BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

ANN E. BULKLEY

ON BEHALF OF EVERGY KANSAS CENTRAL, INC. AND EVERGY KANSAS SOUTH, INC.

IN THE MATTER OF THE APPLICATION OF EVERGY KANSAS CENTRAL, INC. AND EVERGY KANSAS SOUTH, INC. FOR APPROVAL TO MAKE CERTAIN CHANGES IN THEIR CHARGES FOR ELECTRIC SERVICE PURSUANT TO K.S.A. 66-117.

Docket No. 25-EKCE-294-RTS

January 31, 2025

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I. INTRODUCTION AND QUALIFICATIONS

Q: Please state your name, by whom you are employed, and your business address.

A: My name is Ann E. Bulkley. I am a Principal at The Brattle Group ("Brattle"). My business address is One Beacon Street, Suite 2600, Boston, Massachusetts 02108.

Q: On whose behalf are you submitting this testimony?

A: I am submitting this direct testimony before the State Corporation Commission of the State of Kansas ("Commission") on behalf of Evergy Kansas Central, Inc., and Evergy Kansas South, Inc. wholly-owned subsidiaries of Evergy, Inc. Evergy Kansas Central, Inc. and Evergy Kansas South, Inc. are referred to collectively herein as "EKC" or the "Company".

Q: Please describe your background and professional experience in the energy and utility industries.

A: I hold a Bachelor's degree in Economics and Finance from Simmons College and a Master's degree in Economics from Boston University, with more than 25 years of experience consulting to the energy industry. I have provided testimony regarding financial matters, including the cost of capital, before multiple regulatory agencies. I have advised numerous energy and utility clients on a wide range of financial and economic issues with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation and ratemaking purposes. A summary of my professional background and a listing of the testimony that I have filed in other proceedings is presented in **Attachment A**.

II. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY

Q: What is the purpose of your direct testimony?

A: The purpose of my direct testimony is to present evidence and provide a recommendation regarding the appropriate return on equity for the Company's electric utility operations in Kansas and to provide an assessment of the proposed capital structure to be used for ratemaking purposes.

Q: Are you sponsoring any exhibits in support of your direct testimony?

A: Yes. My analyses and recommendations are supported by the data presented in **Exhibits AEB-1 through AEB-12**, which have been prepared by me or under my direction.

Q: Please provide a brief overview of the analyses that support your ROE recommendation.

A: I have estimated the market-based cost of equity by applying traditional estimation methodologies to a proxy group of comparable utilities, including the constant growth form of the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and a Bond Yield Risk Premium ("BYRP" or "Risk Premium") analysis.

My recommendation also takes into consideration: (1) the regulatory environment in which the Company operates; (2) the Company's overall capital expenditure requirements; (3) the Company's planned generation capital expenditures coupled with the increased risk of owning a nuclear generation plant: and (4) wildfire risk which has become a great focus of both equity analysts and credit rating agencies**.** Finally, I consider the Company's proposed capital structure as compared to the capital structures of the proxy companies. While I did not make any specific adjustments to the ROE recommendation for

any of these factors individually, I did take them into consideration in aggregate when determining where my recommended ROE falls within the range of analytical results.

Q: How is the remainder of your direct testimony organized?

A: The remainder of my direct testimony is organized as follows:

- Section III provides a summary of my analyses and conclusions.
- Section IV reviews the regulatory principles pertinent to the development of the cost of capital.
- Section V discusses current and projected capital market conditions and the effect of those conditions on the Company's cost of equity.
- Section VI explains my selection of proxy group of electric utilities.
- Section VII describes my analyses and the analytical basis for my recommendation of the appropriate ROE for the Company.
- Section VIII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized for the Company in this case.
- Section IX discusses the capital structure of the Company as compared with the proxy group.
- Section X presents my conclusions and recommendations for the market cost of equity.

III. SUMMARY OF ANALYSIS AND CONCLUSIONS

Q: Please summarize the key factors considered in your analyses and upon which you base your recommended ROE.

A: My analyses and recommendations considered the following:

- The United States Supreme Court's *Hope* and *Bluefield* decisions established the standards for determining a fair and reasonable authorized ROE for public utilities, including consistency of the allowed return with the returns of other businesses

having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.[1]

- The effect of current and projected capital market conditions on the cost of equity estimation models and on investors' return requirements.

- The results of several analytical approaches that provide estimates of the Company's cost of equity. Because the Company's authorized ROE should be a forward-looking estimate over the period during which the rates will be in effect, these analyses rely on forward-looking inputs and assumptions (*e.g.*, projected analyst growth rates in the DCF model, forecasted risk-free rate and market risk premium in the CAPM analysis).

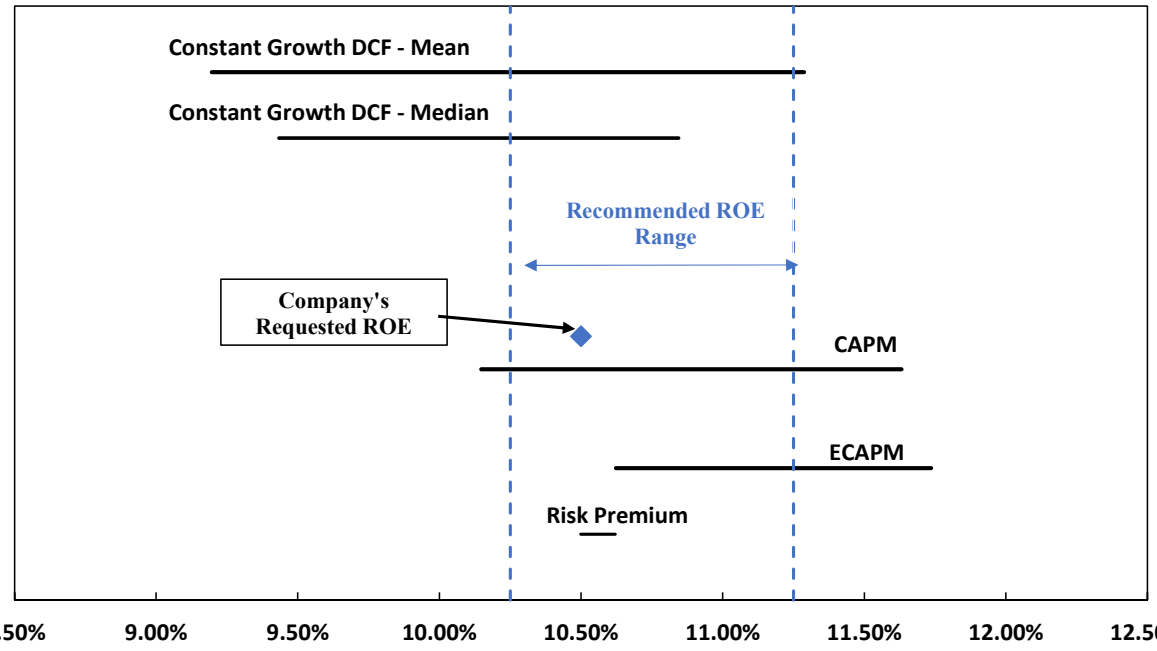
- Although the proxy group companies are generally comparable to EKC, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I considered the Company's regulatory, business, and financial risks relative to the proxy group in determining where the Company's ROE should fall within the reasonable range of analytical results to appropriately account for any residual differences in risk.

Q: What are the results of the models that you have used to estimate the market-based cost of equity for EKC?

A: Figure 1, below, summarizes the range of results produced by the cost of equity analyses based on data through November 29, 2024.

[1] *Federal Power Commission v. Hope Natural Gas Co*., 320 U.S. 591 (1944) ("*Hope*"); *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) ("*Bluefield*").

Figure 1: Summary of Cost of Equity Analytical Results



Q: What is your conclusion regarding the appropriate authorized ROE for the Company in this proceeding?

A: Considering the analytical results presented in Figure 1, current and prospective capital market conditions, as well as the level of regulatory, business, and financial risk faced by the Company's electric operations in Kansas relative to the proxy group, I conclude that an ROE in the range of 10.25 percent to 11.25 percent is reasonable, and within that range, the Company is requesting an ROE of 10.50 percent which is reasonable, if not conservative.

Q: Is the Company's requested capital structure reasonable and appropriate?

A: Based on the analysis presented in Section IX of my testimony, the Company's proposed equity ratio of 51.97 percent for EKC is reasonable. To determine if EKC's requested capital structure was reasonable, I reviewed the capital structures of the utility subsidiaries of the proxy companies. As shown in **Exhibit AEB-11**, the results of that analysis

demonstrate that the eight quarter average equity ratios for the utility operating companies of the proxy group range from 45.33 percent to 60.29 percent, with a median of 50.80 percent. Comparing the recommended equity ratio to the proxy group demonstrates that the Company's requested equity ratio is generally consistent with the median equity ratio and well within the range of the equity ratios for the utility operating subsidiaries of the proxy group companies.

IV. REGULATORY PRINCIPLES

Q: Please describe the guiding principles to be used in establishing the cost of equity for a regulatory utility.

A: The United States Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's allowed ROE. Among the standards established by the Court in those cases are: (1) consistency with other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) that the end result, as opposed to the methodology employed, is the controlling factor in arriving at just and reasonable rates.[2]

Q: Has the Commission provided similar guidance in establishing the appropriate ROE?

A: Yes, it has. In Docket No. 15-WSEE-115-RTS for Westar Energy, Inc. and Kansas Gas and Electric Company, the Commission recognized the Supreme Court's authority in *Hope* and *Bluefield* regarding a "fair rate of return":

> In addition to Kansas' own statutes and case law on the subject, the U.S. Supreme Court has established certain principles for the Commission to follow when reviewing rate change applications. *Bluefield Waterworks & Imp. Co. v. Pub. Serv. Comm 'n of W Va*., 262 U.S. 679 (1923), and *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944), provide what this Commission has referred to as the "capital attraction standard." "The return [on investment]

[2] *Bluefield*, 262 U.S. at 692-93; *Hope*, 320 U.S. at 603.

> should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, *to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties*." "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. "The court has also stated however, "a rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. Also in *Hope Natural Gas*, the U.S. Supreme Court promulgated what this Commission refers to as the "comparable earnings standard." "By that standard the return to the equity owner *should be commensurate with returns on investments in other enterprises having corresponding risks*" which would include not only service on a utility's debt but also dividends on the stock. This, as Westar noted in its Application, does not guarantee it will actually earn its authorized return. "(R]egulation does not insure that the business shall produce net revenues, nor does the Constitution require that the losses of the business in one year shall be restored from future earnings by the device of capitalizing the losses and adding them to the rate base on which a fair return and depreciation allowance is to be earned." These standards taken together stand for the general idea that the return provided to a utility's investors should (1) be consistent with other businesses having similar risks and (2) the adequacy of the return for servicing debt and paying dividends be able to support a utility's credit quality, access to capital, and financial integrity. "The KCC is required to balance the public need for adequate, efficient, and reasonable service with the public utility's need for sufficient revenue to meet the cost of furnishing service and to earn a reasonable profit."[3]

This guidance is consistent with the principle that an allowed rate of return must be sufficient to enable regulated entities, such as the Company's, to attract capital on reasonable terms.

Q: Why is it important for a utility to be allowed the opportunity to earn an ROE that is adequate to attract capital at reasonable terms?

A: An ROE that is adequate to attract capital at reasonable terms enables the Company to provide safe, reliable electric utility service while maintaining its financial integrity. That return should be commensurate with returns required by investors elsewhere in the market

[3] Kansas Corporation Commission, Docket No. 15-WSEE-115-RTS, Order, September 24, 2015, at 25-26.

for investments of comparable risk. If it is not, debt and equity investors will seek alternative investment opportunities for which the expected return reflects the perceived risks, thereby inhibiting the Company's ability to attract capital at reasonable cost.

Q: Is a utility's ability to attract capital also affected by the ROEs that are authorized for other utilities?

A: Yes. Utilities compete directly for capital with other investments of similar risk, which include other utilities. Therefore, the ROE authorized to a utility sends an important signal to investors regarding whether there is regulatory support for financial integrity, dividends, growth, and fair compensation for business and financial risk. The cost of capital represents an opportunity cost to investors. If higher returns are available for other investments of comparable risk, investors have an incentive to direct their capital to those investments. Thus, an authorized ROE significantly below authorized ROEs for other utilities can inhibit the utility's ability to attract capital for investment.

Q: Are you aware of any current risk factors for electric utilities that highlights the importance of regulatory outcomes that are viewed as credit supportive?

A: Yes. Electric utilities face increased capital expenditure requirements over the near-term. For example, as I will discuss in Section VIII below, the Company is forecasting significant capital expenditures over the near-term, which Moody's has noted is elevated when compared to historical levels.[4] The elevated capital expenditure requirements are likely to put downward pressure on credit metrics and thus credit ratings and require external financing to fund. The increased need for external financing to fund the elevated capital expenditures requires electric utilities be able to have access to capital at reasonable terms.

[4] Moody's Ratings, Evergy Kansas Central: Update to Credit Analysis, January 17, 2025, at 4.

Therefore, it is imperative that the return authorized by the Commission in the current proceeding be commensurate with the returns on assets of similar risk as a return that is not considered comparable could affect EKC's ability to access capital at a time when the need to access the capital markets is heightened.

Q: What is the standard for setting the ROE in any jurisdiction?

A: The stand-alone ratemaking principle is a foundation of jurisdictional ratemaking. This principle requires that the rates that are charged in any operating jurisdiction be for the costs incurred in that jurisdiction. The stand-alone ratemaking principle ensures that customers in each jurisdiction only pay for the costs of the service provided in that jurisdiction, which is not influenced by the business operations in other operating companies. Consistent with this principle, the cost of equity analysis is performed for an individual operating company as a stand-alone entity. As such, I have evaluated the investor-required return for EKC.

Q: Does the fact that the Company is a subsidiary of Evergy, Inc., a publicly-traded company, affect your analysis?

A: No. In this proceeding, consistent with stand-alone ratemaking principles, it is appropriate to establish the cost of equity for the Company, not its publicly-traded entity, Evergy, Inc. More importantly, however, it is appropriate to establish a cost of equity and capital structure that provide the Company the ability to attract capital on reasonable terms on a stand-alone basis and within Evergy, Inc.

Q: Are the regulatory framework, the authorized ROE, and equity ratio important to the financial community?

A: Yes. The regulatory framework is one of the most important factors in debt and equity investors' assessments of risk for a utility company. Specifically, the authorized ROE and equity ratio for regulated utilities is very important for determining the degree of regulatory support for reinforcing a utility's creditworthiness and financial stability in the jurisdiction. To the extent authorized returns in a jurisdiction are lower than the returns that have been authorized more broadly, such actions are considered by both debt and equity investors in the overall risk assessment of the regulatory jurisdiction in which the company operates.

Q: What are your conclusions regarding regulatory guidelines?

A: The ratemaking process is premised on the principle that, in order for investors and companies to commit the capital needed to provide safe and reliable utility services, a utility must have a reasonable opportunity to recover the return of, and the market-required return on, its invested capital. Accordingly, the Commission's order in this proceeding should establish rates that provide the Company with a reasonable opportunity to earn an ROE that is adequate to attract capital at reasonable terms and sufficient to ensure its financial integrity. It is important for the ROE authorized in this proceeding to take into consideration current and projected capital market conditions, as well as investors' expectations and requirements for both risks and returns. Because utility operations are capital-intensive, regulatory decisions should enable the utility to attract capital at reasonable terms under a variety of economic and financial market conditions. Providing the opportunity to earn a market-based cost of capital supports the financial integrity of the Company, which is in the interest of both customers and shareholders.

V. CAPITAL MARKET CONDITIONS

Q: Why is it important to analyze capital market conditions?

A: The models used to estimate the cost of equity rely on market data and thus the results of those models can be affected by prevailing market conditions at the time the analysis is performed. While the ROE established in a rate proceeding is intended to be forward-looking, the analysis uses current and projected market data, including stock prices, dividends, growth rates, and interest rates, in the cost of equity estimation models to estimate the investor-required return for the subject company.

Analysts and regulatory commissions recognize that current market conditions affect the results of the cost of equity estimation models. As a result, it is important to consider the effect of the market conditions on these models when determining an appropriate range for the ROE, and the ROE to be used for ratemaking purposes for a future period. If investors do not expect current market conditions to be sustained in the future, it is possible that the cost of equity estimation models will not provide an accurate estimate of investors' required return during that rate period. Therefore, it is important to consider projected market data to estimate the return for that forward-looking period.

Q: How have market conditions changed since the Company's last rate proceeding?

A: As shown in Figure 2, while the federal funds rate and core inflation have declined, long-term government bonds yields have increased slightly since the settlement agreement was filed in the Company's last rate proceeding. Further, inflation still remains well above the Federal Reserve's target level of 2 percent. As a result, current capital market conditions are generally consistent with those that existed at the time of the Company's last rate proceeding.

Figure 2: Change in Market Conditions Since Company's Last Rate Case[5]

Docket	Date	Federal Funds Rate	30-Day Avg of 30-Year Treasury Bond Yield	Core Inflation Rate
Docket No. 23-EKCE-775-RTS				
Settlement Agreement Date	9/29/2023	5.33%	4.42%	4.14%
Current	12/31/2024	4.33%	4.56%	3.25%

Q: What has the level of inflation been over the past few years?

A: As shown in Figure 3, core inflation[6] increased steadily beginning in early 2021, rising from 1.40 percent in January 2021 to a high of 6.64 percent in September 2022, which was the largest 12-month increase since 1982.[7] Since that time, while core inflation has declined in response to the Federal Reserve's monetary policy, it continues to remain above the Federal Reserve's target level of 2.0 percent.

In addition, I also considered the ratio of unemployed persons per job opening, which is currently 0.9 and has been consistently below 1.0 since April 2021, despite the Federal Reserve's accelerated policy normalization. This indicates sustained strength in the labor market. Given the Federal Reserve's dual mandate of maximum employment and price stability, the strength in the labor market allowed the Federal Reserve to focus on the

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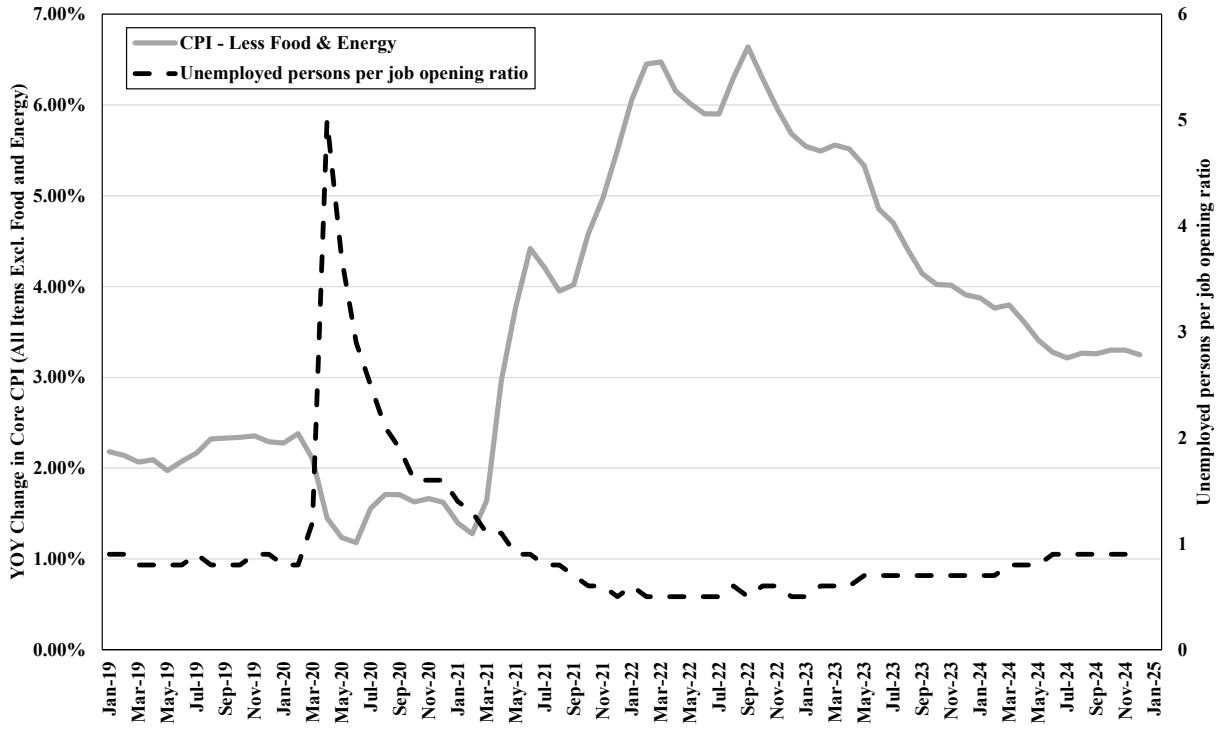
5 St. Louis Federal Reserve Bank; Bureau of Labor Statistics

6 Figure 3 presents the year-over-year ("YOY") change in core inflation, as measured by the Consumer Price Index ("CPI") excluding food and energy prices as published by the Bureau of Labor Statistics. I considered core inflation because it is the preferred inflation indicator of the Federal Reserve for determining the direction of monetary policy. Core inflation is preferred by the Federal Reserve because it removes the effect of food and energy prices, which can be highly volatile.

7 *Bloomberg,* Pickert, Reade, "Core US Inflation Rises to 40-Year High, Securing Big Fed Hike", October 13, 2022.

priority of reducing inflation and pursue the necessary restrictive monetary policy needed to reduce inflation.

Figure 3: Core Inflation and Unemployed Persons-to-Job Openings, January 2019 to December 2024[8]



Q: What policy actions did the Federal Reserve enact to respond to increased inflation?

A: The dramatic increase in inflation prompted the Federal Reserve to pursue an aggressive normalization of monetary policy, removing the accommodative policy programs used to mitigate the economic effects of COVID-19. Between the March 2022 Federal Open Market Committee ("FOMC") meeting and the July 2023 FOMC meeting, the Federal Reserve increased the target federal funds rate through a series of increases from a range of 0.00 – 0.25 percent to a range of 5.25 percent to 5.50 percent. As discussed below, in

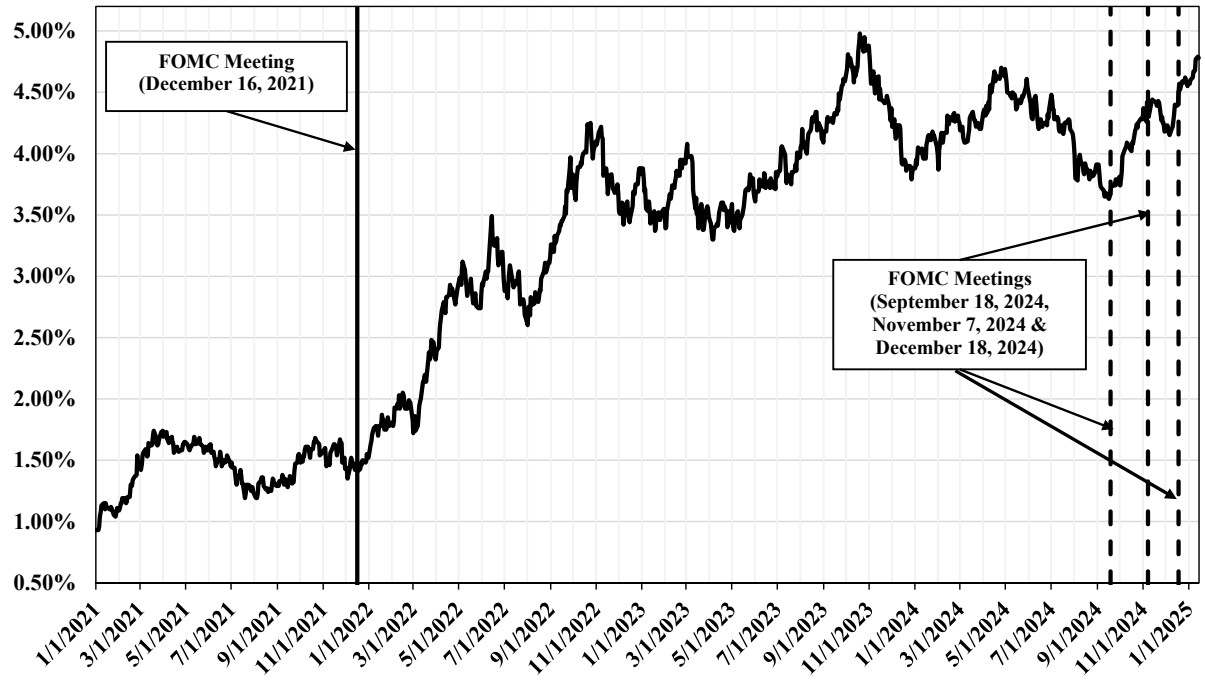
[8] Bureau of Labor Statistics. The unemployed persons-to-job openings ratio reflects data through November 2024 which was the latest data available as of January 2025.

light of the progress on reducing inflation and the balancing of the dual mandate, the Federal Reserve lowered the federal funds rate in September, November and December 2024 by a total of 100 basis points to a range of 4.25 percent to 4.50 percent.

Q: How did the yields on long-term government bonds respond to the Federal Reserve's normalization of monetary policy to combat inflation?

A: As shown in Figure 4, as the Federal Reserve substantially increased the federal funds rate between December 2021 and July 2023 in response to persistent increased levels of inflation, longer-term interest rates increased.

Figure 4: 10-Year Treasury Bond Yield, January 2021– January 14, 2025[9]



Q: What is the expected path of the monetary policy over the near-term?

A: As noted above, at the September 2024 FOMC meeting, Chairman Powell noted that while over the past two years the risks associated with inflation have far exceeded the risks

[9] S&P Capital IQ Pro.

associated with the labor market, the FOMC's current view is that the risks associated with both inflation and the labor market have become more balanced given the effectiveness of restrictive monetary policy in combatting inflation. As a result, the FOMC indicated it was time to change monetary policy in order to continue to achieve the Federal Reserve's dual mandate of maximum employment and price stability and, as a result, decided to lower the target range for the federal funds rate by 50 basis points to a range of 4.75 percent to 5.00 percent.

The FOMC recently also reduced the federal funds rate range by 25 basis points at both the November 2024 and December 2024 meetings to a range of 4.25 percent to 4.50 percent. However, Chairman Powell continued to provide a similar message at the December 2024 meeting as he did at both the September and November 2024 meetings, stating that the FOMC is "not on any preset course".[10] Chairman Powell further noted that "the slower pace of cuts for next year [the FOMC is forecasting just two rate cuts before the end of 2025] really reflects both the higher inflation readings we've had this year and the expectation that inflation will be higher".[11]

Q: What has happened to the yields on long-term government bonds since the FOMC reduced the federal funds rate in September 2024?

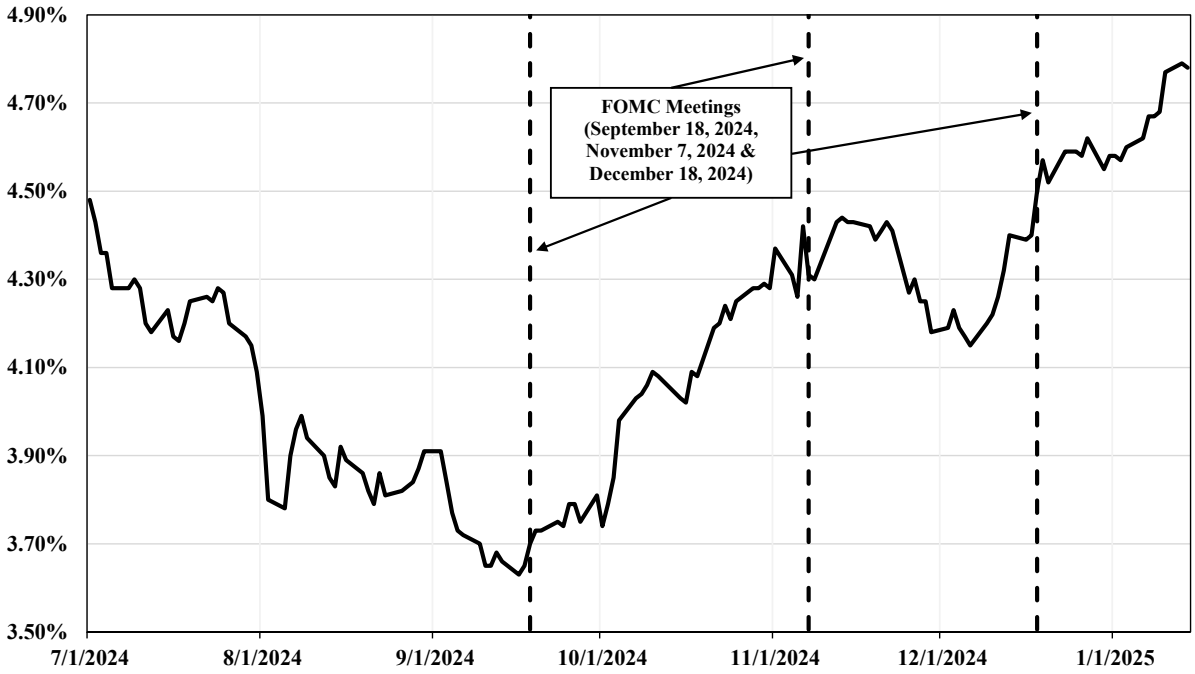
A: As shown in Figure 5, which adjusts Figure 4 to more closely examine the period preceding and after the September 2024 FOMC meeting, the yield on the 10-year Treasury bond declined prior to reduction in the federal funds rate at the September 2024 FOMC meeting, but has since increased. As of January 14, 2025, the yield on the 10-year Treasury bond

[10] FOMC, Transcript of Chair Powell's Press Conference, December 18, 2024.

[11] *Id.* Clarification added.

was 4.78 percent, which is substantially higher than the yield just prior to the actions of the FOMC in September 2024 and consistent with the level seen in April 2024, several months prior to the first reduction in the federal funds rate.

Figure 5: 10-year Treasury Bond Yield, July 1, 2024 – January 14, 2025[12]



Q: Why have long-term interest rates increased since the Federal Reserve first reduced the federal funds rate in September?

A: According to a *Reuters* article, the increase in long-term government bond yields was initially related to investors responding to an increasing probability of a Trump Administration in 2025 and has continued as a result of President Trump being re-elected.[13] This is because investors view key elements of President Trump's economic plan such as

[12] S&P Capital IQ Pro.

[13] Davide Barbuscia and Lewis Krauskopf, "Bond rebound uncertain as Trump plans overshadow Fed rate cuts," *Reuters*, November 8, 2024.

tax cuts and tariffs as inflationary. The expectation of sustained inflation means that the Federal Reserve will lower the federal funds rate more gradually than initially expected. For example, at the time the article was published in November 2024, *Reuters* noted that investors expected the federal funds rate to decline to 3.7 percent by the end of 2025 from the current range of 4.5 percent to 4.75 percent, which was 100 basis points above investors' expectations in September 2024.[14] Currently, as of January 2025, according to the CME Group, investors expect the federal funds rate to decline by only 25 basis points by the end of 2025 to a range of 4.00 percent to 4.25 percent.[15]

Q: What are the expectations for the yields on long-term government bonds?

A: Economists consider the expected policy of the Federal Reserve in the development of their forecasts of long-term government bond yields. Currently, economists are projecting that long-term government bond yields will remain elevated. For example, the most recent consensus estimates published in the *Blue Chip Financial Forecasts* for the average yield on the 30-year Treasury bond is 4.48 percent through 1Q/2026[16] and 4.30 percent over the longer term through 2030.[17] This is important because it means that long-term interest rates are expected to remain elevated during the period that the Company's rates will be in effect.

Q: What are your conclusions regarding the effect of current market conditions on the cost of equity for the Company?

A: Due to their effect on the estimated cost of equity, it is important that current and projected market conditions be considered in setting the forward-looking ROE in this proceeding. As

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[14] *Id.*

[15] CME Group, as of 1/14/2025.

[16] *Blue Chip Financial Forecasts*, Vol. 44, No. 1, December 30, 2024, at 2.

[17] *Blue Chip Financial Forecasts*, Vol. 43, No. 12, November 27, 2024, at 2 & 14.

shown in Figure 2, current capital market conditions are generally consistent with those that existed at the time of the Company's last rate proceeding. Further, while the FOMC decreased the federal funds rate, there is uncertainty regarding the policies of a new administration with respect to tariffs, taxes and immigration, which are projected to be inflationary. As a result, long-term government bond yields have been resistant to declines in the federal funds rate and are expected to remain at current elevated levels over the near-term.

VI. PROXY GROUP SELECTION

Q: Please provide a summary profile of EKC.

A: EKC is a wholly-owned subsidiary of Evergy, Inc. The Company provides generation, including nuclear-powered generation, transmission and distribution of electricity to approximately 742,200 customers in central and eastern Kansas.[18] As of December 31, 2023, EKC's net utility electric plant in Kansas was approximately $12.09 billion.[19] EKC currently has an investment-grade long-term rating from S&P of BBB+ (Outlook: Stable) and from Moody's of Baa1 (Outlook: Stable).[20]

Q: Why have you used a group of proxy companies to estimate the cost of equity for the Company?

A: One of the purposes of this proceeding is to estimate the cost of equity for an electric utility company that is not itself publicly traded. Because the cost of equity is a market-based concept and because the Company's operations do not make up the entirety of a publicly

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[18] Evergy, Inc. 2023 Form 10-K, at 15.

[19] Provided by the Company.

[20] S&P and Moody's Ratings accessed December 5, 2024.

traded entity, it is necessary to establish a group of companies that are both publicly traded and comparable to the Company in certain fundamental business and financial respects to serve as its "proxy" in the cost of equity estimation process.

Even if the Company's electric utility operations in Kansas did constitute the entirety of a publicly traded entity, it is possible that transitory events could bias its market value over a given period of time. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The companies included in the proxy group all possess a set of operating and risk characteristics that are substantially comparable to the Company, and thus provide a reasonable basis to derive and estimate an appropriate cost of equity for the Company.

Q: How did you select the companies included in your proxy group?

A: I began with the group of 36 companies that *Value Line* classifies as electric utilities and applied the following screening criteria to select companies that:

- pay consistent quarterly cash dividends, since companies that do not cannot be analyzed using the constant growth DCF model;
- have investment grade long-term issuer ratings from both S&P and Moody's;
- are covered by more than one utility industry analyst;
- have positive long-term earnings growth forecasts from at least two equity analysts;
- own generation assets included in rate base;
- derive at least 40 percent of sales from company-owned generation;
- derive at least 60 percent of the Company's operating income from regulated electric operations; and
- were not party to a merger or transformative transaction during the analytical period considered.

Q: Did you include Evergy, Inc. in your analysis?

A: No. In order to avoid the circular logic that otherwise would occur, it is my practice to exclude the subject company, or its parent holding company, from the proxy group.

Q: What is the composition of your proxy group?

A: The screening criteria discussed above is shown in **Exhibit AEB-2** and results in a proxy group consisting of the companies shown in Figure 6 below:

Figure 6: Proxy Group

Company	Ticker
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
CMS Energy Corporation	CMS
DTE Energy	DTE
Duke Energy Corporation	DUK
Entergy Corporation	ETR
IDACORP, Inc.	IDA
NextEra Energy, Inc.	NEE
NorthWestern Corporation	NWE
OGE Energy Corporation	OGE
Pinnacle West Capital Corporation	PNW
Portland General Electric Company	POR
PPL Corporation	PPL
Southern Company	SO
Xcel Energy Inc.	XEL

Q: Why is it appropriate to recognize the risks of owning generation in developing the proxy group?

A: As discussed, EKC is a vertically-integrated electric utility, and the overall purpose of developing a set of screening criteria is to select a proxy group of companies that align with the financial and operational characteristics of the Company and that investors would view as comparable to the Company. Thus, I have applied a screening criterion to remove companies that do not own substantial amounts of generation and therefore, may not be as comparable to the Company. According to Moody's, generation ownership causes vertically-integrated electric utilities to have higher business risk than either electric transmission and distribution companies, or natural gas distribution or transportation companies. For example, Moody's states that:

> Generation utilities and vertically integrated utilities generally have a higher level of business risk because they are engaged in power generation, so we apply the Standard Grid. We view power generation as the highest-risk component of the electric utility business, as generation plants are typically the most expensive part of a utility's infrastructure (representing asset concentration risk) and are subject to the greatest risks in both construction and operation, including the risk that incurred costs will either not be recovered in rates or recovered with material delays.[21]

Q: Is there additional evidence that vertically-integrated electric utilities have different risk profiles than transmission and distribution-only utilities?

Yes. Vertically-integrated electric utilities are projecting substantial generation capital expenditures for the development of new generation assets as well as for existing generating facilities to meet continuing changes in environmental regulations. As I will discuss in more detail in Section VIII.A, credit rating agencies have highlighted that the

[21] Moody's Investors Service. Rating Methodology: Regulated Electric and Gas Utilities, August 2024, at 14.

evolving environment regulations could result in the need for substantial capital expenditures for existing owned generation particularly for companies that own either coal or nuclear generation plants. Conversely, while transmission and distribution-only ("T&D") utilities will also need to invest in their transmission and distribution systems to facilitate the transition to clean energy generation, T&D utilities will not face the risk associated with the required investment in generation assets. Therefore, the risks confronted by a vertically-integrated electric utility are quite different from the risks confronted by a T&D utility over the near and long term. As a result, I have applied a generation screening criterion to ensure that a significant portion of the total sales of each of the proxy group companies are supplied with power from generation assets that they own, which is similar to EKC.

VII. COST OF EQUITY ESTIMATION

Q: Please briefly discuss the ROE in the context of the regulated rate of return.

A: The overall rate of return for a regulated utility is the weighted average cost of capital, in which the cost rates of the individual sources of capital are weighted by their respective book values. The ROE is the cost of common equity capital in the utility's capital structure for ratemaking purposes. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

Q: How is the required cost of equity determined?

A: The required cost of equity is estimated by using analytical techniques that rely on market-based data to quantify investor expectations regarding equity returns, adjusted for certain incremental costs and risks. Informed judgment is then applied to determine where the

company's cost of equity falls within the range of results produced by multiple analytical techniques. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, as well as the subject company in the context of the proxy group, in particular.

Q: What methods did you use to estimate the cost of equity for the Company in this proceeding?

A: I considered the results of the constant growth DCF model, the CAPM, the ECAPM, and a BYRP analysis. A reasonable cost of equity estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results.

Q: Why is it important to use more than one analytical approach?

A: Because the cost of equity is not directly observable, it must be estimated based on both quantitative and qualitative information. When faced with the task of estimating the cost of equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Several models have been developed to estimate the cost of equity, and I use multiple approaches to estimate the cost of equity. As a practical matter, however, all the models available for estimating the cost of equity are subject to limiting assumptions or other methodological constraints. Consequently, many well-regarded finance texts recommend using multiple approaches when estimating the cost of equity. For example, Copeland, Koller, and Murrin[22] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski[23] recommend the CAPM, DCF, and BYRP approaches.

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[22] Copeland, Tom, Tim Koller and Jack Murrin. Valuation: Measuring and Managing the Value of Companies. New York, McKinsey & Company, Inc., 3rd Ed., 2000, at 214.

[23] Brigham, Eugene and Louis Gapenski. Financial Management: Theory and Practice. Orlando, Dryden Press, 1994, at 341.

Q: Has the Commission previously recognized that it is important to consider the results of multiple cost of equity models?

A: Yes. In its order in Docket No. 10-KCPE-415-RTS, the Commission determined the authorized ROE for Evergy Metro, Inc. based on both the DCF and the CAPM analyses presented by the witnesses in the proceeding. Specifically, the Commission noted that:

> The last main capital issue raises the question of whether CAPM is appropriate to include in setting the ROE. For us, this is not a difficult question, and we find that in this case, under the economic conditions that exist and under which all parties have labored, CAPM should be included. We also conclude, as a matter of law, that we are afforded broad discretion in setting the ROE, and interpret that discretion to extend beyond a rigid formulaic approach. Therefore, after reviewing the evidence presented by all three parties on the CAPM question, we are most persuaded by the testimony offered by Crane and Gatewood. Using both CAPM and DCF generates an analysis that encompasses the current economic climate.[24]

Furthermore, the Commission has noted in subsequent orders that it has relied on the evidence provided by each of the ROE witnesses in the case in the determination of the ROE.[25]

A. Constant Growth DCF Model

Q: Please describe the DCF approach.

A: The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

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[24] Kansas Corporation Commission, Docket No. 10-KCPE-415-RTS, Order: 1) Addressing Prudence; 2) Approving Application, in Part; & 3) Ruling on Pending Requests, November 22, 2010, at 43.

[25] *See, e.g.,* Kansas Corporation Commission, Docket No. 12-KCPE-764-RTS, Order, December 13, 2012, at 11; Kansas Corporation Commission, Docket No. 15-KCPE-116-RTS, Order, September 10, 2015, at 16; and Kansas Corporation Commission, Docket No. 19-ATMG-525-RTS, Order, February 24, 2020, at 8.

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \ldots + \frac{D_\infty}{(1+k)^\infty} \quad [1]$$

Where P_0 represents the current stock price, D1…D∞ are all expected future dividends, and k is the discount rate, or required cost of equity. Equation [1] is a standard present value calculation that can be simplified and rearranged into the following form:

$$k = \frac{D_0(1+g)}{P_0} + g \quad [2]$$

Equation [2] is often referred to as the constant growth DCF model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

Q: What assumptions are required for the constant growth DCF model?

A: The constant growth DCF model requires the following four assumptions: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings ratio; and (4) a discount rate greater than the expected growth rate. To the extent that any of these assumptions are not objectively valid, considered judgment and/or specific adjustments should be applied to the results.

Q: What market data do you use to calculate the dividend yield in your constant growth DCF model?

A: The dividend yield in my constant growth DCF model is based on the proxy group companies' current annualized dividend and average closing stock prices over the most recent 30, 90, and 180 trading days ended November 29, 2024.

Q: Why did you use three averaging periods for stock prices?

A: I use an average of recent trading days to calculate the term P_0 in the DCF model to reflect current market data while also ensuring that the result of the model is not skewed by anomalous events that may affect stock prices on any given trading day.

Q: Did you make any adjustments to the dividend yield to account for periodic growth in dividends?

A: Yes. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected first year dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the aggregated dividends to be paid during that time.

Q: Why is it important to select appropriate measures of long-term growth in applying the DCF model?

A: In its constant growth form, the DCF model (*i.e.*, Equation [2]) assumes a single growth estimate in perpetuity. To reduce the long-term growth rate to a single measure, one must assume that the payout ratio remains constant and that earnings per share, dividends per share and book value per share all grow at the same constant rate. Over the long run, however, dividend growth can only be sustained by earnings growth. Therefore, it is important to consider a variety of sources in arriving at a single projected long-term earnings growth rate for the constant growth DCF model.

Q: Which sources of long-term earnings growth rates did you use in your DCF analysis?

A: I incorporate three sources of long-term earnings per share ("EPS") growth rates: (1) Zacks Investment Research; (2) S&P Capital IQ Pro; and (3) *Value Line*.

Q: How you previously relied on projected EPS growth rate provided by Yahoo! Finance?

A: Yes, I have; however, Yahoo! Finance no longer reports consensus projected 3 to 5-year EPS growth rates. As a result, I am now instead relying on the consensus projected 3 to 5-year EPS growth rates reported by S&P Capital IQ Pro.

Q: Why are EPS growth rates the appropriate growth rates to be relied on in the DCF model?

A: Earnings are the fundamental driver of a company's ability to pay dividends; therefore, projected EPS growth is the appropriate measure of a company's long-term growth. In contrast, changes in a company's dividend payments are based on management decisions related to cash management and other factors. For example, a company may decide to retain earnings rather than pay out a portion of those earnings to shareholders through dividends. Therefore, dividend growth rates are less likely than earnings growth rates to reflect accurately investor perceptions of a company's growth prospects.

Q: How did you calculate the range of results for the constant growth DCF model?

A: I calculated a low-end result for my DCF model using the minimum growth rate of the three sources (*i.e.*, the lowest of the Zacks, S&P, and *Value Line* projected earnings growth rates) for each of the proxy group companies. I used a similar approach to calculate a high-end result, using the maximum growth rate of the three sources for each proxy group

company. Lastly, I also calculated results using the average growth rate from all three sources for each proxy group company.

Q: Please summarize the results of your constant growth DCF analyses.

A: **Exhibit AEB-3** and Figure 7 summarize the results of my constant growth DCF analysis.

Figure 7: Constant Growth Discounted Cash Flow Results

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	9.05%	10.24%	11.14%
90-Day Avg. Stock Price	9.14%	10.33%	11.23%
180-Day Avg. Stock Price	9.41%	10.60%	11.50%
Average	9.20%	10.39%	11.29%
Median Results:			
30-Day Avg. Stock Price	9.27%	10.03%	10.64%
90-Day Avg. Stock Price	9.39%	10.19%	10.81%
180-Day Avg. Stock Price	9.64%	10.38%	11.08%
Average	9.43%	10.20%	10.84%

B. CAPM Analysis

Q: Please briefly describe the CAPM.

A: The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable or "systematic" risk of that security.[26] This second component is the product of the market risk premium and the beta coefficient, which measures the relative riskiness of the security being evaluated.

[26] Systematic risk is the risk inherent in the entire market or market segment, which cannot be diversified away using a portfolio of assets. Unsystematic risk is the risk of a specific company that can, theoretically, be mitigated through portfolio diversification

The CAPM is defined by four components:

$$K_e = r_f + \beta(r_m - r_f) \qquad [3]$$

Where:

K_e = the required market cost of equity;

β = beta coefficient of an individual security;

r_f = the risk-free rate of return; and

r_m = the required return on the market.

In this specification, the term ($r_m - r_f$) represents the market risk premium. According to the theory underlying the CAPM, because unsystematic risk can be diversified away, investors should only be concerned with systematic or non-diversifiable risk. Non-diversifiable risk is measured by beta, which is defined as:

$$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)} \qquad [4]$$

The variance of the market return (*i.e.*, *Variance* (r_m)) is a measure of the uncertainty of the general market, and the Covariance between the return on a specific security and the general market (*i.e.*, *Covariance* (r_e, r_m)) reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, beta represents the risk of the security relative to the general market.

Q: What risk-free rate do you use in your CAPM analysis?

A: I rely on three sources for my estimate of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds, which is 4.52 percent;[27] (2) the average projected 30-year Treasury bond yield for the first quarter of 2025 through the first quarter of 2026, which is

[27] Bloomberg Professional as of November 29, 2024.

4.42 percent;[28] and (3) the average projected 30-year Treasury bond yield for 2026 through 2030, which is 4.30 percent.[29]

Q: What beta coefficients do you use in your CAPM analysis?

A: As shown in **Exhibit AEB-4**, I use the beta coefficients for the proxy group companies as reported by Bloomberg and *Value Line*. The beta coefficients reported by Bloomberg are calculated using ten years of weekly returns relative to the S&P 500 Index. The beta coefficients reported by *Value Line* are calculated using five years of weekly returns relative to the NYSE Composite Index. Additionally, as shown in **Exhibit AEB-5**, I consider another CAPM analysis that relies on the long-term average beta coefficient for the companies in my proxy group, which is calculated as an average of the *Value Line* beta coefficients for the companies in my proxy group from 2013 through 2023.

Q: How do you estimate the market risk premium in the CAPM?

A: I estimate the market risk premium as the difference between the implied expected equity market return and the risk-free rate. As shown in **Exhibit AEB-6**, the expected market return is calculated using the constant growth DCF model discussed earlier in my testimony for the companies in the S&P 500 Index. Based on an estimated market capitalization-weighted dividend yield of 1.46 percent and a weighted long-term growth rate of 10.51 percent, the estimated required market return for the S&P 500 Index as of November 29, 2024, is 12.05 percent. Based on the three risk-free rates considered, the market risk premium ranges from 7.54 percent to 7.75 percent.

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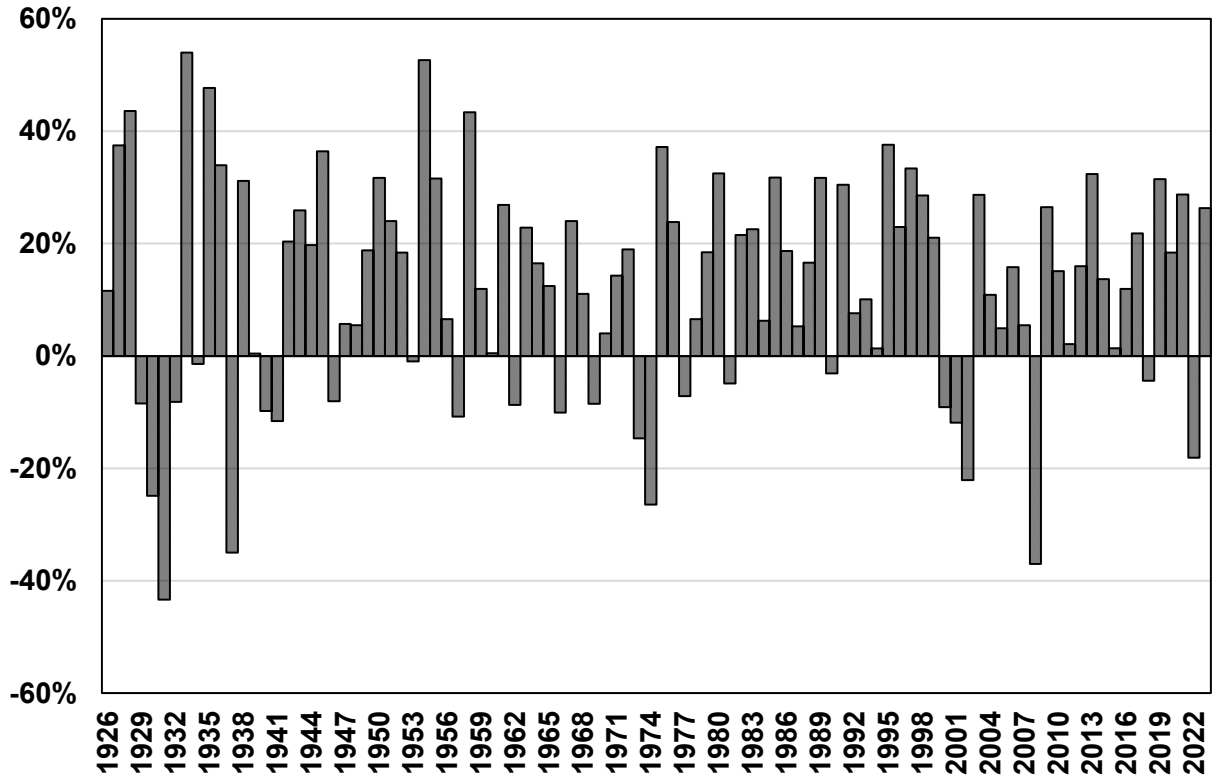
[28] *Blue Chip Financial Forecasts*, Vol. 43, No. 12, November 27, 2024, at 2.
[29] *Blue Chip Financial Forecasts*, Vol. 43, No. 12, November 27, 2024, at 14.

Q: How does the current expected market return of 12.05 percent compare to observed historical market returns?

A: As shown in Figure 8, given the range of annual equity returns that have been observed over the past century, a current expected market return of 12.05 percent is not unreasonable. As shown, in 52 out of the past 98 years (or roughly 53 percent of observations), the realized equity market return was 12.05 percent or greater.

Figure 8: Realized U.S. Equity Market Returns (1926-2023)[30]



[30] Depicts total annual returns on large company stocks, as reported in the 2023 *Kroll* SBBI Yearbook for 1926-2022 and from S&P Capital IQ Professional for 2023.

Q: Did you consider another form of the CAPM in your analysis?

A: Yes. I have also considered the results of an ECAPM analysis in estimating the cost of equity for the Company.[31] The ECAPM calculates the product of the adjusted beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium without any effect from the beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [5]$$

Where:

k_e = the required market cost of equity

β = adjusted beta coefficient of an individual security

r_f = the risk-free rate of return

r_m = the required return on the market as a whole

In essence, the ECAPM addresses the tendency of the "traditional" CAPM to underestimate the cost of equity for companies with low beta coefficients such as regulated utilities. In that regard, the ECAPM is not redundant to the use of adjusted betas in the traditional CAPM; rather, it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM underestimates the "alpha," or the constant return term.[32]

As with the CAPM, my application of the ECAPM uses the forward-looking market risk premium estimates, the three yields on 30-year Treasury securities noted earlier as the

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[31] *See, e.g.*, Morin, Roger A. New Regulatory Finance. Public Utilities Reports, Inc., 2006, at 189.

[32] *Id.*, at 191.

risk-free rate, and the current Bloomberg, current *Value Line*, and long-term average *Value Line* beta coefficients.

Q: What are the results of your CAPM analyses?

A: The results of my CAPM and ECAPM analyses are summarized in Figure 9, as well as presented in **Exhibit AEB-4**.

Figure 9: CAPM and ECAPM Results

	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	11.63%	11.63%	11.62%
Current Bloomberg Beta	10.43%	10.41%	10.39%
Long-term Avg. *Value Line* Beta	10.20%	10.18%	10.15%
ECAPM:			
Current *Value Line* Beta	11.74%	11.73%	11.73%
Current Bloomberg Beta	10.84%	10.82%	10.80%
Long-term Avg. *Value Line* Beta	10.66%	10.65%	10.62%

C. BYRP

Q: Please describe the Bond Yield Plus Risk Premium approach.

A: In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as bondholders. In other words, because returns to equity holders have greater risk than returns to bondholders, equity investors must be compensated to bear that risk. Thus, risk premium approaches estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In my analysis, I use actual authorized returns for vertically integrated electric utilities as the historical measure of the cost of equity to determine the risk premium.

Q: Are there other considerations that should be addressed in conducting this analysis?

A: Yes. It is important to recognize both academic literature and market evidence indicating that the equity risk premium (as used in this approach) is inversely related to the level of interest rates (*i.e.*, as interest rates increase, the equity risk premium decreases, and vice versa). Consequently, it is important to develop an analysis that: (1) reflects the inverse relationship between interest rates and the equity risk premium; and (2) relies on recent and expected market conditions. Such an analysis can be developed based on a regression of the risk premium as a function of Treasury bond yields. When the authorized ROEs for vertically integrated electric utilities serve as the measure of required equity returns and the yield on the long-term Treasury bond is defined as the relevant measure of interest rates, the risk premium is the difference between those two points.[33]

Q: Is the BYRP analysis relevant to investors?

A: Yes. Investors are aware of authorized ROEs in other jurisdictions, and they consider those authorizations as a benchmark for a reasonable level of equity returns for utilities of comparable risk operating in other jurisdictions. Because my BYRP analysis is based on authorized ROEs for utility companies relative to corresponding Treasury yields, it provides relevant information to assess the return expectations of investors in the current interest rate environment.

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[33] *See e.g.*, Berry, S. Keith. "Interest Rate Risk and Utility Risk Premia during 1982-93." Managerial and Decision Economics, Vol. 19, No. 2, March, 1998 (the author used a similar methodology, including using authorized ROEs as the relevant data source, and came to similar conclusions regarding the inverse relationship between risk premia and interest rates). *See also* Harris, Robert S. "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return." *Financial Management*, Spring 1986, at 66.

Q: What did your BYRP analysis reveal?

A: As shown in Figure 10 below, from 1980 through November 29, 2024, there was a strong negative relationship between risk premia and interest rates. To estimate that relationship, I conducted a regression analysis using the following equation:

$$RP = a + bT \qquad [6]$$

Where:

RP = Risk Premium (difference between allowed ROEs and the yield on 30-year Treasury bonds)

a = intercept term

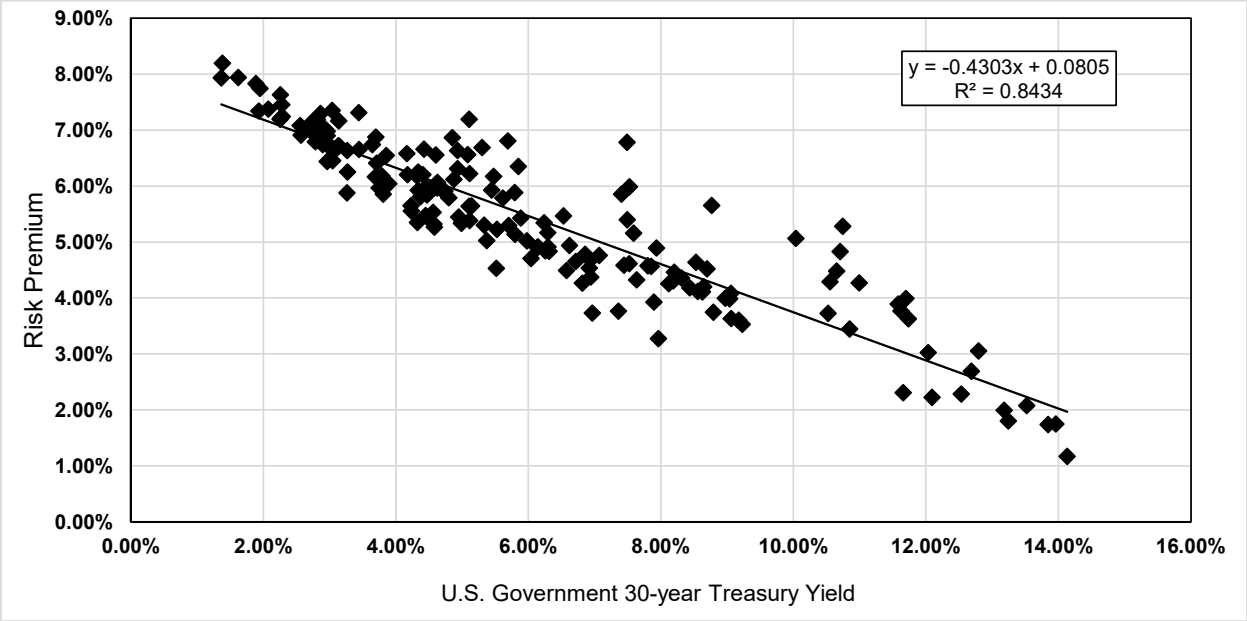
b = slope term

T = 30-year Treasury bond yield

Data regarding authorized ROEs were derived from all vertically integrated electric rate cases from 1980 through November 2024 as reported by Regulatory Research Associates ("RRA").[34] This equation's coefficients were statistically significant at the 99.00 percent level.

[34] The data was screened to eliminate limited issue rider cases, transmission-only cases, distribution-only cases and cases that were silent with respect to the authorized ROE.

Figure 10: Risk Premium Regression Analysis



Q: What are the results of your BYRP analysis?

A: Figure 11 presents the results of my BYRP analysis, which is also presented in more detail in **Exhibit AEB-7**.

Figure 11: BYRP Results

	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
Bond Yield Risk Premium:	10.62%	10.57%	10.50%

Q: How did the results of the BYRP inform your recommended ROE for the Company?

A: I have considered the results of the BYRP analysis in setting my recommended ROE for the Company. As noted above, investors consider the authorized ROE determination by a regulator when assessing the risk of that company as compared to utilities of comparable risk operating in other jurisdictions. The BYRP analysis considers this comparison by

estimating the return expectations of investors based on the current and past authorized ROEs of U.S. vertically integrated electric utilities.

VIII. REGULATORY AND BUSINESS RISKS

Q: Taken alone, do the results from the cost of equity estimation models for the proxy group provide an appropriate estimate of the cost of equity for the Company?

A: No. These analyses provide only a range of the appropriate estimate of the Company's cost of equity. There are several additional factors that must be taken into consideration when determining where the Company's cost of equity falls within the range of results. These factors, which are discussed below, should be considered with respect to their overall effect on the Company's risk profile.

A. Capital Expenditures

Q: Please summarize the Company's capital expenditure requirements.

A: As of December 31, 2023, EKC had net utility plant of $12.09 billion and capital expenditures for 2025 through 2029 of approximately $7.39 billion.[35] Therefore, EKC's projected capital expenditures represent approximately 61.11 percent of its net utility plant as of December 31, 2023.

Q: How is the Company's risk profile affected by its substantial capital expenditure requirements?

A: As with any utility faced with substantial capital expenditure requirements, the Company's risk profile may be adversely affected in two significant and related ways: (1) the heightened level of investment increases the risk of under-recovery or delayed recovery of

[35] Data provided by the Company.

the invested capital; and (2) an inadequate return would put downward pressure on key credit metrics.

Q: Do credit rating agencies recognize the risks associated with elevated levels of 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. Recently, S&P evaluated the capital expenditure trends in the utility sector, noting that the balance between operating with negative discretionary cash flow from operations offset by reliable access to capital markets for financing may be tested through ever-increasing capital expenditure requirements as a result of the transformation of the energy sector through the focus on low/no carbon generation, electrification, and the replacement of aging infrastructure:

> Some companies have been unable to support financial metrics consistent with former ratings as their discretionary cash flow deteriorated. This trend was a significant contributor to the sector seeing the median rating decline to 'BBB+' from 'A-' for the first time in 2022. What is less clear is whether or not management teams will take steps to forestall another step down in credit quality as high capital outlays persist. So far in 2023, we have not seen evidence that equity issuance is keeping pace with debt issuance to fill ever-deepening discretionary cash flow shortfalls, but time will tell.
>
> …..
>
> Despite the improvement in the economic outlook, we expect inflation, high interest rates, higher capital spending, and the strategic decision by many companies to operate with only minimal financial cushion from their downgrade thresholds to continue to pressure the industry's credit quality. We are cautious about the durability of the current stable ratings outlook given persistently high capital spending that now supports a trend of deterioration in discretionary cash flow. Without a commensurate focus on balance sheet preservation through equity support of discretionary cash flow deficits, limited financial cushions could give rise to another round of negative rating actions. The question then comes back to management priorities and financial policy

decisions, or utilities may be faced with another step down in the median ratings.[36]

Therefore, to the extent the Company's rates do not continue to permit the recovery of its capital investments on a regular basis, the Company would face increased recovery risk and thus increased pressure on its credit metrics.

Q: Have credit rating agencies commented on the Company's capital investment plan?

A: Yes, both S&P and Moody's have acknowledged that the Company has an elevated capital spending plan that will continue over the near-term and be funded through a combination of internally generated funds, infusions from Evergy, Inc. and external financing. Specifically, Moody's noted:

> Kansas Central's annual capital expenditures have remained elevated compared to a historical average of around $717 million during 2019-2021. In 2022 and 2023, the utility's capital expenditures increased to $919 million and $1.2 billion, respectively. We expect capital spending to remain elevated over the next two years at least, including capital spend averaging over $1.5 billion annually, partly driven by investments in new generation as well as transmission and distribution investments.[37]

Similarly, S&P stated:

> Elevated capital spending at Evergy Kansas Central Inc. (EKC) will require balanced funding and effective management of regulatory risk. As per EKC's latest 2024 Integrated Resource Plan (IRP) update, the company plans to spend approximately $7.4 billion over the 2025-2029 period toward capital investments. The company directs about 85% of this spending toward new generation and transmission and distribution (T&D). Moreover, EKC's capital spending constitutes almost 45% of the total capital investment plan of its parent, Evergy Inc. We expect EKC will fund such capital spending in a balanced manner using internally generated cash flows, additional leverage, and infusions from the parent as necessary to support financial measures. We also expect EKC will effectively manage regulatory risk to maintain credit quality.

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[36] S&P Global Ratings, "Record CapEx Fuels Growth Along With Credit Risk For North American Investor-Owned Utilities," September 12, 2023, at 5, 7-8.

[37] Moody's Ratings, Evergy Kansas Central: Update to Credit Analysis, January 17, 2025, at 4.

> EKC's negative discretionary cash flow requires external funding. We expect EKC will have discretionary cash flow deficits throughout the forecast period, owing to its rising capital spending. We expect EKC will continue to effectively fund these cash flow deficits in a credit supportive manner.[38]

Q: Does the Company currently have a capital tracking mechanism to recover the costs associated with its capital expenditures plan between rate cases?

A: Yes, to a limited extent. EKC has a Construction Work in Progress ("CWIP") Rider that allows EKC to recover the return on 100 percent of the amounts recorded to construction work in progress on EKC's books related only to natural gas generation facilities with the amount not exceeding the definitive cost estimate found reasonable by the Commission.[39] Additionally, EKC has a Transmission Delivery Charge ("TDC") that provides for the recovery of transmission capital costs. However, while the CWIP rider and TDC provide for the recovery of capital expenditure between rate cases, the CWIP rider and the TDC only address 49 percent of EKC's capital expenditures. Therefore, the Company still depends primarily on rate case filings for capital cost recovery.

Q: Are capital tracking mechanisms common for utilities?

A: Yes. As shown in **Exhibit AEB-8**, approximately 67.8 percent of the utility operating utilities of the proxy group companies have some form of capital cost recovery mechanisms in place.

Q: What are your conclusions regarding the effect of the Company's capital spending requirements on its risk profile and cost of capital?

A: The Company's capital expenditure requirements as a percentage of net utility plant are significant and will continue over the next few years. While EKC has the CWIP Rider and

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[38] S&P Global Ratings, Evergy Kansas Central Inc., December 16, 2024, at 1-2.

[39] Cost Recovery for Utilities; Energy Generating Facilities; Net Metering; HB 2527.

TDC, these mechanisms only provide for timely recovery of a portion of the Company's capital expenditures between rate cases.

B. Regulatory Risk

Q: How does the regulatory environment affect investors' risk assessments?

A: The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory authorities recognize that because utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms, and doing so balances the long-term interests of investors and customers. To achieve this balance, the Company must be able to finance its operations assuming a reasonable opportunity to earn an appropriate return on invested capital to maintain an acceptable financial profile. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.

From the perspective of debt investors, the authorized return should enable the utility to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its systems, and maintain the necessary levels of liquidity to fund unexpected events. This financial liquidity must be derived not only from internally-generated funds, but also by efficient access to capital markets. Moreover, because fixed income investors have many investment alternatives, even within a given market sector, the utility's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

In addition, equity investors require that the authorized return be adequate to provide a risk-comparable return on the equity portion of the utility's capital investments. Because equity investors are the residual claimants on the utility's cash flows (which is to say that the equity return is subordinate to interest payments), they are particularly concerned with the strength of regulatory support and its effect on future cash flows.

Q: Do credit rating agencies consider regulatory risk in establishing a company's credit rating?

A: Yes. Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity and key financial metrics. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[40]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "we assess regulatory advantage because the influence of the regulatory framework and regime is of critical importance. It defines the environment in which a utility operates and has a significant bearing on a utility's financial performance."[41] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2)

[40] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, August 6, 2024, at 2.
[41] Standard & Poor's Global Ratings, "Sector-Specific Corporate Methodology," April 4, 2024, at 147.

tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[42]

Q: How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A: The regulatory environment can significantly affect both the access to and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[u]tility rates are set in a political/regulatory process rather than a competitive or free-market process; thus, the regulatory framework is a key determinant of the credit quality of a utility."[43] Moody's further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "[t]he regulatory framework is important because it provides the basis for decisions that affect utilities, including rate-setting as well as the consistency and predictability of regulatory decision-making."[44]

Q: Have you conducted any analysis to compare the cost recovery mechanisms of EKC to the cost recovery mechanisms approved in the jurisdictions in which the companies in your proxy group operate?

A: Yes. I selected three mechanisms that are important to provide a regulated utility an opportunity to earn its authorized ROE. These are: (1) test year convention (*i.e.*, forecast vs. historical); (2) use of revenue decoupling mechanisms or other clauses that mitigate volumetric risk; and (3) prevalence of capital cost recovery between rate cases. The results

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[42] *Id*.
[43] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, August 6, 2024, at 8.
[44] *Id*.

of this regulatory risk assessment are shown in **Exhibit AEB-8** and are summarized as follows:

Test Year Convention: EKC uses a historical test year adjusted for known and measurable changes in Kansas, while 51.7 percent of the utility operating subsidiaries of the companies in the proxy group use either fully forecasted or partially forecasted test years. Forecast test years have been relied on for several years and produce cost estimates that are more reflective of future costs, which results in more accurate recovery of incurred costs and mitigates the regulatory lag associated with historical test years. As Lowry, Hovde, Getachew, and Makos explain in their 2010 report, Forward Test Years for US Electric Utilities:

> This report provides an in depth discussion of the test year issue. It includes the results of empirical research which explores why the unit costs of electric IOUs are rising and shows that utilities operating under forward test years realize higher returns on capital and have credit ratings that are materially better than those of utilities operating under historical test years. The research suggests that shifting to a future test year is a prime strategy for rebuilding utility credit ratings as insurance against an uncertain future.[45]

Volumetric Risk: EKC does have partial protection against volumetric risk in Kansas through a Energy Efficient Rider ("EER") which allows for the recovery of lost sales revenue from the reduction in usage associated with energy efficiency programs. This type of mechanism is generally consistent with the companies in the proxy group where approximately 60.9 percent of the operating companies held by the proxy group have some form of protection against volumetric risk.

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[45] M.N. Lowry, D. Hovde, L. Getachew, and M. Makos, Forward Test Years for US Electric Utilities, prepared for Edison Electric Institute, August 2010, at 1.

Capital Cost Recovery: As discussed above, EKC has the CWIP rider and the TDC to recover a portion of the Company's projected capital expenditures. Approximately 67.8 percent of the operating utility companies of the proxy group have some form of capital cost recovery mechanism in place that allows them to recover capital investments that are placed into service between rate cases.

Q: Have you developed any additional analyses to evaluate the regulatory environment in Kansas as compared to the jurisdictions in which the companies in your proxy group operate?

A: Yes. I have conducted two additional analyses to compare the regulatory framework of Kansas to the jurisdictions in which the utility operating subsidiaries of the proxy group operate. Specifically, I considered two different rankings: (1) the Regulatory Research Associates ("RRA") ranking of regulatory jurisdictions, which is presented in **Exhibit AEB-9**; and (2) S&P's ranking of the credit supportiveness of regulatory jurisdictions, which is presented in **Exhibit AEB-10.**

Q: Please explain how you used the RRA ratings to compare the regulatory jurisdictions of the utility operating subsidiaries of the proxy companies relative to the Company?

A: RRA assigns a ranking for each regulatory jurisdiction between "Above Average/1" to "Below Average/3," with nine total rankings between these categories. I applied a similar numeric ranking system to the RRA rankings with "Above Average/1" assigned the highest ranking ("1") and "Below Average/3" assigned the lowest ranking ("9"). As shown on **Exhibit AEB-9**, the Company's jurisdictional ranking is "6" or "Average / 3", which is below the proxy group's average numeric ranking of "4.61" from RRA, which is between "Average / 1" and "Average / 2."

Q: How did you conduct your analysis of the S&P credit supportiveness?

A: For credit supportiveness, S&P classifies each regulatory jurisdiction into five categories that range from "Credit Supportive" to "Most Credit Supportive." My analysis of the credit supportiveness of the regulatory jurisdictions in which the proxy companies operate relative to the Company's regulatory jurisdiction is similar to the analysis of the RRA overall regulatory ranking just discussed. Specifically, I assign a numerical ranking to each of S&P's categories, from Most Credit Supportive ("1") to Credit Supportive ("5"). As shown in **Exhibit AEB-10**, the proxy group average ranking is 2.48, which would be classified between "Very Credit Supportive" and "Highly Credit Supportive," while the Company's rank is slightly higher at "Highly Credit Supportive" ("2"), which suggests that investors perceive regulation for the Company as consistent with, albeit slightly above average, relative to the proxy group.

Q: What are your conclusions regarding the perceived risks related to the regulatory environment in Kansas?

A: The regulatory framework in which a regulated utility provides service is one of the most important considerations for debt and equity investors. Based on my analysis, I conclude that the regulatory risk for EKC is, overall, higher than the proxy group, which reflects the fact that operating in Kansas poses somewhat greater risk than the jurisdictions in which the utility operating subsidiaries of the proxy group companies provide service. This conclusion considers the regulatory support provided through the Company's use of the EER, CWIP Rider and TDC. However, when compared to the cost recovery mechanisms available to the companies in the proxy group, the Company's use of a historical test year,

limited revenue stabilization and capital cost recovery between rate cases indicates greater risk with respect to timely cost recovery for the Company relative to the proxy group.

C. Nuclear Generation Ownership

Q: How does the ownership of a nuclear generation facility affect the business risk of a vertically integrated electric utility?

A: The ownership of a nuclear generation facility increases the business risk of a vertically integrated electric utility. This is due to: 1) the increased operational risk as financial costs for the utility could be significant if an incident were to occur; and 2) the long-term storage risk associated with spent nuclear fuel. Further, given the environmental concerns associated with nuclear generating facilities, substantial capital investments could be required to meet changes in environmental regulations.

Q: Does EKC own a nuclear generation facility?

A: Yes. EKC has a 47 percent ownership interest in the Wolf Creek Generating Station ("Wolf Creek").

Q: Have the credit rating agencies considered the risk of owning a nuclear generation facility in the determination of the Company's credit rating?

A: Yes. Moody's recently noted that the Company is exposed to pollution risk as a result of EKC's nuclear generation as well as risk with respect to "responsible production".[46] Similarly, S&P recently stated that the Company's faces operations risks as well as "long-term fuel storage concerns" due to EKC's ownership of nuclear generation.[47]

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[46] Moody's Ratings, Evergy Kansas Central: Update to Credit Analysis, January 17, 2025, at 5.

[47] S&P Global Ratings, Evergy Kansas Central Inc., December 16, 2024, at 1-2.

Q: Do each of the companies in your proxy group own nuclear generation?

A: No. As shown in Figure 12 below, only approximately 53 percent of the proxy group companies own nuclear generation.

Figure 12: Owned Nuclear Generation – Proxy Group[48]

Company	Own Nuclear Generation
Alliant Energy Corporation	No
Ameren Corporation	Yes
American Electric Power Company, Inc.	Yes
Avista Corporation	No
CMS Energy Corporation	No
DTE Energy	Yes
Duke Energy Corporation	Yes
Entergy Corporation	Yes
IDACORP, Inc.	No
NextEra Energy, Inc.	Yes
NorthWestern Corporation	No
OGE Energy Corporation	No
Pinnacle West Capital Corporation	Yes
Portland General Electric Company	No
PPL Corporation	No
Southern Company	Yes
Xcel Energy Inc.	Yes
Own Nuclear Generation	**9**
Total	**17**
% Owned Nuclear Generation	**53%**

Q: What are your conclusions regarding the effect of nuclear generation risk on the Company's business risk profile and cost of equity?

A: Credit rating agencies have identified the ownership of nuclear generation as increasing the business risk of a utility due to operational and environmental risks. While EKC owns a nuclear generation facility, as shown in Figure 12 above, there are several proxy group

[48] S&P Capital IQ Pro.

companies that do not own nuclear generation. Thus, all else equal, EKC's ownership of nuclear generation would indicate that the Company has increased business risk relative to the companies in the proxy group.

D. Wildfire Risk

Q: Have equity analysts and credit rating agencies recognized wildfire as a substantial risk to the electric utility sector?

A: Yes. While wildfire risk is not a new threat to utility investors, it has become a much larger focus to both equity investors and credit rating agencies. For example, BofA has stated that wildfire risk has become the top question among all different investor types.[49] In fact, BofA has stated that it sees "the consistent existential risk posed by wildfires outflanking any other factor exposure of a given utility equity."[50] For example, BofA highlighted the catastrophic wildfires in California in 2017-2018 that led to the bankruptcy of PG&E Corporation and its subsidiary Pacific Gas and Electric Company ("PG&E") and caused material liabilities that weakened the earnings growth for Southern California Edison ("SoCalEd"), but noted that the current wildfire risk feels worse given the increased occurrences of wildfires across multiple states, even outside of the traditional wildfire season, and the billions in potential wildfire liabilities currently faced by PacifiCorp in Oregon, Xcel Energy in Colorado, and Hawaiian Electric.[51] A such, a utility's exposure to wildfire risk is expected to be a defining factor for utility valuations:

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[49] BofA Global Research, US Utilities & IPPs, Wildfire wakeup: what the Hawaiian fires mean for the sector as prudency shifts (Aug. 28, 2023).

[50] BofA Global Research, US Utilities & IPPs, As the leaves fall, preparing for Autumn utility outlook. Micro still has potholes (Sept. 6, 2023).

[51] BofA Global Research, US Utilities & IPPs, Wildfire wakeup: what the Hawaiian fires mean for the sector as prudency shifts (Aug. 28, 2023).

> Should there be further events, we perceive a risk that the 'new' premium utility will be defined by its exposure to wildfire factors. The first screen is simply geography and FEMA's assessment of wildfire risk, while the second consideration is the legal and regulatory construct under which the utility operates. We anticipate having explicit and refreshed plans will become a necessity for any utilities operating in geographies.
>
> *****
>
> On balance, the added wildfire concerns across the west, with their disproportionate manifestation across small- and even mid-caps makes us incrementally cautious on the entire sub-group of utilities.[52]

As further stated by BofA:

> PacifiCorp and Xcel Energy (XEL) are each facing billions in potential wildfire-related liabilities. Hawaiian Electric may not have shareholder value if wholly responsible for the ~$5.4Bn estimated wildfire damage. In the past week, Evergy (EVRG) had a fire caused by its downed poles, and Entergy Corp (ETR) warned of fire hazards. The increased occurrences in multiple states, even outside of the traditional wildfire season has investors of all types on edge.[53]

From the credit rating agency perspective, Moody's has noted that wildfire risk "can reach catastrophic levels at utilities," and that it is difficult to determine which utilities are most at risk given that the recent wildfires in Oregon and Hawaii were in moderate risk zones.[54] S&P has stated that "[d]amages and related costs from physical risks are escalating in North America as regions designated as high-fire risk expand," and that over the past 6 years, utility credit downgrades directly related to physical risks have increased significantly.[55] Similarly, FitchRatings ("Fitch") has noted the higher regulatory risk

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[52] BofA Global Research, US Utilities & IPPs, As the leaves fall, preparing for Autumn utility outlook. Micro still has potholes (Sept. 6, 2023).

[53] *Id.*

[54] Moody's Investors Service, Breakfast with the Analysts, 58th Annual EEI Financial Conference, at 30 (Nov. 13, 2023).

[55] S&P Global Ratings, A Storm is Brewing: Extreme Weather Events Pressure North American Utilities' Credit Quality, at 1 (Nov. 9, 2023).

associated with wildfires, and stated that extreme weather, which includes wildfires, has driven approximately one-quarter of its downgrades in the past 6 years, yet was not a driver of downgrades in the 6 years prior.[56] The most recent example that has been addressed by the credit rating agencies[57] is Hawaiian Electric Industries Inc. and its subsidiaries after the catastrophic Maui fires in August 2023 when S&P, Moody's, and Fitch all downgraded to "junk" status in response to the potential wildfire liabilities faced by the utility.[58]

Q: Is wildfire risk to utilities limited to a few states?

A: No. The Federal Emergency Management Agency ("FEMA") publishes a National Risk Index that ranks the wildfire risk by county and census tract in five categories: Very High, Relatively High, Relatively Moderate, Relatively Low, and Very low. Based on FEMA's assessment, wildfire risk is much broader than a few states, with the risk identified primarily as west of the Mississippi River, Hawaii, Florida, and the southeastern coast of the U.S.[59] For example, EKC provides electric service in the counties of Reno, Butler, Cowley and Pottawatomie, each of which are ranked by FEMA as "Relatively Moderate" in regards to wildfire risk.[60]

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[56] Fitch Ratings, *Climate Related Risks in Focus*, 35th Annual Presentation at EEI Financial Conference, at 5, 11 (Nov. 13, 2023).

[57] As of the time of the preparation of this direct testimony, there are currently wildifires ongoing in Los Angeles, California, the source of which has yet to be determined.

[58] *See, e.g.*, Fitch downgrades Hawaiian Electric to junk on worries over wildfire exposure, Reuters (Aug. 21, 2023); S&P downgrades Hawaiian Electric to 'B-'as wildfires raise market-access worries, Reuters (Aug. 24, 2023); Moody's downgrades Hawaiian Electric's credit to junk amid Maui wildfire scrutiny, Reuters (Aug. 18, 2023).

[59] FEMA, National Risk Index; https://hazards.fema.gov/nri/map# (wildfire risk by census tract).

[60] *Id.*

Q: What are your conclusions regarding the effect of wildfire risk on the Company in Kansas?

A: Wildfire risk presents one of the most significant business, operational, and financial threats for utilities in states subject to such risks. EKC provides electric service in counties that have been identified by FEMA as having wildfire risk and it is clear that equity investors and credit rating agencies are reflecting the incremental risk for companies that have been affected by wildfire exposure and that the electric utility sector overall has increased risk related to this threat. The capital costs associated with wildfire mitigation can be significant and continue over many years, thus making the timeliness of cost recovery important. Absent meaningful regulatory support for the utilities in the states subject to substantial potential losses from wildfires, the investor-required return increases significantly due to the higher risk of wildfire exposure. Addressing this risk in a timely manner should be a top regulatory priority in order to provide the Company with the ability to access capital on reasonable terms and make the capital investments needed going forward.

IX. CAPITAL STRUCTURE

Q: Is the capital structure an important consideration in the determination of the appropriate ROE for the Company?

A: Yes. It is a fundamental tenet of finance that the greater the amount of financial risk borne by common shareholders, the greater the return required by shareholders in order to be compensated for the added financial risk imparted by the greater use of senior debt financing. In other words, assuming all else equal, the greater the debt ratio, the greater the risk to equity investors, and thus the greater the return required by equity investors. This

is because the claim of equity holders on the cash flows of the Company is secondary to debt holders, meaning the greater the debt service requirement, the less cash flow is available for common equity holders.

In this proceeding, a proxy group of comparable companies is being used to determine the Company's ROE. The returns that are required by investors for the proxy companies take into consideration the risk related to the capitalization of those companies. Thus, to the extent that the capital structure authorized for the Company was to deviate significantly from the range established by the proxy group used to determine the ROE, that risk difference must be reflected in the equity return.

Q: Should the choice of capital structure change the overall weighted average cost of capital?

A: No. The capital structure and the return on debt and equity are not severable and therefore must be evaluated as a set of assumptions. It is important to recognize that the changes in the capital structure will affect the cost rates of the components of the capital structure. The use of more or less leverage (debt) in the capital structure affects the overall risk profile of the company. The return on debt and equity are investors' required returns for the risk associated with the repayment of the investment (equity or debt). Debt has priority repayment over equity, and therefore has a lower overall cost. The amount of debt that is included in the capital structure can however affect the overall cost of debt. Higher leverage will likely result in higher debt costs, as the risk associated with repayment increases with the increase in the required payments on debt instruments. Further, fixed payments, all else equal, reduce key credit metrics that affect credit ratings and the cost of debt. Therefore, the cost of debt will change with the amount of debt relied upon.

The investor required return on equity will also change as the capitalization of a company changes. Equity bears the residual repayment risk; it is the last investor to be repaid in the event of bankruptcy of a company. Therefore, the greater the leverage, the more of the investments that have priority repayment before equity, the higher the investor-required return on the equity investment.

Q: Do the fundamental principles of regulation provide for the use of the actual capital structure?

A: Yes. The use of the operating utility's actual capital structure for ratemaking purposes is consistent with the stand-alone principle of ratemaking, which is a well-established regulatory principle providing that the rate of return (both return on equity and capital structure) for a regulated utility should be set as if the utility were seeking to attract capital in financial markets based on its own individual merits and risk profile. The stand-alone ratemaking principle states that rates should be established for each jurisdiction on an independent basis. Therefore, this principle leads to the use of the actual capital structure as the default capital structure, as long as that capital structure is reasonable by reference to industry standards or a proxy group of firms with comparable risk.

Q: You stated that leverage affects the metrics that are reviewed by the rating agencies. Have the credit rating agencies highlighted pressures on utilities' cash flows that should be considered in setting the Company's capital structure?

A: Yes. The credit rating agencies have recently highlighted challenges that are placing pressure on the outlook for utilities and noted that they should be considered in setting the Company's capital structure.

For example, while Moody's revised its outlook for the utility sector from "negative" to "stable", Moody's continues to note that high interest rates and increased capital spending will place pressure on credit metrics. Thus, Moody's highlights constructive regulatory outcomes that promote timely cost recovery as a key factor in supporting utility credit quality.[61]

S&P also recently revised its outlook for the industry; however, S&P downgraded its outlook from stable to negative.[62] S&P noted that for the fifth consecutive year it expects downgrades will exceed upgrades with the industry facing significant risks over the near-term as a result of physical risks due to climate change, increased levels of capital spending and cash-flow deficits that are not being "funded in a sufficiently credit supportive manner".[63] In regard to the effect of increased capital spending, S&P noted:

> The industry's capital spending remains at record levels, supporting initiatives for safety, reliability, energy transition, and growth. We consider these trends long term and expect that capital spending will only continue to increase over this decade.
>
> Accordingly, cash flow deficits have increased, pressuring the industry's credit quality. For 2024, our base case assumes that the industry will fund its approximate $85 billion of cash flow deficits with about $40 billion in asset sales and equity issuance.
>
> For 2023, the industry's actual equity issuance was considerably below our expectations, resulting in a weakening of financial performance and credit quality. If this trend persists, credit quality will again likely experience pressure in 2024.[64]

Fitch has stated that it is maintaining a "deteriorating outlook" on the U.S. utility sector in 2024 based on elevated capital spending and continuing higher interest rates that

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[61] Moody's Investors Service, Outlook turns stable on low prices and credit-supportive regulation. (Sept. 7, 2023).
[62] S&P Global Ratings, Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens, February 14, 2024.
[63] *Id*.
[64] *Id.,* at 6-8.

place pressure on credit metrics. Fitch noted that bill affordability will remain a major issue for the industry that could affect future regulatory outcomes, and that while it expects authorized ROEs to start trending up with the increase in interest rates, albeit with a lag, given the uncertain macroeconomic environment and bill pressure on customers, the lag could be longer than in previous cycles.[65]

The continued concerns of credit ratings agencies over the negative effects of inflation, higher interest rates and increased capital expenditures underscore the importance of maintaining adequate cash flow metrics for the industry as a whole, and the Company in the context of this rate proceeding.

Q: What capital structure is the Company proposing?

A: EKC is proposing a capital structure composed of 51.97 percent equity and 48.03 percent long-term debt. The proposed capital structure reflects the Company's projected capital structure as of March 31, 2025.

Q: Is it appropriate that the Company's capital structure reflect its actual capital structure as opposed to its parent company's capital structure or a hypothetical capital structure for ratemaking purposes?

A: Yes, appropriate and important for a number of reasons.

First, as discussed in Mr. Ley's testimony the Non-Unanimous Settlement Agreement ("Settlement Agreement") regarding the merger between Westar Energy, Inc. and Great Plains Energy Inc. ("Merger Order") approved by the Commission requires that Evergy and the Company maintain separate capital structures and separate debt. The Merger Order noted a key term of the Settlement Agreement was "Holdco, KCPL&L, and

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[65] Fitch Ratings, *North American Utilities, Power & Gas Outlook,* S&P Market Intelligence (Nov. 13, 2023).

Westar will maintain separate capital structure and separate debt." As noted by Mr. Ley, the Company maintains a separate capital structure and issues its own debt as required by the Settlement Agreement.[66]

Second, the Company has its own credit ratings and issues its own debt. As noted previously, EKC currently has an investment-grade long-term rating from S&P of BBB+ (Outlook: Stable) and from Moody's of Baa1 (Outlook: Stable).[67] Therefore, the Company is reasonably financially independent of its parent company.

Based on all of these factors, it is appropriate to use the Company's actual capital structure for purposes of setting rates in this proceeding.

Q: Is there a basis for applying Evergy, Inc.'s capital structure for purposes of setting the Company's rates in this proceeding?

A: No. There is no basis to utilize the parent's capital structure as the ratemaking capital structure for the Company. If the consolidated capital structure of Evergy, Inc. were to be applied as the Company's capital structure for ratemaking purposes, doing so would directly contradict the clearly stated intention to separate the Company from Evergy, Inc. in terms of capital structure and debt obligations as set forth in the Settlement Agreement and as required by the Commission.

Q: Is there any basis to rely on a hypothetical capital structure for the Company?

A: No. As discussed previously, the stand-alone ratemaking principle suggests that the actual capital structure of the company should be relied upon, as long as the capital structure is reasonable. Further, the Company's actual capital structure is consistent with those of the

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[66] Direct Testimony of Geoffrey Ley, at 26.
[67] S&P and Moody's Ratings accessed December 5, 2024.

utility operating subsidiaries of the proxy group. There is also no justifiable reason to apply a hypothetical capital structure for ratemaking purposes.

Q: Did you conduct any analysis to determine the reasonableness of the Company's projected actual capital structure?

A: Yes. In order to determine the reasonableness of the Company's projected capital structure, I compared the Company's proposal to the actual capital structures of the utility operating subsidiaries of the companies in the proxy group. Since the ROE is set based on the return that is derived from the risk-comparable proxy group, it is reasonable to look to the average capital structure for the proxy group to benchmark the capital structure proposed by the Company.

Q: How did you conduct this analysis?

A: I calculated the average proportion of common equity, long-term debt, and preferred equity for the most recent two years for each of the companies in the proxy group at the operating subsidiary level. As shown in **Exhibit AEB-11**, the median common equity ratio for the operating subsidiaries of the proxy group companies was 50.80 percent (representing a range from 45.33 percent to 60.29 percent). The Company's proposed equity ratio is generally consistent with the median of the equity ratios for the utility operating subsidiaries of the proxy group companies. Therefore, I consider the Company's proposal reasonable.

Q: Have you reviewed the Company's proposed cost of debt?

A: Yes. I have. **Exhibit AEB-12** summarizes the long-term debt issued for EKC. As shown in this exhibit, I have compared the interest rates for each issuance to the yield on the Moody's A rated utility bond index and the yield on the Moody's Baa Utility bond index

on the settlement date for each issuance. I then calculated the weighted average cost of the actual issuances, as compared to the weighted average cost if the issuances had been placed at the Moody's A rated utility bond yield and the Moody's Baa utility bond yield at the time of issuance.

Q: What are your conclusions regarding the Company's costs of long-term debt?

A: As shown in **Exhibit AEB-12**, the results of this analysis demonstrate that the debt issued by EKC has been below the yield on the Moody's A and Baa rated utility bond indexes. Therefore, I conclude that the weighted average cost of long-term debt issued for EKC is reasonable.

X. CONCLUSIONS AND RECOMMENDATIONS

Q: What is your conclusion with respect to the Company's proposed capital structure?

A: The Company's proposed capital structure is well within the range established by the proxy group companies. Taking into consideration the impact of current and projected market conditions on the cash flows of utilities as raised by the credit rating agencies, I conclude that the Company's proposal is reasonable and should be adopted for ratemaking purposes.

Q: What is your conclusion regarding a fair ROE for the Company?

A: Figure 13 summarizes the results of my cost of equity analyses. Based on the quantitative and qualitative analyses presented in my direct testimony, and the business and financial risks of the Company as compared to the proxy group, the Company's requested ROE of 10.50 percent is reasonable.

Figure 13: Summary of Analytical Results

Constant Growth DCF

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	9.05%	10.24%	11.14%
90-Day Avg. Stock Price	9.14%	10.33%	11.23%
180-Day Avg. Stock Price	9.41%	10.60%	11.50%
Average	9.20%	10.39%	11.29%
Median Results:			
30-Day Avg. Stock Price	9.27%	10.03%	10.64%
90-Day Avg. Stock Price	9.39%	10.19%	10.81%
180-Day Avg. Stock Price	9.64%	10.38%	11.08%
Average	9.43%	10.20%	10.84%

CAPM / ECAPM / Bond Yield Risk Premium

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	11.63%	11.63%	11.62%
Current Bloomberg Beta	10.43%	10.41%	10.39%
Long-term Avg. *Value Line* Beta	10.20%	10.18%	10.15%
ECAPM:			
Current *Value Line* Beta	11.74%	11.73%	11.73%
Current Bloomberg Beta	10.84%	10.82%	10.80%
Long-term Avg. *Value Line* Beta	10.66%	10.65%	10.62%
Bond Yield Risk Premium:	10.62%	10.57%	10.50%

Q: What is your conclusion about the Company's overall proposed weighted average cost of capital?

A: I have reviewed the capital structure as compared to the proxy group and determined that the proposed capitalization of the Company is reasonable as compared with the proxy group. In addition, I have evaluated the Company's cost of debt as compared with the Moody's A and Baa rated utility bond indexes and determined that the issuances made by

the Company were within the range established by these indexes and are therefore reasonable. Finally, the Company's requested ROE is within my recommended ROE range. Therefore, I conclude that the weighted average cost of capital proposed by the Company is reasonable and appropriate.

Q: Does this conclude your direct testimony?

A: Yes, it does.

COST OF EQUITY ANALYSES
SUMMARY OF RESULTS

Constant Growth DCF

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	9.05%	10.24%	11.14%
90-Day Avg. Stock Price	9.14%	10.33%	11.23%
180-Day Avg. Stock Price	9.41%	10.60%	11.50%
Average	9.20%	10.39%	11.29%
Median Results:			
30-Day Avg. Stock Price	9.27%	10.03%	10.64%
90-Day Avg. Stock Price	9.39%	10.19%	10.81%
180-Day Avg. Stock Price	9.64%	10.38%	11.08%
Average	9.43%	10.20%	10.84%

CAPM / ECAPM / Bond Yield Risk Premium

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	11.63%	11.63%	11.62%
Current Bloomberg Beta	10.43%	10.41%	10.39%
Long-term Avg. *Value Line* Beta	10.20%	10.18%	10.15%
ECAPM:			
Current *Value Line* Beta	11.74%	11.73%	11.73%
Current Bloomberg Beta	10.84%	10.82%	10.80%
Long-term Avg. *Value Line* Beta	10.66%	10.65%	10.62%
Bond Yield Risk Premium:	10.62%	10.57%	10.50%

PROXY GROUP SCREENING DATA AND RESULTS

Company	Ticker	[1] Dividends	[2] S&P Credit Rating Between BBB- and AAA	[3] Covered by More Than 1 Analyst	[4] Positive Growth Rates from at least two sources (Value Line, Yahoo! First Call, and Zacks)	[5] Generation Assets Included in Rate Base	[6] % Company-Owned Generation of Total Sales > 40%	[7] % Regulated Electric Operating Income of Total Operating Income > 60%	[8] Announced Merger
Alliant Energy Corporation	LNT	Yes	A-	Yes	Yes	Yes	75.72%	88.17%	No
Ameren Corporation	AEE	Yes	BBB+	Yes	Yes	Yes	72.83%	84.73%	No
American Electric Power Company, Inc.	AEP	Yes	BBB+	Yes	Yes	Yes	52.31%	99.95%	No
Avista Corporation	AVA	Yes	BBB	Yes	Yes	Yes	60.28%	73.88%	No
CMS Energy Corporation	CMS	Yes	BBB+	Yes	Yes	Yes	46.65%	61.25%	No
DTE Energy Company	DTE	Yes	BBB+	Yes	Yes	Yes	84.17%	71.10%	No
Duke Energy Corporation	DUK	Yes	BBB+	Yes	Yes	Yes	80.86%	90.37%	No
Entergy Corporation	ETR	Yes	BBB+	Yes	Yes	Yes	71.73%	97.99%	No
IDACORP, Inc.	IDA	Yes	BBB	Yes	Yes	Yes	62.48%	99.98%	No
NextEra Energy, Inc.	NEE	Yes	A-	Yes	Yes	Yes	96.37%	88.15%	No
NorthWestern Corporation	NWE	Yes	BBB	Yes	Yes	Yes	57.78%	85.59%	No
OGE Energy Corporation	OGE	Yes	BBB+	Yes	Yes	Yes	45.23%	100.00%	No
Pinnacle West Capital Corporation	PNW	Yes	BBB+	Yes	Yes	Yes	72.64%	100.00%	No
Portland General Electric Company	POR	Yes	BBB+	Yes	Yes	Yes	54.70%	100.00%	No
PPL Corporation	PPL	Yes	A-	Yes	Yes	Yes	41.64%	94.24%	No
Southern Company	SO	Yes	A-	Yes	Yes	Yes	76.55%	73.40%	No
Xcel Energy Inc.	XEL	Yes	BBB+	Yes	Yes	Yes	58.13%	85.90%	No

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional
[3] Source: S&P Capital IQ Pro and Zacks
[4] Source: S&P Capital IQ Pro, Value Line Investment Survey, and Zacks
[5] Source: S&P Capital IQ Pro
[6] Source: S&P Capital IQ Pro
[7] Source: Form 10-K's for 2023, 2022, and 2021
[8] Source: S&P Capital IQ Pro Financial News Releases

30-DAY CONSTANT GROWTH DCF

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Projected EPS Growth Rate	[6] S&P Projected EPS Growth Rate	[7] Zacks Projected EPS Growth Rate	[8] Average Projected EPS Growth Rate	[9] Cost of Equity: Minimum Growth Rate	[10] Cost of Equity: Mean Growth Rate	[11] Cost of Equity: Maximum Growth Rate
Alliant Energy Corporation	LNT	$1.92	$60.54	3.17%	3.27%	6.00%	6.69%	6.70%	6.46%	9.27%	9.74%	9.98%
Ameren Corporation	AEE	$2.68	$90.04	2.98%	3.07%	6.50%	6.49%	6.60%	6.53%	9.57%	9.60%	9.67%
American Electric Power Company, Inc.	AEP	$3.72	$97.21	3.83%	3.95%	6.50%	6.28%	6.20%	6.33%	10.15%	10.28%	10.45%
Avista Corporation	AVA	$1.90	$37.55	5.06%	5.17%	5.00%	4.68%	3.90%	4.53%	9.06%	9.70%	10.19%
CMS Energy Corporation	CMS	$2.06	$69.03	2.98%	3.09%	6.00%	7.37%	7.50%	6.96%	9.07%	10.04%	10.60%
DTE Energy Company	DTE	$4.08	$123.55	3.30%	3.41%	4.50%	7.82%	8.00%	6.77%	7.88%	10.19%	11.43%
Duke Energy Corporation	DUK	$4.18	$114.30	3.66%	3.77%	5.00%	6.39%	6.40%	5.93%	8.75%	9.69%	10.17%
Entergy Corporation	ETR	$4.80	$144.84	3.31%	3.40%	0.50%	7.56%	8.30%	5.45%	3.82%	8.86%	11.75%
IDACORP, Inc.	IDA	$3.44	$111.29	3.09%	3.20%	6.00%	7.12%	8.30%	7.14%	9.18%	10.34%	11.52%
NextEra Energy, Inc.	NEE	$2.06	$78.02	2.64%	2.75%	8.50%	8.31%	8.10%	8.30%	10.85%	11.05%	11.25%
NorthWestern Corporation	NWE	$2.60	$54.86	4.74%	4.86%	4.00%	5.36%	6.10%	5.15%	8.83%	10.01%	10.98%
OGE Energy Corporation	OGE	$1.69	$42.03	4.01%	4.13%	6.50%	6.02%	5.20%	5.91%	9.31%	10.03%	10.64%
Pinnacle West Capital Corporation	PNW	$3.58	$89.78	3.99%	4.12%	4.50%	7.04%	8.20%	6.58%	8.58%	10.70%	12.35%
Portland General Electric Company	POR	$2.00	$47.45	4.21%	4.41%	6.00%	8.79%	12.60%	9.13%	10.34%	13.54%	17.08%
PPL Corporation	PPL	$1.03	$33.28	3.10%	3.21%	7.50%	7.04%	6.80%	7.11%	10.00%	10.32%	10.71%
Southern Company	SO	$2.88	$88.95	3.24%	3.34%	6.50%	6.47%	6.80%	6.59%	9.82%	9.94%	10.15%
Xcel Energy Inc.	XEL	$2.19	$67.57	3.24%	3.35%	6.00%	7.03%	6.90%	6.64%	9.34%	9.99%	10.39%
Mean				3.56%	3.68%	5.62%	6.85%	7.21%	6.56%	9.05%	10.24%	11.14%
Median				3.30%	3.40%	6.00%	7.03%	6.80%	6.58%	9.27%	10.03%	10.64%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 30-day average as of November 29, 2024
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: S&P Capital IQ Pro
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

90-DAY CONSTANT GROWTH DCF

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Projected EPS Growth Rate	[6] S&P Projected EPS Growth Rate	[7] Zacks Projected EPS Growth Rate	[8] Average Projected EPS Growth Rate	[9] Cost of Equity: Minimum Growth Rate	[10] Cost of Equity: Mean Growth Rate	[11] Cost of Equity: Maximum Growth Rate
Alliant Energy Corporation	LNT	$1.92	$58.88	3.26%	3.37%	6.00%	6.69%	6.70%	6.46%	9.36%	9.83%	10.07%
Ameren Corporation	AEE	$2.68	$85.54	3.13%	3.24%	6.50%	6.49%	6.60%	6.53%	9.73%	9.77%	9.84%
American Electric Power Company, Inc.	AEP	$3.72	$98.33	3.78%	3.90%	6.50%	6.28%	6.20%	6.33%	10.10%	10.23%	10.41%
Avista Corporation	AVA	$1.90	$37.70	5.04%	5.15%	5.00%	4.68%	3.90%	4.53%	9.04%	9.68%	10.17%
CMS Energy Corporation	CMS	$2.06	$68.06	3.03%	3.13%	6.00%	7.37%	7.50%	6.96%	9.12%	10.09%	10.64%
DTE Energy Company	DTE	$4.08	$123.46	3.30%	3.42%	4.50%	7.82%	8.00%	6.77%	7.88%	10.19%	11.44%
Duke Energy Corporation	DUK	$4.18	$113.29	3.69%	3.80%	5.00%	6.39%	6.40%	5.93%	8.78%	9.73%	10.21%
Entergy Corporation	ETR	$4.80	$129.94	3.69%	3.79%	0.50%	7.56%	8.30%	5.45%	4.20%	9.25%	12.15%
IDACORP, Inc.	IDA	$3.44	$104.54	3.29%	3.41%	6.00%	7.12%	8.30%	7.14%	9.39%	10.55%	11.73%
NextEra Energy, Inc.	NEE	$2.06	$79.31	2.60%	2.71%	8.50%	8.31%	8.10%	8.30%	10.80%	11.01%	11.21%
NorthWestern Corporation	NWE	$2.60	$54.44	4.78%	4.90%	4.00%	5.36%	6.10%	5.15%	8.87%	10.05%	11.02%
OGE Energy Corporation	OGE	$1.69	$40.34	4.18%	4.30%	6.50%	6.02%	5.20%	5.91%	9.49%	10.21%	10.81%
Pinnacle West Capital Corporation	PNW	$3.58	$87.62	4.09%	4.22%	4.50%	7.04%	8.20%	6.58%	8.68%	10.80%	12.45%
Portland General Electric Company	POR	$2.00	$47.22	4.24%	4.43%	6.00%	8.79%	12.60%	9.13%	10.36%	13.56%	17.10%
PPL Corporation	PPL	$1.03	$32.12	3.21%	3.32%	7.50%	7.04%	6.80%	7.11%	10.12%	10.43%	10.83%
Southern Company	SO	$2.88	$87.75	3.28%	3.39%	6.50%	6.47%	6.80%	6.59%	9.86%	9.98%	10.19%
Xcel Energy Inc.	XEL	$2.19	$63.47	3.45%	3.56%	6.00%	7.03%	6.90%	6.64%	9.55%	10.21%	10.60%
Mean				3.65%	3.77%	5.62%	6.85%	7.21%	6.56%	9.14%	10.33%	11.23%
Median				3.45%	3.56%	6.00%	7.03%	6.80%	6.58%	9.39%	10.19%	10.81%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 90-day average as of November 29, 2024
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: S&P Capital IQ Pro
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

180-DAY CONSTANT GROWTH DCF

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Projected EPS Growth Rate	[6] S&P Projected EPS Growth Rate	[7] Zacks Projected EPS Growth Rate	[8] Average Projected EPS Growth Rate	[9] Cost of Equity: Minimum Growth Rate	[10] Cost of Equity: Mean Growth Rate	[11] Cost of Equity: Maximum Growth Rate
Alliant Energy Corporation	LNT	$1.92	$54.28	3.54%	3.65%	6.00%	6.69%	6.70%	6.46%	9.64%	10.12%	10.36%
Ameren Corporation	AEE	$2.68	$78.62	3.41%	3.52%	6.50%	6.49%	6.60%	6.53%	10.01%	10.05%	10.12%
American Electric Power Company, Inc.	AEP	$3.72	$91.99	4.04%	4.17%	6.50%	6.28%	6.20%	6.33%	10.37%	10.50%	10.68%
Avista Corporation	AVA	$1.90	$36.08	5.27%	5.39%	5.00%	4.68%	3.90%	4.53%	9.27%	9.91%	10.40%
CMS Energy Corporation	CMS	$2.06	$63.61	3.24%	3.35%	6.00%	7.37%	7.50%	6.96%	9.34%	10.31%	10.86%
DTE Energy Company	DTE	$4.08	$116.80	3.49%	3.61%	4.50%	7.82%	8.00%	6.77%	8.07%	10.38%	11.63%
Duke Energy Corporation	DUK	$4.18	$105.61	3.96%	4.08%	5.00%	6.39%	6.40%	5.93%	9.06%	10.00%	10.48%
Entergy Corporation	ETR	$4.80	$117.51	4.08%	4.20%	0.50%	7.56%	8.30%	5.45%	4.59%	9.65%	12.55%
IDACORP, Inc.	IDA	$3.44	$98.14	3.51%	3.63%	6.00%	7.12%	8.30%	7.14%	9.61%	10.77%	11.95%
NextEra Energy, Inc.	NEE	$2.06	$74.17	2.78%	2.89%	8.50%	8.31%	8.10%	8.30%	10.99%	11.20%	11.40%
NorthWestern Corporation	NWE	$2.60	$51.94	5.01%	5.14%	4.00%	5.36%	6.10%	5.15%	9.11%	10.29%	11.26%
OGE Energy Corporation	OGE	$1.69	$37.38	4.51%	4.64%	6.50%	6.02%	5.20%	5.91%	9.82%	10.55%	11.15%
Pinnacle West Capital Corporation	PNW	$3.58	$80.85	4.43%	4.57%	4.50%	7.04%	8.20%	6.58%	9.03%	11.15%	12.81%
Portland General Electric Company	POR	$2.00	$44.77	4.47%	4.67%	6.00%	8.79%	12.60%	9.13%	10.60%	13.80%	17.35%
PPL Corporation	PPL	$1.03	$29.84	3.45%	3.57%	7.50%	7.04%	6.80%	7.11%	10.37%	10.69%	11.08%
Southern Company	SO	$2.88	$81.04	3.55%	3.67%	6.50%	6.47%	6.80%	6.59%	10.14%	10.26%	10.47%
Xcel Energy Inc.	XEL	$2.19	$58.37	3.75%	3.88%	6.00%	7.03%	6.90%	6.64%	9.86%	10.52%	10.92%
Mean				3.91%	4.04%	5.62%	6.85%	7.21%	6.56%	9.41%	10.60%	11.50%
Median				3.75%	3.88%	6.00%	7.03%	6.80%	6.58%	9.64%	10.38%	11.08%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 180-day average as of November 29, 2024
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: S&P Capital IQ Pro
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.52%	0.90	12.05%	7.54%	11.30%	11.49%
Ameren Corporation	AEE	4.52%	0.90	12.05%	7.54%	11.30%	11.49%
American Electric Power Company, Inc.	AEP	4.52%	0.85	12.05%	7.54%	10.92%	11.20%
Avista Corporation	AVA	4.52%	0.95	12.05%	7.54%	11.68%	11.77%
CMS Energy Corporation	CMS	4.52%	0.85	12.05%	7.54%	10.92%	11.20%
DTE Energy Company	DTE	4.52%	1.00	12.05%	7.54%	12.05%	12.05%
Duke Energy Corporation	DUK	4.52%	0.90	12.05%	7.54%	11.30%	11.49%
Entergy Corporation	ETR	4.52%	1.00	12.05%	7.54%	12.05%	12.05%
IDACORP, Inc.	IDA	4.52%	0.85	12.05%	7.54%	10.92%	11.20%
NextEra Energy, Inc.	NEE	4.52%	1.00	12.05%	7.54%	12.05%	12.05%
NorthWestern Corporation	NWE	4.52%	1.00	12.05%	7.54%	12.05%	12.05%
OGE Energy Corporation	OGE	4.52%	1.05	12.05%	7.54%	12.43%	12.33%
Pinnacle West Capital Corporation	PNW	4.52%	0.95	12.05%	7.54%	11.68%	11.77%
Portland General Electric Company	POR	4.52%	0.95	12.05%	7.54%	11.68%	11.77%
PPL Corporation	PPL	4.52%	1.10	12.05%	7.54%	12.81%	12.62%
Southern Company	SO	4.52%	0.95	12.05%	7.54%	11.68%	11.77%
Xcel Energy Inc.	XEL	4.52%	0.85	12.05%	7.54%	10.92%	11.20%
Mean			0.94			11.63%	11.74%
Median			0.95			11.68%	11.77%

Notes:
[1] Source: Bloomberg Professional, as of November 29, 2024
[2] Source: Value Line
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q1 2025 - Q1 2026)	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.42%	0.90	12.05%	7.63%	11.29%	11.48%
Ameren Corporation	AEE	4.42%	0.90	12.05%	7.63%	11.29%	11.48%
American Electric Power Company, Inc.	AEP	4.42%	0.85	12.05%	7.63%	10.91%	11.19%
Avista Corporation	AVA	4.42%	0.95	12.05%	7.63%	11.67%	11.77%
CMS Energy Corporation	CMS	4.42%	0.85	12.05%	7.63%	10.91%	11.19%
DTE Energy Company	DTE	4.42%	1.00	12.05%	7.63%	12.05%	12.05%
Duke Energy Corporation	DUK	4.42%	0.90	12.05%	7.63%	11.29%	11.48%
Entergy Corporation	ETR	4.42%	1.00	12.05%	7.63%	12.05%	12.05%
IDACORP, Inc.	IDA	4.42%	0.85	12.05%	7.63%	10.91%	11.19%
NextEra Energy, Inc.	NEE	4.42%	1.00	12.05%	7.63%	12.05%	12.05%
NorthWestern Corporation	NWE	4.42%	1.00	12.05%	7.63%	12.05%	12.05%
OGE Energy Corporation	OGE	4.42%	1.05	12.05%	7.63%	12.43%	12.34%
Pinnacle West Capital Corporation	PNW	4.42%	0.95	12.05%	7.63%	11.67%	11.77%
Portland General Electric Company	POR	4.42%	0.95	12.05%	7.63%	11.67%	11.77%
PPL Corporation	PPL	4.42%	1.10	12.05%	7.63%	12.82%	12.62%
Southern Company	SO	4.42%	0.95	12.05%	7.63%	11.67%	11.77%
Xcel Energy Inc.	XEL	4.42%	0.85	12.05%	7.63%	10.91%	11.19%
Mean						11.63%	11.73%
Median						11.67%	11.77%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 2
[2] Source: Value Line
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2026 - 2030)	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.30%	0.90	12.05%	7.75%	11.28%	11.47%
Ameren Corporation	AEE	4.30%	0.90	12.05%	7.75%	11.28%	11.47%
American Electric Power Company, Inc.	AEP	4.30%	0.85	12.05%	7.75%	10.89%	11.18%
Avista Corporation	AVA	4.30%	0.95	12.05%	7.75%	11.66%	11.76%
CMS Energy Corporation	CMS	4.30%	0.85	12.05%	7.75%	10.89%	11.18%
DTE Energy Company	DTE	4.30%	1.00	12.05%	7.75%	12.05%	12.05%
Duke Energy Corporation	DUK	4.30%	0.90	12.05%	7.75%	11.28%	11.47%
Entergy Corporation	ETR	4.30%	1.00	12.05%	7.75%	12.05%	12.05%
IDACORP, Inc.	IDA	4.30%	0.85	12.05%	7.75%	10.89%	11.18%
NextEra Energy, Inc.	NEE	4.30%	1.00	12.05%	7.75%	12.05%	12.05%
NorthWestern Corporation	NWE	4.30%	1.00	12.05%	7.75%	12.05%	12.05%
OGE Energy Corporation	OGE	4.30%	1.05	12.05%	7.75%	12.44%	12.34%
Pinnacle West Capital Corporation	PNW	4.30%	0.95	12.05%	7.75%	11.66%	11.76%
Portland General Electric Company	POR	4.30%	0.95	12.05%	7.75%	11.66%	11.76%
PPL Corporation	PPL	4.30%	1.10	12.05%	7.75%	12.83%	12.63%
Southern Company	SO	4.30%	0.95	12.05%	7.75%	11.66%	11.76%
Xcel Energy Inc.	XEL	4.30%	0.85	12.05%	7.75%	10.89%	11.18%
Mean						11.62%	11.73%
Median						11.66%	11.76%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 14
[2] Source: Value Line
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.52%	0.77	12.05%	7.54%	10.30%	10.74%
Ameren Corporation	AEE	4.52%	0.73	12.05%	7.54%	10.02%	10.53%
American Electric Power Company, Inc.	AEP	4.52%	0.74	12.05%	7.54%	10.09%	10.58%
Avista Corporation	AVA	4.52%	0.75	12.05%	7.54%	10.13%	10.61%
CMS Energy Corporation	CMS	4.52%	0.73	12.05%	7.54%	9.99%	10.51%
DTE Energy Company	DTE	4.52%	0.80	12.05%	7.54%	10.54%	10.92%
Duke Energy Corporation	DUK	4.52%	0.71	12.05%	7.54%	9.86%	10.41%
Entergy Corporation	ETR	4.52%	0.84	12.05%	7.54%	10.86%	11.16%
IDACORP, Inc.	IDA	4.52%	0.77	12.05%	7.54%	10.32%	10.75%
NextEra Energy, Inc.	NEE	4.52%	0.80	12.05%	7.54%	10.53%	10.91%
NorthWestern Corporation	NWE	4.52%	0.85	12.05%	7.54%	10.95%	11.23%
OGE Energy Corporation	OGE	4.52%	0.90	12.05%	7.54%	11.30%	11.49%
Pinnacle West Capital Corporation	PNW	4.52%	0.80	12.05%	7.54%	10.57%	10.94%
Portland General Electric Company	POR	4.52%	0.77	12.05%	7.54%	10.31%	10.74%
PPL Corporation	PPL	4.52%	0.92	12.05%	7.54%	11.47%	11.62%
Southern Company	SO	4.52%	0.76	12.05%	7.54%	10.27%	10.71%
Xcel Energy Inc.	XEL	4.52%	0.71	12.05%	7.54%	9.87%	10.41%
Mean						10.43%	10.84%
Median						10.31%	10.74%

Notes:
[1] Source: Bloomberg Professional, as of November 29, 2024
[2] Source: Bloomberg Professional, based on 10-year weekly returns
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q1 2025 - Q1 2026)	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.42%	0.77	12.05%	7.63%	10.28%	10.72%
Ameren Corporation	AEE	4.42%	0.73	12.05%	7.63%	10.00%	10.51%
American Electric Power Company, Inc.	AEP	4.42%	0.74	12.05%	7.63%	10.07%	10.56%
Avista Corporation	AVA	4.42%	0.75	12.05%	7.63%	10.11%	10.59%
CMS Energy Corporation	CMS	4.42%	0.73	12.05%	7.63%	9.97%	10.49%
DTE Energy Company	DTE	4.42%	0.80	12.05%	7.63%	10.52%	10.90%
Duke Energy Corporation	DUK	4.42%	0.71	12.05%	7.63%	9.83%	10.39%
Entergy Corporation	ETR	4.42%	0.84	12.05%	7.63%	10.85%	11.15%
IDACORP, Inc.	IDA	4.42%	0.77	12.05%	7.63%	10.29%	10.73%
NextEra Energy, Inc.	NEE	4.42%	0.80	12.05%	7.63%	10.51%	10.90%
NorthWestern Corporation	NWE	4.42%	0.85	12.05%	7.63%	10.94%	11.22%
OGE Energy Corporation	OGE	4.42%	0.90	12.05%	7.63%	11.29%	11.48%
Pinnacle West Capital Corporation	PNW	4.42%	0.80	12.05%	7.63%	10.55%	10.93%
Portland General Electric Company	POR	4.42%	0.77	12.05%	7.63%	10.28%	10.73%
PPL Corporation	PPL	4.42%	0.92	12.05%	7.63%	11.47%	11.61%
Southern Company	SO	4.42%	0.76	12.05%	7.63%	10.24%	10.70%
Xcel Energy Inc.	XEL	4.42%	0.71	12.05%	7.63%	9.84%	10.39%
Mean						10.41%	10.82%
Median						10.28%	10.73%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 2
[2] Source: Bloomberg Professional, based on 10-year weekly returns
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2026 - 2030)	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.30%	0.77	12.05%	7.75%	10.25%	10.70%
Ameren Corporation	AEE	4.30%	0.73	12.05%	7.75%	9.97%	10.49%
American Electric Power Company, Inc.	AEP	4.30%	0.74	12.05%	7.75%	10.03%	10.54%
Avista Corporation	AVA	4.30%	0.75	12.05%	7.75%	10.08%	10.57%
CMS Energy Corporation	CMS	4.30%	0.73	12.05%	7.75%	9.93%	10.46%
DTE Energy Company	DTE	4.30%	0.80	12.05%	7.75%	10.50%	10.89%
Duke Energy Corporation	DUK	4.30%	0.71	12.05%	7.75%	9.80%	10.36%
Entergy Corporation	ETR	4.30%	0.84	12.05%	7.75%	10.83%	11.13%
IDACORP, Inc.	IDA	4.30%	0.77	12.05%	7.75%	10.27%	10.71%
NextEra Energy, Inc.	NEE	4.30%	0.80	12.05%	7.75%	10.49%	10.88%
NorthWestern Corporation	NWE	4.30%	0.85	12.05%	7.75%	10.92%	11.20%
OGE Energy Corporation	OGE	4.30%	0.90	12.05%	7.75%	11.28%	11.47%
Pinnacle West Capital Corporation	PNW	4.30%	0.80	12.05%	7.75%	10.53%	10.91%
Portland General Electric Company	POR	4.30%	0.77	12.05%	7.75%	10.26%	10.70%
PPL Corporation	PPL	4.30%	0.92	12.05%	7.75%	11.46%	11.61%
Southern Company	SO	4.30%	0.76	12.05%	7.75%	10.21%	10.67%
Xcel Energy Inc.	XEL	4.30%	0.71	12.05%	7.75%	9.81%	10.37%
Mean						10.39%	10.80%
Median						10.26%	10.70%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 14
[2] Source: Bloomberg Professional, based on 10-year weekly returns
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.52%	0.76	12.05%	7.54%	10.27%	10.72%
Ameren Corporation	AEE	4.52%	0.74	12.05%	7.54%	10.10%	10.59%
American Electric Power Company, Inc.	AEP	4.52%	0.69	12.05%	7.54%	9.69%	10.28%
Avista Corporation	AVA	4.52%	0.80	12.05%	7.54%	10.51%	10.90%
CMS Energy Corporation	CMS	4.52%	0.70	12.05%	7.54%	9.83%	10.38%
DTE Energy Company	DTE	4.52%	0.77	12.05%	7.54%	10.34%	10.77%
Duke Energy Corporation	DUK	4.52%	0.69	12.05%	7.54%	9.69%	10.28%
Entergy Corporation	ETR	4.52%	0.76	12.05%	7.54%	10.27%	10.72%
IDACORP, Inc.	IDA	4.52%	0.74	12.05%	7.54%	10.10%	10.59%
NextEra Energy, Inc.	NEE	4.52%	0.75	12.05%	7.54%	10.20%	10.66%
NorthWestern Corporation	NWE	4.52%	0.76	12.05%	7.54%	10.27%	10.72%
OGE Energy Corporation	OGE	4.52%	0.94	12.05%	7.54%	11.61%	11.72%
Pinnacle West Capital Corporation	PNW	4.52%	0.75	12.05%	7.54%	10.20%	10.66%
Portland General Electric Company	POR	4.52%	0.76	12.05%	7.54%	10.27%	10.72%
PPL Corporation	PPL	4.52%	0.84	12.05%	7.54%	10.82%	11.13%
Southern Company	SO	4.52%	0.68	12.05%	7.54%	9.65%	10.25%
Xcel Energy Inc.	XEL	4.52%	0.67	12.05%	7.54%	9.59%	10.20%
Mean						10.20%	10.66%
Median						10.20%	10.66%

Notes:
[1] Source: Bloomberg Professional, as of November 29, 2024
[2] Source: Exhibit AEB-5
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q1 2025 - Q1 2026)	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.42%	0.76	12.05%	7.63%	10.25%	10.70%
Ameren Corporation	AEE	4.42%	0.74	12.05%	7.63%	10.07%	10.57%
American Electric Power Company, Inc.	AEP	4.42%	0.69	12.05%	7.63%	9.66%	10.26%
Avista Corporation	AVA	4.42%	0.80	12.05%	7.63%	10.49%	10.88%
CMS Energy Corporation	CMS	4.42%	0.70	12.05%	7.63%	9.80%	10.36%
DTE Energy Company	DTE	4.42%	0.77	12.05%	7.63%	10.32%	10.75%
Duke Energy Corporation	DUK	4.42%	0.69	12.05%	7.63%	9.66%	10.26%
Entergy Corporation	ETR	4.42%	0.76	12.05%	7.63%	10.25%	10.70%
IDACORP, Inc.	IDA	4.42%	0.74	12.05%	7.63%	10.07%	10.57%
NextEra Energy, Inc.	NEE	4.42%	0.75	12.05%	7.63%	10.18%	10.65%
NorthWestern Corporation	NWE	4.42%	0.76	12.05%	7.63%	10.25%	10.70%
OGE Energy Corporation	OGE	4.42%	0.94	12.05%	7.63%	11.60%	11.71%
Pinnacle West Capital Corporation	PNW	4.42%	0.75	12.05%	7.63%	10.18%	10.65%
Portland General Electric Company	POR	4.42%	0.76	12.05%	7.63%	10.25%	10.70%
PPL Corporation	PPL	4.42%	0.84	12.05%	7.63%	10.80%	11.12%
Southern Company	SO	4.42%	0.68	12.05%	7.63%	9.62%	10.23%
Xcel Energy Inc.	XEL	4.42%	0.67	12.05%	7.63%	9.55%	10.18%
Mean						10.18%	10.65%
Median						10.18%	10.65%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 2
[2] Source: Exhibit AEB-5
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2026 - 2030)	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.30%	0.76	12.05%	7.75%	10.22%	10.68%
Ameren Corporation	AEE	4.30%	0.74	12.05%	7.75%	10.04%	10.55%
American Electric Power Company, Inc.	AEP	4.30%	0.69	12.05%	7.75%	9.62%	10.23%
Avista Corporation	AVA	4.30%	0.80	12.05%	7.75%	10.47%	10.86%
CMS Energy Corporation	CMS	4.30%	0.70	12.05%	7.75%	9.76%	10.33%
DTE Energy Company	DTE	4.30%	0.77	12.05%	7.75%	10.29%	10.73%
Duke Energy Corporation	DUK	4.30%	0.69	12.05%	7.75%	9.62%	10.23%
Entergy Corporation	ETR	4.30%	0.76	12.05%	7.75%	10.22%	10.68%
IDACORP, Inc.	IDA	4.30%	0.74	12.05%	7.75%	10.04%	10.55%
NextEra Energy, Inc.	NEE	4.30%	0.75	12.05%	7.75%	10.15%	10.63%
NorthWestern Corporation	NWE	4.30%	0.76	12.05%	7.75%	10.22%	10.68%
OGE Energy Corporation	OGE	4.30%	0.94	12.05%	7.75%	11.59%	11.71%
Pinnacle West Capital Corporation	PNW	4.30%	0.75	12.05%	7.75%	10.15%	10.63%
Portland General Electric Company	POR	4.30%	0.76	12.05%	7.75%	10.22%	10.68%
PPL Corporation	PPL	4.30%	0.84	12.05%	7.75%	10.78%	11.10%
Southern Company	SO	4.30%	0.68	12.05%	7.75%	9.59%	10.20%
Xcel Energy Inc.	XEL	4.30%	0.67	12.05%	7.75%	9.52%	10.15%
Mean						10.15%	10.62%
Median						10.15%	10.63%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 14
[2] Source: Exhibit AEB-5
[3] Source: Exhibit AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

HISTORICAL BETA - 2013 - 2023

Company	Ticker	[1] 12/31/2013	[2] 12/31/2014	[3] 12/31/2015	[4] 12/31/2016	[5] 12/31/2017	[6] 12/31/2018	[7] 12/31/2019	[8] 12/31/2020	[9] 12/31/2021	[10] 12/31/2022	[11] 12/31/2023	[12] Average
Alliant Energy Corporation	LNT	0.75	0.80	0.80	0.70	0.70	0.60	0.60	0.85	0.85	0.85	0.90	0.76
Ameren Corporation	AEE	0.80	0.75	0.75	0.65	0.70	0.55	0.55	0.85	0.80	0.85	0.90	0.74
American Electric Power Company, Inc.	AEP	0.70	0.70	0.70	0.65	0.65	0.55	0.55	0.75	0.75	0.75	0.80	0.69
Avista Corporation	AVA	0.75	0.80	0.80	0.70	0.75	0.65	0.60	0.95	0.95	0.90	0.90	0.80
CMS Energy Corporation	CMS	0.70	0.70	0.75	0.65	0.65	0.55	0.50	0.80	0.80	0.80	0.85	0.70
DTE Energy Company	DTE	0.80	0.75	0.75	0.65	0.65	0.55	0.55	0.95	0.95	0.95	0.95	0.77
Duke Energy Corporation	DUK	0.65	0.60	0.65	0.60	0.60	0.50	0.50	0.85	0.85	0.85	0.90	0.69
Entergy Corporation	ETR	0.70	0.70	0.70	0.65	0.65	0.60	0.60	0.95	0.95	0.95	0.95	0.76
IDACORP, Inc.	IDA	0.75	0.80	0.80	0.75	0.70	0.55	0.55	0.80	0.80	0.80	0.85	0.74
NextEra Energy, Inc.	NEE	0.70	0.70	0.75	0.65	0.65	0.55	0.55	0.90	0.90	0.95	1.00	0.75
NorthWestern Corporation	NWE	0.70	0.70	0.70	0.70	0.70	0.55	0.60	0.95	0.95	0.90	0.95	0.76
OGE Energy Corporation	OGE	0.85	0.90	0.95	0.90	0.95	0.85	0.75	1.10	1.05	1.00	1.05	0.94
Pinnacle West Capital Corporation	PNW	0.75	0.70	0.75	0.70	0.70	0.55	0.50	0.90	0.90	0.90	0.95	0.75
Portland General Electric Company	POR	0.75	0.80	0.80	0.70	0.70	0.60	0.55	0.85	0.90	0.85	0.90	0.76
PPL Corporation	PPL	0.65	0.60	0.70	0.70	0.75	0.70	0.70	1.15	1.10	1.05	1.10	0.84
Southern Company	SO	0.55	0.55	0.60	0.55	0.55	0.50	0.50	0.90	0.95	0.90	0.95	0.68
Xcel Energy Inc.	XEL	0.65	0.65	0.65	0.60	0.60	0.50	0.50	0.80	0.80	0.80	0.85	0.67
Mean		0.72	0.72	0.74	0.68	0.69	0.58	0.57	0.90	0.90	0.89	0.93	0.75

Notes:
[1] Value Line, dated December 26, 2013.
[2] Value Line, dated December 31, 2014.
[3] Value Line, dated December 30, 2015.
[4] Value Line, dated December 29, 2016.
[5] Value Line, dated December 28, 2017.
[6] Value Line, dated December 27, 2018.
[7] Value Line, dated December 26, 2019.
[8] Value Line, dated December 30, 2020.
[9] Value Line, dated December 29, 2021.
[10] Value Line, dated December 30, 2022.
[11] Value Line, Dated December 29, 2023.
[12] Average ([1] - [11])

MARKET RISK PREMIUM DERIVED FROM ANALYSTS' LONG-TERM GROWTH ESTIMATES

[1] Estimated Weighted Average Dividend Yield	1.46%
[2] Estimated Weighted Average Long-Term Growth Rate	10.51%
[3] S&P 500 Estimated Required Market Return	12.05%

STANDARD AND POOR'S 500 INDEX

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	324.76	82.00	26,630.06		6.54%		-11.21%	
American Express Co	AXP	704.44	304.68	214,630.27	0.56%	0.92%	0.01%	15.55%	0.09%
Verizon Communications Inc	VZ	4,209.63	44.34	186,654.83	0.49%	6.11%	0.03%	2.98%	0.01%
Texas Pacific Land Corp	TPL	22.97	1,598.49	36,725.16		0.40%			
Broadcom Inc	AVGO	4,670.58	162.08	757,006.97	1.98%	1.31%	0.03%	17.05%	0.34%
Boeing Co/The	BA	747.17	155.44	116,140.22				34.61%	
Solventum Corp	SOLV	172.75	71.51	12,353.64				-6.78%	
Caterpillar Inc	CAT	482.80	406.11	196,070.92	0.51%	1.39%	0.01%	7.02%	0.04%
JPMorgan Chase & Co	JPM	2,815.34	249.72	703,046.81	1.84%	2.00%	0.04%	2.80%	0.05%
Chevron Corp	CVX	1,797.09	161.93	291,003.00	0.76%	4.03%	0.03%	3.60%	0.03%
Coca-Cola Co/The	KO	4,307.80	64.08	276,043.64	0.72%	3.03%	0.02%	5.98%	0.04%
AbbVie Inc	ABBV	1,767.14	182.93	323,262.98	0.84%	3.59%	0.03%	11.26%	0.10%
Walt Disney Co/The	DIS	1,810.94	117.47	212,731.04	0.56%	0.77%	0.00%	15.80%	0.09%
Corpay Inc	CPAY	69.71	381.18	26,572.43	0.07%			14.54%	0.01%
Extra Space Storage Inc	EXR	211.98	170.96	36,240.71	0.09%	3.79%	0.00%	1.62%	0.00%
Exxon Mobil Corp	XOM	4,395.09	117.96	518,445.35		3.36%		-1.82%	
Phillips 66	PSX	412.99	133.98	55,332.30		3.43%		-8.20%	
General Electric Co	GE	1,082.29	182.16	197,150.68		0.61%		30.30%	
HP Inc	HPQ	963.72	35.43	34,144.52	0.09%	3.27%	0.00%	3.80%	0.00%
Home Depot Inc/The	HD	993.36	429.13	426,281.70	1.11%	2.10%	0.02%	3.56%	0.04%
Monolithic Power Systems Inc	MPWR	48.78	567.64	27,689.48		0.88%		22.00%	
International Business Machines Corp	IBM	924.65	227.41	210,273.55	0.55%	2.94%	0.02%	3.80%	0.02%
Johnson & Johnson	JNJ	2,407.62	155.01	373,205.64	0.97%	3.20%	0.03%	3.00%	0.03%
Lululemon Athletica Inc	LULU	117.66	320.66	37,729.03	0.10%			7.00%	0.01%
McDonald's Corp	MCD	716.62	294.24	210,858.18	0.55%	2.41%	0.01%	4.77%	0.03%
Merck & Co Inc	MRK	2,529.64	101.64	257,112.17	0.67%	3.19%	0.02%	13.00%	0.09%
3M Co	MMM	544.56	133.53	72,714.91	0.19%	2.10%	0.00%	1.81%	0.00%
American Water Works Co Inc	AWK	194.89	136.94	26,688.77	0.07%	2.23%	0.00%	7.83%	0.01%
Bank of America Corp	BAC	7,672.88	47.51	364,538.51	0.95%	2.19%	0.02%	5.00%	0.05%
Pfizer Inc	PFE	5,666.99	26.21	148,531.81	0.39%	6.41%	0.02%	10.02%	0.04%
Procter & Gamble Co/The	PG	2,355.04	179.26	422,164.78	1.10%	2.25%	0.02%	7.37%	0.08%
AT&T Inc	T	7,175.29	23.16	166,179.70	0.43%	4.79%	0.02%	1.16%	0.01%
Travelers Cos Inc/The	TRV	227.02	266.04	60,396.12	0.16%	1.58%	0.00%	18.71%	0.03%
RTX Corp	RTX	1,331.02	121.83	162,157.73	0.42%	2.07%	0.01%	10.62%	0.04%
Analog Devices Inc	ADI	496.30	218.05	108,217.53	0.28%	1.69%	0.00%	14.05%	0.04%
Walmart Inc	WMT	8,038.25	92.50	743,538.23	1.94%	0.90%	0.02%	9.24%	0.18%
Cisco Systems Inc	CSCO	3,982.76	59.21	235,819.12	0.62%	2.70%	0.02%	4.04%	0.02%
Intel Corp	INTC	4,313.00	24.05	103,727.65	0.27%			2.86%	0.01%
General Motors Co	GM	1,099.60	55.59	61,126.53	0.16%	0.86%	0.00%	18.41%	0.03%
Microsoft Corp	MSFT	7,434.88	423.46	3,148,374.62	8.22%	0.78%	0.06%	15.35%	1.26%
Dollar General Corp	DG	219.92	77.27	16,992.85		3.05%		-7.74%	
Cigna Group/The	CI	278.15	337.80	93,959.95	0.25%	1.66%	0.00%	11.65%	0.03%
Kinder Morgan Inc	KMI	2,221.64	28.27	62,805.77	0.16%	4.07%	0.01%	6.39%	0.01%
Citigroup Inc	C	1,891.26	70.87	134,033.94		3.16%		26.39%	
American International Group Inc	AIG	623.77	76.88	47,955.39	0.13%	2.08%	0.00%	10.49%	0.01%
Altria Group Inc	MO	1,694.81	57.74	97,858.50	0.26%	7.07%	0.02%	4.20%	0.01%
HCA Healthcare Inc	HCA	253.30	327.22	82,883.88	0.22%	0.81%	0.00%	10.84%	0.02%
International Paper Co	IP	347.41	58.83	20,438.03		3.14%		-2.00%	
Hewlett Packard Enterprise Co	HPE	1,298.67	21.22	27,557.75	0.07%	2.45%	0.00%	4.73%	0.00%
Abbott Laboratories	ABT	1,734.46	118.77	206,001.25	0.54%	1.85%	0.01%	8.15%	0.04%
Aflac Inc	AFL	555.53	114.00	63,330.24	0.17%	1.75%	0.00%	9.37%	0.02%
Air Products and Chemicals Inc	APD	222.38	334.33	74,347.94	0.19%	2.12%	0.00%	10.24%	0.02%
Super Micro Computer Inc	SMCI	585.57	32.64	19,112.85					
Royal Caribbean Cruises Ltd	RCL	268.88	244.06	65,621.69		0.66%		32.53%	
Hess Corp	HES	308.12	147.18	45,348.84		1.36%			
Archer-Daniels-Midland Co	ADM	478.53	54.60	26,127.93		3.66%		-4.65%	
Automatic Data Processing Inc	ADP	407.46	306.93	125,060.75	0.33%	2.01%	0.01%	9.10%	0.03%
Verisk Analytics Inc	VRSK	141.21	294.21	41,545.58	0.11%	0.53%	0.00%	12.00%	0.01%
AutoZone Inc	AZO	16.90	3,169.54	53,578.82	0.14%			13.50%	0.02%
Linde PLC	LIN	476.16	460.99	219,504.03	0.57%	1.21%	0.01%	11.47%	0.07%
Avery Dennison Corp	AVY	80.35	205.95	16,547.34	0.04%	1.71%	0.00%	13.82%	0.01%
Enphase Energy Inc	ENPH	135.11	71.35	9,639.86	0.03%			4.56%	0.00%
MSCI Inc	MSCI	78.37	609.63	47,777.49	0.12%	1.05%	0.00%	12.00%	0.01%
Ball Corp	BALL	298.43	61.96	18,490.47	0.05%	1.29%	0.00%	12.66%	0.01%
Axon Enterprise Inc	AXON	76.25	646.96	49,333.79				24.64%	
Dayforce Inc	DAY	157.70	79.99	12,614.42					
Carrier Global Corp	CARR	897.23	77.37	69,418.48	0.18%	0.98%	0.00%	12.25%	0.02%
Bank of New York Mellon Corp/The	BK	727.08	81.87	59,525.90	0.16%	2.30%	0.00%	12.10%	0.02%
Otis Worldwide Corp	OTIS	399.46	102.98	41,136.44	0.11%	1.51%	0.00%	10.00%	0.01%
Baxter International Inc	BAX	510.59	33.71	17,211.91	0.04%	2.02%	0.00%	1.27%	0.00%
Becton Dickinson & Co	BDX	289.12	221.90	64,156.20	0.17%	1.87%	0.00%	9.00%	0.02%
Berkshire Hathaway Inc	BRK/B	1,328.45	483.02	641,666.24					
Best Buy Co Inc	BBY	214.73	90.00	19,325.27	0.05%	4.18%	0.00%	4.89%	0.00%
Boston Scientific Corp	BSX	1,473.83	90.66	133,617.20	0.35%			12.64%	0.04%
Bristol-Myers Squibb Co	BMY	2,028.18	59.22	120,108.62		4.05%		-0.11%	
Brown-Forman Corp	BF/B	303.54	42.08	12,772.85		2.15%		-3.20%	
Coterra Energy Inc	CTRA	736.61	26.72	19,682.30		3.14%			
Hilton Worldwide Holdings Inc	HLT	243.78	253.44	61,783.56	0.16%	0.24%	0.00%	12.62%	0.02%
Carnival Corp	CCL	1,154.16	25.43	29,350.41					
Qorvo Inc	QRVO	94.53	69.05	6,527.07	0.02%			3.70%	0.00%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Builders FirstSource Inc	BLDR	115.08	186.47	21,459.90	0.06%			0.15%	0.00%
UDR Inc	UDR	329.96	45.86	15,131.97	0.04%	3.71%	0.00%	1.46%	0.00%
Clorox Co/The	CLX	123.78	167.17	20,692.52	0.05%	2.92%	0.00%	10.56%	0.01%
Paycom Software Inc	PAYC	57.66	231.92	13,372.98	0.03%	0.65%	0.00%	10.23%	0.00%
CMS Energy Corp	CMS	298.78	69.71	20,828.29	0.05%	2.96%	0.00%	7.43%	0.00%
Colgate-Palmolive Co	CL	817.01	96.63	78,947.77	0.21%	2.07%	0.00%	8.23%	0.02%
EPAM Systems Inc	EPAM	56.72	243.92	13,835.49	0.04%			6.44%	0.00%
Conagra Brands Inc	CAG	477.27	27.55	13,148.87	0.03%	5.08%	0.00%	0.62%	0.00%
Airbnb Inc	ABNB	440.00	136.11	59,888.69	0.16%			19.27%	0.03%
Consolidated Edison Inc	ED	346.41	100.59	34,845.60	0.09%	3.30%	0.00%	5.79%	0.01%
Corning Inc	GLW	856.21	48.67	41,671.68	0.11%	2.30%	0.00%	16.38%	0.02%
GoDaddy Inc	GDDY	140.39	197.57	27,737.13					
Cummins Inc	CMI	137.18	375.04	51,448.68	0.13%	1.94%	0.00%	11.78%	0.02%
Caesars Entertainment Inc	CZR	212.48	38.49	8,178.37					
Danaher Corp	DHR	722.28	239.69	173,122.13	0.45%	0.45%	0.00%	0.85%	0.00%
Target Corp	TGT	458.21	132.31	60,626.02	0.16%	3.39%	0.01%	11.09%	0.02%
Deere & Co	DE	273.60	465.90	127,470.16	0.33%	1.26%	0.00%	1.13%	0.00%
Dominion Energy Inc	D	840.01	58.75	49,350.57	0.13%	4.54%	0.01%	16.29%	0.02%
Dover Corp	DOV	137.19	205.90	28,247.83	0.07%	1.00%	0.00%	9.23%	0.01%
Alliant Energy Corp	LNT	256.60	63.20	16,217.07	0.04%	3.04%	0.00%	7.27%	0.00%
Steel Dynamics Inc	STLD	152.24	145.27	22,116.63		1.27%		-4.40%	
Duke Energy Corp	DUK	771.00	117.05	90,245.55	0.24%	3.57%	0.01%	6.70%	0.02%
Regency Centers Corp	REG	181.51	75.59	13,719.99	0.04%	3.73%	0.00%	4.24%	0.00%
Eaton Corp PLC	ETN	395.20	375.42	148,365.98	0.39%	1.00%	0.00%	15.29%	0.06%
Ecolab Inc	ECL	283.16	248.77	70,442.17	0.18%	0.92%	0.00%	18.46%	0.03%
Revvity Inc	RVTY	121.70	116.14	14,134.49	0.04%	0.24%	0.00%	7.86%	0.00%
Dell Technologies Inc	DELL	333.87	127.59	42,599.04	0.11%	1.40%	0.00%	9.51%	0.01%
Emerson Electric Co	EMR	569.53	132.60	75,519.86	0.20%	1.59%	0.00%	13.14%	0.03%
EOG Resources Inc	EOG	562.45	133.26	74,952.14		2.93%		-1.24%	
Aon PLC	AON	216.27	391.54	84,676.90	0.22%	0.69%	0.00%	11.18%	0.02%
Entergy Corp	ETR	214.41	156.17	33,484.10	0.09%	3.07%	0.00%	7.36%	0.01%
Equifax Inc	EFX	123.95	261.56	32,420.89		0.60%		22.00%	
EQT Corp	EQT	596.68	45.44	27,113.32		1.39%		-6.00%	
IQVIA Holdings Inc	IQV	181.50	200.84	36,452.46	0.10%			9.02%	0.01%
Gartner Inc	IT	77.13	517.93	39,950.16	0.10%			9.00%	0.01%
FedEx Corp	FDX	244.32	302.67	73,949.38	0.19%	1.82%	0.00%	12.33%	0.02%
FMC Corp	FMC	124.84	59.09	7,376.53		3.93%		-3.67%	
Brown & Brown Inc	BRO	285.96	113.10	32,341.89	0.08%	0.53%	0.00%	11.31%	0.01%
Ford Motor Co	F	3,903.44	11.13	43,445.25	0.11%	5.39%	0.01%	3.06%	0.00%
NextEra Energy Inc	NEE	2,056.40	78.67	161,777.35	0.42%	2.62%	0.01%	7.65%	0.03%
Franklin Resources Inc	BEN	523.67	22.76	11,918.68	0.03%	5.45%	0.00%	5.00%	0.00%
Garmin Ltd	GRMN	192.02	212.60	40,824.51		1.41%		21.60%	
Freeport-McMoRan Inc	FCX	1,436.93	44.20	63,512.20	0.17%	1.36%	0.00%	15.37%	0.03%
Dexcom Inc	DXCM	390.60	77.99	30,462.53				20.11%	
General Dynamics Corp	GD	274.97	284.01	78,093.84	0.20%	2.00%	0.00%	14.58%	0.03%
General Mills Inc	GIS	555.16	66.26	36,784.83	0.10%	3.62%	0.00%	2.45%	0.00%
Genuine Parts Co	GPC	139.04	126.73	17,620.09		3.16%			
Atmos Energy Corp	ATO	155.40	151.32	23,515.06		2.30%			
WW Grainger Inc	GWW	48.70	1,205.34	58,700.26	0.15%	0.68%	0.00%	5.61%	0.01%
Halliburton Co	HAL	878.50	31.86	27,989.07	0.07%	2.13%	0.00%	2.85%	0.00%
L3Harris Technologies Inc	LHX	189.67	246.25	46,705.83	0.12%	1.88%	0.00%	9.00%	0.01%
Healthpeak Properties Inc	DOC	699.44	21.99	15,380.75	0.04%	5.46%	0.00%	4.99%	0.00%
Insulet Corp	PODD	70.14	266.78	18,713.22				31.17%	
Catalent Inc	CTLT	181.51	61.11	11,092.17					
Fortive Corp	FTV	346.95	79.33	27,523.49	0.07%	0.40%	0.00%	10.74%	0.01%
Hershey Co/The	HSY	147.74	176.13	26,021.66		3.11%		-4.55%	
Synchrony Financial	SYF	389.34	67.52	26,288.53		1.48%		39.62%	
Hormel Foods Corp	HRL	548.36	32.43	17,783.43	0.05%	3.58%	0.00%	6.23%	0.00%
Arthur J Gallagher & Co	AJG	219.40	312.24	68,505.46	0.18%	0.77%	0.00%	12.81%	0.02%
Mondelez International Inc	MDLZ	1,337.19	64.95	86,850.77	0.23%	2.89%	0.01%	5.07%	0.01%
CenterPoint Energy Inc	CNP	651.73	32.62	21,259.34	0.06%	2.58%	0.00%	8.01%	0.00%
Humana Inc	HUM	120.41	296.38	35,687.51		1.19%		-8.82%	
Willis Towers Watson PLC	WTW	100.73	322.00	32,433.60	0.08%	1.09%	0.00%	10.81%	0.01%
Illinois Tool Works Inc	ITW	295.30	277.52	81,951.66	0.21%	2.16%	0.00%	7.08%	0.02%
CDW Corp/DE	CDW	133.26	175.93	23,445.15	0.06%	1.42%	0.00%	3.96%	0.00%
Trane Technologies PLC	TT	225.02	416.22	93,659.43	0.24%	0.81%	0.00%	16.94%	0.04%
Interpublic Group of Cos Inc/The	IPG	372.51	30.48	11,354.06	0.03%	4.33%	0.00%	0.91%	0.00%
International Flavors & Fragrances Inc	IFF	255.68	91.36	23,359.14	0.06%	1.75%	0.00%	3.39%	0.00%
Generac Holdings Inc	GNRC	59.50	188.20	11,197.38					
NXP Semiconductors NV	NXPI	254.16	229.37	58,295.67	0.15%	1.77%	0.00%	2.29%	0.00%
Kellanova	K	344.70	80.72	27,824.01	0.07%	2.82%	0.00%	9.41%	0.01%
Broadridge Financial Solutions Inc	BR	116.89	236.02	27,588.23		1.49%			
Kimberly-Clark Corp	KMB	333.49	139.35	46,471.18	0.12%	3.50%	0.00%	8.06%	0.01%
Kimco Realty Corp	KIM	674.12	25.57	17,237.16	0.05%	3.91%	0.00%	4.66%	0.00%
Oracle Corp	ORCL	2,771.06	184.84	512,203.31	1.34%	0.87%	0.01%	11.95%	0.16%
Kroger Co/The	KR	723.49	61.08	44,190.54	0.12%	2.10%	0.00%	3.11%	0.00%
Lennar Corp	LEN	238.81	174.39	41,645.58	0.11%	1.15%	0.00%	9.07%	0.01%
Eli Lilly & Co	LLY	949.32	795.35	755,038.23		0.65%		28.50%	
Charter Communications Inc	CHTR	142.20	396.97	56,447.36	0.15%			7.71%	0.01%
Loews Corp	L	217.78	86.73	18,887.78		0.29%			
Lowe's Cos Inc	LOW	564.65	272.43	153,827.60		1.69%		-0.44%	
Hubbell Inc	HUBB	53.67	460.09	24,693.28	0.06%	1.15%	0.00%	18.00%	0.01%
IDEX Corp	IEX	75.72	230.63	17,464.07		1.20%			
Marsh & McLennan Cos Inc	MMC	491.12	233.23	114,544.27	0.30%	1.40%	0.00%	8.79%	0.03%
Masco Corp	MAS	215.75	80.56	17,380.73	0.05%	1.44%	0.00%	7.54%	0.00%
S&P Global Inc	SPGI	317.50	522.51	165,896.93	0.43%	0.70%	0.00%	14.00%	0.06%
Medtronic PLC	MDT	1,282.29	86.54	110,969.00	0.29%	3.24%	0.01%	6.49%	0.02%
Viatris Inc	VTRS	1,193.59	13.09	15,624.13		3.67%		-3.41%	
CVS Health Corp	CVS	1,258.41	59.85	75,315.70		4.44%		-2.27%	
DuPont de Nemours Inc	DD	417.96	83.59	34,936.89	0.09%	1.82%	0.00%	4.01%	0.00%
Micron Technology Inc	MU	1,110.48	97.95	108,771.59		0.47%		53.55%	

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Motorola Solutions Inc	MSI	167.12	499.70	83,510.16	0.22%	0.87%	0.00%	9.48%	0.02%
Cboe Global Markets Inc	CBOE	104.69	215.85	22,596.43	0.06%	1.17%	0.00%	13.68%	0.01%
Newmont Corp	NEM	1,138.45	41.94	47,746.61		2.38%		37.81%	
NIKE Inc	NKE	1,190.60	78.37	93,307.20		2.04%		-1.83%	
NiSource Inc	NI	466.78	38.09	17,779.61	0.05%	2.78%	0.00%	8.00%	0.00%
Norfolk Southern Corp	NSC	226.24	275.85	62,408.21	0.16%	1.96%	0.00%	8.84%	0.01%
Principal Financial Group Inc	PFG	228.73	86.36	19,752.77	0.05%	3.38%	0.00%	12.60%	0.01%
Eversource Energy	ES	366.40	64.49	23,629.27	0.06%	4.43%	0.00%	5.09%	0.00%
Northrop Grumman Corp	NOC	145.70	487.59	71,039.59	0.19%	1.69%	0.00%	19.22%	0.04%
Wells Fargo & Co	WFC	3,329.49	76.17	253,607.30	0.66%	2.10%	0.01%	10.67%	0.07%
Nucor Corp	NUE	234.81	154.69	36,323.21		1.40%		-8.72%	
Occidental Petroleum Corp	OXY	938.34	50.58	47,461.39	0.12%	1.74%	0.00%	12.00%	0.01%
Omnicom Group Inc	OMC	195.09	104.82	20,449.66	0.05%	2.67%	0.00%	5.61%	0.00%
ONEOK Inc	OKE	584.18	113.60	66,363.32	0.17%	3.49%	0.01%	7.39%	0.01%
Raymond James Financial Inc	RJF	204.04	169.28	34,540.71	0.09%	1.06%	0.00%	10.00%	0.01%
PG&E Corp	PCG	2,137.54	21.63	46,235.10	0.12%	0.46%	0.00%	9.84%	0.01%
Parker-Hannifin Corp	PH	128.72	702.90	90,477.59	0.24%	0.93%	0.00%	7.90%	0.02%
Rollins Inc	ROL	484.31	50.33	24,375.07	0.06%	1.31%	0.00%	14.00%	0.01%
PPL Corp	PPL	737.97	34.93	25,777.29	0.07%	2.95%	0.00%	6.93%	0.00%
ConocoPhillips	COP	1,293.56	108.34	140,144.52	0.37%	2.88%	0.01%	4.50%	0.02%
PulteGroup Inc	PHM	205.08	135.27	27,741.47	0.07%	0.65%	0.00%	7.98%	0.01%
Pinnacle West Capital Corp	PNW	113.70	93.70	10,653.67	0.03%	3.82%	0.00%	7.26%	0.00%
PNC Financial Services Group Inc/The	PNC	396.78	214.72	85,197.34	0.22%	2.98%	0.01%	18.19%	0.04%
PPG Industries Inc	PPG	232.00	124.37	28,853.84	0.08%	2.19%	0.00%	6.89%	0.01%
Progressive Corp/The	PGR	585.81	268.88	157,513.00		0.15%		39.87%	
Veralto Corp	VLTO	247.31	108.19	26,756.23		0.33%			
Public Service Enterprise Group Inc	PEG	498.23	94.30	46,982.66	0.12%	2.55%	0.00%	6.29%	0.01%
Cooper Cos Inc/The	COO	199.16	104.46	20,803.79	0.05%			12.43%	0.01%
Edison International	EIX	387.15	87.75	33,972.44	0.09%	3.56%	0.00%	7.58%	0.01%
Schlumberger NV	SLB	1,412.15	43.94	62,050.06	0.16%	2.50%	0.00%	9.17%	0.01%
Charles Schwab Corp/The	SCHW	1,779.66	82.76	147,284.83	0.38%	1.21%	0.00%	8.94%	0.03%
Sherwin-Williams Co/The	SHW	251.85	397.40	100,086.50	0.26%	0.72%	0.00%	10.29%	0.03%
West Pharmaceutical Services Inc	WST	72.42	325.68	23,586.51	0.06%	0.26%	0.00%	2.49%	0.00%
J M Smucker Co/The	SJM	106.42	117.79	12,534.74	0.03%	3.67%	0.00%	5.49%	0.00%
Snap-on Inc	SNA	52.51	369.69	19,411.46	0.05%	2.32%	0.00%	4.81%	0.00%
AMETEK Inc	AME	231.31	194.38	44,961.59	0.12%	0.58%	0.00%	7.34%	0.01%
Uber Technologies Inc	UBER	2,105.71	71.96	151,526.84				61.51%	
Southern Co/The	SO	1,094.63	89.13	97,564.68	0.25%	3.23%	0.01%	7.94%	0.02%
Truist Financial Corp	TFC	1,327.52	47.68	63,296.18	0.17%	4.36%	0.01%	7.01%	0.01%
Southwest Airlines Co	LUV	599.74	32.36	19,407.50	0.05%	2.22%	0.00%	7.97%	0.00%
W R Berkley Corp	WRB	381.07	64.55	24,598.01	0.06%	0.50%	0.00%	13.07%	0.01%
Stanley Black & Decker Inc	SWK	154.16	89.45	13,789.96		3.67%			
Public Storage	PSA	175.70	348.05	61,153.60	0.16%	3.45%	0.01%	2.10%	0.00%
Arista Networks Inc	ANET	314.94	405.82	127,808.90	0.33%			17.80%	0.06%
Sysco Corp	SYY	491.23	77.11	37,878.44	0.10%	2.65%	0.00%	7.00%	0.01%
Corteva Inc	CTVA	692.25	62.07	42,967.77	0.11%	1.10%	0.00%	9.10%	0.01%
Texas Instruments Inc	TXN	912.22	201.03	183,382.91	0.48%	2.71%	0.01%	0.10%	0.00%
Textron Inc	TXT	185.51	85.63	15,885.36		0.09%			
Thermo Fisher Scientific Inc	TMO	382.50	529.63	202,583.62	0.53%	0.29%	0.00%	8.37%	0.04%
TJX Cos Inc/The	TJX	1,127.87	125.69	141,762.34	0.37%	1.19%	0.00%	8.42%	0.03%
Globe Life Inc	GL	83.95	111.24	9,338.05	0.02%	0.86%	0.00%	6.00%	0.00%
Johnson Controls International plc	JCI	662.19	83.86	55,530.87	0.14%	1.76%	0.00%	9.59%	0.01%
Ulta Beauty Inc	ULTA	47.11	386.64	18,216.44				-0.55%	
Union Pacific Corp	UNP	606.26	244.66	148,326.75	0.39%	2.19%	0.01%	9.24%	0.04%
Keysight Technologies Inc	KEYS	173.54	170.84	29,648.15	0.08%			13.10%	0.01%
UnitedHealth Group Inc	UNH	920.28	610.20	561,557.50	1.47%	1.38%	0.02%	10.52%	0.15%
Blackstone Inc	BX	722.00	191.09	137,967.50		1.80%		22.49%	
Ventas Inc	VTR	419.35	64.07	26,868.04	0.07%	2.81%	0.00%	7.65%	0.01%
Labcorp Holdings Inc	LH	83.64	241.16	20,170.44	0.05%	1.19%	0.00%	9.21%	0.00%
Vulcan Materials Co	VMC	132.06	288.13	38,050.81	0.10%	0.64%	0.00%	14.45%	0.01%
Weyerhaeuser Co	WY	726.58	32.26	23,439.54		2.48%		-13.66%	
Williams Cos Inc/The	WMB	1,219.01	58.52	71,336.57	0.19%	3.25%	0.01%	5.57%	0.01%
Constellation Energy Corp	CEG	315.12	256.56	80,847.43	0.21%	0.55%	0.00%	18.94%	0.04%
WEC Energy Group Inc	WEC	316.35	101.05	31,967.62	0.08%	3.31%	0.00%	7.09%	0.01%
Adobe Inc	ADBE	440.20	515.93	227,112.39	0.59%			16.34%	0.10%
Vistra Corp	VST	340.23	159.84	54,381.76		0.55%			
AES Corp/The	AES	711.03	13.04	9,271.79		5.29%			
Expeditors International of Washington Inc	EXPD	139.98	120.91	16,924.48	0.04%	1.21%	0.00%	6.49%	0.00%
Amgen Inc	AMGN	537.53	282.87	152,051.88	0.40%	3.18%	0.01%	4.81%	0.02%
Apple Inc	AAPL	15,115.82	237.33	3,587,438.27	9.37%	0.42%	0.04%	14.22%	1.33%
Autodesk Inc	ADSK	215.00	291.90	62,758.50	0.16%			12.84%	0.02%
Cintas Corp	CTAS	403.30	225.79	91,060.80	0.24%	0.69%	0.00%	12.00%	0.03%
Comcast Corp	CMCSA	3,817.10	43.19	164,860.36	0.43%	2.87%	0.01%	8.63%	0.04%
Molson Coors Beverage Co	TAP	193.57	62.06	12,012.66	0.03%	2.84%	0.00%	4.90%	0.00%
KLA Corp	KLAC	133.76	647.03	86,546.59	0.23%	1.05%	0.00%	12.54%	0.03%
Marriott International Inc/MD	MAR	277.89	289.09	80,336.21	0.21%	0.87%	0.00%	5.20%	0.01%
Fiserv Inc	FI	568.92	220.96	125,708.28	0.33%			11.99%	0.04%
McCormick & Co Inc/MD	MKC	252.19	78.41	19,774.33	0.05%	2.30%	0.00%	6.92%	0.00%
PACCAR Inc	PCAR	524.30	117.00	61,343.16	0.16%	1.03%	0.00%	0.48%	0.00%
Costco Wholesale Corp	COST	443.07	971.88	430,614.31	1.12%	0.48%	0.01%	9.88%	0.11%
Stryker Corp	SYK	381.22	392.15	149,493.76	0.39%	0.82%	0.00%	12.22%	0.05%
Tyson Foods Inc	TSN	285.86	64.50	18,437.68	0.05%	3.10%	0.00%	18.97%	0.01%
Lamb Weston Holdings Inc	LW	142.60	77.24	11,014.25	0.03%	1.86%	0.00%	0.57%	0.00%
Applied Materials Inc	AMAT	824.40	174.71	144,031.64	0.38%	0.92%	0.00%	11.58%	0.04%
Cardinal Health Inc	CAH	242.01	122.24	29,583.36	0.08%	1.65%	0.00%	7.60%	0.01%
Cincinnati Financial Corp	CINF	156.32	159.83	24,983.84	0.07%	2.03%	0.00%	8.30%	0.01%
Paramount Global	PARA	626.27	10.85	6,795.06		1.84%		45.00%	
DR Horton Inc	DHI	321.17	168.78	54,206.99	0.14%	0.95%	0.00%	9.24%	0.01%
Electronic Arts Inc	EA	262.27	163.67	42,926.19	0.11%	0.46%	0.00%	12.85%	0.01%
Erie Indemnity Co	ERIE	46.19	440.56	20,349.06		1.16%			
Fair Isaac Corp	FICO	24.35	2,375.03	57,826.99				30.00%	

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Fastenal Co	FAST	572.89	83.56	47,870.40	0.12%	1.87%	0.00%	7.79%	0.01%
M&T Bank Corp	MTB	165.92	218.64	36,277.00	0.09%	2.47%	0.00%	5.10%	0.00%
Xcel Energy Inc	XEL	595.31	72.56	43,195.73	0.11%	3.02%	0.00%	7.36%	0.01%
Fifth Third Bancorp	FITB	670.54	48.06	32,226.31		3.08%		25.00%	
Gilead Sciences Inc	GILD	1,246.27	92.58	115,379.29	0.30%	3.33%	0.01%	16.28%	0.05%
Hasbro Inc	HAS	139.50	65.15	9,088.52		4.30%		27.48%	
Huntington Bancshares Inc/OH	HBAN	1,452.81	18.01	26,165.13	0.07%	3.44%	0.00%	3.45%	0.00%
Welltower Inc	WELL	622.69	138.18	86,043.24	0.22%	1.94%	0.00%	15.72%	0.04%
Biogen Inc	BIIB	145.72	160.63	23,406.90	0.06%			4.43%	0.00%
Northern Trust Corp	NTRS	198.22	111.16	22,033.97	0.06%	2.70%	0.00%	12.04%	0.01%
Packaging Corp of America	PKG	89.80	248.85	22,347.96	0.06%	2.01%	0.00%	7.85%	0.00%
Paychex Inc	PAYX	359.90	146.27	52,642.28	0.14%	2.68%	0.00%	6.99%	0.01%
QUALCOMM Inc	QCOM	1,111.00	158.53	176,126.83	0.46%	2.14%	0.01%	7.73%	0.04%
Ross Stores Inc	ROST	331.76	154.87	51,380.06		0.95%		98.30%	
IDEXX Laboratories Inc	IDXX	81.88	421.75	34,534.86	0.09%			9.75%	0.01%
Starbucks Corp	SBUX	1,133.80	102.46	116,169.15		2.38%			
KeyCorp	KEY	991.28	19.48	19,310.19	0.05%	4.21%	0.00%	20.00%	0.01%
Fox Corp	FOXA	221.16	47.12	10,420.83	0.03%	1.15%	0.00%	9.54%	0.00%
Fox Corp	FOX	235.58	44.73	10,537.54	0.03%	1.21%	0.00%	9.54%	0.00%
State Street Corp	STT	293.15	98.51	28,878.26	0.08%	3.09%	0.00%	10.37%	0.01%
Norwegian Cruise Line Holdings Ltd	NCLH	439.71	26.89	11,823.76				58.74%	
US Bancorp	USB	1,560.03	53.29	83,134.09	0.22%	3.75%	0.01%	8.51%	0.02%
A O Smith Corp	AOS	119.11	74.49	8,872.51		1.83%			
Gen Digital Inc	GEN	616.20	30.85	19,009.92	0.05%	1.62%	0.00%	6.77%	0.00%
T Rowe Price Group Inc	TROW	222.16	123.84	27,512.23	0.07%	4.01%	0.00%	8.17%	0.01%
Waste Management Inc	WM	401.37	228.22	91,599.64	0.24%	1.31%	0.00%	14.57%	0.03%
Constellation Brands Inc	STZ	181.54	240.95	43,741.19	0.11%	1.68%	0.00%	10.88%	0.01%
Invesco Ltd	IVZ	449.44	18.09	8,130.37	0.02%	4.53%	0.00%	12.44%	0.00%
Intuit Inc	INTU	279.92	641.73	179,631.00	0.47%	0.65%	0.00%	18.41%	0.09%
Morgan Stanley	MS	1,611.04	131.61	212,028.39	0.55%	2.81%	0.02%	10.16%	0.06%
Microchip Technology Inc	MCHP	537.01	68.17	36,607.99		2.67%		-19.88%	
Crowdstrike Holdings Inc	CRWD	233.85	345.97	80,905.51				54.97%	
Chubb Ltd	CB	403.10	288.73	116,386.49	0.30%	1.26%	0.00%	1.99%	0.01%
Hologic Inc	HOLX	226.94	79.50	18,041.83	0.05%			7.42%	0.00%
Citizens Financial Group Inc	CFG	440.70	48.14	21,215.32		3.49%			
Jabil Inc	JBL	112.84	135.83	15,327.49	0.04%	0.24%	0.00%	10.82%	0.00%
O'Reilly Automotive Inc	ORLY	57.73	1,243.22	71,771.95	0.19%			9.11%	0.02%
Allstate Corp/The	ALL	264.80	207.39	54,917.59		1.77%		175.00%	
Equity Residential	EQR	379.43	76.66	29,087.06	0.08%	3.52%	0.00%	3.08%	0.00%
BorgWarner Inc	BWA	218.70	34.21	7,481.72		1.29%		-1.00%	
Keurig Dr Pepper Inc	KDP	1,356.45	32.65	44,288.21	0.12%	2.82%	0.00%	6.73%	0.01%
Host Hotels & Resorts Inc	HST	699.03	18.42	12,876.12		4.34%		-1.49%	
Incyte Corp	INCY	192.65	74.59	14,369.78				39.79%	
Simon Property Group Inc	SPG	326.27	183.60	59,903.20	0.16%	4.58%	0.01%	1.34%	0.00%
Eastman Chemical Co	EMN	115.91	104.72	12,138.37	0.03%	3.09%	0.00%	5.72%	0.00%
AvalonBay Communities Inc	AVB	142.24	235.35	33,475.53	0.09%	2.89%	0.00%	5.41%	0.00%
Prudential Financial Inc	PRU	356.00	129.41	46,069.96	0.12%	4.02%	0.00%	3.22%	0.00%
United Parcel Service Inc	UPS	731.37	135.72	99,261.49	0.26%	4.80%	0.01%	1.72%	0.00%
Walgreens Boots Alliance Inc	WBA	864.62	9.02	7,798.85		11.09%		-21.19%	
STERIS PLC	STE	98.71	219.06	21,622.83		1.04%			
McKesson Corp	MCK	126.94	627.79	79,691.73	0.21%	0.45%	0.00%	13.43%	0.03%
Lockheed Martin Corp	LMT	237.04	526.11	124,706.63	0.33%	2.51%	0.01%	2.61%	0.01%
Cencora Inc	COR	193.28	251.55	48,619.62	0.13%	0.87%	0.00%	8.78%	0.01%
Capital One Financial Corp	COF	381.51	192.01	73,253.80	0.19%	1.25%	0.00%	14.13%	0.03%
The Campbell's Company	CPB	297.62	46.20	13,749.86	0.04%	3.20%	0.00%	5.71%	0.00%
Waters Corp	WAT	59.38	384.72	22,843.20	0.06%			6.20%	0.00%
Palantir Technologies Inc	PLTR	2,180.65	67.08	146,278.30				36.08%	
Nordson Corp	NDSN	57.18	260.99	14,923.81		1.20%			
Dollar Tree Inc	DLTR	214.99	71.27	15,322.49	0.04%			6.86%	0.00%
Darden Restaurants Inc	DRI	117.50	176.27	20,711.81	0.05%	3.18%	0.00%	9.75%	0.01%
Evergy Inc	EVRG	229.75	64.63	14,848.48	0.04%	4.13%	0.00%	5.35%	0.00%
Match Group Inc	MTCH	251.09	32.74	8,220.72				34.93%	
Domino's Pizza Inc	DPZ	34.53	476.19	16,443.78	0.04%	1.27%	0.00%	11.05%	0.00%
NVR Inc	NVR	3.06	9,235.58	28,296.71	0.07%			9.43%	0.01%
NetApp Inc	NTAP	203.31	122.64	24,933.50	0.07%	1.70%	0.00%	7.66%	0.00%
Old Dominion Freight Line Inc	ODFL	213.50	225.14	48,066.84	0.13%	0.46%	0.00%	8.80%	0.01%
DaVita Inc	DVA	82.00	166.17	13,625.94	0.04%			17.90%	0.01%
Hartford Financial Services Group Inc/The	HIG	289.89	122.79	35,595.71	0.09%	1.69%	0.00%	12.07%	0.01%
Iron Mountain Inc	IRM	293.46	123.67	36,292.24	0.09%	2.31%	0.00%	4.00%	0.00%
Estee Lauder Cos Inc/The	EL	233.44	72.12	16,835.40	0.04%	1.94%	0.00%	10.56%	0.00%
Cadence Design Systems Inc	CDNS	274.26	306.81	84,146.63	0.22%			15.76%	0.03%
Tyler Technologies Inc	TYL	42.80	629.17	26,927.59					
Universal Health Services Inc	UHS	58.71	205.00	12,036.52		0.39%		23.30%	
Skyworks Solutions Inc	SWKS	159.92	87.59	14,007.45	0.04%	3.20%	0.00%	15.09%	0.01%
Quest Diagnostics Inc	DGX	111.62	162.66	18,155.33	0.05%	1.84%	0.00%	6.28%	0.00%
Rockwell Automation Inc	ROK	112.90	295.14	33,320.36		1.78%			
Kraft Heinz Co/The	KHC	1,209.17	31.97	38,657.32	0.10%	5.00%	0.01%	1.87%	0.00%
American Tower Corp	AMT	467.29	209.00	97,663.48	0.25%	3.10%	0.01%	13.39%	0.03%
Regeneron Pharmaceuticals Inc	REGN	108.07	750.22	81,078.07				29.39%	
Amazon.com Inc	AMZN	10,515.01	207.89	2,185,965.64				35.35%	
Jack Henry & Associates Inc	JKHY	72.96	175.63	12,813.85	0.03%	1.25%	0.00%	9.30%	0.00%
Ralph Lauren Corp	RL	40.22	231.40	9,306.23	0.02%	1.43%	0.00%	11.25%	0.00%
BXP Inc	BXP	158.11	81.99	12,963.50	0.03%	4.78%	0.00%	0.65%	0.00%
Amphenol Corp	APH	1,205.61	72.65	87,587.78	0.23%	0.91%	0.00%	18.77%	0.04%
Howmet Aerospace Inc	HWM	406.26	118.38	48,093.14		0.27%		27.36%	
Valero Energy Corp	VLO	316.59	139.08	44,030.67		3.08%		-19.65%	
Synopsys Inc	SNPS	153.61	558.49	85,791.74	0.22%			12.82%	0.03%
CH Robinson Worldwide Inc	CHRW	118.21	105.58	12,480.11	0.03%	2.35%	0.00%	19.90%	0.01%
Accenture PLC	ACN	626.38	362.37	226,982.92	0.59%	1.63%	0.01%	8.18%	0.05%
TransDigm Group Inc	TDG	56.23	1,252.97	70,455.07	0.18%			16.05%	0.03%
Yum! Brands Inc	YUM	279.07	138.27	38,587.26	0.10%	1.94%	0.00%	9.89%	0.01%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Prologis Inc	PLD	925.91	116.78	108,127.89	0.28%	3.29%	0.01%	3.56%	0.01%
FirstEnergy Corp	FE	576.32	42.55	24,522.29	0.06%	4.00%	0.00%	6.31%	0.00%
VeriSign Inc	VRSN	96.10	187.18	17,988.00					
Quanta Services Inc	PWR	147.61	344.52	50,855.15		0.12%			
Henry Schein Inc	HSIC	124.68	77.05	9,606.69	0.03%			8.39%	0.00%
Ameren Corp	AEE	266.51	94.39	25,155.93	0.07%	2.84%	0.00%	6.25%	0.00%
ANSYS Inc	ANSS	87.45	351.10	30,703.68	0.08%			11.53%	0.01%
FactSet Research Systems Inc	FDS	37.99	490.67	18,639.99	0.05%	0.85%	0.00%	9.00%	0.00%
NVIDIA Corp	NVDA	24,490.00	138.25	3,385,742.50		0.03%		49.81%	
Cognizant Technology Solutions Corp	CTSH	495.82	80.49	39,908.89	0.10%	1.49%	0.00%	6.40%	0.01%
Intuitive Surgical Inc	ISRG	356.18	542.00	193,049.26	0.50%			18.85%	0.09%
Take-Two Interactive Software Inc	TTWO	175.63	188.38	33,084.69				60.59%	
Republic Services Inc	RSG	313.15	218.30	68,361.10	0.18%	1.06%	0.00%	11.44%	0.02%
eBay Inc	EBAY	479.00	63.29	30,315.91	0.08%	1.71%	0.00%	9.93%	0.01%
Goldman Sachs Group Inc/The	GS	313.91	605.57	190,094.37	0.50%	1.98%	0.01%	14.95%	0.07%
SBA Communications Corp	SBAC	107.52	226.25	24,326.99	0.06%	1.73%	0.00%	17.77%	0.01%
Sempra	SRE	633.40	93.67	59,330.51	0.15%	2.65%	0.00%	6.46%	0.01%
Moody's Corp	MCO	181.20	499.98	90,596.38		0.68%			
ON Semiconductor Corp	ON	425.80	71.12	30,282.71				-1.44%	
Booking Holdings Inc	BKNG	33.10	5,201.98	172,168.42	0.45%	0.67%	0.00%	15.98%	0.07%
F5 Inc	FFIV	58.61	250.35	14,674.23	0.04%			6.72%	0.00%
Akamai Technologies Inc	AKAM	150.23	94.02	14,124.34	0.04%			7.09%	0.00%
Charles River Laboratories International Inc	CRL	51.14	199.06	10,179.17	0.03%			4.06%	0.00%
MarketAxess Holdings Inc	MKTX	37.70	258.69	9,753.74	0.03%	1.14%	0.00%	3.02%	0.00%
Devon Energy Corp	DVN	656.90	37.95	24,929.36		2.32%			
Bio-Techne Corp	TECH	158.89	75.36	11,974.09		0.42%			
Alphabet Inc	GOOGL	5,843.00	168.95	987,174.85	2.58%	0.47%	0.01%	16.07%	0.41%
Teleflex Inc	TFX	46.44	192.85	8,956.67	0.02%	0.71%	0.00%	7.50%	0.00%
Netflix Inc	NFLX	427.46	886.81	379,074.13				35.22%	
Allegion plc	ALLE	86.93	140.84	12,243.12	0.03%	1.36%	0.00%	8.33%	0.00%
Agilent Technologies Inc	A	287.33	137.97	39,642.60	0.10%	0.72%	0.00%	6.83%	0.01%
Warner Bros Discovery Inc	WBD	2,453.17	10.48	25,709.17				29.09%	
Elevance Health Inc	ELV	231.92	406.96	94,383.31	0.25%	1.60%	0.00%	11.90%	0.03%
Trimble Inc	TRMB	244.21	72.97	17,819.83					
CME Group Inc	CME	360.36	238.00	85,765.46	0.22%	1.93%	0.00%	3.55%	0.01%
Juniper Networks Inc	JNPR	331.09	35.70	11,819.88	0.03%	2.46%	0.00%	3.56%	0.00%
DTE Energy Co	DTE	206.93	125.78	26,027.03	0.07%	3.24%	0.00%	10.06%	0.01%
Nasdaq Inc	NDAQ	574.76	82.99	47,699.13	0.12%	1.16%	0.00%	9.60%	0.01%
Celanese Corp	CE	109.31	73.21	8,002.75	0.02%	3.82%	0.00%	9.15%	0.00%
Philip Morris International Inc	PM	1,554.83	133.06	206,886.13	0.54%	4.06%	0.02%	10.00%	0.05%
Salesforce Inc	CRM	956.00	329.99	315,470.44	0.82%	0.48%	0.00%	17.52%	0.14%
Ingersoll Rand Inc	IR	403.01	104.17	41,981.80	0.11%	0.08%	0.00%	17.00%	0.02%
Huntington Ingalls Industries Inc	HII	39.13	197.92	7,744.48	0.02%	2.73%	0.00%	7.36%	0.00%
Roper Technologies Inc	ROP	107.23	566.44	60,738.88		0.58%			
MetLife Inc	MET	692.42	88.23	61,092.25	0.16%	2.47%	0.00%	13.14%	0.02%
Tapestry Inc	TPR	233.04	62.28	14,513.47	0.04%	2.25%	0.00%	7.34%	0.00%
CSX Corp	CSX	1,928.42	36.55	70,483.72	0.18%	1.31%	0.00%	7.56%	0.01%
Edwards Lifesciences Corp	EW	589.80	71.35	42,082.23	0.11%			6.86%	0.01%
Ameriprise Financial Inc	AMP	97.01	573.97	55,683.45	0.15%	1.03%	0.00%	16.72%	0.02%
Zebra Technologies Corp	ZBRA	51.58	407.00	20,993.07					
Zimmer Biomet Holdings Inc	ZBH	199.07	112.10	22,316.16	0.06%	0.86%	0.00%	6.50%	0.00%
CBRE Group Inc	CBRE	306.02	139.99	42,839.46					
Camden Property Trust	CPT	106.68	125.80	13,420.51	0.04%	3.28%	0.00%	2.11%	0.00%
Mastercard Inc	MA	910.77	532.94	485,384.44	1.27%	0.50%	0.01%	14.68%	0.19%
CarMax Inc	KMX	154.92	83.97	13,009.00	0.03%			17.91%	0.01%
Intercontinental Exchange Inc	ICE	574.18	160.96	92,419.45	0.24%	1.12%	0.00%	11.26%	0.03%
Smurfit WestRock PLC	SW	520.16	55.02	28,618.99		2.20%		-1.71%	
Fidelity National Information Services Inc	FIS	538.35	85.30	45,921.63		1.69%		22.90%	
Chipotle Mexican Grill Inc	CMG	1,362.59	61.52	83,826.72				22.88%	
Wynn Resorts Ltd	WYNN	109.81	94.38	10,364.34		1.06%		-13.11%	
Live Nation Entertainment Inc	LYV	232.35	138.25	32,122.90				32.27%	
Assurant Inc	AIZ	51.29	227.10	11,647.36		1.41%			
NRG Energy Inc	NRG	202.57	101.61	20,582.77	0.05%	1.60%	0.00%	9.40%	0.01%
Regions Financial Corp	RF	908.86	27.01	24,548.41	0.06%	3.70%	0.00%	5.52%	0.00%
Monster Beverage Corp	MNST	972.52	55.13	53,615.01	0.14%			9.94%	0.01%
Mosaic Co/The	MOS	317.65	26.46	8,404.89		3.17%		-22.38%	
Baker Hughes Co	BKR	989.53	43.95	43,489.66		1.91%		25.86%	
Expedia Group Inc	EXPE	122.82	184.62	22,675.59				22.64%	
CF Industries Holdings Inc	CF	174.02	89.66	15,602.63		2.23%		-6.90%	
Leidos Holdings Inc	LDOS	133.43	165.40	22,069.84	0.06%	0.97%	0.00%	15.41%	0.01%
APA Corp	APA	369.95	22.65	8,379.31		4.42%		-10.77%	
Alphabet Inc	GOOG	5,534.00	170.49	943,491.66	2.46%	0.47%	0.01%	16.07%	0.40%
First Solar Inc	FSLR	107.06	199.27	21,333.39				41.38%	
Discover Financial Services	DFS	251.07	182.43	45,802.98	0.12%	1.53%	0.00%	11.74%	0.01%
Visa Inc	V	1,728.11	315.08	544,491.33	1.42%	0.75%	0.01%	12.50%	0.18%
Mid-America Apartment Communities Inc	MAA	116.88	164.16	19,187.07	0.05%	3.58%	0.00%	0.79%	0.00%
Xylem Inc/NY	XYL	242.94	126.75	30,793.24		1.14%			
Marathon Petroleum Corp	MPC	321.39	156.15	50,184.88		2.33%		-13.05%	
Advanced Micro Devices Inc	AMD	1,622.81	137.18	222,608.60				41.66%	
Tractor Supply Co	TSCO	106.84	283.67	30,307.02	0.08%	1.55%	0.00%	6.20%	0.00%
ResMed Inc	RMD	146.80	249.02	36,555.08	0.10%	0.85%	0.00%	12.61%	0.01%
Mettler-Toledo International Inc	MTD	21.10	1,251.20	26,403.66	0.07%			8.25%	0.01%
Jacobs Solutions Inc	J	123.97	141.23	17,507.84		0.82%			
Copart Inc	CPRT	963.53	63.39	61,078.07					
VICI Properties Inc	VICI	1,043.14	32.61	34,016.70	0.09%	5.31%	0.00%	2.72%	0.00%
Fortinet Inc	FTNT	766.45	95.05	72,851.33	0.19%			17.59%	0.03%
Albemarle Corp	ALB	117.54	107.70	12,659.09		1.50%		23.74%	
Moderna Inc	MRNA	384.82	43.06	16,570.25	0.04%			17.67%	0.01%
Essex Property Trust Inc	ESS	64.27	310.46	19,952.48	0.05%	3.16%	0.00%	2.91%	0.00%
CoStar Group Inc	CSGP	409.96	81.34	33,346.11					
Realty Income Corp	O	875.21	57.63	50,435.35	0.13%	5.49%	0.01%	3.78%	0.00%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Westinghouse Air Brake Technologies Corp	WAB	171.89	200.62	34,484.50	0.09%	0.40%	0.00%	18.16%	0.02%
Pool Corp	POOL	38.06	377.09	14,350.36	0.04%	1.27%	0.00%	0.20%	0.00%
Western Digital Corp	WDC	345.71	72.99	25,233.26				-10.00%	
PepsiCo Inc	PEP	1,371.99	163.45	224,251.61	0.59%	3.32%	0.02%	6.26%	0.04%
TE Connectivity PLC	TEL	299.16	151.12	45,209.38	0.12%	1.72%	0.00%	4.55%	0.01%
Diamondback Energy Inc	FANG	291.99	177.59	51,854.36		2.03%			
Palo Alto Networks Inc	PANW	328.10	387.82	127,243.74	0.33%			13.41%	0.04%
ServiceNow Inc	NOW	206.00	1,049.44	216,184.64				25.00%	
Church & Dwight Co Inc	CHD	245.00	110.13	26,981.58	0.07%	1.03%	0.00%	7.39%	0.01%
Federal Realty Investment Trust	FRT	84.96	116.65	9,911.07	0.03%	3.77%	0.00%	4.26%	0.00%
Amentum Holdings Inc	AMTM	243.29	24.35	5,924.20					
MGM Resorts International	MGM	297.74	38.34	11,415.37	0.03%			5.61%	0.00%
American Electric Power Co Inc	AEP	532.57	99.86	53,181.97	0.14%	3.73%	0.01%	6.40%	0.01%
Invitation Homes Inc	INVH	612.61	34.25	20,981.74	0.05%	3.27%	0.00%	3.63%	0.00%
PTC Inc	PTC	120.13	200.06	24,033.02	0.06%			16.59%	0.01%
JB Hunt Transport Services Inc	JBHT	100.83	189.11	19,067.95	0.05%	0.91%	0.00%	11.01%	0.01%
Lam Research Corp	LRCX	1,286.69	73.88	95,060.29	0.25%	1.25%	0.00%	15.78%	0.04%
Mohawk Industries Inc	MHK	63.12	138.83	8,763.12	0.02%			2.71%	0.00%
Pentair PLC	PNR	165.23	108.99	18,008.54	0.05%	0.84%	0.00%	12.71%	0.01%
GE HealthCare Technologies Inc	GEHC	456.87	83.22	38,020.97	0.10%	0.17%	0.00%	10.24%	0.01%
Vertex Pharmaceuticals Inc	VRTX	257.53	468.13	120,557.19	0.31%			12.20%	0.04%
Amcor PLC	AMCR	1,445.34	10.64	15,378.45	0.04%	4.79%	0.00%	7.52%	0.00%
Meta Platforms Inc	META	2,180.00	574.32	1,252,018.10		0.35%		21.60%	
T-Mobile US Inc	TMUS	1,160.49	246.94	286,570.57	0.75%	1.43%	0.01%	5.00%	0.04%
United Rentals Inc	URI	65.62	866.00	56,828.98	0.15%	0.75%	0.00%	7.62%	0.01%
Honeywell International Inc	HON	650.25	232.93	151,462.12	0.40%	1.94%	0.01%	7.58%	0.03%
Alexandria Real Estate Equities Inc	ARE	174.76	110.23	19,264.04	0.05%	4.72%	0.00%	2.82%	0.00%
Delta Air Lines Inc	DAL	645.28	63.82	41,181.85	0.11%	0.94%	0.00%	8.76%	0.01%
Seagate Technology Holdings PLC	STX	211.53	101.33	21,434.29		2.84%		-11.00%	
United Airlines Holdings Inc	UAL	328.80	96.83	31,838.00	0.08%			9.00%	0.01%
News Corp	NWS	190.00	32.09	6,097.26		0.62%			
Centene Corp	CNC	504.87	60.00	30,291.90	0.08%			6.35%	0.01%
Martin Marietta Materials Inc	MLM	61.12	599.21	36,622.55	0.10%	0.53%	0.00%	8.39%	0.01%
Teradyne Inc	TER	162.86	110.00	17,914.76	0.05%	0.44%	0.00%	14.60%	0.01%
PayPal Holdings Inc	PYPL	1,002.54	86.77	86,990.29	0.23%			14.76%	0.03%
Tesla Inc	TSLA	3,210.06	345.16	1,107,984.19	2.89%			1.00%	0.03%
Blackrock Inc	BLK	148.13	1,022.80	151,505.81	0.40%	1.99%	0.01%	12.51%	0.05%
Arch Capital Group Ltd	ACGL	376.24	100.72	37,895.08	0.10%			4.00%	0.00%
KKR & Co Inc	KKR	888.23	162.87	144,665.84		0.43%		29.00%	
Dow Inc	DOW	700.09	44.21	30,951.05		6.33%		-4.83%	
Everest Group Ltd	EG	42.98	387.56	16,656.78	0.04%	2.06%	0.00%	0.81%	0.00%
Teledyne Technologies Inc	TDY	46.60	485.26	22,614.24	0.06%			7.41%	0.00%
GE Vernova Inc	GEV	275.65	334.12	92,101.17				81.12%	
News Corp	NWSA	378.91	29.35	11,120.92		0.68%			
Exelon Corp	EXC	1,004.83	39.56	39,751.22	0.10%	3.84%	0.00%	5.48%	0.01%
Global Payments Inc	GPN	254.49	118.96	30,274.71	0.08%	0.84%	0.00%	9.02%	0.01%
Crown Castle Inc	CCI	434.60	106.25	46,176.06	0.12%	5.89%	0.01%	2.12%	0.00%
Aptiv PLC	APTV	235.04	55.53	13,051.53	0.03%			13.28%	0.00%
Align Technology Inc	ALGN	74.65	232.77	17,376.99	0.05%			5.19%	0.00%
Kenvue Inc	KVUE	1,917.26	24.08	46,167.56	0.12%	3.41%	0.00%	13.58%	0.02%
Targa Resources Corp	TRGP	218.06	204.30	44,550.35		1.47%		27.23%	
Bunge Global SA	BG	139.63	89.74	12,530.14		3.03%		-8.88%	
Deckers Outdoor Corp	DECK	151.92	195.96	29,770.63	0.08%			10.50%	0.01%
LKQ Corp	LKQ	259.96	39.29	10,213.83		3.05%			
Zoetis Inc	ZTS	451.17	175.25	79,066.67	0.21%	0.99%	0.00%	9.58%	0.02%
Digital Realty Trust Inc	DLR	331.71	195.69	64,912.84	0.17%	2.49%	0.00%	4.12%	0.01%
Equinix Inc	EQIX	96.49	981.48	94,701.23	0.25%	1.74%	0.00%	16.07%	0.04%
Las Vegas Sands Corp	LVS	725.03	53.06	38,469.89		1.51%			
Molina Healthcare Inc	MOH	57.20	297.90	17,039.88	0.04%			11.73%	0.01%

Notes:
[1] Equals sum of Col. [9]
[2] Equals sum of Col. [11]
[3] Equals ([1] x (1 + (0.5 x [2]))) + [2]
[4] Source: Bloomberg Professional as of November 29, 2024
[5] Source: Bloomberg Professional as of November 29, 2024
[6] Equals [4] x [5]
[7] Equals weight in S&P 500 based on market capitalization [6] if Growth Rate >0% and ≤20%
[8] Source: Bloomberg Professional, as of November 29, 2024
[9] Equals [7] x [8]
[10] Source: Bloomberg Professional, as of November 29, 2024
[11] Equals [7] x [10]

BOND YIELD PLUS RISK PREMIUM

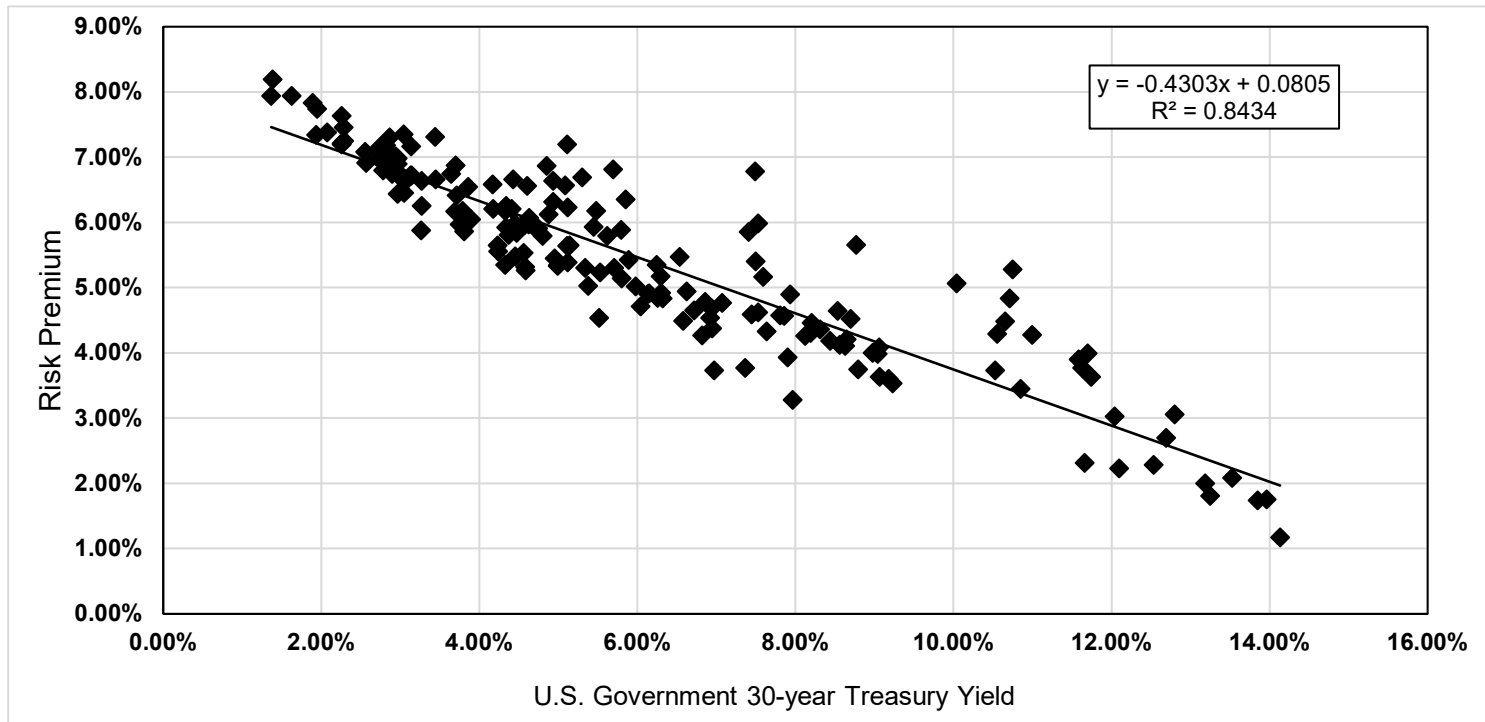
Quarter	[1] Average Authorized VI Electric ROE	[2] U.S. Govt. 30-year Treasury	[3] Risk Premium
1980.1	13.97%	11.66%	2.31%
1980.2	14.25%	10.52%	3.73%
1980.3	14.30%	10.85%	3.45%
1980.4	14.32%	12.10%	2.23%
1981.1	14.82%	12.53%	2.28%
1981.2	15.05%	13.24%	1.81%
1981.3	15.31%	14.13%	1.17%
1981.4	15.59%	13.85%	1.74%
1982.1	15.71%	13.96%	1.75%
1982.2	15.60%	13.52%	2.08%
1982.3	15.85%	12.79%	3.06%
1982.4	16.03%	10.75%	5.28%
1983.1	15.54%	10.71%	4.83%
1983.2	15.13%	10.65%	4.48%
1983.3	15.39%	11.62%	3.77%
1983.4	15.37%	11.74%	3.63%
1984.1	15.06%	12.04%	3.02%
1984.2	15.18%	13.18%	2.00%
1984.3	15.38%	12.69%	2.69%
1984.4	15.69%	11.70%	3.99%
1985.1	15.48%	11.58%	3.90%
1985.2	15.27%	11.00%	4.27%
1985.3	14.84%	10.55%	4.29%
1985.4	15.11%	10.04%	5.07%
1986.1	14.42%	8.77%	5.65%
1986.2	14.27%	7.49%	6.78%
1986.3	13.26%	7.40%	5.86%
1986.4	13.52%	7.53%	5.99%
1987.1	12.90%	7.49%	5.40%
1987.2	13.17%	8.53%	4.64%
1987.3	13.14%	9.06%	4.08%
1987.4	12.76%	9.23%	3.53%
1988.1	12.74%	8.63%	4.11%
1988.2	12.70%	9.06%	3.63%
1988.3	12.78%	9.18%	3.60%
1988.4	12.97%	8.97%	4.00%
1989.1	13.02%	9.04%	3.99%
1989.2	13.22%	8.70%	4.52%
1989.3	12.38%	8.12%	4.26%
1989.4	12.83%	7.93%	4.90%
1990.1	12.62%	8.44%	4.19%
1990.2	12.85%	8.65%	4.20%
1990.3	12.54%	8.79%	3.75%
1990.4	12.68%	8.56%	4.12%
1991.1	12.66%	8.20%	4.46%
1991.2	12.67%	8.31%	4.36%
1991.3	12.49%	8.19%	4.30%
1991.4	12.42%	7.85%	4.57%
1992.1	12.38%	7.81%	4.58%
1992.2	11.83%	7.90%	3.93%
1992.3	12.03%	7.45%	4.59%
1992.4	12.14%	7.52%	4.62%
1993.1	11.84%	7.07%	4.76%
1993.2	11.64%	6.86%	4.78%
1993.3	11.15%	6.32%	4.84%
1993.4	11.04%	6.14%	4.91%
1994.1	11.07%	6.58%	4.49%
1994.2	11.13%	7.36%	3.77%
1994.3	12.75%	7.59%	5.16%
1994.4	11.24%	7.96%	3.28%
1995.1	11.96%	7.63%	4.33%
1995.2	11.32%	6.94%	4.37%
1995.3	11.37%	6.72%	4.65%
1995.4	11.58%	6.24%	5.35%
1996.1	11.46%	6.29%	5.17%
1996.2	11.46%	6.92%	4.54%
1996.3	10.70%	6.97%	3.73%

BOND YIELD PLUS RISK PREMIUM

Quarter	[1] Average Authorized VI Electric ROE	[2] U.S. Govt. 30-year Treasury	[3] Risk Premium
1996.4	11.56%	6.62%	4.94%
1997.1	11.08%	6.82%	4.26%
1997.2	11.62%	6.94%	4.68%
1997.3	12.00%	6.53%	5.47%
1997.4	11.06%	6.15%	4.91%
1998.1	11.31%	5.88%	5.43%
1998.2	12.20%	5.85%	6.35%
1998.3	11.65%	5.48%	6.17%
1998.4	12.30%	5.11%	7.19%
1999.1	10.40%	5.37%	5.03%
1999.2	10.94%	5.80%	5.14%
1999.3	10.75%	6.04%	4.71%
1999.4	11.10%	6.26%	4.84%
2000.1	11.21%	6.30%	4.92%
2000.2	11.00%	5.98%	5.02%
2000.3	11.68%	5.79%	5.89%
2000.4	12.50%	5.69%	6.81%
2001.1	11.38%	5.45%	5.93%
2001.2	11.00%	5.70%	5.30%
2001.3	10.76%	5.53%	5.23%
2001.4	11.99%	5.30%	6.69%
2002.1	10.05%	5.52%	4.53%
2002.2	11.41%	5.62%	5.79%
2002.3	11.65%	5.09%	6.56%
2002.4	11.57%	4.93%	6.63%
2003.1	11.72%	4.85%	6.87%
2003.2	11.16%	4.60%	6.56%
2003.3	10.50%	5.11%	5.39%
2003.4	11.34%	5.11%	6.23%
2004.1	11.00%	4.88%	6.12%
2004.2	10.64%	5.34%	5.30%
2004.3	10.75%	5.11%	5.64%
2004.4	11.24%	4.93%	6.31%
2005.1	10.63%	4.71%	5.92%
2005.2	10.31%	4.47%	5.84%
2005.3	11.08%	4.42%	6.66%
2005.4	10.63%	4.65%	5.98%
2006.1	10.70%	4.63%	6.07%
2006.2	10.79%	5.14%	5.64%
2006.3	10.35%	5.00%	5.35%
2006.4	10.65%	4.74%	5.91%
2007.1	10.59%	4.80%	5.79%
2007.2	10.33%	4.99%	5.34%
2007.3	10.40%	4.95%	5.45%
2007.4	10.65%	4.61%	6.04%
2008.1	10.62%	4.41%	6.21%
2008.2	10.54%	4.57%	5.96%
2008.3	10.43%	4.45%	5.98%
2008.4	10.39%	3.64%	6.74%
2009.1	10.75%	3.44%	7.31%
2009.2	10.75%	4.17%	6.58%
2009.3	10.50%	4.32%	6.18%
2009.4	10.59%	4.34%	6.25%
2010.1	10.59%	4.62%	5.97%
2010.2	10.18%	4.37%	5.81%
2010.3	10.40%	3.86%	6.55%
2010.4	10.38%	4.17%	6.20%
2011.1	10.09%	4.56%	5.53%
2011.2	10.26%	4.34%	5.92%
2011.3	10.57%	3.70%	6.88%
2011.4	10.39%	3.04%	7.35%
2012.1	10.30%	3.14%	7.17%
2012.2	9.95%	2.94%	7.01%
2012.3	9.90%	2.74%	7.16%
2012.4	10.16%	2.86%	7.30%
2013.1	9.85%	3.13%	6.72%

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
Quarter	Average Authorized VI Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
2013.2	9.86%	3.14%	6.72%
2013.3	10.12%	3.71%	6.41%
2013.4	9.97%	3.79%	6.18%
2014.1	9.86%	3.69%	6.16%
2014.2	10.10%	3.44%	6.66%
2014.3	9.90%	3.27%	6.63%
2014.4	9.94%	2.96%	6.98%
2015.1	9.64%	2.55%	7.08%
2015.2	9.83%	2.88%	6.94%
2015.3	9.40%	2.96%	6.44%
2015.4	9.86%	2.96%	6.90%
2016.1	9.70%	2.72%	6.98%
2016.2	9.48%	2.57%	6.91%
2016.3	9.74%	2.28%	7.46%
2016.4	9.83%	2.83%	7.00%
2017.1	9.72%	3.05%	6.67%
2017.2	9.64%	2.90%	6.75%
2017.3	10.00%	2.82%	7.18%
2017.4	9.91%	2.82%	7.09%
2018.1	9.69%	3.02%	6.66%
2018.2	9.75%	3.09%	6.66%
2018.3	9.69%	3.06%	6.63%
2018.4	9.52%	3.27%	6.25%
2019.1	9.72%	3.01%	6.70%
2019.2	9.58%	2.78%	6.79%
2019.3	9.53%	2.29%	7.25%
2019.4	9.89%	2.26%	7.63%
2020.1	9.72%	1.89%	7.83%
2020.2	9.58%	1.38%	8.19%
2020.3	9.30%	1.37%	7.93%
2020.4	9.56%	1.62%	7.94%
2021.1	9.45%	2.07%	7.38%
2021.2	9.47%	2.26%	7.21%
2021.3	9.27%	1.93%	7.34%
2021.4	9.69%	1.95%	7.74%
2022.1	9.45%	2.25%	7.20%
2022.2	9.50%	3.05%	6.45%
2022.3	9.14%	3.26%	5.88%
2022.4	9.94%	3.89%	6.04%
2023.1	9.72%	3.75%	5.97%
2023.2	9.67%	3.81%	5.86%
2023.3	9.79%	4.23%	5.55%
2023.4	9.85%	4.58%	5.27%
2024.1	9.67%	4.32%	5.35%
2024.2	9.90%	4.58%	5.32%
2024.3	9.88%	4.23%	5.65%
2024.4	9.93%	4.45%	5.48%
AVERAGE	10.41%	4.18%	6.23%
MEDIAN	10.34%	4.34%	6.22%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9183651
R Square	0.8433945
Adjusted R Square	0.8425147
Standard Error	0.0056652
Observations	180

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.03077	0.03077	958.61433	0.00000
Residual	178	0.00571	0.00003		
Total	179	0.03648			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0805	0.00	85.58	0.0000	0.0786	0.0823	0.0786	0.0823
U.S. Govt. 30-year Treasury	(0.4303)	0.01	(30.96)	0.0000	(0.4577)	(0.4029)	(0.4577)	(0.4029)

	[7]	[8]	[9]
	U.S. Govt. 30-year Treasury	Risk Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	4.52%	6.11%	10.62%
Blue Chip Near-Term Projected Forecast (Q1 2025 - Q1 2026) [5]	4.42%	6.15%	10.57%
Blue Chip Long-Term Projected Forecast (2026-2030) [6]	4.30%	6.20%	10.50%
AVERAGE			10.56%

Notes:
[1] Source: Regulatory Research Associates, rate cases through November 30, 2024
[2] Source: S&P Capital IQ Pro, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] − Column [2]
[4] Source: S&P Capital IQ Pro, 30-day average as of November 30, 2024
[5] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 2
[6] Source: Blue Chip Financial Forecasts, Vol. 43, No. 12, November 27, 2024, at 14
[7] See notes [4], [5] & [6]
[8] Equals 0.080488 + (-0.430293 x Column [7])
[9] Equals Column [7] + Column [8]

REGULATORY RISK ASSESSMENT

				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Decoupling / Revenue Stabilization				Capital Cost Recovery				
Proxy Group Company	**Operating Subsidiary**	**Jurisdiction**	**Service**	**Test Year**	**Revenue Decoupling**	**Formula-Based Rates**	**Straight Fixed-Variable Rate Design**	**Total**	**Traditional Generation**	**Renewables/Non-Traditional Generation**	**Transmission/ Delivery Infrastructure**	**Environmental Compliance**	**Total**
Alliant Energy Corporation	Interstate Power & Light Co.	Iowa	Electric	Fully Forecast	No	No	No	No	No	Yes	No	Yes	Yes
	Interstate Power & Light Co.	Iowa	Gas	Fully Forecast	No	No	No	No	No	No	No	No	No
	Wisconsin Power & Light Co.	Wisconsin	Electric	Fully Forecast	No	No	No	No	No	No	No	No	No
	Wisconsin Power & Light Co.	Wisconsin	Gas	Fully Forecast	No	No	No	No	No	No	No	No	No
Ameren Corporation	Ameren Illinois Co.	Illinois	Electric	Fully Forecast	Partial	Yes	No	Yes	No	Yes	No	Yes	Yes
	Ameren Illinois Co.	Illinois	Gas	Fully Forecast	Partial	No	No	Yes	No	No	Yes	Yes	Yes
	Union Electric Co.	Missouri	Electric	Historical	Partial	No	No	Yes	No	Yes	Yes	No	Yes
	Union Electric Co.	Missouri	Gas	Historical	Partial	No	No	Yes	No	No	Yes	No	Yes
American Electric Power Company, Inc.	Southwestern Electric Power Co.	Arkansas	Electric	Historical	Partial	Yes	No	Yes	Yes	No	No	Yes	Yes
	Indiana Michigan Power Co.	Indiana	Electric	Fully Forecast	Full	No	No	Yes	No	Yes	Yes	Yes	Yes
	Kentucky Power Co.	Kentucky	Electric	Historical	Partial	No	No	Yes	No	No	Yes	No	Yes
	Southwestern Electric Power Co.	Louisiana	Electric	Historical	Partial	Yes	No	Yes	No	No	No	No	No
	Indiana Michigan Power Co.	Michigan	Electric	Fully Forecast	Partial	No	No	Yes	No	Yes	No	No	Yes
	Ohio Power Co.	Ohio	Electric	Partially Forecast	Partial	No	No	Yes	No	Yes	Yes	No	Yes
	Public Service Co. of Oklahoma	Oklahoma	Electric	Historical	Partial	No	No	Yes	No	Yes	Yes	No	Yes
	Kingsport Power Co.	Tennessee	Electric	Historical	No	No	No	No	No	No	No	No	No
	AEP Texas Inc.	Texas	Electric	Historical	No	No	No	No	No	No	Yes	No	Yes
	Southwestern Electric Power Co.	Texas	Electric	Historical	No	No	No	No	No	No	Yes	No	Yes
	Appalachian Power Co.	Virginia	Electric	Historical	No	No	No	No	Yes	No	No	Yes	Yes
	Appalachian Power Co./Wheeling Power Co.	West Virginia	Electric	Historical	No	No	No	No	No	No	No	Yes	Yes
Avista Corporation	Alaska Electric Light & Power Co.	Alaska	Electric	Historical	No	No	No	No	No	No	No	No	No
	Avista Corp.	Idaho	Electric	Historical	Full	No	No	Yes	No	No	No	No	No
	Avista Corp.	Idaho	Gas	Historical	Full	No	No	Yes	No	No	No	No	No
	Avista Corp.	Oregon	Gas	Fully Forecast	Partial	No	No	Yes	No	No	No	No	No
	Avista Corp.	Washington	Electric	Historical	Full	No	No	Yes	No	No	No	No	No
	Avista Corp.	Washington	Gas	Historical	Full	No	No	Yes	No	No	No	No	No
CMS Energy	Consumers Energy Co.	Michigan	Electric	Fully Forecast	No	No	No	No	No	Yes	No	No	Yes
	Consumers Energy Co.	Michigan	Gas	Fully Forecast	Partial	No	No	Yes	No	No	No	No	No
DTE Energy Company	DTE Electric Co.	Michigan	Electric	Fully Forecast	No	No	No	No	No	Yes	No	No	Yes
	DTE Gas Co.	Michigan	Gas	Fully Forecast	Partial	No	No	Yes	No	No	Yes	No	Yes
Duke Energy Corporation	Duke Energy Florida LLC	Florida	Electric	Fully Forecast	No	No	No	No	Yes	Yes	No	Yes	Yes
	Duke Energy Indiana LLC	Indiana	Electric	Fully Forecast	Partial	No	No	Yes	No	Yes	Yes	Yes	Yes
	Duke Energy Kentucky Inc.	Kentucky	Electric	Fully Forecast	Partial	No	No	Yes	No	No	No	Yes	Yes
	Duke Energy Kentucky Inc.	Kentucky	Gas	Fully Forecast	Partial	No	No	Yes	No	No	Yes	No	Yes
	Duke Energy Carolinas LLC/Duke Energy Progress L	North Carolina	Electric	Historical	No	No	No	No	No	Yes	No	Yes	Yes
	Piedmont Natural Gas Co. Inc.	North Carolina	Gas	Historical	Full	No	No	Yes	No	No	Yes	No	Yes
	Duke Energy Ohio Inc.	Ohio	Electric	Partially Forecast	Partial	No	No	Yes	No	Yes	Yes	No	Yes
	Duke Energy Ohio Inc.	Ohio	Gas	Partially Forecast	No	No	Yes	Yes	No	No	Yes	Yes	Yes
	Duke Energy Carolinas LLC/Duke Energy Progress L	South Carolina	Electric	Historical	No	No	No	No	No	Yes	No	Yes	Yes
	Piedmont Natural Gas Co. Inc.	South Carolina	Gas	Historical	Partial	No	No	Yes	No	No	No	No	No
	Piedmont Natural Gas Co. Inc.	Tennessee	Gas	Historical	Partial	No	No	Yes	No	No	Yes	No	Yes
Entergy Corporation	Entergy Arkansas LLC	Arkansas	Electric	Fully Forecast	Partial	Yes	No	Yes	Yes	Yes	Yes	No	Yes
	Entergy New Orleans LLC	Louisiana-NOC	Electric	Partially Forecast	No	Yes	No	Yes	No	Yes	No	Yes	Yes
	Entergy New Orleans LLC	Louisiana-NOC	Gas	Partially Forecast	No	Yes	No	Yes	No	No	No	No	No
	Entergy Louisiana LLC	Louisiana	Electric	Historical	Partial	Yes	No	Yes	No	No	No	Yes	Yes
	Entergy Louisiana LLC	Louisiana	Gas	Historical	No	Yes	No	Yes	No	No	Yes	No	Yes
	Entergy Mississippi LLC	Mississippi	Electric	Fully Forecast	Partial	Yes	No	Yes	No	No	No	No	No
	Entergy Texas Inc.	Texas	Electric	Historical	No	No	No	No	Yes	No	Yes	No	Yes
IDACORP, Inc.	Idaho Power Co.	Idaho	Electric	Partially Forecast	Full	No	No	Yes	No	No	No	No	No
	Idaho Power Co.	Oregon	Electric	Partially Forecast	No	No	No	No	No	No	No	No	No
NextEra Energy, Inc.	Florida Power & Light Co.	Florida	Electric	Fully Forecast	No	No	No	No	Yes	Yes	No	Yes	Yes
	Pivotal Utility Holdings Inc.	Florida	Gas	Fully Forecast	No	No	No	No	No	No	Yes	Yes	Yes
	Lone Star Transmission LLC	Texas	Electric	Historical	No	No	No	No	No	No	Yes	No	Yes
NorthWestern Corporation	NorthWestern Corporation	Montana	Electric	Historical	No	No	No	No	No	No	No	No	No
	NorthWestern Corporation	Montana	Gas	Historical	No	No	No	No	No	No	No	No	No
	NorthWestern Corporation	Nebraska	Gas	Historical	No	No	No	No	No	No	No	No	No
	NorthWestern Corporation	South Dakota	Electric	Historical	No	No	No	No	No	No	No	No	No

REGULATORY RISK ASSESSMENT

				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Decoupling / Revenue Stabilization				Capital Cost Recovery				
Proxy Group Company	**Operating Subsidiary**	**Jurisdiction**	**Service**	**Test Year**	**Revenue Decoupling**	**Formula-Based Rates**	**Straight Fixed-Variable Rate Design**	**Total**	**Traditional Generation**	**Renewables/Non-Traditional Generation**	**Transmission/ Delivery Infrastructure**	**Environmental Compliance**	**Total**
	NorthWestern Corporation	South Dakota	Gas	Historical	No	No	No	No	No	No	No	No	No
OGE Energy Corporation	Oklahoma Gas & Electric	Arkansas	Electric	Historical	Partial	No	Yes	Yes	No	No	Yes	No	Yes
	Oklahoma Gas & Electric	Oklahoma	Electric	Historical	Partial	No	Yes	Yes	No	No	Yes	Yes	Yes
Pinnacle West Capital Corporation	Arizona Public Service Co.	Arizona	Electric	Historical	Partial	No	No	Yes	No	Yes	No	Yes	Yes
Portland General Electric Company	Portland General Electric Co.	Oregon	Electric	Fully Forecast	No	No	No	No	Yes	Yes	No	Yes	Yes
PPL Corporation	Kentucky Utilities Co.	Kentucky	Electric	Fully Forecast	Partial	No	No	Yes	No	No	No	Yes	Yes
	Louisville Gas & Electric Co.	Kentucky	Electric	Fully Forecast	Partial	No	No	Yes	No	No	No	Yes	Yes
	Louisville Gas & Electric Co.	Kentucky	Gas	Fully Forecast	Partial	No	No	Yes	No	No	Yes	No	Yes
	PPL Electric Utilities Corp.	Pennsylvania	Electric	Fully Forecast	No	No	No	No	No	No	Yes	No	Yes
	Narragansett Electric Co.	Rhode Island	Electric	Historical	Full	No	No	Yes	No	No	Yes	No	Yes
	Narragansett Electric Co.	Rhode Island	Gas	Historical	Full	No	No	Yes	No	No	Yes	Yes	Yes
	Kentucky Utilities Co.	Virginia	Electric	Historical	No	No	No	No	No	No	No	No	No
Southern Company	Alabama Power Co.	Alabama	Electric	Historical	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes
	Atlanta Gas Light Co.	Georgia	Electric	Fully Forecast	No	Yes	No	Yes	No	No	Yes	Yes	Yes
	Georgia Power Co.	Georgia	Gas	Fully Forecast	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes
	Northern Illinois Gas Co.	Illinois	Gas	Fully Forecast	Partial	No	No	Yes	No	No	Yes	Yes	Yes
	Mississippi Power Co.	Mississippi	Electric	Fully Forecast	Partial	Yes	No	Yes	No	No	No	Yes	Yes
	Chattanooga Gas Co.	Tennessee	Gas	Historical	Partial	Yes	No	Yes	No	No	No	No	No
	Virginia Natural Gas Inc.	Virginia	Gas	Partially Forecast	Partial	No	No	Yes	No	No	Yes	No	Yes
Xcel Energy Inc.	Public Service Co. of Colorado	Colorado	Electric	Historical	Partial	No	No	Yes	No	Yes	No	No	Yes
	Public Service Co. of Colorado	Colorado	Gas	Historical	Partial	No	No	Yes	No	No	Yes	No	Yes
	Northern States Power Co.-Minnesota	Minnesota	Electric	Fully Forecast	Partial	Yes	No	Yes	No	Yes	No	Yes	Yes
	Northern States Power Co.-Minnesota	Minnesota	Gas	Fully Forecast	No	No	No	No	No	No	Yes	No	Yes
	Southwestern Public Service Co.	New Mexico	Electric	Fully Forecast	No	No	No	No	No	Yes	No	No	Yes
	Northern States Power Co.-Minnesota	North Dakota	Electric	Fully Forecast	No	No	No	No	No	Yes	Yes	No	Yes
	Northern States Power Co.-Minnesota	North Dakota	Gas	Fully Forecast	No	No	Yes	Yes	No	No	No	No	No
	Northern States Power Co.-Minnesota	South Dakota	Electric	Historical	Partial	No	No	Yes	Yes	No	Yes	Yes	Yes
	Southwestern Public Service Co.	Texas	Electric	Historical	No	No	No	No	No	No	No	No	No
	Northern States Power Co.-Wisconsin	Wisconsin	Electric	Fully Forecast	No	No	No	No	No	No	No	No	No
	Northern States Power Co.-Wisconsin	Wisconsin	Gas	Fully Forecast	No	No	No	No	No	No	No	No	No
Proxy Group Average			Fully Forecast	37			Yes	53				Yes	59
			Partially Forecast	8			No	34				No	28
			Historical	42									
			% with ForecastTest Year:	51.7%			% with Form of Revenue Stabilization	60.9%				% with Form of Capital Cost Recovery	67.8%
EKC [11]		Kansas	Electric	Historical	Partial	No	No	Yes	No	Yes	No	Yes	Yes

Notes:
[1] Regulatory Research Associates, effective as of November 29, 2024.
[2] S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated July 18, 2022. Operating subsidiaries not covered in this report were excluded from this exhibit.
[3] Company Form 10-K, Company Tariffs, S&P Capital IQ Pro
[4] S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated July 18, 2022.
[5] Equals IF(AND([2]=No, [3]=No, [4]=No), No, Yes)
[6] - [9] S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated July 18, 2022.
[10] Equals IF(AND([6]=No, [7]=No, [8]=No, [9]=No), No, Yes)
[11] Company Provided Data.

COMPARISON OF
RRA JURISDICTIONAL RANKINGS

		[1]	[2]
		RRA	
	Operation State	Rank	Numeric Rank
Alliant Energy Corporation	Iowa	Above Average/3	3
	Wisconsin	Above Average/3	3
Ameren Corporation	Illinois	Average/3	6
	Missouri	Average/3	6
American Electric Power Company, Inc.	Arkansas	Average/1	4
	Indiana	Average/1	4
	Kentucky	Average/2	5
	Louisiana — PSC	Average/2	5
	Michigan	Average/1	4
	Ohio	Average/2	5
	Oklahoma	Average/3	6
	Tennessee	Above Average/3	3
	Texas — PUC	Average/3	6
	Virginia	Average/1	4
	West Virginia	Below Average/1	7
Avista Corporation	Alaska	Below Average/1	7
	Idaho	Average/2	5
	Oregon	Average/2	5
	Washington	Average/3	6
CMS Energy	Michigan	Average/1	4
DTE Energy Company	Michigan	Average/1	4
Duke Energy Corporation	Florida	Above Average/2	2
	Indiana	Average/1	4
	Kentucky	Average/2	5
	North Carolina	Above Average/3	3
	Ohio	Average/2	5
	South Carolina	Average/3	6
	Tennessee	Above Average/3	3
Entergy Corporation	Arkansas	Average/1	4
	Louisiana — NOCC	Average/3	6
	Louisiana — PSC	Average/2	5
	Mississippi	Average/1	4
	Texas — PUC	Average/3	6
IDACORP, Inc.	Idaho	Average/2	5
	Oregon	Average/2	5
NextEra Energy, Inc.	Florida	Above Average/2	2
	Texas — PUC	Average/3	6
NorthWestern Corporation	Montana	Average/3	6
	Nebraska	Average/1	4
	South Dakota	Average/2	5
OGE Energy Corp.	Arkansas	Average/1	4
	Oklahoma	Average/3	6
Pinnacle West Capital Corporation	Arizona	Below Average/2	8
Portland General Electric Company	Oregon	Average/2	5
PPL Corporation	Kentucky	Average/2	5
	Pennsylvania	Above Average/2	2
	Rhode Island	Average/2	5
	Virginia	Average/1	4
Southern Company	Alabama	Above Average/1	1
	Georgia	Above Average/2	2
	Illinois	Average/3	6
	Mississippi	Average/1	4
	Tennessee	Above Average/3	3
	Virginia	Average/1	4
Xcel Energy Inc.	Colorado	Average/1	4
	Minnesota	Average/2	5
	New Mexico	Below Average/1	7
	North Dakota	Average/1	4
	South Dakota	Average/2	5
	Texas — PUC	Average/3	6
	Wisconsin	Above Average/3	3
Proxy Group Average		**Average/1 - Average/2**	**4.61**
EKC	**Kansas**	**Average/3**	**6.00**

Notes
[1] State Regulatory Evaluations, Regulatory Research Associates, as of August 7, 2024.
[2] AA/1= 1, AA/2= 2, AA/3= 3, A/1= 4, A/2= 5, A/3=6, BA/1= 7, BA/2= 8, BA/3= 9

COMPARISON OF
S&P JURISDICTIONAL RANKINGS

		[1]	[2]
		S&P	
	Operation State	Rank	Numeric Rank
Alliant Energy Corporation	Iowa	Most credit supportive	1
	Wisconsin	Most credit supportive	1
Ameren Corporation	Illinois	Very credit supportive	3
	Missouri	Very credit supportive	3
American Electric Power Company, Inc.	Arkansas	Highly Credit Supportive	2
	Indiana	Highly Credit Supportive	2
	Kentucky	Most Credit Supportive	1
	Louisiana — PSC	Highly Credit Supportive	2
	Michigan	Most Credit Supportive	1
	Ohio	Very Credit Supportive	3
	Oklahoma	Very Credit Supportive	3
	Tennessee	Highly Credit Supportive	2
	Texas — PUC	Very Credit Supportive	3
	Virginia	Highly Credit Supportive	2
	West Virginia	Very Credit Supportive	3
Avista Corporation	Alaska	More Credit Supportive	4
	Idaho	Very Credit Supportive	3
	Oregon	More Credit Supportive	4
	Washington	Very Credit Supportive	3
CMS Energy	Michigan	Most Credit Supportive	1
DTE Energy Company	Michigan	Most Credit Supportive	1
Duke Energy Corporation	Florida	Most credit supportive	1
	Indiana	Highly credit supportive	2
	Kentucky	Most credit supportive	1
	North Carolina	Highly credit supportive	2
	Ohio	Very credit supportive	3
	South Carolina	More credit supportive	4
	Tennessee	Highly credit supportive	2
Entergy Corporation	Arkansas	Highly credit supportive	2
	Louisiana — NOCC	More credit supportive	4
	Louisiana — PSC	Highly credit supportive	2
	Mississippi	Very credit supportive	3
	Texas — PUC	Very credit supportive	3
IDACORP, Inc.	Idaho	Very credit supportive	3
	Oregon	More credit supportive	4
NextEra Energy, Inc.	Florida	Most credit supportive	1
	Texas — PUC	Very credit supportive	3
NorthWestern Corporation	Montana	More credit supportive	4
	Nebraska	Very credit supportive	3
	South Dakota	Very credit supportive	3
OGE Energy Corp.	Arkansas	Highly credit supportive	2
	Oklahoma	Very credit supportive	3
Pinnacle West Capital Corporation	Arizona	More credit supportive	4
Portland General Electric Company	Oregon	More credit supportive	4
PPL Corporation	Kentucky	Most Credit Supportive	1
	Pennsylvania	Highly credit supportive	2
	Rhode Island	Very credit supportive	3
	Virginia	Highly Credit Supportive	2
Southern Company	Alabama	Most Credit Supportive	1
	Georgia	Highly Credit Supportive	2
	Illinois	Very Credit Supportive	3
	Mississippi	Very Credit Supportive	3
	Tennessee	Highly Credit Supportive	2
	Virginia	Highly Credit Supportive	2
Xcel Energy Inc.	Colorado	Very credit supportive	3
	Minnesota	Highly credit supportive	2
	New Mexico	Credit supportive	5
	North Dakota	Highly credit supportive	2
	South Dakota	Very credit supportive	3
	Texas — PUC	Very credit supportive	3
	Wisconsin	Most credit supportive	1
Proxy Group Average		**Very Credit Supportive to Highly Credit Supportive**	**2.48**
EKC	**Kansas**	**Highly Credit Supportive**	**2**

Notes

[1] S&P Global Ratings, "North American Utility Regulatory Jurisdictions Update: Ontario Remains Unchanged, Notable Developments Elsewhere," March 11, 2024.
[2] Most Credit Supp. = 1, Highly Credit Supp. = 2, Very Credit Supp. = 3, More Credit Supp. = 4, Credit Supp. = 5

CAPITAL STRUCTURE ANALYSIS

		Most Recent 8 Quarters (2022Q4 - 2024Q3)			
Proxy Group Company	Ticker	Common Equity Ratio	Long-Term Debt Ratio	Preferred Equity Ratio	Total Capitalization
Alliant Energy Corporation	LNT	51.99%	48.01%	0.00%	100.00%
Ameren Corporation	AEE	53.16%	46.34%	0.51%	100.00%
American Electric Power Company, Inc.	AEP	48.46%	51.54%	0.00%	100.00%
Avista Corporation	AVA	49.85%	50.15%	0.00%	100.00%
CMS Energy Corporation	CMS	49.05%	50.77%	0.17%	100.00%
DTE Energy Company	DTE	49.25%	50.75%	0.00%	100.00%
Duke Energy Corporation	DUK	52.56%	47.44%	0.00%	100.00%
Entergy Corporation	ETR	50.25%	49.66%	0.09%	100.00%
IDACORP, Inc.	IDA	50.80%	49.20%	0.00%	100.00%
NextEra Energy, Inc.	NEE	60.29%	39.71%	0.00%	100.00%
NorthWestern Corporation	NWE	50.45%	49.55%	0.00%	100.00%
OGE Energy Corporation	OGE	53.63%	46.37%	0.00%	100.00%
Pinnacle West Capital Corporation	PNW	50.19%	49.81%	0.00%	100.00%
Portland General Electric Company	POR	45.33%	54.67%	0.00%	100.00%
PPL Corporation	PPL	56.33%	43.67%	0.00%	100.00%
Southern Company	SO	55.52%	44.48%	0.00%	100.00%
Xcel Energy Inc.	XEL	54.29%	45.71%	0.00%	100.00%
Average		51.85%	48.11%	0.05%	
Median		50.80%	49.20%	0.00%	
Maximum		60.29%	54.67%	0.51%	
Minimum		45.33%	39.71%	0.00%	

Notes:
[1] Ratios are weighted by actual common capital, preferred capital, and long-term debt of the operating subsidiaries.
[2] Electric and Natural Gas operating subsidiaries with data listed as N/A from S&P Capital IQ have been excluded from the analysis.

EVERGY KANSAS CENTRAL ELECTRIC UTILITY LONG-TERM DEBT SCHEDULE
AS OF DECEMBER 31, 2024

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Description	Date of Settlement	Date of Maturity	Interest Rate	Principal Outstanding	Moody's A Utility Bond Index on Settlement date	Moody's Baa Utility Bond index on Settlement date	Weighted Cost of Debt	Weighted Cost at Moody's A Utility Bond Index	Weighted Cost at Moody's Baa Utility Bond Index
Tax-Exempt Bonds:									
KGE 1994 La Cygne PCB Variable Due 2027	04/28/94	04/15/27	3.19%	21,940,000	8.22%	8.48%	0.02%	0.04%	0.04%
WR 1994 St. Marys PCB Variable Due 2032	04/28/94	04/15/32	3.19%	45,000,000	8.22%	8.48%	0.03%	0.08%	0.08%
WR 1994 Wamego PCB Variable Due 2032	04/28/94	04/15/32	3.19%	30,500,000	8.22%	8.48%	0.02%	0.05%	0.06%
KGE 1994 St. Marys PCB Variable Due 2032	04/28/94	04/15/32	3.19%	14,500,000	8.22%	8.48%	0.01%	0.03%	0.03%
KGE 1994 Wamego PCB Variable Due 2032	04/28/94	04/15/32	3.19%	10,000,000	8.22%	8.48%	0.01%	0.02%	0.02%
KGE 2016 PCB 2.50% Due 2031	06/01/16	06/01/31	2.50%	50,000,000	3.91%	4.61%	0.03%	0.04%	0.05%
Mortgage Bonds:									
WR 2015 FMB 3.25% Due 2025	11/13/15	12/01/25	3.25%	250,000,000	4.43%	5.59%	0.18%	0.24%	0.30%
WR 2016 FMB 2.55% Due 2026	06/20/16	07/01/26	2.55%	350,000,000	3.79%	4.47%	0.19%	0.29%	0.34%
WR 2017 FMB 3.10% Due 2027	03/06/17	04/01/27	3.10%	300,000,000	4.23%	4.61%	0.20%	0.27%	0.30%
KGE 2007 FMB 6.53% Due 2037	10/15/07	12/15/37	6.53%	175,000,000	6.23%	6.46%	0.25%	0.24%	0.24%
KGE 2008 FMB 6.64% Due 2038	05/15/08	05/15/38	6.64%	100,000,000	6.26%	6.77%	0.14%	0.14%	0.15%
WR 2012 FMB 4.125% Due 2042	03/01/12	03/01/42	4.13%	550,000,000	4.36%	5.05%	0.49%	0.52%	0.60%
WR 2013 FMB 4.10% Due 2043	03/28/13	04/01/43	4.10%	430,000,000	4.17%	4.68%	0.38%	0.39%	0.43%
WR 2013 FMB 4.625% Due 2043	08/19/13	09/01/43	4.63%	250,000,000	4.87%	5.43%	0.25%	0.26%	0.29%
KGE 2014 FMB 4.30% Due 2044	07/02/14	07/15/44	4.30%	250,000,000	4.35%	4.76%	0.23%	0.24%	0.26%
WR 2015 FMB 4.25% Due 2045	11/13/15	12/01/45	4.25%	300,000,000	4.43%	5.59%	0.28%	0.29%	0.36%
WR 2019 FMB 3.25% Due 2049	08/19/19	09/01/49	3.25%	300,000,000	3.31%	3.65%	0.21%	0.21%	0.24%
WR 2020 FMB 3.45% Due 2050	04/09/20	04/15/50	3.45%	500,000,000	3.47%	4.08%	0.37%	0.37%	0.44%
WR 2023 FMB 5.70% Due 2053	03/14/23	03/15/53	5.70%	400,000,000	5.41%	5.70%	0.49%	0.47%	0.49%
WR 2023 FMB 5.90% Due 2033	11/15/23	11/15/33	5.90%	300,000,000	6.09%	6.33%	0.38%	0.39%	0.41%
Total				**4,626,940,000**			**4.16%**	**4.57%**	**5.13%**

Notes:
[1] - [4] Company Provided Data
[5] - [6] Bloomberg Professional
[7] Equals [3] x ([4] / sum ([4]))
[8] Equals [5] x ([4] / sum ([4]))
[9] Equals [6] x ([4] / sum ([4]))

Ann E. Bulkley

PRINCIPAL

Boston 508.981.0866 Ann.Bulkley@brattle.com

With more than 25 years of experience in the energy industry, Ms. Bulkley specializes in regulatory economics for the electric and natural gas and water utility sectors, including valuation of regulated and unregulated utility assets, cost of capital, and capital structure issues.

Ms. Bulkley has extensive state and federal regulatory experience, and she has provided expert testimony on the cost of capital in nearly 100 regulatory proceedings before 32 state regulatory commissions and the Federal Energy Regulatory Commission (FERC).

In addition to her regulatory experience, Ms. Bulkley has provided valuation and appraisal services for a variety of purposes, including the sale or acquisition of utility assets, regulated ratemaking, ad valorem tax disputes, and other litigation purposes. In addition, she has experience in the areas of contract and business unit valuation, strategic alliances, market restructuring, and regulatory and litigation support.

Ms. Bulkley is a Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

Prior to joining Brattle, Ms. Bulkley was a Senior Vice President at an economic consultancy and held senior positions at several other consulting firms.

AREAS OF EXPERTISE

- Regulatory Economics, Finance & Rates
- Regulatory Investigations & Enforcement
- Tax Controversy & Transfer Pricing
- Electricity Litigation & Regulatory Disputes
- M&A Litigation

EDUCATION

- **Boston University**
  MA in Economics
- **Simmons College**
  BA in Economics and Finance

PROFESSIONAL EXPERIENCE

- **The Brattle Group (2022–Present)**
  Principal
- **Concentric Energy Advisors, Inc. (2002–2021)**
  Senior Vice President
  Vice President
  Assistant Vice President
  Project Manager
- **Navigant Consulting, Inc. (1997–2002)**
  Project Manager
- **Reed Consulting Group (1995-1997)**
  Consultant- Project Manager
- **Cahners Publishing Company (1995)**
  Economist

SELECTED CONSULTING EXPERIENCE & EXPERT TESTIMONY

REGULATORY ANALYSIS AND RATEMAKING

Have provided a range of advisory services relating to regulatory policy analysis and many aspects of utility ratemaking, with specific services including:

- Cost of capital and return on equity testimony, cost of service and rate design analysis and testimony, development of ratemaking strategies
- Development of merchant function exit strategies

- Analysis and program development to address residual energy supply and/or provider of last resort obligations
- Stranded costs assessment and recovery
  Performance-based ratemaking analysis and design
- Many aspects of traditional utility ratemaking (e.g., rate design, rate base valuation)

COST OF CAPITAL

Have provided expert testimony on the cost of capital and capital structure in nearly 100 regulatory proceedings before state and federal regulatory commissions in the United States.

RATEMAKING

Have assisted several clients with analysis to support investor-owned and municipal utility clients in the preparation of rate cases. Sample engagements include:

- Assisted several investor-owned and municipal clients on cost allocation and rate design issues including the development of expert testimony supporting recommended rate alternatives.
- Worked with Canadian regulatory staff to establish filing requirements for a rate review of a newly regulated electric utility. Along with analyzing and evaluating rate application, attended hearings and conducted investigation of rate application for regulatory staff and prepared, supported, and defended recommendations for revenue requirements and rates for the company. Additionally, developed rates for gas utility for transportation program and ancillary services.

VALUATION

Have provided valuation services to utility clients, unregulated generators, and private equity clients for a variety of purposes, including ratemaking, fair value, ad valorem tax, litigation and damages, and acquisition. Appraisal practices are consistent with the national standards established by the Uniform Standards of Professional Appraisal Practice.

Representative projects/clients have included:

- Prepared appraisals of electric utility transmission and distribution assets for ad valorem tax purposes.
- Prepared appraisals of hydroelectric generating facilities for ad valorem tax purposes.
- Conducted appraisals of fossil fuel generating facilities for ad valorem tax purposes.
- Conducted appraisals of generating assets for the purposes of unwinding sale-leaseback agreements.
- For a confidential utility client, prepared valuation of fossil and nuclear generation assets for financing purposes for regulated utility client.

- Conducted a strategic review of the acquisition of nuclear generation assets. Review included the evaluation of the operating costs of the facilities and the long-term liabilities associated with the assets including the decommissioning of the assets.
- Prepared a valuation of a portfolio of generation assets for a large energy utility to be used for strategic planning purposes. Valuation approach included an income approach, a real options analysis, and a risk analysis.
- Assisted clients in the restructuring of NUG contracts through the valuation of the underlying assets. Performed analysis to determine the option value of a plant in a competitively priced electricity market following the settlement of the NUG contract.
- Prepared market valuations of several purchase power contracts for large electric utilities in the sale of purchase power contracts. Assignment included an assessment of the regional power market, analysis of the underlying purchase power contracts, and a traditional discounted cash flow valuation approach, as well as a risk analysis. Analyzed bids from potential acquirers using income and risk analysis approached. Prepared an assessment of the credit issues and value at risk for the selling utility.
- Prepared appraisal of a portfolio of generating facilities for a large electric utility to be used for financing purposes.
- Conducted a valuation of regulated utility assets for the fair value rate base estimate used in electric rate proceedings in Indiana.
- Prepared an appraisal of a fleet of fossil generating assets for a large electric utility to establish the value of assets transferred from utility property.
- Conducted due diligence on an electric transmission and distribution system as part of a buy-side due diligence team.
- Provided analytical support and prepared testimony regarding the valuation of electric distribution system assets in five communities in a condemnation proceeding.
- Prepared feasibility reports analyzing the expected net benefits resulting from municipal ownership of investor-owned utility operations.
- Prepared independent analyses of proposal for the proposed government condemnation of the investor-owned utilities in Maine and the formation of a public power district.
- Valued purchase power agreements in the transfer of assets to a deregulated electric market.

STRATEGIC AND FINANCIAL ADVISORY SERVICES

Have assisted several clients across North America with analytically-based strategic planning, due diligence, and financial advisory services.

Representative projects include:

- Preparation of feasibility studies for bond issuances for municipal and district steam clients.
- Assisted in the development of a generation strategy for an electric utility. Analyzed various NERC regions to identify potential market entry points. Evaluated potential competitors and alliance partners. Assisted in the development of gas and electric price forecasts. Developed a framework for the implementation of a risk management program.
- Assisted clients in identifying potential joint venture opportunities and alliance partners. Contacted interviewed and evaluated potential alliance candidates based on company-established criteria for several LDCs and marketing companies. Worked with several LDCs and unregulated marketing companies to establish alliances to enter into the retail energy market. Prepared testimony in support of several merger cases and participated in the regulatory process to obtain approval for these mergers.
- Assisted clients in several buy-side due diligence efforts, providing regulatory insight and developing valuation recommendations for acquisitions of both electric and gas properties.

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BULKLEY TESTIMONY LISTING

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Commission				
Southwest Gas Corporation	02/24	Southwest Gas Corporation	Docket No. G-01551A-23-0341	Return on Equity
UNS Electric	11/22	UNS Electric	Docket No. E-04204A-15-0251	Return on Equity
Tucson Electric Power Company	6/22	Tucson Electric Power Company	Docket No. G-01933A-22-0107	Return on Equity
Southwest Gas Corporation	12/21	Southwest Gas Corporation	Docket No. G-01551A-21-0368	Return on Equity
Arizona Public Service Company	10/19	Arizona Public Service Company	Docket No. E-01345A-19-0236	Return on Equity
Tucson Electric Power Company	04/19	Tucson Electric Power Company	Docket No. E-01933A-19-0028	Return on Equity
Tucson Electric Power Company	11/15	Tucson Electric Power Company	Docket No. E-01933A-15-0322	Return on Equity
UNS Electric	05/15	UNS Electric	Docket No. E-04204A-15-0142	Return on Equity
UNS Electric	12/12	UNS Electric	Docket No. E-04204A-12-0504	Return on Equity
Arkansas Public Service Commission				
Oklahoma Gas and Electric Co	10/21	Oklahoma Gas and Electric Co	Docket No. D-18-046-FR	Return on Equity
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
California Public Utilities Commission				
PacifiCorp, d/b/a Pacific Power	5/22	PacifiCorp, d/b/a Pacific Power	Docket No. A-22-05-006	Return on Equity
San Jose Water Company	05/21	San Jose Water Company	A2105004	Return on Equity
Colorado Public Utilities Commission				

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Public Service Company of Colorado	01/24	Public Service Company of Colorado	Docket No. 24AL-___G	Return on Equity
Public Service Company of Colorado	11/22	Public Service Company of Colorado	Docket No. 22AL-0530E	Return on Equity
Public Service Company of Colorado	01/22	Public Service Company of Colorado	Docket No. 22AL-0046G	Return on Equity
Public Service Company of Colorado	07/21	Public Service Company of Colorado	21AL-0317E	Return on Equity
Public Service Company of Colorado	02/20	Public Service Company of Colorado	20AL-0049G	Return on Equity
Public Service Company of Colorado	05/19	Public Service Company of Colorado	19AL-0268E	Return on Equity
Public Service Company of Colorado	01/19	Public Service Company of Colorado	19AL-0063ST	Return on Equity
Atmos Energy Corporation	05/15	Atmos Energy Corporation	Docket No. 15AL-0299G	Return on Equity
Atmos Energy Corporation	04/14	Atmos Energy Corporation	Docket No. 14AL-0300G	Return on Equity
Atmos Energy Corporation	05/13	Atmos Energy Corporation	Docket No. 13AL-0496G	Return on Equity
Connecticut Public Utilities Regulatory Authority				
The Southern Connecticut Gas Company	11/23	The Southern Connecticut Gas Company	Docket No. 23-11-02	Return on Equity
Connecticut Natural Gas Corporation	11/23	Connecticut Natural Gas Corporation	Docket No. 23-11-02	Return on Equity
Connecticut Water Company	10/23	Connecticut Water Company	Docket No. 23-08-32	Return on Equity
United Illuminating	09/22	United Illuminating	Docket No. 22-08-08	Return on Equity
United Illuminating	05/21	United Illuminating	Docket No. 17-12-03RE11	Return on Equity
Connecticut Water Company	01/21	Connecticut Water Company	Docket No. 20-12-30	Return on Equity
Connecticut Natural Gas Corporation	06/18	Connecticut Natural Gas Corporation	Docket No. 18-05-16	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Yankee Gas Services Co. d/b/a Eversource Energy	06/18	Yankee Gas Services Co. d/b/a Eversource Energy	Docket No. 18-05-10	Return on Equity
The Southern Connecticut Gas Company	06/17	The Southern Connecticut Gas Company	Docket No. 17-05-42	Return on Equity
The United Illuminating Company	07/16	The United Illuminating Company	Docket No. 16-06-04	Return on Equity
Federal Energy Regulatory Commission				
Sea Robin Pipeline	12/22	Sea Robin Pipeline	Docket No. RP22-___	Return on Equity
Northern Natural Gas Company	07/22	Northern Natural Gas Company	Docket No. RP22-___	Return on Equity
Transwestern Pipeline Company, LLC	07/22	Transwestern Pipeline Company, LLC	Docket No. RP22-___	Return on Equity
Florida Gas Transmission	02/21	Florida Gas Transmission	Docket No. RP21-441	Return on Equity
TransCanyon	01/21	TransCanyon	Docket No. ER21-1065	Return on Equity
Duke Energy	12/20	Duke Energy	Docket No. EL21-9-000	Return on Equity
Wisconsin Electric Power Company	08/20	Wisconsin Electric Power Company	Docket No. EL20-57-000	Return on Equity
Panhandle Eastern Pipe Line Company, LP	10/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-78-000 RP19-78-001	Return on Equity
Panhandle Eastern Pipe Line Company, LP	08/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-1523	Return on Equity
Sea Robin Pipeline Company LLC	11/18	Sea Robin Pipeline Company LLC	Docket# RP19-352-000	Return on Equity
Tallgrass Interstate Gas Transmission	10/15	Tallgrass Interstate Gas Transmission	RP16-137	Return on Equity
Idaho Public Utilities Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/24	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-24-04	Return on Equity
PacifiCorp d/b/a Rocky Mountain Power	05/21	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-24-04	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Intermountain Gas Co	12/22	Intermountain Gas Co	C-INT-G-22-07	Return on Equity
PacifiCorp d/b/a Rocky Mountain Power	05/21	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-21-07	Return on Equity
Illinois Commerce Commission				
Illinois American Water	01/24	Illinois American Water	Docket No. 24-0097	Return on Equity
Peoples Gas Light & Coke Company	01/23	Peoples Gas Light & Coke Company	D-23-0069	Return on Equity
North Shore Gas Company	01/23	North Shore Gas Company	D-23-0068	Return on Equity
Illinois American Water	02/22	Illinois American Water	Docket No. 22-0210	Return on Equity
North Shore Gas Company	02/21	North Shore Gas Company	No. 20-0810	Return on Equity
Indiana Utility Regulatory Commission				
Ohio Valley Gas Corporation and Ohio Valley Gas, Inc.	02/24	Ohio Valley Gas Corporation and Ohio Valley Gas, Inc.	Cause No. 46011	Return on Equity
Southern Indiana Gas and Electric Company d/b/a CenterPoint Energy Indiana South	12/23	Southern Indiana Gas and Electric Company d/b/a CenterPoint Energy Indiana South	IURC Cause No. 45990	Return on Equity
Indiana Michigan Power Co.	08/23	Indiana Michigan Power Co.	IURC Cause No. 45933	Return on Equity
Indiana American Water Company	03/23	Indiana and Michigan American Water Company	IURC Cause No. 45870	Return on Equity
Indiana Michigan Power Co.	07/21	Indiana Michigan Power Co.	IURC Cause No. 45576	Return on Equity
Indiana Gas Company Inc.	12/20	Indiana Gas Company Inc.	IURC Cause No. 45468	Return on Equity
Southern Indiana Gas and Electric Company	10/20	Southern Indiana Gas and Electric Company	IURC Cause No. 45447	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Indiana and Michigan American Water Company	09/18	Indiana and Michigan American Water Company	IURC Cause No. 45142	Return on Equity
Indianapolis Power and Light Company	12/17	Indianapolis Power and Light Company	Cause No. 45029	Fair Value
Northern Indiana Public Service Company	09/17	Northern Indiana Public Service Company	Cause No. 44988	Fair Value
Indianapolis Power and Light Company	12/16	Indianapolis Power and Light Company	Cause No.44893	Fair Value
Northern Indiana Public Service Company	10/15	Northern Indiana Public Service Company	Cause No. 44688	Fair Value
Indianapolis Power and Light Company	09/15	Indianapolis Power and Light Company	Cause No. 44576 Cause No. 44602	Fair Value
Kokomo Gas and Fuel Company	09/10	Kokomo Gas and Fuel Company	Cause No. 43942	Fair Value
Northern Indiana Fuel and Light Company, Inc.	09/10	Northern Indiana Fuel and Light Company, Inc.	Cause No. 43943	Fair Value
Iowa Department of Commerce Utilities Board				
Iowa-American Water Company	04/24	Iowa-American Water Company	Docket No. RPU-2024-000_	Return on Equity
MidAmerican Energy Company	06/23	MidAmerican Energy Company	Docket No. RPU-2023-___	Return on Equity
MidAmerican Energy Company	01/22	MidAmerican Energy Company	Docket No. RPU-2022-0001	Return on Equity
Iowa-American Water Company	08/20	Iowa-American Water Company	Docket No. RPU-2020-0001	Return on Equity
Kansas Corporation Commission				
Evergy Kansas	04/23	Evergy Kansas	Docket No. 23-EKCE-775-RTS	Return on Equity
Atmos Energy Corporation	08/15	Atmos Energy Corporation	Docket No. 16-ATMG-079-RTS	Return on Equity
Kentucky Public Service Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Kentucky American Water Company	06/23	Kentucky American Water Company	Docket No. 2023-____	Return on Equity
Kentucky American Water Company	11/18	Kentucky American Water Company	Docket No. 2018-00358	Return on Equity
Maine Public Utilities Commission				
Central Maine Power	08/22	Central Maine Power	Docket No. 2022-00152	Return on Equity
Central Maine Power	10/18	Central Maine Power	Docket No. 2018-194	Return on Equity
Maryland Public Service Commission				
Maryland American Water Company	06/18	Maryland American Water Company	Case No. 9487	Return on Equity
Massachusetts Appellate Tax Board				
Hopkinton LNG Corporation	03/20	Hopkinton LNG Corporation	Docket No.	Valuation of LNG Facility
FirstLight Hydro Generating Company	06/17	FirstLight Hydro Generating Company	Docket No. F-325471 Docket No. F-325472 Docket No. F-325473 Docket No. F-325474	Valuation of Electric Generation Assets
Massachusetts Department of Public Utilities				
Massachusetts Electric Company Nantucket Electric Company d/b/a National Grid	11/23	Massachusetts Electric Company Nantucket Electric Company d/b/a National Grid	DPU 23-150	Return on Equity
National Grid USA	11/20	Boston Gas Company	DPU 20-120	Return on Equity
Berkshire Gas Company	05/18	Berkshire Gas Company	DPU 18-40	Return on Equity
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Michigan Public Service Commission				
Upper Michigan Energy Resources Corporation	05/24	Upper Michigan Energy Resources Corporation	Case No. U-21541	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Michigan Gas Utilities Corporation	03/24	Michigan Gas Utilities Corporation	Case No. U-21540	Return on Equity
Indiana Michigan Power Co.	09/23	Indiana Michigan Power Co.	Case No. U-21461	Return on Equity
Michigan Gas Utilities Corporation	03/23	Michigan Gas Utilities Corporation	Case No. U-21366	Return on Equity
Michigan Gas Utilities Corporation	03/21	Michigan Gas Utilities Corporation	Case No. U-20718	Return on Equity
Wisconsin Electric Power Company	12/11	Wisconsin Electric Power Company	Case No. U-16830	Return on Equity
Michigan Tax Tribunal				
New Covert Generating Co., LLC.	03/18	The Township of New Covert Michigan	MTT Docket No. 000248TT and 16-001888-TT	Valuation of Electric Generation Assets
Covert Township	07/14	New Covert Generating Co., LLC.	Docket No. 399578	Valuation of Electric Generation Assets
Minnesota Public Utilities Commission				
ALLETE, Inc. d/b/a Minnesota Power	11/23	Allete, Inc. d/b/a Minnesota Power	D-E-015/GR-23-155	Return on Equity
CenterPoint Energy Resources	11/23	CenterPoint Energy Resources	D-G-008/GR-23-173	Return on Equity
Minnesota Energy Resources Corporation	11/22	Minnesota Energy Resources Corporation	Docket No. G011/GR-22-504	Return on Equity
CenterPoint Energy Resources	11/21	CenterPoint Energy Resources	D-G-008/GR-21-435	Return on Equity
ALLETE, Inc. d/b/a Minnesota Power	11/21	Allete, Inc. d/b/a Minnesota Power	D-E-015/GR-21-630	Return on Equity
Otter Tail Power Company	11/20	Otter Tail Power Company	E017/GR-20-719	Return on Equity
ALLETE, Inc. d/b/a Minnesota Power	11/19	Allete, Inc. d/b/a Minnesota Power	E015/GR-19-442	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	10/19	CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	G-008/GR-19-524	Return on Equity
Great Plains Natural Gas Co.	09/19	Great Plains Natural Gas Co.	Docket No. G004/GR-19-511	Return on Equity
Minnesota Energy Resources Corporation	10/17	Minnesota Energy Resources Corporation	Docket No. G011/GR-17-563	Return on Equity
Missouri Public Service Commission				
Ameren Missouri	06/24	Ameren Missouri	File No. ER-2024-0319	Return on Equity
Evergy Missouri West	02/24	Evergy Missouri West	File No. ER-2024-0189	Return on Equity
Ameren Missouri	08/22	Ameren Missouri	File No. ER-2022-0337	Return on Equity
Missouri American Water Company	07/22	Missouri American Water Company	Case No. WR-2022-0303 Case No. SR-2022-0304	Return on Equity
Evergy Missouri West	01/22	Evergy Missouri West	File No. ER-2022-0130	Return on Equity
Evergy Missouri Metro	01/22	Evergy Missouri Metro	File No. ER-2022-0129	Return on Equity
Ameren Missouri	03/21	Ameren Missouri	Docket No. ER-2021-0240 Docket No. GR-2021-0241	Return on Equity
Missouri American Water Company	06/20	Missouri American Water Company	Case No. WR-2020-0344 Case No. SR-2020-0345	Return on Equity
Missouri American Water Company	06/17	Missouri American Water Company	Case No. WR-17-0285 Case No. SR-17-0286	Return on Equity
Montana Public Service Commission				

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Montana-Dakota Utilities Co.	11/22	Montana-Dakota Utilities Co.	D2022.11.099	Return on Equity
Montana-Dakota Utilities Co.	06/20	Montana-Dakota Utilities Co.	D2020.06.076	Return on Equity
Montana-Dakota Utilities Co.	09/18	Montana-Dakota Utilities Co.	D2018.9.60	Return on Equity
Public Utilities Commission of Nevada				
Sierra Pacific Power Company d/b/a NV Energy	02/24	Sierra Pacific Power Company d/b/a NV Energy	24-02026	Return on Equity
Nevada Power Company d/b/a NV Energy	06/23	Nevada Power Company d/b/a NV Energy	23-06007	Return on Equity
Nevada Power Company d/b/a NV Energy	03/23	Nevada Power Company d/b/a NV Energy	22-03028	Merger benefits
New Hampshire - Board of Tax and Land Appeals				
Liberty Utilities (EnergyNorth Natural Gas)	07/23	Liberty Utilities (EnergyNorth Natural Gas)	Docket No. DG 23-067	Return on Equity
Liberty Utilities (Granite State Electric)	05/23	Liberty Utilities (Granite State Electric)	Docket No. DE 23-039	Return on Equity
Public Service Company of New Hampshire d/b/a Eversource Energy	11/19 12/19	Public Service Company of New Hampshire d/b/a Eversource Energy	Master Docket No. 28873-14-15-16-17PT	Valuation of Utility Property and Generating Assets
New Hampshire Public Utilities Commission				
Public Service Company of New Hampshire	05/19	Public Service Company of New Hampshire	DE-19-057	Return on Equity
New Hampshire-Merrimack County Superior Court				
Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	04/18	Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	220-2012-CV-1100	Valuation of Utility Property

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
New Hampshire-Rockingham Superior Court				
Eversource Energy	05/18	Public Service Commission of New Hampshire	218-2016-CV-00899 218-2017-CV-00917	Valuation of Utility Property
New Jersey Board of Public Utilities				
New Jersey American Water Company, Inc.	02/24	New Jersey American Water Company, Inc.	WR2401056	Return on Equity
Elizabethtown Gas Company	2/24	Elizabethtown Gas Company	GR24020158	Return on Equity
Public Service Electric and Gas Company	12/23	Public Service Electric and Gas Company	ER23120924 GR23120925	Return on Equity
New Jersey American Water Company, Inc.	01/22	New Jersey American Water Company, Inc.	WR22010019	Return on Equity
Public Service Electric and Gas Company	10/20	Public Service Electric and Gas Company	EO18101115	Return on Equity
New Jersey American Water Company, Inc.	12/19	New Jersey American Water Company, Inc.	WR19121516	Return on Equity
Public Service Electric and Gas Company	04/19	Public Service Electric and Gas Company	EO18060629 GO18060630	Return on Equity
Public Service Electric and Gas Company	02/18	Public Service Electric and Gas Company	GR17070776	Return on Equity
Public Service Electric and Gas Company	01/18	Public Service Electric and Gas Company	ER18010029 GR18010030	Return on Equity
New Mexico Public Regulation Commission				
Southwestern Public Service Company	07/19	Southwestern Public Service Company	19-00170-UT	Return on Equity
Southwestern Public Service Company	10/17	Southwestern Public Service Company	Case No. 17-00255-UT	Return on Equity
Southwestern Public Service Company	12/16	Southwestern Public Service Company	Case No. 16-00269-UT	Return on Equity
Southwestern Public Service Company	10/15	Southwestern Public Service Company	Case No. 15-00296-UT	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Southwestern Public Service Company	06/15	Southwestern Public Service Company	Case No. 15-00139-UT	Return on Equity
New York State Department of Public Service				
Liberty Utilities (New York Water)	5/23	Liberty Utilities (New York Water)	Case 23-W-0235	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/22	New York State Electric and Gas Company Rochester Gas and Electric	22-E-0317 22-G-0318 22-E-0319 22-G-0320	Return on Equity
Corning Natural Gas Corporation	07/21	Corning Natural Gas Corporation	Case No. 21-G-0394	Return on Equity
Central Hudson Gas and Electric Corporation	08/20	Central Hudson Gas and Electric Corporation	Electric 20-E-0428 Gas 20-G-0429	Return on Equity
Niagara Mohawk Power Corporation	07/20	National Grid USA	Case No. 20-E-0380 20-G-0381	Return on Equity
Corning Natural Gas Corporation	02/20	Corning Natural Gas Corporation	Case No. 20-G-0101	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/19	New York State Electric and Gas Company Rochester Gas and Electric	19-E-0378 19-G-0379 19-E-0380 19-G-0381	Return on Equity
Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	04/19	Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	19-G-0309 19-G-0310	Return on Equity
Central Hudson Gas and Electric Corporation	07/17	Central Hudson Gas and Electric Corporation	Electric 17-E-0459 Gas 17-G-0460	Return on Equity
Niagara Mohawk Power Corporation	04/17	National Grid USA	Case No. 17-E-0238 17-G-0239	Return on Equity
Corning Natural Gas Corporation	06/16	Corning Natural Gas Corporation	Case No. 16-G-0369	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
National Fuel Gas Company	04/16	National Fuel Gas Company	Case No. 16-G-0257	Return on Equity
KeySpan Energy Delivery	01/16	KeySpan Energy Delivery	Case No. 15-G-0058 Case No. 15-G-0059	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/15	New York State Electric and Gas Company Rochester Gas and Electric	Case No. 15-E-0283 Case No. 15-G-0284 Case No. 15-E-0285 Case No. 15-G-0286	Return on Equity
North Dakota Public Service Commission				
Otter Tail Power Company	11/23	Otter Tail Power Company	Case No. PU-23-___	Return on Equity
Montana-Dakota Utilities Co.	11/23	Montana-Dakota Utilities Co.	Case No. PU-23-___	Return on Equity
Montana-Dakota Utilities Co.	05/22	Montana-Dakota Utilities Co.	C-PU-22-194	Return on Equity
Montana-Dakota Utilities Co.	08/20	Montana-Dakota Utilities Co.	C-PU-20-379	Return on Equity
Northern States Power Company	12/12	Northern States Power Company	C-PU-12-813	Return on Equity
Northern States Power Company	12/10	Northern States Power Company	C-PU-10-657	Return on Equity
Oklahoma Corporation Commission				
Oklahoma Gas & Electric	12/23	Oklahoma Gas & Electric	Cause No. PUD2023-000087	Return on Equity
Oklahoma Gas & Electric	12/21	Oklahoma Gas & Electric	Cause No. PUD 202100164	Return on Equity
Arkansas Oklahoma Gas Corporation	01/13	Arkansas Oklahoma Gas Corporation	Cause No. PUD 201200236	Return on Equity
Oregon Public Service Commission				
PacifiCorp d/b/a Pacific Power & Light	02/24	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-433	Return on Equity
PacifiCorp d/b/a Pacific Power & Light	03/22	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-399	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
PacifiCorp d/b/a Pacific Power & Light	02/20	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-374	Return on Equity
Pennsylvania Public Utility Commission				
American Water Works Company Inc.	11/23	Pennsylvania-American Water Company	Docket No. R-2023-3043189 (water) Docket No. R-2023-3043190 (wastewater)	Return on Equity
American Water Works Company Inc.	04/22	Pennsylvania-American Water Company	Docket No. R-2020-3031672 (water) Docket No. R-2020-3031673 (wastewater)	Return on Equity
American Water Works Company Inc.	04/20	Pennsylvania-American Water Company	Docket No. R-2020-3019369 (water) Docket No. R-2020-3019371 (wastewater)	Return on Equity
American Water Works Company Inc.	04/17	Pennsylvania-American Water Company	Docket No. R-2017-2595853	Return on Equity
South Dakota Public Utilities Commission				
MidAmerican Energy Company	05/22	MidAmerican Energy Company	D-NG22-005	Return on Equity
Northern States Power Company	06/14	Northern States Power Company	Docket No. EL14-058	Return on Equity
Texas Public Utility Commission				
CenterPoint Energy Houston	03/24	CenterPoint Energy Houston	D-56211	Return on Equity
AEP Texas	02/24	AEP Texas	D-56165	Return on Equity
Entergy Texas, Inc.	07/22	Entergy Texas, Inc.	D-53719	Return on Equity
Southwestern Public Service Commission	08/19	Southwestern Public Service Commission	Docket No. D-49831	Return on Equity
Southwestern Public Service Company	01/14	Southwestern Public Service Company	Docket No. 42004	Return on Equity
Texas Railroad Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
CenterPoint Energy Entex and CenterPoint Energy Texas Gas	10/23	CenterPoint Energy Entex and CenterPoint Energy Texas Gas	2023 Texas Division Rate Case Case No. OS-23-00015513	Return on Equity
Utah Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	06/24	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 24-035-04	Return on Equity
PacifiCorp d/b/a Rocky Mountain Power	05/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20-035-04	Return on Equity
Virginia State Corporation Commission				
Virginia American Water Company, Inc.	11/23	Virginia American Water Company, Inc.	Docket No. PUR-2023-00194	Return on Equity
Virginia American Water Company, Inc.	11/21	Virginia American Water Company, Inc.	Docket No. PUR-2021-00255	Return on Equity
Virginia American Water Company, Inc.	11/18	Virginia American Water Company, Inc.	Docket No. PUR-2018-00175	Return on Equity
Washington Utilities Transportation Commission				
Cascade Natural Gas Corporation	03/24	Cascade Natural Gas Corporation	Docket No. UG-240008	Return on Equity
Puget Sound Energy Inc.	02/24	Puget Sound Energy Inc.	Docket No. UE-240004 UG-240005	Return on Equity
PacifiCorp d/b/a Pacific Power & Light	03/23	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-230172	Return on Equity
Cascade Natural Gas Corporation	06/20	Cascade Natural Gas Corporation	Docket No. UG-200568	Return on Equity
PacifiCorp d/b/a Pacific Power & Light	12/19	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-191024	Return on Equity
Cascade Natural Gas Corporation	04/19	Cascade Natural Gas Corporation	Docket No. UG-190210	Return on Equity
West Virginia Public Service Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
West Virginia American Water Company	05/23	West Virginia American Water Company	Case No. 23-0383-W-42T	Return on Equity
West Virginia American Water Company	04/21	West Virginia American Water Company	Case No. 21-02369-W-42T	Return on Equity
West Virginia American Water Company	04/18	West Virginia American Water Company	Case No. 18-0573-W-42T Case No. 18-0576-S-42T	Return on Equity
Wisconsin Public Service Commission				
Wisconsin Power and Light	04/24	Wisconsin Power and Light	Docket No. 6680-UR-128	Return on Equity
Wisconsin Electric Power Company and Wisconsin Gas LLC	04/24	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-111	Return on Equity
Wisconsin Power and Light	05/23	Wisconsin Power and Light	Docket No. 6680-UR-124	Return on Equity
Wisconsin Electric Power Company and Wisconsin Gas LLC	04/22	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-110	Return on Equity
Wisconsin Public Service Corp.	04/22	Wisconsin Public Service Corp.	6690-UR-127	Return on Equity
Alliant Energy		Alliant Energy		Return on Equity
Wisconsin Electric Power Company and Wisconsin Gas LLC	03/19	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-109	Return on Equity
Wisconsin Public Service Corp.	03/19	Wisconsin Public Service Corp.	6690-UR-126	Return on Equity
Wyoming Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	08/24	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-671-ER-24	Return on Equity
PacifiCorp d/b/a Rocky Mountain Power	02/23	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-633-ER-23	Return on Equity
PacifiCorp d/b/a Rocky Mountain Power	03/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-578-ER-20	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Montana-Dakota Utilities Co.	05/19	Montana-Dakota Utilities Co.	30013-351-GR-19	Return on Equity

CERTIFICATIONS/ACCREDITATIONS

Certified General Appraiser, licensed in the Commonwealth of Massachusetts

COMMONWEALTH OF MASSACHUSETTS)

) ss:

COUNTY OF SUFFOLK)

VERIFICATION

Ann Bulkley, being duly sworn upon his oath deposes and states that she is a Principal with The Brattle Group, that she has read and is familiar with the foregoing Direct Testimony, and attests that the statements contained therein are true and correct to the best of her knowledge, information and belief.

Ann Bulkley

Subscribed and sworn to before me this 30th day of January 2025.

Notary Public

My Appointment Expires: 6/30/2028

GERARD M. ROONEY NOTARY PUBLIC MY COMMISSION EXPIRES 6/30/2028 COMMONWEALTH OF MASSACHUSETTS

Gerard M. Rooney
NOTARY PUBLIC
Commonwealth of
Massachusetts
My Commission Expires
6/30/2028