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April 2, 2024

ELECTRONIC FILING

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

Re: Docket 20240026-EI; Petition for Rate Increase by Tampa Electric Company

Dear Mr. Teitzman:

Attached for filing on behalf of Tampa Electric Company in the above-referenced docket is the Direct Testimony of Dylan D'Ascendis and Exhibit No. DD-1.

Thank you for your assistance in connection with this matter.

(Document 14 of 32)

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

DIRECT TESTIMONY AND EXHIBIT

OF

DYLAN W. D'ASCENDIS, CRRA, CVA

ON BEHALF OF TAMPA ELECTRIC COMPANY

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PREPARED DIRECT TESTIMONY AND EXHIBIT

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PREPARED DIRECT TESTIMONY

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DYLAN W. D'ASCENDIS, CRRA, CVA

ON BEHALF OF TAMPA ELECTRIC COMPANY

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 direct testimony before the Florida Public Service Commission ("Commission") on behalf of Tampa Electric Company ("Tampa Electric" or the "company").

Q. Please summarize your educational background and professional experience.

A. I have offered expert testimony on behalf of investor-owned utilities before over 35 state regulatory commissions in the United States, in addition to the Federal Energy Regulatory

Commission, the Alberta Utility Commission, the Canadian Energy Regulator, an American Arbitration Association panel, and the Superior Court of Rhode Island, on issues including, but not limited to, common equity cost rate, rate of return, valuation, capital structure, class cost of service, and rate design.

On behalf of the American Gas Association ("AGA"), I calculate the AGA Gas Index, which serves as the benchmark against which the performance of the American Gas Index Fund ("AGIF") is measured on a monthly basis. The AGA Gas Index and AGIF are a market capitalization weighted index and mutual fund, respectively, comprised of the common stocks of the publicly traded corporate members of the AGA.

I am a member of the Society of Utility and Regulatory Financial Analysts ("SURFA"). In 2011, I was awarded the professional designation "Certified Rate of Return Analyst" by SURFA, which is based on education, experience, and the successful completion of a comprehensive written examination.

I am also a member of the National Association of Certified Valuation Analysts ("NACVA") and was awarded the professional designation "Certified Valuation Analyst" by

the NACVA in 2015.

I am a graduate of the University of Pennsylvania, where I received a Bachelor of Arts degree in Economic History. I have also received a Master of Business Administration with high honors and concentrations in Finance and International Business from Rutgers University.

The details of my educational background and expert witness appearances are provided in Document No. 1 of Exhibit No. (DWD-1).

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

A. The purpose of my direct testimony is to present evidence on behalf of Tampa Electric and recommend a return on equity ("ROE") to be used for ratemaking purposes in this proceeding.

Q. Have you prepared an exhibit in support of your prepared direct testimony?

A. Yes. My analyses and conclusions are supported by the data presented in Document Nos. 2 through 15 of Exhibit No. (DWD-

1), which have been prepared by me or under my direction and supervision.

Document No. 1	Resume and Testimony Listing of Dylan W. D'Ascendis
Document No. 2	Summary of Common Equity Cost Rate
Document No. 3	Financial Profile of Tampa Electric Company and the Utility Proxy Group
Document No. 4	Application of the Discounted Cash Flow ("DCF") Model
Document No. 5	Application of the Risk Premium Model ("RPM")
Document No. 6	Application of the Capital Asset Pricing Model ("CAPM")
Document No. 7	Basis of Selection for the Non-Price Regulated Companies Comparable in Total Risk to the Utility Proxy Group
Document No. 8	Application of Cost of Common Equity Models to the Non-Price Regulated Proxy Group
Document No. 9	Derivation of the Flotation Cost Adjustment to the Cost of Common Equity
Document No. 10	Derivation of the Indicated Size Premium for Tampa Electric Company Relative to the Utility Proxy Group

Document No. 11	Service Area Maps of Tampa Electric and the Utility Proxy Group
Document No. 12	National Risk Index of Utility Proxy Group and Tampa Electric Company
Document No. 13	Comparison of Projected Capital Expenditures Relative to Net Plant
Document No. 14	Fama & French – Figure 2
Document No. 15	Referenced Endnotes for the Prepared Direct Testimony of Dylan W. D'Ascendis

II. SUMMARY

Q. What is your recommended ROE for Tampa Electric?

A. I recommend that the Commission authorize Tampa Electric the opportunity to earn an ROE of 11.50 percent on its jurisdictional rate base. The ratemaking capital structure and cost of long-term debt is sponsored by Tampa Electric witness Jeff Chronister.

Q. Please summarize the support for your recommended ROE for Tampa Electric.

A. My recommended ROE of 11.50 percent is summarized in Document No. 2. To support my ROE recommendation, I have assessed the market-based common equity cost rates of

companies of relatively similar, but not necessarily identical, risk to Tampa Electric. Using companies of relatively comparable risk as proxies is consistent with the principles of fair rate of return established by the United States Supreme Court in two cases: (1) *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) *("Hope")*; and (2) *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n*, 262 U.S. 679 (1923) *("Bluefield")*. No proxy group can be identical in risk to any single company. Consequently, there must be an evaluation of relative risk between the company and the proxy group to determine if it is appropriate to adjust the proxy group's indicated rate of return.

My recommendation results from applying several cost of common equity models, specifically the DCF model, the RPM, and the CAPM, to the market data of the Utility Proxy Group whose selection criteria will be discussed below. In addition, I applied the DCF model, RPM, and CAPM to the Non-Price Regulated Proxy Group as discussed further below. The results derived from each are summarized in Document No. 2.

As shown in Document No. 2, I adjusted the indicated common equity cost rate to reflect the effect of flotation costs, as well as the company's somewhat stronger credit rating as

compared to the Utility Proxy Group. These adjustments resulted in a company-specific indicated range of common equity cost rates between 9.90 percent and 12.49 percent. The indicated range of ROEs applicable to the Utility Proxy Group excluding the Predictive Risk Premium Model ("PRPM") from the calculation of the market risk premium is 9.90 percent to 12.42 percent. Given the Utility Proxy Group and company-specific ranges of common equity cost rates, and the company's high customer growth and level of capital investment plans, my recommended ROE for the company is 11.50 percent.

Q. Please summarize the company's proposed capital structure.

A. The company is proposing a capital structure which includes a 54.00 percent common equity ratio. That common equity ratio is consistent with the company's historical equity ratios, and the range of equity ratios maintained by the Utility Proxy Group and their operating subsidiary utility companies.

III. GENERAL PRINCIPLES

Q. What general principles have you considered in arriving at your recommended common equity cost rate of 11.50 percent?

A. In unregulated industries, marketplace competition is the principal determinant of the price of products or services. For regulated public utilities, regulation must act as a substitute for marketplace competition. Assuring that a utility can fulfill its obligations to the public, while providing safe and reliable service at all times, requires a level of earnings sufficient to maintain the integrity of presently invested capital. Sufficient earnings also permit a utility to attract needed new capital at a reasonable cost, for which the utility must compete with other firms of comparable risk, consistent with the fair rate of return standards established by the U.S. Supreme Court in the previously cited *Hope* and *Bluefield* cases.

The U.S. Supreme Court affirmed the fair rate of return standards in *Hope* when it stated:

> The rate-making process under the Act, *i.e.*, the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests.
>
> Thus we stated in the *Natural Gas Pipeline Co.* Case that 'regulation does not insure that the business shall produce net revenues.' 315 U.S. at page 590, 62 S.Ct. at page 745. But such considerations

> aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. *Cf. Chicago & Grand Trunk R. Co. v. Wellman*, 143 U.S. 339, 345, 346 12 S.Ct. 400,402. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[1]

In summary, the U.S. Supreme Court has found a return that is adequate to attract capital at reasonable terms enables the utility to provide service while maintaining its financial integrity. As discussed above, and in keeping with established regulatory standards, that return should be commensurate with the returns expected elsewhere for investments of equivalent risk. The Commission's decision in this proceeding, therefore, should provide the company with

the opportunity to earn a return that is: (1) adequate to attract capital at reasonable cost and terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks.

Lastly, the required return for a regulated public utility is established on a stand-alone basis, *i.e.*, for the utility operating company at issue in a rate case. Parent entities, like other investors, have capital constraints and must look at the attractiveness of the expected risk-adjusted return of each investment alternative in their capital budgeting process. That is, utility holding companies that own many utility operating companies have choices as to where they will invest their capital within the holding company family. Therefore, the opportunity cost concept applies regardless of the source of the funding, public funding or corporate funding.

It therefore is important that the authorized ROE reflects the risks and prospects of the utility's operations and supports the utility's financial integrity from a stand-alone perspective, as measured by its combined business and financial risks. Consequently, the ROE authorized in this proceeding should be sufficient to support the operational

(*i.e.*, business risk) and financing (*i.e.*, financial risk) of the company's utility subsidiary on a stand-alone basis.

Q. Within that broad framework, how is the cost of capital estimated in regulatory proceedings?

A. Regulated utilities primarily use common stock and long-term debt to finance their permanent property, plant, and equipment (*i.e.*, rate base). The fair rate of return for a regulated utility is based on its weighted average cost of capital, in which, as noted earlier, the costs of the individual sources of capital are weighted by their respective book values.

The cost of capital is the return investors require to make an investment in a company. Investors will provide funds to a firm only if the return that they *expect* is equal to, or greater than, the return that they *require* to accept the risk of providing funds to the firm.

The cost of capital (*i.e.*, the combination of the costs of debt and equity) is based on the economic principle of "opportunity costs." Investing in any asset (whether debt or equity securities) represents a forgone opportunity to invest in alternative assets. For any investment to be sensible, its

expected return must be at least equal to the return expected on alternative, comparable risk investment opportunities. Because investments with like risks should offer similar returns, the opportunity cost of an investment should equal the return available on an investment of comparable risk.

Whereas the cost of debt is contractually defined and can be directly observed as the interest rate or yield on debt securities, the cost of common equity must be estimated based on market data and various financial models. Because the cost of common equity is premised on opportunity costs, the models used to determine it are typically applied to a group of "comparable" or "proxy" companies.

In the end, the estimated cost of capital should reflect the return that investors require in light of the subject company's business and financial risks, and the returns available on comparable investments.

Q. Is the authorized return set in regulatory proceedings guaranteed?

A. No, it is not. Consistent with the *Hope* and *Bluefield* standards, the ratemaking process should provide the utility a reasonable opportunity to recover its return of, and return

on, its reasonably incurred investments, but it does not guarantee that return. While a utility may have control over some factors that affect the ability to earn its authorized return (*e.g.*, management performance, operating and maintenance expenses, etc.), there are several factors beyond a utility's control that affect its ability to earn its authorized return. Those may include factors such as weather, the economy, and the prevalence and magnitude of regulatory lag.

Business Risk

Q. Please define business risk and explain why it is important for determining a fair rate of return.

A. The investor-required return on common equity reflects investors' assessment of the total investment risk of the subject firm. Total investment risk is often discussed in the context of business and financial risks.

Business risk reflects the uncertainty associated with owning a company's common stock without the company's use of debt and/or preferred stock financing. One way of considering the distinction between business and financial risks is to view the former as the uncertainty of the expected earned return on common equity, assuming the firm

is financed with no debt.

Examples of business risks generally faced by utilities include, but are not limited to, the regulatory environment, mandatory environmental compliance requirements, customer mix and concentration of customers, service territory economic growth, market demand, risks and uncertainties of supply, operations, capital intensity, size, the degree of operating leverage, emerging technologies including distributed energy resources, the vagaries of weather, all of which have a direct bearing on earnings. Although analysts, including rating agencies, may categorize business risks individually, as a practical matter, such risks are interrelated and not wholly distinct from one another. Therefore, it is difficult to specifically and numerically quantify the effect of any individual risk on investors' required return, *i.e.*, the cost of capital. For determining an appropriate return on common equity, the relevant issue is where investors see the subject company as falling within a spectrum of risk. To the extent investors view a company as being exposed to higher risk, the required return will increase, and vice versa.

For regulated utilities, business risks are both long-term and near-term in nature. Whereas near-term business risks

are reflected in year-to-year variability in earnings and cash flow brought about by economic or regulatory factors, long-term business risks reflect the prospect of an impaired ability of investors to obtain both a fair rate of return on, and return of, their capital. Moreover, because utilities accept the obligation to provide safe, adequate, and reliable service at all times (in exchange for a reasonable opportunity to earn a fair return on their investment), they generally do not have the option to delay, defer, or reject capital investments. Because those investments are capital-intensive, utilities generally do not have the option to avoid raising external funds during periods of capital market distress, if necessary.

Because utilities invest in long-lived assets, long-term business risks are of paramount concern to equity investors. That is, the risk of not recovering the return on their investment extends far into the future. The timing and nature of events that may lead to losses, however, also are uncertain and, consequently, those risks and their implications for the required return on equity tend to be difficult to quantify. Regulatory commissions (like investors who commit their capital) must review a variety of quantitative and qualitative data and apply their reasoned judgment to determine how long-term risks weigh in

their assessment of the market-required return on common equity.

Financial Risk

Q. Please define financial risk and explain why it is important in determining a fair rate of return.

A. Financial risk is the additional risk created by the introduction of debt and preferred stock into the capital structure. The higher the proportion of debt and preferred stock in the capital structure, the higher the financial risk to common equity owners (*i.e.*, failure to receive dividends due to default or other covenants). Therefore, consistent with the basic financial principle of risk and return, common equity investors require higher returns as compensation for bearing higher financial risk.

Q. Can bond and credit ratings be a proxy for a firm's combined business and financial risks to equity owners (*i.e.*, investment risk)?

A. Yes, similar bond ratings/issuer credit ratings reflect, and are representative of, similar combined business and financial risks (*i.e.*, total risk) faced by bond investors.[2] Although specific business or financial risks may differ

between companies, the same bond/credit rating indicates that the combined risks are roughly similar from a debtholder perspective. The caveat is that these debtholder risk measures do not translate directly to risks for common equity.

IV. TAMPA ELECTRIC AND THE UTILITY PROXY GROUP

Q. Are you familiar with Tampa Electric's operations?

A. Yes. The company's electric division provides generation, transmission, and distribution electric service to approximately 839,960 retail customers in Florida.[3] Tampa Electric has long-term issuer ratings of A3 from Moody's and BBB+ from S&P.[4] The company is not publicly traded as it comprises an operating subsidiary of TECO Energy, Inc., whose ultimate parent is Emera Incorporated ("Emera" or the "Parent"). Emera has electric generation, transmission, and distribution operations, natural gas transmission and distribution operations, and non-regulated energy marketing operations in Canada, the United States, and the Caribbean.[5]

Page 1 of Document No. 3 contains comparative capitalization and financial statistics for Tampa Electric for the years 2018 to 2022.[6]

Q. Please explain how you chose the companies in the Utility Proxy Group.

A. The companies selected for the Utility Proxy Group met the following criteria:

- They were included in the Eastern, Central, or Western Electric Utility Group of *Value Line* (Standard Edition);
- They have 70.00 percent or greater of fiscal year 2022 total operating income derived from, and 70.00 percent or greater of fiscal year 2022 total assets attributable to, regulated electric operations;
- They are vertically integrated (*i.e.*, utilities that own and operate regulated generation, transmission, and distribution assets);
- At the time of preparation of this direct testimony, they had not publicly announced that they were involved in any major merger or acquisition activity (*i.e.*, one publicly traded utility merging with or acquiring another) or any other major development;
- They have not cut or omitted their common dividends during the five years ending 2022 or through the time of preparation of this direct testimony;
- They have *Value Line* and Bloomberg Professional Services ("Bloomberg") adjusted betas;
- They have positive *Value Line* five-year dividends per

share ("DPS") growth rate projections; and

- They have *Value Line*, Zacks, or Yahoo! Finance consensus five-year earnings per share ("EPS") growth rate projections.

The following 14 companies met these criteria: Alliant Energy Corporation (LNT); Ameren Corporation (AEE); American Electric Power Corporation (AEP); Duke Energy Corporation (DUK); Edison International (EIX); Entergy Corporation (ETR); Evergy, Inc. (EVRG); IDACORP, Inc. (IDA); NorthWestern Corporation (NWE); OGE Energy Corporation (OGE); Pinnacle West Capital Corporation (PNW); Portland General Electric Company (POR); Southern Company (SO); and Xcel Energy, Inc. (XEL).

Q. Please describe Document No. 3, page 2.

A. Page 2 of Document No. 3 contains comparative capitalization and financial statistics for the Utility Proxy Group for the years 2018 to 2022.

V. CAPITAL STRUCTURE

Q. What is Tampa Electric's requested capital structure?

A. Tampa Electric's requested capital structure consists of

41.57 percent long-term debt and 54.00 percent common equity, as shown in my Document No. 1 that is based on data included in the company's MFR Schedule D-1a.

Q. Does Tampa Electric have a separate capital structure that is recognized by investors?

A. Yes. Tampa Electric is a separate corporate entity that has its own capital structure and issues its own debt. Tampa Electric's actual capital structure is reflected in registrations of its debt issuances with the United States Securities and Exchange Commission.

Q. What are the typical sources of capital commonly considered in establishing a utility's capital structure?

A. Common equity and long-term debt are commonly considered in establishing a utility's capital structure because they are the typical sources of capital financing for a utility's rate base.

Q. Please explain.

A. Long-lived assets are typically financed with long-lived securities, so that the overall term structure of the

utility's long-term liabilities (both debt and equity) closely match the life of the assets being financed. As stated by Brigham and Houston:

> In practice, firms don't finance each specific asset with a type of capital that has a maturity equal to the asset's life. However, academic studies do show that most firms tend to finance short-term assets from short-term sources and long-term assets from long-term sources.[7]

Whereas short-term debt has a maturity of one year or less, long-term debt may have maturities of 30 years or longer. Although there are practical financing constraints, such as the need to "stagger" long-term debt maturities, the general objective is to extend the average life of long-term debt. Still, long-term debt has a finite life, which is likely to be less than the life of the assets included in rate base. Common equity, on the other hand, is outstanding into perpetuity. Thus, common equity more accurately matches the life of the going concern of the utility, which is also assumed to operate in perpetuity. Consequently, it is both typical and important for utilities to have significant proportions of common equity in their capital structures.

Q. Why is it important that the company's requested capital

structure, consisting of 41.57 percent long-term debt and 54.00 percent common equity, be authorized in this proceeding?

A. In order to provide safe, reliable, and affordable service to its customers, Tampa Electric must meet the needs and serve the interests of its various stakeholders, including its customers, shareholders, and bondholders. The interests of these stakeholder groups are aligned with maintaining a healthy balance sheet, strong credit ratings, and a supportive regulatory environment, so that the company has access to capital on reasonable terms in order to make necessary investments.

Safe and reliable service cannot be maintained at a reasonable cost if utilities do not have the financial flexibility and strength to access competitive financing markets on reasonable terms. As Mr. Chronister explains, an appropriate capital structure is important not only to ensure long-term financial integrity, it also is critical to enabling access to capital during constrained markets, or when near-term liquidity is needed to fund extraordinary requirements. In that respect, the capital structure, and the financial strength it engenders, must support both normal circumstances and periods of market uncertainty. The

authorization of a capital structure that understates the company's actual common equity will weaken the financial condition of its operations and adversely impact the company's ability to address expenses and investments, to the detriment of customers and shareholders. Safe and reliable service for customers cannot be sustained over the long term if the interests of shareholders and bondholders are minimized such that the public interest is not optimized.

Q. How does the company's requested common equity ratio of 54.00 percent compare with the common equity ratios maintained by the Utility Proxy Group?

A. The company's requested ratemaking common equity ratio of 54.00 percent is reasonable and consistent with the range of common equity ratios maintained by the Utility Proxy Group. As shown on pages 3 and 4 of Document No. 3, common equity ratios of the Utility Proxy Group companies range from 28.90 percent to 56.13 percent for fiscal year 2022.

In addition to comparing the company's actual common equity ratio with current common equity ratios maintained by the Utility Proxy Group companies, I also compared the company's actual common equity ratio with the equity ratios maintained

by the utility operating subsidiaries of the Utility Proxy Group companies. As shown on page 5 of Document No. 3, common equity ratios of the utility operating subsidiaries of the Utility Proxy Group range from 38.14 percent to 55.90 percent for fiscal year 2022.

Q. Is Tampa Electric's equity ratio of 54.00 percent appropriate for ratemaking purposes given these measures cited above?

A. Yes, it is. The company's equity ratio of 54.00 percent is appropriate for ratemaking purposes in the current proceeding because it is within the range of the common equity ratios currently maintained, and expected to be maintained, by the Utility Proxy Group and their utility operating subsidiaries.

VI. COMMON EQUITY COST RATE MODELS

Q. Is it important that cost of common equity models be market-based?

A. Yes. While a public utility operates a regulated business within the states in which it operates, it still must compete for equity in capital markets along with all other companies of comparable risk, which includes non-utilities. The cost of

common equity is thus determined based on equity market expectations for the returns of those companies. If an individual investor is choosing to invest their capital among companies of comparable risk, they will choose a company providing a higher return over a company providing a lower return.

Q. Are your cost of common equity models market-based?

A. Yes. The DCF model uses market prices in developing the model's dividend yield component. The RPM uses bond ratings and expected bond yields that reflect the market's assessment of bond/credit risk. In addition, betas (β), which reflect the market/systematic risk component of equity risk premium, are derived from regression analyses of market prices. The CAPM is market-based for many of the same reasons that the RPM is market-based (*i.e.*, the use of expected bond yields and betas). Selection criteria for comparable risk, non-price regulated companies are based on regression analyses of market prices and reflect the market's assessment of total risk.

Q. What analytical approaches did you use to determine the company's ROE?

A. As discussed earlier, I have relied on the DCF model, the RPM, and the CAPM, which I applied to the Utility Proxy Group described above. I also applied these same models to a Non-Price Regulated Proxy Group described later in this section.

I rely on these models because reasonable investors use a variety of tools and do not rely exclusively on a single source of information or single model. Moreover, the models on which I rely focus on different aspects of return requirements and provide different insights to investors' views of risk and return. The DCF model, for example, estimates the investor-required return assuming a constant expected dividend yield and growth rate in perpetuity, while Risk Premium-based methods (*i.e.*, the RPM and CAPM approaches) provide the ability to reflect investors' views of risk, future market returns, and the relationship between interest rates and the cost of common equity. Just as the use of market data for the Utility Proxy Group adds the reliability necessary to inform expert judgment in arriving at a recommended common equity cost rate, the use of multiple generally accepted common equity cost rate models also adds reliability and accuracy when arriving at a recommended common equity cost rate.

Q. Has the Commission approved the use of multiple methods in

determining the cost of equity during past rate cases?

A. Yes. In Docket No. 20080318-GU, the Commission stated that there are several models which satisfy the terms for determining a fair rate of return as laid out by *Hope* and *Bluefield*:

> While the logic of the legal and economic concepts of a fair rate of return are fairly straight forward, the actual implementation of these concepts is more controversial. Unlike the cost rate on debt that is fixed and known due to its contractual terms, the cost of equity must be estimated. **Financial models have been developed to estimate the investor-required ROE for a company.** Market-based approaches such as the Discounted Cash Flow (DCF) model and the Capital Asset Pricing Model (CAPM) are generally recognized as being consistent with the market-based standards of a fair return enunciated in Hope, 320 U.S. 591 and Bluefield, 262 U.S. 679. [Emphasis added][8]

More recently, in Order No. PSC-2023-0388-FOF-GU, issued on December 27, 2023, the Commission considered the results of the witnesses DCF, CAPM, and RPM analyses to determine the appropriate range of ROEs in which to set Peoples Gas System,

Inc.'s authorized return.[9]

Discounted Cash Flow Model

Q. What is the theoretical basis of the DCF model?

A. The theory underlying the DCF model is that the present value of an expected future stream of net cash flows during the investment holding period can be determined by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate, which is derived from the cash flows received from dividends and market price appreciation. Mathematically, the dividend yield on market price plus a growth rate equals the capitalization rate (*i.e.*, the total common equity return rate expected by investors), as depicted in the formula below:

$$K_e = (D_0 \ (1+g))/P + g$$

Where:

K_e = the required return on common equity;

D_0 = the annualized dividend per share;

P = the current stock price; and

g = the growth rate.

Q. Which version of the DCF model did you rely on?

A. I used the single-stage constant growth DCF model in my analyses.

Q. Please describe the dividend yield you used in applying the constant growth DCF model.

A. The unadjusted dividend yields are based on the Utility Proxy Group companies' dividends as of December 29, 2023, divided by the average closing market price for the 60 trading days ended December 29, 2023 (*see*, Column 1, page 1 of Document No. 4).

Q. Please explain your adjustment to the dividend yield.

A. Because dividends are paid periodically (*e.g.*, quarterly), as opposed to continuously (daily), an adjustment must be made to the dividend yield. This is often referred to as the discrete, or the Gordon Periodic, version of the DCF model.

DCF theory calls for using the full growth rate, or D_1, in calculating the model's dividend yield component. Since the companies in the Utility Proxy Group increase their quarterly dividends at various times during the year, a reasonable assumption is to reflect one-half of the annual dividend growth rate in the dividend yield component, or

$D_{1/2}$. Because the dividend should be representative of the next 12-month period, this adjustment is a conservative approach that does not overstate the dividend yield. Therefore, the actual average dividend yields in Column 1, page 1 of Document No. 4 were adjusted upward to reflect one-half of the average projected growth rate shown in Column 6.

Q. Please explain the basis for the growth rates you apply to the Utility Proxy Group in your constant growth DCF model.

A. Investors are likely to rely on widely available financial information services, such as *Value Line*, Zacks, and Yahoo! Finance. Investors realize that analysts have significant insight into the dynamics of the industries and individual companies they analyze, as well as companies' abilities to effectively manage the effects of changing laws and regulations, and ever-changing economic and market conditions. For these reasons, I used analysts' five-year forecasts of earnings per share growth in my DCF analysis.

Over the long run, there can be no growth in dividends per share without growth in earnings per share. Security analysts' earnings expectations have a more significant influence on market prices than dividend expectations. Thus,

using projected earnings growth rates in a DCF analysis provides a better match between investors' market price appreciation expectations and the growth rate component of the DCF.

Q. Please summarize the constant growth DCF model results.

A. As shown on page 1 of Document No. 4, the application of the constant growth DCF model to the Utility Proxy Group results in a range of indicated ROEs from 7.42 percent to 10.72 percent. The mean of those results is 9.89 percent, the median result is 9.89 percent, and the average of the two is 9.89 percent.

In arriving at a conclusion for the constant growth DCF-indicated common equity cost rate for the Utility Proxy Group, I relied on an average of the mean and the median results of the DCF, specifically 9.89 percent, applicable to the Utility Proxy Group. This approach takes into consideration all proxy company results while mitigating high and low side outliers of those results.

The Risk Premium Model

Q. Please describe the theoretical basis of the RPM.

A. The RPM is based on the fundamental financial principle of risk and return; namely, that investors require greater returns for bearing greater risk. The RPM recognizes that common equity capital has greater investment risk than debt capital, as common equity shareholders are behind debtholders in any claim on a company's assets and earnings. As a result, investors require higher returns from common stocks than from bonds to compensate them for bearing the additional risk.

While it is possible to directly observe bond returns and yields, the investors' required common equity returns cannot be directly determined or observed. According to RPM theory, one can estimate a common equity risk premium over bonds (either historically or prospectively) and use that premium to derive a cost rate of common equity. The cost of common equity equals the expected cost rate for long-term debt capital, plus a risk premium over that cost rate, to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on the corporation's assets and earnings upon liquidation.

Q. Please explain the total market approach RPM.

A. The total market approach RPM adds a prospective public

utility bond yield to an average of: (1) an equity risk premium that is derived from a beta-adjusted total market equity risk premium, (2) an equity risk premium based on the S&P Utilities Index, and (3) an equity risk premium based on authorized ROEs for electric utilities.

Q. Please explain how you determined the expected bond yield applicable to the Utility Proxy Group.

A. The first step in the total market approach RPM analysis is to determine the expected bond yield. Because both ratemaking and the cost of capital, including the common equity cost rate, are prospective in nature, a prospective yield on similarly-rated long-term debt is essential. I relied on a consensus forecast of about 50 economists of the expected yield on Aaa-rated corporate bonds for the six calendar quarters ending with the second calendar quarter of 2025, and *Blue Chip*'s long-term projections for 2025 to 2029, and 2030 to 2034. As shown on line 1, page 1 of Document No. 5, the average expected yield on Moody's Aaa-rated corporate bonds is 4.90 percent.

Because that 4.90 percent estimate represents a corporate bond yield and not a utility specific bond yield, I adjusted the expected Aaa-rated corporate bond yield to an equivalent

A2-rated public utility bond yield, I made an upward adjustment of 0.73 percent, which represents a recent spread between Aaa-rated corporate bonds and A2-rated public utility bonds (as shown on line 2 and explained in note 2 on page 1 of Document No. 5). Adding that recent 0.73 percent spread to the expected Aaa-rated corporate bond yield of 4.90 percent results in an expected A2-rated public utility bond yield of 5.63 percent.

I then reviewed the average credit rating for the Utility Proxy Group from Moody's to determine if an adjustment to the estimated A2-rated public utility bond was necessary. Since the Utility Proxy Group's average Moody's long-term issuer rating is Baa1, another adjustment to the expected A2-rated public utility bond is needed to reflect this difference in bond ratings. An upward adjustment of 0.17 percent, which represents two-thirds of a recent spread between A2-rated and Baa2-rated public utility bond yields, is necessary to make the A2 prospective bond yield applicable to an Baa1-rated public utility bond (as shown on line 4 and explained in note 3 on page 1 of Document No. 5). Adding the 0.17 percent to the 5.63 percent prospective A2-rated public utility bond yield results in a 5.80 percent expected bond yield applicable to the Utility Proxy Group as shown on page 1 of Document No. 5.

To develop the total market approach RPM estimate of the appropriate return on equity, this prospective bond yield is then added to the average of the three different equity risk premiums, which I now discuss, in turn.

Q. Please explain how the beta-derived equity risk premium is determined.

A. The components of the beta-derived risk premium model are: (1) an expected market equity risk premium over corporate bonds, and (2) the beta. The derivation of the beta-derived equity risk premium that I applied to the Utility Proxy Group is shown on lines 1 through 9, on page 6 of Document No. 5. The total beta-derived equity risk premium I applied is based on an average of three historical market data-based equity risk premiums, two *Value Line*-based equity risk premiums, and a Bloomberg-based equity risk premium. Each of these is described below.

Q. How did you derive a market equity risk premium based on long-term historical data?

A. To derive an historical market equity risk premium, I used the most recent holding period returns for the large company common stocks from the Stocks, Bonds, Bills, and Inflation

("SBBI") Yearbook 2023 ("SBBI - 2023")[10] less the average historical yield on Moody's Aaa/Aa-rated corporate bonds for the period 1928 to 2022. Using holding period returns over a long period of time is appropriate because it is consistent with the long-term investment horizon presumed by investing in a going concern, *i.e.*, a company expected to operate in perpetuity.

SBBI's long-term arithmetic mean monthly total return rate on large company common stocks was 11.78 percent and the long-term arithmetic mean monthly yield on Moody's Aaa/Aa-rated corporate bonds was 5.96 percent (as explained in note 1, page 6 of Document No. 5). As shown on line 1, page 6 of Document No. 5, subtracting the mean monthly bond yield from the total return on large company stocks results in a long-term historical equity risk premium of 5.82 percent.

I used the arithmetic mean monthly total return rates for the large company stocks and yields (income returns) for the Moody's Aaa/Aa corporate bonds, because they are appropriate for the purpose of estimating the cost of capital as noted in SBBI - 2023.[11] Using the arithmetic mean return rates and yields is appropriate because historical total returns and equity risk premiums provide insight into the variance and standard deviation of returns needed by investors in

estimating future risk when making a current investment. If investors relied on the geometric mean of historical equity risk premiums, they would have no insight into the potential variance of future returns, because the geometric mean relates the change over many periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, which is critical to risk analysis.

Q. Please explain the derivation of the regression-based market equity risk premium.

A. To derive the regression-based market equity risk premium of 7.27 percent shown on line 2, page 6 of Document No. 5, I used the same monthly annualized total returns on large company common stocks relative to the monthly annualized yields on Moody's Aaa/Aa-rated corporate bonds as mentioned above. I modeled the relationship between interest rates and the market equity risk premium using the observed monthly market equity risk premium as the dependent variable, and the monthly yield on Moody's Aaa/Aa-rated corporate bonds as the independent variable. I then used a linear Ordinary Least Squares ("OLS") regression, in which the market equity risk premium is expressed as a function of the Moody's Aaa/Aa-rated corporate bonds yield:

$$RP = \alpha + \beta(R_{Aaa/Aa})$$

Q. Please explain the derivation of the PRPM equity risk premium.

A. The PRPM, published in the *Journal of Regulatory Economics,*[12] was developed from the work of Robert F. Engle, who shared the Nobel Prize in Economics in 2003 "for methods of analyzing economic time series with time-varying volatility ("ARCH")".[13] Engle found that volatility changes over time and is related from one period to the next, especially in financial markets. Engle discovered that volatility of prices and returns clusters over time and is therefore highly predictable and can be used to predict future levels of risk and risk premiums.

The PRPM estimates the risk-return relationship directly, as the predicted equity risk premium is generated by predicting volatility or risk. The PRPM is not based on an estimate of investor behavior, but rather on an evaluation of the results of that behavior (*i.e.*, the variance of historical equity risk premiums).

The inputs to the model are the historical monthly returns on large company common stocks minus the monthly yields on

Moody's Aaa/Aa-rated corporate bonds during the period from January 1928 through December 2023.[14] Using a generalized form of ARCH, known as GARCH, I calculated each Utility Proxy Group company's projected equity risk premium using Eviews© statistical software. When the GARCH model is applied to the historical return data, it produces a predicted GARCH variance series and a GARCH coefficient. Multiplying the predicted monthly variance by the GARCH coefficient and then annualizing it[15] produces the predicted annual equity risk premium. The resulting PRPM predicted a market equity risk premium of 9.35 percent.[16]

Q. Is the PRPM supported by academic literature?

A. Yes, it is. The PRPM is based on the research of Dr. Robert F. Engle, dating back to the early 1980s. Dr. Engle discovered that the volatility of market prices, returns, and risk premiums clusters over time, making prices, returns, and risk premiums highly predictable.

In 2003, he shared the Nobel Prize in Economics for this work, characterized as "methods of analyzing economic time series with time-varying volatility ("ARCH").[17] Dr. Engle[18] noted that relative to volatility, "the standard tools have become the ARCH/GARCH[19] models." Hence, the methodology is not new.

In addition, the GARCH methodology has been well tested by academia since Engle's, *et al*. research was originally published in 1982, 40 years ago. I use the well-established GARCH methodology to estimate the PRPM model using a standard commercial and relatively inexpensive statistical package, Eviews,©[20] to develop a means by which to estimate a predicted equity risk premium which, when added to a bond yield, results in a cost of common equity.

Also, the PRPM is in the public domain, having been published six times in academically peer-reviewed journals: *Journal of Economics and Business* (June 2011 and April 2015),[21] *The Journal of Regulatory Economics* (December 2011),[22] *The Electricity Journal* (May 2013 and March 2020),[23] and *Energy Policy* (April 2019).[24] Notably, none of these articles have been rebutted in the academic literature.

Finally, the PRPM has also been presented to a number of utility industry/regulatory/academic groups including the following: The Edison Electric Institute Cost of Capital Working Group; The NARUC Staff Subcommittee on Accounting and Finance; The National Association of Electric Companies Finance/Accounting/Taxation and Rates and Regulations Committees; the NARUC Electric Committee; The Wall Street Utility Group; the Indiana Utility Regulatory Commission

Cost of Capital Task Force; the Financial Research Institute of the University of Missouri Hot Topic Hotline Webinar; and the Center for Research and Regulated Industries Annual Eastern Conference on two occasions.

Q. Has the PRPM been implicitly accepted by other regulatory commissions?

A. Yes. In Docket No. 2017-292-WS, the Public Service Commission of South Carolina ("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 10.5% 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.[25]

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.[26]

Q. Did the commission reject the PRPM in Order No. PSC-2023-0388-FOF-GU concerning Peoples Gas Systems?

A. Yes, it did. The Commission stated the:

> PRPM suffers from a lack of transparency, is used

only by a few ROE witnesses testifying on behalf of utilities, has not been widely relied upon by other regulatory jurisdictions, and routinely produces ROE results that are higher than both the DCF Model and CAPM which are widely accepted and relied upon by the regulatory community. We find that there is persuasive evidence in the record that the PRPM method developed and used by witness D'Ascendis in all his cost of equity analyses produces an unreasonably excessive ROE and shall be disregarded.

Q. Do you have a response to the commission's statement?

A. Yes, I do. I appreciate the commission's openness to considering multiple models in its determination of ROEs for the utilities they regulate, but I respectfully disagree with their exclusion of the PRPM in Order No. PSC-2023-0388-FOF-GU. As noted above, the theory supporting the model is based on the Nobel Prize winning work of Engle, and the model itself has been published six times in four separate peer-reviewed academic journals, which indicates that it has been thoroughly vetted by the academic community. This, in addition to the fact that the model has not been rebutted in the academic literature in the over ten years since it has

been presented should speak to the model's soundness. While maybe not universally accepted, the PRPM is widely disseminated across the U.S. regulatory landscape.

In view of the above, the soundness of the model, as evidenced in the underlying theory and the academic vetting of the PRPM, and the wide dissemination of the model in the U.S. regulatory landscape should lead the commission reconsider the PRPM in its determination regarding the ROE for Tampa Electric in this proceeding.

Q. Have you applied the PRPM in the same manner in this proceeding as you did in Docket No. 20230023-GU?

A. In part. In my Direct Testimony in this proceeding, I have not relied on the PRPM results of the individual companies in the Utility Proxy Group. However, I continue to rely on the PRPM in my estimation of the equity risk premium used in my RPM and CAPM analyses.

Q. Additionally, have you presented your ROE model results excluding the PRPM?

A. Yes. While I respectfully disagree with the Commission's finding in Order No. PSC-2023-0388-FOF-GU, I have presented

my ROE model results including and excluding the PRPM for the commission's convenience. As can be gleaned from Document No. 2, my recommended ROE of 11.50 percent is still within the range of ROEs produced by my models without the PRPM.

Q. Please explain the derivation of a projected equity risk premium based on *Value Line* data for your RPM analysis.

A. As noted above, because both ratemaking and the cost of capital are prospective, a prospective market equity risk premium is needed. The derivation of the forecasted or prospective market equity risk premium can be found in note 4, page 7 of Document No. 5. Consistent with my calculation of the dividend yield component in my DCF analysis, this prospective market equity risk premium is derived from an average of the three- to five-year median market price appreciation potential by *Value Line* for the 13 weeks ended December 29, 2023, plus an average of the median estimated dividend yield for the common stocks of the 1,700 firms covered in *Value Line* (as explained in note 1, page 2 of Document No. 5).

The average median expected price appreciation is 62.00 percent, which translates to a 12.82 percent annual appreciation, and when added to the average of *Value Line's*

median expected dividend yields of 2.33 percent, equates to a forecasted annual total return rate on the market of 15.15 percent. The forecasted Moody's Aaa-rated corporate bond yield of 4.90 percent is deducted from the total market return of 15.15 percent, resulting in an equity risk premium of 10.25 percent, as shown on line 4, page 6 of Document No. 5.

Q. Please explain the derivation of an equity risk premium based on the S&P 500 companies.

A. Using data from *Value Line*, I calculated an expected total return on the S&P 500 companies using expected dividend yields and long-term growth estimates as a proxy for capital appreciation. The expected total return for the S&P 500 is 14.14 percent. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 4.90 percent results in a 9.24 percent projected equity risk premium as shown on line 5, page 6 of Document No. 5.

Q. Please explain the derivation of an equity risk premium based on Bloomberg data.

A. Using data from Bloomberg, I calculated an expected total return on the S&P 500 using expected dividend yields and

long-term growth estimates as a proxy for capital appreciation, identical to the method described above. The expected total return for the S&P 500 is 17.52 percent. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 4.90 percent results in a 12.62 percent projected equity risk premium as shown on line 6, page 6 of Document No. 5.

Q. What is your conclusion of a beta-derived equity risk premium for use in your RPM analysis?

A. I gave equal weight to all six equity risk premiums based on each source – historical, *Value Line*, and Bloomberg – in arriving at a 9.54 percent equity risk premium as shown on line 7, page 6 of Document No. 5.

After calculating the average market equity risk premium of 9.09 percent, I adjusted it by the beta to account for the risk of the Utility Proxy Group. As discussed below, the beta is a meaningful measure of prospective relative risk to the market as a whole, and is a logical way to allocate a company's, or proxy group's, share of the market's total equity risk premium relative to corporate bond yields. As shown on page 1 of Document No. 6, the average of the mean and median beta for the Utility Proxy Group is 0.81.

Multiplying the 0.81 average beta by the market equity risk premium of 9.09 percent results in a Beta-adjusted equity risk premium for the Utility Proxy Group of 7.36 percent (see line 9, page 6 of Document No. 5).

Q. How did you derive the equity risk premium based on the S&P Utility Index and Moody's A-rated public utility bonds?

A. I estimated three equity risk premiums based on the S&P Utility Index holding period returns, and two equity risk premiums based on the expected returns of the S&P Utilities Index, using *Value Line* and Bloomberg data, respectively. Turning first to the S&P Utility Index holding period returns, I derived a long-term monthly arithmetic mean equity risk premium between the S&P Utility Index total returns of 10.63 percent and monthly Moody's A-rated public utility bond yields of 6.44 percent from 1928 to 2019 to arrive at an equity risk premium of 4.20 percent (as shown on line 1, page 10 of Document No. 5). I then used the same historical data to derive an equity risk premium of 5.01 percent based on a regression of the monthly equity risk premiums (as shown on line 2, page 10 of Document No. 5). The final S&P Utility Index holding period equity risk premium involved applying the PRPM using the historical monthly equity risk premiums from January 1928 to December

2023 to arrive at a PRPM-derived equity risk premium of 4.80 percent for the S&P Utility Index (as shown on line 3, page 10 of Document No. 5).

I then derived expected total returns on the S&P Utilities Index of 10.63 percent and 10.61 percent using data from *Value Line* and Bloomberg, respectively, and subtracted the prospective Moody's A2-rated public utility bond yield of 5.63 percent (derived on line 3, page 1 of Document No. 5), which resulted in equity risk premiums of 5.00 percent and 4.98 percent, respectively (as shown on lines 4 and 5, respectively, on page 10 of Document No. 5). As with the market equity risk premiums, I averaged each risk premium based on each source (*i.e.*, historical, *Value Line*, and Bloomberg) to arrive at my utility-specific equity risk premium of 4.80 percent as shown on line 6, page 10 of Document No. 5.

Q. How do you derive an equity risk premium of 4.85 percent based on authorized ROEs for electric utilities?

A. The equity risk premium of 4.85 percent shown on line 3, page 5 of Document No. 5 is the result of a regression analysis based on regulatory awarded ROEs related to the yields on Moody's A2-rated public utility bonds. That

analysis is shown on page 11 of Document No. 5. Page 11 of Document No. 5 contains the graphical results of a regression analysis of 1,232 rate cases for electric utilities which were fully litigated during the period from January 1, 1980, through December 29, 2023. It shows the implicit equity risk premium relative to the yields on A2-rated public utility bonds immediately prior to the issuance of each regulatory decision.

It is readily discernible that there is an inverse relationship between the yield on A2-rated public utility bonds and equity risk premiums. In other words, as interest rates decline, the equity risk premium rises and vice versa, a result consistent with financial literature on the subject.[27] I used the regression results to estimate the equity risk premium applicable to the projected yield on Moody's A2-rated public utility bonds. Given the expected A2-rated utility bond yield of 5.63 percent, it can be calculated that the indicated equity risk premium applicable to that bond yield is 4.85 percent, which is shown on line 3, page 5 of Document No. 5.

Q. What is your conclusion of an equity risk premium for use in your total market approach RPM analysis?

A. The equity risk premium I apply to the Utility Proxy Group is 5.67 percent, which is the average of the beta-adjusted equity risk premium for the Utility Proxy Group, the S&P Utilities Index, and the authorized return utility equity risk premiums of 7.36 percent, 4.80 percent, and 4.85 percent, respectively, as shown on page 5 of Document No. 5.

Q. What is the indicated RPM common equity cost rate based on the total market approach?

A. As shown on line 7, page 1 of Document No. 5, I calculated a common equity cost rate of 11.47 percent for the Utility Proxy Group based on the total market approach RPM.

The Capital Asset Pricing Model

Q. Please explain the theoretical basis of the CAPM.

A. CAPM theory defines risk as the co-variability of a security's returns with the market's returns as measured by the beta (β). A beta less than 1.0 indicates lower variability than the market as a whole, while a beta greater than 1.0 indicates greater variability than the market.

The CAPM assumes that all non-market or unsystematic risk

can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. In addition, the CAPM presumes that investors only require compensation for systematic risk, which is the result of macroeconomic and other events that affect the returns on all assets. The model is applied by adding a risk-free rate of return to a market risk premium, which is adjusted proportionately to reflect the systematic risk of the individual security relative to the total market as measured by the beta. The traditional CAPM model is expressed as:

$$R_s = R_f + \beta(R_m - R_f)$$

Where:
- R_s = Return rate on the common stock;
- R_f = Risk-free rate of return;
- R_m = Return rate on the market as a whole; and
- β = Adjusted beta (volatility of the security relative to the market as a whole)

Numerous tests of the CAPM have measured the extent to which security returns and beta are related as predicted by the CAPM, confirming its validity. The empirical CAPM ("ECAPM") reflects the reality that while the results of these tests

support the notion that the beta is related to security returns, the empirical Security Market Line ("SML") described by the CAPM formula is not as steeply sloped as the predicted SML.[28]

Q. Why is the use of the ECAPM appropriate in determining the ROE for Tampa Electric?

A. The ECAPM is a well-established model that has been relied on in both academic and regulatory settings. Fama and French clearly state regarding the figure in Document No. 14, that "[t]he returns on the low beta portfolios are too high, and the returns on the high beta portfolios are too low."[29]

In addition, Morin observes that while the results of these tests support the notion that Beta is related to security returns, the empirical SML described by the CAPM formula is not as steeply sloped as the predicted SML. Morin states:

> With few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.[30]
>
> * * *
>
> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk

by the following approximation:

$$K=R_F + x(R_M - R_F) + (1-x)\ \beta(R_M - R_F)$$

where x is a fraction to be determined empirically. The value of x that best explains the observed relationship [is] Return = 0.0829 + 0.0520 β is between 0.25 and 0.30. If x = 0.25, the equation becomes:

$$K = R_F + 0.25(R_M - R_F) + 0.75\ \beta(R_M - R_F)$$ [31]

Fama and French provide similar support for the ECAPM when they state:

> The early tests firmly reject the Sharpe-Lintner version of the CAPM. There is a positive relation between beta and average return, but it is too 'flat.'… The regressions consistently find that the intercept is greater than the average risk-free rate… and the coefficient on beta is less than the average excess market return… This is true in the early tests… as well as in more recent cross-section regressions tests, like Fama and French (1992). [32]

Finally, Fama and French further note:

> Confirming earlier evidence, the relation between beta and average return for the ten portfolios is much flatter than the Sharpe-Linter CAPM predicts. The returns on low beta portfolios are too high, and the

> returns on the high beta portfolios are too low. For example, the predicted return on the portfolio with the lowest beta is 8.3 percent per year; the actual return is 11.1 percent. The predicted return on the portfolio with the highest beta is 16.8 percent per year; the actual is 13.7 percent.[33]

Research from Dianna R. Harrington also supports the use of the ECAPM. Harrington summarizes studies on the predicted results of the CAPM versus the actual returns in her text Modern Portfolio Theory & the Capital Asset Pricing Model:

> So far we have learned some very interesting things about the CAPM and reality. Some of the earliest work tested realized data (history) against data generated by simulated portfolios. Early studies by Douglas (1969) and Lintner (Douglas [1969]) showed discrepancies between what was expected on the basis of the CAPM and the actual relationships that were apparent in the capital markets. Theoretically, the minimal rate of return from the portfolios (the intercept) and the actual risk-free rate for the period should have been equal. They were not.
>
> * * *
>
> Another study, now more famous than Lintner's was

done by Black, Jensen, and Scholes (1972). Lintner had used what is called a cross-sectional method (looking at a number of stock returns during one time period), whereas Black, Jensen, and Scholes used a time-series method (using returns for a number of stocks over several time periods). To make their test, Black, Jensen, and Scholes assumed that what had happened in the past was a good proxy for the investor expectations (a frequent assumption in CAPM tests). Using historical data, they generated estimates using what we call the market model:

$$R_{jt} = \alpha_j + \beta_j (R_{mt}) + \varepsilon_j$$

Where:

R = total returns

β = the slope of the line (the incremental return for risk)

α = the intercept or a constant (expected to be 0 over time and across all firms)

ε = an error term (expected to be random, without information)

m = the market proxy

j = the firm or portfolio

t = the time period

Instead of using single stocks, they formed

portfolios in an effort to wash out one source of error; because betas of single firms are quite unstable. On the basis of the CAPM, they expected to find

1. That the intercept was equal to the risk-free rate (their proxy was the Treasury bill rate)
2. That the capital market line had a positive slope and that riskier (higher beta) securities provided higher return

Instead they found

1. That the intercept was different from the risk-free rate
2. That high-risk securities earned less and low-risk securities earned more than predicted by the model
3. That the intercept seemed to depend on the beta of any asset: high-beta stocks had a different intercept than low-beta stocks

* * *

Fama and MacBeth (1974) criticized the Black, Jensen, and Scholes study (hereafter called BJS). In a reformation of the study, they supported the

first of the BJS findings. They found that the intercept exceeded the risk-free proxy, but did not find the evidence to support the other BJS conclusions.[34]

Harrington discusses Black's potential solution to this phenomenon:

> Black's replacement for the risk-free asset was a portfolio that had no covariability with the market portfolio. Because the relevant risk in the CAPM is systematic risk, a risk-free asset would be the one with no volatility relative to the market – that is, a portfolio with a beta of zero. All investor-perceived levels of risk could be obtained from various linear combinations of Black's zero-beta portfolio and the market portfolio… Since R_z (the rate of return of the zero-beta asset) and R_m are uncorrelated (as R_f and R_m were assumed to be in the simple CAPM), the investor can choose from various combinations of R_z and R_m. On segment R_mY, R_z, is sold short and proceeds are invested in R_m. On segment R_zR_m, portions of the zero-beta portfolio are purchased. At R_m, the investor is fully invested in the market portfolio. The equilibrium CAPM was rewritten by Black as follows:

$$E(R_i) = (1 - \beta_i)\ E(R_z) + \beta_i E(R_m)$$

Where:

E indicates expected,

$E(R_z)$ is less than $E(R_m)$, and

R_z holdings over the whole market must be in equilibrium. That is, the number of short sellers and lenders of securities must be equal.

Black's adaptation is intriguing. The result of using this model is a capital market line that has a less steep slope and a higher intercept than those of the simple CAPM. If Black's model is more correct in its description of investor behavior in the marketplace, then the use of the simple model would produce equity return predictions that would be too low for stocks with betas greater than one and too high for stocks with betas of less than one.[35]

Clearly, the justification from Morin, Fama and French, and Harrington, along with their reviews of other academic research on the CAPM, validate the use of the ECAPM. In addition, the New York Public Service Commission has been using this form of the CAPM, with factors of 0.25 and 0.75, since the mid-1990s. As such, the ECAPM is a well-established model that has been relied on in both academic and regulatory settings. I continue to believe it is an

appropriate model to estimate Tampa Electric's ROE, and in view of theory and practical research, I have applied both the traditional CAPM and the ECAPM to the companies in the Utility Proxy Group and averaged the results.

Q. What betas did you use in your CAPM analysis?

A. For the betas in my CAPM analysis, I considered two sources: *Value Line* and Bloomberg. While both of those services adjust their calculated (or "raw") betas to reflect the tendency of the beta to regress to the market mean of 1.00, *Value Line* calculates the beta over a five-year period, while Bloomberg calculates it over a two-year period.

Q. Please describe your selection of a risk-free rate of return.

A. As shown in Column 5, page 1 of Document No. 6, the risk-free rate adopted for both applications of the CAPM is 4.15 percent. This risk-free rate is based on the average of the *Blue Chip* consensus forecast of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the second calendar quarter of 2025, and long-term projections for the years 2025 to 2029 and 2030 to 2034.

Q. Why is the yield on long-term U.S. Treasury bonds appropriate for use as the risk-free rate?

A. The yield on long-term U.S. Treasury bonds is almost risk-free and its term is consistent with the long-term cost of capital of public utilities measured by the yields on Moody's A2-rated public utility bonds; the long-term investment horizon inherent in utilities' common stocks; and the long-term life of the jurisdictional rate base to which the allowed fair rate of return (*i.e.*, cost of capital) will be applied. In contrast, short-term U.S. Treasury yields are more volatile and largely a function of Federal Reserve monetary policy.

Q. Please explain the estimation of the expected risk premium for the market used in your CAPM analyses.

A. The basis of the market risk premium is explained in detail in note 1, page 2 of Document No. 6. As discussed above, the market risk premium is derived from an average of three historical data-based market risk premiums, two *Value Line* data-based market risk premiums, and one Bloomberg data-based market risk premium.

The long-term income return on U.S. Government securities

of 5.00 percent was deducted from the SBBI - 2023 monthly historical total market return of 12.03 percent, which results in an historical market equity risk premium of 7.03 percent.[36] I applied a linear OLS regression to the monthly annualized historical returns on the S&P 500 relative to historical yields on long-term U.S. Government securities from SBBI - 2023. That regression analysis yielded a market equity risk premium of 8.27 percent. The PRPM market equity risk premium is 10.44 percent and is derived using the PRPM relative to the yields on long-term U.S. Treasury securities from January 1926 through December 2023.

The *Value Line*-derived forecasted total market equity risk premium is derived by deducting the forecasted risk-free rate of 4.15 percent, discussed above, from the *Value Line* projected total annual market return of 15.15 percent, resulting in a forecasted total market equity risk premium of 11.00 percent. The S&P 500 projected market equity risk premium using *Value Line* data is derived by subtracting the projected risk-free rate of 4.15 percent from the projected total return of the S&P 500 of 14.14 percent. The resulting market equity risk premium is 9.99 percent.

The S&P 500 projected market equity risk premium using Bloomberg data is derived by subtracting the projected risk-

free rate of 4.15 percent from the projected total return of the S&P 500 of 17.52 percent. The resulting market equity risk premium is 13.37 percent. These six measures, when averaged, result in an average total market equity risk premium of 10.02 percent as shown on page 2 of Document No. 6.

Q. What are the results of your application of the traditional and empirical CAPM to the Utility Proxy Group?

A. As shown on page 1 of Document No. 6, the adjusted mean result of my CAPM/ECAPM analyses is 12.45 percent, the adjusted median is 12.50 percent, and the average of the two is 12.48 percent. Consistent with my reliance on the average of mean and median DCF results discussed above, the indicated common equity cost rate using the CAPM/ECAPM is 12.48 percent.

Common Equity Cost Rates for a Proxy Group of Domestic, Non-Price Regulated Companies Based on the DCF, RPM, and CAPM

Q. Why do you also consider a proxy group of domestic, non-price regulated companies?

A. Although I am not an attorney, my interpretation of the *Hope* and *Bluefield* cases is that they did not specify that

comparable risk companies had to be utilities. Since the purpose of rate regulation is to be a substitute for marketplace competition, non-price regulated firms operating in the competitive marketplace make an excellent proxy if they are comparable in total risk to the Utility Proxy Group being used to estimate the cost of common equity. The selection of such domestic, non-price regulated competitive firms theoretically and empirically results in a proxy group that is comparable in total risk to the Utility Proxy Group, since all of these companies compete for capital in the exact same markets.

Q. How did you select non-price regulated companies that are comparable in total risk to the Utility Proxy Group?

A. In order to select a proxy group of domestic, non-price regulated companies similar in total risk to the Utility Proxy Group, I relied on the betas and related statistics derived from *Value Line* regression analyses of weekly market prices over the most recent 260 weeks (*i.e.*, five years). These selection criteria resulted in a proxy group of 48 domestic, non-price regulated firms comparable in total risk to the Utility Proxy Group. Total risk is the sum of non-diversifiable market risk and diversifiable company-specific risks. The criteria used in selecting the domestic,

non-price regulated firms were:

- They must be covered by *Value Line* (Standard Edition);
- They must be domestic, non-price regulated companies, *i.e.*, not utilities;
- Their betas must lie within plus or minus two standard deviations of the average unadjusted betas of the Utility Proxy Group; and
- The residual standard errors of the *Value Line* regressions which gave rise to the unadjusted betas must lie within plus or minus two standard deviations of the average residual standard error of the Utility Proxy Group.

Betas measure market, or systematic, risk, which is not diversifiable. The residual standard errors of the regressions measure each firm's company-specific, diversifiable risk. Companies that have similar betas and similar residual standard errors resulting from the same regression analyses have similar total investment risk.

Q. Have you prepared a schedule which shows the data from which you selected the 45 domestic, non-price regulated companies that are comparable in total risk to the Utility Proxy Group?

A. Yes, the basis of my selection and both proxy groups' regression statistics are shown in Document No. 7.

Q. Did you calculate common equity cost rates using the DCF model, RPM, and CAPM for the Non-Price Regulated Proxy Group?

A. Yes. Because the DCF model, RPM, and CAPM have been applied in an identical manner as described above, I will not repeat the details of the rationale and application of each model. One exception is in the application of the RPM, where I did not use public utility-specific equity risk premiums.

Page 2 of Document No. 8 derives the constant growth DCF model common equity cost rate. As shown, the indicated common equity cost rate, using the constant growth DCF for the Non-Price Regulated Proxy Group comparable in total risk to the Utility Proxy Group, is 10.80 percent.

Pages 3 through 5 of Document No. 8 contain the data and calculations that support the 13.76 percent RPM common equity cost rate. As shown on line 1, page 3 of Document No. 8, the consensus prospective yield on Moody's Baa-rated corporate bonds for the six quarters ending in the second quarter of 2025, and for the years 2025 to 2029 and 2030 to 2034, is 5.95 percent.[37] Since the Non-Price Regulated Proxy Group has an average Moody's long-term issuer rating of A3, a downward adjustment of 0.28 percent to the projected Baa2-

rated corporate bond yield is necessary to reflect the difference in ratings which results in a projected A3-rated corporate bond yield of 5.67 percent for the Non-Regulated Proxy Group.

When the Beta-adjusted risk premium of 8.09 percent (as derived on page 5 of Document No. 8) relative to the Non-Price Regulated Proxy Group is added to the prospective A3-rated corporate bond yield of 5.67 percent, the indicated RPM common equity cost rate is 13.76 percent.

Page 6 of Document No. 8 contains the inputs and calculations that support my indicated CAPM/ECAPM common equity cost rate of 13.28 percent.

Q. What is the cost rate of common equity based on the Non-Price Regulated Proxy Group comparable in total risk to the Utility Proxy Group?

A. As shown on page 1 of Document No. 8, the results of the common equity models applied to the Non-Price Regulated Proxy Group – which group is comparable in total risk to the Utility Proxy Group – are as follows: 10.80 percent (DCF), 13.76 percent (RPM), and 13.28 percent (CAPM). The average of the mean and median of these models is 12.95 percent,

which I used as the indicated common equity cost rates for the Non-Price Regulated Proxy Group.

VII. CONCLUSION OF COMMON EQUITY COST RATE BEFORE ADJUSTMENTS

Q. What is the indicated common equity cost rate before adjustments?

A. By applying multiple cost of common equity models to the Utility Proxy Group and the Non-Price Regulated Proxy Group, the indicated range of common equity cost rates attributable to the Utility Proxy Group before any relative risk adjustments is between 9.89 percent (DCF model result) and 12.48 percent (CAPM result) and 9.89 percent to 12.41 percent excluding the PRPM in the market risk premium as shown in Document No. 2. I used multiple cost of common equity models as primary tools in arriving at my recommended common equity cost rate because no single model is so inherently precise that it can be relied on to the exclusion of other theoretically sound models. Using multiple models adds reliability to the estimated common equity cost rate, with the prudence of using multiple cost of common equity models supported in both the financial literature and regulatory precedent.

Based on these common equity cost rate results, I conclude

that a range of common equity cost rates between 9.89 percent and 12.48 percent is reasonable and appropriate before any adjustments for relative risk differences between the company and the Utility Proxy Group are made.

VIII. ADJUSTMENTS TO THE COMMON EQUITY COST RATE

Flotation Costs

Q. What are flotation costs?

A. Flotation costs are those costs associated with the sale of new issuances of common stock. They include market pressure and the mandatory unavoidable costs of issuance (*e.g.*, underwriting fees and out-of-pocket costs for printing, legal, registration, etc.). For every dollar raised through debt or equity offerings, the company receives less than one full dollar in financing.

Q. Has the Commission supported the use of flotation cost adjustments in past rate proceedings?

A. Yes. In Peoples Gas System, Inc.'s recent 2023 rate proceeding the Commission noted:

> 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.[38]

Q. Why is it important to recognize flotation costs in the allowed common equity cost rate?

A. It is important because there is no other mechanism in the ratemaking paradigm through which such costs can be recognized and recovered. Because these costs are real, necessary, and legitimate, recovery of these costs should be permitted. As noted by Morin:

> The costs of issuing these securities are just as real as operating and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit recovery of these costs…
>
> The simple fact of the matter is that common equity capital is not free… [Flotation costs] must be recovered through a rate of return adjustment.[39]

Q. Should flotation costs be recognized whether or not there is a stock issuance of additional shares during the test year?

A. Yes. As noted above, there is no mechanism to recapture such costs in the ratemaking paradigm other than an adjustment to the allowed common equity cost rate. Flotation costs are charged to capital accounts and are not expensed on a utility's income statement. As such, flotation costs are analogous to capital investments, albeit negative, reflected on the balance sheet. Recovery of capital investments relates to the expected useful lives of the investment. Since common equity has a very long and indefinite life (assumed to be infinity in the standard regulatory DCF model), flotation costs should be recovered through an adjustment to common equity cost rate, even when there has not been an issuance during the test year, or in the absence of an expected imminent issuance of additional shares of common stock.

Historical flotation costs are a permanent loss of investment to the utility and should be accounted for. When any company, including a utility, issues common stock, flotation costs are incurred for legal, accounting, printing fees and the like. For each dollar of issuing market price, a small percentage is expensed and is permanently unavailable for investment in utility rate base. Since these expenses are charged to capital accounts and not expensed on the income statement, the only way to restore the full value of that dollar of issuing price with an assumed investor required return of 10.00 percent is

for the net investment, $0.95, to earn more than 10.00 percent to net back to the investor a fair return on that dollar. In other words, if a company issues stock at $1.00 with 5.00 percent in flotation costs, it will net $0.95 in investment. Assuming the investor in that stock requires a 10.00 percent return on his or her invested $1.00 (*i.e.*, a return of $0.10), the company needs to earn approximately 10.5 percent on its invested $0.95 to receive a $0.10 return.

Q. Do the common equity cost rate models you have used already reflect investors' anticipation of flotation costs?

A. No. All of these models assume no transaction costs. The literature is quite clear that these costs are not reflected in the market prices paid for common stocks. For example, Brigham and Daves confirm this and provide the methodology utilized to calculate the flotation adjustment.[40] In addition, Morin confirms the need for such an adjustment even when no new equity issuance is imminent.[41] Consequently, it is proper to include a flotation cost adjustment when using cost of common equity models to estimate the common equity cost rate.

Q. How did you calculate the flotation cost allowance?

A. I modified the DCF calculation to provide a dividend yield that would reimburse investors for issuance costs in accordance with the method cited in literature by Brigham and Daves, as well as by Morin. The flotation cost adjustment recognizes the actual costs of issuing equity that were incurred by Tampa Electric's parent, Emera, in its equity issuances since its acquisition of Tampa Electric. Based on the issuance costs shown on page 1 of Document No. 9, an adjustment of 0.10 percent is required to reflect the flotation costs applicable to the Utility Proxy Group.

Credit Risk Adjustment

Q. Please discuss your proposed credit risk adjustment.

A. Tampa Electric's long-term issuer ratings are A3 and BBB+ from Moody's Investors Services and S&P, respectively, which are slightly less risky than the average long-term issuer ratings for the Utility Proxy Group of Baa1 and BBB+, respectively.[42] Hence, a downward credit risk adjustment is necessary to reflect the less risky credit rating, i.e., A3, of Tampa Electric relative to the Baa1 average Moody's bond rating of the Utility Proxy Group.[43]

An indication of the magnitude of the necessary downward adjustment to reflect the lesser credit risk inherent in a A3

bond rating is one-third of a recent three-month average spread between Moody's A2 and Baa2-rated public utility bond yields of 0.25 percent, shown on page 4 of Document No. 5, or 0.08 percent.[44]

Other Considerations

Q. What company-specific business risks did you consider in your analysis?

A. As detailed below, I've considered the company's size relative to the Utility Proxy Group, lack of geographic diversification, and higher climate risk relative to the Utility Proxy Group in my ROE recommendation.

Q. Why is it necessary to consider Tampa Electric's size relative to the Utility Proxy Group?

A. A smaller size relative to the Utility Proxy Group companies indicates greater relative business risk for the company because, all else being equal, size has a material bearing on risk. Size affects business risk because smaller companies generally are less able to cope with significant events that affect sales, revenues and earnings. For example, smaller companies face more risk exposure to business cycles and economic conditions, both nationally and locally.

Additionally, the loss of revenues from a few larger customers would have a greater effect on a small company than on a bigger company with a larger, more diverse, customer base. This is true for utilities, as well as for non-regulated companies.

As further evidence that smaller firms are riskier, investors generally demand greater returns from smaller firms to compensate for less marketability and liquidity of their securities. Kroll's Cost of Capital Navigator: U.S. Cost of Capital Module ("Kroll") discusses the nature of the small-size phenomenon, providing an indication of the magnitude of the size premium based on several measures of size. In discussing "Size as a Predictor of Equity Premiums," Kroll states:

> The size effect is based on the empirical observation that companies of smaller size are associated with greater risk and, therefore, have greater cost of capital [sic]. The "size" of a company is one of the most important risk elements to consider when developing cost of equity capital estimates for use in valuing a business simply because size has been shown to be a *predictor* of equity returns. In other words, there is a significant (negative) relationship between size

> and historical equity returns - as size *decreases*, returns tend to *increase*, and vice versa. (footnote omitted) (emphasis in original)[45]

Furthermore, in "The Capital Asset Pricing Model: Theory and Evidence," Fama and French note size is indeed a risk factor which must be reflected when estimating the cost of common equity. On page 14, they note:

> . . . the higher average returns on small stocks and high book-to-market stocks reflect unidentified state variables that produce undiversifiable risks (covariances) in returns not captured in the market return and are priced separately from market betas.[46]

Based on this evidence, Fama and French proposed their three-factor model which includes a size variable in recognition of the effect size has on the cost of common equity.

Also, it is a basic financial principle that the use of funds invested, and not the source of funds, is what gives rise to the risk of any investment.[47] Eugene Brigham, a well-known authority, states:

> A number of researchers have observed that portfolios of small-firms (sic) have earned

> consistently higher average returns than those of large-firm stocks; this is called the "small-firm effect." On the surface, it would seem to be advantageous to the small firms to provide average returns in a stock market that are higher than those of larger firms. In reality, it is bad news for the small firm; **what the small-firm effect means is that the capital market demands higher returns on stocks of small firms than on otherwise similar stocks of the large firms.** (emphasis added)[48]

Consistent with the financial principle of risk and return discussed above, increased relative risk due to small size must be considered in the allowed rate of return on common equity.

Q. Is a relative risk adjustment due to Tampa Electric's small size when compared to the Utility Proxy Group necessary in this proceeding?

A. No. Tampa Electric has similar risk to the average utility in the Utility Proxy Group because, Tampa Electric is similar in size to the Utility Proxy Group companies. I measured Tampa Electric's size based on an estimated market capitalization of common equity for Tampa Electric (whose

common stock is not publicly traded).

As shown on Document No. 10, Tampa Electric's estimated market capitalization was $8.98 billion as of December 29, 2023, compared with the market capitalization of the average company in the Utility Proxy Group of $15.9 billion as of December 29, 2023. The average company in the Utility Proxy Group has a market capitalization 1.8 times the size of Tampa Electric's estimated market capitalization.

As a result, it is necessary to consider if an adjustment to the indicated range of common equity cost rates attributable to the Utility Proxy Group is necessary solely on the difference in size between the two. The determination is based on the size premiums for portfolios of New York Stock Exchange, American Stock Exchange, and NASDAQ listed companies ranked by deciles for the 1926 to 2022 period. The average size premium for the Utility Proxy Group with a market capitalization of $15.9 billion falls in the 2nd decile, while the company's estimated market capitalization of $8.98 billion places it in the 3rd decile. The size premium spread between the 2nd decile and the 3rd decile is 0.12 percent. It is my determination that the size premium spread between the 2nd and 3rd decile of 0.12 percent is not significant enough to include it in the determination of my

recommended range of ROEs at this time. That said, the company's lack of geographic diversity due to its small size is cause for concern.

Q. Please describe the company's lack of geographic diversity and why that increases its relative risk?

A. Tampa Electric's service area in West Central Florida is extremely compact compared to other Florida investor-owned utilities or the Utility Proxy Group as shown on Document No. 11. In the event of a substantial storm or other catastrophic event, the entire system and customer base of Tampa Electric is at risk for damage, outages, and other customer impacts. This is unlike other utilities in Florida, and more importantly, the Utility Proxy Group, which have more geographically diverse service areas or larger service territories, which may only have a portion of the system assets and customer base affected in the case of storms or other natural disasters or catastrophic events, allowing the unaffected areas and assets to help mitigate certain impacts and help sustain the utility while repairs are made in affected areas. Tampa Electric's smaller size and limited geographic diversity have also been recognized as key risks in the company's recent S&P and Moody's credit ratings reports.[49]

Q. How did you assess Tampa Electric's risk associated with extreme weather?

A. The Federal Emergency Management Agency ("FEMA") calculates the National Risk Index ("NRI") for each county in the United States. The measure is calculated as the expected annual loss[50] associated with 18 naturally occurring hazards (e.g., hurricanes, floods, earthquakes, etc.) multiplied by a community risk factor, which is determined based on social vulnerability of the county and community resilience. The resulting risk index measures the potential for negative effects of naturally occurring hazards. Of the 3,143 counties in the United States, Hillsborough County, which includes Tampa and a majority of Tampa Electric's customers, is ranked 15th in terms of risk and carries a risk rating of Very High (the highest risk rating). That ranking is driven by the fourth highest expected annual loss value associated with hurricanes of all counties in the United States.

Further, between 1980 and 2023 Florida trails only Texas for the highest cost associated with major natural disasters that resulted in over $1 billion in costs (CPI-adjusted), incurring over $390 billion as a result of weather-related events during that period.[51] Over the most recent five years, Florida leads all states in terms of costs associated

with major weather events, incurring between $100 billion and $200 billion.[52]

In addition, such major weather events are becoming more common. Since 2014, there were a total of 58 severe storms or tropical cyclones that impacted Florida and resulted in at least $1 billion in damages, 21 of which occurred after 2019.[53] In the ten-year period between 2014 and 2023 there were ten *more* such events than in the 34 years from 1980 through 2013 (34 and 24 weather events, respectively).

Q. Is Tampa Electric's risk associated with extreme weather relatively high as compared to the Utility Proxy Group?

A. Yes, it is. As shown in Document No. 12, I calculated two measures based on the FEMA NRI data. First, I calculated the average risk score for each of the companies in the Utility Proxy Group and for Tampa Electric based on the counties in which they operate. In addition, using the same data, I also calculated a county area (i.e., square miles) weighted risk score. That is, larger counties within a proxy company's service area have a higher weight in calculating the weighted average risk score. As shown in Document No. 12, the average and median risk scores for the Utility Proxy Group fall in the Relatively Low category, while Tampa

Electric's risk score is higher than any of the companies in the Utility Proxy Group and falls at the high end of the Relatively High category. As noted above, Hillsborough County, which includes the city of Tampa falls in the Very High risk category. Based on those results, Tampa Electric has a uniquely high level of risk as compared to the Utility Proxy Group.

Q. Does Tampa Electric's storm reserve insulate the company from the risks associated with hurricanes?

A. Not entirely. Tampa Electric utilizes a storm reserve, which is funded through base rates for restoration costs associated with major storms. The storm reserve can be as high as $56 million, which is the level of the reserve as of October 31, 2013.[54] Tampa Electric may petition the Commission for recovery of restoration costs above the storm reserve and to replenish the storm reserve. The storm cost recovery surcharge is capped at $4.00/ 1,000 kWh for a 12-month period. However, Tampa Electric can petition the Commission to increase the surcharge or extend the recovery period if the company incurs costs greater than $100 million in a given calendar year.[55] The company recently had to petition the Commission for such a surcharge and extension of the recovery period in response to Hurricanes Ian and

Nicole in late 2022, which resulted in total restoration costs of $134 million. The restoration costs are being recovered through a surcharge to customers' bills beginning April 2023 and ending in December 2024. In September 2023, Tampa Electric also incurred $35 million in storm restoration costs associated with Hurricane Idalia. The company has not yet sought recovery of those costs.[56]

As shown by the company's recent experience, the level of the storm reserve does not cover the total restoration expenses associated with hurricanes that have a larger effect on the company's service territory, such as Hurricane Ian. As a result, even with the possibility to recover costs by petitioning the Commission outside of a rate case, regulatory lag remains, especially for significant storms with costs over $100 million. For example, Tampa Electric's storm related costs incurred in September and November 2022 will not be fully recovered until December 2024. In addition, the risk of disallowances of restoration costs remains as well. Further, the increased frequency of hurricanes and other large storms will only serve to increase restoration costs and the need to recover those costs. As noted above, restoration costs associated with Hurricane Idalia have not yet been recovered but have been incurred by Tampa Electric. This occurred while Tampa

Electric was still recovering its restoration costs associated with two prior hurricanes, which included an extension to the recovery period beyond a single calendar year.

Q. Have credit rating agencies noted Tampa Electric's risk associated with hurricanes?

A. Yes, they have. Although Moody's notes that it views the Commission's regulatory treatment of storm costs as credit supportive, it also states that, "Tampa Electric is a relatively small utility with a concentrated service territory along the Gulf Coast of western central Florida, making it vulnerable to storm related event risk."[57] S&P similarly notes that, "[Tampa Electric's] service territory is more susceptible to physical risks related to hurricanes,"[58] and also finds that, "Relative to peers, physical risks associated with coastal storms are evident…"[59]

Q. What are your conclusions as they relate to Tampa Electric's risk associated with extreme weather?

A. Tampa Electric faces relatively higher risk from extreme weather events as compared to the Utility Proxy Group. Tampa Electric's customer base is highly concentrated in the city

of Tampa and Hillsborough County. Hillsborough County is one of the highest risk counties in the United States as it relates to the potential effect of natural disasters. In addition, the frequency of major storms impacting Florida has increased in recent years. Although Tampa Electric has the ability to utilize a storm reserve and petition the Commission to recover additional restoration costs above the reserve level, that regulatory framework does not eliminate the risk faced by the company. As such, Tampa Electric's relatively higher risk associated with extreme weather is unique to the company (as compared to the Utility Proxy Group) and should be considered when determining the appropriate ROE in this proceeding.

Q. Have you considered any other company-specific issues in your recommended ROE?

A. Yes, I have. In addition to the company's flotation costs, relative credit rating, and its smaller relative size I have also considered the company's high customer growth, and level of capital expenditures compared to the Utility Proxy Group companies in my ROE recommendation.

Q. Please describe the company's high customer growth.

A. Tampa Electric's total number of retail customers has increased by 63,500 (*i.e.*, approximately 8.4 percent) over the past five years.[60] The increased customer growth in Tampa Electric's service territory necessitates increased and accelerated capital investment.

Q. Please briefly summarize the company's capital investment plans.

A. Tampa Electric currently plans to invest over $6.2 billion of additional capital over the 2024-2027 period,[61] which represents over 68.00 percent of its 2022 year-end net utility plant.[62] That amount includes investments required to support growth, and to maintain safe, sufficient, and reliable service in both its transmission and distribution facilities. As discussed by Mr. Chronister, the company will require continued access to the capital markets, at reasonable terms, to finance its capital spending plan. As the company moves forward with its capital spending plan, timely recovery of its capital costs is critical to mitigate the delay of capital recovery and execute its capital spending program.

Q. Do substantial capital expenditures directly relate to a utility being allowed the opportunity to earn a return

adequate to attract capital at reasonable terms?

A. Yes, they do. The allowed ROE should enable the subject utility to finance capital expenditures and working capital requirements at reasonable rates, and to maintain its financial integrity in a variety of economic and capital market conditions. As discussed throughout my direct testimony, a return adequate to attract capital at reasonable terms enables the utility to provide safe, reliable service while maintaining its financial soundness. To the extent a utility is provided the opportunity to earn its market-based cost of capital, neither customers nor shareholders should be disadvantaged. These requirements are of particular importance to a utility when it is engaged in a substantial capital expenditure program.

The ratemaking process is predicated on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility services, the utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory commissions recognize that since utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms; doing so balances the long-term interests of the utility and its

ratepayers.

Further, the financial community carefully monitors the current and expected financial conditions of utility companies, as well as the regulatory environment in which those companies operate. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' assessments of risk. That is especially important during periods in which the utility expects to make significant capital investments and, therefore, may require access to capital markets.

Q. Do credit rating agencies recognize risk associated with increased capital expenditures?

A. Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. S&P has noted several long-term challenges for utilities' financial health including: heavy construction programs to address demand growth; declining capacity margins; and aging infrastructure and regulatory responsiveness to mounting requests for rate increases.[63] S&P noted:

> We assume that capital spending will remain a focus of

most utility managements and strain credit metrics. It provides growth when sales are diminished by ongoing demanded efficiency from regulators and other trends, and it is welcomed by policymakers that appreciate the economic stimulus and the benefits of safer, more reliable service. The speed with which the regulatory process turns the new spending into higher rates to begin to pay for it is an important factor in our assumptions and the forecast. Any extended lag between spending and recovery can exacerbate the negative effect on credit metrics and therefore ratings.[64]

The rating agency views noted above also are consistent with certain observations discussed in my direct testimony: (1) the benefits of maintaining a strong financial profile are significant when capital access is required and become particularly acute during periods of market instability; and (2) the Commission's decision in this proceeding will have a direct bearing on the company's credit profile and its ability to access the capital needed to fund its investments.

Q. How do the company's expected capital expenditures compare to the Utility Proxy Group?

A. To reasonably make that comparison, I calculated the ratio of expected capital expenditures to net plant for each company in the Utility Proxy Group. I performed that calculation using Tampa Electric's projected capital expenditures during 2024 through 2027 relative to its net plant for the year ended December 31, 2022. As shown in Document No. 13, Tampa Electric has the highest ratio of projected capital expenditures to net plant relative to the Utility Proxy Group, approximately 26.00 percent higher than the Utility Proxy Group median.

Q. What are your conclusions regarding the effect of Tampa Electric's capital investment plan on its risk profile and cost of capital?

A. It is clear that Tampa Electric's capital investment plan relative to net plant is larger than the median of the Utility Proxy Group companies. It also is clear that equity investors and credit rating agencies recognize the additional risks associated with substantial capital expenditures.

Q. What is the indicated cost of common equity after your company-specific adjustments?

A. 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.

IX. CONCLUSION

Q. What is your recommended ROE for Tampa Electric?

A. Given the discussion above and the results from the analyses that I have performed, I recommend that an ROE of 11.50 percent is appropriate for the company at this time.

Q. In your opinion, is your proposed ROE of 11.50 percent fair and reasonable to the company and its customers?

A. Yes, it is.

Q. In your opinion, is the company's proposed equity ratio of 54.00 percent fair and reasonable to the company and its customers?

A. Yes, it is.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

EXHIBIT

OF

DYLAN W. D'ASCENDIS, CRRA, CVA

ON BEHALF OF TAMPA ELECTRIC COMPANY

TABLE OF CONTENTS

scottmadden
MANAGEMENT CONSULTANTS

Resume and Testimony Listing of:

Dylan W. D'Ascendis, CRRA, CVA
Partner

Summary

Dylan is an experienced consultant and a Certified Rate of Return Analyst (CRRA) and Certified Valuation Analyst (CVA). Dylan joined ScottMadden in 2016 and is a leading expert witness with respect to cost of capital, capital structure, and valuation. He has served as a consultant for investor-owned and municipal utilities and authorities for 15 years. Dylan has testified as an expert witness on over 150 occasions regarding rate of return, cost of service, rate design, and valuation before more than 35 regulatory jurisdictions in the United States and Canada, an American Arbitration Association panel, and the Superior Court of Rhode Island. He also maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured. Dylan holds a B.A. in economic history from the University of Pennsylvania and an M.B.A. with concentrations in finance and international business from Rutgers University.

Areas of Specialization

- Expert Witness Testimony
- Rates and Regulation
- Return on Equity
- Valuation
- Utility Regulations
- Rate Case Planning, Management, and Support
- Utility Benchmarking

Recent Articles and Speeches

- "Decoupling, Risk Impacts, and the Cost of Capital." Co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. The Electricity Journal. March 2020
- "Decoupling Impact and Public Utility Conservation Investment." Co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. Energy Policy Journal. 130 (2019), 311-319
- "Establishing Alternative Proxy Groups." Presentation before the Society of Utility and Regulatory Financial Analysts: 51st Financial Forum. April 4, 2019. New Orleans, LA
- "Past Is Prologue: Future Test Year." Presentation before the National Association of Water Companies 2017 Southeast Water Infrastructure Summit. May 2, 2017. Savannah, GA
- "Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model." Co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Pauline M. Ahern, and Frank J. Hanley. The Electricity Journal. May 2013
- "Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks." Presentation before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum. April 17-18, 2013. Indianapolis, IN

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies
- Maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured
- Sponsored valuation testimony for a large municipal water company in front of an American Arbitration Association Board to justify the reasonability of their lease payments to the city
- Co-authored a valuation report on behalf of a large investor-owned utility in response to a new state regulation which allowed the appraised value of acquired assets into rate base

scottmadden
MANAGEMENT CONSULTANTS

Resume and Testimony Listing of:
Dylan W. D'Ascendis, CRRA, CVA
Partner

Sponsor	Date	Case/Applicant	Docket No.	Subject
Regulatory Commission of Alaska				
Alaska Power Company	08/23	Alaska Power Company	Docket No. TA 909-2 / U-23-054	Capital Structure
ENSTAR Natural Gas Company	08/22	ENSTAR Natural Gas Company	Docket No. TA334-4	Rate of Return
Cook Inlet Natural Gas Storage Alaska, LLC	07/21	Cook Inlet Natural Gas Storage Alaska, LLC	Docket No. TA45-733	Capital Structure
Alaska Power Company	09/20	Alaska Power Company; Goat Lake Hydro, Inc.; BBL Hydro, Inc.	Tariff Nos. TA886-2; TA6-521; TA4-573	Capital Structure
Alaska Power Company	07/16	Alaska Power Company	Docket No. TA857-2	Rate of Return
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	02/23	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	Proceeding ID. 27084	Determination of Cost-of-Capital Parameters
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	01/20	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2021 Generic Cost of Capital, Proceeding ID. 24110	Rate of Return
Arizona Corporation Commission				
Foothills Water & Sewer, LLC	10/23	Foothills Water & Sewer, LLC	Docket No. WS-21182A-23-0292	Rate of Return and Fair Value Rate Base
Arizona Water Company	12/22	Arizona Water Company – Eastern Group	Docket No. W-01445A-22-0286	Rate of Return
EPCOR Water Arizona, Inc.	08/22	EPCOR Water Arizona, Inc.	Docket No. WS-01303A-22-0236	Rate of Return
EPCOR Water Arizona, Inc.	06/20	EPCOR Water Arizona, Inc.	Docket No. WS-01303A-20-0177	Rate of Return
Arizona Water Company	12/19	Arizona Water Company – Western Group	Docket No. W-01445A-19-0278	Rate of Return
Arizona Water Company	08/18	Arizona Water Company – Northern Group	Docket No. W-01445A-18-0164	Rate of Return
Arkansas Public Service Commission				
Summit Utilities Arkansas, Inc.	01/24	Summit Utilities Arkansas, Inc.	Docket No. 23-079-U	Rate of Return
Southwestern Electric Power Co.	07/21	Southwestern Electric Power Co.	Docket No. 21-070-U	Return on Equity
CenterPoint Energy Resources Corp.	05/21	CenterPoint Arkansas Gas	Docket No. 21-004-U	Return on Equity
California Public Utilities Commission				
San Gabriel Valley Water Company	05/23	San Gabriel Valley Water Company	Docket No. A23-05-001	Return on Equity
Colorado Public Utilities Commission				
Atmos Energy Corporation	08/22	Atmos Energy Corporation	Docket No. 22AL-0348G	Rate of Return
Summit Utilities, Inc.	04/18	Colorado Natural Gas Company	Docket No. 18AL-0305G	Rate of Return
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Rate of Return
Commission of the Canada Energy Regulator				
Trans-Northern Pipelines Inc.	11/22	Trans-Northern Pipelines Inc.	Docket No. C-22197	Cost of Capital
Delaware Public Service Commission				
Artesian Water Company, Inc.	04/23	Artesian Water Company, Inc.	Docket No. 23-0601	Rate of Return
Delmarva Power & Light Co.	12/22	Delmarva Power & Light Co.	Docket No. 22-0897 (Electric)	Return on Equity
Delmarva Power & Light Co.	01/22	Delmarva Power & Light Co.	Docket No. 22-002 (Gas)	Return on Equity
Delmarva Power & Light Co.	11/20	Delmarva Power & Light Co.	Docket No. 20-0149 (Electric)	Return on Equity
Delmarva Power & Light Co.	10/20	Delmarva Power & Light Co.	Docket No. 20-0150 (Gas)	Return on Equity

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MANAGEMENT CONSULTANTS

Resume and Testimony Listing of:
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Partner

Sponsor	Date	Case/Applicant	Docket No.	Subject
Tidewater Utilities, Inc.	11/13	Tidewater Utilities, Inc.	Docket No. 13-466	Capital Structure
Public Service Commission of the District of Columbia				
Washington Gas Light Company	04/22	Washington Gas Light Company	Formal Case No. 1169	Rate of Return
Washington Gas Light Company	09/20	Washington Gas Light Company	Formal Case No. 1162	Rate of Return
Federal Energy Regulatory Commission				
LS Power Grid California, LLC	10/20	LS Power Grid California, LLC	Docket No. ER21-195-000	Rate of Return
Florida Public Service Commission				
Peoples Gas System, Inc.	04/23	Peoples Gas System, Inc.	Docket No. 20230023-GU	Rate of Return
Tampa Electric Company	04/21	Tampa Electric Company	Docket No. 20210034-EI	Return on Equity
Peoples Gas System, Inc.	09/20	Peoples Gas System, Inc.	Docket No. 20200051-GU	Rate of Return
Utilities, Inc. of Florida	06/20	Utilities, Inc. of Florida	Docket No. 20200139-WS	Rate of Return
Hawaii Public Utilities Commission				
Launiupoko Irrigation Company, Inc.	12/20	Launiupoko Irrigation Company, Inc.	Docket No. 2020-0217 / Transferred to 2020-0089	Capital Structure
Lanai Water Company, Inc.	12/19	Lanai Water Company, Inc.	Docket No. 2019-0386	Cost of Service / Rate Design
Manele Water Resources, LLC	08/19	Manele Water Resources, LLC	Docket No. 2019-0311	Cost of Service / Rate Design
Kaupulehu Water Company	02/18	Kaupulehu Water Company	Docket No. 2016-0363	Rate of Return
Aqua Engineers, LLC	05/17	Puhi Sewer & Water Company	Docket No. 2017-0118	Cost of Service / Rate Design
Hawaii Resources, Inc.	09/16	Laie Water Company	Docket No. 2016-0229	Cost of Service / Rate Design
Illinois Commerce Commission				
Aqua Illinois, Inc.	01/24	Aqua Illinois, Inc.	Docket No. 24-0044	Rate of Return
Ameren Illinois Company d/b/a Ameren Illinois	01/23	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 23-0082 (Electric)	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/23	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 23-0067 (Gas)	Return on Equity
Utility Services of Illinois, Inc.	02/21	Utility Services of Illinois, Inc.	Docket No. 21-0198	Rate of Return
Ameren Illinois Company d/b/a Ameren Illinois	07/20	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 20-0308	Return on Equity
Utility Services of Illinois, Inc.	11/17	Utility Services of Illinois, Inc.	Docket No. 17-1106	Cost of Service / Rate Design
Aqua Illinois, Inc.	04/17	Aqua Illinois, Inc.	Docket No. 17-0259	Rate of Return
Utility Services of Illinois, Inc.	04/15	Utility Services of Illinois, Inc.	Docket No. 14-0741	Rate of Return
Indiana Utility Regulatory Commission				
Aqua Indiana, Inc.	03/16	Aqua Indiana, Inc. Aboite Wastewater Division	Docket No. 44752	Rate of Return
Twin Lakes, Utilities, Inc.	08/13	Twin Lakes, Utilities, Inc.	Docket No. 44388	Rate of Return
Kansas Corporation Commission				
Atmos Energy Corporation	07/19	Atmos Energy Corporation	19-ATMG-525-RTS	Rate of Return
Kentucky Public Service Commission				
Bluegrass Water Utility Operating Company	02/23	Bluegrass Water Utility Operating Company	2022-00432	Return on Equity
Atmos Energy Corporation	07/22	Atmos Energy Corporation	2022-00222	PRP Rider Rate
Water Service Corporation of KY	06/22	Water Service Corporation of KY	2022-00147	Rate of Return
Atmos Energy Corporation	07/21	Atmos Energy Corporation	2021-00304	PRP Rider Rate

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Atmos Energy Corporation	06/21	Atmos Energy Corporation	2021-00214	Rate of Return
Duke Energy Kentucky, Inc.	06/21	Duke Energy Kentucky, Inc.	2021-00190	Return on Equity
Bluegrass Water Utility Operating Company	10/20	Bluegrass Water Utility Operating Company	2020-00290	Return on Equity
Louisiana Public Service Commission				
Utilities, Inc. of Louisiana	05/21	Utilities, Inc. of Louisiana	Docket No. U-36003	Rate of Return
Southwestern Electric Power Company	12/20	Southwestern Electric Power Company	Docket No. U-35441	Return on Equity
Atmos Energy Corporation	04/20	Atmos Energy Corporation	Docket No. U-35535	Rate of Return
Louisiana Water Service, Inc.	06/13	Louisiana Water Service, Inc.	Docket No. U-32848	Rate of Return
Maine Public Utilities Commission				
Northern Utilities, Inc. d/b/a Unitil	05/23	Northern Utilities, Inc. d/b/a Unitil	Docket No. 2023-00051	Return on Equity
Summit Natural Gas of Maine, Inc.	03/22	Summit Natural Gas of Maine, Inc.	Docket No. 2022-00025	Rate of Return
The Maine Water Company	09/21	The Maine Water Company	Docket No. 2021-00053	Rate of Return
Maryland Public Service Commission				
Washington Gas Light Company	05/23	Washington Gas Light Company	Case No. 9704	Rate of Return
FirstEnergy Service Company	03/23	Potomac Edison Company	Case No. 9695	Rate of Return
Washington Gas Light Company	08/20	Washington Gas Light Company	Case No. 9651	Rate of Return
FirstEnergy Corporation	08/18	Potomac Edison Company	Case No. 9490	Rate of Return
Massachusetts Department of Public Utilities				
Unitil Corporation	9/23	Fitchburg Gas & Electric Co. (Elec.)	D.P.U. 23-80	Rate of Return
Unitil Corporation	9/23	Fitchburg Gas & Electric Co. (Gas)	D.P.U. 23-81	Rate of Return
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Elec.)	D.P.U. 19-130	Rate of Return
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Gas)	D.P.U. 19-131	Rate of Return
Liberty Utilities	07/15	Liberty Utilities d/b/a New England Natural Gas Company	D.P.U. 15-75	Rate of Return
Minnesota Public Utilities Commission				
Northern States Power Company	11/01	Northern States Power Company	Docket No. G002/GR-21-678	Return on Equity
Northern States Power Company	10/21	Northern States Power Company	Docket No. E002/GR-21-630	Return on Equity
Northern States Power Company	11/20	Northern States Power Company	Docket No. E002/GR-20-723	Return on Equity
Mississippi Public Service Commission				
Great River Utility Operating Co.	07/22	Great River Utility Operating Co.	Docket No. 2022-UN-86	Rate of Return
Atmos Energy Corporation	03/19	Atmos Energy Corporation	Docket No. 2015-UN-049	Capital Structure
Atmos Energy Corporation	07/18	Atmos Energy Corporation	Docket No. 2015-UN-049	Capital Structure
Missouri Public Service Commission				
Confluence Rivers Utility Operating Company, Inc.	01/23	Confluence Rivers Utility Operating Company, Inc.	Case No. WR-2023-0006/SR-2023-0007	Rate of Return
Spire Missouri, Inc.	12/20	Spire Missouri, Inc.	Case No. GR-2021-0108	Return on Equity
Indian Hills Utility Operating Company, Inc.	10/17	Indian Hills Utility Operating Company, Inc.	Case No. SR-2017-0259	Rate of Return
Raccoon Creek Utility Operating Company, Inc.	09/16	Raccoon Creek Utility Operating Company, Inc.	Case No. SR-2016-0202	Rate of Return
Public Utilities Commission of Nevada				
Southwest Gas Corporation	09/23	Southwest Gas Corporation	Docket No. 23-09012	Return on Equity
Southwest Gas Corporation	09/21	Southwest Gas Corporation	Docket No. 21-09001	Return on Equity
Southwest Gas Corporation	08/20	Southwest Gas Corporation	Docket No. 20-02023	Return on Equity
New Hampshire Public Utilities Commission				

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Aquarion Water Company of New Hampshire, Inc.	12/20	Aquarion Water Company of New Hampshire, Inc.	Docket No. DW 20-184	Rate of Return
New Jersey Board of Public Utilities				
New Jersey Natural Gas Company	01/24	New Jersey Natural Gas Company	Docket No. GR24010071	Rate of Return
Middlesex Water Company	05/23	Middlesex Water Company	Docket No. WR23050292	Rate of Return
FirstEnergy Service Company	03/23	Jersey Central Power & Light Co.	Docket No. ER23030144	Rate of Return
Atlantic City Electric Company	02/23	Atlantic City Electric Company	Docket No. ER20120746	Return on Equity
Middlesex Water Company	05/21	Middlesex Water Company	Docket No. WR21050813	Rate of Return
Atlantic City Electric Company	12/20	Atlantic City Electric Company	Docket No. ER20120746	Return on Equity
FirstEnergy Service Company	02/20	Jersey Central Power & Light Co.	Docket No. ER20020146	Rate of Return
Aqua New Jersey, Inc.	12/18	Aqua New Jersey, Inc.	Docket No. WR18121351	Rate of Return
Middlesex Water Company	10/17	Middlesex Water Company	Docket No. WR17101049	Rate of Return
Middlesex Water Company	03/15	Middlesex Water Company	Docket No. WR15030391	Rate of Return
The Atlantic City Sewerage Company	10/14	The Atlantic City Sewerage Company	Docket No. WR14101263	Cost of Service / Rate Design
Middlesex Water Company	11/13	Middlesex Water Company	Docket No. WR1311059	Capital Structure
New Mexico Public Regulation Commission				
New Mexico Gas Company	09/23	New Mexico Gas Company	Case No. 23-00255-UT	Return on Equity
Southwestern Public Service Co.	11/22	Southwestern Public Service Co.	Case No. 22-00286-UT	Return on Equity
Southwestern Public Service Co.	01/21	Southwestern Public Service Co.	Case No. 20-00238-UT	Return on Equity
North Carolina Utilities Commission				
Carolina Water Service, Inc.	07/22	Carolina Water Service, Inc.	Docket No. W-354 Sub 400	Rate of Return
Aqua North Carolina, Inc.	06/22	Aqua North Carolina, Inc.	Docket No. W-218 Sub 573	Rate of Return
Carolina Water Service, Inc.	07/21	Carolina Water Service, Inc.	Docket No. W-354 Sub 384	Rate of Return
Piedmont Natural Gas Co., Inc.	03/21	Piedmont Natural Gas Co., Inc.	Docket No. G-9, Sub 781	Return on Equity
Duke Energy Carolinas, LLC	07/20	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1214	Return on Equity
Duke Energy Progress, LLC	07/20	Duke Energy Progress, LLC	Docket No. E-2, Sub 1219	Return on Equity
Aqua North Carolina, Inc.	12/19	Aqua North Carolina, Inc.	Docket No. W-218 Sub 526	Rate of Return
Carolina Water Service, Inc.	06/19	Carolina Water Service, Inc.	Docket No. W-354 Sub 364	Rate of Return
Carolina Water Service, Inc.	09/18	Carolina Water Service, Inc.	Docket No. W-354 Sub 360	Rate of Return
Aqua North Carolina, Inc.	07/18	Aqua North Carolina, Inc.	Docket No. W-218 Sub 497	Rate of Return
North Dakota Public Service Commission				
Northern States Power Company	09/21	Northern States Power Company	Case No. PU-21-381	Rate of Return
Northern States Power Company	11/20	Northern States Power Company	Case No. PU-20-441	Rate of Return
Public Utilities Commission of Ohio				
Aqua Ohio, Inc.	11/22	Aqua Ohio, Inc.	Case No. 22-1094-WW-AIR	Rate of Return
Duke Energy Ohio, Inc.	10/21	Duke Energy Ohio, Inc.	Case No. 21-887-EL-AIR	Return on Equity
Aqua Ohio, Inc.	07/21	Aqua Ohio, Inc.	Case No. 21-0595-WW-AIR	Rate of Return
Aqua Ohio, Inc.	05/16	Aqua Ohio, Inc.	Case No. 16-0907-WW-AIR	Rate of Return
Pennsylvania Public Utility Commission				
Columbia Water Company	05/23	Columbia Water Company	Docket No. R-2023-3040258	Rate of Return
Borough of Ambler	06/22	Borough of Ambler – Bureau of Water	Docket No. R-2022-3031704	Rate of Return
Citizens' Electric Company of Lewisburg	05/22	C&T Enterprises	Docket No. R-2022-3032369	Rate of Return
Valley Energy Company	05/22	C&T Enterprises	Docket No. R-2022-3032300	Rate of Return

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Resume and Testimony Listing of:

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Community Utilities of Pennsylvania, Inc.	04/21	Community Utilities of Pennsylvania, Inc.	Docket No. R-2021-3025207	Rate of Return
Vicinity Energy Philadelphia, Inc.	04/21	Vicinity Energy Philadelphia, Inc.	Docket No. R-2021-3024060	Rate of Return
Delaware County Regional Water Control Authority	02/20	Delaware County Regional Water Control Authority	Docket No. A-2019-3015173	Valuation
Valley Energy, Inc.	07/19	C&T Enterprises	Docket No. R-2019-3008209	Rate of Return
Wellsboro Electric Company	07/19	C&T Enterprises	Docket No. R-2019-3008208	Rate of Return
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
Steelton Borough Authority	01/19	Steelton Borough Authority	Docket No. A-2019-3006880	Valuation
Mahoning Township, PA	08/18	Mahoning Township, PA	Docket No. A-2018-3003519	Valuation
SUEZ Water Pennsylvania Inc.	04/18	SUEZ Water Pennsylvania Inc.	Docket No. R-2018-000834	Rate of Return
Columbia Water Company	09/17	Columbia Water Company	Docket No. R-2017-2598203	Rate of Return
Veolia Energy Philadelphia, Inc.	06/17	Veolia Energy Philadelphia, Inc.	Docket No. R-2017-2593142	Rate of Return
Emporium Water Company	07/14	Emporium Water Company	Docket No. R-2014-2402324	Rate of Return
Columbia Water Company	07/13	Columbia Water Company	Docket No. R-2013-2360798	Rate of Return
Penn Estates Utilities, Inc.	12/11	Penn Estates, Utilities, Inc.	Docket No. R-2011-2255159	Capital Structure / Long-Term Debt Cost Rate
South Carolina Public Service Commission				
Blue Granite Water Co.	12/19	Blue Granite Water Company	Docket No. 2019-292-WS	Rate of Return
Carolina Water Service, Inc.	02/18	Carolina Water Service, Inc.	Docket No. 2017-292-WS	Rate of Return
Carolina Water Service, Inc.	06/15	Carolina Water Service, Inc.	Docket No. 2015-199-WS	Rate of Return
Carolina Water Service, Inc.	11/13	Carolina Water Service, Inc.	Docket No. 2013-275-WS	Rate of Return
United Utility Companies, Inc.	09/13	United Utility Companies, Inc.	Docket No. 2013-199-WS	Rate of Return
Utility Services of South Carolina, Inc.	09/13	Utility Services of South Carolina, Inc.	Docket No. 2013-201-WS	Rate of Return
Tega Cay Water Services, Inc.	11/12	Tega Cay Water Services, Inc.	Docket No. 2012-177-WS	Capital Structure
South Dakota Public Service Commission				
Northern States Power Company	06/22	Northern States Power Company	Docket No. EL22-017	Rate of Return
Tennessee Public Utility Commission				
Piedmont Natural Gas Company	07/20	Piedmont Natural Gas Company	Docket No. 20-00086	Return on Equity
Public Utility Commission of Texas				
Southwestern Public Service Co.	02/23	Southwestern Public Service Co.	Docket No. 54634	Return on Equity
CSWR – Texas Utility Operating Company, LLC	02/23	CSWR – Texas Utility Operating Company, LLC	Docket No. 54565	Rate of Return
Oncor Electric Delivery Co. LLC	05/22	Oncor Electric Delivery Co. LLC	Docket No. 53601	Return on Equity
Southwestern Public Service Co.	02/21	Southwestern Public Service Co.	Docket No. 51802	Return on Equity
Southwestern Electric Power Co.	10/20	Southwestern Electric Power Co.	Docket No. 51415	Rate of Return
Texas Railroad Commission				
Atmos Pipeline – Texas, a Division of Atmos Energy Corporation	05/23	Atmos Pipeline – Texas, a Division of Atmos Energy Corporation	Docket No. OS-23-00013758	Return on Equity
Virginia State Corporation Commission				
Aqua Virginia, Inc.	07/23	Aqua Virginia, Inc.	PUR-2023-00073	Rate of Return
Washington Gas Light Company	06/22	Washington Gas Light Company	PUR-2022-00054	Return on Equity
Virginia Natural Gas, Inc.	04/21	Virginia Natural Gas, Inc.	PUR-2020-00095	Return on Equity
Massanutten Public Service Corporation	12/20	Massanutten Public Service Corporation	PUE-2020-00039	Return on Equity

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Aqua Virginia, Inc.	07/20	Aqua Virginia, Inc.	PUR-2020-00106	Rate of Return
WGL Holdings, Inc.	07/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	05/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	07/17	Aqua Virginia, Inc.	PUR-2017-00082	Rate of Return
Massanutten Public Service Corp.	08/14	Massanutten Public Service Corp.	PUE-2014-00035	Rate of Return / Rate Design
Public Service Commission of West Virginia				
FirstEnergy Service Company	05/23	Monongahela Power Company and The Potomac Edison Company	Case No. 23-0460-E-42T	Return on Equity
FirstEnergy Service Company	12/21	Monongahela Power Company and The Potomac Edison Company	Case No. 21-0857-E-CN (ELG)	Return on Equity
FirstEnergy Service Company	11/21	Monongahela Power Company and The Potomac Edison Company	Case No. 21-0813-E-P (Solar)	Return on Equity

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

Line No.	Principal Methods	Proxy Group of Fourteen Electric Utilities	Proxy Group of Fourteen Electric Utilities (excl. PRPM)
1.	Discounted Cash Flow Model (DCF) (1)	9.89%	9.89%
2.	Risk Premium Model (RPM) (2)	11.47%	11.46%
3.	Capital Asset Pricing Model (CAPM) (3)	12.48%	12.41%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	12.95%	12.89%
5.	Indicated Common Equity Cost Rate before Adjustment for Unique Risk	9.89% - 12.48%	9.89% - 12.41%
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	9.90% - 12.49%	9.90% - 12.42%
9.	Recommended Common Equity Cost Rate	11.50%	11.50%

Notes:
(1) From page 1 of Document No. 4.
(2) From page 1 of Document No. 5.
(3) From page 1 of Document No. 6.
(4) From page 1 of Document No. 8.
(5) Company-specific risk adjustment to reflect TECO's lower risk due to a greater long-term rating relative to the proxy group as detailed in Mr. D'Ascendis' Direct Testimony.
(6) From page 1 of Document No. 9.

Tampa Electric Company, Inc.
Capitalization and Financial Statistics (1)
2018 - 2022, Inclusive

	2022	2021	2020	2019	2018	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
Capitalization Statistics						
Amount of Capital Employed						
Total Permanent Capital	$ 7,624.742	$ 6,900.873	$ 6,111.880	$ 5,721.456	$ 5,152.162	
Short-Term Debt	1,048.003	555.478	560.648	256.861	167.348	
Total Capital Employed	$ 8,672.744	$ 7,456.351	$ 6,672.528	$ 5,978.317	$ 5,319.511	
Indicated Average Capital Cost Rates (2)						
Total Debt	3.45 %	3.78 %	3.99 %	4.28 %	4.16 %	
Capital Structure Ratios						
Based on Total Permanent Capital:						
Long-Term Debt	41.91 %	41.95 %	41.85 %	44.70 %	44.37 %	42.96 %
Preferred Stock	-	-	-	-	-	-
Common Equity	58.09	58.05	58.15	55.30	55.63	57.04
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Based on Total Capital:						
Total Debt, Including Short-Term Debt	48.93 %	46.28 %	46.74 %	47.08 %	46.12 %	47.03 %
Preferred Stock	-	-	-	-	-	-
Common Equity	51.07	53.72	53.26	52.92	53.88	52.97
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Dividend Payout Ratio	94.82 %	106.16 %	95.97 %	100.86 %	106.39 %	100.84 %
Rate Of Return On Average Book Common Equity	10.86 %	9.40 %	11.07 %	10.48 %	10.77 %	10.52 %
Total Debt / EBITDA (3)	3.73 x	3.93 x	3.72 x	3.82 x	3.41 x	3.72 x
Funds From Operations / Total Debt (4)	10.86 %	21.15 %	22.33 %	25.69 %	27.02 %	21.41 %
Total Debt / Total Capital	48.93 %	46.28 %	46.74 %	47.08 %	46.12 %	47.03 %

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 Fourteen Electric Utilities
Capitalization and Financial Statistics (1)
2018 - 2022, Inclusive

	2022	2021	2020	2019	2018	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
Capitalization Statistics						
Amount of Capital Employed						
Total Permanent Capital	$34,914.030	$32,750.196	$30,428.258	$28,342.351	$26,105.282	
Short-Term Debt	$1,265.274	$1,065.456	$877.056	$930.357	$1,010.967	
Total Capital Employed	$36,179.304	$33,815.652	$31,305.314	$29,272.708	$27,116.249	
Indicated Average Capital Cost Rates (2)						
Total Debt	3.82 %	3.71 %	4.13 %	4.33 %	4.42 %	
Preferred Stock	5.86 %	7.09 %	5.58 %	5.44 %	5.34 %	
Capital Structure Ratios						
Based on Total Permanent Capital:						
Long-Term Debt	56.90 %	56.46 %	55.23 %	53.38 %	52.59 %	54.91 %
Preferred Stock	0.51	0.56	0.75	0.87	0.87	0.71
Common Equity	42.59	42.98	44.02	45.75	46.55	44.38
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Based on Total Capital:						
Total Debt, Including Short-Term Debt	58.01 %	57.66 %	56.30 %	54.44 %	53.84 %	56.05 %
Preferred Stock	0.49	0.54	0.71	0.85	0.84	0.69
Common Equity	41.49	41.80	42.99	44.71	45.32	43.26
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Financial Statistics						
Financial Ratios - Market Based						
Earnings / Price Ratio	5.10 %	5.60 %	4.25 %	5.54 %	4.85 %	5.07 %
Market / Average Book Ratio	189.04	186.74	184.58	195.96	190.03	189.27
Dividend Yield	3.69	3.70	3.72	3.45	3.72	3.66
Dividend Payout Ratio	79.74	70.80	65.48	62.25	50.87	65.83
Rate of Return on Average Book Common Equity	9.31 %	10.18 %	7.94 %	10.65 %	8.58 %	9.33 %
Total Debt / EBITDA (3)	5.44 x	5.27 x	6.00 x	4.55 x	5.27 x	5.31 x
Funds from Operations / Total Debt (4)	10.41 %	5.48 %	12.09 %	13.16 %	18.84 %	11.99 %
Total Debt / Total Capital	58.01 %	57.66 %	56.30 %	54.44 %	53.84 %	56.05 %

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 Fourteen Electric Utilities
2018 - 2022, Inclusive

	2022	2021	2020	2019	2018	5 YEAR AVERAGE
Alliant Energy Corporation						
Long-Term Debt	53.86 %	53.11 %	51.92 %	51.87 %	51.29 %	52.41 %
Short-Term Debt	4.28	3.71	2.98	2.83	4.11	3.58
Preferred Stock	-	-	1.53	1.68	1.86	1.01
Common Equity	41.86	43.18	43.57	43.62	42.74	43.00
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Ameren Corporation						
Long-Term Debt	54.50 %	55.74 %	53.67 %	51.99 %	50.21 %	53.22 %
Short-Term Debt	4.16	2.33	2.37	2.44	3.55	2.97
Preferred Stock	0.50	0.55	0.69	0.79	0.84	0.67
Common Equity	40.84	41.38	43.27	44.78	45.40	43.14
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
American Electric Power Corporation						
Long-Term Debt	55.99 %	57.18 %	57.43 %	54.01 %	52.68 %	55.46 %
Short-Term Debt	6.46	4.47	4.58	5.74	4.31	5.11
Preferred Stock	-	-	-	-	-	-
Common Equity	37.55	38.35	37.99	40.25	43.01	39.43
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Duke Energy Corporation						
Long-Term Debt	57.21 %	54.82 %	54.08 %	53.78 %	53.59 %	54.70 %
Short-Term Debt	3.17	2.84	2.59	2.90	3.35	2.97
Preferred Stock	1.58	1.69	1.77	1.81	-	1.37
Common Equity	38.04	40.65	41.56	41.51	43.06	40.96
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Edison International						
Long-Term Debt	62.80 %	58.16 %	52.97 %	53.34 %	52.39 %	55.93 %
Short-Term Debt	4.27	5.42	6.15	1.60	2.56	4.00
Preferred Stock	4.03	4.38	4.87	6.38	7.81	5.49
Common Equity	28.90	32.04	36.01	38.68	37.24	34.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Entergy Corporation						
Long-Term Debt	64.76 %	66.47 %	63.59 %	58.99 %	59.50 %	62.66 %
Short-Term Debt	2.07	3.08	4.63	6.43	7.15	4.67
Preferred Stock	0.79	0.56	0.72	0.84	0.81	0.75
Common Equity	32.38	29.89	31.06	33.74	32.54	31.92
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Evergy, Inc.						
Long-Term Debt	48.89 %	48.22 %	51.60 %	49.27 %	40.17 %	47.63 %
Short-Term Debt	6.29	5.77	1.68	4.82	5.93	4.90
Preferred Stock	-	-	-	-	-	-
Common Equity	44.82	46.01	46.72	45.91	53.90	47.47
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
IDACORP, Inc.						
Long-Term Debt	43.87 %	42.85 %	43.86 %	42.70 %	43.63 %	43.38 %
Short-Term Debt	-	-	-	-	-	-
Preferred Stock	-	-	-	-	-	-
Common Equity	56.13	57.15	56.14	57.30	56.37	56.62
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 Fourteen Electric Utilities
2018 - 2022, Inclusive

	2022	2021	2020	2019	2018	5 YEAR AVERAGE
NorthWestern Corporation						
Long-Term Debt	49.56 %	52.09 %	51.54 %	52.27 %	51.98 %	51.49 %
Short-Term Debt	-	-	2.23	-	-	0.44
Preferred Stock	-	-	-	-	-	-
Common Equity	50.44	47.91	46.23	47.73	48.02	48.07
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
OGE Energy Corporation						
Long-Term Debt	50.75 %	49.74 %	48.39 %	42.91 %	44.00 %	47.16 %
Short-Term Debt	-	5.39	1.32	1.50	-	1.64
Preferred Stock	-	-	-	-	-	-
Common Equity	49.25	44.87	50.29	55.59	56.00	51.20
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Pinnacle West Capital Corporation						
Long-Term Debt	54.95 %	53.26 %	52.11 %	50.39 %	49.23 %	51.99 %
Short-Term Debt	2.40	2.20	1.40	1.03	0.73	1.55
Preferred Stock	-	-	-	-	-	-
Common Equity	42.65	44.54	46.49	48.58	50.04	46.46
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Portland General Electric Company						
Long-Term Debt	56.75 %	54.82 %	52.44 %	50.06 %	49.72 %	52.76 %
Short-Term Debt	-	-	2.58	-	-	0.52
Preferred Stock	-	-	-	-	-	-
Common Equity	43.25	45.18	44.98	49.94	50.28	46.72
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Southern Company						
Long-Term Debt	62.46 %	63.84 %	62.72 %	60.01 %	61.14 %	62.03 %
Short-Term Debt	2.97	1.76	0.79	2.75	4.06	2.47
Preferred Stock	-	0.36	0.38	0.39	0.40	0.31
Common Equity	34.57	34.04	36.11	36.85	34.40	35.19
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Xcel Energy Inc.						
Long-Term Debt	57.81 %	57.39 %	56.96 %	56.69 %	55.00 %	56.77 %
Short-Term Debt	1.96	2.58	1.66	1.86	3.52	2.32
Preferred Stock	-	-	-	-	-	-
Common Equity	40.23	40.03	41.38	41.45	41.48	40.91
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Fourteen Electric Utilities						
Long-Term Debt	55.30 %	54.84 %	53.81 %	52.02 %	51.04 %	53.40 %
Short-Term Debt	2.72	2.83	2.50	2.42	2.81	2.65
Preferred Stock	0.49	0.54	0.71	0.85	0.84	0.69
Common Equity	41.49	41.80	42.99	44.71	45.32	43.26
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 Fourteen Electric Utilities

		2022				
Company Name	Parent Company Ticker	Common Equity	Preferred Equity	Short-Term Debt	Long-Term Debt	Total Capital
Interstate Power and Light Company	LNT	51.03%	0.00%	0.00%	48.97%	100.00%
Wisconsin Power and Light Company	LNT	53.10%	0.00%	4.41%	42.49%	100.00%
Ameren Illinois Company	AEE	54.31%	0.43%	2.34%	42.91%	100.00%
Union Electric Company	AEE	49.42%	0.62%	2.56%	47.39%	100.00%
AEP Texas Inc.	AEP	39.90%	0.00%	0.99%	59.11%	100.00%
Appalachian Power Company	AEP	46.62%	0.00%	1.71%	51.67%	100.00%
Indiana Michigan Power Company	AEP	45.46%	0.00%	3.78%	50.77%	100.00%
Kentucky Power Company	AEP	41.94%	0.00%	4.30%	53.75%	100.00%
Kingsport Power Company	AEP	NA	NA	NA	NA	NA
Ohio Power Company	AEP	48.83%	0.00%	2.73%	48.43%	100.00%
Public Service Company of Oklahoma	AEP	50.20%	0.00%	7.56%	42.25%	100.00%
Southwestern Electric Power Company	AEP	48.68%	0.00%	4.12%	47.20%	100.00%
Wheeling Power Company	AEP	NA	NA	NA	NA	0.00%
Duke Energy Carolinas, LLC	DUK	49.75%	0.00%	3.97%	46.28%	100.00%
Duke Energy Florida, LLC	DUK	46.05%	0.00%	3.09%	50.86%	100.00%
Duke Energy Indiana, LLC	DUK	49.53%	0.00%	4.58%	45.89%	100.00%
Duke Energy Kentucky, Inc.	DUK	50.33%	0.00%	4.64%	45.03%	100.00%
Duke Energy Ohio, Inc.	DUK	55.90%	0.00%	5.83%	38.27%	100.00%
Duke Energy Progress, LLC	DUK	46.82%	0.00%	1.08%	52.10%	100.00%
Southern California Edison Company	EIX	38.14%	3.94%	1.87%	56.05%	100.00%
Entergy Arkansas, LLC	ETR	46.98%	0.00%	0.00%	53.02%	100.00%
Entergy Louisiana, LLC	ETR	46.78%	0.00%	0.00%	53.22%	100.00%
Entergy Mississippi, LLC	ETR	46.29%	0.00%	0.00%	53.71%	100.00%
Entergy New Orleans, LLC	ETR	47.21%	0.00%	0.00%	52.79%	100.00%
Entergy Texas, Inc.	ETR	47.15%	0.69%	0.00%	52.16%	100.00%
Evergy Kansas Central, Inc.	EVRG	47.56%	0.00%	10.12%	42.32%	100.00%
Evergy Kansas South, Inc.	EVRG	NA	NA	NA	NA	NA
Evergy Metro, Inc.	EVRG	49.76%	0.00%	3.67%	46.57%	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	54.53%	0.00%	0.00%	45.47%	100.00%
NorthWestern Corporation	NWE	50.32%	0.00%	0.00%	49.68%	100.00%
Oklahoma Gas and Electric Company	OGE	55.57%	0.00%	0.00%	44.43%	100.00%
Arizona Public Service Company	PNW	46.91%	0.00%	2.20%	50.90%	100.00%
Portland General Electric Company	POR	41.10%	0.00%	0.00%	58.90%	100.00%
Alabama Power Company	SO	52.19%	0.00%	0.00%	47.81%	100.00%
Georgia Power Company	SO	51.85%	0.00%	4.40%	43.75%	100.00%
Mississippi Power Company	SO	55.41%	0.00%	0.00%	44.59%	100.00%
Northern States Power Company	XEL	51.09%	0.00%	1.35%	47.57%	100.00%
Northern States Power Company	XEL	52.63%	0.00%	1.96%	45.40%	100.00%
Public Service Company of Colorado	XEL	54.42%	0.00%	1.73%	43.84%	100.00%
Southwestern Public Service Company	XEL	51.14%	0.00%	0.45%	48.41%	100.00%
	Average	49.05%	0.15%	2.31%	48.49%	
	Minimum	38.14%	0.00%	0.00%	38.27%	
	Maximum	55.90%	3.94%	10.12%	59.11%	

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

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Fourteen Electric Utilities	Average Dividend Yield (1)	Value Line Projected Five Year Growth in EPS (2)	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth in EPS (3)	Adjusted Dividend Yield (4)	Indicated Common Equity Cost Rate (5)
Alliant Energy Corporation	3.62 %	6.50 %	6.30 %	6.65 %	6.48 %	3.74 %	10.22 %
Ameren Corporation	3.30	6.50	6.20	5.40	6.03	3.40	9.43
American Electric Power Corporation	4.52	6.50	4.80	3.70	5.00	4.63	9.63
Duke Energy Corporation	4.50	5.00	6.10	6.70	5.93	4.63	10.56
Edison International	4.73	4.50	3.70	4.85	4.35	4.83	9.18
Entergy Corporation	4.61	0.50	6.40	11.00	5.97	4.75	10.72
Evergy, Inc.	5.10	7.50	4.30	2.50	4.77	5.22	9.99
IDACORP, Inc.	3.42	4.00	4.10	3.70	3.93	3.49	7.42 (6)
NorthWestern Corporation	5.12	3.50	5.20	4.08	4.26	5.23	9.49
OGE Energy Corporation	4.83	6.50	3.70	(12.34)	5.10	4.95	10.05
Pinnacle West Capital Corporation	4.78	2.50	5.90	5.90	4.77	4.89	9.66
Portland General Electric Company	4.57	5.00	6.00	4.60	5.20	4.69	9.89
Southern Company	4.06	6.50	4.00	7.10	5.87	4.18	10.05
Xcel Energy Inc.	3.45	6.00	6.00	6.30	6.10	3.56	9.66
						Average	9.89 %
						Median	9.89 %
						Average of Mean and Median	9.89 %

Notes:

(1) Indicated dividend at 12/29/2023 divided by the average closing price of the last 60 trading days ending 12/29/2023 for each company.

(2) From pages 2 through 15 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, 3.62% x (1+(1/2 x 6.48%)) = 3.74%.

(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 12/29/2023.
www.yahoo.com, Downloaded on 12/29/2023.

ALLIANT ENERGY NDQ-LNT

RECENT PRICE 49.96 | P/E RATIO 16.8 (Trailing: 18.2 Median: 21.0) | RELATIVE P/E RATIO 1.04 | DIV'D YLD 3.6% | VALUE LINE

TIMELINESS 4 Lowered 10/27/23
SAFETY 2 Raised 9/28/07
TECHNICAL 3 Raised 12/1/23
BETA .90 (1.00 = Market)

18-Month Target Price Range
Low-High: $41-$76 Midpoint (% to Mid): $59 (15%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+60%)	*15%*
Low	60	(+20%)	*8%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	329	303	270
to Sell	252	259	267
Hld's(000)	192231	193788	196380

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
	15.57	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	*16.05*	*16.55*	Revenues per sh	*16.95*
	2.56	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	*5.50*	*5.75*	"Cash Flow" per sh	*6.45*
	1.35	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	*2.85*	*3.10*	Earnings per sh [A]	*3.80*
	.64	.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*	Div'd Decl'd per sh [B] ■ †	*2.29*
	2.46	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	*5.80*	*5.80*	Cap'l Spending per sh	*5.40*
	12.15	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	*26.55*	*27.80*	Book Value per sh [C]	*31.90*
	220.72	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	*255.80*	*256.00*	Common Shs Outst'g [D]	*257.00*
	15.1	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
	.80	.81	.93	.80	.91	.92	.86	.87	.91	1.17	1.04	1.03	1.13	1.09	1.15	1.24			Relative P/E Ratio	*1.00*
	3.1%	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%			Avg Ann'l Div'd Yield	*3.7%*
							3276.8	3350.3	3253.6	3320.0	3382.2	3534.5	3647.7	3416.0	3669.0	4205.0	*4100*	*4240*	Revenues ($mill)	*4350*
							382.1	395.7	390.9	384.0	466.1	522.3	567.4	624.0	674.0	686.0	*715*	*800*	Net Profit ($mill)	*975*
							12.4%	10.1%	15.3%	13.4%	12.5%	8.4%	10.8%	--	10.8%	3.1%	*1.0%*	*2.0%*	Income Tax Rate	*2.0%*
							8.1%	8.8%	9.4%	16.3%	10.7%	14.5%	16.3%	8.8%	3.7%	8.7%	*4.0%*	*4.0%*	AFUDC % to Net Profit	*4.0%*
							46.1%	49.7%	47.3%	51.5%	47.8%	52.3%	50.6%	53.5%	52.9%	55.0%	*53.5%*	*52.5%*	Long-Term Debt Ratio	*52.0%*
							50.8%	47.5%	50.0%	46.1%	49.8%	45.7%	47.6%	44.9%	47.1%	45.0%	*46.5%*	*47.5%*	Common Equity Ratio	*48.0%*
							6461.0	7257.2	7446.3	8377.6	8392.8	10032	10938	12657	12725	13944	*14665*	*15035*	Total Capital ($mill)	*17070*
							7147.3	6442.0	8970.2	9809.9	10798	12462	13527	14336	14987	16247	*17050*	*17090*	Net Plant ($mill)	*19180*
							7.0%	6.5%	6.3%	5.6%	6.7%	6.3%	6.3%	5.9%	6.3%	6.1%	*6.5%*	*6.5%*	Return on Total Cap'l	*7.0%*
							11.0%	10.8%	10.0%	9.5%	10.6%	10.9%	10.5%	10.6%	11.3%	10.9%	*10.5%*	*11.0%*	Return on Shr. Equity	*12.0%*
							11.3%	11.2%	10.2%	9.7%	10.9%	11.2%	10.7%	10.8%	11.0%	10.9%	*10.5%*	*11.0%*	Return on Com Equity [E]	*12.0%*
							4.9%	4.6%	3.6%	2.8%	4.0%	4.4%	4.2%	4.2%	4.3%	4.1%	*4.0%*	*4.5%*	Retained to Com Eq	*4.5%*
							57%	60%	66%	72%	64%	62%	61%	62%	62%	62%	*62%*	*62%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $9339 mill. **Due in 5 Yrs** $2117 mill.
LT Debt $8429 mill. **LT Interest** $285 mill.
(LT interest earned: 3.5x)

Leases, Uncapitalized Annual rentals $3 mill.

Pension Assets-12/22 $706 mill. **Oblig** $875 mill.

Pfd Stock None

Common Stock 252,719,087 shs.

MARKET CAP: $12.6 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-2.3	+3.7	-.7
Avg. Indust. Use (MWH)	11134	11696	11494
Avg. Indust. Revs. per KWH (¢)	7.55	7.64	8.39
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	5496	5486	5629
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.6	+.8	+.7
Fixed Charge Cov. (%)	251	259	NA

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	--	.5%	*2.0%*
"Cash Flow"	6.5%	7.5%	*3.5%*
Earnings	6.0%	8.0%	*6.5%*
Dividends	6.5%	6.5%	*6.0%*
Book Value	6.0%	7.0%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	916	763	920	817	3416
2021	901	817	1024	927	3669
2022	1068	943	1135	1059	4205
2023	1077	912	1077	*1034*	*4100*
2024	*1080*	*950*	*1145*	*1065*	*4240*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.72	.54	.94	.26	2.47
2021	.68	.57	1.02	.35	2.63
2022	.77	.63	.90	.43	2.73
2023	.65	.64	1.02	*.54*	*2.85*
2024	*.71*	*.70*	*1.10*	*.59*	*3.10*

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.355	.355	.355	.355	1.42
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	

BUSINESS: Alliant Energy Corporation (formerly Interstate Energy) is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity to 985,000 customers and gas to 425,000 customers in Wisconsin, Iowa, and Minnesota. Electric revenue by state: WI, 43%; IA, 56%. MN, 1%. 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, Wisconsin 53718-2148. Tel.: 608-458-3311. Internet: www.alliantenergy.com.

Alliant Energy has got its next CEO. Indeed, the Wisconsin-based electric and gas utility announced that, effective January 1st, Lisa Barton will assume the role of chief executive, replacing John Larsen, who is stepping down after leading the company for what will be four-and-a-half years. An industry veteran who previously held leadership positions at American Electric Power, Ms. Barton joined Alliant earlier this year, heading both utility subsidiaries and filling the position of Chief Operating Officer. Mr. Larsen, meanwhile, will retain his chairmanship of the company's board of directors.

We still look for earnings to rise just over 4%, to $2.85 a share, this year. On the plus side, Alliant should benefit from lower operating costs and from the recovery of certain construction costs. However, heating and cooling demand is likely to be lower, coinciding with unseasonably mild weather during much of the year.

Alliant has earmarked $4.15 billion for renewable-energy and battery-storage projects between this year 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.

Residential power demand may increase at a fairly modest clip over the next decade or two. A recent study by the Weldon Cooper Center for Public Service at the University of Virginia 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 are ranked 4 (Below Average) for relative year-ahead price performance. While the utility company boasts a fairly attractive dividend (current yield: 3.6%), long-term total return potential doesn't stand out.

Nils C. Van Liew *December 8, 2023*

Company's Financial Strength A
Stock's Price Stability 95
Price Growth Persistence 65
Earnings Predictability 95

(A) Diluted EPS. Excl. nonrecurring losses: '11, 1¢; '12, 8¢. '20 & '21 EPS don't sum due to rounding. Next earnings report due late Feb. **(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.

AMEREN NYSE-AEE

RECENT PRICE 77.46 | P/E RATIO 17.0 (Trailing: 17.6 Median: 20.0) | RELATIVE P/E RATIO 1.05 | DIV'D YLD 3.3% | VALUE LINE

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

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$68-$120 $94 (20%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+55%)	*14%*
Low	100	(+30%)	*10%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	326	296	289
to Sell	270	268	287
Hld's(000)	206602	205221	204708

	35.3	37.3	48.1	46.8	54.1	64.9	70.9	80.9	87.7	90.8	99.2	91.2
High:	28.4	30.6	35.2	37.3	41.5	51.4	51.9	63.1	58.7	69.8	73.3	69.7
Low:												

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

Target Price Range 2026 2027 2028

% TOT. RETURN 10/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-4.3	-0.7
3 yr.	1.3	33.7
5 yr.	33.2	41.5

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
36.23	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	*29.95*	*31.60*	Revenues per sh	*32.65*
6.76	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	*9.50*	*10.05*	"Cash Flow" per sh	*12.20*
2.98	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	*4.40*	*4.70*	Earnings per sh [A]	*5.50*
2.54	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*	*2.65*	Div'd Decl'd per sh [B] ■	*3.30*
6.96	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*	Cap'l Spending per sh	*13.00*
32.41	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	*40.20*	*42.90*	Book Value per sh [C]	*55.00*
208.30	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*	Common Shs Outst'g [D]	*285.00*
17.4	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.0*
.92	.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.18	1.14	1.16	1.24			Relative P/E Ratio	*1.10*
4.9%	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%			Avg Ann'l Div'd Yield	*3.0%*
5838.0	6053.0	6098.0	6076.0	6177.0	6291.0	5910.0	5794.0	6394.0	7957.0	*8000*	*8500*	Revenues ($mill)	*9300*
518.0	593.0	585.0	659.0	683.0	821.0	834.0	877.0	995.0	1074.0	*1190*	*1275*	Net Profit ($mill)	*1570*
37.5%	38.9%	38.3%	36.7%	38.2%	22.4%	17.9%	15.0%	13.6%	14.0%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
7.1%	5.7%	5.1%	4.1%	5.6%	6.9%	5.8%	5.5%	6.0%	5.0%	*6.0%*	*5.0%*	AFUDC % to Net Profit	*4.0%*
45.2%	47.2%	49.3%	47.7%	49.2%	50.3%	52.1%	55.0%	56.1%	56.6%	*55.5%*	*53.5%*	Long-Term Debt Ratio	*51.0%*
53.7%	51.7%	49.7%	51.3%	49.8%	48.8%	47.1%	44.3%	43.3%	43.4%	*44.0%*	*46.0%*	Common Equity Ratio	*48.5%*
12190	12975	13968	13840	14420	15632	17116	20158	22391	24193	*24950*	*25750*	Total Capital ($mill)	*29500*
16205	17424	18799	20113	21466	22810	24376	26807	29261	31262	*33050*	*35000*	Net Plant ($mill)	*38400*
5.6%	5.8%	5.3%	6.0%	6.0%	6.4%	6.0%	5.3%	5.3%	5.4%	*5.0%*	*5.0%*	Return on Total Cap'l	*6.0%*
7.7%	8.7%	8.3%	9.1%	9.3%	10.6%	10.2%	9.7%	10.1%	10.2%	*11.0%*	*11.0%*	Return on Shr. Equity	*10.0%*
7.8%	8.7%	8.3%	9.2%	9.4%	10.7%	10.3%	9.7%	10.2%	10.2%	*11.0%*	*11.0%*	Return on Com Equity [E]	*10.0%*
1.9%	2.9%	2.5%	3.3%	3.4%	4.8%	4.4%	4.2%	4.4%	4.4%	*5.0%*	*5.0%*	Retained to Com Eq	*4.0%*
76%	67%	70%	64%	64%	56%	57%	57%	57%	57%	*57%*	*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: $20.4 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 '20-'22 to '26-'28
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%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1440	1398	1628	1328	5794
2021	1566	1472	1811	1545	6394
2022	1879	1726	2306	2046	7957
2023	2062	1760	2060	*2118*	*8000*
2024	*2120*	*1800*	*2450*	*2130*	*8500*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.59	.98	1.47	.46	3.50
2021	.91	.80	1.65	.48	3.84
2022	.97	.80	1.74	.63	4.14
2023	1.00	.90	1.87	*.63*	*4.40*
2024	*1.03*	*.90*	*2.00*	*.77*	*4.70*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.475	.475	.475	.495	1.92
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		

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 posted solid results for the September quarter. Earnings per share of $1.87 were $0.04 higher than our estimate and $0.13 above the year-ago tally. Most of the outperformance was due to increased investments in infrastructure across all business segments and lower tax expenses. Too, earnings at Ameren Missouri, the largest segment, continue to benefit from higher electric service rates, and we look for this to remain a main catalyst to the bottom line in the next couple of years.

The utility's guidance has improved a bit. Due to the aforementioned tailwinds and strong bottom-line performances of late, management narrowed its 2023 earnings estimate to a range of $4.30 to $4.45 per share. This compares to the initial guidance range of $4.25 to $4.45 per share. The company also updated its five-year plan, which includes a 6% to 8% compounded annual growth rate for earnings from 2023 through 2027. Our 2023 and 2024 bottom-line projections are staying put at $4.40 and $4.70 per share, respectively. Profit growth should be primarily driven by increased infrastructure investment and strong rate base growth.

Ameren remains active on the regulatory front. There was a constructive settlement of the Ameren Missouri Electric rate review, and new rates recently went into effect. The agreement calls for a 2% increase in residential customer rates, compounded annually since April 2017. AEE also has a rate case ongoing for its Illinois electric segment, and received a lower-than-expected proposed order from the commission. In December, the company filed briefs detailing concerns with the return on equity in the proposed electric order. A final order is expected in mid-December.

This issue is best suited for conservative income-oriented investors. The dividend yield of 3.3% is about average for a utility, which is one of the highest dividend-paying industries in the market. Meanwhile, capital appreciation potential over the 18-month and 3- to 5-year time frames is solid compared to most of its peers. Lastly, these shares are ranked to track the broader market averages in the coming year.

Zachary J. Hodgkinson December 8, 2023

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

(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-February. **(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%.

AMERICAN ELEC. PWR. NDQ-AEP

RECENT PRICE 78.54 | P/E RATIO 13.8 (Trailing: 16.3 Median: 18.0) | RELATIVE P/E RATIO 0.85 | DIV'D YLD 4.5% | VALUE LINE

TIMELINESS 3 Raised 11/24/23
SAFETY 1 Raised 3/17/23
TECHNICAL 4 Raised 12/1/23
BETA .80 (1.00 = Market)

18-Month Target Price Range

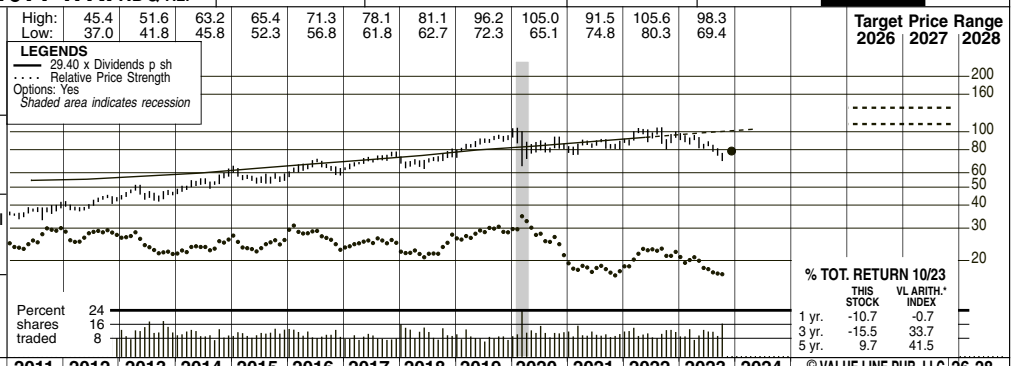
Low-High	Midpoint (% to Mid)
$67-$123	$95 (20%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	135	(+70%)	*17%*
Low	110	(+40%)	*12%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	707	635	596
to Sell	496	532	572
Hld's(000)	390225	381232	386016



2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
33.41	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	*37.30*	*38.75*	Revenues per sh	*40.90*
6.80	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	*11.00*	*11.65*	"Cash Flow" per sh	*14.75*
2.86	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	*5.25*	*5.60*	Earnings per sh A	*6.80*
1.58	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	*3.35*	*3.52*	Div'd Decl'd per sh B ■ †	*4.16*
8.88	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*	Cap'l Spending per sh	*14.00*
25.17	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	*52.60*	*55.05*	Book Value per sh C	*62.55*
400.43	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	*523.00*	*530.00*	Common Shs Outst'g D	*550.00*
16.3	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
.87	.79	.67	.85	.75	.88	.81	.84	.80	.80	.97	.97	1.14	1.01	.92	1.23			Relative P/E Ratio	*1.00*
3.4%	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%			Avg Ann'l Div'd Yield	*3.3%*
15357	17020	16453	16380	15425	16196	15561	14919	16792	19640	*19500*	*20550*	Revenues ($mill)	*22500*
1549.0	1634.0	1763.4	2073.6	1783.2	1923.8	2019.0	2200.1	2488.1	2307.2	*2765*	*2990*	Net Profit ($mill)	*3740*
36.2%	37.8%	35.1%	26.8%	33.7%	5.8%	.7%	1.9%	4.6%	NMF	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
7.3%	9.0%	11.0%	8.0%	8.0%	10.7%	12.7%	9.7%	7.8%	7.0%	*7.0%*	*7.0%*	AFUDC % to Net Profit	*5.0%*
51.1%	49.0%	49.8%	50.0%	51.5%	53.2%	56.1%	58.5%	58.3%	58.5%	*58.0%*	*58.0%*	Long-Term Debt Ratio	*57.5%*
48.9%	51.0%	50.2%	50.0%	48.5%	46.8%	43.9%	41.5%	41.7%	42.0%	*42.0%*	*42.0%*	Common Equity Ratio	*42.5%*
32913	33001	35633	34775	37707	40677	44759	49537	53734	57520	*62950*	*68900*	Total Capital ($mill)	*75900*
40997	44117	46133	45639	50262	55099	60138	63902	66001	71283	*74600*	*78000*	Net Plant ($mill)	*87300*
6.0%	6.3%	6.1%	7.2%	5.9%	5.9%	5.6%	5.6%	5.6%	4.0%	*4.5%*	*4.5%*	Return on Total Cap'l	*5.0%*
9.6%	9.7%	9.9%	11.9%	9.8%	10.1%	10.3%	10.7%	11.1%	9.7%	*10.0%*	*10.0%*	Return on Shr. Equity	*11.0%*
9.6%	9.7%	9.9%	11.9%	9.8%	10.1%	10.3%	10.7%	11.1%	9.7%	*10.0%*	*10.0%*	Return on Com Equity	*11.0%*
3.7%	3.8%	3.9%	5.5%	3.2%	3.5%	3.4%	3.8%	4.3%	2.9%	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
62%	61%	60%	54%	67%	65%	67%	65%	61%	70%	*63%*	*63%*	All Div'ds to Net Prof	*61%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $42220 mill. **Due in 5 Yrs** $12886 mill.
LT Debt $36716 mill. **LT Interest** $1400 mill.

Leases, Uncapitalized Annual rentals $119.6 mill.

Pfd Stock None

Common Stock 525,875,633 shs.

MARKET CAP: $41.3 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 '20-'22 to '26-'28
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%*

QUARTERLY REVENUES ($ mill.) E

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	3747	3494	4066	3610	14918
2021	4281	3826	4623	4061	16792
2022	4593	4640	5526	4881	19640
2023	4690	4373	5342	*5095*	*19500*
2024	*4820*	*4750*	*5375*	*5605*	*20550*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.00	1.05	1.50	.87	4.42
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	*1.24*	*5.25*
2024	*1.35*	*1.35*	*1.75*	*1.15*	*5.60*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.67	.67	.67	.70	2.71
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	

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 16,700 employees. President, Executive Chairman & Chief Executive Officer: Julie Sloat. Incorporated: New York. Address: 1 Riverside Plaza, Columbus, Ohio 43215-2373. Telephone: 614-716-1000. Internet: www.aep.com.

We think that American Electric Power will likely post solid earnings growth in 2023 and 2024. The company should continue to benefit from rate relief, increased investment in its transmission business, and volume growth over the next few years, despite challenging economic conditions which have led to usage decline of late. Third-quarter earnings per share came in at $1.77, above Wall Street's and our expectations due to rate increases, load growth, and higher transmission revenue. As a result, management narrowed its 2023 bottom-line outlook to a range of $5.24-$5.34 per share, and reaffirmed a long-term annual earnings growth target of 6%-7%. We are sticking with our 2023 and 2024 EPS estimates of $5.25 and $5.60, respectively.

The company remains active on the regulatory front. Units in Indiana and Michigan requested hikes in the third quarter, based on a 10.5% return on equity (ROE). The utility expects new rates to go into effect by next year. In Ohio, AEP reached an agreement with the Public Utilities Commission of Ohio to invest more than $1.5 billion in the electric grid over the next five years. If approved, the average residential customer would see an average annual increase of about $1.50 per month through 2028. Kentucky Power is also making progress in its June 2023 rate base application, which asks for a 9.9% ROE and a request for the securitization of $471 million of regulatory assets. A final order is expected by the end of this year, and interim rates will likely go into effect in January 2024.

The board of directors raised the dividend, effective with the December payment. This is the typical timing of hikes for AEP. The increase was $0.05 a share (6%) quarterly, in line with the company's 6%-7% operating earnings growth range and within the utility's target for a payout ratio of 60%-70%.

These shares are ranked 3 (Average) for Timeliness. Nonetheless, this stock is best suited for risk-averse income-oriented investors. Indeed, the above average dividend yield of 4.5% remains this issue's most notable feature. Meanwhile, total return potential over the 18-month and 3- to 5-year time frames is solid for a utility.

Zachary J. Hodgkinson December 8, 2023

(A) Diluted EPS. Excl. nonrec. gains (losses): '07, (20¢); '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 February. (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	100
Price Growth Persistence	55
Earnings Predictability	95

DUKE ENERGY NYSE-DUK

RECENT PRICE 87.90 | P/E RATIO 14.3 (Trailing: 17.6 Median: 18.0) | RELATIVE P/E RATIO 0.95 | DIV'D YLD 4.7% | VALUE LINE

TIMELINESS 4 Lowered 8/18/23
SAFETY 2 New 6/1/07
TECHNICAL 3 Raised 11/3/23
BETA .85 (1.00 = Market)

18-Month Target Price Range
Low-High: $74-$131 | Midpoint (% to Mid): $103 (15%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	135	(+55%)	*15%*
Low	100	(+15%)	*7%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	947	891	852
to Sell	673	731	753
Hld's(000)	499614	493832	495714

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
High:	71.1	75.5	87.3	90.0	87.8	91.8	91.4	97.4	103.8	108.4	116.3	106.4						
Low:	59.6	64.2	67.1	65.5	70.2	76.1	72.0	82.5	62.1	85.6	83.8	83.1						

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

Target Price Range 2026 2027 2028

% TOT. RETURN 9/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-1.0	16.6
3 yr.	12.3	43.6
5 yr.	34.1	37.1

Percent shares traded: 15, 10, 5

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
	30.24	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	*38.50*	*38.95*	Revenues per sh	*40.90*
	8.11	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	*13.25*	*13.55*	"Cash Flow" per sh	*14.60*
	3.60	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	*5.60*	*6.00*	Earnings per sh A	*7.00*
	2.58	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*	Div'd Decl'd per sh B ■	*4.30*
	7.43	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	*16.75*	*17.60*	Cap'l Spending per sh	*16.75*
	50.40	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	*64.50*	*66.25*	Book Value per sh C	*70.00*
	420.62	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	*770.00*	*770.00*	Common Shs Outst'g D	*770.00*
	16.1	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
	.85	1.04	.89	.81	.87	1.11	.98	.94	.92	1.12	1.00	.92	.94	.88	1.02	1.14			Relative P/E Ratio	*.95*
	4.4%	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%			Avg Ann'l Div'd Yield	*3.9%*
	24598	23925	23459	22743	23565	24521	25079	23868	25097	28768	*29650*	*30000*	Revenues ($mill)	*31500*
	2813.0	2934.0	2854.0	2560.0	2963.0	3339.0	3747.0	3878.0	4133.0	4104.1	*4310*	*4620*	Net Profit ($mill)	*5390*
	32.6%	30.6%	32.2%	31.0%	30.4%	14.1%	12.7%	.3%	5.1%	7.4%	*9.0%*	*9.0%*	Income Tax Rate	*9.0%*
	8.8%	7.2%	9.2%	11.7%	12.3%	11.4%	8.0%	6.9%	5.9%	8.1%	*7.0%*	*7.0%*	AFUDC % to Net Profit	*7.0%*
	48.0%	47.7%	48.6%	52.6%	54.0%	53.8%	54.0%	53.7%	55.1%	56.1%	*58.5%*	*58.5%*	Long-Term Debt Ratio	*61.0%*
	52.0%	52.3%	51.4%	47.4%	46.0%	46.2%	44.1%	44.4%	43.1%	42.5%	*40.0%*	*40.0%*	Common Equity Ratio	*37.5%*
	79482	78088	77222	86609	90774	94940	101807	103589	109744	115235	*124525*	*124525*	Total Capital ($mill)	*144100*
	69490	70046	75709	82520	86391	91694	102127	106782	111408	111748	*124375*	*124375*	Net Plant ($mill)	*141100*
	4.6%	4.8%	4.8%	4.0%	4.3%	4.6%	4.7%	4.8%	4.8%	4.5%	*4.5%*	*4.5%*	Return on Total Cap'l	*4.5%*
	6.8%	7.2%	7.2%	6.2%	7.1%	7.6%	8.0%	8.1%	8.4%	8.5%	*9.0%*	*9.0%*	Return on Shr. Equity	*9.0%*
	6.8%	7.2%	7.2%	6.2%	7.1%	7.6%	8.3%	8.2%	8.5%	8.5%	*9.0%*	*9.0%*	Return on Com Equity E	*9.0%*
	1.5%	1.7%	1.5%	.6%	1.2%	2.0%	2.4%	2.3%	1.9%	2.5%	*2.5%*	*2.5%*	Retained to Com Eq	*3.0%*
	78%	76%	79%	91%	83%	74%	71%	73%	78%	76%	*73%*	*73%*	All Div'ds to Net Prof	*68%*

CAPITAL STRUCTURE as of 6/30/23
Total Debt $74523 mill. **Due in 5 Yrs** $19536 mill.
LT Debt $69914 mill. **LT Interest** $2206 mill.
Incl. $915 mill. finance leases.
(LT interest earned: 2.7x)
Leases, Uncapitalized Annual rentals $225 mill.
Pension Assets-12/21 $9235 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 770,707,545 shs. **as of 7/31/23**
MARKET CAP: $67.7 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-2.3	+2.0	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. (%)	183	209	285

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
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
2020	5949	5421	6721	5777	23868
2021	6150	5758	6951	6238	25097
2022	7132	6685	7968	6983	28768
2023	7276	6578	*8150*	*7646*	*29650*
2024	*7350*	*6650*	*8250*	*7750*	*30000*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.14	1.08	1.87	1.03	5.12
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	*1.98*	*1.51*	*5.60*
2024	*1.35*	*1.30*	*2.05*	*1.30*	*6.00*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.9275	.9275	.945	.945	3.75
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	1.0250		

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 continues to make progress in its rate cases. The North Carolina Utilities Commission approved new rates in that state that were implemented on October 1st. The utility reached a settlement calling for increases of $234 million (5.8%) in 2023, $126 million (3.2%) in 2024, and $138 million (3.4%) in 2025. In Kentucky, the utility's electric rate case hearing has reached a conclusion, and an order by the Kentucky Public Service Commission is expected in late November. Duke also partnered with Amazon to place a two-megawatt solar plant on top of an Amazon fulfillment center in north Kentucky, which is the largest rooftop solar site in that state. This should benefit the utility's long-term clean energy transition goals.

Rate relief is a main reason for the profit growth we expect in 2023 and 2024. We think the utility should continue to benefit from a number of pending rate cases, as well as strong electric volume growth over the next few years. Accordingly, management reaffirmed its long-term annual earnings growth rate of 5%-7% through 2027. While the utility is taking advantage of rate relief, we have cut our 2023 profit projection by $0.05 a share, to reflect weaker-than-expected second-quarter earnings due to mild weather and increased interest expenses. We look for 2023 and 2024 bottom-line totals of $5.60 and $6.00 per share, right around management's annual target of 5%-7% growth.

These shares have dropped nearly 10% in value since our August report, alongside many of its peers in the utilities industry. Utility stocks have been under selling pressure due to increased competition in the bond market caused by rising Treasury yields. Duke shares have closely tracked the S&P Utility Index (XLU) over the past year, and both are down more than 15% over that interim.

Income-oriented investors may be drawn to this issue. The stock has an above-average dividend yield for a utility. Too, Duke has a proven track record of strong management and the stock price has outperformed its peer group over the past five to 10 years. At this level, however, appreciation potential to 2026-2028 is nothing to write home about.

Zachary J. Hodgkinson November 10, 2023

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 Nov. **(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 62.53 | P/E RATIO 13.0 (Trailing: 13.2 Median: 14.0) | RELATIVE P/E RATIO 0.81 | DIV'D YLD 5.0% | VALUE LINE

TIMELINESS 3 Lowered 7/7/23
SAFETY 3 Lowered 11/23/18
TECHNICAL 2 Lowered 10/20/23
BETA 1.00 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$49-$85 $67 (5%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+70%)	17%
Low	70	(+10%)	8%

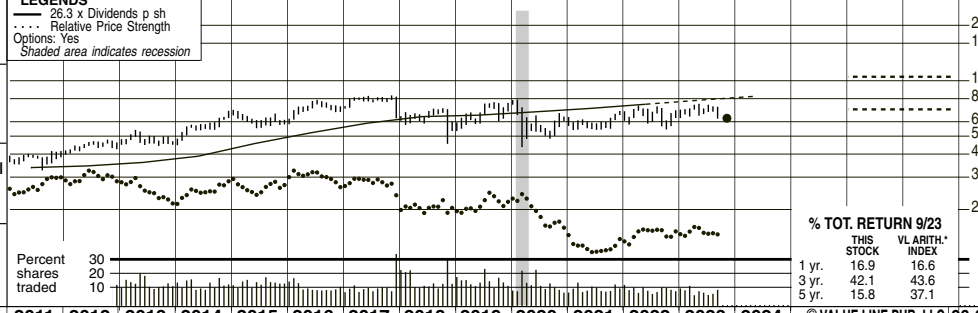
Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	382	371	369
to Sell	254	274	304
Hld's(000)	343385	343456	340122

	48.0	54.2	68.7	69.6	78.7	83.4	71.0	76.4	78.9	68.6	73.3	74.9
High:	39.6	44.3	44.7	55.2	58.0	62.7	45.5	53.4	43.6	53.9	54.4	58.8

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

Target Price Range 2026 2027 2028



% TOT. RETURN 9/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	16.9	16.6
3 yr.	42.1	43.6
5 yr.	15.8	37.1

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
40.25	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	*45.20*	*46.65*	Revenues per sh	*50.00*
7.60	8.08	7.96	8.41	9.03	9.63	8.80	9.95	10.35	10.43	11.03	4.69	9.81	10.69	11.16	12.07	*12.40*	*13.00*	"Cash Flow" per sh	*14.50*
3.32	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	*4.75*	*5.10*	Earnings per sh A	*6.00*
1.18	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*	Div'd Decl'd per sh B ■	*3.66*
8.67	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	*15.25*	*15.75*	Cap'l Spending per sh	*17.00*
25.92	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	*35.25*	*35.00*	Book Value per sh C	*42.25*
325.81	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	*384.00*	*386.00*	Common Shs Outst'g D	*390.00*
16.0	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.5*
.85	.75	.65	.66	.74	.62	.71	.68	.75	.94	.87	- -	.75	.68	.70	.81			Relative P/E Ratio	*.80*
2.2%	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%			Avg Ann'l Div'd Yield	*4.2%*
12581	13413	11524	11869	12320	12657	12347	13578	14905	17220	*17350*	*18000*	Revenues ($mill)	*19500*
1344.0	1539.0	1480.0	1422.0	1603.0	d290.0	1716.0	1818.0	1907.0	1977.0	*2030*	*2170*	Net Profit ($mill)	*2550*
25.2%	22.4%	6.6%	11.1%	5.0%	- -	1.2%	5.0%	18.0%	12.5%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
7.8%	5.8%	8.0%	6.8%	7.2%	- -	9.6%	9.6%	8.8%	9.6%	*9.0%*	*9.0%*	AFUDC % to Net Profit	*8.0%*
45.7%	44.1%	45.0%	41.8%	45.6%	53.6%	53.5%	55.2%	57.6%	60.7%	*63.5%*	*65.5%*	Long-Term Debt Ratio	*66.5%*
46.2%	47.2%	46.7%	49.2%	45.8%	38.3%	39.9%	39.5%	33.2%	30.6%	*28.5%*	*27.0%*	Common Equity Ratio	*27.0%*
21516	23216	24352	24362	25506	27284	33360	35581	41959	44547	*47425*	*50475*	Total Capital ($mill)	*60325*
30455	32981	35085	37000	39050	41348	44285	47839	50700	53486	*56375*	*59400*	Net Plant ($mill)	*69175*
7.3%	7.7%	7.1%	6.9%	7.3%	.1%	6.4%	6.3%	5.6%	5.7%	*5.5%*	*5.5%*	Return on Total Cap'l	*5.5%*
11.5%	11.9%	11.1%	10.0%	11.6%	NMF	11.1%	11.4%	10.7%	11.3%	*11.5%*	*12.5%*	Return on Shr. Equity	*12.5%*
12.5%	13.0%	12.0%	10.8%	12.7%	NMF	12.0%	12.0%	12.5%	12.9%	*13.5%*	*14.5%*	Return on Com Equity E	*14.0%*
8.1%	8.8%	7.2%	5.6%	6.6%	NMF	5.9%	5.4%	5.4%	5.2%	*5.0%*	*5.5%*	Retained to Com Eq	*5.5%*
40%	37%	44%	53%	52%	NMF	54%	58%	61%	64%	*67%*	*65%*	All Div'ds to Net Prof	*64%*

CAPITAL STRUCTURE as of 6/30/23
Total Debt $33480 mill. **Due in 5 Yrs** $9685 mill.
LT Debt $29430 mill. **LT Interest** $1400 mill.
(Total Interest Coverage: 2.9x)
Leases, Uncapitalized Annual rentals $542 mill.

Pension Assets-12/22 $3462 mill.
Oblig $3524 mill.

Pfd Stock $3879 mill. **Pfd Div'd** $212 mill.

Common Stock 383,288,769 shs.
as of 7/20/23
MARKET CAP: $24.0 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	+.7	-3.9	+2.6
Avg. Indust. Use (MWH)	589	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	23133	21190	24345
Annual Load Factor (%)	46.7	52.7	45.8
% Change Customers (yr-end)	+.6	+.3	+.8
Fixed Charge Cov. (%)	NMF	113	135

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	0.5%	2.0%	*4.0%*
"Cash Flow"	2.5%	1.5%	*4.0%*
Earnings	2.0%	1.5%	*4.5%*
Dividends	7.5%	6.5%	*5.0%*
Book Value	1.5%	0.5%	*2.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	2790	2987	4644	3157	13578
2021	2960	3315	5299	3331	14905
2022	3968	4008	5228	4016	17220
2023	3966	3964	*5350*	*4070*	*17350*
2024	*4100*	*4250*	*5475*	*4175*	*18000*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.63	1.00	1.67	1.19	4.52
2021	.79	.94	1.69	1.16	4.59
2022	1.07	.94	1.48	1.15	4.63
2023	1.09	1.01	*1.49*	*1.16*	*4.75*
2024	*1.14*	*1.06*	*1.63*	*1.27*	*5.10*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.6125	.6125	.6125	.6125	2.45
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		

BUSINESS: Edison International is a holding company for Southern California Edison Company (SoCal Edison), which supplies electricity to 5.2 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, 42%; industrial, 3%; other, 15%. Generating sources: nuclear, 9%; gas, 7%; hydroelectric, 4%; purchased, 80%. Power costs: 37% of revs. '22 reported depr. rate: 3.8%. Employs 13,385. Chairman: William P. Sullivan. 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 is on target for a solid 2023 campaign and operational momentum through next year. The utility posted good first-half profit comparisons that should enable it to surpass the midpoint of this year's internal share-earnings projection of $4.55 to $4.85. The escalation mechanism set forth in the 2021 General Rate Case (GRC) decision that allows the company to bill for certain types of expenses, thereby circumventing regulatory lag, is a big plus. Higher interest expense remains problematic, but there are enough tailwinds to more than offset the challenging rate environment. Load growth in California is brisk at around 3% due in part to the ongoing shift to electric vehicles and heavy equipment. Leadership remains confident in its expectation of 5%-7% profit growth through at least 2025, with a path to $7 per share by 2028. The state's aggressive green energy initiatives and ongoing fire mitigation work should deliver economic returns on invested capital. As always, rate relief by way of the regulatory umbrella will be a key factor. In that vein, the company filed its latest GRC a few months ago.

Although Edison has worked to lower its wildfire risks, they're still problematic. Orange County recently filed a lawsuit alleging EIX's utility, SoCal Edison, acted negligently in maintaining and operating its equipment, causing two wildfires that burned thousands of acres. The blazes in question took place in October, 2020 and May, 2022. Dollar amounts sought weren't given. In recent years, EIX has paid out billions of dollars in lawsuit settlements associated with the role its power lines played in the disastrous late 2017 to 2018 forest fires in the Golden State. While we now exclude the charges from our earnings presentation (beginning from 2019), to better highlight the progress that EIX is making in its core operations, one can see the impact on the balance sheet via the rising debt as a percentage of total capital in the financial array.
These shares are neutrally ranked for year-ahead relative performance. Despite the many good things taking place in EIX's service area, wildfire risks, though likely less catastrophic now than in the past, are still financially material.
Anthony J. Glennon *October 20, 2023*

(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); 1Q '23, (28¢); disc. ops.: '13, 11¢; '14, 57¢; '15, 11¢; '18, 10¢. Qtly. EPS may not sum due to rounding. Next egs. report due early Nov. **(B)** Div'ds paid late Jan., Apr., July, & Oct. ■ Div'd reinv. plan avail. **(C)** Incl. def'd chgs. In '22: $2.49/sh. **(D)** In mill. **(E)** Rate base: net orig. cost. Rate all'd on com. eq. in '20: 10.3%; Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	35
Earnings Predictability	10

ENTERGY CORP. NYSE-ETR

RECENT PRICE **101.63** | P/E RATIO **15.7** (Trailing: 14.6 Median: 14.0) | RELATIVE P/E RATIO **0.97** | DIV'D YLD **4.4%** | **VALUE LINE**

TIMELINESS **3** Raised 9/8/23
SAFETY **2** Raised 12/13/19
TECHNICAL **4** Lowered 12/8/23
BETA .95 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$80-$145 $113 (10%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	155	(+55%)	*15%*
Low	115	(+15%)	*7%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	377	367	405
to Sell	274	287	270
Hld's(000)	186530	184354	181973

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
High:	74.5	72.6	92.0	90.3	82.1	87.9	90.8	122.1	135.5	115.0	126.8	111.9								
Low:	61.6	60.2	60.4	61.3	65.4	69.6	71.9	83.2	75.2	85.8	94.9	87.1								
	59.47	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	***57.15***	***57.80***	Revenues per sh	***65.20***
	11.73	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	***18.20***	***17.45***	"Cash Flow" per sh	***19.90***
	5.60	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	***7.25***	***6.45***	Earnings per sh [A]	***7.50***
	2.58	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***	Div'd Decl'd per sh [B] ■ †	***5.00***
	10.29	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	***23.00***	***19.00***	Cap'l Spending per sh	***19.75***
	40.71	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	***63.10***	***65.50***	Book Value per sh [C]	***73.90***
	193.12	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	***214.00***	***218.00***	Common Shs Outst'g [D]	***230.00***
	19.3	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***18.0***
	1.02	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.75	.88	.79	.81	1.22			Relative P/E Ratio	***1.00***
	2.4%	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%			Avg Ann'l Div'd Yield	***3.7%***
	11391	12495	11513	10846	11074	11009	10879	10114	11743	13764	***12225***	***12600***	Revenues ($mill)	***15000***
	904.5	1060.0	1061.2	1249.8	950.7	1092.1	1258.2	1406.7	1402.8	1103.2	***1550***	***1405***	Net Profit ($mill)	***1725***
	26.7%	37.8%	2.2%	11.3%	1.8%	--	--	--	16.1%	16.1%	***23.0%***	***23.0%***	Income Tax Rate	***23.0%***
	10.1%	9.3%	7.4%	8.1%	14.7%	17.5%	16.7%	12.2%	7.1%	2.5%	***10.0%***	***8.0%***	AFUDC % to Net Profit	***10.0%***
	55.1%	54.9%	57.8%	63.6%	63.6%	63.2%	62.0%	65.5%	67.6%	64.2%	***64.5%***	***64.5%***	Long-Term Debt Ratio	***64.5%***
	43.6%	43.8%	40.8%	35.5%	35.5%	35.9%	37.1%	33.7%	31.7%	35.2%	***35.5%***	***35.5%***	Common Equity Ratio	***35.5%***
	22109	22842	22714	22777	22528	24602	27557	32386	36733	36810	***38780***	***41065***	Total Capital ($mill)	***48910***
	27882	28723	27824	27921	29664	31974	35183	38853	42244	42477	***45025***	***47730***	Net Plant ($mill)	***56845***
	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%	5.9%	5.6%	4.9%	4.3%	***5.0%***	***4.5%***	Return on Total Cap'l	***4.5%***
	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%	12.0%	12.6%	11.8%	8.4%	***11.5%***	***9.5%***	Return on Shr. Equity	***10.0%***
	9.2%	10.4%	11.2%	15.2%	11.7%	12.2%	12.1%	12.7%	11.9%	8.4%	***11.5%***	***9.5%***	Return on Com Equity [E]	***10.0%***
	3.0%	4.4%	4.8%	7.7%	3.9%	4.9%	5.2%	5.9%	5.2%	1.9%	***4.5%***	***3.0%***	Retained to Com Eq	***3.5%***
	68%	58%	58%	50%	68%	61%	58%	55%	57%	78%	***60%***	***71%***	All Div'ds to Net Prof	***77%***

% TOT. RETURN 10/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-7.0	-0.7
3 yr.	5.8	33.7
5 yr.	36.3	41.5

CAPITAL STRUCTURE as of 9/30/23
Total Debt $27534 mill. **Due in 5 Yrs** $11117 mill.
LT Debt $24659 mill. **LT Interest** $824.0 mill.
Incl. $54.7 mill. of securitization bonds.
(LT interest earned: 2.8x)
Leases, Uncapitalized Annual rentals $62.1 mill.
Pension Assets-12/22 $6993.1 mill.
Oblig $8409.6 mill.
Pfd Stock $254.4 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 211,473,074 shs. **as of 10/31/23**
MARKET CAP: $21.5 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-4.1	+3.2	+1.1
Avg. Indust. Use (MWH)	1017	1015	1018
Avg. Indust. Revs. per KWH(¢)	4.95	5.91	7.08
Capacity at Peak (Mw)	25665	NA	NA
Peak Load, Summer (Mw)	21340	NA	NA
Annual Load Factor (%)	62	NA	NA
% Change Customers (yr-end)	+1.0	+1.0	+1.0
Fixed Charge Cov. (%)	202	243	209

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	-.5%	-1.5%	*2.0%*
"Cash Flow"	.5%	-.5%	*1.5%*
Earnings	-.5%	1.5%	*.5%*
Dividends	1.5%	2.5%	*4.0%*
Book Value	1.5%	4.0%	*4.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	2427	2413	2904	2370	10114
2021	2845	2822	3353	2723	11743
2022	2878	3395	4219	3273	13764
2023	2981	2846	3596	***2802***	***12225***
2024	***2900***	***3300***	***3300***	***3100***	***12600***

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.59	1.79	2.59	1.93	6.90
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	***.80***	***7.25***
2024	***1.50***	***1.05***	***2.95***	***.95***	***6.45***

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.91	.91	.91	.93	3.66
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	

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 recorded improved third-quarter bottom-line results. Revenues fell to around $3.6 billion as electricity prices significantly declined due to lower fuel prices year over year. However, the company benefited from much warmer temperatures through its coverage areas, while population growth also helped. These factors led to a significant increase in gross profits, and the company has made investments in improving its infrastructure, allowing for a decline in maintenance expenses. Though interest costs rose due to higher interest rates, a profit of $3.14 per share was recorded during the recent quarter. We expect solid fourth-quarter earnings to occur at Entergy, as it should benefit from a few positive rate adjustments, including a new one in the Louisiana area, which began in September. Overall, we look for the bottom line to reach $7.25 per share this year.

We expect decent growth in the years ahead. The company should benefit from several rate cases across its coverage areas in the past few quarters, and we expect more to be filed, helping the top line grow. Still, some headwinds will likely exist in the near term, including cooler weather compared to this summer and the slowdown of some industrial activities that require Entergy's power to occur. Meanwhile, the energy provider has agreed to sell its gas distribution business for $484 million. This deal will likely close in the third quarter of 2025, subject to regulatory approvals. Over the long haul, Entergy is well positioned to benefit from growing populations in the southern U.S. along with reshoring of industrial and manufacturing processes. Another plus is capital projects, including several solar facilities in the years ahead. Overall, we project earnings will recede to $6.45 per share in 2024 before recovering to $7.50 by 2026-2028.

The board hiked the quarterly payout by 6% to $1.13 per share. What's more, we estimate the payout will grow at a solid clip in the years ahead.

Shares of Entergy are neutrally ranked for Timeliness. Also this stock has below-average 3- to 5-year appreciation potential. The dividend yield is attractive, however.

John E. Seibert III *December 8, 2023*

(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 February. **(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: $23.64/sh. **(D)** In mill. **(E)** Rate base: Net original cost. Allowed ROE (blended): 9.71%; earned on avg. com. eq., '22: 8.5%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	45
Earnings Predictability	75

EVERGY, INC. NYSE-EVRG

RECENT PRICE 50.72 | P/E RATIO 12.3 (Trailing: 17.1 Median: NMF) | RELATIVE P/E RATIO 0.76 | DIV'D YLD 5.1% | VALUE LINE

TIMELINESS 3 Raised 11/3/23
SAFETY 2 New 9/14/18
TECHNICAL 4 Lowered 12/8/23
BETA .95 (1.00 = Market)

18-Month Target Price Range

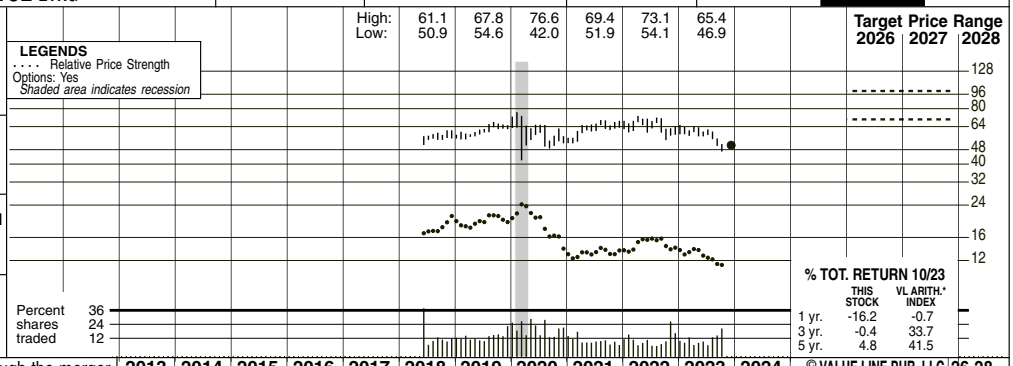
Low-High	Midpoint (% to Mid)
$43-$79	$61 (20%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+95%)	*22%*
Low	70	(+40%)	*12%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	358	310	298
to Sell	268	284	272
Hld's(000)	191450	194561	192350



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: $11.7 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 '26-'28
Revenues	- -	- -	*2.5%*
"Cash Flow"	- -	- -	*5.0%*
Earnings	- -	- -	*7.5%*
Dividends	- -	- -	*7.0%*
Book Value	- -	- -	*3.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1116	1184	1517	1094	4913.4
2021	1611	1236	1616	1122	5586.7
2022	1223	1446	1909	1281	5859.1
2023	1297	1354	1669	*1460*	*5780*
2024	*1250*	*1500*	*1950*	*1300*	*6000*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.31	.59	1.60	.22	2.72
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*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.475	.475	.475	.505	1.93
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	

© VALUE LINE PUB. LLC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	26-28
Revenues per sh	- -	- -	- -	- -	- -	16.75	22.71	21.66	24.36	25.49	*25.15*	*26.10*	*28.25*
"Cash Flow" per sh	- -	- -	- -	- -	- -	4.89	7.18	7.06	8.18	7.34	*7.90*	*8.20*	*9.20*
Earnings per sh A	- -	- -	- -	- -	- -	2.50	2.79	2.72	3.83	3.26	*3.60*	*3.85*	*4.85*
Div'd Decl'd per sh B ■	- -	- -	- -	- -	- -	1.74	1.93	2.05	2.18	2.33	*2.48*	*2.61*	*3.05*
Cap'l Spending per sh	- -	- -	- -	- -	- -	4.19	5.34	6.88	8.60	9.41	*9.20*	*9.25*	*9.50*
Book Value per sh C	- -	- -	- -	- -	- -	39.28	37.82	38.50	40.32	41.86	*42.70*	*44.10*	*47.50*
Common Shs Outst'g D	- -	- -	- -	- -	- -	255.33	226.64	226.84	229.30	229.90	*230.00*	*230.00*	*230.00*
Avg Ann'l P/E Ratio	- -	- -	- -	- -	- -	22.7	21.8	21.7	16.2	19.9	*Bold figures are Value Line estimates*		*17.5*
Relative P/E Ratio	- -	- -	- -	- -	- -	1.23	1.16	1.11	.88	1.15			*.95*
Avg Ann'l Div'd Yield	- -	- -	- -	- -	- -	3.1%	3.2%	3.5%	3.5%	4.0%			*3.7%*
Revenues ($mill)	- -	- -	- -	- -	- -	4275.9	5147.8	4913.4	5586.7	5859.1	*5780*	*6000*	*6500*
Net Profit ($mill)	- -	- -	- -	- -	- -	535.8	669.9	618.3	879.7	752.7	*830*	*885*	*1115*
Income Tax Rate	- -	- -	- -	- -	- -	9.8%	12.6%	14.1%	11.7%	5.8%	*9.0%*	*9.0%*	*9.0%*
AFUDC % to Net Profit	- -	- -	- -	- -	- -	2.5%	2.5%	5.5%	5.0%	5.1%	*6.0%*	*6.0%*	*5.0%*
Long-Term Debt Ratio	- -	- -	- -	- -	- -	40.0%	50.6%	51.3%	50.1%	50.0%	*51.5%*	*51.5%*	*53.5%*
Common Equity Ratio	- -	- -	- -	- -	- -	60.0%	49.4%	48.7%	49.9%	48.0%	*48.5%*	*48.5%*	*46.5%*
Total Capital ($mill)	- -	- -	- -	- -	- -	16716	17337	17924	18542	19668	*20175*	*21250*	*23400*
Net Plant ($mill)	- -	- -	- -	- -	- -	18952	19346	20106	21150	22137	*23150*	*24200*	*26300*
Return on Total Cap'l	- -	- -	- -	- -	- -	4.0%	4.8%	4.5%	5.7%	6.9%	*5.5%*	*5.5%*	*6.0%*
Return on Shr. Equity	- -	- -	- -	- -	- -	5.3%	7.8%	7.1%	9.5%	8.1%	*9.0%*	*9.0%*	*10.0%*
Return on Com Equity E	- -	- -	- -	- -	- -	5.3%	7.8%	7.1%	9.5%	8.1%	*9.0%*	*9.0%*	*10.0%*
Retained to Com Eq	- -	- -	- -	- -	- -	.6%	2.4%	1.8%	4.1%	3.1%	*3.0%*	*3.0%*	*3.5%*
All Div'ds to Net Prof	- -	- -	- -	- -	- -	89%	69%	75%	57%	73%	*69%*	*68%*	*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.

We look for Evergy's earnings prospects to improve in 2023 and 2024. Increased income from the company's transmission system, as well as rate relief in Missouri and Kansas, should remain key factors over the next few years. Indeed, higher transmission margin due to ongoing investments to improve its transmission infrastructure contributed $0.04 per share to third period profits and should continue to benefit earnings moving forward. Our full-year 2023 earnings estimate is at the midpoint of Evergy's updated guidance range of $3.55-$3.65 per share. Too, the utility is now targeting a long-term annual earnings per share growth target of 4%-6%, based on the midpoint of its original 2023 profit guidance of $3.65 per share.

Evergy received a disappointing regulatory ruling in Kansas. The negotiated unanimous settlement, which is currently pending approval by the Kansas Corporation Commission, fell short of the utility's expectations. Under the settlement agreement, Kansas Central will receive a net revenue increase of $74 million (3.5%) compared to the subsidiary's initial request of $204 million (9.8%). Too, Kansas Metro, which requested a hike of $14 million (2%), is set to receive a net revenue decrease of $32.9 million (-4.5%). The ruling, if approved, will hurt the company's forward plan by approximately $0.15 a share and go into effect by December 21st, 2023. Evergy plans to continue filing rate cases in Kansas and Missouri every two years.

The board of directors raised the dividend, effective with the December payment. The increase was $0.12 a share (5%) annually. The utility's target for the payout ratio is a range of 60%-70%. The yield of 5.1% now sits comfortably above the utility average, which is one of the highest dividend-paying industries in the market.

This stock is best suited for income-oriented investors. What's more, 18-month and 3- to 5-year capital appreciation potential remains attractive for a utility. Indeed, we look for the stock to trade within a range of $70-$100 out to 2026-2028. Meanwhile, the Timeliness rank sits at just 3 (Average).

Zachary J. Hodgkinson December 8, 2023

(A) Diluted earnings. Next earnings report due mid Feb. **(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	35
Earnings Predictability	85

IDACORP, INC. NYSE-IDA

RECENT PRICE **96.28** | P/E RATIO **18.4** (Trailing: 17.9 Median: 20.0) | RELATIVE P/E RATIO **1.15** | DIV'D YLD **3.4%** | **VALUE LINE**

TIMELINESS 4 Lowered 8/18/23
SAFETY 1 Raised 1/22/21
TECHNICAL 5 Lowered 9/29/23
BETA .85 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$83-$137 $110 (15%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(+30%)	*10%*
Low	105	(+10%)	*6%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	187	174	168
to Sell	162	153	170
Hld's(000)	41351	41405	42011

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
High:	45.7	54.7	70.1	70.5	83.4	100.0	102.4	114.0	113.6	113.8	118.9	113.0								
Low:	38.2	43.1	50.2	55.4	65.0	77.5	79.6	89.3	69.1	85.3	93.5	88.1								
	19.51	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	***32.85***	***34.00***	Revenues per sh	***36.50***
	4.11	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	***8.80***	***9.30***	"Cash Flow" per sh	***10.60***
	1.86	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	***5.15***	***5.40***	Earnings per sh [A]	***6.10***
	1.20	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***	***3.40***	Div'd Decl'd per sh [B] ■ †	***4.15***
	6.39	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	***14.00***	***16.00***	Cap'l Spending per sh	***11.00***
	26.79	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	***56.85***	***59.25***	Book Value per sh [C]	***66.00***
	45.06	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	***51.00***	***51.50***	Common Shs Outst'g [D]	***53.00***
	18.2	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***19.0***
	.97	.84	.68	.75	.72	.79	.75	.77	.82	1.00	1.04	1.11	1.19	1.02	1.12	1.21			Relative P/E Ratio	***1.05***
	3.5%	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%			Avg Ann'l Div'd Yield	***3.6%***
	182.4	193.5	194.7	198.3	212.4	226.8	232.9	237.4	245.6	259.0	***265***	***280***	Net Profit ($mill)	***335***
	28.3%	8.0%	19.0%	15.5%	18.6%	7.1%	9.5%	10.8%	13.1%	12.7%	***13.0%***	***13.0%***	Income Tax Rate	***13.0%***
	12.3%	13.6%	16.3%	16.3%	13.9%	15.2%	16.2%	17.3%	17.7%	19.8%	***15.0%***	***15.0%***	AFUDC % to Net Profit	***16.0%***
	46.6%	45.3%	45.6%	44.8%	43.7%	43.6%	41.3%	43.9%	42.8%	43.9%	***46.5%***	***47.0%***	Long-Term Debt Ratio	***50.0%***
	53.4%	54.7%	54.4%	55.2%	56.3%	56.4%	58.7%	56.1%	57.2%	56.1%	***53.5%***	***53.0%***	Common Equity Ratio	***50.0%***
	3465.9	3567.6	3783.3	3898.5	3997.5	4205.1	4201.3	4560.4	4669.1	5001.4	***5425***	***5790***	Total Capital ($mill)	***7000***
	3665.0	3833.5	3992.4	4172.0	4283.9	4395.7	4531.5	4709.5	4901.8	5173.0	***5650***	***6000***	Net Plant ($mill)	***7000***
	6.4%	6.6%	6.2%	6.1%	6.3%	6.4%	6.5%	6.1%	6.2%	6.1%	***6.0%***	***6.0%***	Return on Total Cap'l	***5.5%***
	9.9%	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	9.3%	9.2%	9.2%	***9.0%***	***9.0%***	Return on Shr. Equity	***9.5%***
	9.9%	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	9.3%	9.2%	9.2%	***9.0%***	***9.0%***	Return on Com Equity [E]	***9.5%***
	5.6%	5.4%	4.8%	4.3%	4.4%	4.4%	4.2%	3.9%	3.7%	3.7%	***3.5%***	***3.5%***	Retained to Com Eq	***3.5%***
	43%	46%	50%	53%	53%	54%	56%	58%	60%	60%	***62%***	***63%***	All Div'ds to Net Prof	***68%***
	1246.2	1282.5	1270.3	1262.0	1349.5	1370.8	1346.4	1350.7	1458.1	1644.0	***1675***	***1750***	Revenues ($mill)	***1935***

CAPITAL STRUCTURE as of 6/30/23
Total Debt $2605.6 mill. **Due in 5 Yrs** $335.0 mill.
LT Debt $2482.4 mill. **LT Interest** $110.0 mill.
(Total Interest Coverage: 4.0x)

Pension Assets-12/22 $839.7 mill.
Oblig $953.8 mill.

Pfd Stock None

Common Stock 50,614,789 shs.
as of 7/28/23

MARKET CAP: $4.9 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	+2.0	+3.9	+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)	3392	3751	3568
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+2.7	+2.8	+2.4
Fixed Charge Cov. (%)	313	334	419

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	3.5%	2.5%	*3.5%*
"Cash Flow"	4.0%	3.5%	*4.0%*
Earnings	4.0%	4.0%	*4.0%*
Dividends	8.5%	6.5%	*6.5%*
Book Value	5.0%	4.5%	*3.5%*

QUARTERLY REVENUES($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	291.0	318.8	425.3	315.6	1350.7
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	***410***	***421.5***	***1675***
2024	***445***	***430***	***425***	***450***	***1750***

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.74	1.19	2.02	.74	4.69
2021	.89	1.38	1.93	.65	4.85
2022	.91	1.27	2.10	.83	5.11
2023	1.11	1.35	***1.95***	***.74***	***5.15***
2024	***1.20***	***1.40***	***2.05***	***.75***	***5.40***

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.63	.63	.63	.67	2.56
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	

BUSINESS: IDACORP, Inc. is a holding company for Idaho Power Company, a regulated electric utility that serves 618,000 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, 38%; commercial, 27%; industrial, 22%; irrigation, 12%; other, 1%. Generating sources: hydro, 29%; coal, 20%; gas, 13%; purchased, 39%. Fuel costs: 40% of revenues. '22 reported depreciation rate: 3.0%. Has 2,077 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 string of annual earnings gains could be in jeopardy. Customer growth fueled impressive showings in the first half of this year, and favorable adjustments tied to grid modernization and expansion pitched in, as well. Leadership has repeated its earnings outlook of $4.95 to $5.15 per share, and stated that Idaho Power will use approximately $15 million of additional tax credits available under its Idaho earnings support regulatory mechanism in 2023. As far as our estimate, we are holding tight at $5.15 a share, which would represent earnings growth of about three-quarters of a percentage point. Of course, this would extend the annual growth streak to 16 years, but we do have some concerns. Most notably, a rising debt burden that has been facilitating both clean-energy maneuvers and huge infrastructure buildouts. The added interest expense could chip away at the small margin of growth we foresee right now.

Our $5.40-a-share earnings estimate for 2024 factors in some higher rates. The company's last filing of a general rate case was just over 12 years ago (in 2011). All the while, the population in its service area has jumped considerably, and customer growth has been the byproduct of this wave. Idaho, in particular, is past due for an increase in electric delivery rates. Management is poised to follow suit in the state of Oregon, though little information on the timing front has been provided as this report heads to press. The $5.40 figure represents 5% year-over-year growth, roughly in line with in-house expectations.

IDACORP's top-quality stock is not all that appealing at this juncture. Despite a 10% drop in price over the last 90 days, IDA's stock is an untimely choice (4: Below Average). Also, capital appreciation potential three to five years hence is below the *Value Line* median. The lower price has pumped up the yield a bit, and a 5% increase to $0.83 a quarter starting with the November payout was a welcome sign, but there are better options available within our utilities coverage. Make no mistake, the company's impressive finances and track record warrant the stock a premium valuation versus its peers. We simply think our subscribers should await a more favorable entry point.

Erik M. Manning *October 20, 2023*

(A) Diluted EPS. Earnings may not sum due to rounding. Next earnings report due early November. **(B)** Dividends historically paid in late February, May, August, and November. ■ Dividend reinvestment plan available. † Shareholder investment plan available. **(C)** Incl. intangibles. In '22: $1421.9 mill., $28.12/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	100
Price Growth Persistence	70
Earnings Predictability	100

NORTHWESTERN NDQ-NWE

RECENT PRICE 49.39 | P/E RATIO 14.3 (Trailing: 16.2 Median: 17.0) | RELATIVE P/E RATIO 0.89 | DIV'D YLD 5.2% | VALUE LINE

TIMELINESS 4 Raised 10/13/23
SAFETY 2 Raised 7/27/18
TECHNICAL 5 Lowered 10/20/23
BETA .95 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$48-$74	$61 (25%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	75	(+50%)	15%
Low	55	(+10%)	8%

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	169	135	157
to Sell	115	123	113
Hld's(000)	57154	58097	58238

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
High:	38.0	47.2	58.7	59.7	63.8	64.5	65.7	76.7	80.5	70.8	63.1	61.2						
Low:	33.0	35.1	42.6	48.4	52.2	55.7	50.0	57.3	45.1	53.2	48.7	46.0						

Target Price Range 2026 2027 2028

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

% TOT. RETURN 9/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	2.1	16.6
3 yr.	12.5	43.6
5 yr.	0.4	37.1

Percent shares traded

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
	30.79	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	*24.20*	*25.80*	Revenues per sh	*28.25*
	3.70	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	*6.80*	*7.20*	"Cash Flow" per sh	*8.35*
	1.44	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	*3.45*	*3.60*	Earnings per sh [A]	*4.15*
	1.28	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*	Div'd Decl'd per sh [B] ■ †	*2.76*
	3.00	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	*8.50*	*7.75*	Cap'l Spending per sh	*7.00*
	21.12	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	*47.50*	*48.50*	Book Value per sh [C]	*52.30*
	38.97	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	*62.00*	*62.00*	Common Shs Outst'g [D]	*62.00*
	21.7	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.5*
	1.15	.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	1.06	.96	.94	.99			Relative P/E Ratio	*.85*
	4.1%	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%			Avg Ann'l Div'd Yield	*4.3%*
	1154.5	1204.9	1214.3	1257.2	1305.7	1198.1	1257.9	1198.7	1372.3	1477.8	*1500*	*1600*	Revenues ($mill)	*1750*
	94.0	120.7	138.4	164.2	162.7	171.1	179.3	162.6	181.6	185.5	*210*	*225*	Net Profit ($mill)	*255*
	13.2%	--	13.7%	--	7.6%	--	1.6%	--	.9%	--	*3.0%*	*6.0%*	Income Tax Rate	*12.0%*
	8.7%	8.9%	9.8%	4.3%	5.2%	3.4%	4.6%	6.0%	14.9%	18.5%	*14.0%*	*13.0%*	AFUDC % to Net Profit	*12.0%*
	53.5%	53.4%	53.1%	52.0%	50.2%	52.2%	52.5%	52.8%	52.2%	48.2%	*47.5%*	*46.5%*	Long-Term Debt Ratio	*48.0%*
	46.5%	46.6%	46.9%	48.0%	49.8%	47.8%	47.5%	47.2%	47.8%	51.8%	*52.5%*	*53.5%*	Common Equity Ratio	*52.0%*
	2215.7	3168.0	3408.6	3493.9	3614.5	4064.6	4289.8	4409.1	4893.1	5148.3	*5625*	*5625*	Total Capital ($mill)	*6200*
	2690.1	3758.0	4059.5	4214.9	4358.3	4521.3	4700.9	4952.9	5247.2	5657.5	*6000*	*6250*	Net Plant ($mill)	*6725*
	5.5%	4.8%	5.2%	5.9%	5.6%	5.2%	5.2%	4.6%	4.6%	4.5%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.0%*
	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	7.8%	7.8%	7.0%	*7.0%*	*7.5%*	Return on Shr. Equity	*8.0%*
	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	7.8%	7.8%	7.0%	*7.0%*	*7.5%*	Return on Com Equity [E]	*8.0%*
	3.5%	3.8%	3.0%	4.1%	3.4%	3.2%	3.1%	2.0%	2.3%	1.7%	*2.0%*	*2.0%*	Retained to Com Eq	*2.5%*
	61%	54%	65%	58%	62%	64%	64%	74%	71%	76%	*74%*	*72%*	All Div'ds to Net Prof	*67%*

CAPITAL STRUCTURE as of 6/30/23
Total Debt $2668.5 mill. **Due in 5 Yrs** $1111.4 mill.
LT Debt $2565.4 mill. **LT Interest** $102.0 mill.
Incl. $7.2 mill. finance leases.
(Total Interest Coverage: 2.5x)

Pension Assets-12/22 $441.5 mill.
Oblig $521.8 mill.

Pfd Stock None

Common Stock 60,041,809 shs.
as of 7/21/23

MARKET CAP: $3.0 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-4.4	+.7	+3.7
Avg. Indust. Use (MWH)	33526	31792	34079
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	NA	NA	2073
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.2	+1.6	+1.5
Fixed Charge Cov. (%)	247	245	219

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	-2.0%	-1.0%	*2.5%*
"Cash Flow"	3.0%	1.0%	*3.5%*
Earnings	3.5%	1.0%	*3.5%*
Dividends	5.5%	4.0%	*2.0%*
Book Value	6.0%	4.5%	*3.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	335.3	269.4	280.6	313.4	1198.7
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*	*325*	*430*	*1500*
2024	*455*	*340*	*365*	*440*	*1600*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.00	.43	.58	1.21	3.21
2021	1.24	.59	.70	.97	3.50
2022	1.08	.58	.47	1.16	3.29
2023	1.10	.32	*.88*	*1.15*	*3.45*
2024	*1.10*	*.50*	*.85*	*1.15*	*3.60*

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.575	.575	.575	.575	2.30
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		

BUSINESS: NorthWestern Corporation (doing business as NorthWestern Energy) supplies electricity & gas in the Upper Midwest and Northwest, serving 463,000 electric customers in Montana and South Dakota and 301,000 gas customers in Montana, South Dakota, and Nebraska. Electric revenue breakdown: residential, 45%; commercial, 46%; industrial, 5%; other, 4%. Generating sources: coal, 28%; hydro, 26%; wind, 6%; natural gas, 6%; purchased power, 34%. Fuel costs: 33% of revenues. 2022 reported depreciation rate: 2.8%. Has approximately 1,500 employees. Board Chair: 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.

Regulators are dragging their feet on approving NorthWestern's settlement agreement for new electric and natural gas rates. To recap: in early April, the utility worked out an acceptable consensus with the Montana Consumer Counsel, the Montana Large Customer Group, and Walmart, Inc. The settlement has been submitted to the Montana Public Service Commission (MPSC) for the regulatory body's consideration. The MPSC has already granted interim rate hikes, starting from last October, to allow the company to begin the recoupment of some elevated spending. The agreed to base rates would increase annual electric and natural gas revenues by $67.4 million and $14.1 million, respectively. Those levels are predicated on the same authorized returns on equity, namely 9.65% for electric and 9.55% for gas, that were last agreed upon in 2015 and 2017. If the MPSC signs off on the agreement, the utility will have gotten about two-thirds of what it originally filed for in its general rate case. Importantly, NorthWestern would also receive pricing mechanisms geared towards reducing regulatory lag.

Rate-base expansion should drive growth. (The rate base is the dollar value of assets for which a utility is allowed to earn a regulated return on.) In June, NorthWestern completed an $83 million, 58-megawatt gas-fired power plant in South Dakota, with the potential for added capacity later. A $275 million, 175-mw gas generation facility in Montana was due to be operational later this year, but was delayed due to environmental permitting troubles. Now cleared, it is expected to come on line in 2024. The company may also add 220 mw of coal-fired generation, assuming it can get regulatory body approval, by doubling its stake in an existing plant at very favorable terms.

NorthWestern stock, however, is an untimely selection for year-ahead relative price performance. Rapidly rising yields on Treasury securities has pressured this equity and the stock's of most of the company's peers. We've scaled back our 3- to 5-year Target Price Range for the shares of many utilities, including NWE, on the prospect that the rise in interest rates is more than just a cyclical increase.

Anthony J. Glennon *October 20, 2023*

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	30
Earnings Predictability	95

(A) Diluted egs. Excl. nonrec. gains/(losses): '12, 40¢; '15, 27¢; '18, 52¢; '19, 45¢; '20, (15¢); '21, 10¢; '22, (4¢); 1Q-2Q '23, (5¢). Qtly EPS may not sum to full yr. due to rounding. Next egs. report due early Nov. **(B)** Div'ds paid late Mar., June, Sept. & Dec. ■ Div'd reinvest. plan avail. † Shrhldr. invest. plan avail. **(C)** Incl. def'd charges. In '22: $17.98/sh. **(D)** In mill. **(E)** Rate base: Net orig. cost. Rate allowed on com. eq. in MT in '19 (elec.): 9.65%; in '17 (gas): 9.55%; in SD in '15: none specified; in NE in '07: 10.4%. Reg. Climate: Below Avg.

OGE ENERGY CORP. NYSE-OGE

RECENT PRICE 34.93 | P/E RATIO 16.5 (Trailing: 20.0 Median: 18.0) | RELATIVE P/E RATIO 1.02 | DIV'D YLD 4.8% | VALUE LINE

TIMELINESS 2 Raised 12/1/23
SAFETY 2 Lowered 12/18/15
TECHNICAL 3 Raised 12/1/23
BETA 1.05 (1.00 = Market)

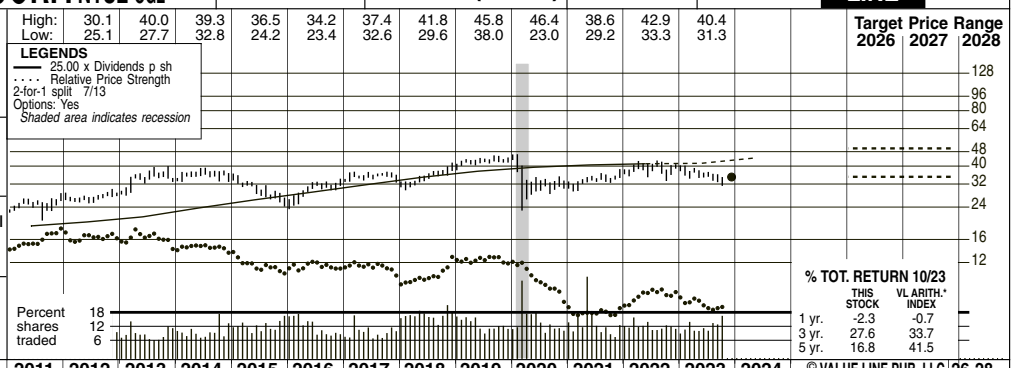
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$27-$48 $38 (5%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+45%)	13%
Low	35	(Nil)	5%

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	262	183	174
to Sell	155	211	216
Hld's(000)	139192	139715	134247



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
High:	30.1	40.0	39.3	36.5	34.2	37.4	41.8	45.8	46.4	38.6	42.9	40.4								
Low:	25.1	27.7	32.8	24.2	23.4	32.6	29.6	38.0	23.0	29.2	33.3	31.3								
	20.68	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	*17.00*	*17.50*	Revenues per sh	*19.00*
	2.39	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	*4.60*	*4.65*	"Cash Flow" per sh	*6.25*
	1.32	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	*2.05*	*2.15*	Earnings per sh [A]	*3.15*
	.68	.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*	*1.78*	Div'd Decl'd per sh [B] ■	*1.85*
	3.04	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*	Cap'l Spending per sh	*4.75*
	9.16	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*	Book Value per sh [C]	*26.00*
	183.60	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*	Common Shs Outst'g [D]	*200.20*
	13.8	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.0*
	.73	.75	.72	.85	.90	.97	.99	.96	.89	.93	.92	.89	1.01	.83	.77	1.00			Relative P/E Ratio	*.80*
	3.8%	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%			Avg Ann'l Div'd Yield	*4.4%*
	2867.7	2453.1	2196.9	2259.2	2261.1	2270.3	2231.6	2122.3	3653.7	3375.7	*3400*	*3500*	Revenues ($mill)	*3800*						
	387.6	395.8	337.6	338.2	384.3	425.5	449.6	415.9	472.5	452.5	*410*	*430*	Net Profit ($mill)	*630*						
	24.9%	30.4%	29.2%	30.5%	32.5%	14.5%	7.4%	13.2%	11.5%	12.0%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*						
	2.6%	1.7%	3.7%	6.4%	15.0%	8.3%	1.6%	1.6%	2.2%	2.0%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*						
	43.1%	45.9%	44.3%	41.1%	41.7%	42.0%	43.6%	49.0%	52.6%	49.8%	*52.0%*	*52.0%*	Long-Term Debt Ratio	*50.0%*						
	56.9%	54.1%	55.7%	58.9%	58.3%	58.0%	56.4%	51.0%	47.4%	52.4%	*48.0%*	*48.0%*	Common Equity Ratio	*50.0%*						
	5337.2	5999.7	5971.6	5849.6	6600.7	6902.0	7334.7	7126.2	8552.7	8962.0	*9400*	*9750*	Total Capital ($mill)	*10400*						
	6672.8	6979.9	7322.4	7696.2	8339.9	8643.8	9044.6	9374.6	9832.9	10546.8	*10830*	*11000*	Net Plant ($mill)	*12075*						
	8.6%	7.8%	6.9%	7.0%	7.0%	7.3%	7.1%	6.9%	6.4%	5.9%	*6.5%*	*6.5%*	Return on Total Cap'l	*7.5%*						
	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	11.0%	*12.0%*	*12.0%*	Return on Shr. Equity	*13.0%*						
	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	11.0%	*12.0%*	*12.0%*	Return on Com Equity [E]	*13.0%*						
	7.3%	6.5%	4.0%	3.3%	3.5%	3.8%	3.6%	2.8%	3.6%	3.0%	*4.5%*	*4.5%*	Retained to Com Eq	*5.5%*						
	43%	47%	61%	67%	64%	64%	67%	76%	69%	73%	*81%*	*81%*	All Div'ds to Net Prof	*57%*						

CAPITAL STRUCTURE as of 9/30/23
Total Debt $4751.1 mill. **Due in 5 Yrs** $1731.5 mill.
LT Debt $4339.7 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 200,287,364 shs.

MARKET CAP: $7.0 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 '26-'28
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
2020	431.3	503.5	702.1	485.4	2122.3
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	***1292.4***	***3400***
2024	***630***	***750***	***1300***	***820***	***3500***

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.23	.51	1.04	.30	2.08
2021	.26	.56	1.26	.28	2.36
2022	.33	.36	1.31	.25	2.25
2023	.19	.44	1.20	***.22***	***2.05***
2024	***.35***	***.30***	***1.25***	***.25***	***2.15***

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.365	.365	.365	.388	1.48
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	

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. '22 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 reached an uncontested settlement to replace two aging power generation units at the Horseshoe Lake Power Plant, and is awaiting the final order from the Oklahoma Corporation Commission. The Horseshoe Lake Project, which will replace the oldest units in the utility's generation fleet, is expected to cost approximately $331 million and increase the average residential customer's bill by $2.20 per month. The hike will likely go into effect in late 2026. The company also plans to file a rate review in Oklahoma by the end of the year, and expects a constructive regulatory outcome.

We have raised our 2023 earnings estimate by $0.05 a share. The company is benefiting from its transformation to a fully focused electric utility, as well as rate relief. As a result of the strong performances of late, OGE raised and narrowed its full-year 2023 profit guidance range to $2.02-$2.07 a share from the previous range of $1.93-$2.07 per share. The company looks for earnings growth to continue through 2024 and beyond as tailwinds at the electric company should help it to surpass long-term interest cost increases. We think OGE is well-positioned for the next few years due to rate relief, and the company's improved prospects as a pure play electric utility. The Inflation Reduction Act should also provide assistance to the bottom line through an otherwise challenging macroeconomic environment over that interim. Our 2024 earnings estimate is staying put at $2.15 a share.

The board of directors has raised the dividend, effective with the October payment. The increase was modest, at $0.0041 a share quarterly (1% higher). This issue offers a very attractive dividend, and the yield of 4.8% now sits comfortably above the utility average, which is one of the highest dividend-paying industries in the market.

This stock was recently upgraded one notch in our Timeliness Ranking System to 2 (Above Average). These shares should also appeal to income-oriented investors as the dividend remains this issue's most notable feature. Meanwhile, total return potential is unspectacular for the 18-month and 3- to 5-year time spans.

Zachary J. Hodgkinson December 8, 2023

(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 late Feb. **(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	A
Stock's Price Stability	85
Price Growth Persistence	35
Earnings Predictability	95

PINNACLE WEST NYSE-PNW

RECENT PRICE 73.04 | P/E RATIO 17.1 (Trailing: 20.4 Median: 17.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 4.8% | VALUE LINE

TIMELINESS 5 Lowered 10/13/23
SAFETY 2 Lowered 10/22/21
TECHNICAL 3 Lowered 10/20/23
BETA .95 (1.00 = Market)

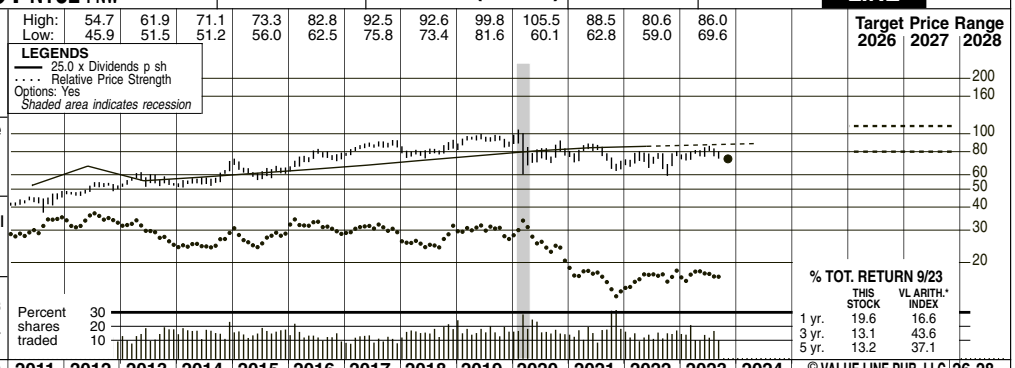
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$68-$107 $88 (20%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+50%)	*14%*
Low	80	(+10%)	*7%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	299	243	201
to Sell	175	222	237
Hld's(000)	97877	98017	97185



	54.7	61.9	71.1	73.3	82.8	92.5	92.6	99.8	105.5	88.5	80.6	86.0
High:	45.9	51.5	51.2	56.0	62.5	75.8	73.4	81.6	60.1	62.8	59.0	69.6
Low:												

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
35.07	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	*40.75*	*40.05*	Revenues per sh	*41.65*
9.29	8.13	8.08	6.85	7.52	7.92	8.15	8.09	9.09	9.39	9.79	11.41	11.13	10.86	12.23	13.44	*13.30*	*13.30*	"Cash Flow" per sh	*15.00*
2.96	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	*4.20*	*4.50*	Earnings per sh [A]	*5.70*
2.10	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	3.42	*3.48*	*3.54*	Div'd Decl'd per sh [B] ■	*3.75*
9.37	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	*14.50*	*15.00*	Cap'l Spending per sh	*15.00*
35.15	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	*54.10*	*56.75*	Book Value per sh [C]	*62.00*
100.49	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	*113.50*	*118.00*	Common Shs Outst'g [D]	*120.00*
14.9	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.5*
.79	.97	.91	.80	.92	.91	.86	.84	.81	.98	.97	.96	1.03	.86	.76	.99			Relative P/E Ratio	*.90*
4.8%	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%			Avg Ann'l Div'd Yield	*4.0%*
3454.6	3491.6	3495.4	3498.7	3565.3	3691.2	3471.2	3587.0	3803.8	4324.4	*4625*	*4725*	Revenues ($mill)	*5000*
406.1	397.6	437.3	442.0	497.8	511.0	538.3	550.6	618.7	483.6	*475*	*525*	Net Profit ($mill)	*685*
34.4%	34.2%	34.3%	33.9%	32.5%	20.2%	--	12.1%	14.8%	13.0%	*11.0%*	*12.0%*	Income Tax Rate	*14.0%*
10.0%	11.6%	11.8%	14.1%	13.9%	15.2%	9.3%	9.5%	10.1%	15.2%	*14.0%*	*13.0%*	AFUDC % to Net Profit	*12.0%*
40.0%	41.0%	43.0%	45.6%	48.9%	47.0%	47.1%	52.8%	53.9%	56.1%	*56.0%*	*52.5%*	Long-Term Debt Ratio	*56.0%*
60.0%	59.0%	57.0%	54.4%	51.1%	53.0%	52.9%	47.2%	46.1%	43.9%	*44.0%*	*47.5%*	Common Equity Ratio	*44.0%*
6990.9	7398.7	8046.3	8825.4	9796.4	9861.1	10263	11948	12820	13790	*13950*	*14100*	Total Capital ($mill)	*16900*
10889	11194	11809	12714	13445	14030	14523	15159	15987	16854	*17475*	*18200*	Net Plant ($mill)	*20200*
7.1%	6.4%	6.4%	6.0%	6.1%	6.2%	6.3%	5.5%	5.8%	4.5%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.0%*
9.7%	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	9.8%	10.5%	8.0%	*7.5%*	*8.0%*	Return on Shr. Equity	*9.5%*
9.7%	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	9.8%	10.5%	8.0%	*7.5%*	*8.0%*	Return on Com Equity [E]	*9.5%*
4.1%	3.5%	3.9%	3.5%	4.2%	3.9%	3.8%	3.5%	4.2%	1.7%	*1.5%*	*1.5%*	Retained to Com Eq	*3.0%*
58%	62%	59%	62%	58%	60%	61%	64%	60%	78%	*83%*	*78%*	All Div'ds to Net Prof	*66%*

CAPITAL STRUCTURE as of 6/30/23
Total Debt $8788.6 mill. **Due in 5 Yrs** $2100.7 mill.
LT Debt $8164.3 mill. **LT Interest** $395.0 mill.
(Total Interest Coverage: 2.8x)

Leases, Uncapitalized Annual rentals $18.1 mill.

Pension Assets-12/22 $2829.5 mill.
Oblig $2809.5 mill.

Pfd Stock None

Common Stock 113,312,203 shs.
as of 7/28/23
MARKET CAP: $8.3 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	+5.0	-.1	+4.4
Avg. Indust. Use (MWH)	766	808	849
Avg. Indust. Revs. per KWH (¢)	7.62	8.11	9.20
Capacity at Peak (Mw)	9094	8726	8612
Peak Load, Summer (Mw)	7660	7580	7587
Annual Load Factor (%)	45.5	45.9	48.1
% Change Customers (yr-end)	+2.3	+2.2	+2.1
Fixed Charge Cov. (%)	318	317	226

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	1.5%	2.0%	*3.0%*
"Cash Flow"	5.0%	5.5%	*3.5%*
Earnings	4.5%	3.5%	*2.5%*
Dividends	4.0%	5.5%	*2.0%*
Book Value	4.0%	4.0%	*3.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	661.9	929.6	1254.5	741.0	3587.0
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*	*1510*	*1048.3*	*4625*
2024	*965*	*1135*	*1540*	*1085*	*4725*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.27	1.71	3.07	d.17	4.87
2021	.32	1.91	3.00	.24	5.47
2022	.15	1.45	2.88	d.21	4.26
2023	d.03	*.94*	*3.30*	*d.01*	*4.20*
2024	*.05*	*1.35*	*3.11*	*d.01*	*4.50*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.737	.738	.738	.782	3.00
2020	.783	.783	.783	.83	3.18
2021	.83	.83	.83	.85	3.34
2022	.85	.85	.85	.85	3.40
2023	.865	.865	.865		

BUSINESS: Pinnacle West Capital Corporation is a holding company for Arizona Public Service Company (APS), which supplies electricity to 1.3 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, 47%; commercial/industrial, 41%; other, 12%. Generating sources: gas, 25%; nuclear, 24%; coal, 20%; renewables, 12%; purchased, 19%. Fuel costs: 38% of revenues. '22 reported deprec. rate: 3.03%. Has 5,861 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.

Pinnacle West should see a resumption of annual earnings growth in 2024. After a weak start to this year due to higher operating and maintenance expense and mild weather, a heat wave took hold in July and the company benefited from a court ruling that allowed for the inclusion within its rate base of money spent to clean up emissions at a coal plant. The judiciary appeal win resulted in a surcharge on customers bills beginning July 1st. Higher electric demand from the heat wave, plus the surcharge, prompted management to raise this year's earnings projection from $3.95-$4.15 per share to $4.10-$4.30. Relative to last year, this year's bottom line is suffering from higher retirement contributions, prompted by last year's decline in equity and bond markets, and higher interest expense. Full-year profits should be up next year given the likelihood of higher electric rates.

A pending general rate case could help restore some of the earnings power lost last year. Rate relief is due at the start of 2024, but how much? From early 2022, the company has been operating under revised regulatory parameters that cut its allowed return on equity (ROE) from 10% to a nationwide low of 8.7%. The change effectively reduced the utility's annual earning power by about $1.00 per share. Pinnacle is requesting its ROE be restored near the former level. The company is also seeking an expansion in the use of automatic pricing mechanisms to cut regulatory lag in the recoupment of investments it's planning to make in support of Arizona's clean-energy objectives. A decision from a revamped state regulatory commission, which has a few new members and a different chairperson because of term limits, is due by year's end. A March appeals court decision has restored some of the company's former ROE, now at 8.9%, as the bench ruled that the regulatory commission overstepped its bounds by penalizing the utility for "poor customer service."

These shares, however, are untimely. PNW is down 11% over the past three months, in concert with its industry peers and other interest rate sensitive stocks. The dividend yield, 45 basis points above the industry median, may be a draw.

Anthony J. Glennon *October 20, 2023*

(A) Diluted EPS. Excl. nonrec. gain/(loss): '09, ($1.45); '17, 8¢; gains/(losses) from discont. ops.: '06, 10¢; '08, 28¢; '09, (13¢); '10, 18¢; '11, 10¢; '12, (5¢). '20 and '22 qtly. EPS don't sum due to rounding. Next egs. report due early Nov. **(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 '22: $17.54/sh. **(D)** In mill. **(E)** Rate base: Fair value. Rate allowed on common equity in '23: 8.9%. Regulatory Climate: Below Average.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	45
Earnings Predictability	90

PORTLAND GENERAL NYSE-POR

RECENT PRICE **41.13** | P/E RATIO **15.2** (Trailing: 15.9 Median: 18.0) | RELATIVE P/E RATIO **0.95** | DIV'D YLD **4.8%** | **VALUE LINE**

TIMELINESS 5 Lowered 8/11/23
SAFETY 2 Raised 10/22/21
TECHNICAL 4 Lowered 9/15/23
BETA .90 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$37-$63 $50 (20%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+70%)	*18%*
Low	50	(+20%)	*10%*

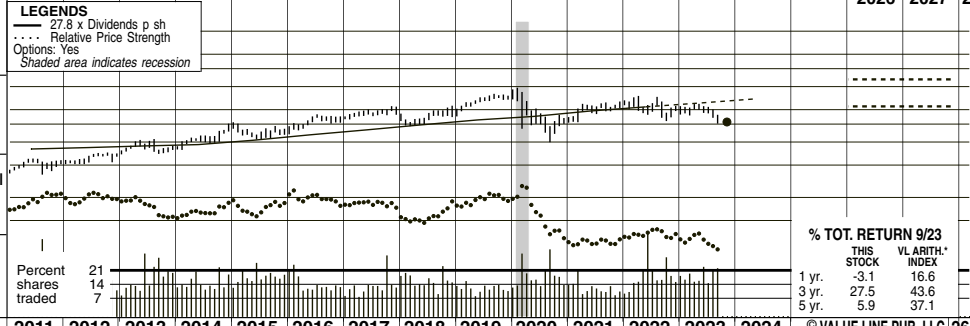
Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	207	184	189
to Sell	157	173	170
Hld's(000)	98285	101190	103597

	High:	28.1	33.3	40.3	41.0	45.2	50.1	50.4	58.4	63.1	53.1	57.0	51.6
	Low:	24.3	27.4	29.0	33.0	35.3	42.4	39.0	44.0	32.0	40.8	41.6	38.0

Target Price Range 2026 2027 2028

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



Percent shares traded 21 14 7

% TOT. RETURN 9/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-3.1	16.6
3 yr.	27.5	43.6
5 yr.	5.9	37.1

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
27.87	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	*28.15*	*29.40*	Revenues per sh	*32.35*
5.21	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	*7.00*	*7.75*	"Cash Flow" per sh	*9.30*
2.33	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	*2.70*	*3.00*	Earnings per sh [A]	*3.65*
.93	.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*	Div'd Decl'd per sh [B] ■ †	*2.36*
7.28	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	*12.00*	*10.75*	Cap'l Spending per sh	*11.00*
21.05	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	*33.95*	*35.00*	Book Value per sh [C]	*38.70*
62.53	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	*101.50*	*102.00*	Common Shs Outst'g [D]	*102.00*
11.9	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.5*
.63	.98	.96	.76	.78	.89	.95	.81	.89	1.00	1.01	.99	1.19	.85	.96	1.06			Relative P/E Ratio	*.90*
3.3%	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%			Avg Ann'l Div'd Yield	*3.9%*
1810.0	1900.0	1898.0	1923.0	2009.0	1991.0	2123.0	2145.0	2396.0	2647.0	*2855*	*3000*	Revenues ($mill)	*3300*
137.0	175.0	172.0	193.0	204.0	212.0	214.0	247.0	244.0	245.0	*255*	*305*	Net Profit ($mill)	*375*
23.2%	26.0%	20.7%	20.6%	25.3%	7.4%	11.2%	12.4%	8.6%	15.2%	*17.5%*	*17.5%*	Income Tax Rate	*17.5%*
14.6%	33.7%	19.8%	16.6%	8.8%	8.0%	7.0%	9.7%	10.2%	8.6%	*10.0%*	*9.0%*	AFUDC % to Net Profit	*8.5%*
51.3%	52.7%	47.8%	48.4%	50.1%	46.5%	51.3%	53.6%	56.8%	57.0%	*54.5%*	*53.5%*	Long-Term Debt Ratio	*54.5%*
48.7%	47.3%	52.2%	51.6%	49.9%	53.5%	48.7%	46.4%	43.2%	43.0%	*45.5%*	*46.5%*	Common Equity Ratio	*45.5%*
3735.0	4037.0	4329.0	4544.0	4842.0	4684.0	5323.0	5628.0	6265.0	6459.0	*7550*	*7700*	Total Capital ($mill)	*8650*
4880.0	5679.0	6012.0	6434.0	6741.0	6887.0	7161.0	7539.0	8005.0	8465.0	*9250*	*9850*	Net Plant ($mill)	*10900*
5.1%	5.8%	5.4%	5.6%	5.5%	5.8%	5.1%	5.6%	4.9%	4.9%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.5%*
7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	9.5%	9.0%	8.8%	*7.5%*	*8.5%*	Return on Shr. Equity	*9.5%*
7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	9.5%	9.0%	8.8%	*7.5%*	*8.5%*	Return on Com Equity [E]	*9.5%*
2.9%	4.6%	3.3%	3.5%	3.6%	3.5%	3.1%	4.1%	3.5%	3.1%	*2.5%*	*3.0%*	Retained to Com Eq	*3.5%*
61%	50%	56%	57%	58%	59%	63%	57%	61%	64%	*70%*	*66%*	All Div'ds to Net Prof	*64%*

CAPITAL STRUCTURE as of 6/30/23
Total Debt $3938 mill. **Due in 5 Yrs** $520 mill.
LT Debt $3778 mill. **LT Interest** $155 mill.
Incl. $292 mill. finance leases.
(Total Interest Coverage: 2.7x)
Leases, Uncapitalized Annual rentals $4 mill.
Pension Assets-12/22 $547 mill.
Oblig $695 mill.
Pfd Stock None

Common Stock 101,094,514 shs.
as of 7/20/23

MARKET CAP: $4.2 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	+.4	+5.1	+3.4
Avg. Indust. Use (MWH)	18472	20002	22097
Avg. Indust. Revs. per KWH (¢)	4.99	5.22	5.23
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	3771	4447	4255
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.5	+.6	+1.1
Fixed Charge Cov. (%)	275	261	254

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	1.0%	4.0%	*3.0%*
"Cash Flow"	4.0%	5.5%	*3.5%*
Earnings	4.0%	5.0%	*5.0%*
Dividends	5.0%	6.0%	*5.5%*
Book Value	3.0%	3.0%	*4.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	573	469	547	556	2145
2021	609	537	642	608	2396
2022	626	591	743	687	2647
2023	687	648	*790*	*730*	*2855*
2024	*740*	*660*	*825*	*775*	*3000*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.91	.43	.84	.57	2.75
2021	1.07	.36	.56	.73	2.72
2022	.67	.72	.65	.70	2.74
2023	.80	.44	*.76*	*.70*	*2.70*
2024	*.80*	*.65*	*.80*	*.75*	*3.00*

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.3625	.3625	.385	.385	1.50
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		

BUSINESS: Portland General Electric Company (PGE) provides electricity to 926,000 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 it closed in 1993. Electric revenue breakdown: residential, 52%; commercial, 33%; industrial, 14%; other, 1%. Generating sources: gas, 32%; wind, 15%; coal, 4%; hydro, 7%; purchased, 41%. Fuel costs: 37% of revenues. '22 reported depreciation rate: 3.4%. Has 2,873 full-time employees. Chairman: Jack E. Davis. 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 annual share earnings should be up nicely in 2024 following this year's flat to down result. For full-year 2023, leadership is still targeting profits of $2.60 to $2.75 per share. Weather extremes helped lift 2022's electric usage up 3.4% in the utility's service area, making for a difficult comparison this year, and purchased power costs were unusually high in the second quarter. Moreover, major investments in generating capacity and battery storage are driving up financing costs. Capital expenditures will likely rise from $766 million in 2022 to $1.23 billion this year and $1.1 billion in 2024. Rate relief should lift earnings next year. The utility filed for a 14% price increase with its Oregon regulators, in part to recoup higher purchased power costs. The request also addresses reliability and resiliency work, capital investments, and rising operating and financing costs. Our estimates assume a reasonably good outcome with higer electric rates in place on January 1st. Leadership called the progress made in negotiations "constructive and collaborative," thus far.

Oregon's aggressive "green" energy initiatives should drive bottom-line growth. PGE will add at least 375 to 500 megawatts of nonemitting annual power generation in the intermediate term, plus significant battery storage capacity. The company is partnering with NextEra Energy (NEE) to construct a 311-mw wind energy facility. PGE will own two-thirds of the venture and is to receive NEE's share of the power generation via a long-term purchase agreement. Project completion is targeted for December. Regulatory backing for the pursuit of more of these types of renewable generation projects should expand the rate base (the dollar value of assets a utility is allowed to earn an economic return on) for many years to come. This, plus load growth from a vibrant tech-based local economy, should enable PGE to achieve its long-term 5%-7% earnings and dividend growth targets.

These shares, however, are untimely. Similar to other interest-rate sensitive issues, POR's stock price has been under pressure of late. Annual total return prospects are higher than the industry median.

Anthony J. Glennon *October 20, 2023*

(A) Diluted earnings. Excl. nonrecurring gains/(losses): '13, (42¢); '17, (19¢); '20, ($1.03); '22, (14¢). Next earnings report due October 27th.
(B) Dividends paid mid-Jan., Apr., July, and Oct. ■ Dividend reinvestment plan available. † Shareholder investment plan available.
(C) Incl. deferred charges. In '21: $473 mill., $5.30/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	95
Price Growth Persistence	60
Earnings Predictability	95

SOUTHERN COMPANY NYSE-SO

RECENT PRICE **66.79** | P/E RATIO **15.8** (Trailing: 21.2 Median: 17.0) | RELATIVE P/E RATIO **1.05** | DIV'D YLD **4.2%** | **VALUE LINE**

TIMELINESS 4 Lowered 8/4/23
SAFETY 2 Lowered 2/21/14
TECHNICAL 4 Lowered 11/10/23
BETA .90 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$61-$100 $81 (20%)

2026-28 PROJECTIONS

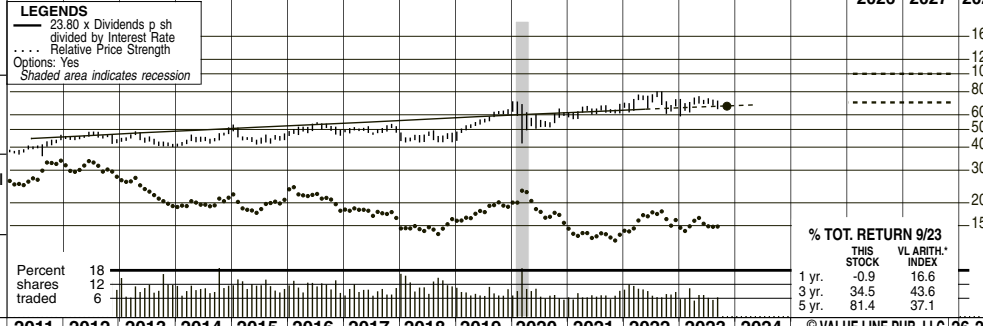
	Price	Gain	Ann'l Total Return
High	100	(+50%)	*14%*
Low	70	(+5%)	*5%*

Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	911	843	773
to Sell	594	622	703
Hld's(000)	693302	697201	688021

	High:	48.6	48.7	51.3	53.2	54.6	53.5	49.4	64.3	71.1	68.9	80.6	75.8
	Low:	41.8	40.0	40.3	41.4	46.0	46.7	42.4	43.3	42.0	56.7	60.7	58.8

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



% TOT. RETURN 9/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-0.9	16.6
3 yr.	34.5	43.6
5 yr.	81.4	37.1

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
20.12	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	*25.70*	*27.10*	Revenues per sh	*28.90*
4.22	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	*7.55*	*8.00*	"Cash Flow" per sh	*9.25*
2.28	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	*3.60*	*4.00*	Earnings per sh [A]	*5.15*
1.60	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*	Div'd Decl'd per sh [B] ■	*3.10*
4.65	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	7.58	*7.85*	*7.85*	Cap'l Spending per sh	*7.50*
16.23	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	*28.00*	*29.90*	Book Value per sh [C]	*32.25*
763.10	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	*1070.0*	*1070.0*	Common Shs Outst'g [D]	*1070.0*
16.0	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.5*
.85	.97	.90	.95	.99	1.08	.91	.84	.80	.93	.78	.82	.94	.92	1.00	1.14			Relative P/E Ratio	*.90*
4.4%	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%			Avg Ann'l Div'd Yield	*3.6%*
17087	18467	17489	19896	23031	23495	21419	20375	23113	29279	*27500*	*29000*	Revenues ($mill)	*30900*
2439.0	2567.0	2647.0	2757.0	3269.0	3096.0	3354.0	3481.0	3670.0	3931.3	*3850*	*4280*	Net Profit ($mill)	*5510*
34.8%	33.8%	33.4%	28.5%	25.2%	21.3%	15.9%	14.3%	16.3%	18.8%	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*
11.6%	13.9%	13.2%	11.9%	7.6%	6.8%	6.0%	6.6%	7.7%	8.0%	*8.0%*	*8.0%*	AFUDC % to Net Profit	*6.0%*
51.5%	49.5%	52.8%	61.5%	64.5%	62.0%	60.1%	61.5%	64.0%	63.0%	*64.0%*	*64.0%*	Long-Term Debt Ratio	*63.0%*
45.8%	47.3%	44.0%	35.7%	35.0%	37.6%	39.5%	38.1%	35.6%	36.5%	*36.0%*	*36.0%*	Common Equity Ratio	*37.0%*
41483	42142	46788	69359	68953	65750	69594	73336	78285	80558	*83500*	*85000*	Total Capital ($mill)	*93500*
51208	54868	61114	78446	79872	80797	83080	87634	91108	94570	*99350*	*100000*	Net Plant ($mill)	*110000*
6.8%	7.1%	6.6%	4.9%	5.9%	5.9%	6.0%	5.9%	5.8%	5.5%	*5.5%*	*5.5%*	Return on Total Cap'l	*6.5%*
12.1%	12.1%	12.0%	10.3%	13.3%	12.4%	12.1%	12.3%	13.0%	12.5%	*13.0%*	*13.0%*	Return on Shr. Equity	*14.5%*
12.5%	12.5%	12.6%	11.0%	13.4%	12.5%	12.1%	12.4%	13.1%	13.0%	*13.0%*	*13.0%*	Return on Com Equity [E]	*14.5%*
3.2%	3.2%	3.1%	2.5%	3.9%	2.6%	2.8%	2.8%	3.1%	3.0%	*3.5%*	*3.5%*	Retained to Com Eq	*5.0%*
75%	75%	76%	78%	72%	79%	77%	78%	76%	78%	*77%*	*77%*	All Div'ds to Net Prof	*67%*

CAPITAL STRUCTURE as of 6/30/23
Total Debt $55134 mill. **Due in 5 Yrs** $15427 mill.
LT Debt $50495 mill. **LT Interest** $1754 mill.
Incl. $215 mill. finance leases.
(LT interest earned: 3.3x)
Leases, Uncapitalized Annual rentals $307 mill.
Pension Assets-12/22 $17225 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 1,090,546,579 shs.
MARKET CAP: $72.8 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-8.5	-5.3	+2.0
Avg. Indust. Use (MWH)	2947	NA	NA
Avg. Indust. Revs. per KWH (¢)	6.03	NA	NA
Capacity at Yearend (Mw)	41940	NA	NA
Peak Load, Summer (Mw)	34209	NA	NA
Annual Load Factor (%)	60.3	NA	NA
% Change Customers (yr-end)	-8.9	+1.3	+1.5
Fixed Charge Cov. (%)	281	270	275

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
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
2020	5018	4620	5620	5117	20375
2021	5910	5198	6238	5767	23113
2022	6648	7206	8378	7047	29279
2023	6480	5748	*8000*	*7272*	*27500*
2024	*6800*	*7200*	*8000*	*7000*	*29000*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.81	.75	1.18	.51	3.25
2021	1.09	.67	1.22	.44	3.42
2022	.97	1.07	1.31	.26	3.61
2023	.79	.79	*1.32*	*.70*	*3.60*
2024	*1.20*	*1.00*	*1.30*	*.50*	*4.00*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.60	.62	.62	.62	2.46
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		

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, 37%; commercial, 30%; industrial, 19%; other, 14%. Generating sources: gas, 44%; coal, 20%; nuclear, 16%; other, 11%; purchased, 9%. Fuel costs: 29% of revenues. '22 reported deprec. rates (utility): 2.7%-3.6%. Has 27,300 employees. President and CEO: Chris Womack. Inc.: Delaware. Address: 30 Ivan Allen Jr. Blvd., N.W., Atlanta, Georgia 30308. Tel.: 404-506-0747. Internet: www.southerncompany.com.

Southern Company's Georgia Power subsidiary continues to face challenges in its nuclear construction project. Indeed, Georgia Power agreed to pay $413 million to resolve a legal dispute regarding a cost-sharing agreement with Oglethorpe Power over Plant Vogtle units 3 and 4. The utility expects to record a $114 million after-tax charge in the third quarter due to the settlement. Meanwhile, Georgia Power recently found a motor fault in one of its reactor coolant pumps at the site of Vogtle unit 4. The company is currently in the process of replacing the pump, and now expects unit 4 to be in-service by the first quarter of 2024. Once again, additional project delays and cost increases are likely to occur, and construction timing will greatly impact our full-year estimates. We remain optimistic that the project, once completed, will benefit the company's transition towards cleaner energy, as well as improve its long-term dividend and earnings growth prospects.

We have lowered our 2023 EPS estimate by $0.05. At $3.60, our new call represents a slight decline from the $3.61 a share that the utility earned last year due to worse-than-expected second quarter financials and construction delays. (Third-period results were expected to be released shortly after this Issue went to press.) While the Vogtle nuclear station continues to experience delays, we think Southern should benefit from rate relief, higher retail pricing, and increased usage of electricity throughout the next couple of years. As a result, our 2024 bottom-line estimate is staying put at $4.00 per share, in-line with management's long-term annual earnings-per-share growth target of 5%-7%.

Shares of Southern Company have declined 10% in value since our August report, along with many of its peers. Utility stocks have been among the worst-performing sectors of late due to rising Treasury yields. Indeed, the S&P Utility Index (XLU) is down more than 15% over the past 12 months, marking the sector's largest annual loss on record.

Income-oriented accounts may be drawn to this untimely issue. Indeed, the stock's dividend yield of 4.2% remains its most notable feature.

Zachary J. Hodgkinson November 10, 2023

(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-Feb. **(B)** Div'ds paid in early Mar., June, Sept., and Dec. ■ Div'd reinvestment plan avail. **(C)** Incl. def'd charges. In '22: $19.85/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	95
Price Growth Persistence	45
Earnings Predictability	95

XCEL ENERGY NDQ-XEL

RECENT PRICE 57.65 | P/E RATIO 17.0 (Trailing: 18.3 Median: 20.0) | RELATIVE P/E RATIO 1.06 | DIV'D YLD 3.8% | VALUE LINE

TIMELINESS 4 Lowered 8/11/23
SAFETY 1 Raised 5/1/15
TECHNICAL 4 Lowered 10/6/23
BETA .85 (1.00 = Market)

18-Month Target Price Range
Low-High: $49-$93 Midpoint (% to Mid): $71 (25%)

2026-28 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+40%)	12%
Low	65	(+15%)	7%

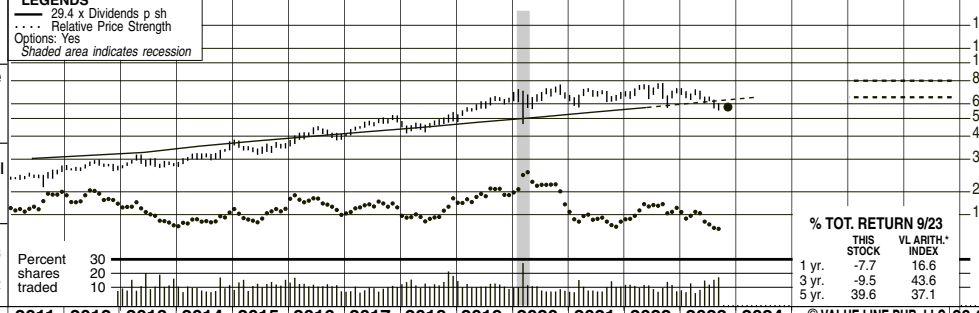
Institutional Decisions

	4Q2022	1Q2023	2Q2023
to Buy	485	448	426
to Sell	362	377	422
Hld's(000)	427005	433290	432509

High: 29.9 31.8 37.6 38.3 45.4 52.2 54.1 66.1 76.4 72.9 77.7 73.0
Low: 25.8 26.8 27.3 31.8 35.2 40.0 41.5 47.7 46.6 57.2 56.9 53.7

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

Target Price Range 2026 2027 2028



% TOT. RETURN 9/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-7.7	16.6
3 yr.	-9.5	43.6
5 yr.	39.6	37.1

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	© VALUE LINE PUB. LLC	26-28
23.40	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	*27.35*	*28.75*	Revenues per sh	*30.35*
3.45	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	*8.25*	*8.65*	"Cash Flow" per sh	*10.10*
1.35	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*	Earnings per sh A	*4.25*
.91	.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*	*2.22*	Div'd Decl'd per sh B ■ †	*2.66*
4.89	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	*9.00*	*9.25*	Cap'l Spending per sh	*9.50*
14.70	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	*31.50*	*33.15*	Book Value per sh C	*38.25*
428.78	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	*551.60*	*553.00*	Common Shs Outst'g D	*560.00*
16.7	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	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.5*
.89	.82	.85	.90	.89	.94	.84	.81	.83	.97	1.02	1.02	1.19	1.23	1.22	1.29			Relative P/E Ratio	*.95*
4.0%	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%			Avg Ann'l Div'd Yield	*3.6%*
10915	11686	11024	11107	11404	11537	11529	11526	13431	15310	*15100*	*15900*	Revenues ($mill)	*17000*
948.2	1021.3	1063.6	1123.4	1171.0	1261.0	1372.0	1473.0	1597.0	1736.0	*1725*	*1960*	Net Profit ($mill)	*2385*
33.8%	33.9%	35.8%	34.1%	30.7%	12.6%	8.5%	--	--	--	*NMF*	*NMF*	Income Tax Rate	*NMF*
13.4%	12.5%	7.7%	7.8%	9.4%	12.4%	8.3%	10.7%	6.2%	5.9%	*6.0%*	*6.0%*	AFUDC % to Net Profit	*6.0%*
53.3%	53.0%	54.1%	56.3%	55.9%	56.4%	56.8%	57.4%	58.2%	57.8%	*58.0%*	*58.0%*	Long-Term Debt Ratio	*58.0%*
46.7%	47.0%	45.9%	43.7%	44.1%	43.6%	43.2%	42.6%	41.8%	42.2%	*42.0%*	*42.0%*	Common Equity Ratio	*42.0%*
20477	21714	23092	25216	25975	28025	30646	34220	37391	39488	*41750*	*44075*	Total Capital ($mill)	*50900*
26122	28757	31206	32842	34329	36944	39483	42950	45457	48253	*50525*	*52850*	Net Plant ($mill)	*59700*
6.0%	6.0%	5.8%	5.7%	5.8%	5.7%	5.6%	5.4%	5.3%	5.5%	*5.5%*	*5.5%*	Return on Total Cap'l	*6.0%*
9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	10.1%	10.2%	10.4%	*10.5%*	*10.5%*	Return on Shr. Equity	*11.0%*
9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	10.1%	10.2%	10.4%	*10.5%*	*10.5%*	Return on Com Equity E	*11.0%*
4.5%	4.5%	4.3%	4.0%	3.9%	4.3%	4.4%	4.2%	4.2%	4.3%	*4.0%*	*4.0%*	Retained to Com Eq	*4.0%*
54%	55%	57%	61%	62%	58%	58%	58%	59%	58%	*62%*	*62%*	All Div'ds to Net Prof	*62%*

CAPITAL STRUCTURE as of 6/30/23
Total Debt $25610 mill. **Due in 5 Yrs** $3808 mill.
LT Debt $24015 mill. **LT Interest** $869 mill.
Incl. $228 mill. finance leases.
(Total Interest Coverage: 2.8x)

Leases, Uncapitalized Annual rentals $264 mill.
Pension Assets-12/22 $2685 mill.
Oblig $2871 mill.

Pfd Stock None

Common Stock 551,532,742 shs.
as of 7/25/23
MARKET CAP: $31.8 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2020	2021	2022
% Change Retail Sales (KWH)	-2.3	+1.4	+1.2
Resid'l Revs. per KWH (¢)	12.12	12.94	13.41
C & I Revs. per KWH (¢)	7.86	8.73	9.02
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	19665	19849	20346
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	252	262	255

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '26-'28
Revenues	1.5%	2.5%	*3.5%*
"Cash Flow"	6.5%	7.5%	*6.0%*
Earnings	5.5%	6.0%	*6.0%*
Dividends	6.0%	6.0%	*6.5%*
Book Value	5.0%	5.5%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	2811	2586	3182	2947	11526
2021	3541	3068	3467	3355	13431
2022	3751	3424	4082	4053	15310
2023	4080	3022	*4010*	*3988*	*15100*
2024	*4125*	*3500*	*4150*	*4125*	*15900*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.56	.54	1.14	.54	2.79
2021	.67	.58	1.13	.58	2.96
2022	.70	.60	1.18	.69	3.17
2023	.76	.52	*1.30*	*.77*	*3.35*
2024	*.80*	*.60*	*1.35*	*.80*	*3.55*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.38	.405	.405	.405	1.60
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	

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, 2.1 mill. gas. Electric revenues: resid'l, 29%; comm'l & ind'l, 48%; other, 23%. Purchases 33% of power, owns 67%. Total electric mix: wind, 33%; gas, 24%; coal, 23%, nuclear, 13%, solar/other, 7%. Fuel costs: 45% of revenues. '22 deprec. rate: 3.7%. Employs 11,982. President, CEO and Chrmn.: Robert Frenzel. Inc.: MN. Addr.: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Int.: www.xcelenergy.com.

Xcel Energy should achieve this year's profit objectives. During the first half of 2023, the company's share earnings were $0.02 below the prior year's $1.30. Mild second-quarter weather in the northern region was a factor, as was higher operating and maintenance (O&M) expense and interest charges. There was also less incremental regulatory recovery to offset rising costs than previously expected, given a dissapointing conclusion to the company's general rate case (GRC) in Minnesota (see below). Xcel has put a belt-tightening plan in place to reduce O&M costs by 3%, which should enable it to reach its 2023 profit target of $3.30-$3.40 a share.

The company is appealing the low return on equity (ROE) handed down by Minnesota regulators. As part of Xcel's GRC, commissioners heard testimony from the Minnesota Department of Commerce, which found that Xcel had been "flourishing" at its prior 9.06% ROE, but an increase to 9.25% was merited. Commissioners voted to set the rate at 9.25%, despite the conclusion of a state administrative law judge (ALJ) that a 9.87% ROE would be "reasonable" for Xcel, given the sharp rise in the cost of capital lately. Xcel has requested reconsideration. The case would go to an appeals court if regulators dismiss the appeal.

Xcel has submitted a $15-billion resource plan consistent with the "green" energy transition of Colorado. If approved, the investments the company will be making in renewables for that state will go a long ways towards supporting the company's long-term 5%-7% earnings growth goals. Clean energy plans in other state territories are also supportive.

The company provided an update on the Colorado wildfire lawsuits it's been hit with. (We covered this issue at great length in our July 21st review.) Notably, the investigation report, which concluded that sparks from an Xcel power line was the most likely source of ignition 80-110 feet away, also mentioned an underground coal fire could not be ruled out.

Xcel stock is untimely. Though tort law in Colorado is less onerous to defendents than California law, the aforementioned legal woes, plus headline risk, will likely drag on as an overhang to XEL shares.

Anthony J. Glennon *October 20, 2023*

(A) Diluted EPS. Excl. nonrecurring gain (losses): '10, 5¢; '15, (16¢); '17, (5¢); gains (loss) on discontinued ops.: '09, (1¢); '10, 1¢. '20 EPS don't sum due to rounding.
Next earnings report due October 27th.
(B) Div'ds typically paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan available. † Shareholder investment plan available.
(C) Incl. intangibles. In '22: $2871 mill., $5.22/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	95
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 Fourteen Electric Utilities	Proxy Group of Fourteen Electric Utilities (excl. PRPM)
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	4.90 %	4.90 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds (2)	0.73	0.73
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	5.63 %	5.63 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group (3)	0.17	0.17
5.	Adjusted Prospective Bond Yield	5.80 %	5.80 %
6.	Equity Risk Premium (4)	5.67	5.66
7.	Risk Premium Derived Common Equity Cost Rate	11.47 %	11.46 %

Notes:
(1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 8 and 9 of this Document).
(2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.73% from page 2 of this Document.
(3) Adjustment to reflect the Baa1 Moody's LT issuer rating of the Utility Proxy Group as shown on page 3 of this Document. The 0.17% adjustment is derived by taking 2/3 of the spread between A2 and Baa2 Public Utility Bonds (2/3 * 0.25% = 0.17%) as derived from page 2 of this Document.
(4) From page 5 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
Dec-2023	4.74 %	5.43 %	5.68 %
Nov-2023	5.28	6.05	6.29
Oct-2023	5.61	6.34	6.61
Average	5.21 %	5.94 %	6.19 %

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds: 0.73 % (1)

Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds: 0.25 % (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 December 2023		Standard & Poor's Long-Term Issuer Rating December 2023	
Proxy Group of Fourteen 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	A-	7.0
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	A3	7.0	BBB+	8.0
Portland General Electric Company	A3	7.0	BBB+	8.0
Southern Company	A3	7.0	BBB+	8.0
Xcel Energy Inc.	A3	7.0	A-	7.0
Average	Baa1	7.6	BBB+	7.9
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 4 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 Fourteen Electric Utilities	Proxy Group of Fourteen Electric Utilities (excl. PRPM)
1.	Calculated equity risk premium based on the total market using the beta approach (1)	7.36 %	7.32 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A2 rated bonds (2)	4.80	4.80
3.	Predicted Equity Risk Premium Based on Regression Analysis of 1,232 Fully-Litigated Electric Cases (3)	4.85	4.85
4.	Average equity risk premium	5.67 %	5.66 %

Notes: (1) From page 6 of this Document.
(2) From page 10 of this Document.
(3) From page 11 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 Fourteen Electric Utilities	Proxy Group of Fourteen Electric Utilities (excl. PRPM)
1.	Kroll Equity Risk Premium (1)	5.82 %	5.82 %
2.	Regression on Kroll Risk Premium Data (2)	7.27	7.27
3.	Kroll Equity Risk Premium based on PRPM (3)	9.35	NA
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	10.25	10.25
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	9.24	9.24
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	12.62	12.62
7.	Conclusion of Equity Risk Premium	9.09 %	9.04 %
8.	Adjusted Beta (7)	0.81	0.81
9.	Forecasted Equity Risk Premium	7.36 %	7.32 %

Notes provided on page 7 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 2022 SBBI® Yearbook minus the arithmetic mean monthly yield of Moody's average Aaa and Aa corporate bonds from 1928-2022.

(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 1928-2022 referenced in note 1 above.

(3) The Predictive Risk Premium Model (PRPM) is discussed in Mr. D'Ascendi's 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 December 2023.

(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 4.90% (from page 1 of this Document) from the projected 3-5 year total annual market return of 15.15% (described fully in note 1 on page 2 of Document No. 6).

(5) Using data from Value Line for the S&P 500, an expected total return of 14.14% 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 4.90% results in an expected equity risk premium of 9.24%.

(6) Using data from Bloomberg for the S&P 500, an expected total return of 17.52% 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 4.90% results in an expected equity risk premium of 12.62%.

(7) Average of mean and median beta from page 1 of Document No. 6.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2023 SBBI Yearbook, Kroll.
Value Line Summary and Index.
Blue Chip Financial Forecasts December 28, 2023 and December 1, 2023
Bloomberg Professional Services.

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	4.20 %	4.20 %
2.	Regression of Historical Equity Risk Premium (2)	5.01	5.01
3.	Forecasted Equity Risk Premium Based on PRPM (3)	4.80	NA
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	5.00	5.00
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	4.98	4.98
6.	Average Equity Risk Premium (6)	4.80 %	4.80 %

Notes:
(1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2022. 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 - 2022 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 - December 2023.

(4) Using data from Value Line for the S&P Utilities Index, an expected return of 10.63% 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 5.63%, calculated on line 3 of page 1 of this Document results in an equity risk premium of 5.00%. (10.63% - 5.63% = 5.00%)

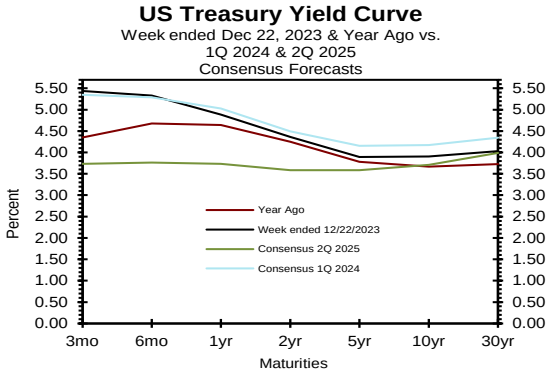
(5) Using data from Bloomberg Services for the S&P Utilities Index, an expected return of 10.61% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 5.63%, calculated on line 3 of page 1 of this Document results in an equity risk premium of 4.98%. (10.61% - 5.63% = 4.98%)

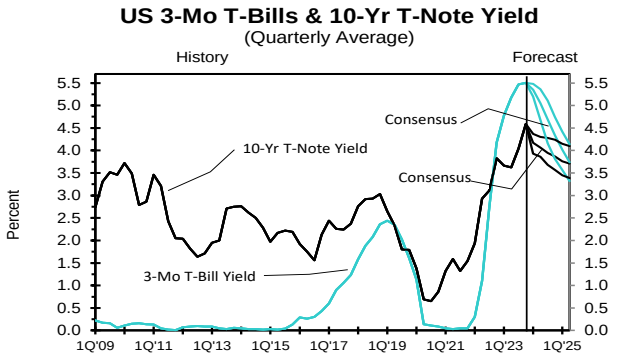
(6) Average of lines 1 through 5.

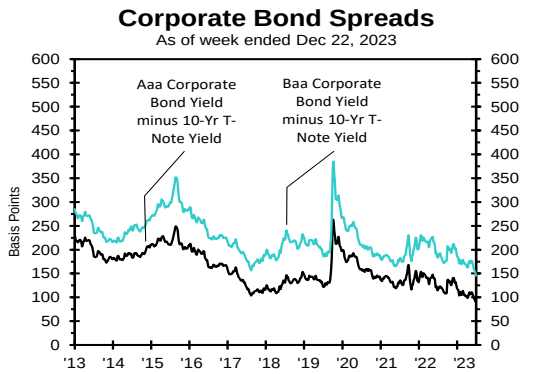
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

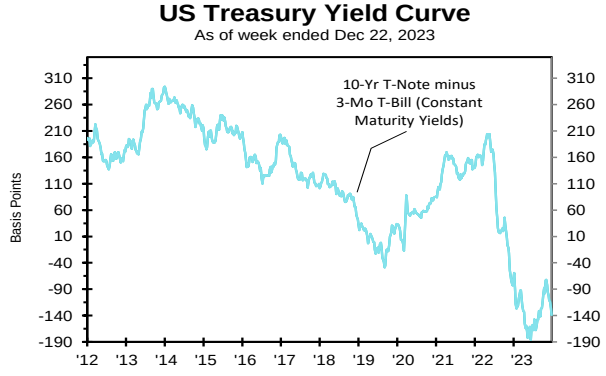
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	1Q	2Q	3Q	4Q	1Q	2Q
Interest Rates	Dec 22	Dec 15	Dec 8	Dec 1	Nov	Oct	Sep	4Q 2023*	2024	2024	2024	2024	2025	2025
Federal Funds Rate	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	**5.3**	**5.1**	**4.8**	**4.4**	**4.1**	**3.8**
Prime Rate	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	**8.4**	**8.2**	**7.9**	**7.6**	**7.2**	**7.0**
SOFR	5.31	5.31	5.33	5.33	5.32	5.31	5.31	5.32	**5.3**	**5.1**	**4.8**	**4.5**	**4.2**	**3.8**
Commercial Paper, 1-mo.	5.32	5.32	5.33	5.34	5.33	5.33	5.31	5.33	**5.3**	**5.1**	**4.7**	**4.4**	**4.1**	**3.8**
Treasury bill, 3-mo.	5.44	5.45	5.45	5.46	5.52	5.60	5.56	5.53	**5.4**	**5.1**	**4.7**	**4.3**	**4.0**	**3.7**
Treasury bill, 6-mo.	5.33	5.36	5.38	5.39	5.44	5.57	5.51	5.46	**5.3**	**5.0**	**4.6**	**4.3**	**4.0**	**3.8**
Treasury bill, 1 yr.	4.88	5.01	5.08	5.16	5.28	5.42	5.44	5.25	**5.0**	**4.7**	**4.4**	**4.2**	**3.9**	**3.7**
Treasury note, 2 yr.	4.36	4.54	4.62	4.70	4.88	5.07	5.02	4.85	**4.5**	**4.2**	**4.0**	**3.8**	**3.7**	**3.6**
Treasury note, 5 yr.	3.90	4.06	4.17	4.27	4.49	4.77	4.49	4.47	**4.2**	**4.0**	**3.9**	**3.8**	**3.6**	**3.6**
Treasury note, 10 yr.	3.91	4.06	4.19	4.32	4.50	4.80	4.38	4.49	**4.2**	**4.1**	**3.9**	**3.9**	**3.8**	**3.7**
Treasury note, 30 yr.	4.03	4.17	4.30	4.49	4.66	4.95	4.47	4.63	**4.3**	**4.3**	**4.2**	**4.1**	**4.0**	**4.0**
Corporate Aaa bond	4.84	4.95	5.11	5.27	5.52	5.87	5.38	5.51	**5.1**	**5.0**	**4.9**	**4.8**	**4.8**	**4.7**
Corporate Baa bond	5.39	5.51	5.70	5.88	6.15	6.53	6.03	6.13	**6.1**	**6.0**	**6.0**	**5.9**	**5.8**	**5.8**
State & Local bonds	4.05	4.16	4.23	4.33	4.56	4.88	4.54	4.57	**4.3**	**4.3**	**4.2**	**4.2**	**4.1**	**4.1**
Home mortgage rate	6.67	6.95	7.03	7.22	7.44	7.62	7.20	7.36	**6.9**	**6.8**	**6.6**	**6.4**	**6.3**	**6.1**
	History								Consensus Forecasts-Quarterly					
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
Key Assumptions	2022	2022	2022	2022	2023	2023	2023	2023**	2024	2024	2024	2024	2025	2025
Fed's AFE $ Index	108.3	113.5	118.8	119.8	115.5	114.6	115.0	117.1	**115.2**	**114.9**	**114.8**	**114.7**	**114.4**	**114.4**
Real GDP	-2.0	-0.6	2.7	2.6	2.2	2.1	4.9	1.2	**0.9**	**0.5**	**0.7**	**1.2**	**1.8**	**2.1**
GDP Price Index	8.5	9.1	4.4	3.9	3.9	1.7	3.3	2.7	**2.3**	**2.3**	**2.3**	**2.2**	**2.2**	**2.1**
Consumer Price Index	9.2	9.7	5.5	4.2	3.8	2.7	3.6	2.9	**2.4**	**2.4**	**2.4**	**2.3**	**2.2**	**2.2**
PCE Price Index	7.7	7.2	4.7	4.1	4.2	2.5	2.6	2.6	**2.2**	**2.2**	**2.2**	**2.2**	**2.1**	**2.0**

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. *Interest rate data for 4Q 2023 based on historical data through the week ended December 22. **Data for 4Q 2023 for the Fed's AFE $ Index based on data through the week ended December 22. Figures for 4Q 2023 Real GDP, GDP Chained Price Index, Consumer Price Index, and PCE Price Index are consensus forecasts from the December 2023 survey.







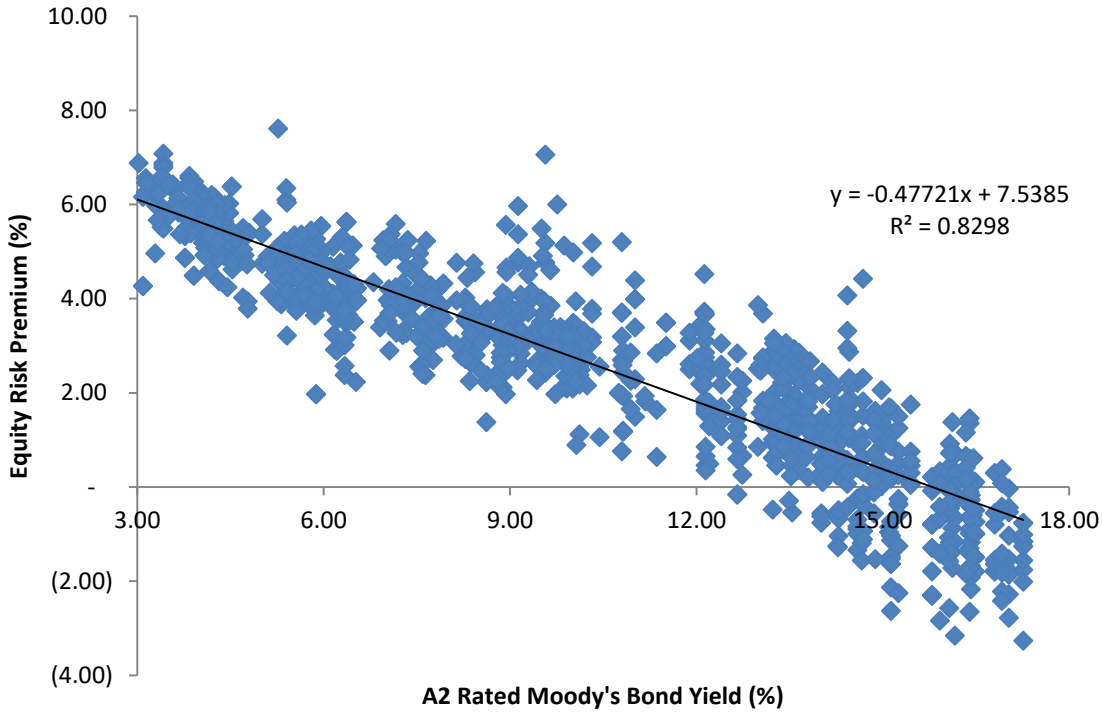


Long-Range Survey:

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 2029 and averages for the five-year periods 2025-2029 and 2030-2034. 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	2025-2029	2030-2034
1. Federal Funds Rate	**CONSENSUS**	**3.8**	**3.2**	**3.1**	**3.0**	**3.0**	**3.2**	**3.0**
	Top 10 Average	4.3	3.6	3.6	3.5	3.5	3.7	3.5
	Bottom 10 Average	3.3	2.7	2.6	2.6	2.5	2.7	2.5
2. Prime Rate	**CONSENSUS**	**6.9**	**6.3**	**6.2**	**6.2**	**6.2**	**6.3**	**6.1**
	Top 10 Average	7.3	6.7	6.7	6.6	6.6	6.8	6.6
	Bottom 10 Average	6.5	5.9	5.7	5.7	5.7	5.9	5.6
3. SOFR	**CONSENSUS**	**3.8**	**3.2**	**3.1**	**3.1**	**3.1**	**3.3**	**3.0**
	Top 10 Average	4.1	3.6	3.5	3.5	3.4	3.6	3.4
	Bottom 10 Average	3.4	2.9	2.7	2.7	2.6	2.9	2.6
4. Commercial Paper, 1-Mo	**CONSENSUS**	**3.7**	**3.2**	**3.2**	**3.2**	**3.1**	**3.3**	**3.1**
	Top 10 Average	3.9	3.5	3.4	3.4	3.4	3.5	3.4
	Bottom 10 Average	3.5	2.9	2.8	2.8	2.8	3.0	2.7
5. Treasury Bill Yield, 3-Mo	**CONSENSUS**	**3.7**	**3.2**	**3.1**	**3.0**	**3.0**	**3.2**	**3.0**
	Top 10 Average	4.1	3.6	3.6	3.5	3.5	3.7	3.5
	Bottom 10 Average	3.2	2.7	2.6	2.5	2.5	2.7	2.4
6. Treasury Bill Yield, 6-Mo	**CONSENSUS**	**3.7**	**3.3**	**3.2**	**3.2**	**3.1**	**3.3**	**3.1**
	Top 10 Average	4.1	3.7	3.6	3.6	3.6	3.7	3.6
	Bottom 10 Average	3.4	2.9	2.8	2.7	2.7	2.9	2.7
7. Treasury Bill Yield, 1-Yr	**CONSENSUS**	**3.7**	**3.4**	**3.3**	**3.3**	**3.2**	**3.4**	**3.2**
	Top 10 Average	4.1	3.8	3.7	3.7	3.7	3.8	3.7
	Bottom 10 Average	3.3	3.0	2.9	2.8	2.8	3.0	2.8
8. Treasury Note Yield, 2-Yr	**CONSENSUS**	**3.7**	**3.5**	**3.4**	**3.4**	**3.4**	**3.5**	**3.4**
	Top 10 Average	4.1	3.9	3.9	3.9	3.9	3.9	3.9
	Bottom 10 Average	3.3	3.1	3.0	2.9	2.9	3.0	2.9
9. Treasury Note Yield, 5-Yr	**CONSENSUS**	**3.7**	**3.7**	**3.7**	**3.7**	**3.7**	**3.7**	**3.7**
	Top 10 Average	4.1	4.1	4.2	4.2	4.3	4.2	4.3
	Bottom 10 Average	3.3	3.2	3.2	3.1	3.1	3.2	3.1
10. Treasury Note Yield, 10-Yr	**CONSENSUS**	**3.9**	**3.9**	**3.9**	**3.9**	**3.9**	**3.9**	**3.9**
	Top 10 Average	4.3	4.4	4.5	4.5	4.5	4.4	4.5
	Bottom 10 Average	3.5	3.3	3.3	3.3	3.3	3.3	3.3
11. Treasury Bond Yield, 30-Yr	**CONSENSUS**	**4.1**	**4.1**	**4.1**	**4.2**	**4.2**	**4.1**	**4.2**
	Top 10 Average	4.5	4.6	4.7	4.7	4.7	4.6	4.8
	Bottom 10 Average	3.8	3.6	3.6	3.6	3.6	3.7	3.6
12. Corporate Aaa Bond Yield	**CONSENSUS**	**5.0**	**4.9**	**4.9**	**5.0**	**5.0**	**4.9**	**5.0**
	Top 10 Average	5.3	5.3	5.4	5.5	5.5	5.4	5.5
	Bottom 10 Average	4.6	4.5	4.5	4.5	4.5	4.5	4.4
13. Corporate Baa Bond Yield	**CONSENSUS**	**6.0**	**6.0**	**6.0**	**6.0**	**6.0**	**6.0**	**6.0**
	Top 10 Average	6.4	6.4	6.5	6.6	6.6	6.5	6.6
	Bottom 10 Average	5.7	5.5	5.5	5.6	5.6	5.6	5.6
14. State & Local Bonds Yield	**CONSENSUS**	**4.3**	**4.3**	**4.3**	**4.3**	**4.3**	**4.3**	**4.3**
	Top 10 Average	4.6	4.7	4.7	4.8	4.8	4.7	4.9
	Bottom 10 Average	4.0	3.8	3.9	3.9	3.8	3.9	3.8
15. Home Mortgage Rate	**CONSENSUS**	**6.2**	**5.9**	**5.9**	**5.9**	**5.9**	**5.9**	**5.8**
	Top 10 Average	6.6	6.4	6.4	6.5	6.5	6.5	6.5
	Bottom 10 Average	5.7	5.5	5.4	5.3	5.2	5.4	5.2
A. Fed's AFE Nominal $ Index	**CONSENSUS**	**114.1**	**113.0**	**113.1**	**113.2**	**112.8**	**113.2**	**112.3**
	Top 10 Average	116.0	115.5	115.9	116.5	116.2	116.0	115.7
	Bottom 10 Average	111.8	110.4	110.1	109.6	109.1	110.2	108.5
		Year-Over-Year, % Change					Five-Year Averages	
		2025	2026	2027	2028	2029	2025-2029	2030-2034
B. Real GDP	**CONSENSUS**	**1.6**	**2.1**	**2.1**	**2.0**	**2.0**	**1.9**	**2.0**
	Top 10 Average	2.1	2.4	2.4	2.3	2.3	2.3	2.3
	Bottom 10 Average	1.1	1.8	1.8	1.7	1.7	1.6	1.7
C. GDP Chained Price Index	**CONSENSUS**	**2.2**	**2.2**	**2.1**	**2.1**	**2.2**	**2.2**	**2.2**
	Top 10 Average	2.5	2.3	2.3	2.3	2.3	2.3	2.3
	Bottom 10 Average	2.0	2.0	2.0	2.0	2.0	2.0	2.0
D. Consumer Price Index	**CONSENSUS**	**2.3**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**
	Top 10 Average	2.5	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
E. PCE Price Index	**CONSENSUS**	**2.2**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**
	Top 10 Average	2.3	2.3	2.2	2.2	2.2	2.2	2.3
	Bottom 10 Average	2.0	2.0	1.9	1.9	2.0	1.9	2.0

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
7.5385 %	-0.4772	5.63 %	4.85 %

Notes:

(1) From line 3 of page 1 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)

Proxy Group of Fourteen Electric Utilities	[1] Value Line Adjusted Beta	[2] Bloomberg Adjusted Beta	[3] Average Beta	[4] Market Risk Premium (1)	[5] Risk-Free Rate (2)	[6] Traditional CAPM Cost Rate	[7] ECAPM Cost Rate	[8] Indicated Common Equity Cost Rate (3)
Alliant Energy Corporation	0.90	0.72	0.81	10.02 %	4.15 %	12.26 %	12.74 %	12.50 %
Ameren Corporation	0.90	0.72	0.81	10.02	4.15	12.26	12.74	12.50
American Electric Power Corporation	0.80	0.67	0.74	10.02	4.15	11.56	12.21	11.89
Duke Energy Corporation	0.85	0.68	0.76	10.02	4.15	11.76	12.36	12.06
Edison International	1.00	0.87	0.93	10.02	4.15	13.47	13.64	13.55 (4)
Entergy Corporation	0.95	0.75	0.85	10.02	4.15	12.66	13.04	12.85
Evergy, Inc.	0.95	0.70	0.82	10.02	4.15	12.36	12.82	12.59
IDACORP, Inc.	0.85	0.69	0.77	10.02	4.15	11.86	12.44	12.15
NorthWestern Corporation	0.95	0.68	0.81	10.02	4.15	12.26	12.74	12.50
OGE Energy Corporation	1.05	0.74	0.90	10.02	4.15	13.17	13.42	13.29
Pinnacle West Capital Corporation	0.95	0.73	0.84	10.02	4.15	12.56	12.97	12.77
Portland General Electric Company	0.90	0.70	0.80	10.02	4.15	12.16	12.66	12.41
Southern Company	0.90	0.67	0.78	10.02	4.15	11.96	12.51	12.24
Xcel Energy Inc.	0.85	0.68	0.76	10.02	4.15	11.76	12.36	12.06
Mean			0.81			12.29 %	12.76 %	12.45 %
Median			0.81			12.26 %	12.74 %	12.50 %
Average of Mean and Median			0.81			12.28 %	12.75 %	12.48 %

Results Excluding the PRPM MRP

Proxy Group of Fourteen Electric Utilities	[1] Value Line Adjusted Beta	[2] Bloomberg Adjusted Beta	[3] Average Beta	[4] Market Risk Premium (1)	[5] Risk-Free Rate (2)	[6] Traditional CAPM Cost Rate	[7] ECAPM Cost Rate	[8] Indicated Common Equity Cost Rate (3)
Alliant Energy Corporation	0.90	0.72	0.81	9.93 %	4.15 %	12.20 %	12.67 %	12.43 %
Ameren Corporation	0.90	0.72	0.81	9.93	4.15	12.20	12.67	12.43
American Electric Power Corporation	0.80	0.67	0.74	9.93	4.15	11.50	12.15	11.82
Duke Energy Corporation	0.85	0.68	0.76	9.93	4.15	11.70	12.29	12.00
Edison International	1.00	0.87	0.93	9.93	4.15	13.39	13.56	13.47 (4)
Entergy Corporation	0.95	0.75	0.85	9.93	4.15	12.59	12.97	12.78
Evergy, Inc.	0.95	0.70	0.82	9.93	4.15	12.29	12.74	12.52
IDACORP, Inc.	0.85	0.69	0.77	9.93	4.15	11.80	12.37	12.08
NorthWestern Corporation	0.95	0.68	0.81	9.93	4.15	12.20	12.67	12.43
OGE Energy Corporation	1.05	0.74	0.90	9.93	4.15	13.09	13.34	13.21
Pinnacle West Capital Corporation	0.95	0.73	0.84	9.93	4.15	12.49	12.89	12.69
Portland General Electric Company	0.90	0.70	0.80	9.93	4.15	12.10	12.59	12.34
Southern Company	0.90	0.67	0.78	9.93	4.15	11.90	12.44	12.17
Xcel Energy Inc.	0.85	0.68	0.76	9.93	4.15	11.70	12.29	12.00
Mean			0.81			12.22 %	12.69 %	12.38 %
Median			0.81			12.20 %	12.67 %	12.43 %
Average of Mean and Median			0.81			12.21 %	12.68 %	12.41 %

Notes on page 2 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 (1926-2022)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2022:	12.03 %
Arithmetic Mean Income Returns on Long-Term Government Bonds:	5.00
MRP based on Kroll Historical Data:	7.03 %

Measure 2: Application of a Regression Analysis to Kroll Historical Data
(1926-2022) 8.27 %

Measure 3: Application of the PRPM to Kroll Historical Data:
(January 1926 - December 2023) 10.44 %

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP Thirteen weeks ending December 29, 2023.

Total projected return on the market 3-5 years hence*:	15.15 %
Projected Risk-Free Rate (see note 2):	4.15
MRP based on Value Line Summary & Index:	11.00 %

*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:	14.14 %
Projected Risk-Free Rate (see note 2):	4.15
MRP based on Value Line data	9.99 %

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	17.52 %
Projected Risk-Free Rate (see note 2):	4.15
MRP based on Bloomberg data	13.37 %

Average of Value Line, Kroll, and Bloomberg MRP:	10.02 %
Average MRP Excluding the PRPM MRP:	9.93 %

(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 8 and 9 of Document No. 5) The projection of the risk-free rate is illustrated below:

First Quarter 2024	4.30 %
Second Quarter 2024	4.30
Third Quarter 2024	4.20
Fourth Quarter 2024	4.10
First Quarter 2025	4.00
Second Quarter 2025	4.00
2025-2029	4.10
2030-2034	4.20
	4.15 %

(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 December 28, 2023 and December 1, 2023
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 0.65 - 0.91 and residual standard error of the regression range of 2.6538 - 3.1650 of the proxy group of fourteen 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 0.1278. The standard deviation of the standard error of the regression is calculated as follows:

Standard Deviation of the Std. Err. of the Regr. = Standard Error of the Regression

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

Thus, $0.1278 = \frac{2.9094}{} = \frac{2.9094}{22.7596}$

Source of Information: Value Line Proprietary Database, December 2023.
Value Line Investment Survey (Standard Edition).

Tampa Electric Company, Inc.
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Fourteen Electric Utilities	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
Alliant Energy Corporation	0.85	0.72	2.8754	0.0642
Ameren Corporation	0.85	0.72	2.6556	0.0592
American Electric Power Corporation	0.75	0.60	2.8010	0.0625
Duke Energy Corporation	0.85	0.73	2.8589	0.0638
Edison International	0.95	0.90	3.4527	0.0770
Entergy Corporation	0.95	0.85	2.8571	0.0637
Evergy, Inc.	0.90	0.84	2.9841	0.0678
IDACORP, Inc.	0.80	0.65	2.7648	0.0617
NorthWestern Corporation	0.90	0.83	2.8897	0.0645
OGE Energy Corporation	1.00	0.98	2.8969	0.0646
Pinnacle West Capital Corporation	0.90	0.82	3.0709	0.0685
Portland General Electric Company	0.85	0.76	2.9458	0.0657
Southern Company	0.90	0.83	2.7920	0.0623
Xcel Energy Inc.	0.80	0.67	2.8860	0.0644
Average	0.88	0.78	2.9094	0.0650
Beta Range (+/- 2 std. Devs. of Beta)	0.65	0.91		
2 std. Devs. of Beta	0.13			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.6538	3.1650		
Std. dev. of the Res. Std. Err.	0.1278			
2 std. devs. of the Res. Std. Err.	0.2556			

Source of Information: Value Line Proprietary Database, December 2023.

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	0.88	2.6568	0.0593
Abbott Labs.	0.90	0.83	2.8864	0.0644
Agilent Technologies	0.95	0.86	2.8378	0.0633
Air Products & Chem.	0.90	0.84	2.8029	0.0625
Alphabet Inc.	0.95	0.86	2.7317	0.0609
Altria Group	0.90	0.80	3.1178	0.0696
Assurant Inc.	0.90	0.80	2.8167	0.0628
Booz Allen Hamilton	0.85	0.75	3.1624	0.0706
Brady Corp.	0.95	0.89	2.9113	0.0650
Bristol-Myers Squibb	0.80	0.68	3.0143	0.0673
Broadridge Fin'l	0.90	0.78	2.8391	0.0633
Brown-Forman 'B'	0.85	0.75	2.8019	0.0625
CACI Int'l	0.90	0.78	3.0796	0.0687
Chemed Corp.	0.80	0.65	2.8629	0.0639
Cisco Systems	0.90	0.81	2.7267	0.0608
CSW Industrials	0.90	0.80	3.0966	0.0691
Danaher Corp.	0.90	0.81	2.6569	0.0593
Dolby Labs.	0.95	0.90	2.7326	0.0610
Fastenal Co.	0.90	0.83	3.0992	0.0691
Franklin Electric	0.95	0.85	2.9918	0.0667
GATX Corp.	0.95	0.90	3.1116	0.0694
Henry (Jack) & Assoc	0.85	0.71	2.9576	0.0660
Hunt (J.B.)	0.95	0.89	3.1607	0.0705
Ingredion Inc.	0.90	0.84	2.8563	0.0637
Int'l Business Mach.	0.95	0.90	2.7698	0.0618
Landstar System	0.80	0.65	2.9423	0.0656
Lockheed Martin	0.90	0.83	2.8568	0.0637
Monster Beverage	0.85	0.75	3.0527	0.0681
MSC Industrial Direc	0.95	0.86	2.9664	0.0662
Oracle Corp.	0.85	0.71	2.8932	0.0645
Packaging Corp.	0.95	0.89	2.9972	0.0669
Pfizer, Inc.	0.80	0.69	2.9493	0.0658
Selective Ins. Group	0.85	0.74	3.0019	0.0670
Sensient Techn.	0.95	0.88	2.7605	0.0616
Service Corp. Int'l	0.95	0.85	3.0027	0.0670
Sherwin-Williams	0.95	0.86	2.8633	0.0639
Sirius XM Holdings	0.90	0.82	2.9907	0.0667
Smith (A.O.)	0.90	0.80	2.9692	0.0662
Texas Instruments	0.90	0.80	2.8210	0.0629
Thermo Fisher Sci.	0.90	0.78	2.7308	0.0609
UniFirst Corp.	0.95	0.87	2.8590	0.0638
VeriSign Inc.	0.95	0.85	2.9410	0.0656
Waters Corp.	0.95	0.86	3.0260	0.0675
Watsco, Inc.	0.85	0.76	2.9424	0.0656
Western Union	0.85	0.70	3.0536	0.0681
Average	0.90	0.81	2.9178	0.0651
Proxy Group of Fourteen Electric Utilities	0.88	0.78	2.9094	0.0650

Source of Information: Value Line Proprietary Database, December 2023.

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)		10.80	%		10.80	%	
Risk Premium Model (RPM) (2)		13.76			13.72		
Capital Asset Pricing Model (CAPM)		13.28		(3)	13.20		(4)
	Mean	12.61	%		12.57	%	
	Median	13.28	%		13.20	%	
	Average of Mean and Median	12.95	%		12.89	%	

Notes:
(1) From page 2 of this Document.
(2) From page 3 of this Document.
(3) From page 6 of this Document.
(4) From page 7 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

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Fourty-Five Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS (1)	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (2)
3M Company	6.23 %	4.50 %	7.30 %	NA %	5.90 %	6.41 %	12.31 %
Abbott Labs.	2.20	4.50	9.00	-2.00	6.75	2.27	9.02
Agilent Technologies	0.79	13.50	8.00	7.70	9.73	0.83	10.56
Air Products & Chem.	2.55	10.50	11.30	10.02	10.61	2.69	13.30
Alphabet Inc.	0.00	13.00	16.60	17.53	15.71	0.00	NA
Altria Group	9.48	6.00	3.00	2.19	3.73	9.66	13.39
Assurant Inc.	1.80	10.50	14.60	14.60	13.23	1.92	15.15
Booz Allen Hamilton	1.50	8.00	12.00	12.00	10.67	1.58	12.25
Brady Corp.	1.70	11.00	7.00	7.00	8.33	1.77	10.10
Bristol-Myers Squibb	4.59	NA	3.10	-0.35	3.10	4.66	7.76
Broadridge Fin'l	1.73	9.50	NA	11.80	10.65	1.82	12.47
Brown-Forman 'B'	1.52	16.50	NA	11.00	13.75	1.62	15.37
CACI Int'l	0.00	7.00	9.50	6.70	7.73	0.00	NA
Chemed Corp.	0.28	6.50	8.90	10.00	8.47	0.29	8.76
Cisco Systems	3.06	8.50	6.20	5.77	6.82	3.16	9.98
CSW Industrials	0.42	8.00	16.00	12.00	12.00	0.45	12.45
Danaher Corp.	0.45	11.00	12.00	-1.40	11.50	0.48	11.98
Dolby Labs.	1.42	9.50	NA	16.00	12.75	1.51	14.26
Fastenal Co.	2.31	6.50	9.00	6.33	7.28	2.39	9.67
Franklin Electric	1.00	10.50	12.00	13.40	11.97	1.06	13.03
GATX Corp.	1.99	8.50	NA	12.00	10.25	2.09	12.34
Henry (Jack) & Assoc	1.36	6.50	8.00	7.10	7.20	1.41	8.61
Hunt (J.B.)	0.91	9.00	15.00	4.50	9.50	0.95	10.45
Ingredion Inc.	3.10	8.00	11.00	10.00	9.67	3.25	12.92
Int'l Business Mach.	4.38	3.00	3.90	2.52	3.14	4.45	7.59
Landstar System	0.75	1.00	NA	12.00	6.50	0.77	7.27
Lockheed Martin	2.83	7.00	8.60	11.33	8.98	2.96	11.94
Monster Beverage	0.00	11.00	20.80	22.64	18.15	0.00	NA
MSC Industrial Direc	3.35	5.00	NA	10.60	7.80	3.48	11.28
Oracle Corp.	1.46	10.00	9.10	9.61	9.57	1.53	11.10
Packaging Corp.	3.17	9.00	5.00	-14.29	7.00	3.28	10.28
Pfizer, Inc.	5.59	2.00	7.00	-13.35	4.50	5.72	10.22
Selective Ins. Group	1.37	15.00	23.80	23.80	20.87	1.51	22.38 (3)
Sensient Techn.	2.76	2.50	NA	3.80	3.15	2.80	5.95
Service Corp. Int'l	1.92	5.00	7.20	12.00	8.07	2.00	10.07
Sherwin-Williams	0.90	7.00	12.40	14.17	11.19	0.95	12.14
Sirius XM Holdings	2.20	28.50	6.60	8.26	14.45	2.36	16.81
Smith (A.O.)	1.73	9.50	9.00	8.00	8.83	1.81	10.64
Texas Instruments	3.36	3.50	9.00	10.00	7.50	3.49	10.99
Thermo Fisher Sci.	0.29	9.50	7.70	2.10	6.43	0.30	6.73
UniFirst Corp.	0.77	9.00	NA	8.50	8.75	0.80	9.55
VeriSign Inc.	0.00	13.00	NA	8.00	10.50	0.00	NA
Waters Corp.	0.00	10.00	3.90	3.84	5.91	0.00	NA
Watsco, Inc.	2.53	9.00	9.00	4.42	7.47	2.62	10.09
Western Union	7.73	-0.50	NA	0.97	0.97	7.77	8.74
	NA= Not Available					Mean	10.96 %
						Median	10.64 %
						Average of Mean and Median	10.80 %

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 December 29, 2023. 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 12/29/2023.
www.yahoo.com, Downloaded on 12/29/2023.

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)	5.95 %	5.95 %
2	Adjustment to Reflect Bond rating Difference of Non-Price Regulated Companies (2)	(0.28)	(0.28)
3	Adjusted Prospective Bond Yield	5.67	5.67
4.	Equity Risk Premium (3)	8.09	8.05
5.	Risk Premium Derived Common Equity Cost Rate	13.76 %	13.72 %

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated December 28, 2023 and December 1, 2023 (see pages 8 and 9 of Document No. 4). The estimates are detailed below.

First Quarter 2024	6.10 %
Second Quarter 2024	6.00
Third Quarter 2024	6.00
Fourth Quarter 2024	5.90
First Quarter 2025	5.80
Second Quarter 2025	5.80
2025-2029	6.00
2030-2034	6.00
Average	5.95 %

(2) The average yield spread of Baa2 rated corporate bonds over A2 corporate bonds for the three months ending December 2023. 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
Dec-23	5.26 %	5.65 %	0.39 %
Nov-23	5.87	6.29	0.42
Oct-23	6.18	6.63	0.45
		Average yield spread	0.42
		2/3 of spread	0.28

(3) From page 5 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 December 2023		Standard & Poor's Long-Term Issuer Rating December 2023	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
3M Company	A3	7.0	BBB+	8.0
Abbott Labs.	Aa3	4.0	AA-	4.0
Agilent Technologies	Baa1	8.0	BBB+	8.0
Air Products & Chem.	A2	6.0	A	6.0
Alphabet Inc.	Aa2	3.0	AA+	2.0
Altria Group	A3	7.0	BBB	9.0
Assurant Inc.	Baa2	9.0	BBB	9.0
Booz Allen Hamilton	NA	--	NA	--
Brady Corp.	NA	--	NA	--
Bristol-Myers Squibb	A2	6.0	A	6.0
Broadridge Fin'l	Baa2	9.0	BBB	9.0
Brown-Forman 'B'	A1	5.0	A-	7.0
CACI Int'l	NA	--	BB+	11.0
Chemed Corp.	WR	--	NR	--
Cisco Systems	A1	5.0	AA-	4.0
CSW Industrials	NA	--	NA	--
Danaher Corp.	A3	7.0	A-	7.0
Dolby Labs.	NA	--	NA	--
Fastenal Co.	NA	--	NA	--
Franklin Electric	NA	--	NA	--
GATX Corp.	Baa2	9.0	BBB	9.0
Henry (Jack) & Assoc	NA	--	NA	--
Hunt (J.B.)	Baa1	8.0	BBB+	8.0
Ingredion Inc.	Baa1	8.0	BBB	9.0
Int'l Business Mach.	A3	7.0	A-	7.0
Landstar System	NA	--	NA	--
Lockheed Martin	A2	6.0	A-	7.0
Monster Beverage	NA	--	NA	--
MSC Industrial Direc	NA	--	NA	--
Oracle Corp.	Baa2	9.0	BBB	9.0
Packaging Corp.	Baa2	9.0	BBB	9.0
Pfizer, Inc.	A2	6.0	A	6.0
Selective Ins. Group	Baa2	9.0	BBB	9.0
Sensient Techn.	WR	--	NR	--
Service Corp. Int'l	Ba3	13.0	BB+	11.0
Sherwin-Williams	Baa2	9.0	BBB	9.0
Sirius XM Holdings	NA	--	BB	12.0
Smith (A.O.)	NA	--	NA	--
Texas Instruments	Aa3	4.0	A+	5.0
Thermo Fisher Sci.	A3	7.0	A-	7.0
UniFirst Corp.	NA	--	NA	--
VeriSign Inc.	Baa3	10.0	BBB	9.0
Waters Corp.	NA	--	NA	--
Watsco, Inc.	NA	--	NA	--
Western Union	Baa2	9.0	BBB	9.0
Average	A3	7.4	BBB+	7.8

Notes:
(1) From page 4 of Document No. 5.

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)	5.82 %	5.82 %
2.	Regression on Kroll Risk Premium Data (2)	7.27	7.27
3.	Kroll Equity Risk Premium based on PRPM (3)	9.35	NA
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	10.25	10.25
5	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	9.24	9.24
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	12.62	12.62
7.	Conclusion of Equity Risk Premium	9.09 %	9.04 %
8.	Adjusted Beta (7)	0.89	0.89
9.	Forecasted Equity Risk Premium	8.09 %	8.05 %

Notes:
(1) From note 1 of page 7 of Document No. 5.
(2) From note 2 of page 7 of Document No. 5.
(3) From note 3 of page 7 of Document No. 5.
(4) From note 4 of page 7 of Document No. 5.
(5) From note 5 of page 7 of Document No. 5.
(6) From note 6 of page 7 of Document No. 5.
(7) Average of mean and median beta from page 6 of this Document.

Sources of Information:
Stocks, Bonds, Bills, and Inflation - 2023 SBBI Yearbook, Kroll.
Value Line Summary and Index.
Blue Chip Financial Forecasts December 28, 2023 and December 1, 2023
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	1.01	0.98	10.02 %	4.15 %	13.97 %	14.02 %	13.99 %
Abbott Labs.	0.90	0.84	0.87	10.02	4.15	12.87	13.19	13.03
Agilent Technologies	0.95	1.07	1.01	10.02	4.15	14.27	14.24	14.26
Air Products & Chem.	0.90	0.88	0.89	10.02	4.15	13.07	13.34	13.20
Alphabet Inc.	0.90	1.13	1.01	10.02	4.15	14.27	14.24	14.26
Altria Group	0.85	0.63	0.74	10.02	4.15	11.56	12.21	11.89
Assurant Inc.	0.90	0.76	0.83	10.02	4.15	12.46	12.89	12.68
Booz Allen Hamilton	0.85	0.84	0.85	10.02	4.15	12.66	13.04	12.85
Brady Corp.	0.95	0.88	0.91	10.02	4.15	13.27	13.49	13.38
Bristol-Myers Squibb	0.80	0.57	0.68	10.02	4.15	10.96	11.76	11.36 (4)
Broadridge Fin'l	0.90	1.02	0.96	10.02	4.15	13.77	13.87	13.82
Brown-Forman 'B'	0.90	0.84	0.87	10.02	4.15	12.87	13.19	13.03
CACI Int'l	0.90	0.77	0.84	10.02	4.15	12.56	12.97	12.77
Chemed Corp.	0.80	0.58	0.69	10.02	4.15	11.06	11.84	11.45 (4)
Cisco Systems	0.90	0.84	0.87	10.02	4.15	12.87	13.19	13.03
CSW Industrials	0.90	0.78	0.84	10.02	4.15	12.56	12.97	12.77
Danaher Corp.	0.90	1.08	0.99	10.02	4.15	14.07	14.09	14.08
Dolby Labs.	0.95	0.86	0.91	10.02	4.15	13.27	13.49	13.38
Fastenal Co.	0.90	0.94	0.92	10.02	4.15	13.37	13.57	13.47
Franklin Electric	0.90	0.92	0.91	10.02	4.15	13.27	13.49	13.38
GATX Corp.	0.95	0.90	0.92	10.02	4.15	13.37	13.57	13.47
Henry (Jack) & Assoc	0.85	0.82	0.84	10.02	4.15	12.56	12.97	12.77
Hunt (J.B.)	0.95	0.96	0.96	10.02	4.15	13.77	13.87	13.82
Ingredion Inc.	0.90	0.63	0.77	10.02	4.15	11.86	12.44	12.15
Int'l Business Mach.	0.95	0.77	0.86	10.02	4.15	12.77	13.12	12.94
Landstar System	0.80	0.82	0.81	10.02	4.15	12.26	12.74	12.50
Lockheed Martin	0.90	0.64	0.77	10.02	4.15	11.86	12.44	12.15
Monster Beverage	0.85	0.72	0.79	10.02	4.15	12.06	12.59	12.33
MSC Industrial Direc	0.90	0.87	0.89	10.02	4.15	13.07	13.34	13.20
Oracle Corp.	0.85	1.00	0.93	10.02	4.15	13.47	13.64	13.55
Packaging Corp.	0.95	0.86	0.90	10.02	4.15	13.17	13.42	13.29
Pfizer, Inc.	0.80	0.73	0.77	10.02	4.15	11.86	12.44	12.15
Selective Ins. Group	0.85	0.61	0.73	10.02	4.15	11.46	12.14	11.80
Sensient Techn.	0.95	0.98	0.96	10.02	4.15	13.77	13.87	13.82
Service Corp. Int'l	0.95	0.83	0.89	10.02	4.15	13.07	13.34	13.20
Sherwin-Williams	0.95	1.07	1.01	10.02	4.15	14.27	14.24	14.26
Sirius XM Holdings	0.95	1.05	1.00	10.02	4.15	14.17	14.17	14.17
Smith (A.O.)	0.90	1.03	0.96	10.02	4.15	13.77	13.87	13.82
Texas Instruments	0.90	1.01	0.96	10.02	4.15	13.77	13.87	13.82
Thermo Fisher Sci.	0.90	1.00	0.95	10.02	4.15	13.67	13.79	13.73
UniFirst Corp.	0.90	0.80	0.85	10.02	4.15	12.66	13.04	12.85
VeriSign Inc.	0.90	1.07	0.99	10.02	4.15	14.07	14.09	14.08
Waters Corp.	0.95	1.00	0.98	10.02	4.15	13.97	14.02	13.99
Watsco, Inc.	0.90	1.10	1.00	10.02	4.15	14.17	14.17	14.17
Western Union	0.85	0.86	0.86	10.02	4.15	12.77	13.12	12.94
		Mean	0.89			13.04 %	13.32 %	13.26 %
		Median	0.89			13.07 %	13.34 %	13.29 %
		Average of Mean and Median	0.89			13.06 %	13.33 %	13.28 %

Notes:
(1) From note 1 of page 2 of Document No. 6.
(2) From note 2 of page 2 of Document No. 6.
(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	1.01	0.98	9.93 %	4.15 %	13.88 %	13.93 %	13.91 %
Abbott Labs.	0.90	0.84	0.87	9.93	4.15	12.79	13.11	12.95
Agilent Technologies	0.95	1.07	1.01	9.93	4.15	14.18	14.16	14.17
Air Products & Chem.	0.90	0.88	0.89	9.93	4.15	12.99	13.26	13.13
Alphabet Inc.	0.90	1.13	1.01	9.93	4.15	14.18	14.16	14.17
Altria Group	0.85	0.63	0.74	9.93	4.15	11.50	12.15	11.82
Assurant Inc.	0.90	0.76	0.83	9.93	4.15	12.39	12.82	12.61
Booz Allen Hamilton	0.85	0.84	0.85	9.93	4.15	12.59	12.97	12.78
Brady Corp.	0.95	0.88	0.91	9.93	4.15	13.19	13.41	13.30
Bristol-Myers Squibb	0.80	0.57	0.68	9.93	4.15	10.90	11.70	11.30 (4)
Broadridge Fin'l	0.90	1.02	0.96	9.93	4.15	13.69	13.78	13.74
Brown-Forman 'B'	0.90	0.84	0.87	9.93	4.15	12.79	13.11	12.95
CACI Int'l	0.90	0.77	0.84	9.93	4.15	12.49	12.89	12.69
Chemed Corp.	0.80	0.58	0.69	9.93	4.15	11.00	11.77	11.39 (4)
Cisco Systems	0.90	0.84	0.87	9.93	4.15	12.79	13.11	12.95
CSW Industrials	0.90	0.78	0.84	9.93	4.15	12.49	12.89	12.69
Danaher Corp.	0.90	1.08	0.99	9.93	4.15	13.98	14.01	14.00
Dolby Labs.	0.95	0.86	0.91	9.93	4.15	13.19	13.41	13.30
Fastenal Co.	0.90	0.94	0.92	9.93	4.15	13.29	13.49	13.39
Franklin Electric	0.90	0.92	0.91	9.93	4.15	13.19	13.41	13.30
GATX Corp.	0.95	0.90	0.92	9.93	4.15	13.29	13.49	13.39
Henry (Jack) & Assoc	0.85	0.82	0.84	9.93	4.15	12.49	12.89	12.69
Hunt (J.B.)	0.95	0.96	0.96	9.93	4.15	13.69	13.78	13.74
Ingredion Inc.	0.90	0.63	0.77	9.93	4.15	11.80	12.37	12.08
Int'l Business Mach.	0.95	0.77	0.86	9.93	4.15	12.69	13.04	12.87
Landstar System	0.80	0.82	0.81	9.93	4.15	12.20	12.67	12.43
Lockheed Martin	0.90	0.64	0.77	9.93	4.15	11.80	12.37	12.08
Monster Beverage	0.85	0.72	0.79	9.93	4.15	12.00	12.52	12.26
MSC Industrial Direc	0.90	0.87	0.89	9.93	4.15	12.99	13.26	13.13
Oracle Corp.	0.85	1.00	0.93	9.93	4.15	13.39	13.56	13.47
Packaging Corp.	0.95	0.86	0.90	9.93	4.15	13.09	13.34	13.21
Pfizer, Inc.	0.80	0.73	0.77	9.93	4.15	11.80	12.37	12.08
Selective Ins. Group	0.85	0.61	0.73	9.93	4.15	11.40	12.07	11.74
Sensient Techn.	0.95	0.98	0.96	9.93	4.15	13.69	13.78	13.74
Service Corp. Int'l	0.95	0.83	0.89	9.93	4.15	12.99	13.26	13.13
Sherwin-Williams	0.95	1.07	1.01	9.93	4.15	14.18	14.16	14.17
Sirius XM Holdings	0.95	1.05	1.00	9.93	4.15	14.08	14.08	14.08
Smith (A.O.)	0.90	1.03	0.96	9.93	4.15	13.69	13.78	13.74
Texas Instruments	0.90	1.01	0.96	9.93	4.15	13.69	13.78	13.74
Thermo Fisher Sci.	0.90	1.00	0.95	9.93	4.15	13.59	13.71	13.65
UniFirst Corp.	0.90	0.80	0.85	9.93	4.15	12.59	12.97	12.78
VeriSign Inc.	0.90	1.07	0.99	9.93	4.15	13.98	14.01	14.00
Waters Corp.	0.95	1.00	0.98	9.93	4.15	13.88	13.93	13.91
Watsco, Inc.	0.90	1.10	1.00	9.93	4.15	14.08	14.08	14.08
Western Union	0.85	0.86	0.86	9.93	4.15	12.69	13.04	12.87
		Mean	0.89			12.96 %	13.24 %	13.18 %
		Median	0.89			12.99 %	13.26 %	13.21 %
		Average of Mean and Median	0.89			12.98 %	13.25 %	13.20 %

Notes:
(1) From note 1 of page 2 of Document No. 6.
(2) From note 2 of page 2 of Document No. 6.
(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 Fourteen Electric Utilities	4.33 %	5.27 %	4.44 %	9.71 %	9.81 %	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 Document No. 4.
(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 December 29, 2023 (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	$ 8,984.120		3	0.57%	
2.	Proxy Group of Fourteen Electric Utilities	$ 15,918.152	1.8 x	2	0.45%	0.12%

	[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	$ 31,549.077	$ 2,203,381.286	-0.26%
	2	12,372.885	31,316.513	0.45%
	3	5,918.981	12,323.854	0.57%
	4	3,770.176	5,916.017	0.58%
	5	2,365.425	3,769.877	0.93%
	6	1,389.851	2,365.076	1.16%
	7	789.019	1,389.118	1.37%
	8	377.076	782.383	1.18%
	9	218.389	373.879	2.15%
Smallest	10	2.015	218.227	4.83%

*From 2023 Kroll Cost of Capital Navigator

Notes:

(1) From page 2 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 0.12% in Column [4], Line No. 2 is derived as follows 0.12% = 0.57% - 0.45%.

Tampa Electric Company, Inc.
Market Capitalization of Tampa Electric Company, Inc. and the
Utility Proxy Group

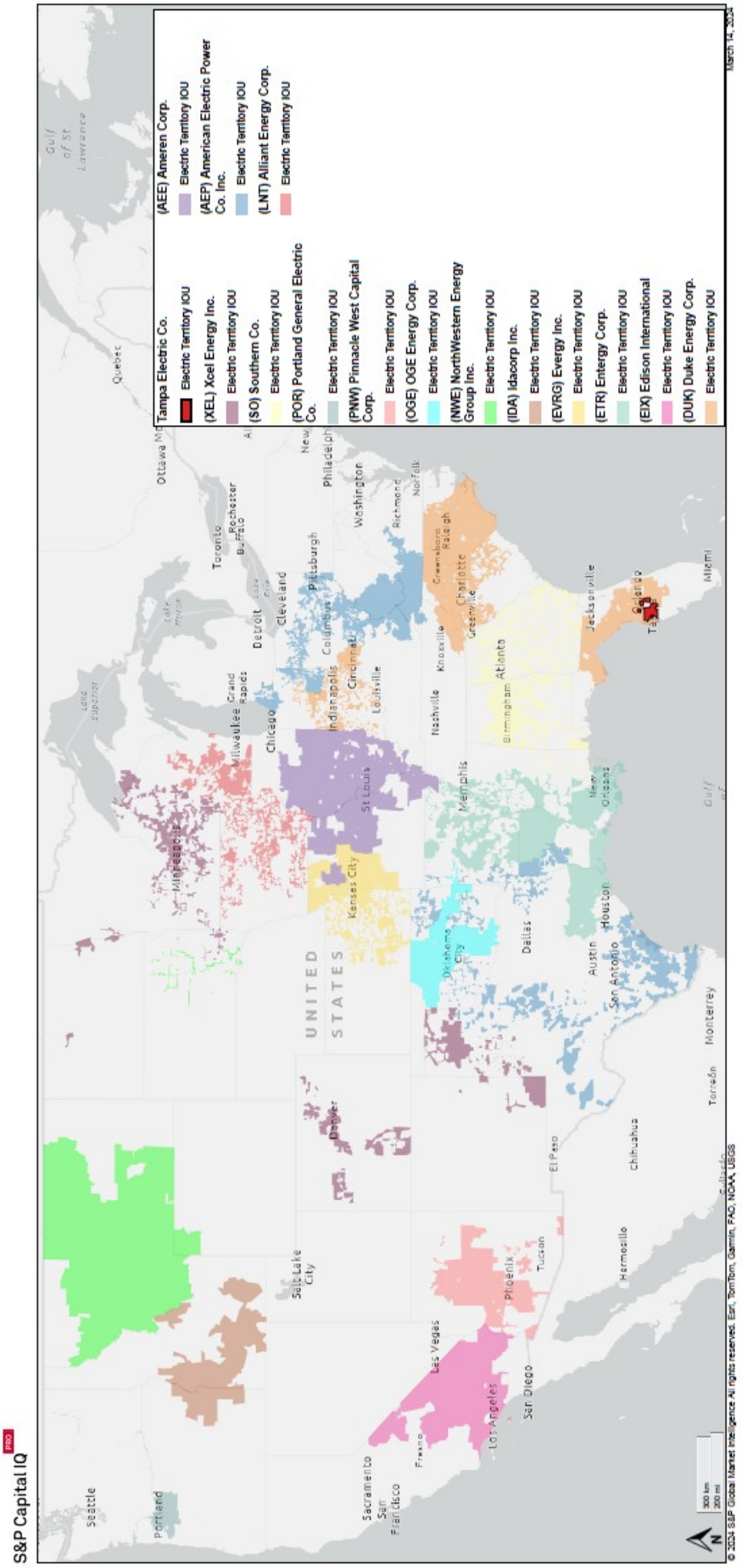
Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2022 (millions)	[2] Book Value per Share at Fiscal Year End 2022 (1)	[3] Total Common Equity at Fiscal Year End 2022 (millions)	[4] Closing Stock Market Price on December 29, 2023	[5] Market-to-Book Ratio on December 29, 2023 (2)	[6] Market Capitalization on December 29, 2023 (3) (millions)
Tampa Electric Company, Inc.		NA	NA	5,291.001 (4)	NA		
Based upon Proxy Group of Fourteen Electric Utilities						169.8 (5)	$ 8,984.120 (6)
Proxy Group of Fourteen Electric Utilities							
Alliant Energy Corporation	NASDAQ	251.135	$ 24.99	$ 6,276.00	$ 51.30	205.3 %	$ 12,883.224
Ameren Corporation	NYSE	262.000	$ 40.11	$ 10,508.00	$ 72.34	180.4	18,953.08
American Electric Power Corporation	NASDAQ	513.866	$ 46.50	$ 23,893.40	$ 81.22	174.7	41,736.20
Duke Energy Corporation	NYSE	770.000	$ 61.51	$ 47,360.00	$ 97.04	157.8	74,720.80
Edison International	NYSE	382.208	$ 35.70	$ 13,643.00	$ 71.49	200.3	27,324.09
Entergy Corporation	NYSE	211.177	$ 61.40	$ 12,966.99	$ 101.19	164.8	21,368.95
Evergy, Inc.	NASDAQ	229.546	$ 41.32	$ 9,483.70	$ 52.20	126.3	11,982.31
IDACORP, Inc.	NYSE	50.562	$ 55.52	$ 2,807.24	$ 98.32	177.1	4,971.25
NorthWestern Corporation	NASDAQ	63.278	$ 42.12	$ 2,665.18	$ 50.89	120.8	3,220.23
OGE Energy Corporation	NYSE	200.200	$ 22.05	$ 4,413.40	$ 34.93	158.4	6,992.99
Pinnacle West Capital Corporation	NYSE	113.247	$ 53.41	$ 6,048.65	$ 71.84	134.5	8,135.68
Portland General Electric Company	NYSE	89.283	$ 31.13	$ 2,779.00	$ 43.34	139.2	3,869.54
Southern Company	NYSE	1,090.000	$ 27.90	$ 30,408.00	$ 70.12	251.4	76,430.80
Xcel Energy Inc.	NASDAQ	549.578	$ 30.34	$ 16,675.00	$ 61.91	204.0	34,024.38
Median		240.341	$ 40.711	$ 9,995.850	$ 70.805	169.8 %	$ 15,918.152

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 December 29, 2023 is assumed to be equal to the market-to-book ratio of the Utility Proxy Group on December 29, 2023 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2022 Annual Forms 10K.
Finance.Yahoo.com.
Bloomberg Professional Services.

DOCKET NO. 20240026-EI
EXHIBIT NO. DWD-1
WITNESS: D'ASCENDIS
DOCUMENT NO. 11
PAGE 1 OF 1
FILED: 04/02/2024



Tampa Electric Company, Inc.
Analysis of Climate-Related Risks
Utility Proxy Group

Company	Average Risk Score	Area (Sq Mi) Weighted Average Risk Score
LNT	49.98	51.84
AEE	49.89	53.54
AEP	43.44	46.19
DUK	63.76	71.11
EIX	93.64	94.39
ETR	61.47	64.02
EVRG	45.56	46.22
IDA	44.08	46.58
NWE	35.95	32.56
OGE	60.22	59.83
PNW	83.70	83.30
POR	92.73	93.47
SO	52.24	57.51
XEL	49.49	49.13
Proxy Group Average	59.01	60.69
Proxy Group Median	51.11	55.53
TECO	98.96	98.81

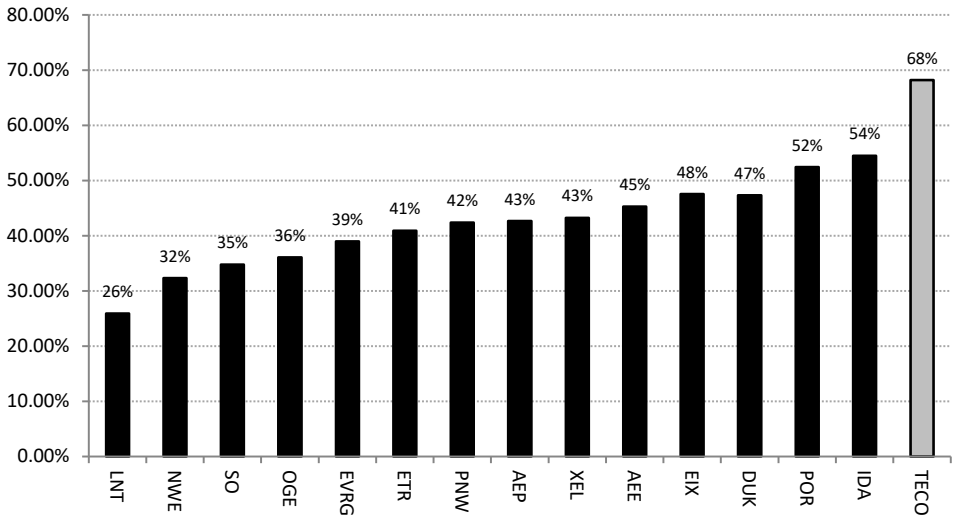
Sources:
S&P Capital IQ
Company Tariffs and Annual Filings
National Risk Index Database

National Risk Index Ranking Clusters

Risk Ranking	Risk Score	Number of Counties
Very High	99.55 - 100	15
Relatively High	95.45 - 99.52	129
Relatively Moderate	82.82 - 95.42	397
Relatively Low	48.11 - 82.79	1,091
Very Low	0.03 - 48.08	1,511
	Total	3,143

Sources:
National Risk Index Database

Tampa Electric Company, Inc.
Comparison of Projected Capital Expenditures Relative to Net Plant

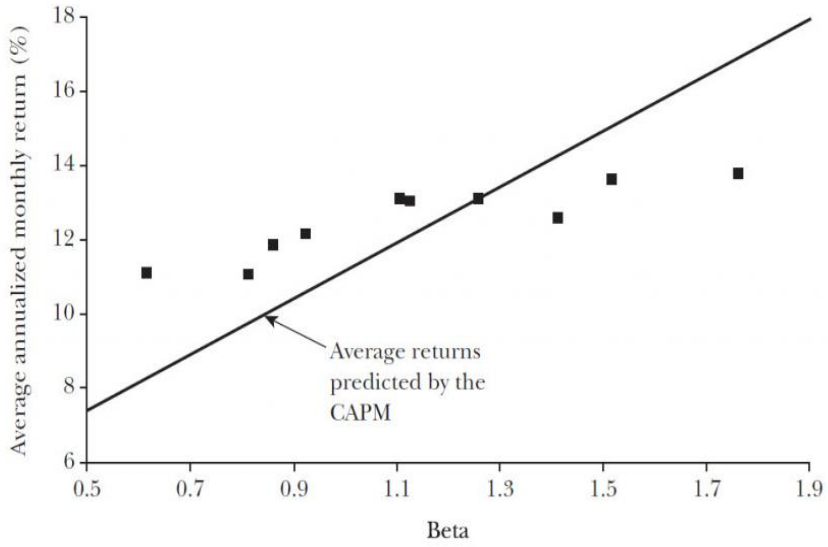


Sources of Information: Value Line
Tampa Electric Company, Inc., 2022 FERC Form 1
Company Provided

Fama and French's Figure 2[1]

Figure 2

Average Annualized Monthly Return versus Beta for Value Weight Portfolios Formed on Prior Beta, 1928–2003



[1] Eugene F. Fama and Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, Journal of Economic Perspectives, Vol. 18, No. 3, Summer 2004 at 33 ("Fama & French").

REFERENCED ENDNOTES

FOR THE

PREPARED DIRECT TESTIMONY

OF

DYLAN W. D'ASCENDIS

[1] *Hope*, 320 U.S. 591 (1944), at 603.

[2] Risk distinctions within S&P's bond rating categories are recognized by a 'plus' or 'minus', *e.g.*, within the A category, an S&P rating can be an A+, A, or A-. Similarly, risk distinction for Moody's ratings are distinguished by numerical rating gradations, *e.g.*, within the A category, a Moody's rating can be A1, A2 and A3.

[3] *See*, Tampa Electric Company, SEC Form 10-K, at 5 (Dec. 31, 2023). The Company's operations include electricity sold at the wholesale level to municipalities, electric cooperative utilities, power marketers, and other load-serving entities.

[4] Source: S&P Capital IQ.

[5] *See*, Emera Incorporated, SEC Form 40-F, at 6-8 (Dec. 31, 2023).

[6] Source: Tampa Electric Company, FERC Form 1.

[7] Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, Concise 4th Ed., Thomson South-Western, 2004, at 574.

[8] *In re: Petition for rate increase by Peoples*, Docket No. 080318-GU, Final Order Granting in Part and Denying in Part Petition for Rate Increase, at 12 (June 9, 2009).

[9] *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 62-66, 71 (December 27, 2023).

[10] *See*, SBBI - 2023, Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2022.

[11] *See*, SBBI - 2023, at 200-201.

[12] Autoregressive conditional heteroscedasticity. See "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. *The Journal of Regulatory Economics* (December 2011), 40:261-278.

[13] www.nobelprize.org.

[14] Data from January 1928 to December 2022 is from SBBI - 2023. Data from January 2023 to December 2023 is from Bloomberg.

[15] Annualized Return = (1 + Monthly Return) ^12 - 1.

[16] Shown on line 3, page 6 of Document No. 5.

[17] www.nobelprize.org.

[18] Robert Engle, "GARCH 101: The Use of ARCH/GARCH Models in Applied Econometrics", *Journal of Economic Perspectives*, Volume 15, No. 4, Fall 2001, at 157-168.

[19] Autoregressive Conditional Heteroskedasticity/Generalized Autoregressive Conditional Heteroskedasticity.

[20] In addition to Eviews,® the GARCH methodology can be applied and the PRPM derived using other standard statistical software packages such as SAS, RATS, S-Plus and JMulti, which are not cost-prohibitive. The software that I used in this proceeding, Eviews,® currently costs $600 - $700 for a single user commercial license. In addition, JMulti is a free downloadable software with GARCH estimation applications.

[21] Eugene A. Pilotte and Richard A. Michelfelder, "Treasury Bond Risk and Return, the Implications for the Hedging of Consumption and Lessons for Asset Pricing", *Journal of Economics and Business*, June 2011, 582-604. and Richard A. Michelfelder, "Empirical Analysis of the Generalized Consumption Asset Pricing Model: Estimating the Cost of Capital", *Journal of Economics and Business*, April 2015, 37-50.

[22] Pauline M. Ahern, Frank J. Hanley, and Richard A. Michelfelder, "New Approach to Estimating the Equity Risk Premium for Public Utilities", *The Journal of Regulatory Economics*, December 2011, at 40:261-278.

[23] Richard A. Michelfelder, Pauline M. Ahern, Dylan W. D'Ascendis, and Frank J. Hanley, "Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model for Estimating the Cost of Common Equity", *The Electricity Journal*, April 2013, at 84-89; and Richard A. Michelfelder, Pauline M. Ahern, and Dylan W. D'Ascendis, "Decoupling, Risk Impacts and the Cost of Capital", *The Electricity Journal*, January 2020.

[24] Richard A. Michelfelder, Pauline M. Ahern, and Dylan W. D'Ascendis, "Decoupling Impact and Public Utility Conservation Investment", *Energy Policy*, April 2019, 311-319.

[25] PSC SC Docket No. 2017-292-WS - Order No. 2018-345, at 14. (May 17, 2018)

[26] NCUC Docket No. W-354, Sub 363, 364, 365, *Order Granting Partial Rate Increase and Requiring Customer Notice*, at PDF 72 (March 31, 2020).

[27] *See, e.g.*, Robert S. Harris and Felicia C. Marston, *The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts*, Journal of Applied Finance, Vol. 11, No. 1, 2001, at 11-12; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45.

[28] Roger A. Morin, Modern Regulatory Finance, (2021) at 205-209 ("Morin").

[29] Eugene F. Fama and Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, Journal of Economic Perspectives, Vol. 18, No. 3, Summer 2004, at 33 ("Fama & French").

[30] Morin, at 207.

[31] Morin, at 221.

[32] Fama and French, at 32.

[33] Fama and French, at 33.

[34] Dianna R. Harrington, Modern Portfolio Theory & the Capital Asset Pricing Model – A User's Guide, Prentice-Hall, Inc. 1983, at 43-45.

[35] Dianna R. Harrington, Modern Portfolio Theory & the Capital Asset Pricing Model – A User's Guide, Prentice-Hall, Inc. 1983, at 43-45.

[36] *See*, SBBI - 2023, Appendix A-1 (1) through A-1 (3) and Appendix A-7 (19) through A-7 (21).

[37] *Blue Chip Financial Forecasts*, December 1, 2023, at 14; and December 28, 2023, at 2.

[38] *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).

[39] Morin, at 329.

[40] Eugene F. Brigham and Phillip R. Daves, Intermediate Financial Management, 9th Edition, Thomson/Southwestern, at page 342.

[41] Morin, at 337-339.

[42] Source of Information: S&P Global Market Intelligence.

[43] As shown on page 3 of Document No. 5.

[44] 0.08% = 0.25% * (1/3).

[45] Kroll, Cost of Capital Navigator: U.S. Cost of Capital Module, Size as a Predictor of Equity Returns, at 1.

[46] Fama & French, at 25-43.

[47] Brealey, Richard A. and Myers, Stewart C., Principles of Corporate Finance (McGraw-Hill Book Company, 1996), at 204-205, 229.

[48] Brigham, Eugene F., Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989), at 623.

[49] *See*, S&P Global Ratings, RatingsDirect: Tampa Electric Co., June 15, 2023; and Moody's Investor Service, Credit Opinion: Tampa Electric Company, December 20, 2023.

[50] FEMA defines Expected Annual Loss in the following way (see, https://hazards.fema.gov/nri/expected-annual-loss):

> Expected Annual Loss (EAL) represents the average economic loss in dollars resulting from natural hazards each year. It is calculated for each hazard type and quantifies loss for relevant consequence types: buildings, people, and agriculture.
>
> As the natural hazards component of the National Risk Index, an Expected Annual Loss score and rating represent a community's relative level of expected losses each year when compared to all other communities at the same level. An Expected Annual Loss score is positively associated to a community's risk; thus, a higher Expected Annual Loss score results in a higher Risk Index score.

[51] https://www.ncei.noaa.gov/access/billions/.

[52] https://www.ncei.noaa.gov/access/billions/.

[53] https://www.ncei.noaa.gov/access/billions/.

[54] Florida Public Service Commission, Order No. PSC-13-0443-FOF-EI, Docket No. 130040-EI, September 30, 2013, Exhibit A: Stipulation and Settlement Agreement, at 9-10.

[55] Florida Public Service Commission, Order No. PSC-13-0443-FOF-EI, Docket No. 130040-EI, September 30, 2013, Exhibit A: Stipulation and Settlement Agreement, at 10.

[56] Tampa Electric Company, SEC Form 10-K, at 48 (Dec. 31, 2023).

[57] Moody's Investor Service, Credit Opinion: Tampa Electric Company, December 20, 2023, at 6.

[58] S&P Global Ratings, RatingsDirect: Tampa Electric Co., June 15, 2023, at 2.

[59] S&P Global Ratings, RatingsDirect: Tampa Electric Co., June 15, 2023, at 8.

[60] Source: 2018 and 2022 FERC Form 1, at 301.

[61] Source: Company provided data.

[62] Source: Tampa Electric Company, 2022 FERC Form 1, at 110.

[63] Standard & Poor's, Industry Report Card: Utility Sectors in the Americas Remain Stable, While Challenges Beset European, Australian, and New Zealand Counterparts, RatingsDirect, June 27, 2008, at 4.

[64] Standard & Poor's, *Industry Top Trends 2017: Utilities*, RatingsDirect, February 16, 2017, at 4.