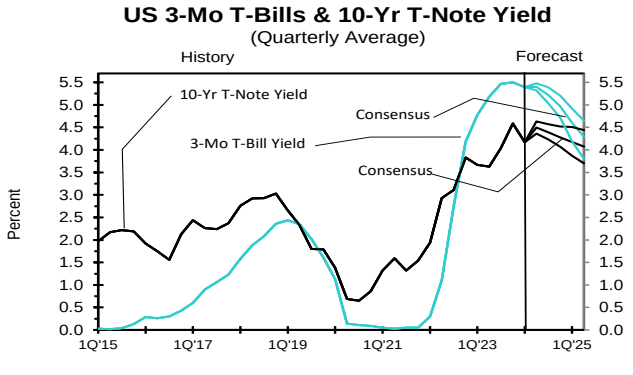
Stocks, Bonds, Bills, and Inflation - 2023 SBBI Yearbook, Kroll.
Value Line Summary and Index.
Blue Chip Financial Forecasts May 31, 2024
Bloomberg Professional Services.

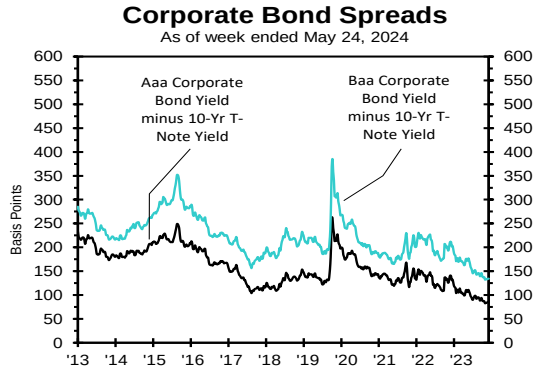
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

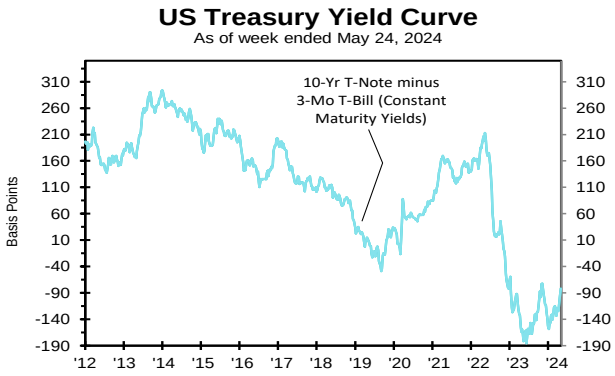
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	2Q	3Q	4Q	1Q	2Q	3Q
Interest Rates	May 24	May 17	May 10	May 3	Apr	Mar	Feb	1Q 2024	2024	2024	2024	2025	2025	2025
Federal Funds Rate	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.4	5.2	5.0	4.7	4.4	4.1
Prime Rate	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.5	8.4	8.1	7.8	7.6	7.3
SOFR	5.31	5.31	5.31	5.32	5.32	5.31	5.31	5.31	5.3	5.3	5.0	4.7	4.4	4.1
Commercial Paper, 1-mo.	5.31	5.33	5.32	5.32	5.31	5.32	5.31	5.32	5.3	5.2	5.0	4.7	4.4	4.0
Treasury bill, 3-mo.	5.45	5.45	5.46	5.46	5.44	5.47	5.44	5.45	5.4	5.2	5.0	4.6	4.3	4.0
Treasury bill, 6-mo.	5.43	5.42	5.42	5.43	5.38	5.36	5.28	5.28	5.4	5.2	4.9	4.6	4.3	4.0
Treasury bill, 1 yr.	5.17	5.14	5.13	5.19	5.14	4.99	4.92	4.90	5.2	5.0	4.7	4.4	4.2	3.9
Treasury note, 2 yr.	4.87	4.80	4.83	4.93	4.87	4.59	4.54	4.48	4.8	4.6	4.4	4.1	3.9	3.8
Treasury note, 5 yr.	4.48	4.43	4.49	4.61	4.56	4.20	4.19	4.12	4.5	4.4	4.2	4.1	3.9	3.9
Treasury note, 10 yr.	4.44	4.42	4.48	4.61	4.54	4.21	4.21	4.16	4.5	4.4	4.3	4.2	4.1	4.0
Treasury note, 30 yr.	4.57	4.56	4.63	4.73	4.66	4.36	4.38	4.33	4.6	4.5	4.5	4.4	4.3	4.3
Corporate Aaa bond	5.28	5.27	5.34	5.45	5.38	5.11	5.13	5.08	5.3	5.2	5.1	5.1	5.0	5.0
Corporate Baa bond	5.76	5.76	5.83	5.94	5.88	5.62	5.65	5.60	6.1	6.0	6.0	5.9	5.9	5.9
State & Local bonds	4.29	4.21	4.23	4.32	4.28	4.12	4.12	4.11	4.4	4.3	4.2	4.2	4.2	4.2
Home mortgage rate	6.94	7.02	7.09	7.22	6.99	6.82	6.78	6.75	7.0	6.9	6.7	6.5	6.4	6.3
	History								Consensus Forecasts-Quarterly					
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Key Assumptions	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	2025	2025	2025
Fed's AFE $ Index	113.5	118.8	119.8	115.5	114.6	115.0	116.6	115.5	117.1	117.7	116.9	116.5	116.2	116.0
Real GDP	-0.6	2.7	2.6	2.2	2.1	4.9	3.4	1.3	2.2	1.7	1.6	1.8	1.9	2.0
GDP Price Index	9.1	4.4	3.9	3.9	1.7	3.3	1.6	3.0	2.8	2.5	2.3	2.3	2.3	2.2
Consumer Price Index	10.0	5.3	4.0	3.8	3.0	3.4	2.7	3.8	3.5	2.7	2.5	2.4	2.4	2.4
PCE Price Index	7.2	4.7	4.1	4.2	2.5	2.6	1.8	3.3	2.9	2.3	2.2	2.3	2.2	2.2

Forecasts for interest rates and the Federal Reserve's Advanced Foreign Economies Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, CPI and PCE Price Index are seasonally adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; SOFR from the New York Fed. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Major Currency Index are from FRSR H.10. Historical data for Real GDP, GDP Price Index and PCE Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index history is from the Department of Labor's Bureau of Labor Statistics (BLS).









Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2025 through 2030 and averages for the five-year periods 2026-2030 and 2031-2035. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year						Five-Year Averages	
		2025	2026	2027	2028	2029	2030	2026-2030	2031-2035
1. Federal Funds Rate	**CONSENSUS**	**4.1**	**3.4**	**3.2**	**3.2**	**3.3**	**3.3**	**3.3**	**3.2**
	Top 10 Average	4.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	Bottom 10 Average	3.6	3.0	2.7	2.7	2.7	2.7	2.8	2.7
2. Prime Rate	**CONSENSUS**	**7.1**	**6.5**	**6.4**	**6.4**	**6.4**	**6.3**	**6.4**	**6.3**
	Top 10 Average	7.5	6.9	6.9	6.9	6.9	6.9	6.9	6.8
	Bottom 10 Average	6.8	6.1	5.9	5.8	5.8	5.7	5.9	5.7
3. SOFR	**CONSENSUS**	**4.0**	**3.4**	**3.3**	**3.3**	**3.2**	**3.2**	**3.3**	**3.2**
	Top 10 Average	4.3	3.7	3.7	3.6	3.6	3.6	3.6	3.6
	Bottom 10 Average	3.8	3.1	2.9	2.8	2.8	2.7	2.8	2.7
4. Commercial Paper, 1-Mo	**CONSENSUS**	**4.0**	**3.4**	**3.4**	**3.3**	**3.3**	**3.3**	**3.4**	**3.3**
	Top 10 Average	4.2	3.6	3.6	3.6	3.5	3.5	3.6	3.6
	Bottom 10 Average	3.8	3.2	3.0	3.0	3.0	2.9	3.0	2.9
5. Treasury Bill Yield, 3-Mo	**CONSENSUS**	**4.0**	**3.4**	**3.3**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**
	Top 10 Average	4.4	3.7	3.7	3.7	3.7	3.7	3.7	3.7
	Bottom 10 Average	3.6	3.0	2.8	2.7	2.7	2.7	2.8	2.6
6. Treasury Bill Yield, 6-Mo	**CONSENSUS**	**4.0**	**3.5**	**3.4**	**3.4**	**3.4**	**3.3**	**3.4**	**3.3**
	Top 10 Average	4.3	3.8	3.8	3.7	3.7	3.7	3.8	3.7
	Bottom 10 Average	3.7	3.2	3.0	2.9	2.9	2.8	3.0	2.8
7. Treasury Bill Yield, 1-Yr	**CONSENSUS**	**4.0**	**3.6**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.4**
	Top 10 Average	4.3	3.9	3.9	3.9	3.9	3.9	3.9	3.8
	Bottom 10 Average	3.8	3.4	3.2	3.1	3.0	3.0	3.1	3.0
8. Treasury Note Yield, 2-Yr	**CONSENSUS**	**3.8**	**3.7**	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**
	Top 10 Average	4.1	4.0	4.1	4.1	4.1	4.1	4.1	4.1
	Bottom 10 Average	3.5	3.3	3.2	3.1	3.1	3.1	3.2	3.0
9. Treasury Note Yield, 5-Yr	**CONSENSUS**	**3.9**	**3.8**	**3.8**	**3.9**	**3.9**	**3.9**	**3.9**	**3.9**
	Top 10 Average	4.2	4.2	4.3	4.3	4.5	4.4	4.3	4.5
	Bottom 10 Average	3.6	3.5	3.4	3.3	3.4	3.4	3.4	3.3
10. Treasury Note Yield, 10-Yr	**CONSENSUS**	**4.0**	**4.0**	**4.0**	**4.0**	**4.2**	**4.2**	**4.1**	**4.2**
	Top 10 Average	4.4	4.5	4.5	4.6	4.7	4.7	4.6	4.8
	Bottom 10 Average	3.7	3.6	3.5	3.5	3.6	3.6	3.5	3.6
11. Treasury Bond Yield, 30-Yr	**CONSENSUS**	**4.2**	**4.2**	**4.2**	**4.3**	**4.4**	**4.4**	**4.3**	**4.4**
	Top 10 Average	4.5	4.6	4.7	4.8	4.9	4.9	4.7	4.9
	Bottom 10 Average	3.9	3.9	3.8	3.8	3.8	3.9	3.8	3.8
12. Corporate Aaa Bond Yield	**CONSENSUS**	**5.1**	**5.1**	**5.1**	**5.2**	**5.3**	**5.3**	**5.2**	**5.2**
	Top 10 Average	5.4	5.4	5.6	5.7	5.8	5.8	5.7	5.8
	Bottom 10 Average	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7
13. Corporate Baa Bond Yield	**CONSENSUS**	**6.0**	**6.0**	**6.1**	**6.1**	**6.2**	**6.2**	**6.1**	**6.2**
	Top 10 Average	6.3	6.3	6.5	6.6	6.7	6.7	6.5	6.7
	Bottom 10 Average	5.7	5.7	5.6	5.6	5.6	5.7	5.6	5.7
14. State & Local Bonds Yield	**CONSENSUS**	**4.1**	**4.1**	**4.2**	**4.2**	**4.3**	**4.4**	**4.2**	**4.3**
	Top 10 Average	4.4	4.5	4.5	4.6	4.7	4.7	4.6	4.8
	Bottom 10 Average	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.7
15. Home Mortgage Rate	**CONSENSUS**	**6.3**	**6.1**	**6.1**	**6.1**	**6.1**	**6.2**	**6.1**	**6.1**
	Top 10 Average	6.7	6.5	6.5	6.5	6.6	6.6	6.6	6.6
	Bottom 10 Average	6.0	5.7	5.7	5.6	5.6	5.6	5.6	5.5
A. Fed's AFE Nominal $ Index	**CONSENSUS**	**115.6**	**114.6**	**114.3**	**113.9**	**113.4**	**112.8**	**113.8**	**112.3**
	Top 10 Average	116.9	116.3	115.8	115.7	115.3	115.1	115.6	114.8
	Bottom 10 Average	114.2	113.0	112.7	112.1	111.5	110.9	112.0	110.1
		Year-Over-Year, % Change						Five-Year Averages	
		2025	2026	2027	2028	2029	2030	2026-2030	2031-2035
B. Real GDP	**CONSENSUS**	**1.9**	**2.0**	**2.1**	**2.1**	**2.0**	**2.0**	**2.1**	**2.0**
	Top 10 Average	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2
	Bottom 10 Average	1.6	1.8	1.9	1.8	1.8	1.8	1.8	1.8
C. GDP Chained Price Index	**CONSENSUS**	**2.3**	**2.2**	**2.2**	**2.1**	**2.2**	**2.1**	**2.2**	**2.1**
	Top 10 Average	2.6	2.4	2.4	2.3	2.3	2.3	2.4	2.3
	Bottom 10 Average	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0
D. Consumer Price Index	**CONSENSUS**	**2.4**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**
	Top 10 Average	2.7	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	Bottom 10 Average	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0
E. PCE Price Index	**CONSENSUS**	**2.2**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**
	Top 10 Average	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2
	Bottom 10 Average	2.0	1.9	1.9	1.9	2.0	2.0	1.9	2.0

Tampa Electric Company, Inc.
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

Line No.	Equity Risk Premium based on S&P Utility Index Holding Period Returns (1):	Implied Equity Risk Premium	Implied Equity Risk Premium (excl. PRPM)
1.	Historical Equity Risk Premium	4.02 %	4.02 %
2.	Regression of Historical Equity Risk Premium (2)	4.81	4.81
3.	Forecasted Equity Risk Premium Based on PRPM (3)	4.39	NA
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	3.75	3.75
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	5.32	5.32
6.	Average Equity Risk Premium (6)	4.46 %	4.47 %

Notes:
(1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2023. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S&P Utility Index relative to Moody's A2 rated public utility bond yields from 1928 - 2023 referenced in note 1 above.

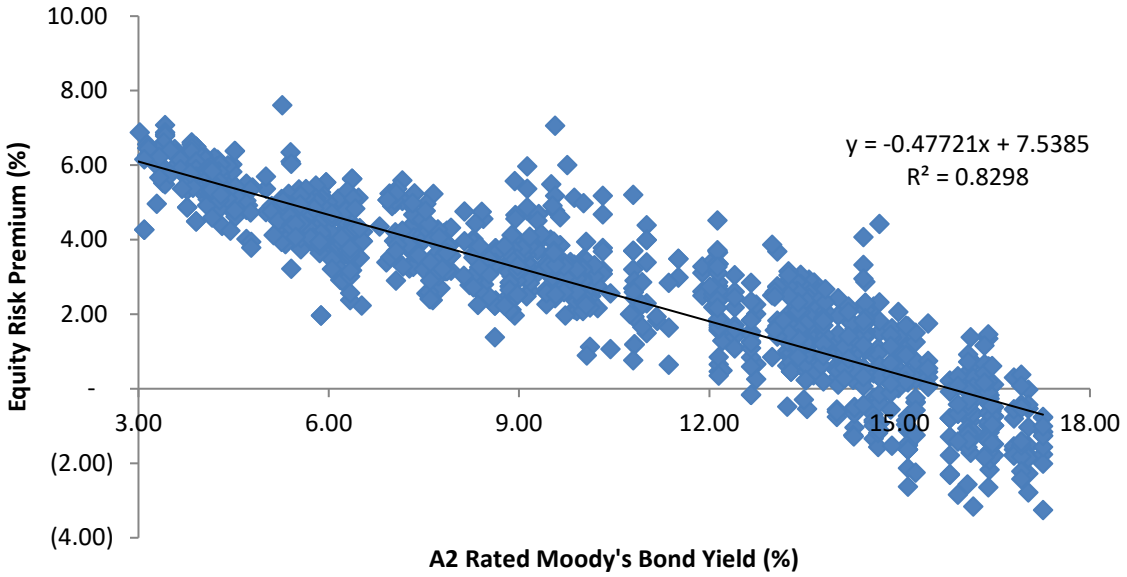
(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A2 rated public utility bonds from January 1928 - May 2024.

(4) Using data from Value Line for the S&P Utilities Index, an expected return of 9.40% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 5.65%, calculated on line 3 of page 23 of this Document results in an equity risk premium of 3.75%. (9.40% - 5.65% = 3.75%)

(5) Using data from Bloomberg Services for the S&P Utilities Index, an expected return of 10.97% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 5.65%, calculated on line 3 of page 23 of this Document results in an equity risk premium of 5.32%. (10.97% - 5.65% = 5.32%)

(6) Average of lines 1 through 5.

Tampa Electric Company, Inc.
Prediction of Equity Risk Premiums Relative to
Moody's A2 Rated Utility Bond Yields - Electric Utilities



Constant	Slope	Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
7.5257 %	-0.4763	5.65 %	4.83 %

Notes:

(1) From line 3 of page 23 of this Document.

Source of Information: Regulatory Research Associates.

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Fifteen Electric Utilities	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Alliant Energy Corporation	0.90	0.69	0.79	8.93 %	4.41 %	11.46 %	11.93 %	11.70 %
Ameren Corporation	0.90	0.74	0.82	8.93	4.41	11.73	12.13	11.93
American Electric Power Corporation	0.80	0.72	0.76	8.93	4.41	11.19	11.73	11.46
Duke Energy Corporation	0.90	0.68	0.79	8.93	4.41	11.46	11.93	11.70
Edison International	1.00	0.88	0.94	8.93	4.41	12.80	12.94	12.87 (4)
Entergy Corporation	0.95	0.77	0.86	8.93	4.41	12.09	12.40	12.24
Evergy, Inc.	0.95	0.69	0.82	8.93	4.41	11.73	12.13	11.93
IDACORP, Inc.	0.85	0.67	0.76	8.93	4.41	11.19	11.73	11.46
NorthWestern Corporation	0.95	0.73	0.84	8.93	4.41	11.91	12.27	12.09
OGE Energy Corporation	1.05	0.75	0.90	8.93	4.41	12.44	12.67	12.56
Pinnacle West Capital Corporation	0.95	0.73	0.84	8.93	4.41	11.91	12.27	12.09
PNM Resources, Inc.	0.90	0.45	0.67	8.93	4.41	10.39	11.13	10.76 (4)
Portland General Electric Company	0.90	0.70	0.80	8.93	4.41	11.55	12.00	11.78
Southern Company	0.95	0.69	0.82	8.93	4.41	11.73	12.13	11.93
Xcel Energy Inc.	0.85	0.71	0.78	8.93	4.41	11.37	11.86	11.62
Mean			0.81			11.66 %	12.08 %	11.88 %
Median			0.82			11.73 %	12.13 %	11.93 %
Average of Mean and Median			0.82			11.70 %	12.11 %	11.91 %

Results Excluding the PRPM MRP

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Fifteen Electric Utilities	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Alliant Energy Corporation	0.90	0.69	0.79	8.82 %	4.41 %	11.38 %	11.85 %	11.61 %
Ameren Corporation	0.90	0.74	0.82	8.82	4.41	11.65	12.04	11.85
American Electric Power Corporation	0.80	0.72	0.76	8.82	4.41	11.12	11.65	11.38
Duke Energy Corporation	0.90	0.68	0.79	8.82	4.41	11.38	11.85	11.61
Edison International	1.00	0.88	0.94	8.82	4.41	12.71	12.84	12.77 (4)
Entergy Corporation	0.95	0.77	0.86	8.82	4.41	12.00	12.31	12.15
Evergy, Inc.	0.95	0.69	0.82	8.82	4.41	11.65	12.04	11.85
IDACORP, Inc.	0.85	0.67	0.76	8.82	4.41	11.12	11.65	11.38
NorthWestern Corporation	0.95	0.73	0.84	8.82	4.41	11.82	12.18	12.00
OGE Energy Corporation	1.05	0.75	0.90	8.82	4.41	12.35	12.57	12.46
Pinnacle West Capital Corporation	0.95	0.73	0.84	8.82	4.41	11.82	12.18	12.00
PNM Resources, Inc.	0.90	0.45	0.67	8.82	4.41	10.32	11.05	10.69 (4)
Portland General Electric Company	0.90	0.70	0.80	8.82	4.41	11.47	11.91	11.69
Southern Company	0.95	0.69	0.82	8.82	4.41	11.65	12.04	11.85
Xcel Energy Inc.	0.85	0.71	0.78	8.82	4.41	11.29	11.78	11.54
Mean			0.81			11.58 %	12.00 %	11.87 %
Median			0.82			11.65 %	12.04 %	11.85 %
Average of Mean and Median			0.82			11.62 %	12.02 %	11.86 %

Notes on page 35 of this Document.

Tampa Electric Company, Inc.
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

(1) The market risk premium (MRP) is derived by using six different measures from three sources: Kroll, Value Line, and Bloomberg as illustrated below:

Historical Data MRP Estimates:

Measure 1: Kroll Arithmetic Mean MRP (1926-2023)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2023:	12.16 %
Arithmetic Mean Income Returns on Long-Term Government Bonds:	4.99
MRP based on Kroll Historical Data:	7.17 %

Measure 2: Application of a Regression Analysis to Kroll Historical Data
(1926-2023) 7.93 %

Measure 3: Application of the PRPM to Kroll Historical Data:
(January 1926 - May 2024) 9.44 %

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP (Thirteen weeks ending May 31, 2024)

Total projected return on the market 3-5 years hence*:	12.05 %
Projected Risk-Free Rate (see note 2):	4.41
MRP based on Value Line Summary & Index:	7.64 %

*Forcasted 3-5 year capital appreciation plus expected dividend yield

Measure 5: Value Line Projected Return on the Market based on the S&P 500

Total return on the Market based on the S&P 500:	13.78 %
Projected Risk-Free Rate (see note 2):	4.41
MRP based on Value Line data	9.37 %

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	16.43 %
Projected Risk-Free Rate (see note 2):	4.41
MRP based on Bloomberg data	12.02 %

Average of Value Line, Kroll, and Bloomberg MRP:	8.93 %
Average MRP Excluding the PRPM MRP:	8.82 %

(2) For reasons explained in the direct testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 30 and 31 of this Document) The projection of the risk-free rate is illustrated below:

Second Quarter 2024	4.60 %
Third Quarter 2024	4.50
Fourth Quarter 2024	4.50
First Quarter 2025	4.40
Second Quarter 2025	4.30
Third Quarter 2025	4.30
2026-2030	4.30
2031-2035	4.40
	4.41 %

(3) Average of Column 6 and Column 7.

(4) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Sources of Information:
Value Line Summary and Index.
Blue Chip Financial Forecasts May 31, 2024
Stocks, Bonds, Bills, and Inflation - 2023 SBBI Yearbook, Kroll.
Bloomberg Professional Services.

Tampa Electric Company, Inc.
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Utility Proxy Group

The criteria for selection of the proxy group of non-price regulated companies comparable in total risk to the Utility Proxy Group was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The proxy group of non-price regulated companies was selected based on the unadjusted beta range of 0.71 - 0.97 and residual standard error of the regression range of 2.6200 - 3.1248 of the proxy group of fifteen electric utilities.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus three standard deviations captures 95.50% of the distribution of unadjusted betas and residual standard errors of the regression.

The standard deviation of the Utility Proxy Group's residual standard error of the regression is 0.1262. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus,} \quad 0.1262 = \frac{2.8724}{\sqrt{518}} = \frac{2.8724}{22.7596}$$

Source of Information: Value Line Proprietary Database, March 2024.
Value Line Investment Survey (Standard Edition).

Tampa Electric Company, Inc.
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

	[1]	[2]	[3]	[4]
Proxy Group of Fifteen Electric Utilities	Value Line Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta
Alliant Energy Corporation	0.90	0.79	2.8827	0.0645
Ameren Corporation	0.90	0.78	2.7468	0.0615
American Electric Power Corporation	0.80	0.68	2.8399	0.0635
Duke Energy Corporation	0.90	0.80	2.8226	0.0632
Edison International	1.00	0.96	3.0177	0.0675
Entergy Corporation	0.95	0.92	2.8782	0.0644
Evergy, Inc.	0.95	0.88	3.0139	0.0674
IDACORP, Inc.	0.85	0.71	2.7417	0.0613
NorthWestern Corporation	0.95	0.89	2.8877	0.0646
OGE Energy Corporation	1.05	1.06	2.8511	0.0638
Pinnacle West Capital Corporation	0.95	0.88	3.0887	0.0691
PNM Resources, Inc.	0.90	0.79	2.7065	0.0606
Portland General Electric Company	0.90	0.83	2.9624	0.0663
Southern Company	0.95	0.87	2.8002	0.0627
Xcel Energy Inc.	0.85	0.73	2.8460	0.0637
Average	0.92	0.84	2.8724	0.0643
Beta Range (+/- 2 std. Devs. of Beta)	0.71	0.97		
2 std. Devs. of Beta	0.13			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.6200	3.1248		
Std. dev. of the Res. Std. Err.	0.1262			
2 std. devs. of the Res. Std. Err.	0.2524			

Source of Information: Value Line Proprietary Database, March 2024.

Tampa Electric Company, Inc.
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Utility Proxy Group

Proxy Group of Fourty-Five Non-Price Regulated Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
3M Company	0.95	0.90	2.8014	0.0627
Abbott Laboratories	0.90	0.79	2.9435	0.0659
AbbVie Inc.	0.85	0.71	2.9836	0.0668
Agilent Technologies, Inc.	0.95	0.86	2.8446	0.0636
Air Products and Chemicals, Inc.	0.90	0.84	3.0254	0.0677
Allstate Corporation	1.00	0.94	2.8155	0.0630
Altria Group, Inc.	0.85	0.76	2.8496	0.0638
Analog Devices, Inc.	1.00	0.94	2.8821	0.0645
Assurant, Inc.	0.90	0.79	3.0402	0.0680
Brady Corporation	0.95	0.90	2.8700	0.0642
Broadridge Financial Solutions, Inc.	0.90	0.81	2.7554	0.0617
Brown-Forman Corporation (BF-B)	0.90	0.80	2.7350	0.0612
CACI International Inc	0.90	0.79	2.9988	0.0671
Cisco Systems, Inc.	0.85	0.74	2.8338	0.0634
Danaher Corporation	0.90	0.81	3.0396	0.0680
Dolby Laboratories, Inc.	0.95	0.86	2.9431	0.0659
Expeditors International	0.95	0.91	2.6678	0.0597
FactSet Research Systems Inc.	1.00	0.95	2.7621	0.0618
Fastenal Company	0.90	0.79	2.9654	0.0664
Federal Signal Corporation	0.95	0.91	2.7509	0.0616
Franklin Electric Co., Inc.	0.90	0.82	2.9449	0.0659
GATX Corporation	0.95	0.90	2.9590	0.0662
Home Depot, Inc.	0.95	0.90	2.6222	0.0587
Innospec Inc.	1.00	0.93	3.0161	0.0675
International Business Machines Corporatio	0.90	0.84	2.6369	0.0590
Juniper Networks, Inc.	1.00	0.94	3.0964	0.0693
Lockheed Martin Corporation	0.85	0.74	2.8649	0.0641
Microsoft Corporation	0.90	0.78	2.8521	0.0638
MSA Safety Incorporated	0.95	0.92	3.0899	0.0691
MSC Industrial Direct Co., Inc.	0.90	0.84	2.9743	0.0666
O'Reilly Automotive, Inc.	0.90	0.84	3.0511	0.0683
OSI Systems, Inc.	0.90	0.81	3.0233	0.0676
Packaging Corporation of America	0.95	0.85	2.8655	0.0641
Philip Morris International Inc.	0.95	0.87	2.8492	0.0638
Selective Insurance Group, Inc.	0.85	0.74	2.9866	0.0668
Sensient Technologies Corporation	0.90	0.84	2.8182	0.0631
Sherwin-Williams Company	0.95	0.89	2.9050	0.0650
Smith Corporation (A.O.)	0.90	0.79	3.0917	0.0692
Texas Instruments Incorporated	0.85	0.77	2.7702	0.0620
Thermo Fisher Scientific Inc.	0.85	0.76	2.8528	0.0638
UniFirst Corporation	0.90	0.81	3.0645	0.0686
VeriSign, Inc.	0.90	0.80	2.8918	0.0647
Verisk Analytics, Inc.	0.90	0.78	2.7594	0.0617
Watts Water Technologies, Inc.	1.00	0.96	2.8773	0.0644
Zoetis Inc.	1.00	0.96	2.8188	0.0631
Average	0.92	0.84	2.8931	0.0647
Proxy Group of Fifteen Electric Utilities	0.92	0.84	2.8724	0.0643

Source of Information: Value Line Proprietary Database, March 2024.

Tampa Electric Company, Inc.
Summary of Cost of Equity Models Applied to
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Utility Proxy Group

Principal Methods		Proxy Group of Fourty-Five Non-Price Regulated Companies			Proxy Group of Fourty-Five Non-Price Regulated Companies (excl. PRPM)		
Discounted Cash Flow Model (DCF) (1)		10.60	%		10.60	%	
Risk Premium Model (RPM) (2)		13.26			13.17		
Capital Asset Pricing Model (CAPM)		12.78		(3)	12.68		(4)
	Mean	12.21	%		12.15	%	
	Median	12.78	%		12.68	%	
	Average of Mean and Median	12.50	%		12.42	%	

Notes:
(1) From page 40 of this Document.
(2) From page 41 of this Document.
(3) From page 44 of this Document.
(4) From page 45 of this Document.

Tampa Electric Company, Inc.
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Utility Proxy Group

Proxy Group of Fourty-Five Non-Price Regulated Companies	[1] Average Dividend Yield	[2] Value Line Projected Five Year Growth in EPS	[3] Zack's Five Year Projected Growth Rate in EPS	[4] Yahoo! Finance Projected Five Year Growth in EPS	[5] Average Projected Five Year Growth Rate in EPS (1)	[6] Adjusted Dividend Yield	[7] Indicated Common Equity Cost Rate (2)	
3M Company	3.00 %	30.50 %	7.50 %	(4.86) %	19.00 %	3.29 %	22.29 %	(3)
Abbott Laboratories	2.02	4.00	9.00	7.50	6.83	2.09	8.92	
AbbVie Inc.	3.68	4.00	6.90	6.21	5.70	3.78	9.48	
Agilent Technologies, Inc.	0.66	8.00	6.80	4.95	6.58	0.68	7.26	
Air Products and Chemicals, Inc.	2.90	10.50	7.50	6.58	8.19	3.02	11.21	
Allstate Corporation	2.20	30.00	7.00	NMF	18.50	2.40	20.90	(3)
Altria Group, Inc.	8.98	6.00	3.20	3.39	4.20	9.17	13.37	
Analog Devices, Inc.	1.82	7.50	9.50	(1.41)	8.50	1.90	10.40	
Assurant, Inc.	1.63	9.50	6.20	6.20	7.30	1.69	8.99	
Brady Corporation	1.56	13.00	7.70	7.70	9.47	1.63	11.10	
Broadridge Financial Solutions, Inc.	1.60	9.50	NA	11.80	10.65	1.69	12.34	
Brown-Forman Corporation (BF-B)	1.76	15.50	NA	7.60	11.55	1.86	13.41	
CACI International Inc	-	7.00	10.40	6.70	8.03	-	NA	
Cisco Systems, Inc.	3.31	4.50	5.50	3.47	4.49	3.38	7.87	
Danaher Corporation	0.43	7.00	8.60	7.52	7.71	0.45	8.16	
Dolby Laboratories, Inc.	1.47	9.50	NA	16.00	12.75	1.56	14.31	
Expeditors International	1.24	(1.00)	3.80	(16.80)	3.80	1.26	5.06	
FactSet Research Systems Inc.	0.94	11.00	10.20	9.60	10.27	0.99	11.26	
Fastenal Company	2.20	9.00	9.00	6.33	8.11	2.29	10.40	
Federal Signal Corporation	0.57	13.50	NA	16.00	14.75	0.61	15.36	
Franklin Electric Co., Inc.	0.99	7.00	12.00	13.40	10.80	1.04	11.84	
GATX Corporation	1.76	11.50	NA	12.00	11.75	1.86	13.61	
Home Depot, Inc.	2.56	6.50	9.50	3.15	6.38	2.64	9.02	
Innospec Inc.	1.21	13.00	NA	7.50	10.25	1.27	11.52	
International Business Machines Corporation	3.71	3.00	4.10	2.96	3.35	3.77	7.12	
Juniper Networks, Inc.	2.45	8.50	3.60	11.00	7.70	2.54	10.24	
Lockheed Martin Corporation	2.77	9.50	4.10	3.48	5.69	2.85	8.54	
Microsoft Corporation	0.72	14.00	16.10	15.03	15.04	0.77	15.81	
MSA Safety Incorporated	1.09	9.00	NA	18.00	13.50	1.16	14.66	
MSC Industrial Direct Co., Inc.	3.55	5.00	NA	9.12	7.06	3.68	10.74	
O'Reilly Automotive, Inc.	-	10.50	13.00	11.40	11.63	-	NA	
OSI Systems, Inc.	-	10.50	11.00	8.00	9.83	-	NA	
Packaging Corporation of America	2.75	9.00	2.80	(14.29)	5.90	2.83	8.73	
Philip Morris International Inc.	5.47	5.00	7.50	9.56	7.35	5.67	13.02	
Selective Insurance Group, Inc.	1.38	16.50	16.20	17.15	16.62	1.49	18.11	
Sensient Technologies Corporation	2.30	2.50	NA	3.80	3.15	2.34	5.49	
Sherwin-Williams Company	0.89	11.00	10.90	11.37	11.09	0.94	12.03	
Smith Corporation (A.O.)	1.49	9.00	9.00	10.00	9.33	1.56	10.89	
Texas Instruments Incorporated	2.92	3.00	9.00	(5.74)	6.00	3.01	9.01	
Thermo Fisher Scientific Inc.	0.27	6.00	9.90	6.82	7.57	0.28	7.85	
UniFirst Corporation	0.80	9.50	NA	7.80	8.65	0.83	9.48	
VeriSign, Inc.	-	12.50	NA	8.00	10.25	-	NA	
Verisk Analytics, Inc.	0.66	8.50	12.30	12.42	11.07	0.70	11.77	
Watts Water Technologies, Inc.	0.83	7.00	8.00	8.00	7.67	0.86	8.53	
Zoetis Inc.	1.04	7.50	11.20	9.53	9.41	1.09	10.50	
						Mean	10.70 %	
						Median	10.50 %	
					Average of Mean and Median		10.60 %	

NA= Not Available
NMF = Non-Meaningful Figure

Notes:
(1) Average of columns 2 through 4 excluding negative growth rates.
(2) The application of the DCF model to the domestic, non-price regulated comparable risk companies is identical to the application of the DCF to the Utility Proxy Groups. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of May 31, 2024. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.zacks.com, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.
(3) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Source of Information:
Value Line Investment Survey.
www.zacks.com, Downloaded on 05/31/2024.
www.yahoo.com, Downloaded on 05/31/2024.

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Fourty-Five Non-Price Regulated Companies	Proxy Group of Fourty-Five Non-Price Regulated Companies (excl. PRPM)
1.	Prospective Yield on Baa2 Rated Corporate Bonds (1)	6.01 %	6.01 %
2	Adjustment to Reflect Bond rating Difference of Non-Price Regulated Companies (2)	(0.22)	(0.22)
3	Adjusted Prospective Bond Yield	5.79	5.79
4.	Equity Risk Premium (3)	7.47	7.38
5.	Risk Premium Derived Common Equity Cost Rate	13.26 %	13.17 %

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated May 31, 2024 (see pages 30 and 31 of this Document). The estimates are detailed below.

Second Quarter 2024	6.10 %
Third Quarter 2024	6.00
Fourth Quarter 2024	6.00
First Quarter 2025	5.90
Second Quarter 2025	5.90
Third Quarter 2025	5.90
2026-2030	6.10
2031-2035	6.20
Average	6.01 %

(2) The average yield spread of Baa2 rated corporate bonds over A2 corporate bonds for the three months ending May 2024. To reflect the A3 average rating of the Non-Price Regulated Proxy Group, the prosepctive yield on Baa corporate bonds must be adjusted by 2/3 of the spread between A2 and Baa2 corporate bond yields as shown below:

	A2 Corp. Bond Yield	Baa2 Corp. Bond Yield	Spread
May-24	5.62 %	5.95 %	0.33 %
Apr-24	5.67	6.00	0.33
Mar-24	5.42	5.75	0.33
		Average yield spread	0.33
		2/3 of spread	0.22

(3) From page 43 of this Document.

Tampa Electric Company, Inc.
Comparison of Long-Term Issuer Ratings for the
Utility Proxy Group

Proxy Group of Fourty-Five Non-Price Regulated Companies	Moody's Long-Term Issuer Rating May 2024		Standard & Poor's Long-Term Issuer Rating May 2024	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
3M Company	A3	7.0	BBB+	8.0
Abbott Laboratories	Aa3	4.0	AA-	4.0
AbbVie Inc.	A3	7.0	A-	7.0
Agilent Technologies, Inc.	Baa1	8.0	BBB+	8.0
Air Products and Chemicals, Inc.	A2	6.0	A	6.0
Allstate Corporation	A3	7.0	BBB+	8.0
Altria Group, Inc.	A3	7.0	BBB	9.0
Analog Devices, Inc.	A2	6.0	A-	7.0
Assurant, Inc.	Baa2	9.0	BBB	9.0
Brady Corporation	NA	--	NA	--
Broadridge Financial Solutions, Inc.	Baa2	9.0	BBB	9.0
Brown-Forman Corporation (BF-B)	A1	5.0	A-	7.0
CACI International Inc	NA	--	BB+	11.0
Cisco Systems, Inc.	A1	5.0	AA-	4.0
Danaher Corporation	A3	7.0	A-	7.0
Dolby Laboratories, Inc.	NA	--	NA	--
Expeditors International	NA	--	NA	--
FactSet Research Systems Inc.	Baa3	10.0	NA	--
Fastenal Company	NA	--	NA	--
Federal Signal Corporation	NA	--	NA	--
Franklin Electric Co., Inc.	NA	--	NA	--
GATX Corporation	Baa2	9.0	BBB	9.0
Home Depot, Inc.	A2	6.0	A	6.0
Innospec Inc.	NA	--	NR	--
International Business Machines Corporation	A3	7.0	A-	7.0
Juniper Networks, Inc.	Baa2	9.0	BBB	9.0
Lockheed Martin Corporation	A2	6.0	A-	7.0
Microsoft Corporation	Aaa	1.0	AAA	1.0
MSA Safety Incorporated	NA	--	NA	--
MSC Industrial Direct Co., Inc.	NA	--	NA	--
O'Reilly Automotive, Inc.	Baa1	8.0	BBB	9.0
OSI Systems, Inc.	NA	--	NA	--
Packaging Corporation of America	Baa2	9.0	BBB	9.0
Philip Morris International Inc.	A2	6.0	A-	7.0
Selective Insurance Group, Inc.	Baa2	9.0	BBB	9.0
Sensient Technologies Corporation	WR	--	NR	--
Sherwin-Williams Company	Baa2	9.0	BBB	9.0
Smith Corporation (A.O.)	NR	--	NA	--
Texas Instruments Incorporated	Aa3	4.0	A+	5.0
Thermo Fisher Scientific Inc.	A3	7.0	A-	7.0
UniFirst Corporation	NA	--	NA	--
VeriSign, Inc.	Baa3	10.0	BBB	9.0
Verisk Analytics, Inc.	Baa2	9.0	BBB	9.0
Watts Water Technologies, Inc.	NA	--	NR	--
Zoetis Inc.	Baa1	8.0	BBB	9.0
Average	A3	7.1	A-/BBB+	7.5

Notes:
(1) From page 26 of this Document.

Source of Information:
Bloomberg Professional Services.

Tampa Electric Company, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Non-Price Regulated Companies of Comparable risk to the
Utility Proxy Group

Line No.	Equity Risk Premium Measure	Proxy Group of Fourty-Five Non-Price Regulated Companies	Proxy Group of Fourty-Five Non-Price Regulated Companies (excl. PRPM)
1.	Kroll Equity Risk Premium (1)	5.96 %	5.96 %
2.	Regression on Kroll Risk Premium Data (2)	6.92	6.92
3.	Kroll Equity Risk Premium based on PRPM (3)	8.46	NA
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	6.91	6.91
5	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	8.64	8.64
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	11.29	11.29
7.	Conclusion of Equity Risk Premium	8.03 %	7.94 %
8.	Adjusted Beta (7)	0.93	0.93
9.	Forecasted Equity Risk Premium	7.47 %	7.38 %

Notes:
(1) From note 1 of page 29 of this Document.
(2) From note 2 of page 29 of this Document.
(3) From note 3 of page 29 of this Document.
(4) From note 4 of page 29 of this Document.
(5) From note 5 of page 29 of this Document.
(6) From note 6 of page 29 of this Document.
(7) Average of mean and median beta from page 44 of this Document.

Sources of Information:
Stocks, Bonds, Bills, and Inflation - 2023 SBBI Yearbook, Kroll.
Value Line Summary and Index.
Blue Chip Financial Forecasts May 31, 2024
Bloomberg Professional Services.

Tampa Electric Company, Inc.
Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Utility Proxy Group

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Fourty-Five Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
3M Company	0.95	1.02	0.99	8.93 %	4.41 %	13.25 %	13.27 %	13.26 %
Abbott Laboratories	0.90	0.82	0.86	8.93	4.41	12.09	12.40	12.24
AbbVie Inc.	0.85	0.59	0.72	8.93	4.41	10.84	11.46	11.15 (4)
Agilent Technologies, Inc.	0.95	1.14	1.04	8.93	4.41	13.69	13.61	13.65
Air Products and Chemicals, Inc.	0.90	0.84	0.87	8.93	4.41	12.18	12.47	12.32
Allstate Corporation	1.00	0.59	0.80	8.93	4.41	11.55	12.00	11.78
Altria Group, Inc.	0.85	0.62	0.74	8.93	4.41	11.02	11.60	11.31
Analog Devices, Inc.	1.00	1.13	1.06	8.93	4.41	13.87	13.74	13.81
Assurant, Inc.	0.90	0.78	0.84	8.93	4.41	11.91	12.27	12.09
Brady Corporation	0.95	0.76	0.86	8.93	4.41	12.09	12.40	12.24
Broadridge Financial Solutions, Inc.	0.90	1.05	0.98	8.93	4.41	13.16	13.20	13.18
Brown-Forman Corporation (BF-B)	0.90	0.83	0.86	8.93	4.41	12.09	12.40	12.24
CACI International Inc	0.90	0.83	0.86	8.93	4.41	12.09	12.40	12.24
Cisco Systems, Inc.	0.85	0.78	0.81	8.93	4.41	11.64	12.07	11.85
Danaher Corporation	0.90	1.05	0.98	8.93	4.41	13.16	13.20	13.18
Dolby Laboratories, Inc.	0.95	0.92	0.93	8.93	4.41	12.71	12.87	12.79
Expeditors International	0.95	1.09	1.02	8.93	4.41	13.52	13.47	13.49
FactSet Research Systems Inc.	1.00	0.98	0.99	8.93	4.41	13.25	13.27	13.26
Fastenal Company	0.90	0.99	0.95	8.93	4.41	12.89	13.00	12.95
Federal Signal Corporation	0.95	1.09	1.02	8.93	4.41	13.52	13.47	13.49
Franklin Electric Co., Inc.	0.90	0.94	0.92	8.93	4.41	12.62	12.80	12.71
GATX Corporation	0.95	0.93	0.94	8.93	4.41	12.80	12.94	12.87
Home Depot, Inc.	0.95	1.04	0.99	8.93	4.41	13.25	13.27	13.26
Innospec Inc.	1.00	0.97	0.99	8.93	4.41	13.25	13.27	13.26
International Business Machines Cor	0.90	0.73	0.82	8.93	4.41	11.73	12.13	11.93
Juniper Networks, Inc.	1.00	0.81	0.91	8.93	4.41	12.53	12.73	12.63
Lockheed Martin Corporation	0.85	0.63	0.74	8.93	4.41	11.02	11.60	11.31
Microsoft Corporation	0.90	1.07	0.98	8.93	4.41	13.16	13.20	13.18
MSA Safety Incorporated	0.95	0.91	0.93	8.93	4.41	12.71	12.87	12.79
MSC Industrial Direct Co., Inc.	0.90	0.91	0.91	8.93	4.41	12.53	12.73	12.63
O'Reilly Automotive, Inc.	0.90	0.69	0.80	8.93	4.41	11.55	12.00	11.78
OSI Systems, Inc.	0.90	0.97	0.93	8.93	4.41	12.71	12.87	12.79
Packaging Corporation of America	0.95	0.87	0.91	8.93	4.41	12.53	12.73	12.63
Philip Morris International Inc.	0.95	0.77	0.86	8.93	4.41	12.09	12.40	12.24
Selective Insurance Group, Inc.	0.85	0.55	0.70	8.93	4.41	10.66	11.33	10.99 (4)
Sensient Technologies Corporation	0.90	1.02	0.96	8.93	4.41	12.98	13.07	13.02
Sherwin-Williams Company	0.95	1.11	1.03	8.93	4.41	13.61	13.54	13.57
Smith Corporation (A.O.)	0.90	1.05	0.97	8.93	4.41	13.07	13.14	13.10
Texas Instruments Incorporated	0.85	1.11	0.98	8.93	4.41	13.16	13.20	13.18
Thermo Fisher Scientific Inc.	0.85	1.02	0.94	8.93	4.41	12.80	12.94	12.87
UniFirst Corporation	0.90	0.85	0.88	8.93	4.41	12.27	12.53	12.40
VeriSign, Inc.	0.90	0.99	0.95	8.93	4.41	12.89	13.00	12.95
Verisk Analytics, Inc.	0.90	0.92	0.91	8.93	4.41	12.53	12.73	12.63
Watts Water Technologies, Inc.	1.00	1.17	1.09	8.93	4.41	14.14	13.94	14.04
Zoetis Inc.	1.00	1.12	1.06	8.93	4.41	13.87	13.74	13.81
		Mean	0.92			12.60 %	12.78 %	12.77 %
		Median	0.93			12.71 %	12.87 %	12.79 %
		Average of Mean and Median	0.93			12.66 %	12.83 %	12.78 %

Notes:
(1) From note 1 of page 35 of this Document.
(2) From note 2 of page 35 of this Document.
(3) Average of CAPM and ECAPM cost rates.
(4) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Tampa Electric Company, Inc.
Traditional CAPM and ECAPM Results (excluding the PRPM MRP) for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the Utility Proxy Group

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Fourty-Five Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
3M Company	0.95	1.02	0.99	8.82 %	4.41 %	13.15 %	13.17 %	13.16 %
Abbott Laboratories	0.90	0.82	0.86	8.82	4.41	12.00	12.31	12.15
AbbVie Inc.	0.85	0.59	0.72	8.82	4.41	10.76	11.38	11.07 (4)
Agilent Technologies, Inc.	0.95	1.14	1.04	8.82	4.41	13.59	13.50	13.54
Air Products and Chemicals, Inc.	0.90	0.84	0.87	8.82	4.41	12.09	12.37	12.23
Allstate Corporation	1.00	0.59	0.80	8.82	4.41	11.47	11.91	11.69
Altria Group, Inc.	0.85	0.62	0.74	8.82	4.41	10.94	11.51	11.23
Analog Devices, Inc.	1.00	1.13	1.06	8.82	4.41	13.76	13.63	13.70
Assurant, Inc.	0.90	0.78	0.84	8.82	4.41	11.82	12.18	12.00
Brady Corporation	0.95	0.76	0.86	8.82	4.41	12.00	12.31	12.15
Broadridge Financial Solutions, Inc.	0.90	1.05	0.98	8.82	4.41	13.06	13.10	13.08
Brown-Forman Corporation (BF-B)	0.90	0.83	0.86	8.82	4.41	12.00	12.31	12.15
CACI International Inc	0.90	0.83	0.86	8.82	4.41	12.00	12.31	12.15
Cisco Systems, Inc.	0.85	0.78	0.81	8.82	4.41	11.56	11.98	11.77
Danaher Corporation	0.90	1.05	0.98	8.82	4.41	13.06	13.10	13.08
Dolby Laboratories, Inc.	0.95	0.92	0.93	8.82	4.41	12.62	12.77	12.69
Expeditors International	0.95	1.09	1.02	8.82	4.41	13.41	13.37	13.39
FactSet Research Systems Inc.	1.00	0.98	0.99	8.82	4.41	13.15	13.17	13.16
Fastenal Company	0.90	0.99	0.95	8.82	4.41	12.79	12.90	12.85
Federal Signal Corporation	0.95	1.09	1.02	8.82	4.41	13.41	13.37	13.39
Franklin Electric Co., Inc.	0.90	0.94	0.92	8.82	4.41	12.53	12.71	12.62
GATX Corporation	0.95	0.93	0.94	8.82	4.41	12.71	12.84	12.77
Home Depot, Inc.	0.95	1.04	0.99	8.82	4.41	13.15	13.17	13.16
Innospec Inc.	1.00	0.97	0.99	8.82	4.41	13.15	13.17	13.16
International Business Machines Corporation	0.90	0.73	0.82	8.82	4.41	11.65	12.04	11.85
Juniper Networks, Inc.	1.00	0.81	0.91	8.82	4.41	12.44	12.64	12.54
Lockheed Martin Corporation	0.85	0.63	0.74	8.82	4.41	10.94	11.51	11.23
Microsoft Corporation	0.90	1.07	0.98	8.82	4.41	13.06	13.10	13.08
MSA Safety Incorporated	0.95	0.91	0.93	8.82	4.41	12.62	12.77	12.69
MSC Industrial Direct Co., Inc.	0.90	0.91	0.91	8.82	4.41	12.44	12.64	12.54
O'Reilly Automotive, Inc.	0.90	0.69	0.80	8.82	4.41	11.47	11.91	11.69
OSI Systems, Inc.	0.90	0.97	0.93	8.82	4.41	12.62	12.77	12.69
Packaging Corporation of America	0.95	0.87	0.91	8.82	4.41	12.44	12.64	12.54
Philip Morris International Inc.	0.95	0.77	0.86	8.82	4.41	12.00	12.31	12.15
Selective Insurance Group, Inc.	0.85	0.55	0.70	8.82	4.41	10.59	11.25	10.92 (4)
Sensient Technologies Corporation	0.90	1.02	0.96	8.82	4.41	12.88	12.97	12.93
Sherwin-Williams Company	0.95	1.11	1.03	8.82	4.41	13.50	13.43	13.47
Smith Corporation (A.O.)	0.90	1.05	0.97	8.82	4.41	12.97	13.04	13.00
Texas Instruments Incorporated	0.85	1.11	0.98	8.82	4.41	13.06	13.10	13.08
Thermo Fisher Scientific Inc.	0.85	1.02	0.94	8.82	4.41	12.71	12.84	12.77
UniFirst Corporation	0.90	0.85	0.88	8.82	4.41	12.18	12.44	12.31
VeriSign, Inc.	0.90	0.99	0.95	8.82	4.41	12.79	12.90	12.85
Verisk Analytics, Inc.	0.90	0.92	0.91	8.82	4.41	12.44	12.64	12.54
Watts Water Technologies, Inc.	1.00	1.17	1.09	8.82	4.41	14.03	13.83	13.93
Zoetis Inc.	1.00	1.12	1.06	8.82	4.41	13.76	13.63	13.70
		Mean	0.92			12.51 %	12.69 %	12.67 %
		Median	0.93			12.62 %	12.77 %	12.69 %
		Average of Mean and Median	0.93			12.57 %	12.73 %	12.68 %

Notes:
(1) From note 1 of page 35 of this Document.
(2) From note 2 of page 35 of this Document.
(3) Average of CAPM and ECAPM cost rates.
(4) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Tampa Electric Company, Inc.
Derivation of the Flotation Cost Adjustment to the Cost of Common Equity

Equity Issuances

Date	Issuing Company	[1] Shares Issued (1)	[2] Market Price per Share (1)	[3] Average Offering Price per Share (1)	[4] Underwriting Discount (1)	[5] Total Offering Expense per Share (1)	[6] Net Proceeds per Share (2)	[7] Total Flotation Costs (3)	[8] Gross Equity Issue before Costs (4)	[9] Net Proceeds (5)	[10] Flotation Cost Percentage (6)
At-The-Market 2023	Emera Incorporated	8,287,037	NA	48.270	NA	$ 0.362	$ 47.91	$ 3,000,000	$ 400,000,000	$ 397,000,000	0.75%
At-The-Market 2022	Emera Incorporated	4,072,469	NA	61.310	NA	$ 0.491	$ 60.90	$ 2,000,000	$ 250,000,000	$ 248,000,000	0.80%
At-The-Market 2021	Emera Incorporated	4,987,123	NA	57.630	NA	$ 0.602	$ 56.95	$ 3,000,000	$ 287,000,000	$ 284,000,000	1.05%
At-The-Market 2020	Emera Incorporated	4,544,025	NA	56.040	NA	$ 0.880	$ 55.24	$ 4,000,000	$ 255,000,000	$ 251,000,000	1.57%
At-The-Market 2019	Emera Incorporated	1,768,120	NA	56.560	NA	$ 0.735	$ 55.82	$ 1,300,000	$ 100,000,000	$ 98,700,000	1.30%
12/18/2017	Emera Incorporated	14,614,000	47.980	47.900	1.916	$ 0.031	$ 45.95	$ 29,619,544	$ 701,179,720	$ 671,560,176	4.22%
12/8/2016	Emera Incorporated	7,624,500	44.260	45.250	1.810	$ 0.059	$ 43.38	$ 6,702,090	$ 337,460,370	$ 330,758,280	1.99%
	Total Public Issuances							$ 49,621,634	$ 2,330,640,090	$ 2,281,018,456	2.13%

Flotation Cost Adjustment

	[11] Average Dividend Yield (7)	[12] Average Projected EPS Growth Rate (7)	[13] Adjusted Dividend Yield (8)	[14] Average DCF Cost Rate Unadjusted for Flotation (9)	[15] DCF Cost Rate Adjusted for Flotation (10)	[16] Flotation Cost Adjustment (11)
Proxy Group of Fifteen Electric Utilities	4.29 %	6.01 %	4.42 %	10.43 %	10.52 %	0.10 %

Notes:
(1) From Company prospectuses, annual filings, or Company provided.
(2) Column [3] - Column [4] - Column [5].
(3) (Column [2] - Column [6]) x Column [1].
(4) Column [1] x Column [2].
(5) Column [1] x Column [6].
(6) Column [7] / Column [8].
(7) From page 7 of this Document.
(8) Column [11] x (1 + 0.5 x Column [12]).
(9) Column [12] + Column [13].
(10) (Column [13] / (1 - Column [10])) + Column [12].
(11) Column [15] - Column [14].

Tampa Electric Company, Inc.
Derivation of Investment Risk Adjustment Based upon
Kroll Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		[1] Market Capitalization on May 31, 2024 (1) (millions)			[2] Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	Tampa Electric Company, Inc. - based on the Utility Proxy Group	$ 8,730.152			3	0.61%	
2.	Proxy Group of Fifteen Electric Utilities	$ 12,871.715	1.5	x	3	0.61%	0.00%

	[A] Decile	[B] Market Capitalization of Smallest Company (millions)	[C] Market Capitalization of Largest Company (millions)	[D] Size Premium (Return in Excess of CAPM)*
Largest	1	$ 36,942.976	$ 2,662,326.048	0.06%
	2	14,910.719	36,391.113	0.46%
	3	7,493.607	14,820.048	0.61%
	4	4,622.261	7,461.284	0.64%
	5	3,011.224	4,621.785	0.95%
	6	1,864.293	3,010.806	1.21%
	7	1,050.083	1,862.491	1.39%
	8	555.880	1,046.037	1.14%
	9	213.039	554.523	1.99%
Smallest	10	1.576	212.644	4.70%

*From 2024 Kroll Cost of Capital Navigator

Notes:

(1) From page 48 of this Document.

(2) Gleaned from Columns [B] and [C] on the bottom of this page. The appropriate decile (Column [A]) corresponds to the market capitalization of the proxy group, which is found in Column [1].

(3) Corresponding risk premium to the decile is provided in Column [D] on the bottom of this page.

(4) Line No. 1 Column [3] – Line No. 2 Column [3]. For example, the 0.00% in Column [4], Line No. 2 is derived as follows 0.00% = 0.61% - 0.61%.

Tampa Electric Company, Inc.
Market Capitalization of Tampa Electric Company, Inc. and the
Utility Proxy Group

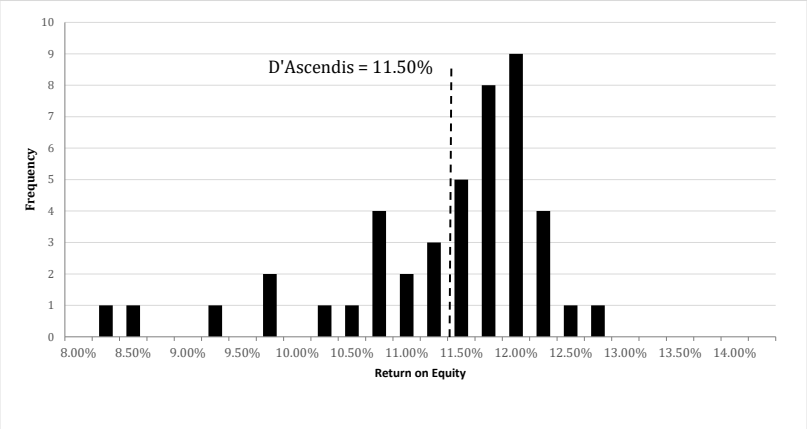
Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2022 (millions)	[2] Book Value per Share at Fiscal Year End 2022 (1)	[3] Total Common Equity at Fiscal Year End 2022 (millions)	[4] Closing Stock Market Price on May 31, 2024	[5] Market-to-Book Ratio on May 31, 2024 (2)	[6] Market Capitalization on May 31, 2024 (3) (millions)
Tampa Electric Company, Inc.		NA	NA	5,291.001 (4)	NA		
Based upon Proxy Group of Fifteen Electric Utilities						165.0 (5)	$ 8,730.152 (6)
Proxy Group of Fifteen Electric Utilities							
Alliant Energy Corporation	NASDAQ	256.097	$ 26.46	$ 6,777.00	$ 51.49	194.6 %	$ 13,186.427
Ameren Corporation	NYSE	266.300	$ 42.62	$ 11,349.00	$ 73.37	172.2	19,538.43
American Electric Power Corporation	NASDAQ	526.185	$ 47.98	$ 25,246.70	$ 90.25	188.1	47,488.16
Duke Energy Corporation	NYSE	771.000	$ 61.15	$ 47,150.00	$ 103.57	169.4	79,852.47
Edison International	NYSE	383.925	$ 36.02	$ 13,828.00	$ 76.85	213.4	29,504.63
Entergy Corporation	NYSE	212.849	$ 68.70	$ 14,622.65	$ 112.49	163.7	23,943.34
Evergy, Inc.	NASDAQ	229.729	$ 42.06	$ 9,663.10	$ 54.66	129.9	12,557.00
IDACORP, Inc.	NYSE	50.615	$ 57.45	$ 2,907.57	$ 95.47	166.2	4,832.24
NorthWestern Corporation	NASDAQ	64.762	$ 43.01	$ 2,785.31	$ 51.96	120.8	3,365.03
OGE Energy Corporation	NYSE	200.300	$ 22.52	$ 4,511.60	$ 36.30	161.2	7,270.89
Pinnacle West Capital Corporation	NYSE	113.538	$ 54.41	$ 6,177.66	$ 78.86	144.9	8,953.58
PNM Resources, Inc.	NYSE	90.200	$ 26.04	$ 2,349.09	$ 38.34	147.2	3,458.28
Portland General Electric Company	NYSE	101.160	$ 32.81	$ 3,319.00	$ 44.56	135.8	4,507.67
Southern Company	NYSE	1,092.000	$ 28.80	$ 31,444.00	$ 80.14	278.3	87,512.88
Xcel Energy Inc.	NASDAQ	554.942	$ 31.75	$ 17,617.00	$ 55.45	174.7	30,771.52
Median		229.729	$ 42.063	$ 9,663.100	$ 75.110	165.0 %	$ 12,871.715

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Requested rate base multiplied by the requested common equity ratio.
(5) The market-to-book ratio of Tampa Electric Company, Inc. on May 31, 2024 is assumed to be equal to the market-to-book ratio of the Utility Proxy Group on May 31, 2024 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2022 Annual Forms 10K.
Finance.Yahoo.com.
Bloomberg Professional Services.

Tampa Electric Company, Inc.
Histogram of Mr. D'Ascendis' Model Results

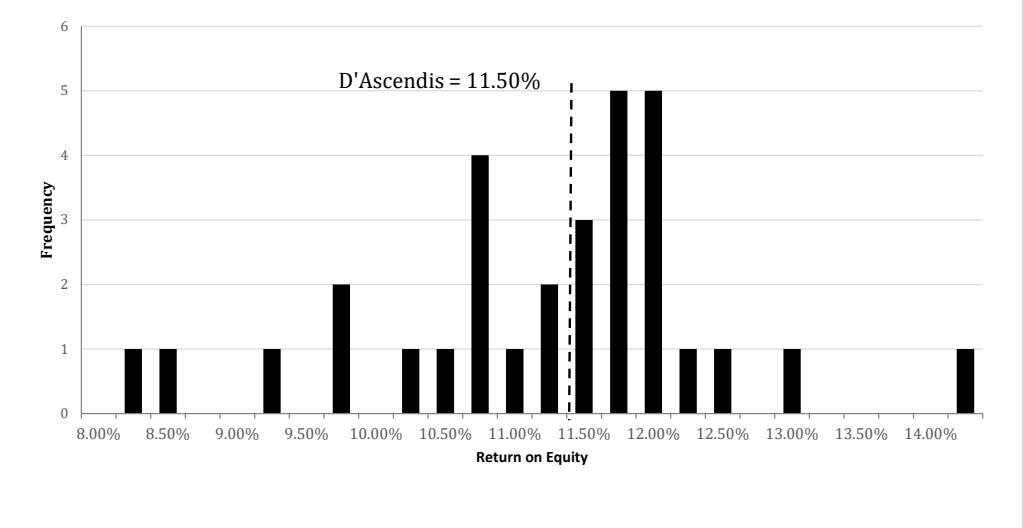


		ROE	Percentile Rank
Number of Model Results below 11.5%:	21 48.00%	11.50%	45.20%
Number of Model Results above Average Upper Bound 11.90%:	14 32.00%		

		Plot Number	ROE	D'Ascendis ROE
DCF				
Alliant Energy Corporation	10.27%	1	8.21%	11.50%
Ameren Corporation	9.61%	2	8.33%	11.50%
American Electric Power Corporation	10.54%	3	9.21%	11.50%
Duke Energy Corporation	10.21%	4	9.53%	11.50%
Edison International	11.32%	5	9.61%	11.50%
Entergy Corporation	9.21%	6	10.21%	11.50%
Evergy, Inc.	11.19%	7	10.27%	11.50%
IDACORP, Inc.	8.33%	8	10.54%	11.50%
NorthWestern Corporation	9.53%	9	10.69%	11.50%
OGE Energy Corporation	10.72%	10	10.69%	11.50%
Pinnacle West Capital Corporation	11.52%	11	10.72%	11.50%
PNM Resources, Inc.	8.21%	12	10.76%	11.50%
Portland General Electric Company	14.16%	13	10.92%	11.50%
Southern Company	10.69%	14	11.07%	11.50%
Xcel Energy Inc.	10.92%	15	11.09%	11.50%
RP		16	11.19%	11.50%
RP Model w/ PRPM	11.09%	17	11.32%	11.50%
RP Model w/o PRPM	11.07%	18	11.38%	11.50%
CAPM w/ PRPM MRP		19	11.38%	11.50%
Alliant Energy Corporation	11.70%	20	11.46%	11.50%
Ameren Corporation	11.93%	21	11.46%	11.50%
American Electric Power Corporation	11.46%	22	11.52%	11.50%
Duke Energy Corporation	11.70%	23	11.54%	11.50%
Edison International	12.87%	24	11.61%	11.50%
Entergy Corporation	12.24%	25	11.61%	11.50%
Evergy, Inc.	11.93%	26	11.62%	11.50%
IDACORP, Inc.	11.46%	27	11.69%	11.50%
NorthWestern Corporation	12.09%	28	11.70%	11.50%
OGE Energy Corporation	12.56%	29	11.70%	11.50%
Pinnacle West Capital Corporation	12.09%	30	11.78%	11.50%
PNM Resources, Inc.	10.76%	31	11.85%	11.50%
Portland General Electric Company	11.78%	32	11.85%	11.50%
Southern Company	11.93%	33	11.85%	11.50%
Xcel Energy Inc.	11.62%	34	11.93%	11.50%
CAPM w/o PRPM MRP		35	11.93%	11.50%
Alliant Energy Corporation	11.61%	36	11.93%	11.50%
Ameren Corporation	11.85%	37	12.00%	11.50%
American Electric Power Corporation	11.38%	38	12.00%	11.50%
Duke Energy Corporation	11.61%	39	12.09%	11.50%
Edison International	12.77%	40	12.09%	11.50%
Entergy Corporation	12.15%	41	12.15%	11.50%
Evergy, Inc.	11.85%	42	12.24%	11.50%
IDACORP, Inc.	11.38%	43	12.46%	11.50%
NorthWestern Corporation	12.00%	44	12.56%	11.50%
OGE Energy Corporation	12.46%	45	12.77%	11.50%
Pinnacle West Capital Corporation	12.00%	46	12.87%	11.50%
PNM Resources, Inc.	10.69%	47	14.16%	11.50%
Portland General Electric Company	11.69%			
Southern Company	11.85%			
Xcel Energy Inc.	11.54%			

Bin	*Frequency*
8.00%	0
8.25%	1
8.50%	1
8.75%	0
9.00%	0
9.25%	1
9.50%	0
9.75%	2
10.00%	0
10.25%	1
10.50%	1
10.75%	4
11.00%	2
11.25%	3
11.50%	5
11.75%	8
12.00%	9
12.25%	4
12.50%	1
12.75%	1
13.00%	0
13.25%	0
13.50%	0
13.75%	0
14.00%	0
14.25%	0
14.50%	0
Total	44

Tampa Electric Company, Inc.
Histogram of Mr. D'Ascendis' Model Results

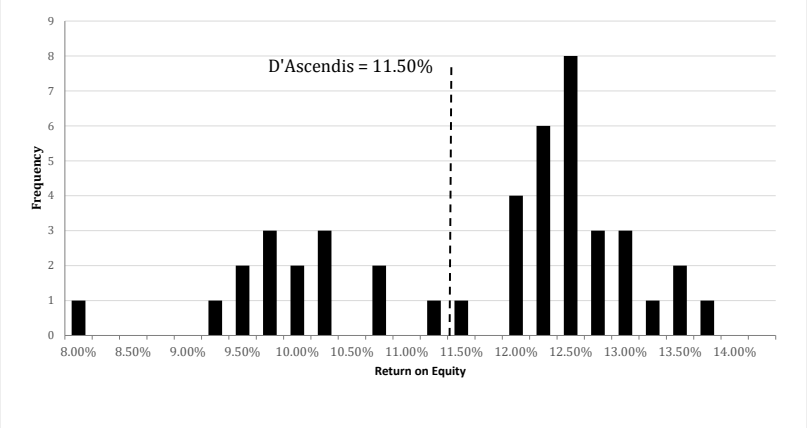


			ROE	Percentile Rank
Number of Model Results below 11.5%:	17	55.00%		
Number of Model Results above Upper Bound w/o PRPM 11.93%:	6	19.00%	11.50%	55.80%

DCF		**Plot Number**	**ROE**	**D'Ascendis ROE**
Alliant Energy Corporation	10.27%	1	8.21%	11.50%
Ameren Corporation	9.61%	2	8.33%	11.50%
American Electric Power Corporation	10.54%	3	9.21%	11.50%
Duke Energy Corporation	10.21%	4	9.53%	11.50%
Edison International	11.32%	5	9.61%	11.50%
Entergy Corporation	9.21%	6	10.21%	11.50%
Evergy, Inc.	11.19%	7	10.27%	11.50%
IDACORP, Inc.	8.33%	8	10.54%	11.50%
NorthWestern Corporation	9.53%	9	10.69%	11.50%
OGE Energy Corporation	10.72%	10	10.69%	11.50%
Pinnacle West Capital Corporation	11.52%	11	10.72%	11.50%
PNM Resources, Inc.	8.21%	12	10.92%	11.50%
Portland General Electric Company	14.16%	13	11.07%	11.50%
Southern Company	10.69%	14	11.19%	11.50%
Xcel Energy Inc.	10.92%	15	11.32%	11.50%
RP		16	11.38%	11.50%
RP Model w/o PRPM	11.07%	17	11.38%	11.50%
CAPM w/o PRPM MRP		18	11.52%	11.50%
Alliant Energy Corporation	11.61%	19	11.54%	11.50%
Ameren Corporation	11.85%	20	11.61%	11.50%
American Electric Power Corporation	11.38%	21	11.61%	11.50%
Duke Energy Corporation	11.61%	22	11.69%	11.50%
Edison International	12.77%	23	11.85%	11.50%
Entergy Corporation	12.15%	24	11.85%	11.50%
Evergy, Inc.	11.85%	25	11.85%	11.50%
IDACORP, Inc.	11.38%	26	12.00%	11.50%
NorthWestern Corporation	12.00%	27	12.00%	11.50%
OGE Energy Corporation	12.46%	28	12.15%	11.50%
Pinnacle West Capital Corporation	12.00%	29	12.46%	11.50%
PNM Resources, Inc.	10.69%	30	12.77%	11.50%
Portland General Electric Company	11.69%	30	14.16%	11.50%
Southern Company	11.85%			
Xcel Energy Inc.	11.54%			

Bin	*Frequency*
8.00%	0
8.25%	1
8.50%	1
8.75%	0
9.00%	0
9.25%	1
9.50%	0
9.75%	2
10.00%	0
10.25%	1
10.50%	1
10.75%	4
11.00%	1
11.25%	2
11.50%	3
11.75%	5
12.00%	5
12.25%	1
12.50%	1
12.75%	0
13.00%	1
13.25%	0
13.50%	0
13.75%	0
14.00%	0
14.25%	1
14.50%	0
Total	31

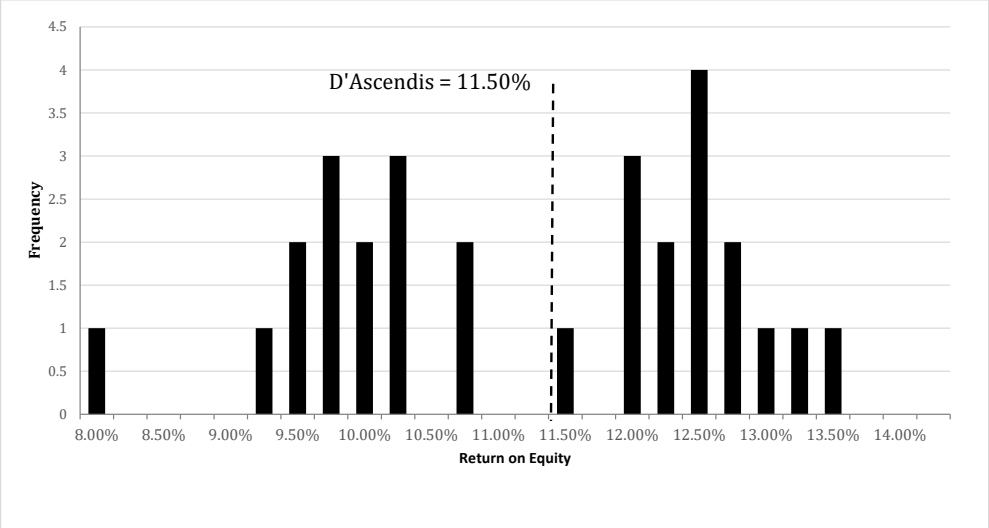
Tampa Electric Company, Inc.
Histogram of Mr. D'Ascendis' Model Results



Number of Model Results below 11.50%:	16	36.00%	ROE Percentile Rank
Number of Model Results above Combined Upper Bound 12.46%:	13	30.00%	11.50% 35.80%

DCF		**Plot Number**	**ROE**	**D'Ascendis ROE**	*Bin*	*Frequency*
Alliant Energy Corporation	10.22%	1	7.42%	11.50%		
Ameren Corporation	9.43%	2	9.18%	11.50%	8.00%	1
American Electric Power Corporation	9.63%	3	9.43%	11.50%	8.25%	0
Duke Energy Corporation	10.56%	4	9.49%	11.50%	8.50%	0
Edison International	9.18%	5	9.63%	11.50%	8.75%	0
Entergy Corporation	10.72%	6	9.66%	11.50%	9.00%	0
Evergy, Inc.	9.99%	7	9.66%	11.50%	9.25%	1
IDACORP, Inc.	7.42%	8	9.89%	11.50%	9.50%	2
NorthWestern Corporation	9.49%	9	9.99%	11.50%	9.75%	3
OGE Energy Corporation	10.05%	10	10.05%	11.50%	10.00%	2
Pinnacle West Capital Corporation	9.66%	11	10.05%	11.50%	10.25%	3
Portland General Electric Company	9.89%	12	10.22%	11.50%	10.50%	0
Southern Company	10.05%	13	10.56%	11.50%	10.75%	2
Xcel Energy Inc.	9.66%	14	10.72%	11.50%	11.00%	0
RP		15	11.09%	11.50%	11.25%	1
RP Model w/ PRPM	11.09%	16	11.46%	11.50%	11.50%	1
RP Model w/o PRPM	11.46%	17	11.82%	11.50%	11.75%	0
CAPM w/o PRPM MRP		18	11.89%	11.50%	12.00%	4
Alliant Energy Corporation	12.43%	19	12.00%	11.50%	12.25%	6
Ameren Corporation	12.43%	20	12.00%	11.50%	12.50%	8
American Electric Power Corporation	11.82%	21	12.06%	11.50%	12.75%	3
Duke Energy Corporation	12.00%	22	12.06%	11.50%	13.00%	3
Edison International	13.47%	23	12.08%	11.50%	13.25%	1
Entergy Corporation	12.78%	24	12.15%	11.50%	13.50%	2
Evergy, Inc.	12.52%	25	12.17%	11.50%	13.75%	1
IDACORP, Inc.	12.08%	26	12.24%	11.50%	14.00%	0
NorthWestern Corporation	12.43%	27	12.34%	11.50%	14.25%	0
OGE Energy Corporation	13.21%	28	12.41%	11.50%	14.50%	0
Pinnacle West Capital Corporation	12.69%	29	12.43%	11.50%		
Portland General Electric Company	12.34%	30	12.43%	11.50%	Total	44
Southern Company	12.17%	31	12.43%	11.50%		
Xcel Energy Inc.	12.00%	32	12.50%	11.50%		
CAPM w/ PRPM MRP		33	12.50%	11.50%		
Alliant Energy Corporation	12.50%	34	12.50%	11.50%		
Ameren Corporation	12.50%	35	12.52%	11.50%		
American Electric Power Corporation	11.89%	36	12.59%	11.50%		
Duke Energy Corporation	12.06%	37	12.69%	11.50%		
Edison International	13.55%	38	12.77%	11.50%		
Entergy Corporation	12.85%	39	12.78%	11.50%		
Evergy, Inc.	12.59%	40	12.85%	11.50%		
IDACORP, Inc.	12.15%	41	13.21%	11.50%		
NorthWestern Corporation	12.50%	42	13.29%	11.50%		
OGE Energy Corporation	13.29%	43	13.47%	11.50%		
Pinnacle West Capital Corporation	12.77%	44	13.55%	11.50%		
Portland General Electric Company	12.41%					
Southern Company	12.24%					
Xcel Energy Inc.	12.06%					

Tampa Electric Company, Inc.
Histogram of Mr. D'Ascendis' Model Results



			ROE	Percentile Rank
Number of Model Results below 11.5%:	15	52.00%		
Number of Model Results above Upper Bound w/o PRPM 12.49%:	5	17.00%	11.50%	50.30%

DCF		**Plot Number**	**ROE**	**D'Ascendis ROE**
Alliant Energy Corporation	10.22%	1	7.42%	11.50%
Ameren Corporation	9.43%	2	9.18%	11.50%
American Electric Power Corporation	9.63%	3	9.43%	11.50%
Duke Energy Corporation	10.56%	4	9.49%	11.50%
Edison International	9.18%	5	9.63%	11.50%
Entergy Corporation	10.72%	6	9.66%	11.50%
Evergy, Inc.	9.99%	7	9.66%	11.50%
IDACORP, Inc.	7.42%	8	9.89%	11.50%
NorthWestern Corporation	9.49%	9	9.99%	11.50%
OGE Energy Corporation	10.05%	10	10.05%	11.50%
Pinnacle West Capital Corporation	9.66%	11	10.05%	11.50%
Portland General Electric Company	9.89%	12	10.22%	11.50%
Southern Company	10.05%	13	10.56%	11.50%
Xcel Energy Inc.	9.66%	14	10.72%	11.50%
RP		15	11.46%	11.50%
RP Model w/o PRPM	11.46%	16	11.82%	11.50%
CAPM w/o PRPM MRP		17	12.00%	11.50%
Alliant Energy Corporation	12.43%	18	12.00%	11.50%
Ameren Corporation	12.43%	19	12.08%	11.50%
American Electric Power Corporation	11.82%	20	12.17%	11.50%
Duke Energy Corporation	12.00%	21	12.34%	11.50%
Edison International	13.47%	22	12.43%	11.50%
Entergy Corporation	12.78%	23	12.43%	11.50%
Evergy, Inc.	12.52%	24	12.43%	11.50%
IDACORP, Inc.	12.08%	25	12.52%	11.50%
NorthWestern Corporation	12.43%	26	12.69%	11.50%
OGE Energy Corporation	13.21%	27	12.78%	11.50%
Pinnacle West Capital Corporation	12.69%	28	13.21%	11.50%
Portland General Electric Company	12.34%	29	13.47%	11.50%
Southern Company	12.17%			
Xcel Energy Inc.	12.00%			

Bin	*Frequency*
8.00%	1
8.25%	0
8.50%	0
8.75%	0
9.00%	0
9.25%	1
9.50%	2
9.75%	3
10.00%	2
10.25%	3
10.50%	0
10.75%	2
11.00%	0
11.25%	0
11.50%	1
11.75%	0
12.00%	3
12.25%	2
12.50%	4
12.75%	2
13.00%	1
13.25%	1
13.50%	1
13.75%	0
14.00%	0
14.25%	0
14.50%	0
Total	29

Tampa Electric Company, Inc.
Retention Ratio Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.369
R Square	0.136
Adjusted R Square	0.135
Standard Error	0.260
Observations	1029

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	10.925	10.925	161.467	0.000
Residual	1027	69.488	0.068		
Total	1028	80.413			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.1568	0.0106	14.7387	0.0000	0.1360	0.1777
Retention Ratio	-0.2706	0.0213	-12.7069	0.0000	-0.3124	-0.2288

Source: Value Line

Tampa Electric Company, Inc.
Growth Rate Regression Analysis

Company	Ticker	Trailing P/E Ratio	Hist. 10yr Earnings Growth Rate	Hist. 10yr Dividend Growth Rate	Hist. 10yr Book Value Growth Rate	Hist. 5yr Earnings Growth Rate	Hist. 5yr Dividend Growth Rate	Hist. 5yr Book Value Growth Rate	Proj. Earnings Growth Rate	Proj. Dividend Growth Rate	Proj. Book Value Growth Rate	Proj. Sustainable Growth Rate
ALLETE, Inc.	ALE	13.1	3.00%	3.50%	4.50%	0.50%	3.50%	3.00%	6.00%	3.50%	3.50%	3.60%
Alliant Energy Corporation	LNT	17.1	6.00%	6.50%	6.00%	7.00%	6.50%	6.50%	6.50%	6.00%	5.00%	4.56%
Ameren Corporation	AEE	16.2	4.00%	3.50%	2.00%	8.00%	5.00%	5.50%	6.50%	6.50%	6.50%	4.00%
American Electric Power Company, Inc.	AEP	17.0	5.00%	5.00%	3.50%	4.00%	5.00%	3.50%	6.50%	5.50%	6.00%	4.29%
Avangrid, Inc.	AGR	15.7	NA	NA	NA	3.50%	0.50%	0.50%	3.50%	Nil	1.50%	1.75%
Avista Corporation	AVA	15.9	3.00%	4.50%	4.00%	1.00%	4.50%	3.50%	6.00%	4.50%	3.50%	1.96%
Black Hills Corporation	BKH	13.9	7.50%	5.00%	5.00%	4.00%	6.00%	6.50%	3.50%	4.00%	3.50%	3.15%
CenterPoint Energy, Inc.	CNP	20.1	NA	-1.50%	3.50%	3.00%	-10.00%	6.00%	6.00%	3.00%	6.50%	4.94%
CMS Energy Corporation	CMS	18.8	6.00%	7.00%	6.50%	5.50%	6.50%	8.00%	5.00%	4.00%	4.00%	4.94%
Consolidated Edison, Inc.	ED	18.6	2.00%	2.50%	4.00%	2.00%	2.50%	3.50%	6.00%	3.50%	4.50%	3.60%
Dominion Energy Inc.	D	25.8	1.50%	2.00%	5.00%	-2.00%	-3.00%	3.50%	3.00%	0.50%	1.50%	3.63%
DTE Energy Company	DTE	18.4	4.00%	5.50%	3.00%	2.50%	5.50%	1.50%	4.50%	3.00%	1.00%	4.75%
Duke Energy Corporation	DUK	17.8	3.00%	3.00%	2.00%	4.50%	3.50%	1.00%	5.00%	2.00%	2.50%	2.88%
Edison International	EIX	14.8	2.00%	8.00%	2.00%	14.00%	5.00%	0.50%	6.00%	5.50%	5.00%	5.13%
Entergy Corporation	ETR	9.0	2.50%	2.00%	2.00%	5.50%	3.00%	6.50%	0.50%	3.50%	4.00%	3.61%
Exelon Corporation	EXC	15.7	-0.50%	-3.00%	4.50%	2.50%	4.00%	3.50%	NMF	NMF	NMF	4.00%
FirstEnergy Corp.	FE	15.4	1.00%	-2.50%	-6.00%	-1.00%	NA	7.00%	5.50%	5.50%	6.00%	5.37%
Evergy, Inc.	EVRG	16.7	NA	NA	NA	NA	NA	NA	7.50%	7.00%	3.50%	3.70%
Hawaiian Electric Industries, Inc.	HE	6.1	3.00%	0.50%	2.50%	1.50%	0.50%	1.50%	-11.50%	NMF	3.00%	3.92%
IDACORP, Inc.	IDA	18.1	4.00%	8.00%	4.50%	3.50%	6.50%	4.50%	5.00%	5.50%	4.00%	3.24%
MGE Energy, Inc.	MGEE	19.3	4.50%	4.00%	5.50%	5.50%	4.00%	5.50%	6.00%	3.50%	2.00%	7.25%
NextEra Energy, Inc.	NEE	20.7	9.50%	11.00%	8.00%	12.50%	11.50%	6.00%	8.00%	9.00%	9.00%	4.81%
Eversource Energy	ES	14.0	6.50%	7.00%	4.50%	5.50%	6.00%	4.00%	6.00%	6.00%	3.50%	4.18%
NorthWestern Corporation	NWE	15.6	3.50%	5.50%	6.00%	NA	3.50%	4.00%	4.00%	2.00%	3.00%	2.80%
OGE Energy Corp.	OGE	15.9	3.00%	7.50%	4.00%	4.50%	6.50%	1.50%	6.50%	3.00%	5.50%	5.59%
Otter Tail Corporation	OTTR	12.5	18.00%	2.50%	3.50%	14.50%	4.00%	6.00%	4.50%	7.00%	8.00%	4.60%
Pinnacle West Capital Corporation	PNW	16.8	3.50%	4.00%	4.00%	2.00%	5.00%	3.50%	4.50%	1.50%	4.50%	3.15%
PNM Resources, Inc.	PNM	13.3	7.50%	9.00%	2.50%	8.00%	7.00%	4.00%	5.00%	5.00%	4.50%	4.50%
Portland General Electric Company	POR	17.6	3.50%	5.00%	3.50%	3.00%	6.00%	3.00%	6.00%	5.50%	4.00%	3.42%
PPL Corporation	PPL	17.2	-9.00%	-1.00%	NA	-17.00%	-4.50%	4.00%	7.50%	-0.50%	3.00%	3.80%
Public Service Enterprise Group Incorporated	PEG	19.7	3.00%	4.50%	3.00%	4.00%	4.50%	1.50%	5.00%	5.00%	5.00%	4.56%
Sempra Energy	SRE	15.4	7.50%	7.00%	7.00%	13.50%	7.00%	10.00%	7.00%	5.00%	6.00%	5.36%
Southern Company	SO	20.4	3.00%	3.50%	3.00%	3.00%	3.50%	2.50%	6.50%	3.50%	3.50%	4.79%
Unitil Corp.	UTL	18.6	NA	NA	NA	4.50%	1.50%	5.50%	7.10%	NA	NA	NA
WEC Energy Group, Inc.	WEC	16.5	6.50%	10.00%	7.00%	7.00%	6.50%	3.50%	6.00%	7.00%	4.00%	4.68%
Xcel Energy Inc.	XEL	16.2	5.50%	6.00%	5.00%	6.50%	6.50%	6.00%	7.00%	5.50%	5.50%	4.95%
Atmos Energy Corporation	ATO	17.4	9.50%	7.00%	9.50%	9.00%	8.50%	12.00%	7.00%	7.50%	4.50%	5.00%
Chesapeake Utilities	CPK	23.0	9.00%	8.00%	10.50%	10.00%	10.00%	10.50%	6.50%	8.00%	6.50%	5.40%
NiSource Inc.	NI	17.1	1.50%	-0.50%	-3.00%	15.00%	3.50%	0.50%	9.50%	4.50%	5.00%	4.95%
New Jersey Resources	NJR	17.3	5.00%	6.50%	7.50%	2.50%	6.50%	7.00%	5.00%	5.00%	4.50%	5.72%
Northwest Natural Gas Holding	NWN	16.9	-1.00%	1.50%	1.00%	2.50%	0.50%	0.50%	6.50%	0.50%	4.00%	3.42%
One Gas, Inc.	OGS	15.8	NA	NA	NA	6.00%	8.50%	4.50%	3.50%	2.50%	4.50%	3.66%
RGC Resources	RGCO	15.7	NA	NA	NA	1.50%	6.00%	4.00%	NA	NA	NA	NA
Spire Inc.	SR	15.7	5.00%	5.00%	5.50%	3.00%	5.50%	3.50%	4.50%	4.50%	5.50%	2.55%
Southwest Gas Holdings	SWX	19.9	5.50%	8.50%	6.50%	4.50%	7.00%	7.00%	10.00%	5.50%	7.50%	2.85%
UGI Corporation	UGI	7.7	8.00%	6.50%	6.50%	4.50%	7.00%	6.50%	6.50%	3.50%	9.00%	6.35%

Notes:
Source: Value Line Reports as of May 31, 2024.

Tampa Electric Company, Inc.
Growth Rate Regression Analysis

SUMMARY OUTPUT

Trailing PE ratio vs 5 year proj eps

Regression Statistics	
Multiple R	0.505944527
R Square	0.255979864
Adjusted R Square	0.238265099
Standard Error	3.069362454
Observations	44

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	136.1340479	136.1340479	14.45008513	0.000458932
Residual	42	395.6814067	9.420985873		
Total	43	531.8154545			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	13.46738742	0.937817781	14.36034558	8.36903E-18	11.57479452	15.35998033	11.57479452	15.35998033
Proj. Earnings Growth Rate	57.66481546	15.16965499	3.801326759	0.000458932	27.05121228	88.27841864	27.05121228	88.27841864

SUMMARY OUTPUT

Trailing PE ratio vs 10 Year Historical eps

Regression Statistics	
Multiple R	0.107127346
R Square	0.011476268
Adjusted R Square	-0.014537514
Standard Error	3.656645751
Observations	40

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	5.898790453	5.898790453	0.44116108	0.510572999
Residual	38	508.1002095	13.37105815		
Total	39	513.999			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.87636703	0.869521051	19.40880787	2.55786E-21	15.11611368	18.63662037	15.11611368	18.63662037
Hist. 10yr Earnings Growth Rate	-9.831727076	14.80236874	-0.664199578	0.510572999	-39.79755596	20.13410181	-39.79755596	20.13410181

SUMMARY OUTPUT

Trailing PE ratio vs 10 Year Historical Dividend

Regression Statistics	
Multiple R	0.107663923
R Square	0.01159152
Adjusted R Square	-0.013752287
Standard Error	3.65472329
Observations	41

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	6.109104348	6.109104348	0.457370913	0.502846521
Residual	39	520.9230908	13.35700233		
Total	40	527.0321951			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15.99788367	0.977007158	16.37437713	4.5168E-19	14.02170016	17.97406718	14.02170016	17.97406718
Hist. 10yr Dividend Growth Rate	11.72627707	17.33907323	0.676292032	0.502846521	-23.34530891	46.79786306	-23.34530891	46.79786306

SUMMARY OUTPUT

Trailing PE ratio vs 10 Year Historical Book

Regression Statistics	
Multiple R	0.225513799
R Square	0.050856473
Adjusted R Square	0.025879012
Standard Error	3.626647947
Observations	40

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	26.7798873	26.7798873	2.036094576	0.161769227
Residual	38	499.7978627	13.15257533		
Total	39	526.57775			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15.3220009	1.015261201	15.09168368	1.23459E-17	13.26671205	17.37728975	13.26671205	17.37728975
Hist. 10yr Book Value Growth Rate	28.29583676	19.83003897	1.426917859	0.161769227	-11.84797841	68.43965193	-11.84797841	68.43965193

SUMMARY OUTPUT

Trailing PE ratio vs 5 Year Historical EPS

Regression Statistics	
Multiple R	0.060718748
R Square	0.003686766
Adjusted R Square	-0.020034977
Standard Error	3.553626999
Observations	44

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1.962649224	1.962649224	0.155417173	0.695406003
Residual	42	530.3871235	12.62826485		
Total	43	532.3497727			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.73909141	0.722932505	23.15443184	1.54552E-25	15.28015455	18.19802827	15.28015455	18.19802827
Hist. 5yr Earnings Growth Rate	-4.107327746	10.4186118	-0.394229848	0.695406003	-25.13293758	16.91828209	-25.13293758	16.91828209

Tampa Electric Company, Inc.
Growth Rate Regression Analysis

SUMMARY OUTPUT

Trailing PE ratio vs 5 Year Historical Dividend

Regression Statistics	
Multiple R	0.072879991
R Square	0.005311493
Adjusted R Square	-0.018371567
Standard Error	3.549327339
Observations	44

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2.825341342	2.825341342	0.224273942	0.638254965
Residual	42	529.1044314	12.59772456		
Total	43	531.9297727			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.86061161	0.842749033	20.00668165	4.33732E-23	15.15987521	18.56134801	15.15987521	18.56134801
Hist. 5yr Dividend Growth Rate	-6.904280305	14.57904267	-0.473575698	0.638254965	-36.32597955	22.51741894	-36.32597955	22.51741894

SUMMARY OUTPUT

Trailing PE ratio vs 5 Year Historical Book

Regression Statistics	
Multiple R	0.090540079
R Square	0.008197506
Adjusted R Square	-0.014867668
Standard Error	3.506992551
Observations	45

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	4.371139647	4.371139647	0.355406196	0.554194172
Residual	43	528.8568604	12.29899675		
Total	44	533.228			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15.99360086	1.035782089	15.44108653	3.7598E-19	13.9047472	18.08245451	13.9047472	18.08245451
X Variable 1	11.8459069	19.87036377	0.596159539	0.554194172	-28.22650071	51.91831452	-28.22650071	51.91831452

SUMMARY OUTPUT

Trailing PE ratio vs proj dividend

Regression Statistics	
Multiple R	0.014052024
R Square	0.000197459
Adjusted R Square	-0.025438503
Standard Error	3.262675603
Observations	41

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.081992842	0.081992842	0.007702437	0.930513727
Residual	39	415.1570315	10.64505209		
Total	40	415.2390244			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.89219424	1.217792399	13.87116084	1.15324E-16	14.42897661	19.35541187	14.42897661	19.35541187
Proj. Dividend Growth Rate	-2.18080215	24.84861531	-0.087763528	0.930513727	-52.44187071	48.08026641	-52.44187071	48.08026641

SUMMARY OUTPUT

Trailing PE ratio vs proj Book

Regression Statistics	
Multiple R	0.102201814
R Square	0.010445211
Adjusted R Square	-0.013690272
Standard Error	3.568426455
Observations	43

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	5.510800896	5.510800896	0.432774058	0.514307758
Residual	41	522.0803619	12.73366736		
Total	42	527.5911628			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	17.43326081	1.489770129	11.70198037	1.19796E-14	14.424609	20.44191263	14.424609	20.44191263
Proj. Book Value Growth Rate	-19.91381474	30.2707968	-0.657855651	0.514307758	-81.04692909	41.21929961	-81.04692909	41.21929961

SUMMARY OUTPUT

Trailing PE ratio vs proj Sustainable Growth

Regression Statistics	
Multiple R	0.036554794
R Square	0.001336253
Adjusted R Square	-0.022441455
Standard Error	3.544089303
Observations	44

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.705875325	0.705875325	0.056197719	0.813762307
Residual	42	527.5438974	12.56056899		
Total	43	528.2497727			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.01924744	2.106447363	7.604864816	2.00799E-09	11.76826456	20.27023032	11.76826456	20.27023032
Proj. Sustainable Growth Rate	11.46864134	48.37852545	0.237060581	0.813762307	-86.16317568	109.1004583	-86.16317568	109.1004583

Tampa Electric Company, Inc.
Dr. Woolridge Corrected DCF Results

Dr. Woolridge's Electric Proxy Group

Company	30-Day Dividend Yield [1]	90-Day Dividend Yield [1]	180-Day Dividend Yield [1]	Value Line Growth Rate [2]	Yahoo! Finance Growth Rate [3]	Zacks Growth Rate [3]	S&P Growth Rate [3]	Average Growth Rate [4]	Dividend Yield Adjustment Factor [5]	Expected 30-Day Dividend Yield [6]	Expected 90-Day Dividend Yield [6]	Expected 180-Day Dividend Yield [6]	30-Day DCF Result [7]	90-Day DCF Result [7]	180-Day DCF Result [7]
Alliant Energy Corporation (NYSE-LNT)	3.80%	3.90%	3.90%	6.50%	6.30%	6.10%	6.60%	6.38%	1.0319	3.92%	4.02%	4.02%	10.30%	10.40%	10.40%
Ameren Corporation (NYSE-AEE)	3.60%	3.70%	3.60%	6.50%	4.80%	6.48%	6.41%	6.05%	1.0303	3.71%	3.81%	3.71%	9.76%	9.86%	9.76%
American Electric Power Co. (NYSE-AEP)	4.10%	4.20%	4.40%	6.50%	6.19%	5.80%	6.26%	6.19%	1.0310	4.23%	4.33%	4.54%	10.42%	10.52%	10.73%
Avista Corporation (NYSE-AVA)	5.30%	5.50%	5.50%	6.00%	6.20%	NA	5.00%	5.73%	1.0287	5.45%	5.66%	5.66%	11.18%	11.39%	11.39%
CMS Energy Corporation (NYSE-CMS)	3.40%	3.50%	3.60%	5.00%	7.40%	7.38%	7.27%	6.76%	1.0338	3.51%	3.62%	3.72%	10.27%	10.38%	10.48%
Consolidated Edison, Inc. (NYSE-ED)	3.50%	3.70%	3.70%	6.00%	6.09%	2.00%	4.91%	4.75%	1.0238	3.58%	3.79%	3.79%	8.33%	8.54%	8.54%
Duke Energy Corporation (NYSE-DUK)	4.10%	4.30%	4.40%	5.00%	6.86%	6.28%	6.40%	6.14%	1.0307	4.23%	4.43%	4.54%	10.37%	10.57%	10.68%
Edison International (NYSE-EIX)	4.40%	4.50%	4.60%	6.00%	7.60%	NA	7.40%	7.00%	1.0350	4.55%	4.66%	4.76%	11.55%	11.66%	11.76%
Entergy Corporation (NYSE-ETR)	4.20%	4.40%	4.50%	0.50%	6.80%	7.46%	7.05%	5.45%	1.0273	4.31%	4.52%	4.62%	9.76%	9.97%	10.07%
Evergy, Inc. (NYSE-EVRG)	4.80%	5.00%	5.00%	7.50%	6.00%	5.00%	5.27%	5.94%	1.0297	4.94%	5.15%	5.15%	10.88%	11.09%	11.09%
Eversource Energy (NYSE-ES)	4.80%	4.90%	4.90%	6.00%	4.20%	5.70%	6.00%	5.48%	1.0274	4.93%	5.03%	5.03%	10.41%	10.51%	10.51%
Exelon Corporation (NDW-EXC)	4.00%	4.20%	4.00%	NMF	4.20%	5.91%	5.96%	5.36%	1.0268	4.11%	4.31%	4.11%	9.47%	9.67%	9.47%
IDACORP, Inc. (NYSE-IDA)	3.50%	3.60%	3.50%	5.00%	4.40%	NA	6.20%	5.20%	1.0260	3.59%	3.69%	3.59%	8.79%	8.89%	8.79%
MGE Energy, Inc. (NYSE-MGEE)	2.20%	2.30%	2.30%	6.00%	5.40%	NA	0.00%	5.70%	1.0285	2.26%	2.37%	2.37%	7.96%	8.07%	8.07%
Nextera Energy, Inc. (NYSE-NEE)	3.00%	3.30%	3.40%	8.00%	7.84%	7.99%	8.12%	7.99%	1.0400	3.12%	3.43%	3.54%	11.11%	11.42%	11.53%
NorthWestern Corporation (NYSE-NWE)	5.20%	5.30%	5.20%	4.00%	4.50%	NA	5.08%	4.53%	1.0227	5.32%	5.42%	5.32%	9.85%	9.95%	9.85%
OGE Energy Corp. (NYSE-OGE)	4.80%	4.90%	4.90%	6.50%	-12.34%	5.00%	5.27%	5.59%	1.0280	4.93%	5.04%	5.04%	10.52%	10.63%	10.63%
Pinnacle West Capital Corp. (NYSE-PNW)	4.70%	4.90%	4.80%	4.50%	6.90%	7.55%	6.82%	6.44%	1.0322	4.85%	5.06%	4.95%	11.29%	11.50%	11.39%
Portland General Electric Company (NYSE-POR)	4.60%	4.80%	4.80%	6.00%	12.50%	NA	8.95%	9.15%	1.0458	4.81%	5.02%	5.02%	13.96%	14.17%	14.17%
PPL Corporation (NYSE-PPL)	3.70%	3.80%	3.90%	7.50%	6.80%	6.46%	6.87%	6.91%	1.0346	3.83%	3.93%	4.03%	10.74%	10.84%	10.94%
Public Service Enterprise Group Incorporated (NYSE - PEG)	3.50%	3.70%	3.80%	5.00%	5.25%	6.24%	6.51%	5.75%	1.0288	3.60%	3.81%	3.91%	9.35%	9.56%	9.66%
Southern Company (NYSE-SO)	3.90%	4.10%	4.10%	6.50%	7.30%	4.50%	5.83%	6.03%	1.0302	4.02%	4.22%	4.22%	10.05%	10.25%	10.25%
WEC Energy Group (NYSE-WEC)	4.10%	4.10%	4.10%	6.00%	6.68%	7.17%	7.04%	6.72%	1.0336	4.24%	4.24%	4.24%	10.96%	10.96%	10.96%
Xcel Energy Inc. (NYSE-XEL)	4.00%	3.90%	3.80%	7.00%	6.73%	6.41%	6.36%	6.63%	1.0332	4.13%	4.03%	3.93%	10.76%	10.66%	10.56%
												Average	10.34%	10.48%	10.49%
												Mean			10.43%
												Median			10.48%
												Average of Mean and Median			10.46%

Notes:
[1] Source: Exhibit JRW-5, Page 2
[2] Source: Exhibit JRW-5, Page 4
[3] Source: Exhibit JRW-5, Page 5
[4] Average growth rate excluding negative growth rates
[5] 1 + 0.5 x average growth rate
[6] Dividend yield x dividend yield adjustment factor
[7] Expected dividend yield + average growth rate

D'Ascendis Direct Testimony Electric Proxy Group

Company	30-Day Dividend Yield [1]	90-Day Dividend Yield [1]	180-Day Dividend Yield [1]	Value Line Growth Rate [2]	Yahoo! Finance Growth Rate [3]	Zacks Growth Rate [3]	S&P Growth Rate [3]	Average Growth Rate [4]	Dividend Yield Adjustment Factor [5]	Expected 30-Day Dividend Yield [6]	Expected 90-Day Dividend Yield [6]	Expected 180-Day Dividend Yield [6]	30-Day DCF Result [7]	90-Day DCF Result [7]	180-Day DCF Result [7]
Alliant Energy Corporation (NYSE-LNT)	3.80%	3.90%	3.90%	6.50%	6.30%	6.10%	6.60%	6.38%	1.0319	3.92%	4.02%	4.02%	10.30%	10.40%	10.40%
Ameren Corporation (NYSE-AEE)	3.60%	3.70%	3.60%	6.50%	4.80%	6.48%	6.41%	6.05%	1.0303	3.71%	3.81%	3.71%	9.76%	9.86%	9.76%
American Electric Power Co. (NYSE-AEP)	4.10%	4.20%	4.40%	6.50%	6.19%	5.80%	6.26%	6.19%	1.0310	4.23%	4.33%	4.54%	10.42%	10.52%	10.73%
Duke Energy Corporation (NYSE-DUK)	4.10%	4.30%	4.40%	5.00%	6.86%	6.28%	6.40%	6.14%	1.0307	4.23%	4.43%	4.54%	10.37%	10.57%	10.68%
Edison International (NYSE-EIX)	4.40%	4.50%	4.60%	6.00%	7.60%	NA	7.40%	7.00%	1.0350	4.55%	4.66%	4.76%	11.55%	11.66%	11.76%
Entergy Corporation (NYSE-ETR)	4.20%	4.40%	4.50%	0.50%	6.80%	7.46%	7.05%	5.45%	1.0273	4.31%	4.52%	4.62%	9.76%	9.97%	10.07%
Evergy, Inc. (NYSE-EVRG)	4.80%	5.00%	5.00%	7.50%	6.00%	5.00%	5.27%	5.94%	1.0297	4.94%	5.15%	5.15%	10.88%	11.09%	11.09%
IDACORP, Inc. (NYSE-IDA)	3.50%	3.60%	3.50%	5.00%	4.40%	NA	6.20%	5.20%	1.0260	3.59%	3.69%	3.59%	8.79%	8.89%	8.79%
NorthWestern Corporation (NYSE-NWE)	5.20%	5.30%	5.20%	4.00%	4.50%	NA	5.08%	4.53%	1.0227	5.32%	5.42%	5.32%	9.85%	9.95%	9.85%
OGE Energy Corp. (NYSE-OGE)	4.80%	4.90%	4.90%	6.50%	-12.34%	5.00%	5.27%	5.59%	1.0280	4.93%	5.04%	5.04%	10.52%	10.63%	10.63%
Pinnacle West Capital Corp. (NYSE-PNW)	4.70%	4.90%	4.80%	4.50%	6.90%	7.55%	6.82%	6.44%	1.0322	4.85%	5.06%	4.95%	11.29%	11.50%	11.39%
Portland General Electric Company (NYSE-POR)	4.60%	4.80%	4.80%	6.00%	12.50%	NA	8.95%	9.15%	1.0458	4.81%	5.02%	5.02%	13.96%	14.17%	14.17%
Southern Company (NYSE-SO)	3.90%	4.10%	4.10%	6.50%	7.30%	4.50%	5.83%	6.03%	1.0302	4.02%	4.22%	4.22%	10.05%	10.25%	10.25%
Xcel Energy Inc. (NYSE-XEL)	4.00%	3.90%	3.80%	7.00%	6.73%	6.41%	6.36%	6.63%	1.0332	4.13%	4.03%	3.93%	10.76%	10.66%	10.56%
												Average	10.59%	10.72%	10.72%
												Mean			10.68%
												Median			10.72%
												Average of Mean and Median			10.70%

Notes:
[1] Source: Exhibit JRW-5, Page 2
[2] Source: Exhibit JRW-5, Page 4
[3] Source: Exhibit JRW-5, Page 5
[4] Average growth rate excluding negative growth rates
[5] 1 + 0.5 x average growth rate
[6] Dividend yield x dividend yield adjustment factor
[7] Expected dividend yield + average growth rate

Tampa Electric Company, Inc.
Comparison of Market Return Measures

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
	Actual Market Return (1)	LT average Market Return (2)	Kroll (3)	Ibbotson Chen Supply-Side (4)	Duke CFO Survey (5)	Damodaran (6)	Fernandez Survey (7)
2009	26.46%	11.67%	10.50%	11.65%	NA	8.20%	NA
2010	15.06%	11.85%	10.08%	11.12%	NA	8.49%	10.25%
2011	2.11%	11.88%	9.63%	10.54%	6.30%	7.89%	9.32%
2012	16.00%	11.77%	10.00%	11.34%	5.70%	7.54%	7.96%
2013	32.39%	11.82%	9.50%	11.49%	6.30%	8.00%	8.10%
2014	13.69%	12.05%	9.00%	11.43%	7.20%	7.95%	8.81%
2015	1.38%	12.07%	9.00%	9.89%	6.10%	8.39%	7.90%
2016	11.96%	11.95%	9.00%	11.48%	5.70%	8.14%	7.60%
2017	21.83%	11.95%	9.00%	11.28%	7.16%	7.49%	8.20%
2018	-4.38%	12.06%	8.50%	11.19%	6.21%	8.64%	8.20%
2019	31.49%	11.88%	9.00%	11.23%	6.81%	7.12%	8.30%
2020	18.40%	12.09%	8.00%	11.31%	8.38%	5.65%	7.50%
2021	28.71%	12.16%	8.00%	11.32%	8.69%	5.75%	7.30%
2022	-18.11%	12.33%	8.00%	11.11%	8.40%	9.82%	8.30%
2023	26.61%	12.02%	9.00%	11.31%	8.99%	8.48%	9.50%
Sum	223.60%	179.55%	136.21%	167.70%	91.94%	117.55%	117.24%
Forecast Bias (8)		**80.30%**	**60.92%**	**75.00%**	**50.49%**	**52.57%**	**59.47%**

Notes:
(1) Source: Kroll, 2023 SBBI, Appendix A-1, A-7; Cost of Capital Navigator
(2) Rolling historic long-term average of data in Column 1 since 1926
(3) Source: Kroll Recommended ERP + Corresponding Risk-Free Rate
(4) Source: SBBI - 2023
(5) Source: Duke/Richmond Fed CFO Survey
(6) Source: Damodaran: Implied Equity Risk Premiums - United States
(7) Source: Pablo Fernandez, IESE Business School MRP and RFR Survey
(8) Sum of forecasts divided by sum of actual observations

Tampa Electric Company, Inc.
Hypothetical Example: Flotation Cost Recovery

Return on Equity	10.75%
Flotation Costs	2.75%
Market Value	$ 25.00
Dividend Yield	3.50%
Growth Rate	7.25%
Adjusted ROE	10.85%
Flotation Cost Recovery:	**No**
DCF Estimate	**10.65%**

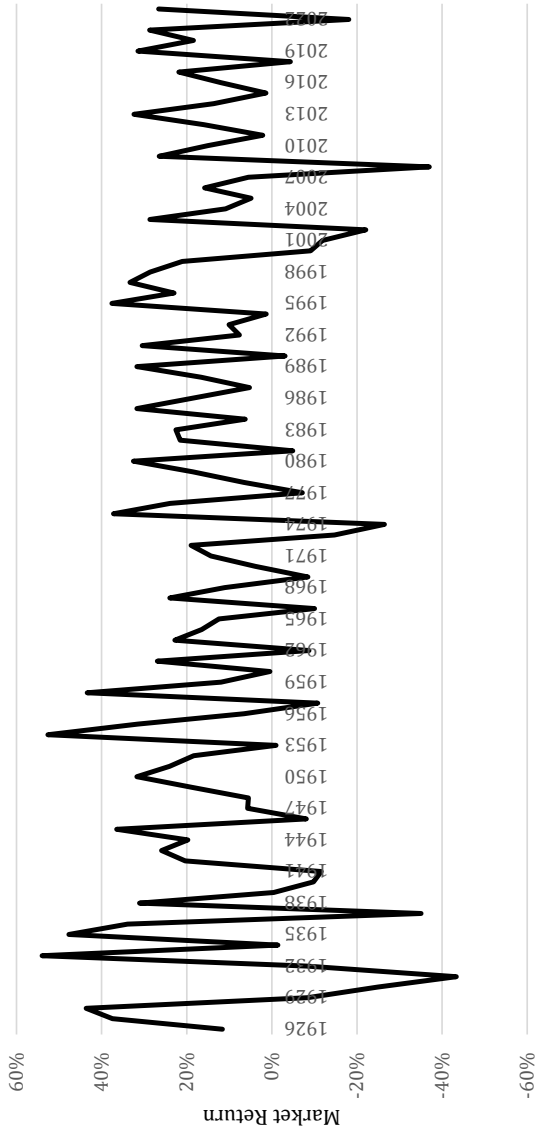
	Common Stock	Retained Earnings	Book Value	Market Price	Market/ Book Value	Earnings Per Share	Dividends Per Share	Payout Ratio
1	$ 24.31		$ 24.31	$ 25.00	1.0283	$ 2.61	$ 0.88	33.48%
2	$ 24.31	$ 1.74	$ 26.05	$ 26.79	1.0283	$ 2.80	$ 0.94	33.48%
3	$ 24.31	$ 3.60	$ 27.91	$ 28.70	1.0283	$ 3.00	$ 1.00	33.48%
4	$ 24.31	$ 5.60	$ 29.91	$ 30.76	1.0283	$ 3.22	$ 1.08	33.48%
5	$ 24.31	$ 7.74	$ 32.05	$ 32.96	1.0283	$ 3.45	$ 1.15	33.48%
6	$ 24.31	$ 10.03	$ 34.34	$ 35.31	1.0283	$ 3.69	$ 1.24	33.48%
7	$ 24.31	$ 12.48	$ 36.80	$ 37.84	1.0283	$ 3.96	$ 1.32	33.48%
8	$ 24.31	$ 15.12	$ 39.43	$ 40.54	1.0283	$ 4.24	$ 1.42	33.48%
9	$ 24.31	$ 17.94	$ 42.25	$ 43.44	1.0283	$ 4.54	$ 1.52	33.48%
10	$ 24.31	$ 20.96	$ 45.27	$ 46.55	1.0283	$ 4.87	$ 1.63	33.48%
	Growth Rate		7.15%	7.15%		7.15%	7.15%	

Return on Equity	10.75%
Flotation Costs	2.75%
Market Value	$ 25.00
Dividend Yield	3.50%
Growth Rate	7.25%
Adjusted ROE	10.85%
Flotation Cost Recovery:	**Yes**
DCF Estimate	**10.75%**

	Common Stock	Retained Earnings	Book Value	Market Price	Market/ Book Value	Earnings Per Share	Dividends Per Share	Payout Ratio
1	$ 24.31		$ 24.31	$ 25.00	1.0283	$ 2.64	$ 0.88	33.17%
2	$ 24.31	$ 1.76	$ 26.08	$ 26.81	1.0283	$ 2.83	$ 0.94	33.17%
3	$ 24.31	$ 3.65	$ 27.97	$ 28.76	1.0283	$ 3.03	$ 1.01	33.17%
4	$ 24.31	$ 5.68	$ 29.99	$ 30.84	1.0283	$ 3.25	$ 1.08	33.17%
5	$ 24.31	$ 7.86	$ 32.17	$ 33.08	1.0283	$ 3.49	$ 1.16	33.17%
6	$ 24.31	$ 10.19	$ 34.50	$ 35.48	1.0283	$ 3.74	$ 1.24	33.17%
7	$ 24.31	$ 12.69	$ 37.00	$ 38.05	1.0283	$ 4.01	$ 1.33	33.17%
8	$ 24.31	$ 15.37	$ 39.68	$ 40.81	1.0283	$ 4.31	$ 1.43	33.17%
9	$ 24.31	$ 18.25	$ 42.56	$ 43.76	1.0283	$ 4.62	$ 1.53	33.17%
10	$ 24.31	$ 21.33	$ 45.65	$ 46.94	1.0283	$ 4.95	$ 1.64	33.17%
	Growth Rate		7.25%	7.25%		7.25%	7.25%	

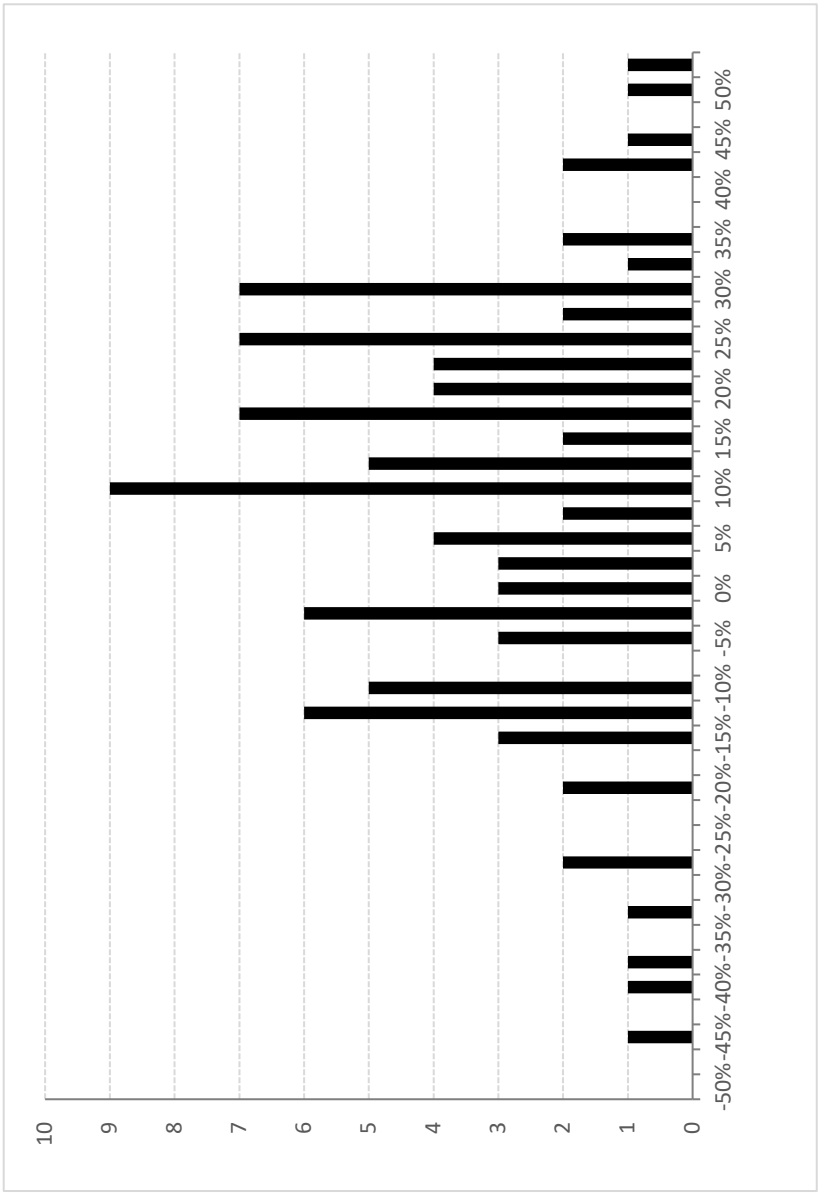
Tampa Electric Company, Inc.

U.S. Large Company Stock Returns 1926 - 2023



Source: Kroll, SBBI 2023 Yearbook: Stocks, Bonds, Bills, and Inflation 1926 - 2022, Appendix A; Kroll Cost of Capital Navigator

Tampa Electric Company, Inc.
Frequency Distribution of Observed Market Returns, 1926 - 2023



Source: Kroll, 2023 SBBI, Appendix A-1, A-7; Cost of Capital Navigator

Tampa Electric Company, Inc.
Frequency of Market Returns (1926 - 2023)

Year	Large Company Stocks Total Returns Jan-Dec*	Long-Term Government Bond Income Returns Jan-Dec*	MRP Jan-Dec*
1926	11.62%	3.73%	7.89%
1927	37.49%	3.41%	34.08%
1928	43.61%	3.22%	40.39%
1929	-8.42%	3.47%	-11.89%
1930	-24.90%	3.32%	-28.22%
1931	-43.34%	3.33%	-46.67%
1932	-8.19%	3.69%	-11.88%
1933	53.99%	3.12%	50.87%
1934	-1.44%	3.18%	-4.62%
1935	47.67%	2.81%	44.86%
1936	33.92%	2.77%	31.15%
1937	-35.03%	2.66%	-37.69%
1938	31.12%	2.64%	28.48%
1939	-0.41%	2.40%	-2.81%
1940	-9.78%	2.23%	-12.01%
1941	-11.59%	1.94%	-13.53%
1942	20.34%	2.46%	17.88%
1943	25.90%	2.44%	23.46%
1944	19.75%	2.46%	17.29%
1945	36.44%	2.34%	34.10%
1946	-8.07%	2.04%	-10.11%
1947	5.71%	2.13%	3.58%
1948	5.50%	2.40%	3.10%
1949	18.79%	2.25%	16.54%
1950	31.71%	2.12%	29.59%
1951	24.02%	2.38%	21.64%
1952	18.37%	2.66%	15.71%
1953	-0.99%	2.84%	-3.83%
1954	52.62%	2.79%	49.83%
1955	31.56%	2.75%	28.81%
1956	6.56%	2.99%	3.57%
1957	-10.78%	3.44%	-14.22%
1958	43.36%	3.27%	40.09%
1959	11.96%	4.01%	7.95%
1960	0.47%	4.26%	-3.79%
1961	26.89%	3.83%	23.06%
1962	-8.73%	4.00%	-12.73%
1963	22.80%	3.89%	18.91%
1964	16.48%	4.15%	12.33%
1965	12.45%	4.19%	8.26%
1966	-10.06%	4.49%	-14.55%
1967	23.98%	4.59%	19.39%
1968	11.06%	5.50%	5.56%
1969	-8.50%	5.95%	-14.45%
1970	3.86%	6.74%	-2.88%
1971	14.30%	6.32%	7.98%
1972	19.00%	5.87%	13.13%
1973	-14.69%	6.51%	-21.20%
1974	-26.47%	7.27%	-33.74%
1975	37.23%	7.99%	29.24%
1976	23.93%	7.89%	16.04%
1977	-7.16%	7.14%	-14.30%
1978	6.57%	7.90%	-1.33%
1979	18.61%	8.86%	9.75%
1980	32.50%	9.97%	22.53%
1981	-4.92%	11.55%	-16.47%
1982	21.55%	13.50%	8.05%
1983	22.56%	10.38%	12.18%
1984	6.27%	11.74%	-5.47%
1985	31.73%	11.25%	20.48%
1986	18.67%	8.98%	9.69%
1987	5.25%	7.92%	-2.67%
1988	16.61%	8.97%	7.64%
1989	31.69%	8.81%	22.88%
1990	-3.10%	8.19%	-11.29%
1991	30.47%	8.22%	22.25%
1992	7.62%	7.26%	0.36%
1993	10.08%	7.17%	2.91%
1994	1.32%	6.59%	-5.27%
1995	37.58%	7.60%	29.98%
1996	22.96%	6.18%	16.78%
1997	33.36%	6.64%	26.72%
1998	28.58%	5.83%	22.75%
1999	21.04%	5.57%	15.47%
2000	-9.10%	6.50%	-15.60%
2001	-11.89%	5.53%	-17.42%
2002	-22.10%	5.59%	-27.69%
2003	28.68%	4.80%	23.88%
2004	10.88%	5.02%	5.86%
2005	4.91%	4.69%	0.22%
2006	15.79%	4.68%	11.11%
2007	5.49%	4.86%	0.63%
2008	-37.00%	4.45%	-41.45%
2009	26.46%	3.47%	22.99%
2010	15.06%	4.25%	10.81%
2011	2.11%	3.82%	-1.71%
2012	16.00%	2.47%	13.53%
2013	32.39%	2.90%	29.49%
2014	13.69%	3.41%	10.28%
2015	1.38%	2.47%	-1.09%
2016	11.96%	2.30%	9.66%
2017	21.83%	2.67%	19.16%
2018	-4.38%	2.82%	-7.20%
2019	31.49%	2.55%	28.94%
2020	18.40%	1.53%	16.87%
2021	28.71%	1.73%	26.98%
2022	-18.11%	2.61%	-20.72%
2023	26.61%	4.17%	22.44%
Average	12.17%	4.84%	7.32%
Std. Dev.	19.73%	2.62%	19.85%

Source: Kroll, 2023 SBBI, Appendix A-1, A-7; Cost of Capital Navigator

MRP

Bin	Frequency	Cumulative %
-50.00%	0	0.0%
-47.50%	0	0.0%
-45.00%	1	1.0%
-42.50%	0	1.0%
-40.00%	1	2.0%
-37.50%	1	3.1%
-35.00%	0	3.1%
-32.50%	1	4.1%
-30.00%	0	4.1%
-27.50%	2	6.1%
-25.00%	0	6.1%
-22.50%	0	6.1%
-20.00%	2	8.2%
-17.50%	0	8.2%
-15.00%	3	11.2%
-12.50%	6	17.3%
-10.00%	5	22.4%
-7.50%	0	22.4%
-5.00%	3	25.5%
-2.50%	6	31.6%
0.00%	3	34.7%
2.50%	3	37.8%
5.00%	4	41.8%
7.50%	2	43.9%
10.00%	9	53.1%
12.50%	5	58.2%
15.00%	2	60.2%
17.50%	7	67.3%
20.00%	4	71.4%
22.50%	4	75.5%
25.00%	7	82.7%
27.50%	2	84.7%
30.00%	7	91.8%
32.50%	1	92.9%
35.00%	2	94.9%
37.50%	0	94.9%
40.00%	0	94.9%
42.50%	2	96.9%
45.00%	1	98.0%
47.50%	0	98.0%
50.00%	1	99.0%
51.00%	1	100.0%
Count:	98	

Market Returns

Bin	Frequency	Cumulative %
-50.00%	0	0.0%
-47.50%	0	0.0%
-45.00%	0	0.0%
-42.50%	1	1.0%
-40.00%	0	1.0%
-37.50%	0	1.0%
-35.00%	2	3.1%
-32.50%	0	3.1%
-30.00%	0	3.1%
-27.50%	0	3.1%
-25.00%	1	4.1%
-22.50%	1	5.1%
-20.00%	1	6.1%
-17.50%	1	7.1%
-15.00%	0	7.1%
-12.50%	1	8.2%
-10.00%	4	12.2%
-7.50%	7	19.4%
-5.00%	1	20.4%
-2.50%	3	23.5%
0.00%	3	26.5%
2.50%	4	30.6%
5.00%	2	32.7%
7.50%	7	39.8%
10.00%	1	40.8%
12.50%	7	48.0%
15.00%	2	50.0%
17.50%	5	55.1%
20.00%	7	62.2%
22.50%	4	66.3%
25.00%	6	72.4%
27.50%	4	76.5%
30.00%	3	79.6%
32.50%	9	88.8%
35.00%	2	90.8%
37.50%	3	93.9%
40.00%	1	94.9%
42.50%	0	94.9%
45.00%	2	96.9%
47.50%	0	96.9%
50.00%	1	98.0%
52.50%	0	98.0%
55.00%	2	100.0%
57.50%	0	100.0%
60.00%	0	100.0%
62.50%	0	100.0%
	98	

	MRP from Direct	Rank
With PRPM	10.02%	53.00%
Without PRPM	9.93%	52.80%

	Average Return from Direct	Rank
	14.17%	49.20%
	14.08%	49.10%

	MRP from Rebuttal	Rank
With PRPM	8.93%	49.90%
Without PRPM	8.82%	49.90%

	Average Return from Rebuttal	Rank
	13.34%	48.10%
	13.23%	48.10%

Tampa Electric Company, Inc.
Historical Market Returns (2014 - 2023)

Year	Return
2014	13.69%
2015	1.38%
2016	11.96%
2017	21.83%
2018	-4.38%
2019	31.49%
2020	18.40%
2021	28.71%
2022	-18.11%
2023	26.61%
Average 2014 - 2023	13.16%
Years over 12.03%	6

Source: Kroll, 2023 SBBI, Appendix A-1, A-7; Cost of Capital Navigator

Tampa Electric Company, Inc.
Safety Rankings Analysis Utility Proxy Group & Non-Regulated Proxy Group

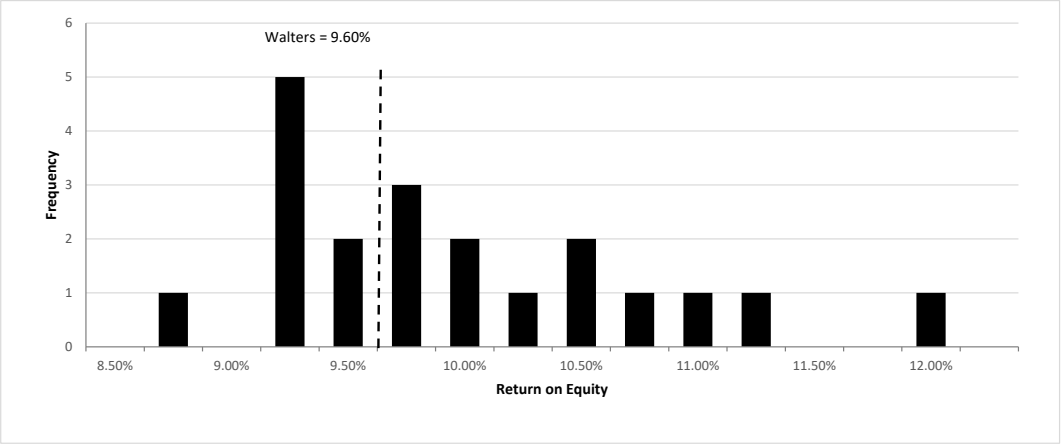
Utility Proxy Group	Safety
Average	2.20
Median	2.00

Non-Price Regulated Proxy Group	Safety
Average	1.76
Median	2.00

Ticker	Proxy Group of Fifteen Electric Companies	Safety
LNT	Alliant Energy Corporation	2
AEE	Ameren Corporation	1
AEP	American Electric Power Corporation	1
DUK	Duke Energy Corporation	2
EIX	Edison International	3
ETR	Entergy Corporation	2
EVRG	Evergy, Inc.	2
IDA	IDACORP, Inc.	1
NWE	NorthWestern Corporation	3
OGE	OGE Energy Corporation	3
PNM	PNM Resources, Inc.	3
PNW	Pinnacle West Capital Corporation	3
POR	Portland General Electric Company	3
SO	Southern Company	2
XEL	Xcel Energy Inc.	2

Ticker	Proxy Group of Fourty-Five Non-Price Regulated Companies	Safety
MMM	3M Company	2
ABT	Abbott Laboratories	1
ABBV	AbbVie Inc.	2
A	Agilent Technologies, Inc.	2
APD	Air Products and Chemicals, Inc.	1
ALL	Allstate Corporation	1
MO	Altria Group, Inc.	2
ADI	Analog Devices, Inc.	2
AIZ	Assurant, Inc.	2
BRC	Brady Corporation	2
BR	Broadridge Financial Solutions, Inc.	2
BFB	Brown-Forman Corporation (BF-B)	1
CACI	CACI International Inc	3
CSCO	Cisco Systems, Inc.	1
DHR	Danaher Corporation	2
DLB	Dolby Laboratories, Inc.	2
EXPD	Expeditors International	1
FDS	FactSet Research Systems Inc.	2
FAST	Fastenal Company	1
FSS	Federal Signal Corporation	2
FELE	Franklin Electric Co., Inc.	2
GATX	GATX Corporation	2
HD	Home Depot, Inc.	1
IOSP	Innospec Inc.	2
IBM	International Business Machines Corporation	2
JNPR	Juniper Networks, Inc.	2
LMT	Lockheed Martin Corporation	1
MSFT	Microsoft Corporation	1
MSA	MSA Safety Incorporated	2
MSM	MSC Industrial Direct Co., Inc.	2
ORLY	O'Reilly Automotive, Inc.	2
OSIS	OSI Systems, Inc.	2
PKG	Packaging Corporation of America	2
PM	Philip Morris International Inc.	2
SIGI	Selective Insurance Group, Inc.	2
SXT	Sensient Technologies Corporation	2
SHW	Sherwin-Williams Company	2
AOS	Smith Corporation (A.O.)	2
TXN	Texas Instruments Incorporated	1
TMO	Thermo Fisher Scientific Inc.	1
UNF	UniFirst Corporation	2
VRSN	VeriSign, Inc.	2
VRSK	Verisk Analytics, Inc.	2
WTS	Watts Water Technologies, Inc.	2
ZTS	Zoetis Inc.	2

Tampa Electric Company, Inc.
Histogram of Mr. Walters' Model Results



	Frequency	Percentile	ROE	Rank
# below 9.60%:	6	30%	9.60%	32.70%
# above 10%:	9	45%		

CAPM		**Plot Number**	**ROE**	**Walters ROE**
Current Beta & Kroll MRP	9.68%	1	8.80%	9.60%
Current Beta & RP Derived MRP	11.02%	2	9.28%	9.60%
Current Beta & FERC S&P MRP	12.03%	3	9.29%	9.60%
Historical Beta & Kroll MRP	8.80%	4	9.31%	9.60%
Historical Beta & RP Derived MRP	9.83%	5	9.35%	9.60%
Historical Beta & FERC S&P MRP	10.66%	6	9.37%	9.60%
MI Beta & Kroll MRP	9.29%	7	9.63%	9.60%
MI Beta & RP Derived MRP	10.50%	8	9.68%	9.60%
MI Beta & FERC S&P MRP	11.43%	9	9.83%	9.60%
DCF		10	9.87%	9.60%
Constant Growth DCF Analyst EPS Average	10.98%	11	9.93%	9.60%
Constant Growth DCF Analyst EPS Median	10.50%	12	10.11%	9.60%
Constant Growth Sustainable Growth Rate DCF Average	9.37%	13	10.16%	9.60%
Constant Growth Sustainable Growth Rate DCF Median	9.28%	14	10.50%	9.60%
Multi-Stage Growth DCF Average	9.35%	15	10.50%	9.60%
Multi-Stage Growth DCF Median	9.31%	16	10.66%	9.60%
Risk Premium		17	10.98%	9.60%
Average Equity RP + Projected Treasury	9.63%	18	11.02%	9.60%
Average rolling 5-yr avg. RP + 13 week A-Utility Bond	9.93%	19	11.43%	9.60%
Average rolling 5-yr avg. RP + 13 week Baa-Utility Bond	10.16%	20	12.03%	9.60%
Average rolling 5-yr avg. RP + 26 week A-Utility Bond	9.87%			
Average rolling 5-yr avg. RP + 26 week Baa-Utility Bond	10.11%			

Bin	*Frequency*
8.50%	0
8.75%	1
9.00%	0
9.25%	5
9.50%	2
9.75%	3
10.00%	2
10.25%	1
10.50%	2
10.75%	1
11.00%	1
11.25%	1
11.50%	0
11.75%	0
12.00%	1
12.25%	0
Total	20

Source: Mr. Walters' Workpapers

Tampa Electric Company, Inc.
Electric Rate Case Common Equity Ratios Range
from 2016 - 2024

Year	Min	Max
2016	28.46	57.16
2017	31.62	58.18
2018	35.73	57.10
2019	33.71	57.02
2020	34.82	56.83
2021	37.75	55.00
2022	37.77	58.22
2023	38.57	60.70
2024	38.39	53.72

Company requested equity ratio: 54.00%

Source: S&P Capital IQ - Regulatory Research Associates

Tampa Electric Company, Inc.
Gross Domestic Product by Industry
from 1947 - 2023

Industry	1947	2023	CAGR
Agriculture, forestry, fishing, and hunting	19.9	251.7	3.40%
Mining	5.8	380.9	5.66%
Utilities	3.5	434.3	**6.55%**
Construction	8.9	1,203.8	**6.67%**
Manufacturing	63.4	2,804.7	5.11%
Wholesale trade	15.6	1,613.7	6.29%
Retail trade	23.2	1,738.5	5.84%
Transportation and warehousing	14.1	970.5	5.73%
Information	7.7	1,475.1	**7.16%**
Finance, insurance, real estate, rental, and leasing	25.8	5,656.5	**7.35%**
Professional and business services	8.2	3,543.9	**8.31%**
Educational services, health care, and social assistance	4.6	2,351.6	**8.55%**
Arts, entertainment, recreation, accommodation, and food services	8.0	1,231.3	**6.85%**
Other services, except government	7.5	597.0	5.93%
Government	33.5	3,107.4	6.14%
Total Gross domestic product	249.7	27,360.9	6.37%

Source: Bureau of Economic Analysis

Industry	Gross Domestic Product	1947-2023 CAGR	Beginning Year	Ending Year	Gross Domestic Product In Ending Year	% of Total
Agriculture, forestry, fishing, and hunting	251.7	3.40%	1	267	2.E+06	
Mining	380.9	5.66%	1	267	9.E+08	
Utilities	434.3	6.55%	1	267	1.E+10	
Construction	1,203.8	6.67%	1	267	4.E+10	
Manufacturing	2,804.7	5.11%	1	267	2.E+09	
Wholesale trade	1,613.7	6.29%	1	267	2.E+10	
Retail trade	1,738.5	5.84%	1	267	7.E+09	
Transportation and warehousing	970.5	5.73%	1	267	3.E+09	
Information	1,475.1	7.16%	1	267	2.E+11	
Finance, insurance, real estate, rental, and leasing	5,656.5	7.35%	1	267	9.E+11	
Professional and business services	3,543.9	8.31%	1	267	6.E+12	
Educational services, health care, and social assistance	2,351.6	8.55%	1	267	8.E+12	50.01%
Arts, entertainment, recreation, accommodation, and food services	1,231.3	6.85%	1	267	6.E+10	
Other services, except government	597.0	5.93%	1	267	3.E+09	
Government	3,107.4	6.14%	1	267	3.E+10	
Total Gross domestic product	27,360.9				2.E+13	

Industry	Gross Domestic Product	1947-2023 CAGR	Beginning Year	Ending Year	Gross Domestic Product In Ending Year	% of Total
Agriculture, forestry, fishing, and hunting	251.7	3.40%	1	6,752	2.E+100	
Mining	380.9	5.66%	1	6,752	1.E+164	
Utilities	434.3	6.55%	1	6,752	4.E+188	
Construction	1,203.8	6.67%	1	6,752	3.E+192	
Manufacturing	2,804.7	5.11%	1	6,752	5.E+149	
Wholesale trade	1,613.7	6.29%	1	6,752	2.E+182	
Retail trade	1,738.5	5.84%	1	6,752	6.E+169	
Transportation and warehousing	970.5	5.73%	1	6,752	2.E+166	
Information	1,475.1	7.16%	1	6,752	9.E+205	
Finance, insurance, real estate, rental, and leasing	5,656.5	7.35%	1	6,752	5.E+211	
Professional and business services	3,543.9	8.31%	1	6,752	5.E+237	
Educational services, health care, and social assistance	2,351.6	8.55%	1	6,752	1.E+244	100.00%
Arts, entertainment, recreation, accommodation, and food services	1,231.3	6.85%	1	6,752	3.E+197	
Other services, except government	597.0	5.93%	1	6,752	5.E+171	
Government	3,107.4	6.14%	1	6,752	2.E+178	
Total Gross domestic product	27,360.9				1.E+244	

Tampa Electric Company, Inc.
Market-to-Book Ratios, Earnings / Book Ratios and
Inflation for Standard & Poor's Industrial Index and
the Standard & Poor's 500 Composite Index
from 1947 through 2023

	Market-to-Book Ratio (1)		Earnings / Book Common Equity Ratio (2)			
Year	S&P Industrial Index (3)	S&P 500 Composite Index (3)	S&P Industrial Index (3)	S&P 500 Composite Index (3)	Inflation (4)	Earnings / Book Common Equity Ratio - Net of Inflation
1947	1.23	NA	13.0 %	NA	9.0 %	4.0 % NA
1948	1.13	NA	17.3	NA	2.7	14.6 NA
1949	1.00	NA	16.3	NA	(1.8)	18.1 NA
1950	1.16	NA	18.3	NA	5.8	12.5 NA
1951	1.27	NA	14.4	NA	6.0	8.4 NA
1952	1.29	NA	12.7	NA	0.9	11.8 NA
1953	1.21	NA	12.7	NA	0.6	12.1 NA
1954	1.45	NA	13.5	NA	(0.4)	13.9 NA
1955	1.81	NA	16.0	NA	0.4	15.6 NA
1956	1.92	NA	13.7	NA	2.8	10.9 NA
1957	1.71	NA	12.5	NA	3.0	9.5 NA
1958	1.70	NA	9.8	NA	1.8	8.0 NA
1959	1.94	NA	11.2	NA	1.5	9.7 NA
1960	1.82	NA	10.3	NA	1.4	8.9 NA
1961	2.01	NA	9.8	NA	0.7	9.1 NA
1962	1.83	NA	10.9	NA	1.2	9.7 NA
1963	1.94	NA	11.4	NA	1.6	9.8 NA
1964	2.18	NA	12.3	NA	1.2	11.1 NA
1965	2.21	NA	13.2	NA	1.9	11.3 NA
1966	2.00	NA	13.2	NA	3.4	9.8 NA
1967	2.05	NA	12.1	NA	3.3	8.8 NA
1968	2.17	NA	12.6	NA	4.7	7.9 NA
1969	2.10	NA	12.1	NA	5.9	6.2 NA
1970	1.71	NA	10.4	NA	5.6	4.8 NA
1971	1.99	NA	11.2	NA	3.3	7.9 NA
1972	2.16	NA	12.0	NA	3.4	8.6 NA
1973	1.96	NA	14.6	NA	8.9	5.7 NA
1974	1.39	NA	14.8	NA	12.1	2.7 NA
1975	1.34	NA	12.3	NA	7.1	5.2 NA
1976	1.51	NA	14.5	NA	5.0	9.5 NA
1977	1.38	NA	14.6	NA	6.7	7.9 NA
1978	1.25	NA	15.3	NA	9.0	6.3 NA
1979	1.23	NA	17.2	NA	13.3	3.9 NA
1980	1.31	NA	15.6	NA	12.4	3.2 NA
1981	1.24	NA	14.9	NA	8.9	6.0 NA
1982	1.17	NA	11.3	NA	3.8	7.5 NA
1983	1.45	NA	12.2	NA	3.8	8.4 NA
1984	1.46	NA	14.6	NA	4.0	10.6 NA
1985	1.67	NA	12.2	NA	3.8	8.4 NA
1986	2.02	NA	11.5	NA	1.2	10.3 NA
1987	2.50	NA	15.7	NA	4.3	11.4 NA
1988	2.13	NA	19.0	NA	4.4	14.6 NA
1989	2.56	NA	18.5	NA	4.6	13.9 NA
1990	2.63	NA	16.3	NA	6.3	10.0 NA
1991	2.77	NA	10.8	NA	3.0	7.8 NA
1992	3.29	NA	13.0	NA	3.0	10.0 NA
1993	3.72	NA	15.7	NA	2.8	12.9 NA
1994	3.73	NA	23.0	NA	2.6	20.4 NA
1995	4.06	2.64	22.9	16.0	2.5	20.4 13.5
1996	4.79	3.00	24.8	16.8	3.4	21.4 13.4
1997	5.88	3.53	24.6	16.3	1.7	22.9 14.6
1998	7.13	4.16	21.3	14.5	1.6	19.7 12.9
1999	8.27	4.76	25.2	17.1	2.7	22.5 14.4
2000	7.51	4.51	23.9	16.2	3.4	20.5 12.8
2001	NA	3.50	NA	7.4	1.6	NA 5.8
2002	NA	2.93	NA	8.3	2.5	NA 5.8
2003	NA	2.78	NA	14.1	2.0	NA 12.1
2004	NA	2.91	NA	15.3	3.3	NA 12.0
2005	NA	2.78	NA	16.4	3.3	NA 13.1
2006	NA	2.77	NA	17.0	2.5	NA 14.5
2007	NA	2.84	NA	12.8	4.1	NA 8.7
2008	NA	2.24	NA	3.0	(0.0)	NA 3.0
2009	NA	1.87	NA	10.6	2.8	NA 7.8
2010	NA	2.09	NA	14.2	1.4	NA 12.8
2011	NA	2.07	NA	14.6	3.1	NA 11.5
2012	NA	2.14	NA	13.5	1.8	NA 11.8
2013	NA	2.39	NA	14.5	1.5	NA 13.0
2014	NA	2.66	NA	14.2	0.7	NA 13.5
2015	NA	2.73	NA	11.8	0.6	NA 11.2
2016	NA	2.72	NA	12.5	2.1	NA 10.5
2017	NA	3.10	NA	13.8	2.1	NA 11.6
2018	NA	3.15	NA	15.8	2.0	NA 13.8
2019	NA	3.22	NA	15.8	2.3	NA 13.5
2020	NA	3.25	NA	10.2	1.3	NA 8.9
2021	NA	4.39	NA	20.4	7.2	NA 13.3
2022	NA	4.12	NA	17.00	6.4	NA 10.6
2023	NA	4.03	NA	18.06	3.3	NA 14.8

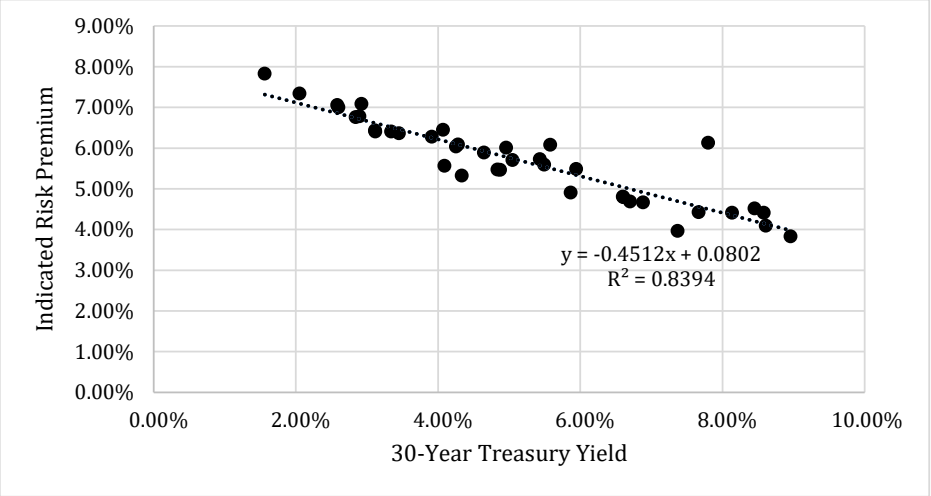
Notes:

(1) Market-to-Book Ratio equals average of the high and low market price for the year divided by the average book value.
(2) Earnings/Book equals earnings per share for the year divided by the average book
(3) On January 2, 2001 Standard & Poor's released Global Industry Classification Standard (GICS) price indexes for all Standard & Poor's U.S. indexes. As a result, all S&P Indexes have been calculated with a common base of 100 at a start date of December 31, 1994. Also, the GICS industrial sector is not comparable to the former S&P Industrial Index and data for the former S&P Industrial Index was discontinued.
(4) As measured by the Consumer Price Index (CPI).

Sources of Information:

Standard & Poor's Security Price Index Record, 2000 Edition, p. 40.
Standard & Poor's Statistical Service, Current Statistics, March 2013, p. 30.
Kroll SBBI 2023 Yearbook Appendix A Tables, Stocks, Bonds, Bills, and Inflation | 1926-2022.
finance.yahoo.com
Bloomberg Professional Services

Tampa Electric Company, Inc.
Mr. Walters' Corrected Risk Premium Model - Treasury Bond



Constant	Slope	Prospective 30-Year Treasury Yield (1)	Risk Premium	Return on Equity
8.02%	-45.12%	4.31%	6.07%	10.38%

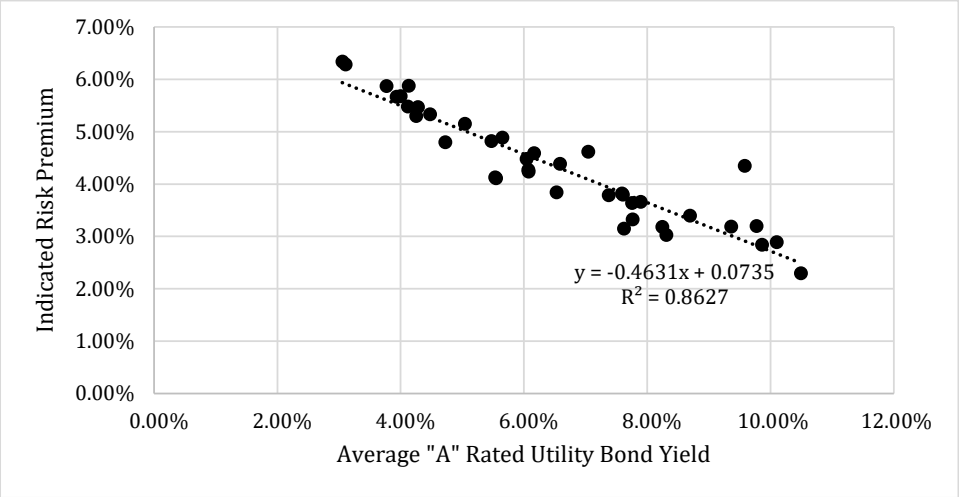
Notes:

(1) For reasons explained in the direct and rebuttal testimonies, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. The projection of the risk-free rate is illustrated below:

Second Quarter 2024	4.60	%
Third Quarter 2024	4.50	
Fourth Quarter 2024	4.40	
First Quarter 2025	4.30	
Second Quarter 2025	4.20	
Third Quarter 2025	4.20	
2025-2029	4.10	
2030-2034	4.20	
	4.31	%

Sources: CCW-10; *Blue Chip Financial Forecasts* , December 1, 2023, and May 1, 2024.

Tampa Electric Company, Inc.
Mr. Walters' Corrected Risk Premium Model - A Utility Bond



Constant	Slope	Prospective A Utility Yield (1)	Risk Premium	Return on Equity
7.35%	-46.31%	5.45%	4.83%	10.28%

Notes:

(1) The appropriate Prospective A Utility Yield takes the average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds from Bloomberg Professional Service. The spread is added to consensus forecast of Moody's Aaa Rated Corporate bonds from *Blue Chip Financial Forecasts.*

Sources: CCW-11; *Blue Chip Financial Forecasts* , December 1, 2023, and May 1, 2024; Bloomberg Professional.

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.			
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.05	%
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds	0.40	(2)
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	5.45	%

Notes: (1) Consensus forecast of Moody's Aaa Rated Corporate

Second Quarter 2024	5.30	%
Third Quarter 2024	5.20	
Fourth Quarter 2024	5.10	
First Quarter 2025	5.00	
Second Quarter 2025	5.00	
Third Quarter 2025	4.90	
2025-2029	4.90	
2030-2034	5.00	
	5.05	%

Notes: (2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds.

Tampa Electric Company, Inc.
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1] Aaa Rated	[2] A2 Rated
Feb-2024	5.03 %	5.42 %
Mar-2024	5.01	5.43
Apr-2024	5.28	5.67
Average	5.11 %	5.51 %

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:

0.40 % (1)

Notes:
(1) Column [2] - Column [1].

Source of Information:
Bloomberg Professional Service

Tampa Electric Company, Inc.
Mr. Walters' Market DCF Exclusions Summary

	Number of Companies Removed	Percent of S&P 500	Market Capitalization ($millions) of Companies Removed	Percent of S&P 500
Non-Dividend Paying Companies	99	19.80%	7,572,616.20	16.34%
Companies Below 0% Growth	58	11.60%	3,007,525.90	6.49%
Companies Above 20% Percent Growth	62	12.40%	9,606,430.60	20.72%
Non-Paying Dividend Companies and Companies with Growth less than 0% or above 20%	34	6.80%	4,452,302.40	9.60%
Non-Paying Dividend Companies or Companies with Growth less than 0% or above 20%	190	38.00%	15,917,481.90	34.34%

Source: Mr. Walters' Exhibit CCW-15.

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate Through Use
Corrected Mr. Walters' CAPM

Risk-Free Rate (1)	4.31	%
Market Risk Premium (2)	12.59	
Beta (3)	0.92	
CAPM	15.91	%
ECAPM	16.16	%

Notes:
(1) Blue Chip Financial Forecasts, December 1, 2023, and May 1, 2024
(2) Mr. Walters' Workpapers; S&P 500 DCF (no company exclusions)
(3) As-filed from Exhibit CCW-15, page 1.

Risk-Free Rate (1)

Second Quarter 2024	4.60	%
Third Quarter 2024	4.50	
Fourth Quarter 2024	4.40	
First Quarter 2025	4.30	
Second Quarter 2025	4.20	
Third Quarter 2025	4.20	
2025-2029	4.10	
2030-2034	4.20	
	4.31	%

Market Risk Premium (2)

Expected Market Return	16.90	%
Less - Risk Free Rate	4.31	
Market Risk Premium:	12.59	%

Tampa Electric Company, Inc.

Rate Adjustment Clauses Allowed For Electric Proxy Group Subsidiaries

Company	Parent	Elec/Gas	Province / State / Country	Fuel / Purchased Power	Energy Efficiency [1]	Environmental [2]	Storm Recovery	Forward Test Year Allowed in Jurisdiction [3]
Ameren Illinois Company	AEE	Electric	Illinois	✓	✓	✓	✓	✓
Ameren Illinois Company	AEE	Gas	Illinois	✓	✓	✓	✓	✓
Union Electric Company	AEE	Electric	Missouri	✓	✓	✓		K
Southwestern Electric Power Company	AEP	Electric	Arkansas	✓	✓	✓	✓	K
Indiana Michigan Power Company	AEP	Electric	Indiana	✓	✓	✓		K
Kentucky Power Company	AEP	Electric	Kentucky	✓	✓	✓		✓
Southwestern Electric Power Company	AEP	Electric	Louisiana	✓	✓	✓	✓	✓
Indiana Michigan Power Company	AEP	Electric	Michigan	✓	✓	✓		✓
Ohio Power Company	AEP	Electric	Ohio		✓		✓	✓
Public Service Company of Oklahoma	AEP	Electric	Oklahoma	✓	✓	✓	✓	K
Kingsport Power Company	AEP	Electric	Tennessee	✓			✓	✓
AEP Texas Inc.	AEP	Electric	Texas		✓	✓		
Southwestern Electric Power Company	AEP	Electric	Texas	✓	✓			
Appalachian Power Company	AEP	Electric	Virginia	✓	✓	✓		✓
Appalachian Power (Wheeling Power)	AEP	Electric	West Virginia	✓	✓			K
Duke Energy Florida, LLC	DUK	Electric	Florida	✓	✓	✓	✓	✓
Duke Energy Indiana, LLC	DUK	Electric	Indiana	✓	✓	✓		K
Duke Energy Kentucky, Inc.	DUK	Electric	Kentucky	✓	✓	✓		✓
Duke Energy Kentucky, Inc.	DUK	Gas	Kentucky	✓	✓			✓
Duke Energy Carolinas, LLC	DUK	Electric	North Carolina	✓	✓	✓		
Duke Energy Progress, LLC	DUK	Electric	North Carolina	✓	✓	✓		
Piedmont Natural Gas, Inc.	DUK	Gas	North Carolina	✓	✓			
Duke Energy Ohio, Inc.	DUK	Electric	Ohio		✓		✓	✓
Duke Energy Ohio, Inc.	DUK	Gas	Ohio	✓		✓		✓
Duke Energy Carolinas, LLC	DUK	Electric	South Carolina	✓	✓	✓		K
Duke Energy Progress, LLC	DUK	Electric	South Carolina	✓	✓	✓		K
Piedmont Natural Gas, Inc.	DUK	Gas	South Carolina	✓	✓			K
Piedmont Natural Gas, Inc.	DUK	Gas	Tennessee	✓				✓
Southern California Edison Company	EIX	Electric	California	✓	✓	✓		✓
Entergy Arkansas LLC	ETR	Electric	Arkansas	✓	✓	✓	✓	K
Entergy Louisiana LLC	ETR	Electric	Louisiana	✓	✓	✓	✓	✓
Entergy Mississippi LLC	ETR	Electric	Mississippi	✓	✓			K
Entergy New Orleans LLC	ETR	Electric	New Orleans	✓	✓	✓		✓
Entergy New Orleans LLC	ETR	Gas	New Orleans	✓				✓
Entergy Texas Inc.	ETR	Electric	Texas	✓	✓	✓	✓	
Evergy Kansas Central	EVRG	Electric	Kansas	✓	✓	✓		
Evergy Kansas Metro	EVRG	Electric	Kansas	✓	✓	✓		
Evergy Missouri Metro	EVRG	Electric	Missouri	✓	✓	✓		K
Evergy Missouri West	EVRG	Electric	Missouri	✓	✓	✓		K
Idaho Power Co.	IDA	Electric	Idaho	✓	✓	✓		✓
Idaho Power Co.	IDA	Electric	Oregon	✓	✓	✓		✓
Interstate Power and Light Company	LNT	Electric	Iowa	✓	✓			K
Interstate Power and Light Company	LNT	Gas	Iowa	✓	✓			K
Wisconsin Power and Light Company	LNT	Gas	Wisconsin	✓				✓
Wisconsin Power and Light Company	LNT	Electric	Wisconsin	✓	✓			✓
NorthWestern Energy	NWE	Electric	Montana	✓	✓			K
NorthWestern Energy	NWE	Gas	Montana	✓	✓			K
NorthWestern Energy	NWE	Gas	Nebraska	✓				✓
NorthWestern Energy	NWE	Gas	South Dakota	✓				K
NorthWestern Energy	NWE	Electric	South Dakota	✓	✓	✓		K
Oklahoma Gas and Electric Company	OGE	Electric	Arkansas	✓	✓	✓	✓	K
Oklahoma Gas and Electric Company	OGE	Electric	Oklahoma	✓	✓	✓		K
Arizona Public Service Company	PNW	Electric	Arizona	✓	✓	✓		K
Public Service Co. of New Mexico	PNM	Electric	New Mexico	✓	✓	✓		
Texas-New Mexico Power Company	PNM	Electric	Texas		✓			
Portland General Electric Company	POR	Electric	Oregon	✓	✓	✓		✓
Alabama Power Company	SO	Electric	Alabama	✓		✓	✓	K
Georgia Power Company	SO	Electric	Georgia	✓	✓	✓	✓	✓
Atlanta Gas Light	SO	Gas	Georgia			✓		✓
Nicor Gas	SO	Gas	Illinois	✓	✓	✓		✓
Mississippi Power Company	SO	Electric	Mississippi	✓	✓	✓	✓	K
Chattanooga Gas	SO	Gas	Tennessee	✓				✓
Virginia Natural Gas	SO	Gas	Virginia	✓	✓			✓
Public Service Company of Colorado	XEL	Electric	Colorado	✓	✓	✓		
Public Service Company of Colorado	XEL	Gas	Colorado	✓	✓			
Northern States Power Company - WI (Michigan)	XEL	Electric	Michigan	✓	✓			✓
Northern States Power Company - WI (Michigan)	XEL	Gas	Michigan	✓				✓
Northern States Power Company - MN	XEL	Electric	Minnesota	✓	✓	✓		✓
Northern States Power Company - MN	XEL	Gas	Minnesota	✓	✓			✓
Southwestern Public Service Company	XEL	Electric	New Mexico	✓	✓			K
Northern States Power Company - MN (North Dakota)	XEL	Electric	North Dakota	✓				✓
Northern States Power Company - MN (North Dakota)	XEL	Gas	North Dakota	✓				✓
Northern States Power Company - MN (South Dakota)	XEL	Electric	South Dakota	✓	✓			K
Southwestern Public Service Company	XEL	Electric	Texas	✓	✓			
Northern States Power Company - WI	XEL	Electric	Wisconsin	✓	✓			✓
Northern States Power Company - WI	XEL	Gas	Wisconsin	✓				✓

Notes:

Note: A mechanism may cover one or more cost categories; therefore, designations may not indicate separate mechanisms for each category.

[1] Utility-sponsored conservation, energy efficiency, load control, or other demand side management programs.

[2] EPA upgrade costs, emissions control & allowance purchase costs, nuclear/coal plant decommissioning, and other costs to comply with state and federal environmental mandates.

[3] K = Known and Measurable. Partially forecasted test years are included.

Sources: Edison Electric Institute (EEI) Innovative Regulatory Tools for Addressing an Increasingly Complex Energy Landscape: 2023 Update, February 2024; Regulatory Research Associates, Adjustment Clauses: A State-by-State Overview, July 18, 2022; Regulatory Research Associates Commission Profiles; SEC Form 10-Ks; Company Tariffs; Company Rate Filings.

REFERENCED ENDNOTES

FOR THE

PREPARED REBUTTAL TESTIMONY

OF

DYLAN W. D'ASCENDIS

[1] Messrs. Chriss, Pollock, and Rábago do not conduct independent analyses of Tampa Electric's ROE, but generally recommend ROEs similar to those authorized in other rate proceedings.

[2] Woolridge Direct Testimony, at 78.

[3] Walters Direct Testimony, at 62-64.

[4] Walters Direct Testimony, at 62-63.

[5] D'Ascendis Direct Testimony, at 91.

[6] Woolridge Direct Testimony, at 17, 19.

[7] Woolridge Direct Testimony, at 18-19.

[8] Walters Direct Testimony, at 4-7.

[9] Walters Direct Testimony, at 7-8.

[10] Chriss Direct Testimony, at 8-10

[11] Pollock Direct Testimony, at 8, Rábago Direct Testimony, at 40.

[12] Woolridge Direct Testimony, at 19-20.

[13] D'Ascendis Direct Testimony, at 50.

[14] Woolridge Direct Testimony, at 21-23.

[15] Woolridge Direct Testimony, at 21-23.

[16] Woolridge Direct Testimony, at 22.

[17] D'Ascendis Direct Testimony, at 68.

[18] Walters Direct Testimony, at 7-8.

[19] S&P Global Ratings, "Rising Risks: Outlook for North American Investor-Owned Regulated Utilities Weakens", February 14, 2024.

[20] Woolridge Direct Testimony, at 5.

[21] Woolridge Direct Testimony, at 10-17.

[22] Woolridge Direct Testimony, at 16.

[23] Woolridge Direct Testimony, at 11-12.

[24] Woolridge Direct Testimony, at 16-17.

[25] Woolridge Direct Testimony, at 17.

[26] Woolridge Direct Testimony, at 15 and 17.

[27] Woolridge Direct Testimony, at 28-29.

[28] Woolridge Direct Testimony, at 28-29.

[29] Roger A. Morin, Modern Regulatory Finance, (Public Utilities Reports, Inc. 2021), at 581 ("Morin").

[30] *See*, Emera, Inc., Annual Report for the year ended December 31, 2023, at 12.

[31] Morin, at 582.

[32] Richard H. Pettway and Bradford D. Jordan, *Diversification, Double Leverage, and the Cost of Capital,* The Journal of Financial Research, Vol. VI, No. 4, Winter 1983; William Beranek and James A. Miles, *The Excess Return Argument and Double Leverage,* The Financial Review, Vo. 23, No. 2, May 1988.

[33] Michael S. Rozeff, *Modified Double Leverage – A New Approach*, Public Utilities Fortnightly, March 31, 1983.

[34] Eugene M. Lerner, *What are the Real Double Leverage Problems?* Public Utilities Fortnightly, June 7, 1973.

[35] Richard A. Brealey, Steward C. Meyers, Franklin Allen, Principles of Corporate Finance, McGraw-Hill Irwin, 8th Ed., 2006, at 234.

[36] Alan C. Shapiro, Modern Corporate Finance, Wiley, 1st Ed., 1990, at 276.

[37] Maryland Public Service Commission, Order No. 81517, Case No. 9092, *In the Matter of the Application of Potomac Electric Power Company for Authority to Revise its Rate and Charges for Electric Service and for Certain Rate Design Changes*, July 19, 2007, at 73. [Clarification added]

[38] *See*, *Transcontinental Gas Pipe Line Corp.*, 80 FERC ¶ 61,157, 61,657 (1997).

[39] *See*, 154 FERC ¶ 61,004, Docket No. ER15-945-001, at 15.

[40] *Ibid*. *See also*, *Transcontinental Gas Pipe Line Corp.*, 80 FERC ¶ 61,157, 61,657 (1997).

[41] Washington Utilities and Transportation Commission, Docket No. UE 050684, Order No. 4, at 117.

[42] Woolridge Direct Testimony, at 45.

[43] Woolridge Direct Testimony, at 47-49.

[44] Woolridge Direct Testimony, at 56-57.

[45] Woolridge Direct Testimony, at 50-53.

[46] Woolridge Direct Testimony, at 50-51.

[47] Woolridge Direct Testimony, at 54.

[48] Woolridge Direct Testimony, at 56.

[49] The 2002 Global Financial Settlement resolved an investigation by the U.S. Securities and Exchange Commission and the New York Attorney General's Office of a number of investment banks related to concerns about conflicts of interest that might influence the independence of investment research provided by equity analysts.

[50] Securities and Exchange Commission, 17 CFR PART 242 [Release Nos. 33-8193; 34-47384; File No. S7-30-02], RIN 3235-AI60 Regulation Analyst Certification.

[51] Anup Agrawal and Mark A. Chen, *Do Analysts' Conflicts Matter? Evidence from Stock Recommendations*, Journal of Law and Economics, August 2008, Vol. 51.

[52] As measured by the mean (median) absolute forecast error.

[53] As measured by the mean (median) forecast error.

[54] Peter D. Easton and Gregory A. Sommers, *Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts*, Journal of Accounting Research, Vol. 45 No. 5 (December 2007), at 1007.

[55] Peter D. Easton and Gregory A. Sommers, *Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts*, Journal of Accounting Research, Vol. 45 No. 5 (December 2007), at 1004. Table 3, Panel A: Descriptive statistics. Market capitalization deciles are assumed to be equivalent to the Kroll Cost of Capital Navigator.

[56] Peter D. Easton and Gregory A. Sommers, *Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts*, Journal of Accounting Research, Vol. 45 No. 5 (December 2007)., at 1004. Table 3, Panel A: Descriptive statistics. Market capitalization deciles are assumed to be equivalent to the Kroll Cost of Capital Navigator.

[57] Woolridge Direct Testimony, at 7.

[58] Myron J. Gordon, *The Pricing of Common Stock*, Presented before the Spring 1990 Seminar, March 27, 1990 of the Institute for Quantitative Research in Finance, Palm Beach, FL.

[59] John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices (University of Chicago Press, 1982) Chapter 4.

[60] Jeremy J. Siegel, Stocks for the Long Run – The Definitive Guide to Financial Market Returns and Long-Term Investment Strategies, McGraw-Hill 2002, pp. 90-94.

[61] Morin, at 371-373.

[62] James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates (Public Utilities Reports, Inc., 1988) ("Bonbright").

[63] John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices (University of Chicago Press, 1982) Chapter 4.

[64] James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs. History* (The Journal of Portfolio Management, Spring 1988) 78-82.

[65] Jing Liu, Doron Nissim, and Jacob Thomas, *Is Cash Flow King in Valuations?*, Financial Analysts Journal, Volume 63, Number 2, 2007.

[66] Servaes and Tufano, *Corporate Dividend Policy: The Theory and Practice of Corporate Dividend and Share Repurchase Policy*, Deutsche Bank, February 2006.

[67] For example, I use projected EPS growth rates from *Value Line*, Yahoo! Finance, and Zacks.

[68] Woolridge Direct Testimony, at 48.

[69] Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

[70] Morin, at 383-384.

[71] *See,* Ping Zhou, William Ruland, *Dividend Payout and Future Earnings Growth*, Financial Analysts Journal, Vol. 62, No. 3, 2006. *See also,* Owain ap Gwilym, James Seaton, Karina Suddason, Stephen Thomas, *International Evidence on the Payout Ratio, Earnings, Dividends and Returns*, Financial Analysts Journal, Vol. 62, No. 7, 2006.

[72] *See,* Robert Arnott, Clifford Asness, *Surprise: Higher Dividends = Higher Earnings Growth*, Financial Analysts Journal, Vol. 59, No. 1, January/February 2003.

[73] Because the payout ratio is the inverse of the retention ratio, the authors found that future earnings growth is negatively related to the retention ratio.

[74] *See,* Eugene F. Brigham, Louis C. Gapenski, Financial Management, Theory and Practice, Seventh Ed., 1994, at 618.

[75] James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs History*, The Journal of Portfolio Management (Spring 1988).

[76] In general, a T-Statistic of 2.00 or greater indicates that the variable is likely to be different than zero, or "statistically significant." The F-Statistic is used to determine whether the model as a whole has statistically significant predictive capability.

[77] Woolridge Direct Testimony, at 56-57.

[78] Woolridge Direct Testimony, at 73.

[79] Woolridge Direct Testimony, at 69-73; Exhibit JRW-6.

[80] Woolridge Direct Testimony, at 73.

[81] Woolridge Direct Testimony, at 40.

[82] *See*, for example, Maine Public Utilities Commission Docket No. 2023-00051, Direct Testimony of J. Randall Woolridge, Ph.D., July 2023, at 56; New Mexico Regulatory Commission Case No. 22-00286-UT, Direct Testimony of J. Randall Woolridge, Ph.D., April 26, 2023, at 60; Public Utility Commission of Texas Docket No. 54634, Direct Testimony of J. Randall Woolridge, Ph.D., August 4, 2023, at 50; Public Utility Commission of Texas Docket No. 53601, Direct Testimony of J. Randall Woolridge, Ph.D., August 26, 2022, at 44; and Railroad Commission of Texas Case No. OS-23-00013758, Direct Testimony of J. Randall Woolridge, Ph.D., September 5, 2023, at 52.

[83] Woolridge Direct Testimony, at 69-73, Exhibit JRW-6.

[84] Forecast bias can be described as a tendency to either over-forecast or under-forecast a given variable.

[85] 2008 was selected as the starting year as it is the first year Kroll published its recommended MRP and risk-free rate.

[86] John Y. Campbell, "Forecasting US Equity Returns in the 21st Century," Social Security Administration, July 2001.

[87] https://indialogue.io/clients/reports/public/5d9da61986db2894649a7ef2/5d9da63386db2894649a7ef5

[88] KPMG Corporate Finance & Valuations Netherlands, Equity Market Risk Premium – Research Summary, 30 September 2023, at 7.

[89] 29 CFR 2509.908-1, Interpretive Bulletin Relating to Investing in Economically Targeted Investments, October 17, 2008.

[90] J.P. Morgan Asset Management 2023 Long-Term Capital Market Assumptions, at 124.

[91] BlackRock Capital Market Assumptions.

[92] BNY Mellon – 10-Year Capital Market Assumptions Calendar Year 2023, at 22.

[93] Stanley B. Block, *A Study of Financial Analysts: Practice and Theory*, Financial Analysts Journal, July/August, 1999.

[94] Exhibit JRW-6, Page 5

[95] Aswath Damodaran, Stern School of Business, *Equity Risk Determinants, Estimation and Implications – The 2022 Edition*, Updated March 23, 2022, at 27-28.

[96] Source: Bureau of Economic Analysis for the years 1929 to 2023. *See also*, www.bea.gov/data/gdp/gross-domestic-product.

[97] SBBI-2023, at 137.

[98] From Damodaran Online, ERPMay24 Spreadsheet.

[99] From Damodaran Online, ERPMay24 Spreadsheet. Five-year growth rate = (Expected Terminal Value / Intrinsic Value) ^ (1/5) – 1 = (6,435.21 / 5,035.69) ^ (1/5) - 1 = 5.03 percent.

[100] FRBSF Economic Letter, *Does Slower Growth Imply Lower Interest Rates?*, November 10, 2014, at 3.

[101] Woolridge Direct Testimony, at 108-109.

[102] Woolridge Direct Testimony, Exhibit at 109.

[103] Morin, at 223-224.

[104] Eugene F. Brigham and Louis C. Gapenski, Financial Management: Theory and Practice, The Dryden Press, 1985, at 201-204.

[105] Bente Villadsen, *et. al*, Risk and Return for Regulated Industries (2017) at 95, endnote 147 of Chapter 4.

[106] The Regulatory Commission of Alaska, Docket P-97-7, Order Rejecting 1997, 1998, 1999 and 2000 Filed TAPS Rates; Setting Just and Reasonable Rates; Requiring Refunds and Filings; and Outlining Phase II Issues, November 27, 2002, at 146; Minnesota Public Utilities Commission, MPUC Docket No. G011/GR-15-736, In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota, Findings of Fact, Conclusions of Law, and Recommendation, August 19, 2016, at 29; Mississippi Public Service Commission, Docket No. 01-UN-0548, Notice of Intent of Mississippi Power Company to Change Rates for Electric Service in its Certificated Areas in the Twenty-Three Counties of Southeast Mississippi, Final Order, December 3, 2001, at 19; Public Utilities Commission of Nevada, Docket No. 20-02023, Application of Southwest Gas Corporation for authority to increase its retail natural gas utility service rates for Southern and Northern Nevada, Order, September 23, 2020, at 35; New York Public Service Commission, Case 16-G-0058, Proceeding on Motion of the Commission as to

the Rates, Charges, Rules and Regulations of KeySpan Gas East Corporation d/b/a National Grid for Gas Service, Order Adopting Terms of Joint Proposal and Establishing Gas Rate Plans, December 16, 2016, at 32; In the Matter of Application of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina, Docket No. E-22, Sub 562 Order Accepting Public Staff Stipulation in Part, Accepting CIGFUR Stipulation, Deciding Contested Issues, and Granting Partial Rate Increase, February 24, 2020, at 40.

[107] Woolridge Direct Testimony, at 111.

[108] Document No. 7 is provided for illustrative purposes only. Please note that I have not relied on the results of the analysis in determining my recommended ROE or range.

[109] Woolridge Direct Testimony, at 85.

[110] Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 62.

[111] Woolridge Direct Testimony, at 84.

[112] John Y. Campbell, Forecasting US Equity Returns in the 21st Century, July 2001.

[113] Eugene F. Brigham, Fundamentals of Financial Management, (The Dryden Press, 1989), at 639.

[114] SBBI-2023, at 193.

[115] SBBI-2023, at 193.

[116] J. Fred Weston and Eugene F. Brigham, Essentials of Managerial Finance, 3rd Edition (The Dryden Press, 1974), at 272.

[117] Morin, at 151.

[118] Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance (McGraw-Hill Book, 1996), at 146-147.

[119] SBBI-2023, at 193-194.

[120] Woolridge Direct Testimony, at 84.

[121] PSC SC Docket No. 2017-292-WS - Order No. 2018-345, at 14. (May 17, 2018).

[122] NCUC Docket No. W-354, Sub 363, 364, 365, *Order Granting Partial Rate Increase and Requiring Customer Notice*, at PDF 72 (March 31, 2020).

[123] D'Ascendis Direct Testimony, at 38-44.

[124] Shannon Pratt, Roger Grabowski, The Lawyer's Guide to The Cost of Capital: Understanding Risk and Return for Valuing Businesses and Other Investments, American Bar Association, 2015, at 421.

[125] Morin, at 139-142.

[126] Woolridge Direct Testimony, at 84.

[127] http://www.eviews.com/general/prices/prices.html

[128] SBBI-2023, at 248-250.

[129] Woolridge Direct Testimony, at 98-107.

[130] Correlations range from negative one to positive one. The closer the correlation is to zero, the weaker the relationship. Positive values indicate a positive correlation, where the values of both variables tend to move in the same direction.

[131] Woolridge Direct Testimony, at 58.

[132] D'Ascendis Direct Testimony, at 63-65.

[133] Business risk in excess of size risk, which is measurable, as discussed previously.

[134] Walters Direct Testimony, at 3.

[135] Walters Direct Testimony, at 27.

[136] D'Ascendis Direct Testimony, at 21-23.

[137] D'Ascendis Direct Testimony, at 21-24.

[138] David C. Parcell, The Cost of Capital – A Practitioner's Guide, Prepared for the Society of Utility and Regulatory Financial Analysts, 2020 Edition, p. 47.

[139] Charles F. Phillips, Jr., The Regulation of Public Utilities – Theory and Practice, 1993, Public Utility Reports, Inc., Arlington, VA, at 391. ("Phillips")

[140] *See, Transcontinental Gas Pipe Line Corp,* 80 FERC ¶ 61,157, 61,657 (1997) ("Opinion No. 414").

[141] 148 FERC ¶ 61,049, Docket No. EL14-12-000, at 190.

[142] Walters Direct Testimony at 32, 39-41.

[143] Walters Direct Testimony, at 41.

[144] Walters Direct Testimony, at 33.

[145] Walters Direct Testimony, at 33.

[146] Robert Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management, Spring 1986; Christofi, Christofi, Lori and Moliver, *Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate*, Journal of Investing, Spring 1999; Robert Harris and Felicia Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992; and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management, Spring 1988.

[147] Source of Information: Bureau of Economic Analysis.

[148] To put the amount of time that will take these two milestones to happen in perspective, approximately 300 years ago, in the year 1719, France and Spain were at war in New France (now Louisiana), and approximately 3,476 years ago, in the year 1457 BC, the first recorded battle in military history, the Battle of Megiddo, was waged between the Egyptians, led by Pharaoh Thutmose III against Kadesh, Canaanite, Mitanni, and Amurru forces. *See also* Zager and Evans, *In the Year 2525*, *on* 2525 (Exordium & Terminus) (RCA 1968).

[149] Woolridge Direct Testimony, at 42

[150] Z. Bodie, A. Kane, and A. J. Marcus, *Investments*, 7th Edition, McGraw-Hill Irwin, 2008, at 616-617

[151] Woolridge Direct Testimony, at 44.

[152] Walters Direct Testimony, at 43.

[153] Walters Direct Testimony, at 42-43.

[154] Walters Direct Testimony, at 44.

[155] Walters Direct Testimony, at 43.

[156] Walters Direct Testimony, at 46.

[157] Walters Direct Testimony, at 43.

[158] Walters Direct Testimony, at 42-43.

[159] Bonbright, at 334.

[160] Phillips, at 395.

[161] Phillips, at 395.

[162] I also note the t-statistics from these analyses indicate the relationship is highly statistically significant.

[163] *Blue Chip* is a source relied upon by Mr. Walters for projected inflation in developing his projected MRP for his CAPM analysis.

[164] *See, Blue Chip Financial Forecasts*, December 1, 2023, at 14, and May 1, 2024, at 2.

[165] *See, Blue Chip Financial Forecasts*, December 1, 2023, at 14, and May 1, 2024, at 2.

[166] Walters Direct Testimony, at 48.

[167] Walters Direct Testimony, at 50.

[168] Walters Direct Testimony, at 58

[169] Walters Direct Testimony, at 51.

[170] Walters Direct Testimony, at 52-53; Exhibit CCW-15, page 2.

[171] Walters Direct Testimony, at 52-53; Exhibit CCW-15, page 2.

[172] Walters Direct Testimony, at 52-53; Exhibit CCW-15, page 2.

[173] Walters Direct Testimony, at 55.

[174] Walters Direct Testimony, at 39-40, 48.

[175] Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, The Journal of Finance, Vol. 25, No. 2. (May 1970), at 383-417.

[176] Duff & Phelps Investment Analyzer, 2020, Chapter 5, at 8.

[177] Walters Direct Testimony, at 73.

[178] Walters Direct Testimony, at 64.

[179] D'Ascendis Direct Testimony, at 69-70.

[180] *In re: Petition for rate increase by Peoples Gas System, Inc.*, Docket No. 20230023-GU, Order Granting in Part and Denying in Part Peoples Gas System, Inc.'s Petition for a Rate Increase, at 68 (December 27, 2023).

[181] D'Ascendis Direct Testimony, at Document No. 4.

[182] Chriss Direct Testimony, at 4.

[183] Pollock Direct Testimony, at 8.

[184] Pollock Direct Testimony, at 8-11.

[185] Rábago Direct Testimony, at 40.

[186] Rábago Direct Testimony, at 41-42.

[187] Rábago Direct Testimony, at 39.

[188] Rábago Direct Testimony, at 39.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that copies of the foregoing rebuttal testimony and exhibit have been served by posting on a shared document site, hand delivery of a USB drive or by electronic mail on this 2nd day of July, 2024 to the following:

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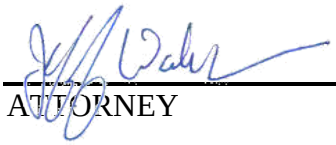

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