Before the Minnesota Public Utilities Commission

State of Minnesota

In the Matter of the Application of Minnesota Power
for Authority to Increase Rates for Electric Utility
Service in Minnesota

Docket No. E015/GR-26-199

Exhibit_____

RETURN ON EQUITY

November 2, 2026

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I. INTRODUCTION

Q. What is your name, position, and 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. Please describe your educational background, as well as your business and professional experience.

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 over 30 years of experience consulting to the energy industry. 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. I have included my qualifications and a summary of testimony that I have filed in other proceedings as MP Exhibit ___ (Bulkley), Direct Schedule 1 to this testimony.

Q. On whose behalf are you testifying?

A. I am submitting this Direct Testimony before the Minnesota Public Utilities Commission ("Commission") on behalf of ALLETE, Inc. ("ALLETE"), d/b/a Minnesota Power ("Minnesota Power" or the "utility").

II. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY

Q. Please describe 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 ("ROE") and overall rate of return to be used for ratemaking purposes. I also address the appropriateness of the utility's proposed capital structure.

Q. Are you sponsoring any exhibits or schedules in support of your Direct Testimony?

A. Yes, I am sponsoring the following exhibits, which were prepared by me or under my direction:

- MP Exhibit ___ (Bulkley), Direct Schedule 1 – Resume and Testimony Listing of Ann E. Bulkley;
- MP Exhibit ___ (Bulkley), Direct Schedule 2 – Summary of Results;
- MP Exhibit ___ (Bulkley), Direct Schedule 3 – Proxy Group Selection;
- MP Exhibit ___ (Bulkley), Direct Schedule 4 – Constant Growth DCF Model;
- MP Exhibit ___ (Bulkley), Direct Schedule 5 – Two-Growth DCF Model;
- MP Exhibit ___ (Bulkley), Direct Schedule 6 – Capital Asset Pricing Model / Empirical Capital Asset Pricing Model;
- MP Exhibit ___ (Bulkley), Direct Schedule 7 – Long-Term Average Beta;
- MP Exhibit ___ (Bulkley), Direct Schedule 8 – Market Return;
- MP Exhibit ___ (Bulkley), Direct Schedule 9 – Bond Yield Plus Risk Premium;
- MP Exhibit ___ (Bulkley), Direct Schedule 10 – Regulatory Risk Analysis; and
- MP Exhibit ___ (Bulkley), Direct Schedule 11 – Capital Structure Analysis.

Q. Please provide a brief overview of the analyses that led to your ROE recommendation.

A. I have estimated the utility's cost of equity ("COE") by applying several traditional estimation methodologies to a proxy group of comparable utilities, including the constant and two-growth forms of the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and a Bond Yield Plus Risk Premium ("BYRP" or "Risk Premium") analysis. My recommendation also takes into consideration the following factors: (1) the regulatory and business environment in which the utility operates; (2) the

utility's rate adjustment mechanisms; (3) the utility's customer concentration; and (4) the utility's proposed capital structure as compared to the capital structures of the proxy group companies. While I do not make specific adjustments to my ROE recommendation for these factors, I did consider them in the aggregate when determining where my recommended ROE falls within the range of the 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 guidelines 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 utility's cost of equity.
- Section VI explains my selection of the proxy group for the utility.
- Section VII describes my analyses and the basis for my recommended ROE in this proceeding.
- Section VIII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized in this proceeding.
- Section IX assesses the utility's proposed capital structure.
- 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. The key factors that I considered in my cost of equity analyses and recommended ROE for the utility in this proceeding are:

- The United States Supreme Court's *Hope* and *Bluefield* decisions,[1] which established the standards for determining a fair and reasonable authorized

[1] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) (hereinafter "*Hope*"); *Bluefield Waterworks & Improvement Co., v. Pub. Serv. Comm'n of W. Va.*, 262 U.S. 679 (1923) (hereinafter "*Bluefield*").

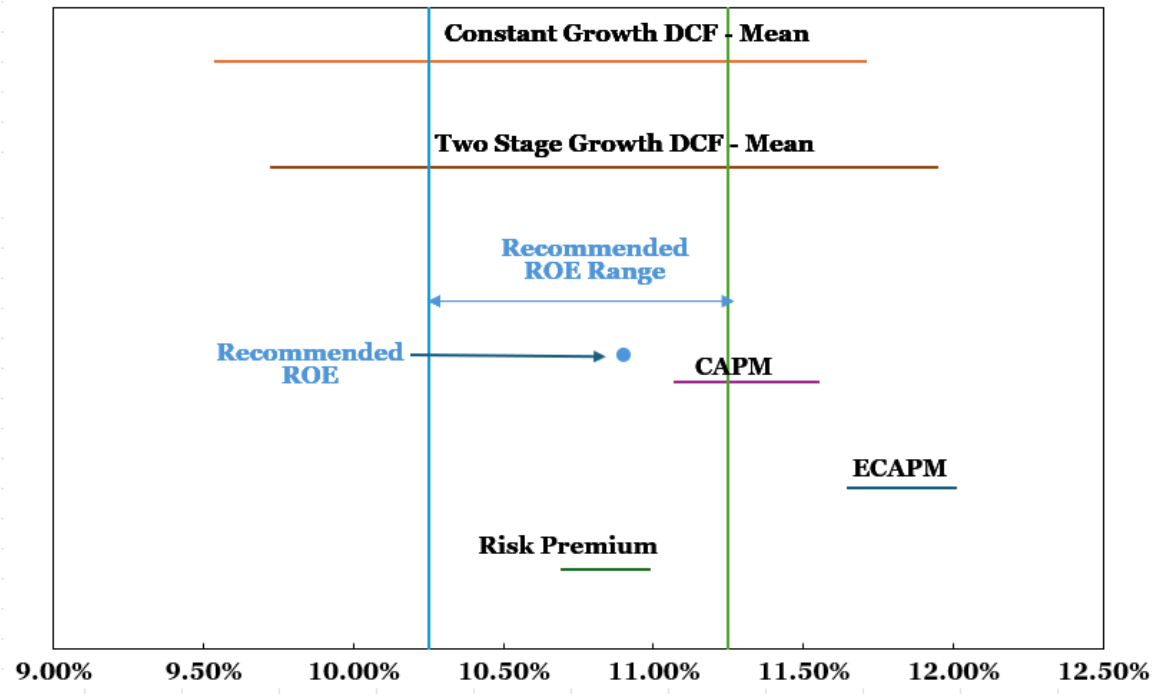
ROE for public utilities, including consistency of the allowed return with the returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result will lead to just and reasonable rates.

- The effect of current and prospective 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 utility's cost of equity. Because the utility'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).
- The utility's regulatory, business, and financial risks relative to the proxy group of comparable companies and the implications of those risks.

Q. What are the results of the models that you have used to estimate the cost of equity for Minnesota Power?

A. Figure 1 summarizes the range of results produced by the constant growth DCF ("CGDCF"), two-growth DCF ("TGDCF"), CAPM, ECAPM, and BYRP analysis.

Figure 1. Summary of Cost of Equity Analytical Results



As shown in Figure 1, the range of results across all methodologies is wide. While it is common to consider multiple models to estimate the cost of equity, it is particularly important when the range of results varies considerably across methodologies.

Q. How do the results of your analyses compare to the analyses that you prepared for the utility's 2023 Rate Case (Docket No. E015/GR-23-155) ("2023 Rate Case")?

A. The current results of the CGDCF, TGDCF, and BYRP analyses have increased significantly since the utility's last rate case, based on the models that the Commission has historically relied upon. The CGDCF and TGDCF model results have increased 53 to 115 basis points whereas the range of the CAPM and ECAPM shifted by –2 basis points to 146 basis points. Finally, the BYRP analysis has increased 43 to 45 basis points.

Q. What is your recommended ROE for Minnesota Power 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 Minnesota Power's electricity operations in Minnesota relative to the proxy group, I recommend a range from 10.25 to 11.25 percent for the utility's ROE. Further, based on the utility's overall risk profile I conclude that the utility's ROE should be at the higher end of this range. However, the utility is proposing an ROE of 9.78 percent, which is consistent with the ROE cap that was established in the Settlement Stipulation and with the Commission's decision on the 2025 Acquisition of ALLETE, Inc.[2]

[2] *In the Matter of the Petition of Minn. Power for Acquisition of ALLETE by Canada Pension Plan Investment Board and Global Infrastructure* Partners, DOCKET NO. E015/PA-24-198, ORDER APPROVING PETITION FOR ACQUISITION WITH CONDITIONS AND ESTABLISHING OTHER REQUIREMENTS at 12 (Dec. 10, 2025) (eDocket No. 202512-225721-01).

Q. Apart from the Settlement Stipulation and the Commission's Acquisition Order capping Minnesota Power's ROE, what is the approach that the Commission has employed in establishing utility ROEs?

A. The Commission has traditionally relied on the TGDCF model for purposes of determining a utility's authorized ROE. Initially, the Commission relied strictly on the results of the TGDCF model; however, since approximately 2015, the Commission has given primary weight to the TGDCF model but also considered various other factors, including the results of other models, market conditions, and company risk factors. For example, in its 2017 Order for Otter Tail Power Company's ("Otter Tail") rate case, the Commission noted that:

> The record in this case establishes a compelling basis for selecting an ROE above the mean average within the DCF range, given Otter Tail's unique characteristics and circumstances relative to other utilities in the proxy group. These factors include the company's relatively smaller size, geographically diffuse customer base, and the scope of the Company's planned infrastructure investments. The Commission has also considered Otter Tail's recognized [sic] the Company's performance in completing major infrastructure projects substantially under budget, its history of providing reliable service with stable rates, and its record of effectively serving the needs of its customers, as measured by multiple customer-satisfaction metrics.[3]

Likewise, in its 2018 Order for Minnesota Energy Resources Corporation's ("MERC") rate case, the Commission acknowledged that the record included a broad diversity of modeling and noted that the authorized ROE was set in light of the record as a whole:

> The Commission believes that the record evidence in this case, including the broad diversity of modeling and expert testimony, establishes a range of reasonable costs of equity, within which the Commission must identify one value.
>
> The record does not formulaically dictate a particular ROE to be approved. Instead, the record presents a range of reasonable returns on equity that the Commission has carefully evaluated based on the

[3] *In re Application of Otter Tail Power Co. for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E017/GR-15-1033, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 55 (May 1, 2017) (eDocket No. 20175-131511-01) (internal citations omitted).

> analyses and arguments in the record. As such, the Commission will set the Company's authorized ROE in light of the record as a whole.[4]

In Minnesota Power's 2021 Rate Case (Docket No. E015/GR-21-335) ("2021 Rate Case"), the Administrative Law Judge noted that the utility's two-stage DCF analysis was a reliable methodology for setting the cost of equity. The Commission concurred that the methodology was well supported by the record and provides a well-reasoned basis for setting the cost of equity. Further, in that case, the Commission rejected the Department's suggestion that the reliability of earnings' estimates in predicting long-term growth was undermined and proposed the use of a multi-stage DCF model using GDP growth to forecast the long-term cost of equity:

> The Department's recommended cost of equity of 9.30% is informed by an underlying assumption that the cost of equity and the return on equity are distinct concepts in the sense that utility earnings exceed the cost of equity over time. This understanding, according to the Department, undermines the reliability of earnings' estimates in predicting long-term growth and instead justifies the use of a multi-stage DCF analysis that uses GDP to forecast the long-term cost of equity.
>
> The Commission does not share this concern. While general statements about GDP and earnings estimates may offer broad perspectives on their overall usefulness, the parties' positions reflect philosophical and methodological differences that are qualitative in nature. But the Department has not demonstrated inaccuracies in Minnesota Power's earnings estimates in this case to justify dismissing them from consideration. The investment community relies heavily on earnings estimates, which are rigorously audited to ensure compliance with accounting principles. And in the case of utilities, earnings estimates reflect industry-specific considerations, include assumptions based on quantitative market data, and have not been shown to produce unreasonable returns. [5]

[4] *In re Application of Minn. Energy Res. Corp. for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G011/GR-17-563, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 45-46 (Dec. 26, 2018) (eDocket No. 201812-148702-01).

[5] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-21-335, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 44-46 (Feb. 28, 2023) (eDocket No. 20232-1934586-01).

The Commission used a similar approach in its order in this proceeding and Great Plains Natural Gas Company ("Great Plains").[6]

Q. Is the overall approach you employed for determining the utility's ROE consistent with those considered by the Commission in prior cases?

A. Yes. As discussed, I have conducted and considered a range of cost of equity estimation models, including the TGDCF and CGDCF models, the CAPM, ECAPM, and Risk Premium models. Each of these methodologies has been applied consistent with the approaches I used in Minnesota Power's 2023 Rate Case. Finally, I considered Minnesota Power's business and financial risk relative to the proxy group in my conclusion as to where the utility's ROE falls within my recommended range.[7]

Q. Is Minnesota Power's requested capital structure reasonable and appropriate?

A. Yes. The utility's test year 2027 average capital structure and plan year capital structures, which include an equity ratio of 53.00 percent, are consistent with the equity ratio that was established in the utility's last electric rate case and with the Commission's decision on the Acquisition of ALLETE.[8] This equity ratio is within the range of actual equity ratios for the operating utilities of the proxy group and is reasonable.

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[6] *In re Petition by Great Plains Natural Gas Co., a Div. of Montana-Dakota Utils., Co., for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G004/GR-19-511, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 17 (Oct. 26, 2020) (eDocket No. 202010-167656-01).

[7] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-21-335, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 18 (Sept. 1, 2022) (eDocket No. 20229-188786-01); *In re Application of Otter Tail Power Co. for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E017/GR15-1033, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 55 (May 1, 2017) (eDocket No. 20175-131511-01); *In re Application of Minn. Energy Res. Corp. for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G011/GR-17-563, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 26 (Dec. 26, 2018) (eDocket No. 201812-148702-01).

[8] *In the Matter of the Petition of Minn. Power for Acquisition of ALLETE by Canada Pension Plan Investment Board and Global Infrastructure* Partners, DOCKET NO. E015/PA-24-198, ORDER APPROVING PETITION FOR ACQUISITION WITH CONDITIONS AND ESTABLISHING OTHER REQUIREMENTS at 12 (Dec. 10, 2025) (eDocket No. 202512-225721-01).

IV. REGULATORY PRINCIPLES

Q. Please describe the guiding principles to be used in establishing the cost of capital for a regulated utility.

A. The U.S. Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's authorized ROE. Among the standards established by the U.S. Supreme 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.[9]

Q. Has the Commission provided similar guidance in establishing the appropriate return on common equity?

A. Yes, it has. For example, in a recent fully litigated case, the Commission cited Minn. Stat. § 216B.16, subd. 6, which states that:

> In determining just and reasonable rates, the Commission is required to "give due consideration to the public need for adequate, efficient, and reasonable service and to the need of the public utility for revenue sufficient to enable it to meet the cost of furnishing service, including adequate provision for depreciation of its utility property used and useful in rendering service to the public, *and to earn a fair and reasonable return upon the investment in such property*."[10]

In the same Order, the Commission stated that it "must set rates at a level that permits stockholders an opportunity to earn a fair and reasonable return on their investment and permits the utility to continue to attract investment."[11] This guidance is in accordance with my view that an allowed rate of return must be sufficient to properly compensate shareholders for their investment, and should

[9] *See generally Hope*, 320 U.S. 591; *Bluefield*, 262 U.S. 679.
[10] *In the Matter of a Petition of Xcel Energy, for Auth. to Increase Rates for Elec. Serv. in the State of Minn.,* Docket No. E002/GR-24-320, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 92 (Jul. 31, 2026) (eDocket No. 20267-234806-01) (quoting Minn. Stat. § 216B.16, subd. 6) (emphasis in original).
[11] *Id.*

enable regulated companies, like Minnesota Power, to attract capital on reasonable terms.

Q. Is "capital" limited to equity capital?

A. No. Although the authorized ROE being determined in the current proceeding is the return applicable to common equity, capital in this context encompasses the full mix of financing needed by the utility to fund investments, including both debt and equity. The authorized ROE and equity ratio affect the utility's cash flow, credit metrics, credit ratings, and, therefore, its ability to obtain debt as well as equity capital on reasonable terms.

Q. Is determining a fair rate of return just about protecting the utility's interests?

A. No. As the U.S. Supreme Court noted in *Bluefield*, a proper rate of return not only assures "confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit [but also] enable[s the utility] to raise the money necessary for the proper discharge of its public duties."[12] As the U.S. Supreme Court further explained in *Hope*, "[t]he rate-making process . . . involves a balancing of the investor and consumer interests."[13]

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 authorized ROE that is adequate to attract capital at reasonable terms enables the utility to continue to provide safe, clean, and reliable electric service while maintaining its financial integrity. That return should be commensurate with returns required by investors elsewhere in the market for investments of comparable risk. It is important to recognize that regardless of whether the investors are private or public, or they are taking on debt or investing equity, they have a choice of where to invest capital. If the return that is authorized is not comparable to the returns

[12] *Bluefield*, 262 U.S. at 693.
[13] *Hope*, 320 U.S. at 603.

available for comparable risk investments, it is reasonable to expect that investors would make rational choices about where to expand their investments, either within their existing portfolios or in other investments that provide reasonable returns for the risk of the investment. Therefore, it is important for the utility to continue to earn a return that reasonably reflects investors' requirements in order to be able to obtain the capital needed to finance the utility operations on behalf of customers.

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

A. Yes. Utilities compete directly for capital with other investments of similar risk, which include but are not limited to other utilities. Therefore, the ROE authorized for 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, over the same time period, investors have an incentive to direct their capital to those alternative investments. Thus, an authorized ROE significantly below authorized ROEs for other utilities can inhibit the utility's ability to attract capital for investment.

Q. Has the Commission similarly considered the authorized ROEs in other jurisdictions when setting ROEs for Minnesota utilities?

A. Yes. The Commission has routinely reviewed authorized ROEs in other jurisdictions in the determination of the ROEs for the companies that it regulates. For example, in its decision in the utility's 2021 Rate Case, the Commission stated:

> [W]hile the decisions of other jurisdictions are not binding and have limited persuasive value because of the fact-intensive nature of cost-of-equity decision-making, they do provide a check, of sorts on reasonableness.[14]

[14] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-21-335, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 45 (Feb. 28, 2023) (eDocket No. 20232-193486-01).

As discussed in more detail later herein, I have developed a comparison of the authorized returns for electric utilities in other jurisdictions, and the returns authorized in Minnesota for electric utilities.

Q. Does the fact that the utility is part of ALLETE, which was recently acquired by Global Infrastructure Partners and CPP Investments (the "Shareholders") affect the cost of equity analysis?

A. No. In this proceeding, consistent with stand-alone ratemaking principles, it is appropriate to establish the cost of equity for Minnesota Power. More importantly, however, it is appropriate to establish an ROE and capital structure that provide the utility the ability to attract capital on reasonable terms, both on a stand-alone basis and within the overall corporate structure. While the Shareholders have agreed to provide the necessary capital to finance Minnesota Power's capital requirements over the next five years, it is reasonable and appropriate that a reasonable return be set to compensate investors and encourage the investment in both debt and equity capital in the utility, based on the risk of the investment in the utility, not the return that is commensurate with the risk of the owners of the utility.

Q. Is the regulatory framework, including the authorized ROE and equity ratio, important to both debt and equity investors?

A. Yes. The regulatory framework is one of the most important factors in debt and equity investors,' as well as the rating agencies, assessments of risk. The regulatory framework broadly considers the relationship between the regulatory commission and the utilities that it regulates with a particular focus on the regulator's supportiveness in establishing a reasonable opportunity for the companies that it regulates to recovery the operating costs of the business including the rate of return. Specifically, regarding debt investors, credit rating agencies consider the authorized ROE and equity ratio for regulated utilities to be very important for two reasons: (1) they help determine the cash flows and credit metrics of the regulated utility; and (2) they provide an indication of the degree of regulatory support for credit quality in the jurisdiction. To the extent that the authorized returns in a

jurisdiction are lower than the returns that have been authorized more broadly, credit rating agencies will consider this in the overall risk assessment of the regulatory jurisdiction in which the company operates. Not only do credit ratings affect the overall cost of borrowing, they also act as a signal to equity investors about the risk of investing in the equity of a company.

Q. What are your conclusions regarding regulatory guidelines?

A. The ratemaking process is premised on the principle that infrastructure-focused utilities must have a reasonable opportunity to recover the return of, and the market-required return on, its invested capital. Accordingly, the Commission's decision in this proceeding should establish rates that provide the utility with a reasonable opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises with similar risk. It is important for the ROE authorized in this proceeding to take into consideration current and projected capital market conditions, as well as market-based return requirements based on the risk of the investment. Because utility operations are capital-intensive, and because there is a particular need to attract significant amounts of capital to meet the clean energy plans across the country, 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 utility, 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. Based on the stand-alone principle of ratemaking, regulated rates should be based on the risks and benefits of the regulated utility, not its investors, parent or affiliates.[15] Many state regulatory commissions have determined that the objective

[15] Morin, Dr. Roger A. New Regulatory Finance. Public Utilities Reports, Inc., 2006, at 215-216.

of a rate case is to establish the cost of equity for the jurisdictional utility as if it were a stand-alone entity. As such, I have estimated the cost of equity for the utility as if it operated as a stand-alone entity; thus, the utility's ownership structure has no effect on the estimated cost of equity. As I noted above, to estimate the utility's cost of equity, I apply several traditional estimation methodologies to a proxy group of comparable utilities, including the constant growth DCF, two-growth DCF CAPM, ECAPM, and BYRP. Each of the models relies on market data that are either specific to the proxy group, in the case of the DCF model, or to the expectations of market risk, in the case of the CAPM. The results of the cost of equity estimation 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 analyst uses both current and projected market data, specifically 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.

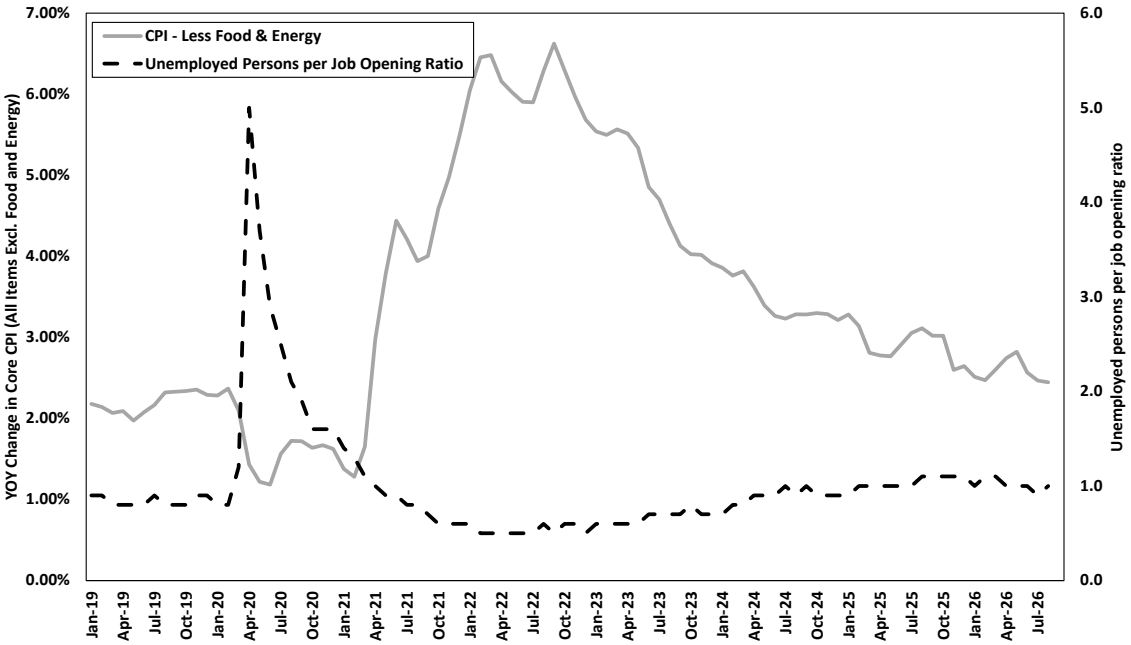
Analysts and regulatory commissions recognize that current market conditions affect the results of the cost of equity estimation models. Accordingly, it is important to consider the effect of these conditions on the models when determining an appropriate range for the ROE and the recommended ROE for 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 very important to consider projected market data to estimate the return for that forward-looking period.

Q. Why are inflation and employment important metrics to consider in evaluating capital market conditions?

A. Because the Federal Reserve's dual mandate is to promote stable prices and employment, it is important to consider both inflation and employment data. Inflation data provides a signal as to the future direction of interest rates. As shown

in Figure 2, while core inflation has declined from the peaks seen in 2022, it continues to remain above the Federal Reserve's target levels and has increased recently. The ratio of unemployed persons per job opening was 1.0 in August 2026, the most recent data available as of September 30, 2026. The ratio of unemployed persons per job opening increased has remained at or close to 1.0 for the last several years, which suggested a tighter labor market. The strength in the labor market has allowed the Federal Reserve to continue to prioritize reducing inflation by pursuing the restrictive monetary policy needed to achieve its 2.00 percent target benchmark.

Figure 2. Core Inflation and Unemployed Persons-to-Job Openings, January 2019 to August 2026[16]



Q. What policy tools does the Federal Reserve use to respond to increased inflation?

A. The Federal Reserve has relied on more restrictive monetary policy, which has been in the form of higher borrowing costs, to address inflationary pressures.

[16] U.S. Bureau of Labor Statistics.

Q. Did economic conditions necessitate a change in monetary policy by the Federal Reserve in 2024 and 2025?

A. Yes. The Federal Reserve reduced the federal funds rate in the fourth quarters of 2024 and 2025. Although the Federal Reserve kept rates unchanged through the first five meetings in 2025, its decision to reduce the federal funds rate at the final three meetings in 2025 was due to an increase in the downside risk to employment at that time.[17]

Q. Have the risks to the Federal Reserve's dual mandate of maximum employment and price stability shifted again in 2026 resulting in a recent increase in the federal funds rate?

A. Yes. Following a series of decreases in the federal funds rate in late 2024 and late 2025, the Federal Reserve increased the federal funds rate in September 2026 by 25 basis points to a target range to 3.75 to 4.00 percent in an attempt to lower persistent inflation.[18] As Federal Reserve Chairman Warsh stated at the Federal Open Market Committee's ("FOMC") September 2026 meeting, while economic activity is "expanding at a solid pace," "job gains have kept pace with the workforce" and the unemployment rate has remained steady, "inflation remains elevated" and has been running above target for more than five years, and that the FOMC's predominant focus is on the price-stability portion of its mandate.[19] Chairman Warsh stated that "the plain fact is that inflation is too high and has been for too long," and the decision to increase the federal funds rate "will support a timelier return to the Committee's 2 percent goal."[20] Although the increase in the federal funds rates was undertaken to combat persistent inflation, core personal consumption expenditures ("PCE") inflation, which is the FOMC's preferred

[17] Federal Reserve, Press Releases September 17, 2025, October 29, 2025, and December 10, 2025, available at https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm.
[18] Federal Reserve, *Transcript of Chairman Warsh's Press Conference*, (Sept. 16, 2026), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20260916.pdf.
[19] *Id.*
[20] *Id.*

inflation measure that excludes food and energy prices, is not projected to reach the Federal Reserve's target of 2.0 percent until 2029.[21]

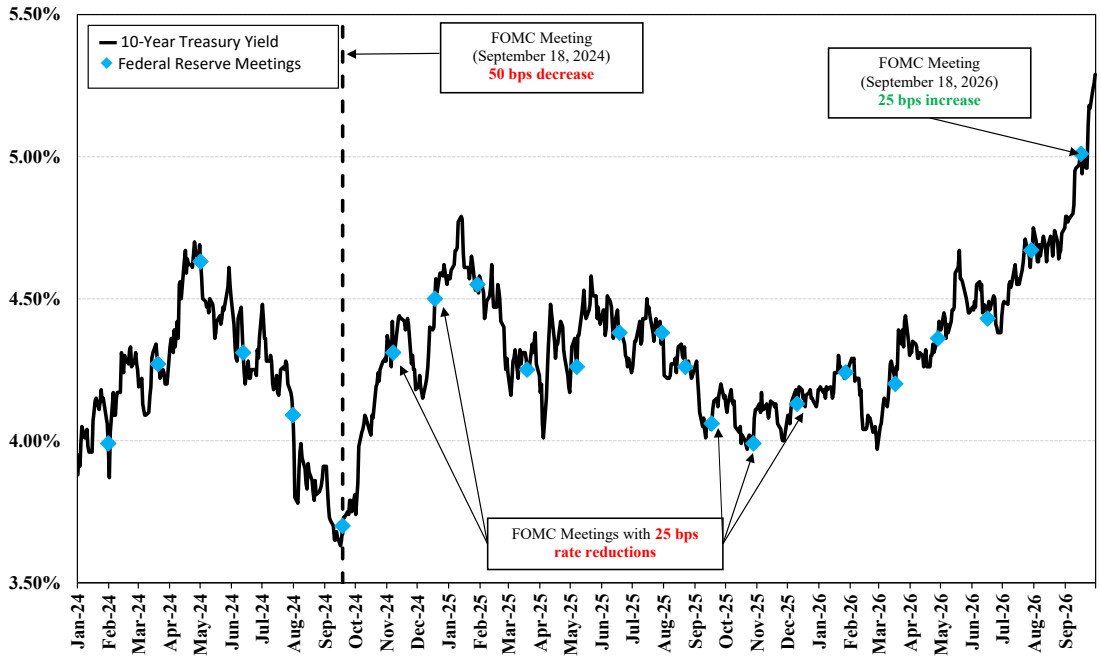
Q. What has happened to the yields on long-term government bonds since the FOMC reduced the federal funds rate in September 2024?

A. As shown in Figure 3, as of September 30, 2026, the 10-year Treasury bond yield was 5.29 percent, which is the highest level since 2007[22] and well above the level at the time of the September 2024 FOMC meeting.

[21] Federal Open Market Committee, *Summary of Economic Projections* at 2, (Sept. 16, 2026), https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20260916.pdf.

[22] Fred Imbert, Sean Conlon, Sarah Min, Chloe Taylor and Sawdah Bhaimiya, *30-year Treasury yield hits highest level since 2004 as bond market rout continues*, CNBC (Sept. 24, 2026), https://www.cnbc.com/2026/09/24/us-treasury-yields-bonds-fed-inflation.html?msockid=2aefc809b52e6c1a22addd45b4416d75.

Figure 3. 10-Year Treasury Bond Yield, January 2024 through September 30, 2026[23]



Q. How have interest rates and inflation changed since the utility's 2023 rate case?

A. As shown in Figure 4, as of the date of my Rebuttal Testimony in the utility's 2023 Rate Case, long-term interest rates have increased significantly, with the 30-year Treasury yield rising by 96 basis points, while inflation has declined. Significant changes in market conditions since early 2024, particularly the increase in the 30-year Treasury yield, indicate that the cost of equity has increased since Minnesota Power's last base rate proceeding in Minnesota.

[23] S&P Capital IQ Pro.

Figure 4. Change in Market Conditions Since the Utility's 2023 Rate Case[24]

Docket	Date	30-Day Avg of 30-Year Treasury Bond Yield	Core Inflation Rate	Auth'd ROE	National Avg. Auth'd ROE
E-015/GR-23-155					
Commission Decision	2/29/2024	4.37%	3.76%	9.78%	9.70%
Current Proceeding	9/30/2026	5.32%	2.45%	TBD	9.78%
Change since Feb-24 Decision:		*0.96%*	*-1.32%*		

Q. Why have long-term interest rates remained above the levels at the time the Federal Reserve first reduced the federal funds rate in September 2024?

A. Ongoing policies of the current administration's economic plans have resulted in higher deficits, and persistent inflation. For example, since January 2025, the administration announced several sets of tariffs on each of the U.S.'s trading partners.[25] The implemented tariffs are largely viewed as inflationary. Inflation affects bonds, in particular long-term government bonds, because it erodes the value of future bonds payments. Therefore, in an inflationary environment, investors will demand higher returns on bonds to compensate for the added risk of inflation, thus bond prices decline and the yields on bonds increase. The longer the duration of the bond, the greater the effect of inflation, which is why inflation risk is greater for long-term government bonds. The significant tariff increases implemented by the current administration along with the effects of the conflict in Iran, which will be discussed in more detail below, have resulted in increased inflation, which is why the FOMC decided to increase the federal funds rate at the September 2026 meeting and the yields on long-term bonds have increased significantly over the past year. Further, the use of tariffs strains the relationship with trading partners, which could result in a reduction in the foreign demand for

[24] St. Louis Federal Reserve Bank; U.S. Bureau of Labor Statistics.
[25] Jennifer Clarke, *What Are Tariffs, How Do They Work and Why Is Trump Using Them?*, BBC News, (Aug. 27, 2025), https://www.bbc.com/news/articles/cn93e12rypgo.

long-term U.S. government bonds resulting in additional upward pressure on long-term government bond yields. [26]

Q. What effect does the February 20, 2026 Supreme Court ruling have on the tariffs implemented by the administration in 2025?

A. While the Supreme Court ruled that the tariffs implemented in 2025 under the International Emergency Economic Powers Act were illegal, the administration quickly responded to the ruling by imposing a 15 percent tariff on all goods imported into the U.S. under Section 122 of the 1974 Trade Act, [27] which allows a President to implement global tariffs up to 15 percent for a period of five months after which the approval of Congress is needed for continuation of the tariffs. In advance of the expiration of the tariffs under Section 122 of the 1974 Trade Act, the administration implemented new tariffs under Section 301 of the Trade Act of 1974, which imposed tariffs between 10 to 12.5 percent on imports from 60 countries.[28] Therefore, the administration is still able to at least temporarily impose global tariffs, which, as noted, will continue to place upward pressure on prices.

Q. Has the conflict in Iran affected inflation and long-term government bond yields?

A. Yes. The conflict in Iran and the resulting increase in underlying oil prices has put upward pressure on inflation as increased oil prices not only increase gasoline prices for consumers, but also the prices of other products as well given that nearly all goods need to be transported from the place of production. The likelihood of continued elevated inflation suggests interest rates will remain higher in the near

[26] Karishma Vanjani, *U.S. Treasury Bonds Sell Off as 30-Year Yield Rises Most Since 1982*, Barron's, (April 9, 2025), https://www.barrons.com/articles/us-treasury-bonds-selloff-market-48ba83be.
[27] Dearbail Jordan, *Trump says he will increase his new global tariffs to 15%,* BBC, (Feb. 22, 2026), https://www.bbc.com/news/articles/cn8z48xwqn3o. *See also*, *Learning Resources, Inc. v. Trump*, 146 S.Ct. 628 (2026) and *Trump v. O.S. Selections, Inc*., 146 S.Ct. 628 (2026).
[28] David Lawler, *Trump imposes new global tariffs, drawing protests from trading partners*, Reuters, (July 24, 2026), https://www.reuters.com/world/us/trump-imposes-forced-labor-duties-60-trading-partners-as-10-us-tariffs-expire-2026-07-24/.

term. [29] In fact, as shown in Figure 3, since the start of the conflict in Iran, the yield on the 10-year Treasury bond has increased 132 basis points (i.e., from 3.97 percent on February 27, 2026 to 5.29 percent on September 30, 2026).

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

A. Economists are still expecting elevated long-term interest rates. In the most recently published report by *Blue Chip Financial Forecasts*, the consensus estimate of economists is that the 30-year treasury bond yield will remain relatively stable and decrease only slightly from 5.35 percent in Q1/2027 to 5.05 percent in Q1/2028.[30] This is important because it means that long-term interest rates are expected to remain elevated during the period that the utility'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 utility?

A. It is important to consider current and projected market conditions in setting the forward-looking ROE due to its effect on the estimated cost of equity. The FOMC currently expects the federal funds rate to increase further and then remain steady in 2027. Further, long-term interest rates remain elevated and are expected to continue to remain elevated due to inflationary policies such as tariffs and tax cuts and the uncertainty regarding the Iran conflict and the increase in underlying energy costs. With long-term interest rates expected to remain relatively high, borrowing also remains relatively more expensive, and thus investors also demand a relatively high cost of capital, which means the cost of capital also remains relatively high.

[29] *See, e.g.*, Finbar Flynn and Ruth Carson, *Bonds Lose $2.5 Trillion in Iran War Wipeout That Mirrors 2022*, Bloomberg, (March 23, 2026), https://www.bloomberg.com/news/articles/2026-03-23/bonds-lose-2-5-trillion-in-iran-war-wipeout-that-mirrors-2022.

[30] *Blue Chip Financial Forecasts* at 9, October 2026 Edition (Oct. 1, 2026).

VI. PROXY GROUP SELECTION

Q. Has the Minnesota Commission historically used a group of proxy companies to estimate the cost of equity for Minnesota Power?

A. Yes. Both before and after the Acquisition, the Minnesota Power electric utility was not itself a publicly-traded company. This is common for smaller business units or subsidiaries of larger companies. Because the cost of equity is a market-based concept and because Minnesota Power's operations do not make up the entirety of a publicly traded entity, it is necessary to establish a group of companies that are both publicly traded and comparable to the utility in certain fundamental business and financial respects to serve as its "proxy" in the cost of equity estimation process.

Further, even if the Minnesota Power utility had previously been a publicly traded company, it is possible that transitory events could bias its market value over a given period. The same is true of ALLETE now that it is owned by private infrastructure investors. 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 Minnesota Power's, and thus provide a reasonable basis to derive and estimate the appropriate cost of equity for Minnesota Power.

Q. Please provide a brief profile of Minnesota Power.

A. In December 2025 ALLETE was acquired and taken private by the Shareholders; however, the utility remains an operating division of ALLETE at this time.[31] The utility provides electric utility service to approximately 150,000 retail customers in

[31] Minnesota Power has filed an application with the Minnesota Commission, seeking to reorganize the enterprise such that ALLETE, Inc. will be a holding company structure with Minnesota Power, Inc. a subsidiary. That application is currently pending before the Commission.

Minnesota.[32] As of December 31, 2024, Minnesota Power's net utility electric plant was approximately $3.51 billion.[33] In addition, Minnesota Power had 2024 electric operating revenues of approximately $1.24 billion.[34] In 2025, approximately 54 percent of Minnesota Power's net generation needs were satisfied by its owned and joint owned facilities, while the remaining 46 percent was purchased power.[35] ALLETE currently has an investment grade long-term rating of BBB (Outlook: Stable) from Standard & Poor's ("S&P") and Baa1 (Outlook: Negative) from Moody's.[36]

Q. Does the change in the ownership of ALLETE and the reorganization change the analysis that you conduct to estimate the cost of equity for Minnesota Power?

A. No. The cost of equity that I am estimating in this proceeding is the cost of equity for Minnesota Power on a stand-alone basis, based on the risk of the operations of the utility. That analysis is unchanged by the ownership change and structure. Therefore, the analyses that I rely on are consistent with the analyses I have used in prior cases to estimate the cost of equity and determine a reasonable ROE for Minnesota Power.

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

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

- pay consistent quarterly cash dividends because such companies cannot be analyzed using the constant growth DCF model;
- have investment grade long-term issuer ratings;

[32] *In the Matter of the Petition of Minn. Power for Acquisition of ALLETE by Canada Pension Plan Investment Board and Global Infrastructure* Partners, DOCKET NO. E015/PA-24-198, ALLETE, INC., 2024 SEC FORM 10-K at 9 (May 1, 2025) (eDocket No. 20255-218418-04).
[33] *Id*. at 95.
[34] *Id*. at 43.
[35] *In the Matter of the Petition of Minn. Power for Acquisition of ALLETE by Canada Pension Plan Investment Board and Global Infrastructure* Partners, DOCKET NO. E015/PA-24-198, ALLETE, INC., FERC FORM 1, 2025/Q4 at 401a (May 1, 2025) (eDocket No. 20255-218418-03).
[36] S&P Capital IQ Pro and Moody's Investors Service.

- have positive long-term earnings growth forecasts from at least two equity analysts;
- own generation assets that are included in rate base;
- derive more than 40.00 percent of total energy sales from company-owned generation;
- derive more than 60.00 percent of total operating income from regulated electric operations; and
- were not currently parties to a merger or transformative transaction during the analytical periods relied on.[37]

Q. What is the composition of your proxy group?

A. The proxy group consists of the following fifteen companies shown in Figure 5.

Figure 5. 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 Company	DTE
Duke Energy Corporation	DUK
Entergy Corporation	ETR
Evergy, Inc.	EVRG
IDACORP, Inc.	IDA
OGE Energy Corporation	OGE
Pinnacle West Capital Corporation	PNW
PPL Corporation	PPL
Southern Company	SO
Xcel Energy Inc.	XEL

[37] This screen is intended to remove companies from the proxy group that are currently engaged in transformative transactions because the market data reported for these companies (stock prices and growth rates) may not reflect the ongoing operations of the business until such transactions are completed.

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 ROE determined?

A. The required ROE is estimated by using one or more analytical techniques that rely on market-based data to quantify investor expectations regarding required 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. 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 establish your recommended ROE in this proceeding?

A. I considered the results of the CGDCF model, the TGDCF model, the CAPM model, the ECAPM model, and the BYRP methodology. As discussed in more detail below, a reasonable ROE estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results.

Q. Is it necessary to modify the models relied upon to estimate the cost of equity for a private company as compared to a public company such as ALLETE prior to the transaction?

A. No. The cost of equity that is being estimated in this proceeding is the investor required return in the utility, which is unchanged from how the cost of equity was

estimated in Minnesota Power's last rate proceeding. Therefore, since the return that is being established in this case is based on the risk of Minnesota Power, the ownership of the utility does not change the methodologies used to estimate the cost of equity. Over the last several decades, the utility industry has contracted significantly through mergers and acquisitions of publicly traded utilities. These transactions do not change the approach to estimating the cost of the investor-required return on equity. The traditional models use market data, available for the publicly traded companies that are determined to be most comparable to the subject utility to estimate the cost of equity for the utility operations.

Q. Is it important to use more than one analytical approach?

A. Yes. 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 Minnesota Power uses 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[38] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski[39] recommend the CAPM, DCF, and BYRP approaches.

[38] Tom Copeland, Tim Koller, and Jack Murrin, *Valuation: Measuring and Managing the Value of Companies* at 214 (New York, McKinsey & Company, Inc., 3rd ed.) (2000).
[39] Eugene Brigham and Louis Gapenski, *Financial Management: Theory and Practice* at 341 (Orlando, Dryden Press) (1994).

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

A. Yes. For example, the Commission emphasized the importance of considering the results of each model submitted by the witnesses in authorizing the ROE for MERC in its 2018 rate proceeding:

> Not all models are equally probative, and not every application of the same model is equally probative. The Commission examines the results of every model introduced into the record in every case. In this case, the Commission agrees with the ALJ that the DCF model is the best in the record for determining return on equity. The Commission finds that the transparency and objectivity of the DCF model make it the strongest, most credible model, and that the most reasonable way to proceed is to use its results as a baseline and to use the results of other models to check, inform, and refine those results.[40]

In that order, the Commission concluded that the results of the DCF models and the other models in the case supported the ROE that was authorized for MERC.[41] Similarly, the Commission explained in its order in the 2016 Minnesota Power rate proceeding that:

> The recommendations of the parties all fall into a fairly narrow and often overlapping range, though the DCF analyses tend to support a lower ROE in that range, and CAPM and risk premium models (and blended approaches) tend to support the higher end of the range.[42]

To account for the divergence between the results of the DCF models and the CAPM and BYRP analyses, the Commission authorized an ROE towards the higher end of the results of the DCF models.[43] Thus, the Commission recognizes the importance of considering the results of each model presented in the rate case since market conditions can cause the results produced by each of the models to diverge.

[40] *In re Application of Minn. Energy Res. Corp. for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G011/GR-17-563, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 27 (Dec. 26, 2018) (eDocket No. 201812-148702-01).
[41] *Id.*
[42] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-16-664, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 60 (Mar. 12, 2018) (eDocket No. 20183-140963-01).
[43] *Id.* at 61.

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:

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

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

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

Equation [2] is often referred to as the CGDCF 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 CGDCF model?

A. The CGDCF 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 violated, considered judgment and/or specific adjustments should be applied to the results.

Q. What market data did you use to calculate the dividend yield in your CGDCF model?

A. The dividend yield in my CGDCF model is based on the proxy companies' current annualized dividend and average closing stock prices over the 30-, 90-, and 180-trading days ended August 31, 2026.

Q. Why did you use 30-, 90-, and 180-day averaging periods?

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. The averaging period should also be reasonably representative of expected capital market conditions over the long term.

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

A. Yes. Because publicly traded 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 12-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 to the proxy group companies?

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. However, over the long run, dividend growth can only be sustained by earnings growth, meaning earnings are the fundamental driver of a company's ability to pay dividends. Therefore, projected earnings per share ("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 accurately reflect investor perceptions of a company's growth prospects.

Accordingly, I have incorporated a number of sources of long-term EPS growth rates into the constant growth DCF model.

Q. Which sources of long-term earnings growth rates did you use?

A. My CGDCF model incorporates three sources of long-term EPS growth rates: (1) *Zacks Investment Research* ("*Zacks*"); (2) *S&P Capital IQ*; and (3) *Value Line Investment Survey* ("*Value Line*").

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. Has the Commission supported the use of earnings growth rates in prior proceedings?

A. Yes. In its decision in Minnesota Power's 2021 Rate Case, the Commission recognized the widespread reliance on earnings growth rates and the reasonableness of using these growth rates in the DCF model:

> [T]he Department has not demonstrated inaccuracies in Minnesota Power's earnings estimates in this case to justify dismissing them from consideration. The investment community relies heavily on earnings estimates, which are rigorously audited to ensure compliance with accounting principles. And in the case of utilities, earnings estimates reflect industry-specific considerations, include

assumptions based on quantitative market data, and have not been shown to produce unreasonable returns.[44]

B. Two-Growth DCF Model

Q. Did you also consider a TGDCF model?

A. Yes. In order to address some of the limiting assumptions underlying the constant growth form of the DCF model, I also considered the results of a two-growth form of the DCF model. As with the CGDCF model, the two-growth form defines the cost of equity as the discount rate that sets the current price equal to the discounted value of future cash flows; however, unlike the CGDCF model, the TGDCF model removes the effect of earnings growth rates that are considered either too high or too low to be sustainable over the long-term.

Q. Has the Commission previously relied on the result of the TGDCF model?

A. Yes. The Commission has historically placed greater weight on the results of the TGDCF model and used the results of other analytical models such as the CAPM and BYRP analyses as a check on the reasonableness of the TGDCF results. Figure 6 summarizes 20 recent decisions issued by the Commission since 2010 in fully litigated rate cases. As shown, the Commission has relied on the results of the TGDCF model in every case beginning in 2013 (and also in 2011).

Figure 6. Commission's Reliance on the TGDCF Model

Date	Company	Docket No.	Case Type	Reliance on TGDCF (Yes/No)
2026	Northern States Power Co.	E-002/GR-24-320	Electric	Yes[45]
2023	Northern States Power Co.	E-002/GR-21-630	Electric	Yes[46]

[44] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-21-335, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 45 (Feb. 28, 2023) (eDocket No. 20232-1934586-01).

[45] *In re Application of N. States Power Co., dba Xcel Energy, for Auth. to Increase Rates for Elec. Serv. in the State of Minn.*, Docket No. E002/GR-24-320, FINDINGS OF FACT, AND CONCLUSIONS, AND ORDER at 99, (Jul. 31, 2026) (eDocket No. 20267-234806-01).

[46] *In re Application of N. States Power Co., dba Xcel Energy, for Auth. to Increase Rates for Elec. Serv. in the State of Minn.*, Docket No. E002/GR-21-630, FINDINGS OF FACT, AND CONCLUSIONS, AND ORDER at 89-90 (Jul. 17, 2023) (eDocket No. 20237-197559-01).

Date	Company	Docket No.	Case Type	Reliance on TGDCF (Yes/No)
2023	Minnesota Power	E-015/GR-21-335	Electric	Yes[47]
2022	OTP	E-017/GR-20-719	Electric	Yes[48]
2020	Great Plains Natural Gas	G-004/GR-19-511	Gas	Yes[49]
2018	MERC	G-011/GR-17-563	Gas	Yes[50]
2017	Minnesota Power	E-015/GR-16-664	Electric	Yes[51]
2016	OTP	E-017/GR-15-1033	Electric	Yes[52]
2016	MERC	G-011/GR-15-736	Gas	Yes[53]
2016	CenterPoint Energy Minnesota Gas	G-008/GR-15-424	Gas	Yes[54]
2016	Great Plains Natural Gas	G-004/GR-15-879	Gas	Yes[55]

[47] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-21-335, FINDINGS OF FACT, AND CONCLUSIONS, AND ORDER at 35-46 (Feb. 28, 2023) (eDocket No. 20232-1934586-01).

[48] *In re Application of Otter Tail Power Co. for Auth. to Increase Rates for Elec. Serv. in the State of Minn.*, Docket No. E017/GR-20-719, FINDINGS OF FACT, AND CONCLUSIONS, AND ORDER at 34 (Feb. 1, 2022) (eDocket No. 20222-182349-01).

[49] *In re Petition by Great Plains Natural Gas Co., a Div. of Montana-Dakota Utils., Co., for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G004/GR-19-511, FINDINGS OF FACT, AND CONCLUSIONS, AND ORDER at 18 (Oct. 26, 2020) (eDocket No. 202010-167656-01).

[50] *In re Application of Minn. Energy Res. Corp. for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G011/GR-17-563, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 27 (Dec. 26, 2018) (eDocket No. 201812-148702-01).

[51] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-16-664, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 61 (Mar. 12, 2018) (eDocket No. 20183-140963-01).

[52] *In re Application of Otter Tail Power Co. for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E017/GR-15-1033, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 55 (May 1, 2017) (eDocket No. 20175-131511-01).

[53] *In re Application of Minn. Energy Res. Corp. for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G011/GR-15-736, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 27 (Oct. 31, 2016) (eDocket No. 201610-126124-01).

[54] *In re Application of CenterPoint Energy Res. Corp. d/b/a CenterPoint Energy Minn. Gas for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G008/GR-15-424, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 42-44 (June 3, 2016) (eDocket No. 20166-121975-01).

[55] *In re Petition by Great Plains Natural Gas Co., a Div. of MDU Res. Group, Inc., for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G004/GR-15-879, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 23 (Sept. 6, 2016) (eDocket No. 20169-124644-01).

Date	Company	Docket No.	Case Type	Reliance on TGDCF (Yes/No)
2014	Northern States Power Co.	E-002/GR-13-868	Electric	Yes[56]
2014	CenterPoint Energy Minnesota Gas	G-008/GR-13-316	Gas	Yes[57]
2014	MERC	G-011/GR-13-617	Gas	Yes[58]
2013	Northern States Power Company	E-002/GR-12-961	Electric	Yes[59]
2012	MERC	G-007,011/GR-10-977	Gas	No (used CGDCF)[60]
2011	IPL	E-001/GR-10-276	Electric	Yes[61]
2011	OTP	E-017/GR-10-239	Electric	No (CGDCF)[62]
2010	Northern States Power Company	G-002/GR-09-1153	Gas	No (CGDCF)[63]

[56] *In re Application of N. States Power Co. for Auth. to Increase Rates for Elec. Serv. in the State of Minn.*, Docket No. E002/GR-13-868, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 57 (May 8, 2015) (eDocket No. 20155-110264-01).

[57] *In re Application of CenterPoint Energy Res. Corp. d/b/a CenterPoint Energy Minn. Gas for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G008/GR-13-316, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 32 (June 9, 2014) (eDocket No. 20146-100252-01); *In re Application of CenterPoint Energy Res. Corp. d/b/a CenterPoint Energy Minn. Gas for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G-008/GR-13-316, DIRECT TESTIMONY OF EILON AMIT at 8-13 (Nov. 26, 2013) (eDocket No. 201311-94112-02).

[58] *In re Petition by Minn. Energy Res. Corp. for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G011/GR-13-617, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 31-32 (Oct. 28, 2014) (eDocket No. 201410-104203-01).

[59] *In Application of N. States Power Co. for Auth. to Increase Rates for Elec. Serv. in the State of Minn.*, Docket No. E002/GR-12-961, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 43 (Sept. 3, 2013) (eDocket No. 20139-90902-01); [59] *In Application of N. States Power Co. for Auth. to Increase Rates for Elec. Serv. in the State of Minn.*, Docket No. E002/GR-12-961, Surrebuttal Testimony of Eilon Amit at 5 and Appendix A (Apr. 12, 2013) (eDocket No. 20134-85655-02).

[60] *In re Application of Minn. Energy Res. Corp. for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G007,011/GR-10-977, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 23 (July 13, 2012) (eDocket No. 20127-76778-01).

[61] *In re Application of Interstate Power & Light Co. for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E001/GR-10-276, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 7-11 (Aug. 12, 2011) (eDocket No. 20118-65311-01); *In re Application of Interstate Power & Light Co. for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E-001/GR-10-276, DIRECT TESTIMONY OF EILON AMIT at 30-42 (Dec. 3, 2010) (eDocket No. 201012-57143-04).

[62] *In re Application of Otter Tail Power Co. for Auth. to Increase Rates for Elec. Utility Serv. in Minn.*, Docket No. E017/GR-10-239, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 43-44 (Apr. 25, 2011) (eDocket No. 20114-61715-01).

[63] *In re Application of N. States Power Co., a Minn. Corp., for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G002/GR-09-1153, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 28-29 (Dec. 6, 2010) (eDocket No. 201012-57199-01).

Date	Company	Docket No.	Case Type	Reliance on TGDCF (Yes/No)
2010	CenterPoint Energy Minnesota Gas	G-008/GR-08-1075	Gas	No (used CGDCF)[64]

Q. How did you apply the TGDCF to the companies in your proxy group?

A. This TGDCF approach that I have relied on is consistent with the approach adopted by the Commission in many proceedings. The TGDCF model starts with the same share price, dividend, and projected EPS growth rate data for the proxy group that is used in the CGDCF model. However, the TGDCF model applies the projected earnings growth rates as the short-term growth rate for years 1–5, and a long-term growth rate for years 6 and beyond for companies that are deemed to have earnings growth rates that are outliers. Outliers are defined as EPS growth rates that are either higher than the proxy group average growth rate plus one standard deviation or lower than the proxy group average growth rate minus one standard deviation. For EPS growth rates outside of this one standard deviation range, the proxy group average growth rate plus or minus one standard deviation from the mean is substituted as the measure of the long-term growth rate. This growth rate test is applied to the mean, low, and high earnings growth rates for the proxy group.

Q. Should proxy group companies with outlier earnings growth rates be excluded from the proxy group prior to calculating the TGDCF model?

A. No. As noted, the TGDCF model applies a statistical approach to address both projected EPS growth rates that are considered to be sustainable over the long term as well as to moderate those EPS growth rates that may not be considered sustainable over the long-term. Since the purpose of the TGDCF model is to account for growth rates that may not be sustainable over the long-term, excluding a company with a growth rate that the analyst perceives to be unsustainable is not appropriate as it will bias the results of the TGDCF model. Specifically, the removal of a company for an unsustainable growth rate will affect the calculation of the

[64] *In re Application of CenterPoint Energy for Auth. to Increase Natural Gas Rates in Minn.*, Docket No. G008/GR-08-1075, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 7-8 (Jan. 11, 2010) (eDocket No. 20101-45867-01).

average and standard deviation for the proxy group. These statistics are used to determine which growth rates are replaced in the second stage of the model. In this instance, the standard deviation for the proxy group will decrease and thus the range of growth rates considered sustainable also decreases. The result of removing a company could be that the growth rates of the companies that remain in the proxy group, which would otherwise be considered sustainable using the full proxy group, may be considered unsustainable in the standard deviation calculation. Therefore, interjecting an analyst's judgement about the growth rates before using the TGDCF model biases the statistical analysis that is fundamental to the TGDCF analysis and can alter the results of the TGDCF model.

Q. Has the Commission previously discussed the purpose of the TGDCF model?

A. Yes. In its order in Docket No. G011/GR-15-736, the Commission noted:

> The DCF model uses the current dividend yield and the expected growth rate of dividends to determine what rate of return is high enough to induce investment. The model is derived from a formula used by investors to assess the attractiveness of investment opportunities using three inputs—dividends, market equity prices, and earnings/dividend growth rates. *Its two basic variants are the Constant-Growth DCF, the classic version, and the Two-Growth DCF, designed for situations in which the short-term, projected earnings growth rates may not be expected to continue in the long run.* The two-growth model uses one growth rate for an initial period, followed by a different growth rate for the long term.[65]

In summary, the Commission noted that the purpose of the TGDCF model is to identify and adjust for growth rates that are not expected to be sustainable in the long-run. This is consistent with my understanding of the TGDCF model.

[65] *In re Application of Minn. Energy Res. Corp. for Auth. to Increase Rates for Natural Gas Serv. in Minn.*, Docket No. G011/GR-15-736, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 20 (Oct. 31, 2016) (eDocket No. 201610-126124-01) (emphasis added).

C. DCF Model Results

Q. How did you calculate the range of results for the CGDCF and TGDCF Models?

A. I calculated a low-end result for the DCF models using the minimum growth rate of the three sources (i.e., the lowest of the *Zacks*, *S&P Capital IQ*, 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. What are the results of your DCF analyses?

A. Figure 7 summarizes the results of my DCF analyses.

Figure 7. Discounted Cash Flow Results

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Constant Growth DCF (excluding flotation costs)			
30-Day Avg. Stock Price	9.52%	10.65%	11.70%
90-Day Avg. Stock Price	9.48%	10.61%	11.67%
180-Day Avg. Stock Price	9.62%	10.76%	11.75%
Average	9.54%	10.67%	11.70%
Two Growth DCF (excluding flotation costs)			
30-Day Avg. Stock Price	9.74%	10.93%	11.95%
90-Day Avg. Stock Price	9.69%	10.88%	11.90%
180-Day Avg. Stock Price	9.76%	10.95%	11.97%
Average	9.73%	10.92%	11.94%

D. Flotation Costs

Q. What are flotation costs?

A. Flotation costs are the costs associated with the sale of new issues of common stock. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other issuance costs.

Q. Why is it typically important to consider flotation costs in the authorized ROE?

A. A regulated utility must have the opportunity to earn an ROE that is both competitive and compensatory to attract and retain new investors. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diluting equity share value.

Q. Do your DCF model results include an adjustment for flotation cost recovery?

A. No, in the Settlement Stipulation on the Acquisition, Minnesota Power committed not to seek recovery of flotation costs.[66] While these are legitimate costs to recover through the rate of return and have been recognized by the Commission in prior cases, I have not adjusted the results of my CGDCF and TGDCF analyses to include flotation costs. The fact that Minnesota Power will not seek the recovery of flotation costs is a benefit to customers.

[66] *In the Matter of the Petition of Minn. Power for Acquisition of ALLETE by Canada Pension Plan Investment Board and Global Infrastructure* Partners, DOCKET NO. E015/PA-24-198, ORDER APPROVING PETITION FOR ACQUISITION WITH CONDITIONS AND ESTABLISHING OTHER REQUIREMENTS at 4 (Dec. 10, 2025) (eDocket No. 202512-225721-01).

Q. In recent Minnesota Power proceedings, has the Commission established an ROE with an explicit adjustment for flotation costs?

A. No. In recent proceedings, the Commission has established Minnesota Power's ROE taking into consideration the results of the TGDCF model, authorized ROEs and its judgement.[67]

E. 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. 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:

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

Where:

K_e = the required return of an individual security

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:

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

[67] *In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv. in Minn.*, Docket No. E015/GR-21-335, FINDINGS OF FACT, CONCLUSIONS AND ORDER at 45-46 (Feb. 28, 2023) (eDocket No. 20232-1934586-01).

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 did 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 of 5.21 percent;[68] (2) the average projected 30-year Treasury yield for the fourth quarter of 2026 through the fourth quarter of 2027, which is 5.00 percent;[69] and (3) the average projected 30-year Treasury bond yield for the period 2028 through 2032 of 4.70 percent.[70]

Q. What beta coefficients did you use in your CAPM analysis?

A. As shown on MP Exhibit ___ (Bulkley), Direct Schedule 6, I used the beta coefficients for the proxy group companies as reported by *Value Line,* which are based on five years of weekly returns relative to the New York Stock Exchange Composite Index. Additionally, as shown in MP Exhibit ___ (Bulkley), Direct Schedule 6 and Schedule 7, I also consider an additional CAPM analysis that relies on the long-term average utility 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 2025.

Q. How did you estimate the market risk premium in the CAPM?

A. I estimated the market risk premium as the difference between the implied expected equity market return and the risk-free rate. As shown in MP Exhibit ___ (Bulkley), Direct Schedule 8, the expected market return is calculated using the CGDCF

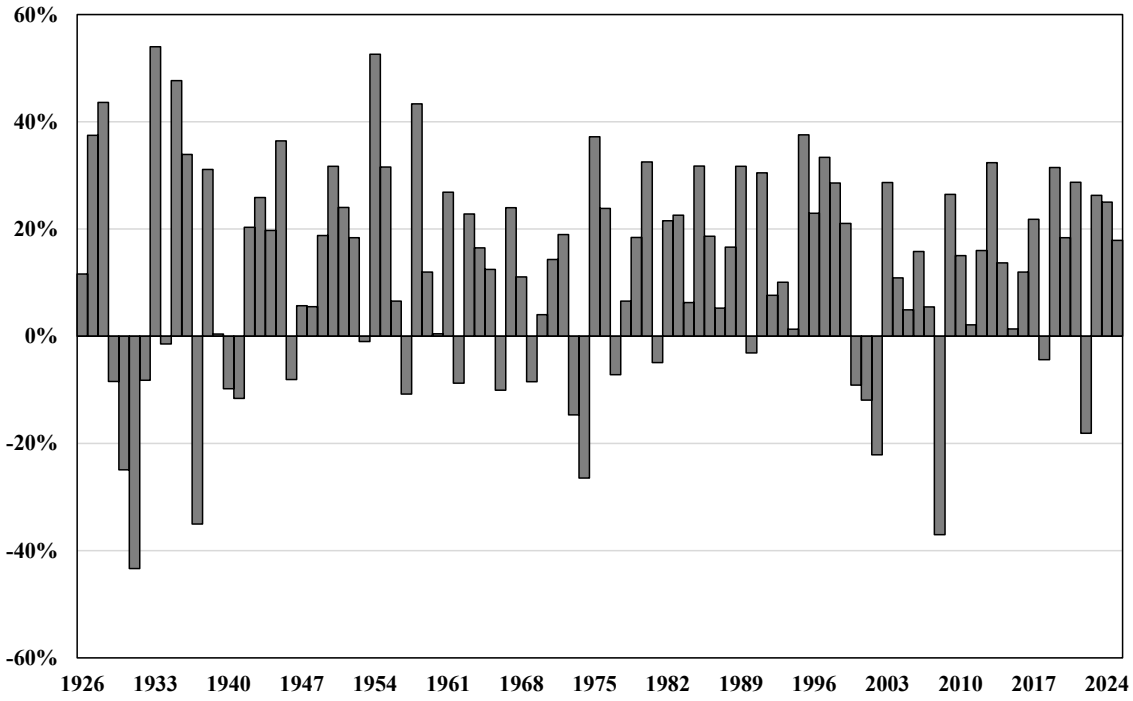
[68] Bloomberg Professional as of August 31, 2026.
[69] *Blue Chip Financial Forecasts* at 9, September 2026 Edition (Sept. 1, 2026).
[70] *Blue Chip Financial Forecasts* at 14, Vol. 45, No. 6 (June 1, 2026).

model discussed previously as applied to the companies in the S&P 500 Index. Based on an estimated market capitalization-weighted dividend yield of 1.35 percent and a weighted long-term growth rate of 11.95 percent, the estimated required market return for the S&P 500 Index as of August 31, 2026 is 13.39 percent. Based on the three risk-free rates considered, the market risk premium ranges from 8.18 percent to 8.69 percent as shown in MP Exhibit ___ (Bulkley), Direct Schedule 6.

Q. How does the current expected market return 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 13.64 percent is reasonable. As shown, in 53 out of the past 100 years (or roughly 53 percent of observations), the realized equity market return was 13.39 percent or greater.

Figure 8. Realized U.S. equity market returns (1926-2025)[71]



[71] Depicts total annual returns on large company stocks, as reported in the 2025 *Kroll* SBBI Yearbook.

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

A. Yes. I have also considered the results of an ECAPM in estimating the cost of equity for Minnesota Power.[72] 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:

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

Where:

k_e = the required return of an individual security;

β = Adjusted beta coefficient of an individual security;

rf = the risk-free rate of return; and

r_m = the required return on the market as a whole.

In essence, the empirical form of the CAPM addresses the tendency of the "traditional" CAPM to underestimate the COE 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 COE for companies with a beta less than 1.0 and overestimates the COE for companies with a beta greater than 1.0.[73]

Consistent with my CAPM, my application of the ECAPM uses the same three yields on the 30-year Treasury bonds as the risk-free rate, forward-looking market, and beta coefficients.

[72] *See, e.g.*, Roger A. Morin, New Regulatory Finance at 189 (Public Utilities Reports, Inc.) (2006).
[73] *Id*. at 191.

Q. What are the results of your CAPM and ECAPM analyses?

A. The results of my CAPM and ECAPM analyses are summarized in Figure 9 (*see also* MP Exhibit ___ (Bulkley), Direct Schedule 6).

Figure 9. CAPM and ECAPM Results

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	**Near-Term Projected**	**Longer-Term Projected**
CAPM			
Current *Value Line* Beta	11.21%	11.15%	11.07%
Long-term Avg. *Value Line* Beta	11.55%	11.50%	11.43%
ECAPM			
Current *Value Line* Beta	11.75%	11.71%	11.65%
Long-term Avg. *Value Line* Beta	12.01%	11.97%	11.92%

F. Bond Yield Plus Risk Premium Analysis

Q. Please describe the BYRP 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 ROE 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 companies as the historical measure of the ROE to determine the risk premium.

Q. What is the fundamental relationship between the equity risk premium and interest rates?

A. 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 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.[74]

Q. What did your BYRP analysis reveal?

A. As shown in Figure 10, 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:

$$RP = a + b(T) \quad [6]$$

Where:

RP = Risk Premium (difference between authorized ROEs and the yield on 30-year U.S. Treasury bonds)

a = intercept term

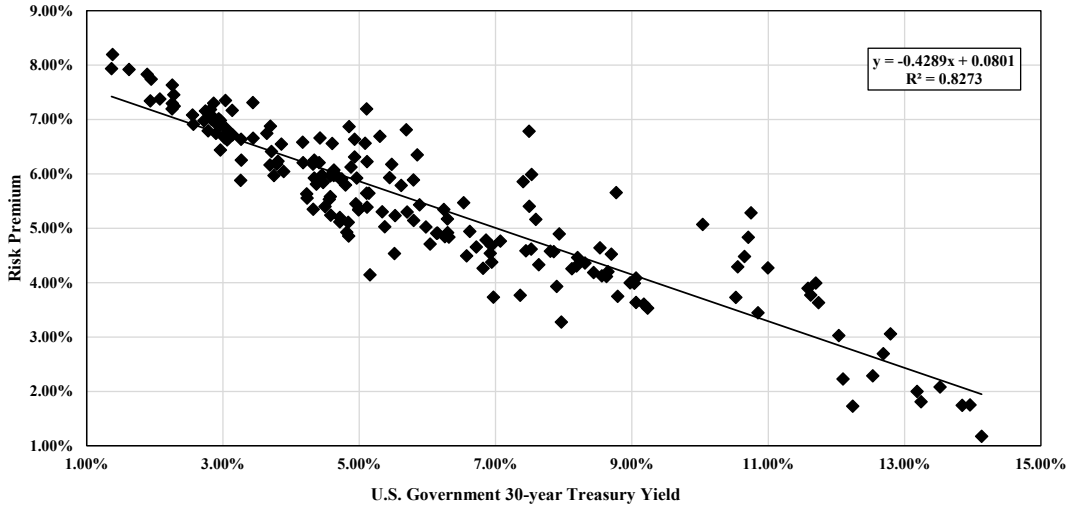
b = slope term

T = 30-year U.S. Treasury bond yield

Data regarding allowed ROEs were derived from all vertically integrated electric rate cases from 1980 through August 2026 as reported by Regulatory Research Associates ("RRA"). This equation's coefficients were statistically significant at the 99.00 percent level.

[74] *See, e.g.*, Keith S. Berry, *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* Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return* at 66, Financial Management (Spring 1986).

Figure 10. Risk Premium Regression Analysis



Q. What are the results of your BYRP analysis?

A. Figure 11 presents the results of the BYRP analysis, which is also presented in more detail in MP Exhibit ___ (Bulkley), Direct Schedule 9.

Figure 5. BYRP Results

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
Risk Premium Results	10.98%	10.87%	10.69%

Q. How did the results of the BYRP inform your recommended ROE for Minnesota Power?

A. I consider the results of the BYRP analysis as a check on the reasonableness of the DCF, CAPM, and ECAPM model results. It is reasonable to expect that investors are aware of and consider the ROE determinations by a regulator when assessing the risk of that company as compared to utilities of comparable risk operating in other jurisdictions. The BYRP analysis takes into account this comparison by estimating the return expectations of investors based on the current and past ROE awards of vertically integrated electric utilities across the U.S.

VIII. REGULATORY AND BUSINESS RISKS

Q. Please explain how you use the results of the COE models in estimating the utility's COE.

A. The results of the COE models based on the proxy group provide a range of the appropriate estimate of the utility's COE. However, in developing the proxy group, it is essential to balance the relative risk of the companies included in the proxy group with the overall size of the group. Therefore, it is always the case that the proxy companies do not have exactly the same risk profile as the subject company. As such, it is reasonable to review the relative risks of the proxy group companies and the subject company to determine how the subject company's risk profile compares with the group to determine the appropriate placement of the ROE within the range of results established using the proxy group companies. Further, consistent with the stand-alone principle, the subject company's risks should be evaluated as if it was a stand-alone entity and therefore, should not consider the effect of the subject company's parent company. As a result, I evaluated several additional factors that must be taken into consideration when determining where the utility's COE falls within the range of results. These factors, which are discussed below, should be considered with respect to their overall effect on the utility's stand-alone risk profile.

A. Customer Concentration

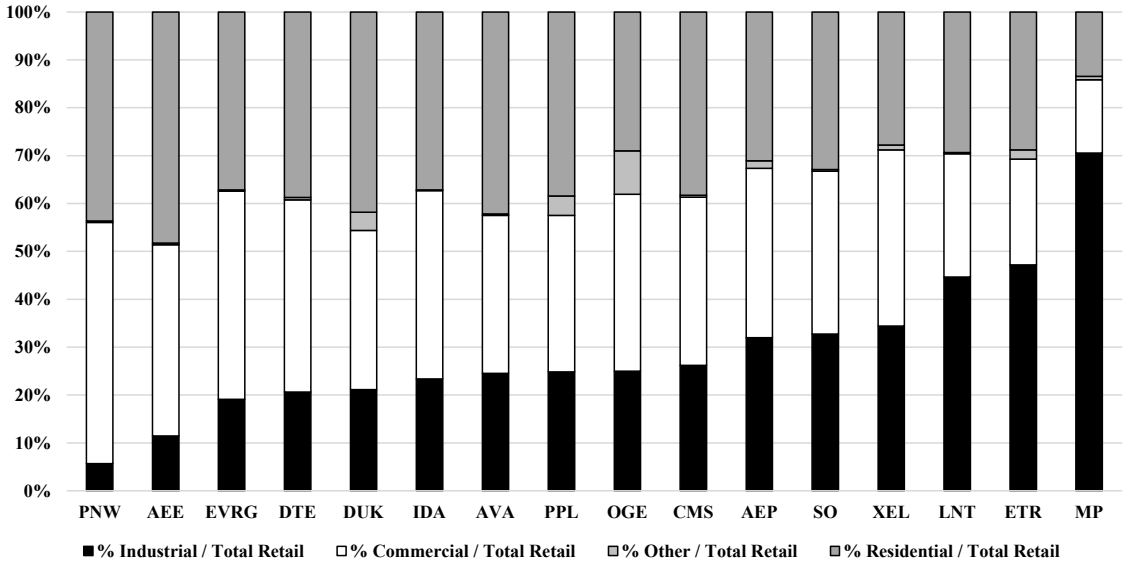
Q. Please summarize Minnesota Power's customer concentration risk.

A. Approximately 71 percent of Minnesota Power's 2025 total retail kWh electric sales in Minnesota were derived from industrial customers.[75] As shown in Figure 12, Minnesota Power's industrial sales volume as a percentage of total retail electric

[75] Based on FERC Form 1 for ALLETE, Inc. (2025); *See also In the Matter of the Petition of Minn. Power for Acquisition of ALLETE by Canada Pension Plan Investment Board and Global Infrastructure* Partners, Docket No. E015/PA-24-198, ALLETE, INC., FERC FORM 1, 2025/Q4 at 401a (May 1, 2025) (eDocket No. 20255-218418-03).

sales was higher than all of the companies in the proxy group by a significant margin.[76]

Figure 6. Customer Concentration[77]



Q. How does customer concentration affect business risk?

A. An extremely high concentration of industrial customers, operating in only two industries, each with the independent ability to create large swings in utility revenues, results in higher business risk. More specifically, over half of Minnesota Power's 2025 retail kWh electric sales came from the mining sector which consists of taconite facilities owned currently by two companies.[78]

Consolidation of load into fewer large customers can create risk because a significant portion of a company's sales could be lost if a customer goes out of business or experiences an economic downturn. As noted by Dhaliwal, Judd, Serfling and Shaikh in their article, *Customer Concentration Risk and the Cost of Equity Capital*:

[76] Does not include "other" commercial or residential customers.
[77] *See* S&P Global Market Intelligence - Other sales includes: Total Public Street and Highway Lighting, Other Sales to Public Authorities, Sales to Railroad and Railways, and Interdepartmental Sales.
[78] *See* Direct Testimony of Company witness Arik C. Forsman.

> Depending on a major customer for a large portion of sales can be risky for a supplier for two primary reasons. First, a supplier faces the risk of losing substantial future sales if a major customer becomes financially distressed or declares bankruptcy, switches to a different supplier, or decides to develop products internally. Consistent with this notion, Hertzel et al. (2008) and Kolay et al. (2015) document negative supplier abnormal stock returns to the announcement that a major customer declares bankruptcy. Further, a customer's weak financial condition or actions could signal inherent problems about the supplier's viability to its remaining customers and lead to compounding losses in sales. Second, a supplier faces the risk of losing anticipated cash flows from being unable to collect outstanding receivables if the customer goes bankrupt. This assertion is consistent with the finding that suppliers offering customers more trade credit experience larger negative abnormal stock returns around the announcement of a customer filing for Chapter 11 bankruptcy (Jorion and Zhang, 2009; Kolay et al., 2015).[79]

Therefore, a company that has a high degree of customer concentration will be inherently riskier than a company that derived income from a larger customer base. Furthermore, as Dhaliwal, Judd, Serfling and Shaik detail in the article, the increased risk associated with a more concentrated customer base will have the effect of increasing a company's cost of equity.[80]

Q. Please describe how changes in economic conditions and Minnesota Power's high degree of customer concentration can affect its business risk.

A. Minnesota Power's major industrial customers are engaged in industries such as taconite mining and processing, pulp and paper manufacturing, and pipelines. Taconite processing constitutes over half of Minnesota Power's retail kWh sales and is highly dependent on economic conditions and the business cycle as taconite is an input into steel which is used in durable consumer goods. Pulp and paper manufacturing companies (i.e., paper mills) are also facing decreased demand as companies are moving away from printed materials and instead providing information electronically.

[79] Dan S. Dhaliwal, J. Scott Judd, Matthew A. Serfling, and Sarah Shaikh, *Customer Concentration Risk and the Cost of Equity Capital* at 1-2, SSRN Electronic Journal (Feb. 2016)
[80] *Id.* at 4.

Q. How have mining and logging employment faired in recent economic conditions?

A. As shown in Figure 13, total mining and logging employment in Minnesota has been volatile. As a result of COVID-19, mining and logging employment decreased from 6,600 in February 2020 to a low of 5,300 in June 2020 before rebounding to close to pre-recession levels at the end of 2020. Similarly, during the Great Financial crises of 2008/2009, mining and logging employment decreased from a high of 6,300 in 2008 to a low of 4,300 in 2009 before rebounding to pre-recession levels in the beginning of 2011. Since 2021, employment has generally ranged from approximately 6,000 to 6,700.

Q. Are Minnesota Power's electric sales dependent on the taconite processing and paper manufacturing industries?

A. Yes. As discussed by Company witness Forsman, Minnesota Power provides service to all six of the taconite plants and four pulp and paper mills, in Minnesota Power's service territory which produce a variety of graphic paper and pulp to serve U.S. and global markets. The taconite mines represent more than 50 percent of the utility's total 2025 retail kWh energy sales. Forest products accounted for 10 percent of retail kWh energy sales in 2025 and is consolidated into four customers. The pipelines category, which accounted for four percent of retail kWh energy sales in 2025, is composed of two customers. The remaining approximately 390 other industrial customers account for four percent of retail kWh energy sales.[81]

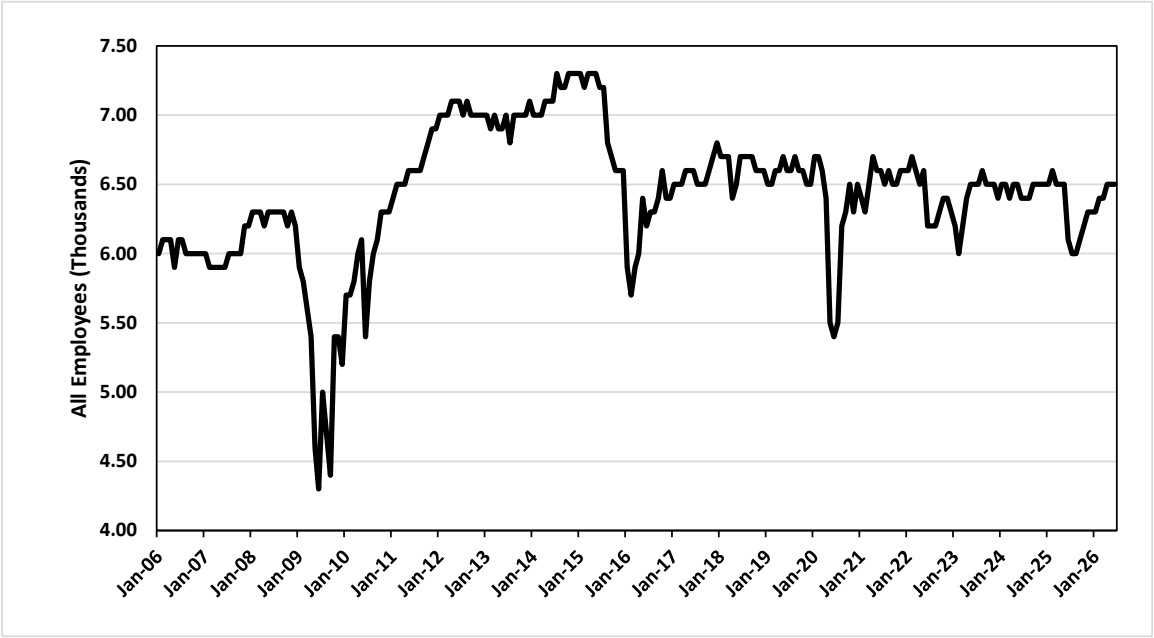
As discussed previously, the taconite mine ownership, with two companies controlling all six taconite mines is already highly consolidated. In March 2025, one of the companies idled or partially idled two mines due to soft market demand.[82] As a result, consolidation of the ownership in the mines and fluctuations

[81] *See* Direct Testimony of Company witness Forsman.

[82] Lydia Taylor, *Cleveland-Cliffs stops development of production plant, idles multiple facilities*, Spectrum News 1, (May 8, 2025), https://spectrumnews1.com/oh/columbus/news/2025/05/08/cleveland-cliffs-facilities-production.

in the business cycle could have a large impact on Minnesota Power's retail electric sales. Furthermore, while there have already been reductions in taconite production, resulting in the loss of more than 600 jobs, if paper mills also reduced output due to weak economic conditions, the effect could be compounded if local employment declined further leading to persons and businesses moving to other areas and reducing the electric sales for Minnesota Power.

Figure 7. Minnesota Mining and Logging Employment (Thousands)[83]



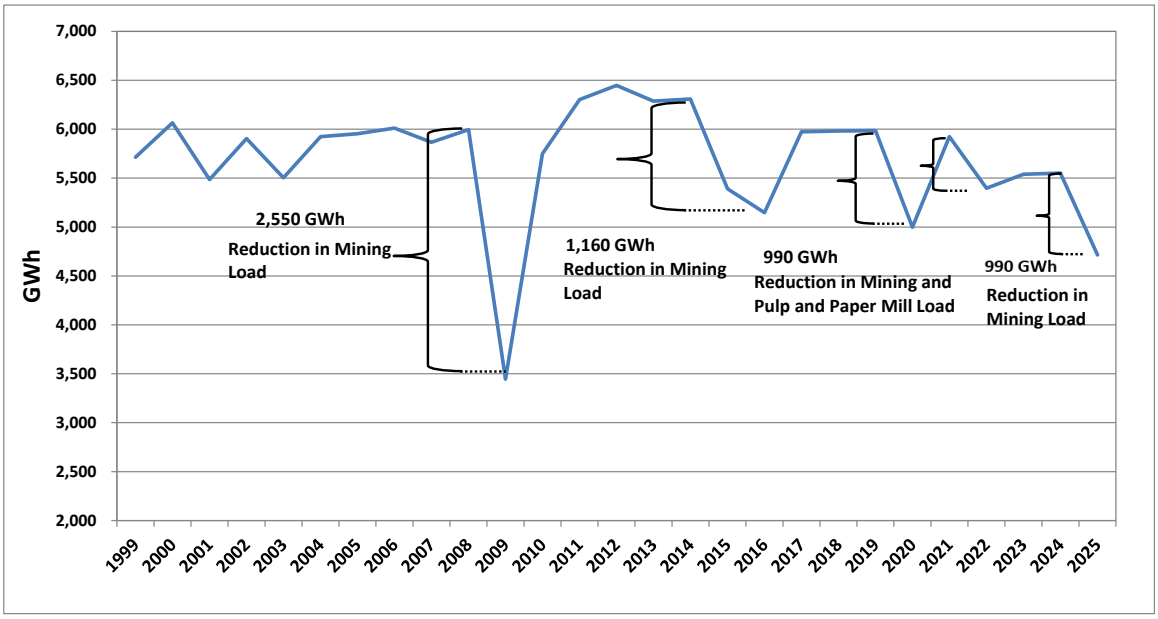
Q. How have the utility's sales been affected by changes in the business cycle of its large industrial customers?

A. As shown in Figure 14, energy sales to industrial customers have been significantly affected by the business cycle. In 2009, sales fell sharply in response to the recession. The decrease in 2009 was primarily related to the mining industry curtailing production. There was another downturn in 2015-2016 that was also mainly related to the taconite mines curtailing production as a result of increased

[83] U.S. Bureau of Labor Statistics, State and Area Employment, Hours, and Earnings, Minnesota Mining and Logging employment, Series Id: SMS27000001000000001.

competition from steel imports as global steel production increased. In 2020, the COVID-19 pandemic had a substantial impact on these customers. Since that time, mining load has been volatile. Mining load rebounded in 2021; however, significant reductions occurred in both 2022 and 2025. As discussed by Company witness Forsman, domestic iron ore production has experienced temporary and indefinite idlings and permanent closures for a variety of reasons. Company witness Forsman provides examples including the early closures of Cleveland Cliffs' Empire Mine and Magnetation's iron ore concentrate facilities in Minnesota, the indefinite idling of Minorca, and the partial idling of Hibbing Taconite.

Figure 8. Minnesota Power Sales to Large Power ("LP") Customers



Q. Have credit rating agencies commented on the effect of the utility's customer concentration on credit metrics?

A. Yes. For example, in its recent research update, S&P noted that ALLETE's strong business risk profile reflects its smaller size and heightened exposure to cyclical industrial customers including its taconite mining customers.[84]

[84] S&P Global Ratings, *ALLETE Inc. 'BBB' Rating Affirmed; Outlook Revised to Stable from Negative; First-Mortgage Bonds Rated 'A-'*, (Aug. 3, 2026), https://www.spglobal.com/ratings/en/regulatory/article/-/view/type/HTML/id/3604483.

Additionally, Moody's noted that the utility's high industrial customer exposure, one of the highest within the Moody's U.S. regulated utility universe, heightens the utility's business risk profile. Moody's further recognized that the three industries served by Minnesota Power, taconite producers, paper and wood products, and oil pipelines, face cyclical market conditions that are credit negative. "In the absence of decoupling from this exposure, lower than anticipated regulated loads from industrial customers can have a material negative impact on ALLETE's cash flow from operations."[85]

Q. What does this information indicate regarding the importance of the Commission's decision in this proceeding for Minnesota Power?

A. The credit rating agencies continued to identify ALLETE's regulated utility operations and cost-recovery mechanisms as important sources of credit support, while also recognizing the enhanced financial flexibility provided by the Acquisition of ALLETE. Moody's observed that constructive regulatory outcomes had improved the ALLETE's credit metrics through 2024 and that Minnesota Power's forward test year, interim rates, and rider mechanisms support timely cash-flow recovery; however, Moody's also noted that rate case outcomes have at times been inconsistent and that elevated capital spending, the rate moratorium through the end of 2026, and uncertainty regarding the timing and outcome of the next rate case are expected to pressure the ALLETE's credit metrics. Moody's therefore indicated that a constructive outcome in Minnesota Power's next rate case, including the timely recovery of its capital investments, would be necessary to improve ALLETE's financial profile.[86]

[85] Moody's Investors Service, *ALLETE, Inc.: Update to credit analysis following rating action* at 8, (Dec. 23, 2025).
[86] *Id.*

Q. What is your conclusion regarding the utility's customer concentration and its effect on the cost of equity for Minnesota Power?

A. Minnesota Power is heavily reliant on sales to industrial customers. As noted above, approximately 71 percent of Minnesota Power's total 2025 retail electric sales in Minnesota were to industrial customers. This concentration is higher than all of the proxy group companies, especially when considering that over 50 percent of Minnesota Power's total retail electric sales are to industrial customers owned by only two companies. A high degree of customer concentration increases Minnesota Power's risk related to customer migration, economic conditions or competition.[87] Therefore, the risk of eroding revenue resulting from customer concentration is higher for Minnesota Power than the proxy group companies on average.

Minnesota Power is proposing a Sales Adjustment Mechanism to mitigate the risk posed by customer concentration. When considering the relative risk of the utility and the proxy group, it is important to recognize that most of the companies in the proxy group have some form of a mechanism to mitigate electric sales risk. Therefore, adopting a customer rate stabilization mechanism will result in volumetric risk for the utility that is similar to the volumetric risk faced by the proxy group companies and may bring Minnesota Power's business risk closer to the risk of the proxy group companies and the cost of equity that results from the models.

Absent the implementation of the sales true-up mechanism, Minnesota Power has significant risk related to its high concentration of sales in a small number of customers that are cyclical businesses, which is greater than the risk faced by the proxy group companies on average, the majority of which have some form of sales true-up mechanism. If the utility's proposed sales true-up mechanism were not approved, then the utility is at much higher overall risk than the proxy group companies, which would suggest that the investor-required return would be at the higher end of the range of my model results.

[87] Conversely, greater customer diversity decreases the effect that any one customer can have on a company's sales.

B. Regulatory Risk

Q. Please explain how the regulatory environment affects 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 a reasonable 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 utility must have 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.

1. Credit Rating Agencies Perspectives on Regulatory Risk

Q. How do credit rating agencies consider regulatory risk in establishing a company's credit rating?

A. 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.[88]

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."[89] 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) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[90]

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

[88] Moody's Investors Service, *Rating Methodology: Regulated Electric and Gas Utilities* at 2 (Aug. 6, 2024).
[89] S&P Global Ratings, *Sector-Specific Corporate Methodology* at 147 (Apr. 4, 2024).
[90] *Id*.

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."[91] 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."[92]

Q. Have the credit rating agencies identified significant risk factors for utilities in the current regulatory environment?

A. Yes. The credit rating agencies have identified political risk as well as pressures related to affordability at a time when utilities have substantial capital investment. For example, at the end of 2025, Moody's maintained its "stable" outlook for 2026 for the regulated gas and electric utilities sector based on the expectation of continued regulatory support in "most states."[93] Specifically, Moody's noted the following factors: (1) macroeconomic factors are expected to be modestly credit negative due to upward pressure on natural gas prices and elevated inflation; and (2) increased power demand due to "the development of new data centers, electrification of transportation and buildings, manufacturing customers and underlying population growth" will increase power prices which when coupled with inflation and elevated capital spending increases utilities' exposure to affordability concerns.[94] In May 2026, Moody's issued a report indicating that political intervention in the rate process is credit negative for electric, gas and water utilities. Moody's also noted that "affordability is becoming an increasingly

[91] Moody's Investors Service, *Rating Methodology: Regulated Electric and Gas Utilities* at 8 (Aug. 6, 2024).
[92] *Id*.
[93] Moody's Ratings, Outlook, *Outlook Stable; supportive regulation to offset modestly negative macro factors* (Oct. 31, 2025).
[94] *Id.*

important credit consideration for regulated utilities in the US amid rising supply costs and steady inflation."[95]

Finally, in January 2026, S&P's outlook for the industry stated that after five years of downgrades outpacing upgrades, in 2025, upgrades outpaced downgrades and the percentage of companies with a negative outlook declined, which S&P noted pointed to a "more stable environment for credit quality in 2026."[96] However, S&P expected the industry to have increased cash flow deficits as a result of significant capital spending, which must be funded with both debt and equity to maintain credit quality.[97] S&P recognized the need for the utility industry to access capital markets to fund the significant capital expenditures. S&P also noted that credit quality would depend on the ability of utilities to manage regulatory risk and achieve fair rate case orders.

While S&P's base case resulted in a stable outlook for the utility sector, S&P stated that about 40 percent of the industry has "minimal financial cushion" from the downgrade threshold and therefore would have limited ability to absorb any unexpected events outside of what is assumed in S&P's base case.[98] Three months later, S&P issued a white paper that highlighted the risks associated with affordability concerns, highlighting the effect on credit quality.

> If affordability concerns persist, political intervention may intensify, posing risk to credit quality. Even in states where bills remain comparatively affordable, recent increases have proven politically salient. Rising competitive capacity costs, which utilities pass through to the customer bill, have already become a campaign issue in certain jurisdictions.

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[95] Moody's Ratings, Regulated Utilities- Pennsylvania, *Political Intervention in rate process is credit negative for electric, gas and water utilities* (May 19, 2026).
[96] S&P Global Ratings. Industry Credit Outlook 2026, *North American Regulated Utilities: Data center growth will support credit quality in 2026* (Jan. 14, 2026).
[97] *Id.*
[98] *Id.*

> Over time, persistently elevated bills may result in less credit-supportive rate case outcomes, eroding financial stability. [99]

Fitch Ratings ("Fitch") had a "neutral" outlook for the utility industry going into 2026, noting that the stable outlook was supported by growth in sales related to data centers and a "generally benign" regulatory environment for utilities.[100] Fitch viewed load growth as a "positive development"; however, because the growth is related to data centers, it raises longer-term uncertainty related to "rate design, customer concentration, and technology risks".[101] Further, at that time, Fitch expected capital expenditures for the industry to "set records" in order to meet the growing demand and to enhance reliability and modernization and noted the need for a balanced regulatory environment to facilitate cost recovery in a credit supportive manner.[102] On June 12, 2026, Fitch downgraded its outlook on the North American Utilities sector from "neutral" to "deteriorating", reflecting rising affordability concerns that are increasing political and regulatory risk for the sector."[103] Further, Fitch noted that "[w]hile our 2026 outlook issued in December 2025 identified regulatory resistance to rate increases as a key watchpoint, developments in 1H26 confirm that this risk is materializing faster and more broadly than anticipated."[104]

The continued concerns of the credit rating agencies over increased capital expenditures underscore the importance of maintaining adequate cash flow metrics for the utility in the context of this proceeding. A reasonable capital structure is key to maintaining supportive cash flow.

[99] S&P Global Ratings, Ratings Direct, White Paper: *Affordability Is Emerging As A Defining Issue For The U.S. Investor-Owned Electric Utility Industry* (Mar. 11, 2026).
[100] Fitch Ratings, *North American Utilities & Power Outlook 2026* at 1 (Dec. 9, 2025).
[101] *Id.*
[102] *Id.*
[103] FitchRatings, Fitch Wire, *FitchRatings Revises North American Utilities & Power Outlook to Deteriorating* (June 12, 2026).
[104] *Id*.

2. Regulatory Framework

Q. What analysis have you conducted to compare the regulatory framework in Minnesota relative to the jurisdictions in which the utility operating subsidiaries of the companies in your proxy group operate?

A. I have evaluated the regulatory framework in Minnesota on three factors that are important in terms of providing 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 provide revenue stabilization; and (3) the prevalence of capital cost recovery between rate cases. The results of this regulatory risk assessment are shown in MP Exhibit ___ (Bulkley), Direct Schedule 10 and are summarized below.

Test Year Convention: Minnesota Power is proposing a forecasted test year. As shown in MP Exhibit ___ (Bulkley), Direct Schedule 10, approximately 53.01 percent of the utility operating subsidiaries of the companies in the proxy group also have partially or fully forecast test years.

Volumetric Risk: Minnesota Power does not currently have protection against volumetric risk through a revenue decoupling mechanism, or straight fixed-variable rate design. However, the utility is proposing a sales true-up mechanism to help balance the increasing variability in the utility's industrial energy sales and to create an opportunity for customers to see the benefits from potential load growth. Approximately 61.45 percent of the utility operating subsidiaries of the proxy group companies have some form of protection against volumetric risk.

Alternative Regulation Plan: Minnesota Power does not currently operate under nor is the utility proposing an alternative regulation plan such as a formula rate plan or multi-year rate plan. Although, approximately 31.33 percent of the utility operating subsidiaries of the proxy group companies operate under an alternative regulation plan.

Capital Cost Recovery: Minnesota Power does have certain capital tracking mechanisms to recover a portion of capital investment costs between rate cases. In addition, the utility is proposing to establish a tracking mechanism to recover the dewatering costs related to the 2015 Coal Combustion Residuals Rule (2015 CCR Rule), which establishes standards for the safe disposal, design, operation, and closure of coal ash landfills and surface impoundments. While capital tracking mechanisms are available to the utility, not all of the costs included in the utility's capital expenditures plan would qualify for recovery through the capital tracking mechanisms. Approximately 81.93 percent of the utility operating subsidiaries of the proxy group companies have some form of capital cost recovery mechanism in place.

Q. Have you considered the utility's proposed property tax expense tracker?

A. Yes. As discussed in the Direct Testimony of Company witness Rena E. Verdoljak, the utility is proposing a mechanism to true-up the actual changes in property taxes in between rate proceedings to address the significant variability in its property tax expenses. Several Minnesota utility operating companies have also implemented property tax trackers. Xcel Energy was authorized a property tax tracker in its most recent rate case and multiple prior cases. In its most recent rate case settlement, CenterPoint Energy Minnesota Gas set property tax baselines for two years that carry forward until their next rate case. In addition, MERC has a property tax tracker.

Q. Are tracking mechanisms commonly implemented for expenses that are outside of the control of utilities?

A. Yes. As noted by S&P, the use of adjustment clauses for expenses that are outside of the control of the utility have expanded significantly:

> The use of adjustment clauses has expanded significantly. These clauses are generally reserved for expenses that are outside the utility's control or are required by law or rule. Some jurisdictions have approved the use of adjustment clauses to recover environmental compliance, energy efficiency and conservation program expenses, transmission

> charges allocated to the utility by the Federal Energy Regulatory Commission and investments associated with meeting renewable resource requirements.[105]

Q. Do analysts rank the various regulatory jurisdictions in terms of their relative credit supportiveness?

A. Yes. RRA and others provide a ranking of regulatory jurisdictions. RRA assigns a ranking for each regulatory jurisdiction as "Above Average," "Average," or "Below Average," and then within each of those categories, a numeric ranking from 1 to 3. Thus, the RRA rankings for each jurisdiction range from the most supportive of "Above Average/1" to the least supportive of "Below Average/3."

Q. Where is Minnesota in these rankings?

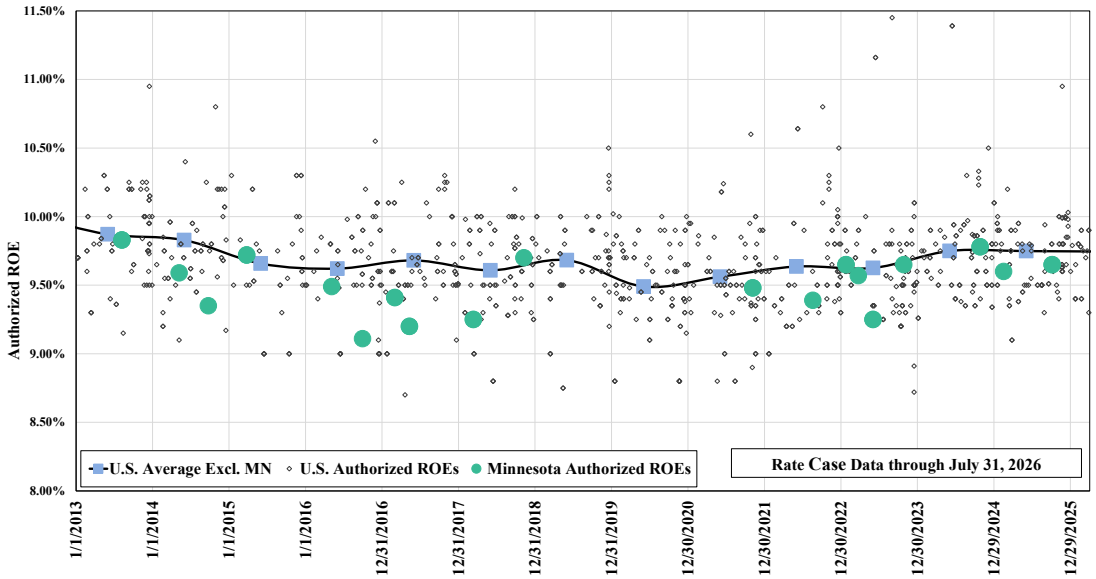
A. RRA ranks Minnesota as an Average/2 which is the middle score of the nine tiers.

Q. How do the returns that have been authorized in Minnesota compared with the authorized returns in other jurisdictions?

A. Figure 15 shows the authorized returns for vertically integrated electric utilities in Minnesota and in other jurisdictions throughout the United States over the past decade. As shown, since 2013, the authorized returns for vertically integrated electric utilities in Minnesota have generally been below the national average. In several instances, Minnesota's authorized ROEs were also near the lower end of the range of authorized ROEs approved in other state jurisdictions.

[105] S&P Global Market Intelligence, *RRA Regulatory Focus Adjustment Clauses: A State-by-State Overview* at 4 (Sept. 2025).

Figure 9. Comparison of Minnesota and U.S. Authorized Vertically Integrated Electric Returns[106]



Q. What is your overall conclusion regarding the business and regulatory risk for Minnesota Power?

A. Minnesota Power has greater risk than the proxy group overall. While the utility is proposing a forecasted test year, it does not have a revenue decoupling or other volumetric risk mitigation mechanism, or an alternative regulation plan or multi-year rate plans that are broadly relied upon in the proxy group companies. Further, Minnesota Power faces significant risk from customer concentration. For these reasons, I conclude that Minnesota Power has greater than average regulatory risk when compared to the proxy group, indicating that the authorized ROE for Minnesota Power should be higher than the proxy group mean/median.

[106] S&P Capital IQ Pro.

IX. CAPITAL STRUCTURE

Q. Is the utility's capital structure an important consideration in the determination of the appropriate ROE?

A. Yes. The equity ratio is the primary indicator of financial risk for a regulated utility such as Minnesota Power. All else equal, a higher debt ratio increases the risk to equity investors. For debt holders, higher debt ratios result in a greater portion of the available cash flow being required to meet debt service, thereby increasing the risk associated with the payments on debt. The result of increased risk is a higher interest rate. The incremental risk of a higher debt ratio is more significant for common equity shareholders, whose claim on the cash flow of the utility is secondary to the claim of debt holders. Therefore, the greater the debt service requirement, the less cash flow available for common equity holders. To the extent the equity ratio is reduced, it is necessary to increase the authorized ROE to compensate investors for the greater financial risk associated with a lower equity ratio.

Q. What is Minnesota Power's proposed capital structure?

A. The utility is proposing to maintain a capital structure consisting of 53.00 percent common equity and 47.00 percent long-term debt.

Q. Did you conduct any analysis to determine if this requested equity ratio was reasonable?

A. Yes. I compared the utility's proposed capital structure relative 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 equity ratios for the utility.

Q. Why do you compare the utility's proposed capital structure to the capital structures of the proxy group companies at the operating company level as opposed to the holding company level?

A. The capital structure at the holding company level includes corporate-level debt that is not part of the regulated or financial capital structure of the operating utilities. Simply because the parent companies in the proxy group are used to estimate the utility's cost of equity does not mean that the holding company capital structures are the relevant comparators for establishing the utility's authorized capital structure. There is no question that the utility subsidiaries of those holding companies are more comparable to the utility in terms of risk. Holding companies have multiple regulated utility subsidiaries, including in multiple jurisdictions, as well as unregulated operations or other business activities, which differs from the utility's purely regulated utility operations in a single jurisdiction. Therefore, the appropriate comparison for the utility's proposed capital structure is a comparison to the capital structures of the utility subsidiaries of the proxy group companies since they are the most comparable to the utility.

Q. Please discuss your analysis of the capital structures of the proxy group companies.

A. I calculated the average proportion of common equity, long-term debt, and preferred equity for the most recent eight quarters for each of the companies in the proxy group at the operating subsidiary level. As shown on MP Exhibit ___ (Bulkley), Direct Schedule 11, the average common equity ratio for the operating subsidiaries of the proxy group companies was 52.36 percent (within a range from 48.52 percent to 59.83 percent). Minnesota Power's proposed equity ratio of 53.00 percent is within the range of equity ratios for the utility operating subsidiaries of the proxy group companies. Considering the utility's business risk, which is higher than the proxy group on average, I consider their proposed equity ratio to be reasonable.

X. CONCLUSIONS AND RECOMMENDATION

Q. What is your conclusion regarding a fair ROE for Minnesota Power?

A. Based on the quantitative and qualitative analyses presented in my direct testimony and summarized in Figure 16 and the business and financial risks of the utility as compared to the proxy group, I conclude that a reasonable range for the utility's ROE is between 10.25 to 11.25 percent and that the utility's ROE would be at the higher end of the range. Therefore, the utility's request to maintain an ROE of 9.78 percent, consistent with the Commission's recent decision, is reasonable.

Figure 10. Summary of Analytical Results

COST OF EQUITY ANALYSES
SUMMARY OF RESULTS AS OF AUGUST 31, 2026

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Constant Growth DCF (excluding flotation costs)			
30-Day Avg. Stock Price	9.52%	10.65%	11.70%
90-Day Avg. Stock Price	9.48%	10.61%	11.67%
180-Day Avg. Stock Price	9.62%	10.76%	11.75%
Average	9.54%	10.67%	11.70%
Two Growth DCF (excluding flotation costs)			
30-Day Avg. Stock Price	9.74%	10.93%	11.95%
90-Day Avg. Stock Price	9.69%	10.88%	11.90%
180-Day Avg. Stock Price	9.76%	10.95%	11.97%
Average	9.73%	10.92%	11.94%

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM			
Current *Value Line* Beta	11.21%	11.15%	11.07%
Long-term Avg. *Value Line* Beta	11.55%	11.50%	11.43%
ECAPM			
Current *Value Line* Beta	11.75%	11.71%	11.65%
Long-term Avg. *Value Line* Beta	12.01%	11.97%	11.92%
Bond Yield Risk Premium	10.98%	10.87%	10.69%

Q. Does this conclude your Direct Testimony?

A. Yes, it does.

Ann E. Bulkley

PRINCIPAL

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With more than 30 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 more than 150 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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TESTIMONY LISTING

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Commission				
Southwest Gas Corporation	02/26	Southwest Gas Corporation	Docket No. G-01551A-26-0018	Return on Equity
Tucson Electric Power Company	6/25	Tucson Electric Power Company	Docket No. G-01933A-25-0103	Return on Equity
UNS Gas	11/24	UNS Gas	Docket No. G-04204A-24-0237	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
California Public Utilities Commission				
Pacific Gas & Electric Company	03/25	Pacific Gas & Electric Company	25-03-010	Return on Equity
PacifiCorp, d/b/a Pacific Power	05/22	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				
Public Service Company of Colorado	12/25	Public Service Company of Colorado	Docket No. 25AL-0499G	Return on Equity
Public Service Company of Colorado	11/25	Public Service Company of Colorado	Docket No. 25AL-0494E	Return on Equity
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				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Connecticut Light & Power	07/26	Connecticut Light & Power	Docket No. 26-05-10	Return on Equity
United Illuminating	11/24	United Illuminating	Docket No. 24-10-04	Return on Equity
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
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				
Northern Natural Gas Company	07/25	Northern Natural Gas Company	Docket No. RP25-___	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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				
Intermountain Gas Co	05/25	Intermountain Gas Co	C-INT-G-25-02	Return on Equity
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
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				
MidAmerican Energy Company	07/26	MidAmerican Energy Company	D-26-0331	Return on Equity
MidAmerican Energy Company	03/26	MidAmerican Energy Company	D-26-0332	Return on Equity
Peoples Gas Light & Coke Company	01/26	Peoples Gas Light & Coke Company	D-26-0065	Return on Equity
North Shore Gas Company	01/26	North Shore Gas Company	D-26-0066	Return on Equity
Illinois American Water	01/26	Illinois American Water	Docket No. 26-127	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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				
MidAmerican Energy Company	07/26	MidAmerican Energy Company	Docket No. RPU-2026-0001	Return on Equity
MidAmerican Energy Company	02/25	MidAmerican Energy Company	Docket No. RPU-2025-0001	Return on Equity
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	01/25	Evergy Kansas	Docket No. 25-EKCE-294-RTS	Return on Equity
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	05/26	Kentucky American Water Company	Docket No. 2026-00094	Return on Equity
Kentucky American Water Company	04/25	Kentucky American Water Company	Docket No. 2025-____	Return on Equity
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	04/26	Central Maine Power	Docket No. 2026-043	Return on Equity
Central Maine Power	09/25	Central Maine Power	Docket No. 2025-____	Return on Equity
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 Department of Public Utilities				
Boston Gas Company	01/26	Boston Gas Company	DPU 26-50	Return on Equity
Berkshire Gas Company	11/25	Berkshire Gas Company	DPU 25-170	Return on Equity
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				
Consumers Energy	6/26	Consumers Energy	C-U-22070	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Consumers Energy	12/25	Consumers Energy	C-U-21981	Return on Equity
Consumers Energy	6/25	Consumers Energy	C-U-21870	Return on Equity
Consumers Energy	12/24	Consumers Energy	C-U-21806	Return on Equity
Upper Michigan Energy Resources Corporation	05/24	Upper Michigan Energy Resources Corporation	Case No. U-21541	Return on Equity
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
Minnesota Public Utilities Commission				
Otter Tail Power Company	10/25	Otter Tail Power Company	E017/GR-25-359	Return on Equity
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

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				
Evergy Metro Inc.	02/26	Evergy Metro Inc.	C-ER-2026-0143	Return on Equity
Ameren Missouri	06/26	Ameren Missouri	ER-2026-0291	Return on Equity
Missouri American Water Company	07/26	Missouri American Water Company	WR-2026-___	Return on Equity
Ameren Missouri	09/24	Ameren Missouri	File No. GR-2024-0369	Return on Equity
Missouri American Water Company	07/24	Missouri American Water Company	WR-2024-0320	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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				
Montana-Dakota Utilities Co.	9/25	Montana-Dakota Utilities Co.	D2025-09-072	Return on Equity
Montana-Dakota Utilities Co.	7/24	Montana-Dakota Utilities Co.	D2024-05-061	Return on Equity
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				
Southwest Gas Corporation	03/26	Southwest Gas Corporation	D-26-03021	Return on Equity
Nevada Power Company d/b/a NV Energy	02/25	Nevada Power Company d/b/a NV Energy	25-02016	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Nevada Power Company d/b/a NV Energy	03/23	Nevada Power Company d/b/a NV Energy	22-03028	Merger benefits
New Hampshire Public Utilities Commission				
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	05/19	Public Service Company of New Hampshire	DE-19-057	Return on Equity
New Jersey Board of Public Utilities				
New Jersey American Water Company, Inc.	01/26	New Jersey American Water Company, Inc.	WR26010010	Return on Equity
South Jersey Gas Company	11/25	South Jersey Gas Company	D-GR25110627	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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
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				
New York State Electric and Gas Company Rochester Gas and Electric	06/25	New York State Electric and Gas Company Rochester Gas and Electric	25-E-0375 25-G-0378 25-E-0379 25-G-0380	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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
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-23-342	Return on Equity
Montana-Dakota Utilities Co.	11/23	Montana-Dakota Utilities Co.	Case No. PU-23-341	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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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	05/26	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-470	Return on Equity
Cascade Natural Gas Corporation	11/25	Cascade Natural Gas Corporation	UG 525	Return on Equity
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
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				
PECo Energy Company	03/26	PECo Energy Company	Docket No. R-2026-3060859	Return on Equity
American Water Works Company Inc.	11/25	Pennsylvania-American Water Company	Docket No. R-2025-3057983 (water) Docket No. R-2025-3058051 (wastewater)	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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	08/26	MidAmerican Energy Company	D-NG26-006	Return on Equity
Otter Tail Power Co.	06/25	Otter Tail Power Co.	D-EL25-022	Return on Equity
Montana-Dakota Utilities Co.	10/23	Montana-Dakota Utilities Co.	Docket No. EL23-020	Return on Equity
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
Tennessee Public Utility Commission				
Tennessee American Water Company	04/24	Tennessee American Water Company	Docket No.24-00032	Return on Equity
Texas Public Utility Commission				
Sharyland Utilities, L.L.C.	05/25	Sharyland Utilities, L.L.C.	Docket No. 57994	Return on Equity
Electric Transmission Texas LLC	02/25	Electric Transmission Texas LLC	Docket No. 57518	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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				
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.	11/25	Virginia American Water Company, Inc.	Docket No. PUR-2025-00185	Return on Equity
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	05/26	Cascade Natural Gas Corporation	Docket No. UG-260127	Return on Equity
Puget Sound Energy Inc.	02/26	Puget Sound Energy Inc.	Docket No. UE-260005 UG-260006	Return on Equity
Cascade Natural Gas Corporation	03/24	Cascade Natural Gas Corporation	Docket No. UG-240008	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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				
West Virginia American Water Company	05/25	West Virginia American Water Company	Case No. 25-____-W-42T	Return on Equity
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	04/26	Wisconsin Power and Light	Docket No. 6690-UR-128	Return on Equity
Wisconsin Electric Power Company and Wisconsin Gas LLC	04/26	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-112	Return on Equity
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
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	05/26	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-710-ER-26	Return on Equity
Montana-Dakota Utilities Co.	06/25	Montana-Dakota Utilities Co.	Docket No. 20004-174-ER-25	Return on Equity
Montana-Dakota Utilities Co.	10/24	Montana-Dakota Utilities Co.	Docket No. 30013-415-GR-24	Return on Equity
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
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

COST OF EQUITY ANALYSES
SUMMARY OF RESULTS AS OF AUGUST 31, 2026

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Constant Growth DCF (excluding flotation costs)			
30-Day Avg. Stock Price	9.52%	10.65%	11.70%
90-Day Avg. Stock Price	9.48%	10.61%	11.67%
180-Day Avg. Stock Price	9.62%	10.76%	11.75%
Average	9.54%	10.67%	11.70%
Two Growth DCF (excluding flotation costs)			
30-Day Avg. Stock Price	9.74%	10.93%	11.95%
90-Day Avg. Stock Price	9.69%	10.88%	11.90%
180-Day Avg. Stock Price	9.76%	10.95%	11.97%
Average	9.73%	10.92%	11.94%

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM			
Current *Value Line* Beta	11.21%	11.15%	11.07%
Long-term Avg. *Value Line* Beta	11.55%	11.50%	11.43%
ECAPM			
Current *Value Line* Beta	11.75%	11.71%	11.65%
Long-term Avg. *Value Line* Beta	12.01%	11.97%	11.92%
Bond Yield Risk Premium	10.98%	10.87%	10.69%

PROXY GROUP SCREENING DATA AND RESULTS

Company	Ticker	[1] Dividends	[2] S&P Credit Rating Between BBB- and AAA	[3] Positive Growth Rates from at least two sources (S&P Capital IQ, Value Line, and Zacks)	[4] Generation Assets Included in Rate Base	[5] Net Generation as a % of Total Sales > 40%	[6] Regulated Elec. Operating Income / Total Operating Income > 60%	[7] Announced Merger
Alliant Energy Corporation	LNT	Yes	BBB+	Yes	Yes	78.34%	87.08%	No
Ameren Corporation	AEE	Yes	BBB+	Yes	Yes	69.50%	84.79%	No
American Electric Power Company, Inc.	AEP	Yes	BBB+	Yes	Yes	56.16%	95.39%	No
Avista Corporation	AVA	Yes	BBB	Yes	Yes	58.60%	75.63%	No
CMS Energy Corporation	CMS	Yes	BBB+	Yes	Yes	54.10%	63.56%	No
DTE Energy Company	DTE	Yes	BBB+	Yes	Yes	87.77%	64.14%	No
Duke Energy Corporation	DUK	Yes	BBB+	Yes	Yes	81.93%	89.73%	No
Entergy Corporation	ETR	Yes	BBB+	Yes	Yes	71.76%	97.84%	No
Evergy, Inc.	EVRG	Yes	BBB+	Yes	Yes	60.71%	100.00%	No
IDACORP, Inc.	IDA	Yes	BBB	Yes	Yes	66.12%	99.99%	No
OGE Energy Corporation	OGE	Yes	BBB+	Yes	Yes	40.81%	97.73%	No
Pinnacle West Capital Corporation	PNW	Yes	BBB+	Yes	Yes	66.01%	100.00%	No
PPL Corporation	PPL	Yes	A-	Yes	Yes	41.75%	94.40%	No
Southern Company	SO	Yes	A-	Yes	Yes	77.05%	78.69%	No
Xcel Energy Inc.	XEL	Yes	BBB+	Yes	Yes	58.37%	85.43%	No

Notes:

[1] Bloomberg Professional

[2] Bloomberg Professional

[3] S&P Capital IQ, Value Line Investment Survey, and Zacks

[4] S&P Capital IQ Pro

[5] S&P Capital IQ Pro

[6] Form 10-K's for 2025, 2024, and 2023

[7] S&P Capital IQ Pro Financial News Releases

CONSTANT GROWTH DCF
30-day Average Stock Prices

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Projected EPS Growth Rate	Zacks Projected EPS Growth Rate	S&P Capital IQ Projected EPS Growth Rate	Average Projected EPS Growth Rate	Cost of Equity: Minimum Growth Rate	Cost of Equity: Mean Growth Rate	Cost of Equity: Maximum Growth Rate
Alliant Energy Corporation	LNT	$2.14	$70.33	3.04%	3.16%	6.00%	7.90%	8.33%	7.41%	9.13%	10.57%	11.50%
Ameren Corporation	AEE	$3.00	$109.11	2.75%	2.86%	7.50%	7.70%	8.03%	7.74%	10.35%	10.60%	10.89%
American Electric Power Company, Inc.	AEP	$3.80	$126.31	3.01%	3.12%	5.50%	8.60%	8.81%	7.64%	8.59%	10.76%	11.95%
Avista Corporation	AVA	$1.97	$39.00	5.05%	5.17%	4.50%	4.10%	5.59%	4.73%	9.25%	9.90%	10.78%
CMS Energy Corporation	CMS	$2.28	$70.83	3.22%	3.34%	8.50%	7.10%	7.58%	7.73%	10.43%	11.07%	11.86%
DTE Energy Company	DTE	$4.66	$140.64	3.31%	3.42%	6.00%	6.00%	8.15%	6.72%	9.41%	10.14%	11.59%
Duke Energy Corporation	DUK	$4.34	$123.66	3.51%	3.62%	6.50%	6.40%	6.69%	6.53%	10.02%	10.15%	10.32%
Entergy Corporation	ETR	$2.56	$108.13	2.37%	2.52%	11.50%	13.30%	13.39%	12.73%	14.00%	15.25%	15.91%
Evergy, Inc.	EVRG	$2.78	$82.93	3.35%	3.49%	6.50%	9.10%	8.89%	8.16%	9.96%	11.65%	12.60%
IDACORP, Inc.	IDA	$3.52	$141.79	2.48%	2.58%	5.50%	9.10%	9.10%	7.90%	8.05%	10.48%	11.70%
OGE Energy Corporation	OGE	$1.70	$47.24	3.60%	3.71%	6.00%	5.60%	7.05%	6.22%	9.30%	9.93%	10.78%
Pinnacle West Capital Corporation	PNW	$3.64	$100.72	3.61%	3.74%	6.00%	5.80%	8.94%	6.91%	9.52%	10.65%	12.72%
PPL Corporation	PPL	$1.14	$35.34	3.23%	3.35%	8.00%	7.50%	7.91%	7.80%	10.85%	11.16%	11.36%
Southern Company	SO	$3.04	$92.18	3.30%	3.43%	5.00%	11.40%	8.21%	8.20%	8.38%	11.64%	14.89%
Xcel Energy Inc.	XEL	$2.37	$78.36	3.02%	3.16%	8.00%	9.40%	9.11%	8.84%	11.15%	12.00%	12.57%
Mean				3.26%	3.38%	6.73%	7.93%	8.39%	7.68%	9.89%	11.06%	12.09%
Median				3.23%	3.35%	6.00%	7.70%	8.21%	7.73%	9.52%	10.65%	11.70%

Notes:
[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1]/[2]
[4] Equals [3] x (1 + [8])
[5] Value Line
[6] Zacks
[7] S&P Capital IQ
[8] Equals average of [5], [6], [7]
[9] Equals [3] x (1 + (min([5], [6], [7])) + (min([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + (max([5], [6], [7])) + (max([5], [6], [7])

CONSTANT GROWTH DCF
90-day Average Stock Prices

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Projected EPS Growth Rate	[6] Zacks Projected EPS Growth Rate	[7] S&P Capital IQ 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	$2.14	$72.14	2.97%	3.08%	6.00%	7.90%	8.33%	7.41%	9.06%	10.49%	11.42%
Ameren Corporation	AEE	$3.00	$109.88	2.73%	2.84%	7.50%	7.70%	8.03%	7.74%	10.33%	10.58%	10.87%
American Electric Power Company, Inc.	AEP	$3.80	$129.23	2.94%	3.05%	5.50%	8.60%	8.81%	7.64%	8.52%	10.69%	11.88%
Avista Corporation	AVA	$1.97	$40.01	4.92%	5.04%	4.50%	4.10%	5.59%	4.73%	9.12%	9.77%	10.65%
CMS Energy Corporation	CMS	$2.28	$72.66	3.14%	3.26%	8.50%	7.10%	7.58%	7.73%	10.35%	10.99%	11.77%
DTE Energy Company	DTE	$4.66	$144.14	3.23%	3.34%	6.00%	6.00%	8.15%	6.72%	9.33%	10.06%	11.51%
Duke Energy Corporation	DUK	$4.34	$123.81	3.51%	3.62%	6.50%	6.40%	6.69%	6.53%	10.02%	10.15%	10.31%
Entergy Corporation	ETR	$2.56	$110.63	2.31%	2.46%	11.50%	13.30%	13.39%	12.73%	13.95%	15.19%	15.86%
Evergy, Inc.	EVRG	$2.78	$82.79	3.36%	3.49%	6.50%	9.10%	8.89%	8.16%	9.97%	11.66%	12.61%
IDACORP, Inc.	IDA	$3.52	$143.21	2.46%	2.55%	5.50%	9.10%	9.10%	7.90%	8.03%	10.45%	11.67%
OGE Energy Corporation	OGE	$1.70	$47.47	3.58%	3.69%	6.00%	5.60%	7.05%	6.22%	9.28%	9.91%	10.76%
Pinnacle West Capital Corporation	PNW	$3.64	$101.79	3.58%	3.70%	6.00%	5.80%	8.94%	6.91%	9.48%	10.61%	12.68%
PPL Corporation	PPL	$1.14	$35.82	3.18%	3.31%	8.00%	7.50%	7.91%	7.80%	10.80%	11.11%	11.31%
Southern Company	SO	$3.04	$92.85	3.27%	3.41%	5.00%	11.40%	8.21%	8.20%	8.36%	11.61%	14.86%
Xcel Energy Inc.	XEL	$2.37	$79.01	3.00%	3.13%	8.00%	9.40%	9.11%	8.84%	11.12%	11.97%	12.54%
Mean				3.21%	3.33%	6.73%	7.93%	8.39%	7.68%	9.85%	11.02%	12.05%
Median				3.18%	3.31%	6.00%	7.70%	8.21%	7.73%	9.48%	10.61%	11.67%

Notes:
[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 90-day average as of August 31, 2026
[3] Equals [1]/[2]
[4] Equals [3] x (1 + [8])
[5] Value Line
[6] Zacks
[7] S&P Capital IQ
[8] Equals average of [5], [6], [7]
[9] Equals [3] x (1 + (min([5], [6], [7])) + (min([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + (max([5], [6], [7])) + (max([5], [6], [7])

CONSTANT GROWTH DCF
180-day Average Stock Prices

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Projected EPS Growth Rate	[6] Zacks Projected EPS Growth Rate	[7] S&P Capital IQ 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	$2.14	$69.96	3.06%	3.17%	6.00%	7.90%	8.33%	7.41%	9.15%	10.58%	11.52%
Ameren Corporation	AEE	$3.00	$107.59	2.79%	2.90%	7.50%	7.70%	8.03%	7.74%	10.39%	10.64%	10.93%
American Electric Power Company, Inc.	AEP	$3.80	$126.00	3.02%	3.13%	5.50%	8.60%	8.81%	7.64%	8.60%	10.77%	11.96%
Avista Corporation	AVA	$1.97	$39.51	4.99%	5.10%	4.50%	4.10%	5.59%	4.73%	9.19%	9.83%	10.71%
CMS Energy Corporation	CMS	$2.28	$72.72	3.14%	3.26%	8.50%	7.10%	7.58%	7.73%	10.35%	10.98%	11.77%
DTE Energy Company	DTE	$4.66	$141.10	3.30%	3.41%	6.00%	6.00%	8.15%	6.72%	9.40%	10.13%	11.58%
Duke Energy Corporation	DUK	$4.34	$122.85	3.53%	3.65%	6.50%	6.40%	6.69%	6.53%	10.05%	10.18%	10.34%
Entergy Corporation	ETR	$2.56	$105.44	2.43%	2.58%	11.50%	13.30%	13.39%	12.73%	14.07%	15.31%	15.98%
Evergy, Inc.	EVRG	$2.78	$79.86	3.48%	3.62%	6.50%	9.10%	8.89%	8.16%	10.09%	11.79%	12.74%
IDACORP, Inc.	IDA	$3.52	$139.09	2.53%	2.63%	5.50%	9.10%	9.10%	7.90%	8.10%	10.53%	11.75%
OGE Energy Corporation	OGE	$1.70	$46.21	3.68%	3.79%	6.00%	5.60%	7.05%	6.22%	9.38%	10.01%	10.86%
Pinnacle West Capital Corporation	PNW	$3.64	$97.99	3.71%	3.84%	6.00%	5.80%	8.94%	6.91%	9.62%	10.76%	12.82%
PPL Corporation	PPL	$1.14	$36.12	3.16%	3.28%	8.00%	7.50%	7.91%	7.80%	10.77%	11.08%	11.28%
Southern Company	SO	$3.04	$91.54	3.32%	3.46%	5.00%	11.40%	8.21%	8.20%	8.40%	11.66%	14.91%
Xcel Energy Inc.	XEL	$2.37	$78.03	3.04%	3.17%	8.00%	9.40%	9.11%	8.84%	11.16%	12.01%	12.58%
Mean				3.28%	3.40%	6.73%	7.93%	8.39%	7.68%	9.92%	11.08%	12.12%
Median				3.16%	3.28%	6.00%	7.70%	8.21%	7.73%	9.62%	10.76%	11.75%

Notes:
[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 180-day average as of August 31, 2026
[3] Equals [1]/[2]
[4] Equals [3] x (1 + [8])
[5] Value Line
[6] Zacks
[7] S&P Capital IQ
[8] Equals average of [5], [6], [7]
[9] Equals [3] x (1 + (min([5], [6], [7])) + (min([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + (max([5], [6], [7])) + (max([5], [6], [7])

TWO GROWTH DCF
30-day Average Stock Prices
Average Growth Rate

		[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Average Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$70.33	3.04%	3.16%	7.41%	7.41%	10.57%	$0.00	$2.22	1.11	2.01	$2.38	1.22	1.95	$2.56	1.35	1.89	$2.75	1.49	1.84	$2.95	1.65	1.79	$3.17	$100.55	$60.85	$70.33
Ameren Corporation	AEE	$3.00	$109.11	2.75%	2.86%	7.74%	7.74%	10.60%	$0.00	$3.12	1.11	2.82	$3.36	1.22	2.74	$3.62	1.35	2.67	$3.90	1.50	2.60	$4.20	1.65	2.54	$4.52	$158.43	$95.74	$109.11
American Electric Power Company, Inc.	AEP	$3.80	$126.31	3.01%	3.12%	7.64%	7.64%	10.76%	$0.00	$3.95	1.11	3.56	$4.25	1.23	3.46	$4.57	1.36	3.36	$4.92	1.51	3.27	$5.30	1.67	3.18	$5.70	$182.50	$109.48	$126.31
Avista Corporation	AVA	$1.97	$39.00	5.05%	5.17%	4.73%	5.97%	10.93%	$0.00	$2.02	1.11	1.82	$2.11	1.23	1.72	$2.21	1.36	1.62	$2.32	1.51	1.53	$2.43	1.68	1.44	$2.57	$51.85	$30.87	$39.00
CMS Energy Corporation	CMS	$2.28	$70.83	3.22%	3.34%	7.73%	7.73%	11.07%	$0.00	$2.37	1.11	2.13	$2.55	1.23	2.07	$2.75	1.37	2.01	$2.96	1.52	1.95	$3.19	1.69	1.89	$3.44	$102.76	$60.79	$70.83
DTE Energy Company	DTE	$4.66	$140.64	3.31%	3.42%	6.72%	6.72%	10.14%	$0.00	$4.82	1.10	4.37	$5.14	1.21	4.24	$5.49	1.34	4.11	$5.85	1.47	3.98	$6.25	1.62	3.85	$6.67	$194.64	$120.09	$140.64
Duke Energy Corporation	DUK	$4.34	$123.66	3.51%	3.62%	6.53%	6.53%	10.15%	$0.00	$4.48	1.10	4.07	$4.77	1.21	3.93	$5.09	1.34	3.81	$5.42	1.47	3.68	$5.77	1.62	3.56	$6.15	$169.67	$104.61	$123.66
Entergy Corporation	ETR	$2.56	$108.13	2.37%	2.52%	12.73%	9.40%	12.22%	$0.00	$2.72	1.12	2.43	$3.07	1.26	2.44	$3.46	1.41	2.45	$3.90	1.59	2.46	$4.40	1.78	2.47	$4.81	$170.64	$95.89	$108.13
Evergy, Inc.	EVRG	$2.78	$82.93	3.35%	3.49%	8.16%	8.16%	11.65%	$0.00	$2.89	1.12	2.59	$3.13	1.25	2.51	$3.39	1.39	2.43	$3.66	1.55	2.36	$3.96	1.74	2.28	$4.28	$122.77	$70.75	$82.93
IDACORP, Inc.	IDA	$3.52	$141.79	2.48%	2.58%	7.90%	7.90%	10.48%	$0.00	$3.66	1.10	3.31	$3.95	1.22	3.23	$4.26	1.35	3.16	$4.60	1.49	3.09	$4.96	1.65	3.01	$5.35	$207.37	$125.99	$141.79
OGE Energy Corporation	OGE	$1.70	$47.24	3.60%	3.71%	6.22%	6.22%	9.93%	$0.00	$1.75	1.10	1.59	$1.86	1.21	1.54	$1.98	1.33	1.49	$2.10	1.46	1.44	$2.23	1.61	1.39	$2.37	$63.87	$39.79	$47.24
Pinnacle West Capital Corporation	PNW	$3.64	$100.72	3.61%	3.74%	6.91%	6.91%	10.65%	$0.00	$3.77	1.11	3.40	$4.03	1.22	3.29	$4.30	1.35	3.18	$4.60	1.50	3.07	$4.92	1.66	2.97	$5.26	$140.71	$84.82	$100.73
PPL Corporation	PPL	$1.14	$35.34	3.23%	3.35%	7.80%	7.80%	11.16%	$0.00	$1.18	1.11	1.07	$1.28	1.24	1.03	$1.38	1.37	1.00	$1.48	1.53	0.97	$1.60	1.70	0.94	$1.72	$51.45	$30.32	$35.34
Southern Company	SO	$3.04	$92.18	3.30%	3.43%	8.20%	8.20%	11.64%	$0.00	$3.16	1.12	2.83	$3.42	1.25	2.75	$3.71	1.39	2.66	$4.01	1.55	2.58	$4.34	1.73	2.50	$4.69	$136.72	$78.85	$92.18
Xcel Energy Inc.	XEL	$2.37	$78.36	3.02%	3.16%	8.84%	8.84%	12.00%	$0.00	$2.47	1.12	2.21	$2.69	1.25	2.15	$2.93	1.40	2.09	$3.19	1.57	2.03	$3.47	1.76	1.97	$3.78	$119.67	$67.92	$78.36
Mean				3.26%	3.38%	7.68%		10.93%																				

Standard Deviation [6]	1.71%
Avg. less Standard Dev [7]	5.97%
Avg. plus Standard Dev [8]	9.40%

Notes:

[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [5])
[5] Source: Schedule 2
[6] Standard Deviation of Column [5]
[7] Mean of Column [5], minus [6]
[8] Mean of Column [5], plus [6]
[9] If [5] > [8], then [8]; If [5] < [7], then [7], Else [5]
[10] ROE that sets [2] equal to [29] using Excel's goal seek function
[11] = [2] x [4]
[12] = (1 + [10]) ^ 1
[13] = [11] / [12]
[14] = [11] * (1 + [5])
[15] = (1 + [10]) ^ 2
[16] = [14] / [15]
[17] = [14] * (1 + [5])
[18] = (1 + [10]) ^ 3
[19] = [17] / [18]
[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
90-day Average Stock Prices
Average Growth Rate

		[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Average Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$72.14	2.97%	3.08%	7.41%	7.41%	10.49%	$0.00	$2.22	1.10	2.01	$2.38	1.22	1.95	$2.56	1.35	1.90	$2.75	1.49	1.85	$2.95	1.65	1.79	$3.17	$103.14	$62.64	$72.14
Ameren Corporation	AEE	$3.00	$109.88	2.73%	2.84%	7.74%	7.74%	10.58%	$0.00	$3.12	1.11	2.82	$3.36	1.22	2.75	$3.62	1.35	2.68	$3.90	1.50	2.61	$4.20	1.65	2.54	$4.52	$159.55	$96.50	$109.89
American Electric Power Company, Inc.	AEP	$3.80	$129.23	2.94%	3.05%	7.64%	7.64%	10.69%	$0.00	$3.95	1.11	3.56	$4.25	1.23	3.47	$4.57	1.36	3.37	$4.92	1.50	3.28	$5.30	1.66	3.19	$5.70	$186.72	$112.37	$129.23
Avista Corporation	AVA	$1.97	$40.01	4.92%	5.04%	4.73%	5.97%	10.80%	$0.00	$2.02	1.11	1.82	$2.11	1.23	1.72	$2.21	1.36	1.63	$2.32	1.51	1.54	$2.43	1.67	1.45	$2.57	$53.20	$31.86	$40.01
CMS Energy Corporation	CMS	$2.28	$72.66	3.14%	3.26%	7.73%	7.73%	10.99%	$0.00	$2.37	1.11	2.13	$2.55	1.23	2.07	$2.75	1.37	2.01	$2.96	1.52	1.95	$3.19	1.68	1.89	$3.44	$105.42	$62.60	$72.66
DTE Energy Company	DTE	$4.66	$144.14	3.23%	3.34%	6.72%	6.72%	10.06%	$0.00	$4.82	1.10	4.38	$5.14	1.21	4.24	$5.49	1.33	4.11	$5.85	1.47	3.99	$6.25	1.61	3.87	$6.67	$199.49	$123.55	$144.14
Duke Energy Corporation	DUK	$4.34	$123.81	3.51%	3.62%	6.53%	6.53%	10.15%	$0.00	$4.48	1.10	4.07	$4.77	1.21	3.94	$5.09	1.34	3.81	$5.42	1.47	3.68	$5.77	1.62	3.56	$6.15	$169.88	$104.76	$123.81
Entergy Corporation	ETR	$2.56	$110.63	2.31%	2.46%	12.73%	9.40%	12.15%	$0.00	$2.72	1.12	2.43	$3.07	1.26	2.44	$3.46	1.41	2.45	$3.90	1.58	2.47	$4.40	1.77	2.48	$4.81	$174.56	$98.37	$110.63
Evergy, Inc.	EVRG	$2.78	$82.79	3.36%	3.49%	8.16%	8.16%	11.66%	$0.00	$2.89	1.12	2.59	$3.13	1.25	2.51	$3.39	1.39	2.43	$3.66	1.55	2.36	$3.96	1.74	2.28	$4.28	$122.58	$70.62	$82.79
IDACORP, Inc.	IDA	$3.52	$143.21	2.46%	2.55%	7.90%	7.90%	10.45%	$0.00	$3.66	1.10	3.31	$3.95	1.22	3.24	$4.26	1.35	3.16	$4.60	1.49	3.09	$4.96	1.64	3.02	$5.35	$209.45	$127.40	$143.21
OGE Energy Corporation	OGE	$1.70	$47.47	3.58%	3.69%	6.22%	6.22%	9.91%	$0.00	$1.75	1.10	1.59	$1.86	1.21	1.54	$1.98	1.33	1.49	$2.10	1.46	1.44	$2.23	1.60	1.39	$2.37	$64.19	$40.02	$47.47
Pinnacle West Capital Corporation	PNW	$3.64	$101.79	3.58%	3.70%	6.91%	6.91%	10.61%	$0.00	$3.77	1.11	3.40	$4.03	1.22	3.29	$4.30	1.35	3.18	$4.60	1.50	3.07	$4.92	1.66	2.97	$5.26	$142.19	$85.87	$101.79
PPL Corporation	PPL	$1.14	$35.82	3.18%	3.31%	7.80%	7.80%	11.11%	$0.00	$1.18	1.11	1.07	$1.28	1.23	1.03	$1.38	1.37	1.00	$1.48	1.52	0.97	$1.60	1.69	0.94	$1.72	$52.16	$30.80	$35.82
Southern Company	SO	$3.04	$92.85	3.27%	3.41%	8.20%	8.20%	11.61%	$0.00	$3.16	1.12	2.84	$3.42	1.25	2.75	$3.71	1.39	2.66	$4.01	1.55	2.58	$4.34	1.73	2.50	$4.69	$137.71	$79.51	$92.85
Xcel Energy Inc.	XEL	$2.37	$79.01	3.00%	3.13%	8.84%	8.84%	11.97%	$0.00	$2.47	1.12	2.21	$2.69	1.25	2.15	$2.93	1.40	2.09	$3.19	1.57	2.03	$3.47	1.76	1.97	$3.78	$120.66	$68.56	$79.01
Mean				3.21%	3.33%	7.68%		10.88%																				

Standard Deviation [6]	1.71%
Avg. less Standard Dev [7]	5.97%
Avg. plus Standard Dev [8]	9.40%

Notes:

[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [5])
[5] Source: Schedule 2
[6] Standard Deviation of Column [5]
[7] Mean of Column [5], minus [6]
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[9] If [5] > [8], then [8]; If [5] < [7], then [7], Else [5]
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[13] = [11] / [12]
[14] = [11] * (1 + [5])
[15] = (1 + [10]) ^ 2
[16] = [14] / [15]
[17] = [14] * (1 + [5])
[18] = (1 + [10]) ^ 3
[19] = [17] / [18]
[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
180-day Average Stock Prices
Average Growth Rate

		[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Average Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$69.96	3.06%	3.17%	7.41%	7.41%	10.58%	$0.00	$2.22	1.11	2.01	$2.38	1.22	1.95	$2.56	1.35	1.89	$2.75	1.50	1.84	$2.95	1.65	1.79	$3.17	$100.01	$60.48	$69.96
Ameren Corporation	AEE	$3.00	$107.59	2.79%	2.90%	7.74%	7.74%	10.64%	$0.00	$3.12	1.11	2.82	$3.36	1.22	2.74	$3.62	1.35	2.67	$3.90	1.50	2.60	$4.20	1.66	2.53	$4.52	$156.21	$94.22	$107.59
American Electric Power Company, Inc.	AEP	$3.80	$126.00	3.02%	3.13%	7.64%	7.64%	10.77%	$0.00	$3.95	1.11	3.56	$4.25	1.23	3.46	$4.57	1.36	3.36	$4.92	1.51	3.27	$5.30	1.67	3.18	$5.70	$182.05	$109.17	$126.00
Avista Corporation	AVA	$1.97	$39.51	4.99%	5.10%	4.73%	5.97%	10.86%	$0.00	$2.02	1.11	1.82	$2.11	1.23	1.72	$2.21	1.36	1.62	$2.32	1.51	1.53	$2.43	1.67	1.45	$2.57	$52.53	$31.37	$39.51
CMS Energy Corporation	CMS	$2.28	$72.72	3.14%	3.26%	7.73%	7.73%	10.98%	$0.00	$2.37	1.11	2.13	$2.55	1.23	2.07	$2.75	1.37	2.01	$2.96	1.52	1.95	$3.19	1.68	1.89	$3.44	$105.51	$62.66	$72.72
DTE Energy Company	DTE	$4.66	$141.10	3.30%	3.41%	6.72%	6.72%	10.13%	$0.00	$4.82	1.10	4.37	$5.14	1.21	4.24	$5.49	1.34	4.11	$5.85	1.47	3.98	$6.25	1.62	3.86	$6.67	$195.28	$120.55	$141.10
Duke Energy Corporation	DUK	$4.34	$122.85	3.53%	3.65%	6.53%	6.53%	10.18%	$0.00	$4.48	1.10	4.07	$4.77	1.21	3.93	$5.09	1.34	3.80	$5.42	1.47	3.68	$5.77	1.62	3.56	$6.15	$168.56	$103.82	$122.85
Entergy Corporation	ETR	$2.56	$105.44	2.43%	2.58%	12.73%	9.40%	12.29%	$0.00	$2.72	1.12	2.42	$3.07	1.26	2.43	$3.46	1.42	2.44	$3.90	1.59	2.45	$4.40	1.79	2.46	$4.81	$166.43	$93.22	$105.44
Evergy, Inc.	EVRG	$2.78	$79.86	3.48%	3.62%	8.16%	8.16%	11.79%	$0.00	$2.89	1.12	2.59	$3.13	1.25	2.50	$3.39	1.40	2.42	$3.66	1.56	2.34	$3.96	1.75	2.27	$4.28	$118.24	$67.73	$79.86
IDACORP, Inc.	IDA	$3.52	$139.09	2.53%	2.63%	7.90%	7.90%	10.53%	$0.00	$3.66	1.11	3.31	$3.95	1.22	3.23	$4.26	1.35	3.15	$4.60	1.49	3.08	$4.96	1.65	3.01	$5.35	$203.42	$123.31	$139.09
OGE Energy Corporation	OGE	$1.70	$46.21	3.68%	3.79%	6.22%	6.22%	10.01%	$0.00	$1.75	1.10	1.59	$1.86	1.21	1.54	$1.98	1.33	1.49	$2.10	1.46	1.43	$2.23	1.61	1.38	$2.37	$62.48	$38.78	$46.21
Pinnacle West Capital Corporation	PNW	$3.64	$97.99	3.71%	3.84%	6.91%	6.91%	10.76%	$0.00	$3.77	1.11	3.40	$4.03	1.23	3.28	$4.30	1.36	3.17	$4.60	1.50	3.06	$4.92	1.67	2.95	$5.26	$136.88	$82.13	$97.99
PPL Corporation	PPL	$1.14	$36.12	3.16%	3.28%	7.80%	7.80%	11.08%	$0.00	$1.18	1.11	1.07	$1.28	1.23	1.03	$1.38	1.37	1.00	$1.48	1.52	0.97	$1.60	1.69	0.95	$1.72	$52.59	$31.09	$36.12
Southern Company	SO	$3.04	$91.54	3.32%	3.46%	8.20%	8.20%	11.66%	$0.00	$3.16	1.12	2.83	$3.42	1.25	2.75	$3.71	1.39	2.66	$4.01	1.55	2.58	$4.34	1.74	2.50	$4.69	$135.76	$78.22	$91.54
Xcel Energy Inc.	XEL	$2.37	$78.03	3.04%	3.17%	8.84%	8.84%	12.01%	$0.00	$2.47	1.12	2.21	$2.69	1.25	2.15	$2.93	1.41	2.09	$3.19	1.57	2.03	$3.47	1.76	1.97	$3.78	$119.16	$67.59	$78.03
Mean				3.28%	3.40%	7.68%		10.95%																				

Standard Deviation [6]	1.71%
Avg. less Standard Dev [7]	5.97%
Avg. plus Standard Dev [8]	9.40%

Notes:

[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [5])
[5] Source: Schedule 2
[6] Standard Deviation of Column [5]
[7] Mean of Column [5], minus [6]
[8] Mean of Column [5], plus [6]
[9] If [5] > [8], then [8]; If [5] < [7], then [7], Else [5]
[10] ROE that sets [2] equal to [29] using Excel's goal seek function
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[15] = (1 + [10]) ^ 2
[16] = [14] / [15]
[17] = [14] * (1 + [5])
[18] = (1 + [10]) ^ 3
[19] = [17] / [18]
[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
30-day Average Stock Prices
Minimum Growth Rate

		[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Minimum Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$70.33	3.04%	3.13%	6.00%	6.00%	9.13%	$0.00	$2.20	1.09	2.02	$2.34	1.19	1.96	$2.48	1.30	1.91	$2.63	1.42	1.85	$2.78	1.55	1.80	$2.95	$94.12	$60.80	$70.33
Ameren Corporation	AEE	$3.00	$109.11	2.75%	2.85%	7.50%	7.50%	10.35%	$0.00	$3.11	1.10	2.82	$3.35	1.22	2.75	$3.60	1.34	2.68	$3.87	1.48	2.61	$4.16	1.64	2.54	$4.47	$156.65	$95.72	$109.11
American Electric Power Company, Inc.	AEP	$3.80	$126.31	3.01%	3.09%	5.50%	5.50%	8.59%	$0.00	$3.90	1.09	3.60	$4.12	1.18	3.49	$4.35	1.28	3.39	$4.58	1.39	3.30	$4.84	1.51	3.20	$5.10	$165.09	$109.33	$126.31
Avista Corporation	AVA	$1.97	$39.00	5.05%	5.15%	4.10%	4.81%	9.84%	$0.00	$2.01	1.10	1.83	$2.09	1.21	1.73	$2.18	1.33	1.64	$2.27	1.46	1.56	$2.36	1.60	1.48	$2.47	$49.19	$30.76	$39.00
CMS Energy Corporation	CMS	$2.28	$70.83	3.22%	3.33%	7.10%	7.10%	10.43%	$0.00	$2.36	1.10	2.14	$2.53	1.22	2.07	$2.71	1.35	2.01	$2.90	1.49	1.95	$3.11	1.64	1.89	$3.33	$99.80	$60.76	$70.83
DTE Energy Company	DTE	$4.66	$140.64	3.31%	3.41%	6.00%	6.00%	9.41%	$0.00	$4.80	1.09	4.39	$5.09	1.20	4.25	$5.39	1.31	4.12	$5.72	1.43	3.99	$6.06	1.57	3.86	$6.42	$188.21	$120.03	$140.64
Duke Energy Corporation	DUK	$4.34	$123.66	3.51%	3.62%	6.40%	6.40%	10.02%	$0.00	$4.48	1.10	4.07	$4.77	1.21	3.94	$5.07	1.33	3.81	$5.40	1.47	3.68	$5.74	1.61	3.56	$6.11	$168.63	$104.60	$123.66
Entergy Corporation	ETR	$2.56	$108.13	2.37%	2.50%	11.50%	8.25%	11.05%	$0.00	$2.71	1.11	2.44	$3.02	1.23	2.45	$3.37	1.37	2.46	$3.75	1.52	2.47	$4.18	1.69	2.48	$4.53	$161.87	$95.84	$108.13
Evergy, Inc.	EVRG	$2.78	$82.93	3.35%	3.46%	6.50%	6.50%	9.96%	$0.00	$2.87	1.10	2.61	$3.06	1.21	2.53	$3.26	1.33	2.45	$3.47	1.46	2.37	$3.69	1.61	2.30	$3.93	$113.62	$70.67	$82.93
IDACORP, Inc.	IDA	$3.52	$141.79	2.48%	2.55%	5.50%	5.50%	8.05%	$0.00	$3.62	1.08	3.35	$3.82	1.17	3.27	$4.03	1.26	3.19	$4.25	1.36	3.12	$4.48	1.47	3.04	$4.73	$185.32	$125.83	$141.79
OGE Energy Corporation	OGE	$1.70	$47.24	3.60%	3.70%	5.60%	5.60%	9.30%	$0.00	$1.75	1.09	1.60	$1.85	1.19	1.54	$1.95	1.31	1.49	$2.06	1.43	1.44	$2.17	1.56	1.39	$2.29	$62.03	$39.77	$47.24
Pinnacle West Capital Corporation	PNW	$3.64	$100.72	3.61%	3.72%	5.80%	5.80%	9.52%	$0.00	$3.75	1.10	3.42	$3.96	1.20	3.30	$4.19	1.31	3.19	$4.44	1.44	3.08	$4.69	1.58	2.98	$4.97	$133.53	$84.75	$100.73
PPL Corporation	PPL	$1.14	$35.34	3.23%	3.35%	7.50%	7.50%	10.85%	$0.00	$1.18	1.11	1.07	$1.27	1.23	1.03	$1.37	1.36	1.00	$1.47	1.51	0.97	$1.58	1.67	0.94	$1.70	$50.73	$30.31	$35.34
Southern Company	SO	$3.04	$92.18	3.30%	3.38%	5.00%	5.00%	8.38%	$0.00	$3.12	1.08	2.88	$3.27	1.17	2.79	$3.44	1.27	2.70	$3.61	1.38	2.61	$3.79	1.50	2.53	$3.98	$117.65	$78.67	$92.18
Xcel Energy Inc.	XEL	$2.37	$78.36	3.02%	3.15%	8.00%	8.00%	11.15%	$0.00	$2.46	1.11	2.22	$2.66	1.24	2.15	$2.87	1.37	2.09	$3.10	1.53	2.03	$3.35	1.70	1.98	$3.62	$115.14	$67.88	$78.36
Mean				3.26%	3.36%	6.53%		9.74%																				

Standard Deviation [6]	1.72%
Avg. less Standard Dev [7]	4.81%
Avg. plus Standard Dev [8]	8.25%

Notes:

[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [5])
[5] Source: Schedule 2
[6] Standard Deviation of Column [5]
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[9] If [5] > [8], then [8]; If [5] < [7], then [7], Else [5]
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[14] = [11] * (1 + [5])
[15] = (1 + [10]) ^ 2
[16] = [14] / [15]
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[18] = (1 + [10]) ^ 3
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[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
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[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
90-day Average Stock Prices
Minimum Growth Rate

	[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Minimum Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$72.14	2.97%	3.06%	6.00%	6.00%	9.06%	$0.00	$2.20	1.09	2.02	$2.34	1.19	1.96	$2.48	1.30	1.91	$2.63	1.41	1.86	$2.78	1.54	1.80	$2.95	$96.55	$62.59	$72.14
Ameren Corporation	AEE	$3.00	$109.88	2.73%	2.83%	7.50%	7.50%	10.33%	$0.00	$3.11	1.10	2.82	$3.35	1.22	2.75	$3.60	1.34	2.68	$3.87	1.48	2.61	$4.16	1.63	2.54	$4.47	$157.75	$96.49	$109.88
American Electric Power Company, Inc.	AEP	$3.80	$129.23	2.94%	3.02%	5.50%	5.50%	8.52%	$0.00	$3.90	1.09	3.60	$4.12	1.18	3.50	$4.35	1.28	3.40	$4.58	1.39	3.31	$4.84	1.51	3.21	$5.10	$168.90	$112.22	$129.23
Avista Corporation	AVA	$1.97	$40.01	4.92%	5.02%	4.10%	4.81%	9.72%	$0.00	$2.01	1.10	1.83	$2.09	1.20	1.74	$2.18	1.32	1.65	$2.27	1.45	1.57	$2.36	1.59	1.48	$2.47	$50.47	$31.74	$40.01
CMS Energy Corporation	CMS	$2.28	$72.66	3.14%	3.25%	7.10%	7.10%	10.35%	$0.00	$2.36	1.10	2.14	$2.53	1.22	2.08	$2.71	1.34	2.02	$2.90	1.48	1.96	$3.11	1.64	1.90	$3.33	$102.39	$62.57	$72.66
DTE Energy Company	DTE	$4.66	$144.14	3.23%	3.33%	6.00%	6.00%	9.33%	$0.00	$4.80	1.09	4.39	$5.09	1.20	4.26	$5.39	1.31	4.13	$5.72	1.43	4.00	$6.06	1.56	3.88	$6.42	$192.89	$123.49	$144.14
Duke Energy Corporation	DUK	$4.34	$123.81	3.51%	3.62%	6.40%	6.40%	10.02%	$0.00	$4.48	1.10	4.07	$4.77	1.21	3.94	$5.07	1.33	3.81	$5.40	1.47	3.68	$5.74	1.61	3.56	$6.11	$168.84	$104.75	$123.81
Entergy Corporation	ETR	$2.56	$110.63	2.31%	2.45%	11.50%	8.25%	10.99%	$0.00	$2.71	1.11	2.44	$3.02	1.23	2.45	$3.37	1.37	2.46	$3.75	1.52	2.47	$4.18	1.68	2.48	$4.53	$165.59	$98.32	$110.63
Evergy, Inc.	EVRG	$2.78	$82.79	3.36%	3.47%	6.50%	6.50%	9.97%	$0.00	$2.87	1.10	2.61	$3.06	1.21	2.53	$3.26	1.33	2.45	$3.47	1.46	2.37	$3.69	1.61	2.30	$3.93	$113.44	$70.54	$82.79
IDACORP, Inc.	IDA	$3.52	$143.21	2.46%	2.53%	5.50%	5.50%	8.03%	$0.00	$3.62	1.08	3.35	$3.82	1.17	3.27	$4.03	1.26	3.19	$4.25	1.36	3.12	$4.48	1.47	3.05	$4.73	$187.17	$127.24	$143.21
OGE Energy Corporation	OGE	$1.70	$47.47	3.58%	3.68%	5.60%	5.60%	9.28%	$0.00	$1.75	1.09	1.60	$1.85	1.19	1.55	$1.95	1.31	1.49	$2.06	1.43	1.44	$2.17	1.56	1.39	$2.29	$62.34	$40.00	$47.47
Pinnacle West Capital Corporation	PNW	$3.64	$101.79	3.58%	3.68%	5.80%	5.80%	9.48%	$0.00	$3.75	1.09	3.42	$3.96	1.20	3.31	$4.19	1.31	3.20	$4.44	1.44	3.09	$4.69	1.57	2.98	$4.97	$134.93	$85.79	$101.79
PPL Corporation	PPL	$1.14	$35.82	3.18%	3.30%	7.50%	7.50%	10.80%	$0.00	$1.18	1.11	1.07	$1.27	1.23	1.04	$1.37	1.36	1.00	$1.47	1.51	0.97	$1.58	1.67	0.95	$1.70	$51.43	$30.79	$35.82
Southern Company	SO	$3.04	$92.85	3.27%	3.36%	5.00%	5.00%	8.36%	$0.00	$3.12	1.08	2.88	$3.27	1.17	2.79	$3.44	1.27	2.70	$3.61	1.38	2.62	$3.79	1.49	2.54	$3.98	$118.50	$79.33	$92.85
Xcel Energy Inc.	XEL	$2.37	$79.01	3.00%	3.12%	8.00%	8.00%	11.12%	$0.00	$2.46	1.11	2.22	$2.66	1.23	2.16	$2.87	1.37	2.10	$3.10	1.52	2.04	$3.35	1.69	1.98	$3.62	$116.09	$68.52	$79.01
Mean				3.21%	3.31%	6.53%		9.69%																				

Standard Deviation [6]	1.72%
Avg. less Standard Dev [7]	4.81%
Avg. plus Standard Dev [8]	8.25%

Notes:

[1] Bloomberg Professional as of August 31, 2026
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[19] = [17] / [18]
[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
180-day Average Stock Prices
Minimum Growth Rate

	[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Minimum Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$69.96	3.06%	3.15%	6.00%	6.00%	9.15%	$0.00	$2.20	1.09	2.02	$2.34	1.19	1.96	$2.48	1.30	1.90	$2.63	1.42	1.85	$2.78	1.55	1.80	$2.95	$93.62	$60.43	$69.96
Ameren Corporation	AEE	$3.00	$107.59	2.79%	2.89%	7.50%	7.50%	10.39%	$0.00	$3.11	1.10	2.82	$3.35	1.22	2.75	$3.60	1.35	2.67	$3.87	1.49	2.60	$4.16	1.64	2.54	$4.47	$154.46	$94.21	$107.59
American Electric Power Company, Inc.	AEP	$3.80	$126.00	3.02%	3.10%	5.50%	5.50%	8.60%	$0.00	$3.90	1.09	3.60	$4.12	1.18	3.49	$4.35	1.28	3.39	$4.58	1.39	3.30	$4.84	1.51	3.20	$5.10	$164.68	$109.02	$126.00
Avista Corporation	AVA	$1.97	$39.51	4.99%	5.09%	4.10%	4.81%	9.78%	$0.00	$2.01	1.10	1.83	$2.09	1.21	1.74	$2.18	1.32	1.65	$2.27	1.45	1.56	$2.36	1.59	1.48	$2.47	$49.83	$31.25	$39.51
CMS Energy Corporation	CMS	$2.28	$72.72	3.14%	3.25%	7.10%	7.10%	10.35%	$0.00	$2.36	1.10	2.14	$2.53	1.22	2.08	$2.71	1.34	2.02	$2.90	1.48	1.96	$3.11	1.64	1.90	$3.33	$102.47	$62.63	$72.72
DTE Energy Company	DTE	$4.66	$141.10	3.30%	3.40%	6.00%	6.00%	9.40%	$0.00	$4.80	1.09	4.39	$5.09	1.20	4.25	$5.39	1.31	4.12	$5.72	1.43	3.99	$6.06	1.57	3.87	$6.42	$188.82	$120.48	$141.10
Duke Energy Corporation	DUK	$4.34	$122.85	3.53%	3.65%	6.40%	6.40%	10.05%	$0.00	$4.48	1.10	4.07	$4.77	1.21	3.94	$5.07	1.33	3.80	$5.40	1.47	3.68	$5.74	1.61	3.56	$6.11	$167.53	$103.81	$122.85
Entergy Corporation	ETR	$2.56	$105.44	2.43%	2.57%	11.50%	8.25%	11.12%	$0.00	$2.71	1.11	2.44	$3.02	1.23	2.44	$3.37	1.37	2.45	$3.75	1.52	2.46	$4.18	1.69	2.47	$4.53	$157.88	$93.18	$105.44
Evergy, Inc.	EVRG	$2.78	$79.86	3.48%	3.59%	6.50%	6.50%	10.09%	$0.00	$2.87	1.10	2.61	$3.06	1.21	2.52	$3.26	1.33	2.44	$3.47	1.47	2.36	$3.69	1.62	2.28	$3.93	$109.42	$67.65	$79.86
IDACORP, Inc.	IDA	$3.52	$139.09	2.53%	2.60%	5.50%	5.50%	8.10%	$0.00	$3.62	1.08	3.35	$3.82	1.17	3.27	$4.03	1.26	3.19	$4.25	1.37	3.11	$4.48	1.48	3.04	$4.73	$181.78	$123.15	$139.09
OGE Energy Corporation	OGE	$1.70	$46.21	3.68%	3.78%	5.60%	5.60%	9.38%	$0.00	$1.75	1.09	1.60	$1.85	1.20	1.54	$1.95	1.31	1.49	$2.06	1.43	1.44	$2.17	1.57	1.39	$2.29	$60.69	$38.76	$46.21
Pinnacle West Capital Corporation	PNW	$3.64	$97.99	3.71%	3.82%	5.80%	5.80%	9.62%	$0.00	$3.75	1.10	3.42	$3.96	1.20	3.30	$4.19	1.32	3.18	$4.44	1.44	3.07	$4.69	1.58	2.96	$4.97	$129.90	$82.06	$97.99
PPL Corporation	PPL	$1.14	$36.12	3.16%	3.27%	7.50%	7.50%	10.77%	$0.00	$1.18	1.11	1.07	$1.27	1.23	1.04	$1.37	1.36	1.01	$1.47	1.51	0.98	$1.58	1.67	0.95	$1.70	$51.85	$31.09	$36.12
Southern Company	SO	$3.04	$91.54	3.32%	3.40%	5.00%	5.00%	8.40%	$0.00	$3.12	1.08	2.87	$3.27	1.18	2.78	$3.44	1.27	2.70	$3.61	1.38	2.61	$3.79	1.50	2.53	$3.98	$116.83	$78.04	$91.54
Xcel Energy Inc.	XEL	$2.37	$78.03	3.04%	3.16%	8.00%	8.00%	11.16%	$0.00	$2.46	1.11	2.22	$2.66	1.24	2.15	$2.87	1.37	2.09	$3.10	1.53	2.03	$3.35	1.70	1.98	$3.62	$114.65	$67.55	$78.03
Mean				3.28%	3.38%	6.53%		9.76%																				

Standard Deviation [6]	1.72%
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Notes:

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[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
30-day Average Stock Prices
Maximum Growth Rate

	[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Maximum Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$70.33	3.04%	3.17%	8.33%	8.33%	11.50%	$0.00	$2.23	1.12	2.00	$2.41	1.24	1.94	$2.62	1.39	1.89	$2.83	1.55	1.83	$3.07	1.72	1.78	$3.33	$104.94	$60.89	$70.33
Ameren Corporation	AEE	$3.00	$109.11	2.75%	2.86%	8.03%	8.03%	10.89%	$0.00	$3.12	1.11	2.81	$3.37	1.23	2.74	$3.64	1.36	2.67	$3.93	1.51	2.60	$4.25	1.68	2.53	$4.59	$160.55	$95.75	$109.11
American Electric Power Company, Inc.	AEP	$3.80	$126.31	3.01%	3.14%	8.81%	8.81%	11.95%	$0.00	$3.97	1.12	3.54	$4.32	1.25	3.44	$4.70	1.40	3.35	$5.11	1.57	3.25	$5.56	1.76	3.16	$6.05	$192.69	$109.56	$126.31
Avista Corporation	AVA	$1.97	$39.00	5.05%	5.19%	5.59%	6.85%	11.82%	$0.00	$2.03	1.12	1.81	$2.14	1.25	1.71	$2.26	1.40	1.61	$2.38	1.56	1.52	$2.52	1.75	1.44	$2.69	$54.03	$30.90	$39.00
CMS Energy Corporation	CMS	$2.28	$70.83	3.22%	3.36%	8.50%	8.50%	11.86%	$0.00	$2.38	1.12	2.12	$2.58	1.25	2.06	$2.80	1.40	2.00	$3.04	1.57	1.94	$3.29	1.75	1.88	$3.57	$106.50	$60.82	$70.83
DTE Energy Company	DTE	$4.66	$140.64	3.31%	3.45%	8.15%	8.15%	11.59%	$0.00	$4.85	1.12	4.35	$5.24	1.25	4.21	$5.67	1.39	4.08	$6.13	1.55	3.96	$6.63	1.73	3.83	$7.17	$208.04	$120.21	$140.64
Duke Energy Corporation	DUK	$4.34	$123.66	3.51%	3.63%	6.69%	6.85%	10.45%	$0.00	$4.49	1.10	4.06	$4.79	1.22	3.92	$5.11	1.35	3.79	$5.45	1.49	3.66	$5.81	1.64	3.53	$6.21	$172.13	$104.69	$123.66
Entergy Corporation	ETR	$2.56	$108.13	2.37%	2.53%	13.39%	10.55%	13.33%	$0.00	$2.73	1.13	2.41	$3.10	1.28	2.41	$3.51	1.46	2.41	$3.98	1.65	2.41	$4.52	1.87	2.42	$4.99	$179.60	$96.07	$108.13
Evergy, Inc.	EVRG	$2.78	$82.93	3.35%	3.50%	9.10%	9.10%	12.60%	$0.00	$2.91	1.13	2.58	$3.17	1.27	2.50	$3.46	1.43	2.42	$3.77	1.61	2.35	$4.12	1.81	2.27	$4.49	$128.18	$70.80	$82.93
IDACORP, Inc.	IDA	$3.52	$141.79	2.48%	2.60%	9.10%	9.10%	11.70%	$0.00	$3.68	1.12	3.29	$4.02	1.25	3.22	$4.38	1.39	3.14	$4.78	1.56	3.07	$5.21	1.74	3.00	$5.69	$219.16	$126.06	$141.79
OGE Energy Corporation	OGE	$1.70	$47.24	3.60%	3.73%	7.05%	7.05%	10.78%	$0.00	$1.76	1.11	1.59	$1.88	1.23	1.54	$2.02	1.36	1.48	$2.16	1.51	1.43	$2.31	1.67	1.39	$2.47	$66.43	$39.81	$47.24
Pinnacle West Capital Corporation	PNW	$3.64	$100.72	3.61%	3.78%	8.94%	8.94%	12.72%	$0.00	$3.80	1.13	3.37	$4.14	1.27	3.26	$4.51	1.43	3.15	$4.92	1.61	3.05	$5.36	1.82	2.94	$5.84	$154.57	$84.95	$100.73
PPL Corporation	PPL	$1.14	$35.34	3.23%	3.36%	8.00%	8.00%	11.36%	$0.00	$1.19	1.11	1.06	$1.28	1.24	1.03	$1.38	1.38	1.00	$1.49	1.54	0.97	$1.61	1.71	0.94	$1.74	$51.92	$30.32	$35.34
Southern Company	SO	$3.04	$92.18	3.30%	3.49%	11.40%	10.55%	14.14%	$0.00	$3.21	1.14	2.82	$3.58	1.30	2.75	$3.99	1.49	2.68	$4.44	1.70	2.62	$4.95	1.94	2.55	$5.47	$152.56	$78.76	$92.18
Xcel Energy Inc.	XEL	$2.37	$78.36	3.02%	3.17%	9.40%	9.40%	12.57%	$0.00	$2.48	1.13	2.20	$2.71	1.27	2.14	$2.97	1.43	2.08	$3.25	1.61	2.02	$3.55	1.81	1.97	$3.89	$122.80	$67.94	$78.36
Mean				3.26%	3.40%	8.70%		11.95%																				

Standard Deviation [6]	1.85%
Avg. less Standard Dev [7]	6.85%
Avg. plus Standard Dev [8]	10.55%

Notes:

[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [5])
[5] Source: Schedule 2
[6] Standard Deviation of Column [5]
[7] Mean of Column [5], minus [6]
[8] Mean of Column [5], plus [6]
[9] If [5] > [8], then [8]; If [5] < [7], then [7], Else [5]
[10] ROE that sets [2] equal to [29] using Excel's goal seek function
[11] = [2] x [4]
[12] = (1 + [10]) ^ 1
[13] = [11] / [12]
[14] = [11] * (1 + [5])
[15] = (1 + [10]) ^ 2
[16] = [14] / [15]
[17] = [14] * (1 + [5])
[18] = (1 + [10]) ^ 3
[19] = [17] / [18]
[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
90-day Average Stock Prices
Maximum Growth Rate

	[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Maximum Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$72.14	2.97%	3.09%	8.33%	8.33%	11.42%	$0.00	$2.23	1.11	2.00	$2.41	1.24	1.95	$2.62	1.38	1.89	$2.83	1.54	1.84	$3.07	1.72	1.79	$3.33	$107.64	$62.68	$72.14
Ameren Corporation	AEE	$3.00	$109.88	2.73%	2.84%	8.03%	8.03%	10.87%	$0.00	$3.12	1.11	2.81	$3.37	1.23	2.74	$3.64	1.36	2.67	$3.93	1.51	2.60	$4.25	1.68	2.54	$4.59	$161.68	$96.51	$109.88
American Electric Power Company, Inc.	AEP	$3.80	$129.23	2.94%	3.07%	8.81%	8.81%	11.88%	$0.00	$3.97	1.12	3.55	$4.32	1.25	3.45	$4.70	1.40	3.35	$5.11	1.57	3.26	$5.56	1.75	3.17	$6.05	$197.14	$112.45	$129.23
Avista Corporation	AVA	$1.97	$40.01	4.92%	5.06%	5.59%	6.85%	11.70%	$0.00	$2.03	1.12	1.81	$2.14	1.25	1.71	$2.26	1.39	1.62	$2.38	1.56	1.53	$2.52	1.74	1.45	$2.69	$55.45	$31.89	$40.01
CMS Energy Corporation	CMS	$2.28	$72.66	3.14%	3.27%	8.50%	8.50%	11.77%	$0.00	$2.38	1.12	2.13	$2.58	1.25	2.06	$2.80	1.40	2.00	$3.04	1.56	1.95	$3.29	1.74	1.89	$3.57	$109.26	$62.63	$72.66
DTE Energy Company	DTE	$4.66	$144.14	3.23%	3.36%	8.15%	8.15%	11.51%	$0.00	$4.85	1.12	4.35	$5.24	1.24	4.22	$5.67	1.39	4.09	$6.13	1.55	3.97	$6.63	1.72	3.85	$7.17	$213.22	$123.67	$144.14
Duke Energy Corporation	DUK	$4.34	$123.81	3.51%	3.62%	6.69%	6.85%	10.45%	$0.00	$4.49	1.10	4.06	$4.79	1.22	3.92	$5.11	1.35	3.79	$5.45	1.49	3.66	$5.81	1.64	3.54	$6.21	$172.34	$104.85	$123.81
Entergy Corporation	ETR	$2.56	$110.63	2.31%	2.47%	13.39%	10.55%	13.27%	$0.00	$2.73	1.13	2.41	$3.10	1.28	2.41	$3.51	1.45	2.42	$3.98	1.65	2.42	$4.52	1.86	2.42	$4.99	$183.72	$98.55	$110.63
Evergy, Inc.	EVRG	$2.78	$82.79	3.36%	3.51%	9.10%	9.10%	12.61%	$0.00	$2.91	1.13	2.58	$3.17	1.27	2.50	$3.46	1.43	2.42	$3.77	1.61	2.35	$4.12	1.81	2.27	$4.49	$127.97	$70.67	$82.79
IDACORP, Inc.	IDA	$3.52	$143.21	2.46%	2.57%	9.10%	9.10%	11.67%	$0.00	$3.68	1.12	3.30	$4.02	1.25	3.22	$4.38	1.39	3.15	$4.78	1.56	3.07	$5.21	1.74	3.00	$5.69	$221.36	$127.48	$143.21
OGE Energy Corporation	OGE	$1.70	$47.47	3.58%	3.71%	7.05%	7.05%	10.76%	$0.00	$1.76	1.11	1.59	$1.88	1.23	1.54	$2.02	1.36	1.48	$2.16	1.51	1.43	$2.31	1.67	1.39	$2.47	$66.76	$40.04	$47.47
Pinnacle West Capital Corporation	PNW	$3.64	$101.79	3.58%	3.74%	8.94%	8.94%	12.68%	$0.00	$3.80	1.13	3.37	$4.14	1.27	3.26	$4.51	1.43	3.15	$4.92	1.61	3.05	$5.36	1.82	2.95	$5.84	$156.20	$85.99	$101.79
PPL Corporation	PPL	$1.14	$35.82	3.18%	3.31%	8.00%	8.00%	11.31%	$0.00	$1.19	1.11	1.07	$1.28	1.24	1.03	$1.38	1.38	1.00	$1.49	1.54	0.97	$1.61	1.71	0.94	$1.74	$52.64	$30.81	$35.82
Southern Company	SO	$3.04	$92.85	3.27%	3.46%	11.40%	10.55%	14.11%	$0.00	$3.21	1.14	2.82	$3.58	1.30	2.75	$3.99	1.49	2.68	$4.44	1.70	2.62	$4.95	1.93	2.56	$5.47	$153.67	$79.42	$92.85
Xcel Energy Inc.	XEL	$2.37	$79.01	3.00%	3.14%	9.40%	9.40%	12.54%	$0.00	$2.48	1.13	2.20	$2.71	1.27	2.14	$2.97	1.43	2.08	$3.25	1.60	2.03	$3.55	1.81	1.97	$3.89	$123.81	$68.58	$79.01
Mean				3.21%	3.35%	8.70%		11.90%																				

Standard Deviation [6]	1.85%
Avg. less Standard Dev [7]	6.85%
Avg. plus Standard Dev [8]	10.55%

Notes:

[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [5])
[5] Source: Schedule 2
[6] Standard Deviation of Column [5]
[7] Mean of Column [5], minus [6]
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[9] If [5] > [8], then [8]; If [5] < [7], then [7], Else [5]
[10] ROE that sets [2] equal to [29] using Excel's goal seek function
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[13] = [11] / [12]
[14] = [11] * (1 + [5])
[15] = (1 + [10]) ^ 2
[16] = [14] / [15]
[17] = [14] * (1 + [5])
[18] = (1 + [10]) ^ 3
[19] = [17] / [18]
[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

TWO GROWTH DCF
180-day Average Stock Prices
Maximum Growth Rate

		[1]	[2]	[3]	[4]	[5]	[9]	[10]		[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Maximum Growth Rate	Second Growth Rate	Cost of Equity	Check	Year 1 Div.	(1+k)^1	PV of Year 1 Div.	Year 2 Div.	(1+k)^2	PV of Year 2 Div.	Year 3 Div.	(1+k)^3	PV of Year 3 Div.	Year 4 Div.	(1+k)^4	PV of Year 4 Div.	Year 5 Div.	(1+k)^5	PV of Year 5 Div.	Year 6 Div.	Year 5 Stock Price	PV of Year 5 Stock Price	Current Stock Price
Alliant Energy Corporation	LNT	$2.14	$69.96	3.06%	3.19%	8.33%	8.33%	11.52%	$0.00	$2.23	1.12	2.00	$2.41	1.24	1.94	$2.62	1.39	1.89	$2.83	1.55	1.83	$3.07	1.72	1.78	$3.33	$104.37	$60.52	$69.96
Ameren Corporation	AEE	$3.00	$107.59	2.79%	2.90%	8.03%	8.03%	10.93%	$0.00	$3.12	1.11	2.81	$3.37	1.23	2.74	$3.64	1.37	2.67	$3.93	1.51	2.60	$4.25	1.68	2.53	$4.59	$158.30	$94.24	$107.59
American Electric Power Company, Inc.	AEP	$3.80	$126.00	3.02%	3.15%	8.81%	8.81%	11.96%	$0.00	$3.97	1.12	3.54	$4.32	1.25	3.44	$4.70	1.40	3.35	$5.11	1.57	3.25	$5.56	1.76	3.16	$6.05	$192.21	$109.25	$126.00
Avista Corporation	AVA	$1.97	$39.51	4.99%	5.13%	5.59%	6.85%	11.76%	$0.00	$2.03	1.12	1.81	$2.14	1.25	1.71	$2.26	1.40	1.62	$2.38	1.56	1.53	$2.52	1.74	1.44	$2.69	$54.74	$31.40	$39.51
CMS Energy Corporation	CMS	$2.28	$72.72	3.14%	3.27%	8.50%	8.50%	11.77%	$0.00	$2.38	1.12	2.13	$2.58	1.25	2.06	$2.80	1.40	2.00	$3.04	1.56	1.95	$3.29	1.74	1.89	$3.57	$109.35	$62.69	$72.72
DTE Energy Company	DTE	$4.66	$141.10	3.30%	3.44%	8.15%	8.15%	11.58%	$0.00	$4.85	1.12	4.35	$5.24	1.25	4.21	$5.67	1.39	4.08	$6.13	1.55	3.96	$6.63	1.73	3.84	$7.17	$208.72	$120.66	$141.10
Duke Energy Corporation	DUK	$4.34	$122.85	3.53%	3.65%	6.69%	6.85%	10.48%	$0.00	$4.49	1.10	4.06	$4.79	1.22	3.92	$5.11	1.35	3.79	$5.45	1.49	3.66	$5.81	1.65	3.53	$6.21	$171.00	$103.90	$122.85
Entergy Corporation	ETR	$2.56	$105.44	2.43%	2.59%	13.39%	10.55%	13.40%	$0.00	$2.73	1.13	2.41	$3.10	1.29	2.41	$3.51	1.46	2.41	$3.98	1.65	2.41	$4.52	1.88	2.41	$4.99	$175.16	$93.40	$105.44
Evergy, Inc.	EVRG	$2.78	$79.86	3.48%	3.64%	9.10%	9.10%	12.74%	$0.00	$2.91	1.13	2.58	$3.17	1.27	2.49	$3.46	1.43	2.41	$3.77	1.62	2.34	$4.12	1.82	2.26	$4.49	$123.44	$67.78	$79.86
IDACORP, Inc.	IDA	$3.52	$139.09	2.53%	2.65%	9.10%	9.10%	11.75%	$0.00	$3.68	1.12	3.29	$4.02	1.25	3.22	$4.38	1.40	3.14	$4.78	1.56	3.06	$5.21	1.74	2.99	$5.69	$214.99	$123.38	$139.09
OGE Energy Corporation	OGE	$1.70	$46.21	3.68%	3.81%	7.05%	7.05%	10.86%	$0.00	$1.76	1.11	1.59	$1.88	1.23	1.53	$2.02	1.36	1.48	$2.16	1.51	1.43	$2.31	1.67	1.38	$2.47	$64.98	$38.80	$46.21
Pinnacle West Capital Corporation	PNW	$3.64	$97.99	3.71%	3.88%	8.94%	8.94%	12.82%	$0.00	$3.80	1.13	3.37	$4.14	1.27	3.25	$4.51	1.44	3.14	$4.92	1.62	3.03	$5.36	1.83	2.93	$5.84	$150.37	$82.26	$97.99
PPL Corporation	PPL	$1.14	$36.12	3.16%	3.28%	8.00%	8.00%	11.28%	$0.00	$1.19	1.11	1.07	$1.28	1.24	1.03	$1.38	1.38	1.00	$1.49	1.53	0.97	$1.61	1.71	0.95	$1.74	$53.07	$31.10	$36.12
Southern Company	SO	$3.04	$91.54	3.32%	3.51%	11.40%	10.55%	14.16%	$0.00	$3.21	1.14	2.81	$3.58	1.30	2.75	$3.99	1.49	2.68	$4.44	1.70	2.62	$4.95	1.94	2.55	$5.47	$151.50	$78.13	$91.54
Xcel Energy Inc.	XEL	$2.37	$78.03	3.04%	3.18%	9.40%	9.40%	12.58%	$0.00	$2.48	1.13	2.20	$2.71	1.27	2.14	$2.97	1.43	2.08	$3.25	1.61	2.02	$3.55	1.81	1.97	$3.89	$122.28	$67.61	$78.03
Mean				3.28%	3.42%	8.70%		11.97%																				

Standard Deviation [6]	1.85%
Avg. less Standard Dev [7]	6.85%
Avg. plus Standard Dev [8]	10.55%

Notes:

[1] Bloomberg Professional as of August 31, 2026
[2] Bloomberg Professional 30-day average as of August 31, 2026
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [5])
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[7] Mean of Column [5], minus [6]
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[15] = (1 + [10]) ^ 2
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[19] = [17] / [18]
[20] = [17] * (1 + [5])
[21] = (1 + [10]) ^ 4
[22] = [20] / [21]
[23] = [20] * (1 + [5])
[24] = (1 + [10]) ^ 5
[25] = [23] / [24]
[26] = [23] * (1 + [9])
[27] = [26] / ([10] - [9])
[28] = [27] / [24]
[29] = [13] + [16] + [19] + [22] + [25] + [28]

CAPITAL ASSET PRICING MODEL
CURRENT RISK FREE RATE AND VALUE LINE BETA

		[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	5.21%	0.80	13.39%	8.18%	11.75%	12.16%
Ameren Corporation	AEE	5.21%	0.75	13.39%	8.18%	11.34%	11.85%
American Electric Power Company, Inc.	AEP	5.21%	0.70	13.39%	8.18%	10.93%	11.55%
Avista Corporation	AVA	5.21%	0.70	13.39%	8.18%	10.93%	11.55%
CMS Energy Corporation	CMS	5.21%	0.70	13.39%	8.18%	10.93%	11.55%
DTE Energy Company	DTE	5.21%	0.75	13.39%	8.18%	11.34%	11.85%
Duke Energy Corporation	DUK	5.21%	0.65	13.39%	8.18%	10.52%	11.24%
Entergy Corporation	ETR	5.21%	0.75	13.39%	8.18%	11.34%	11.85%
Evergy, Inc.	EVRG	5.21%	0.75	13.39%	8.18%	11.34%	11.85%
IDACORP, Inc.	IDA	5.21%	0.70	13.39%	8.18%	10.93%	11.55%
OGE Energy Corporation	OGE	5.21%	0.85	13.39%	8.18%	12.16%	12.47%
Pinnacle West Capital Corporation	PNW	5.21%	0.75	13.39%	8.18%	11.34%	11.85%
PPL Corporation	PPL	5.21%	0.80	13.39%	8.18%	11.75%	12.16%
Southern Company	SO	5.21%	0.65	13.39%	8.18%	10.52%	11.24%
Xcel Energy Inc.	XEL	5.21%	0.70	13.39%	8.18%	10.93%	11.55%
Mean						11.21%	11.75%
Median						11.34%	11.85%

Notes:

[1] Bloomberg Professional 30-day average as of August 31, 2026

[2] Value Line

[3] Schedule 7

[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 AND VALUE LINE BETA

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q4 2026 - Q4 2027)	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	5.00%	0.80	13.39%	8.39%	11.71%	12.13%
Ameren Corporation	AEE	5.00%	0.75	13.39%	8.39%	11.29%	11.82%
American Electric Power Company, Inc.	AEP	5.00%	0.70	13.39%	8.39%	10.87%	11.50%
Avista Corporation	AVA	5.00%	0.70	13.39%	8.39%	10.87%	11.50%
CMS Energy Corporation	CMS	5.00%	0.70	13.39%	8.39%	10.87%	11.50%
DTE Energy Company	DTE	5.00%	0.75	13.39%	8.39%	11.29%	11.82%
Duke Energy Corporation	DUK	5.00%	0.65	13.39%	8.39%	10.45%	11.19%
Entergy Corporation	ETR	5.00%	0.75	13.39%	8.39%	11.29%	11.82%
Evergy, Inc.	EVRG	5.00%	0.75	13.39%	8.39%	11.29%	11.82%
IDACORP, Inc.	IDA	5.00%	0.70	13.39%	8.39%	10.87%	11.50%
OGE Energy Corporation	OGE	5.00%	0.85	13.39%	8.39%	12.13%	12.44%
Pinnacle West Capital Corporation	PNW	5.00%	0.75	13.39%	8.39%	11.29%	11.82%
PPL Corporation	PPL	5.00%	0.80	13.39%	8.39%	11.71%	12.13%
Southern Company	SO	5.00%	0.65	13.39%	8.39%	10.45%	11.19%
Xcel Energy Inc.	XEL	5.00%	0.70	13.39%	8.39%	10.87%	11.50%
Mean						11.15%	11.71%
Median						11.29%	11.82%

Notes:

[1] Blue Chip Financial Forecasts, September 2026 Edition, September 1, 2026, at 9

[2] Value Line

[3] Schedule 7

[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 AND VALUE LINE BETA

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2028 - 2032)	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.70%	0.80	13.39%	8.69%	11.65%	12.08%
Ameren Corporation	AEE	4.70%	0.75	13.39%	8.69%	11.22%	11.76%
American Electric Power Company, Inc.	AEP	4.70%	0.70	13.39%	8.69%	10.78%	11.43%
Avista Corporation	AVA	4.70%	0.70	13.39%	8.69%	10.78%	11.43%
CMS Energy Corporation	CMS	4.70%	0.70	13.39%	8.69%	10.78%	11.43%
DTE Energy Company	DTE	4.70%	0.75	13.39%	8.69%	11.22%	11.76%
Duke Energy Corporation	DUK	4.70%	0.65	13.39%	8.69%	10.35%	11.11%
Entergy Corporation	ETR	4.70%	0.75	13.39%	8.69%	11.22%	11.76%
Evergy, Inc.	EVRG	4.70%	0.75	13.39%	8.69%	11.22%	11.76%
IDACORP, Inc.	IDA	4.70%	0.70	13.39%	8.69%	10.78%	11.43%
OGE Energy Corporation	OGE	4.70%	0.85	13.39%	8.69%	12.08%	12.41%
Pinnacle West Capital Corporation	PNW	4.70%	0.75	13.39%	8.69%	11.22%	11.76%
PPL Corporation	PPL	4.70%	0.80	13.39%	8.69%	11.65%	12.08%
Southern Company	SO	4.70%	0.65	13.39%	8.69%	10.35%	11.11%
Xcel Energy Inc.	XEL	4.70%	0.70	13.39%	8.69%	10.78%	11.43%
Mean						11.07%	11.65%
Median						11.22%	11.76%

Notes:

[1] Blue Chip Financial Forecasts, Vol. 45, No. 6, June 1, 2026, at 14

[2] Value Line

[3] Schedule 7

[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 AND LONG-TERM VALUE LINE BETA

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	5.21%	0.78	13.39%	8.18%	11.56%	12.02%
Ameren Corporation	AEE	5.21%	0.75	13.39%	8.18%	11.37%	11.88%
American Electric Power Company, Inc.	AEP	5.21%	0.70	13.39%	8.18%	10.90%	11.52%
Avista Corporation	AVA	5.21%	0.80	13.39%	8.18%	11.75%	12.16%
CMS Energy Corporation	CMS	5.21%	0.72	13.39%	8.18%	11.06%	11.64%
DTE Energy Company	DTE	5.21%	0.79	13.39%	8.18%	11.69%	12.11%
Duke Energy Corporation	DUK	5.21%	0.70	13.39%	8.18%	10.93%	11.55%
Entergy Corporation	ETR	5.21%	0.78	13.39%	8.18%	11.59%	12.04%
Evergy, Inc.	EVRG	5.21%	0.91	13.39%	8.18%	12.64%	12.83%
IDACORP, Inc.	IDA	5.21%	0.74	13.39%	8.18%	11.28%	11.81%
OGE Energy Corporation	OGE	5.21%	0.95	13.39%	8.18%	12.95%	13.06%
Pinnacle West Capital Corporation	PNW	5.21%	0.77	13.39%	8.18%	11.50%	11.97%
PPL Corporation	PPL	5.21%	0.85	13.39%	8.18%	12.19%	12.49%
Southern Company	SO	5.21%	0.70	13.39%	8.18%	10.93%	11.55%
Xcel Energy Inc.	XEL	5.21%	0.69	13.39%	8.18%	10.84%	11.48%
Mean						11.55%	12.01%
Median						11.50%	11.97%

Notes:

[1] Bloomberg Professional 30-day average as of August 31, 2026

[2] Schedule 6

[3] Schedule 7

[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 AND LONG-TERM VALUE LINE BETA

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q4 2026 - Q4 2027)	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	5.00%	0.78	13.39%	8.39%	11.52%	11.98%
Ameren Corporation	AEE	5.00%	0.75	13.39%	8.39%	11.32%	11.84%
American Electric Power Company, Inc.	AEP	5.00%	0.70	13.39%	8.39%	10.84%	11.48%
Avista Corporation	AVA	5.00%	0.80	13.39%	8.39%	11.71%	12.13%
CMS Energy Corporation	CMS	5.00%	0.72	13.39%	8.39%	11.00%	11.60%
DTE Energy Company	DTE	5.00%	0.79	13.39%	8.39%	11.65%	12.08%
Duke Energy Corporation	DUK	5.00%	0.70	13.39%	8.39%	10.87%	11.50%
Entergy Corporation	ETR	5.00%	0.78	13.39%	8.39%	11.55%	12.01%
Evergy, Inc.	EVRG	5.00%	0.91	13.39%	8.39%	12.62%	12.81%
IDACORP, Inc.	IDA	5.00%	0.74	13.39%	8.39%	11.23%	11.77%
OGE Energy Corporation	OGE	5.00%	0.95	13.39%	8.39%	12.94%	13.05%
Pinnacle West Capital Corporation	PNW	5.00%	0.77	13.39%	8.39%	11.45%	11.94%
PPL Corporation	PPL	5.00%	0.85	13.39%	8.39%	12.16%	12.47%
Southern Company	SO	5.00%	0.70	13.39%	8.39%	10.87%	11.50%
Xcel Energy Inc.	XEL	5.00%	0.69	13.39%	8.39%	10.77%	11.43%
Mean						11.50%	11.97%
Median						11.45%	11.94%

Notes:

[1] Blue Chip Financial Forecasts, September 2026 Edition, September 1, 2026, at 9

[2] Schedule 6

[3] Schedule 7

[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 AND LONG-TERM VALUE LINE BETA

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2028 - 2032)	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Alliant Energy Corporation	LNT	4.70%	0.78	13.39%	8.69%	11.45%	11.93%
Ameren Corporation	AEE	4.70%	0.75	13.39%	8.69%	11.25%	11.78%
American Electric Power Company, Inc.	AEP	4.70%	0.70	13.39%	8.69%	10.75%	11.41%
Avista Corporation	AVA	4.70%	0.80	13.39%	8.69%	11.65%	12.08%
CMS Energy Corporation	CMS	4.70%	0.72	13.39%	8.69%	10.92%	11.53%
DTE Energy Company	DTE	4.70%	0.79	13.39%	8.69%	11.58%	12.03%
Duke Energy Corporation	DUK	4.70%	0.70	13.39%	8.69%	10.78%	11.43%
Entergy Corporation	ETR	4.70%	0.78	13.39%	8.69%	11.48%	11.96%
Evergy, Inc.	EVRG	4.70%	0.91	13.39%	8.69%	12.59%	12.79%
IDACORP, Inc.	IDA	4.70%	0.74	13.39%	8.69%	11.15%	11.71%
OGE Energy Corporation	OGE	4.70%	0.95	13.39%	8.69%	12.92%	13.04%
Pinnacle West Capital Corporation	PNW	4.70%	0.77	13.39%	8.69%	11.38%	11.88%
PPL Corporation	PPL	4.70%	0.85	13.39%	8.69%	12.12%	12.44%
Southern Company	SO	4.70%	0.70	13.39%	8.69%	10.78%	11.43%
Xcel Energy Inc.	XEL	4.70%	0.69	13.39%	8.69%	10.68%	11.36%
Mean						11.43%	11.92%
Median						11.38%	11.88%

Notes:

[1] Blue Chip Financial Forecasts, Vol. 45, No. 6, June 1, 2026, at 14

[2] Schedule 6

[3] Schedule 7

[4] Equals [3]-[1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

HISTORICAL VALUE LINE BETA

Company	Ticker	[1] 2013	[2] 2014	[3] 2015	[4] 2016	[5] 2017	[6] 2018	[7] 2019	[8] 2020	[9] 2021	[10] 2022	[11] 2023	[12] 2024	[13] 2025	[14] 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	0.90	0.80	0.78
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	0.90	0.75	0.75
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	0.80	0.70	0.70
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	0.95	0.70	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	0.85	0.70	0.72
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	1.00	0.80	0.79
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	0.90	0.65	0.70
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	1.00	0.75	0.78
Evergy, Inc.	EVRG						NMF	NMF	1.00	0.95	0.90	0.90	0.95	0.75	0.91
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	0.85	0.65	0.74
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	1.10	0.85	0.95
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	0.95	0.75	0.77
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	1.10	0.80	0.85
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	0.95	0.65	0.70
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	0.85	0.70	0.69
Mean		0.72	0.71	0.74	0.68	0.69	0.59	0.57	0.91	0.90	0.88	0.92	0.94	0.73	0.77

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] Value Line, Dated December 27, 2024.
[13] Value Line, Dated December 26, 2025.

MARKET RISK PREMIUM DERIVED FROM S&P 500 INDEX

[1] Estimate of the S&P 500 Dividend Yield	1.35%
[2] Estimate of the S&P 500 Growth Rate	11.95%
[3] S&P 500 Estimated Required Market Return	13.39%

		[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	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Agilent Technologies Inc	A	282.43194	153.56	43,370.25	0.09%	0.66%	0.00%	9.05%	0.01%
Apple Inc	AAPL	14594.18	316.85	4,624,165.93	9.66%	0.34%	0.03%	11.83%	1.14%
AbbVie Inc	ABBV	1767.11729	256.42	453,124.22	0.95%	2.70%	0.03%	16.47%	0.16%
Airbnb Inc	ABNB	419.52956	183.22	76,866.21	0.16%			15.79%	0.03%
Abbott Laboratories	ABT	1730.3833	110.36	190,965.10	0.40%	2.28%	0.01%	8.59%	0.03%
Arch Capital Group Ltd	ACGL	341.22913	98.07	33,464.34	0.07%			4.08%	0.00%
Accenture PLC	ACN	611.94211	189.76	116,122.13	0.24%	3.44%	0.01%	5.50%	0.01%
Adobe Inc	ADBE	397.5	292.79	116,384.03	0.24%			16.01%	0.04%
Analog Devices Inc	ADI	484.56547	361.0402	174,947.61		1.22%		27.25%	
Archer-Daniels-Midland Co	ADM	481.95958	81.29	39,178.49	0.08%	2.56%	0.00%	7.00%	0.01%
Automatic Data Processing Inc	ADP	397.26274	286.16	113,680.71	0.24%	2.38%	0.01%	7.00%	0.02%
Autodesk Inc	ADSK	209	258.53	54,032.77	0.11%			16.43%	0.02%
Ameren Corp	AEE	276.8	106.01	29,343.57	0.06%	2.83%	0.00%	7.50%	0.00%
American Electric Power Co Inc	AEP	544.39735	122.43	66,650.57	0.14%	3.10%	0.00%	6.25%	0.01%
AES Corp/The	AES	713.43863	14.74	10,516.09		4.77%		30.00%	
Aflac Inc	AFL	501.3433	115.85	58,080.62	0.12%	2.11%	0.00%	7.91%	0.01%
American International Group Inc	AIG	522.89317	76.36	39,928.12	0.08%	2.62%	0.00%	9.05%	0.01%
Assurant Inc	AIZ	49.32377	281.86	13,902.40	0.03%	1.25%	0.00%	9.50%	0.00%
Arthur J Gallagher & Co	AJG	256.3	262.15	67,189.05	0.14%	1.07%	0.00%	16.00%	0.02%
Akamai Technologies Inc	AKAM	143.71661	108.62	15,610.50	0.03%			6.69%	0.00%
Albemarle Corp	ALB	118.00506	134.97	15,927.14	0.03%	1.22%	0.00%	5.50%	0.00%
Align Technology Inc	ALGN	71.03985	159.79	11,351.46	0.02%			10.52%	0.00%
Allstate Corp/The	ALL	252.85795	257.8	65,186.78	0.14%	1.68%	0.00%	2.60%	0.00%
Allegion plc	ALLE	85.03679	155.25	13,201.96	0.03%	1.42%	0.00%	6.21%	0.00%
Applied Materials Inc	AMAT	793.59744	458.39	363,777.13		0.46%		25.06%	
Amcor PLC	AMCR	462.34569	45.89	21,217.04	0.04%	5.67%	0.00%	7.50%	0.00%
Advanced Micro Devices Inc	AMD	1632.47504	470.72	768,438.65				59.21%	
AMETEK Inc	AME	229.26124	235.17	53,915.37	0.11%	0.58%	0.00%	9.59%	0.01%
Amgen Inc	AMGN	540.63201	429.88	232,406.89	0.49%	2.34%	0.01%	5.84%	0.03%
Ameriprise Financial Inc	AMP	88.33322	553.11	48,857.99	0.10%	1.23%	0.00%	13.31%	0.01%
American Tower Corp	AMT	465.96005	175.7	81,869.18	0.17%	4.08%	0.01%	6.52%	0.01%
Amazon.com Inc	AMZN	10786.31357	259.77	2,801,960.68				20.17%	
Arista Networks Inc	ANET	1261.22465	195.69	246,809.05	0.52%			19.57%	0.10%
Aon PLC	AON	212.12713	321.52	68,203.11	0.14%	1.02%	0.00%	7.00%	0.01%
A O Smith Corp	AOS	110.04721	59.13	6,507.09	0.01%	2.44%	0.00%	7.50%	0.00%
APA Corp	APA	350.35151	43.15	15,117.67	0.03%	2.32%	0.00%	8.50%	0.00%
Air Products and Chemicals Inc	APD	222.68731	309.46	68,912.81	0.14%	2.34%	0.00%	6.65%	0.01%
Amphenol Corp	APH	1232.97853	158.55	195,488.75		0.32%		26.59%	
Apollo Global Management Inc	APO	590.54316	136.58	80,656.38	0.17%	1.65%	0.00%	12.55%	0.02%
AppLovin Corp	APP	304.443	312.06	95,004.48				36.35%	
Aptiv PLC	APTV	207.63333	44.76	9,293.67	0.02%			13.25%	0.00%
Alexandria Real Estate Equities Inc	ARE	174.24757	51.29	8,937.16		5.62%		-8.79%	
Ares Management Corp	ARES	223.95774	143.17	32,064.03		3.77%		25.60%	
Atmos Energy Corp	ATO	168.98855	166.13	28,074.07	0.06%	2.41%	0.00%	8.58%	0.01%
Broadcom Inc	AVGO	4757.5802	370.34	1,761,922.25		0.70%		46.59%	
Avery Dennison Corp	AVY	75.78814	174.11	13,195.47	0.03%	2.30%	0.00%	6.74%	0.00%
American Water Works Co Inc	AWK	198.72819	138.23	27,470.20	0.06%	2.59%	0.00%	7.57%	0.00%
Axon Enterprise Inc	AXON	81.23742	566.56	46,025.87				27.50%	
American Express Co	AXP	675.30983	330.17	222,967.05	0.47%	1.15%	0.01%	13.09%	0.06%
AutoZone Inc	AZO	16.32535	2991.24	48,833.04	0.10%			9.85%	0.01%
Boeing Co/The	BA	790.37002	207.78	164,223.08				130.54%	
Bank of America Corp	BAC	6992.74837	61.94	433,130.83	0.91%	2.07%	0.02%	11.00%	0.10%
Ball Corp	BALL	264.70336	62.77	16,615.43	0.03%	1.27%	0.00%	12.29%	0.00%
Baxter International Inc	BAX	516.996	26	13,441.90		0.15%		-1.59%	
Best Buy Co Inc	BBY	210.76755	80.15	16,893.02	0.04%	4.79%	0.00%	3.07%	0.00%
Becton Dickinson & Co	BDX	272.3868	188.11	51,238.68	0.11%	2.23%	0.00%	1.17%	0.00%
Franklin Templeton Inc	BEN	508.07691	34.15	17,350.83	0.04%	3.87%	0.00%	10.53%	0.00%
Brown-Forman Corp	BF/B	290.38342	26.57	7,715.49	0.02%	3.48%	0.00%	4.10%	0.00%
Bunge Global SA	BG	192.11912	116.21	22,326.16	0.05%	2.48%	0.00%	3.00%	0.00%

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Biogen Inc	BIIB	147.754	216.65	32,010.90	0.07%			4.30%	0.00%
Booking Holdings Inc	BKNG	751.3805	199.09	149,592.34	0.31%	0.84%	0.00%	14.91%	0.05%
Baker Hughes Co	BKR	992.67407	63.55	63,084.44	0.13%	1.45%	0.00%	13.00%	0.02%
Builders FirstSource Inc	BLDR	107.59646	66.4	7,144.40				-2.52%	
Blackrock Inc	BLK	154.86926	1155.61	178,968.47	0.37%	1.98%	0.01%	13.61%	0.05%
Bristol-Myers Squibb Co	BMY	2042.71466	66.81	136,473.77		3.77%		27.00%	
Bank of New York Mellon Corp/The	BNY	678.50414	161.28	109,429.15	0.23%	1.56%	0.00%	15.53%	0.04%
Broadridge Financial Solutions Inc	BR	114.0218	182.38	20,795.30	0.04%	2.39%	0.00%	9.50%	0.00%
Berkshire Hathaway Inc	BRK/B	1398.30868	504.03	704,789.52	1.47%			9.50%	0.14%
Brown & Brown Inc	BRO	334.61036	72.17	24,148.83	0.05%	0.91%	0.00%	7.73%	0.00%
Boston Scientific Corp	BSX	1449.22953	48.3	69,997.79	0.15%			7.29%	0.01%
Blackstone Inc	BX	750.62511	143.24	107,519.54	0.22%	3.60%	0.01%	19.31%	0.04%
BXP Inc	BXP	159.66156	67.99	10,855.39	0.02%	4.12%	0.00%	0.91%	0.00%
Citigroup Inc	C	1677.43678	131.62	220,784.23	0.46%	2.04%	0.01%	18.47%	0.09%
Cardinal Health Inc	CAH	232.57573	234.62	54,566.92	0.11%	0.88%	0.00%	13.11%	0.01%
Carrier Global Corp	CARR	824.32506	58.22	47,992.20	0.10%	1.65%	0.00%	10.83%	0.01%
Casey's General Stores Inc	CASY	37.00491	752.21	27,835.46	0.06%	0.35%	0.00%	12.90%	0.01%
Caterpillar Inc	CAT	459.67489	797.47	366,576.93	0.77%	0.82%	0.01%	19.57%	0.15%
Chubb Ltd	CB	385.80295	338.6	130,632.88	0.27%	1.20%	0.00%	6.96%	0.02%
Cboe Global Markets Inc	CBOE	104.43102	300.2	31,350.19	0.07%	1.15%	0.00%	15.06%	0.01%
CBRE Group Inc	CBRE	289.5753	145.81	42,222.97	0.09%			10.50%	0.01%
Crown Castle Inc	CCI	425.45544	76.14	32,394.18		5.58%		23.48%	
Carnival Corp Ltd	CCL	1369.64912	23.89	32,720.92	0.07%	2.51%	0.00%	15.65%	0.01%
Cadence Design Systems Inc	CDNS	275.3952	338.78	93,298.39	0.19%			15.56%	0.03%
CDW Corp/DE	CDW	125.01743	151.58	18,950.14	0.04%	1.66%	0.00%	6.82%	0.00%
Constellation Energy Corp	CEG	354.30738	274.77	97,353.04	0.20%	0.62%	0.00%	19.42%	0.04%
CF Industries Holdings Inc	CF	151.33813	130.03	19,678.50		1.85%		-2.20%	
Citizens Financial Group Inc	CFG	421.17679	68.87	29,006.45		2.67%		20.12%	
Church & Dwight Co Inc	CHD	237.20391	99.78	23,668.21	0.05%	1.23%	0.00%	6.69%	0.00%
CH Robinson Worldwide Inc	CHRW	116.85126	149.66	17,487.96	0.04%	1.68%	0.00%	17.59%	0.01%
Charter Communications Inc	CHTR	114.6	152.44	17,469.62	0.04%			13.44%	0.00%
Cigna Group/The	CI	264.2426	276.08	72,952.10	0.15%	2.26%	0.00%	8.42%	0.01%
Ciena Corp	CIEN	141.55292	382.8	54,186.46				51.80%	
Cincinnati Financial Corp	CINF	153.47805	169.9	26,075.92	0.05%	2.21%	0.00%	7.88%	0.00%
Colgate-Palmolive Co	CL	797.17283	89.82	71,602.06	0.15%	2.36%	0.00%	6.07%	0.01%
Clorox Co/The	CLX	120.93101	97.68	11,812.54	0.02%	5.12%	0.00%	5.07%	0.00%
Comcast Corp	CMCSA	3539.1922	26.62	94,213.30	0.20%	4.96%	0.01%	2.03%	0.00%
CME Group Inc	CME	359.57613	285.5	102,658.99	0.21%	1.82%	0.00%	5.74%	0.01%
Chipotle Mexican Grill Inc	CMG	1265.418	38.03	48,123.85	0.10%			12.98%	0.01%
Cummins Inc	CMI	137.66339	564.4	77,697.22	0.16%	1.56%	0.00%	12.00%	0.02%
CMS Energy Corp	CMS	313.57714	68.06	21,342.06	0.04%	3.35%	0.00%	7.90%	0.00%
Centene Corp	CNC	493.995	64.34	31,783.64				29.14%	
CenterPoint Energy Inc	CNP	652.87158	39.6	25,853.71	0.05%	2.42%	0.00%	8.76%	0.00%
Capital One Financial Corp	COF	613.48484	214.51	131,598.63	0.28%	1.49%	0.00%	11.72%	0.03%
Coherent Corp	COHR	195.83225	277.83	54,408.07					
Coinbase Global Inc	COIN	222.80303	188.12	41,913.71	0.09%			14.91%	0.01%
Cooper Cos Inc/The	COO	195.03063	70.09	13,669.70	0.03%			8.63%	0.00%
ConocoPhillips	COP	1201.33748	132.49	159,165.20	0.33%	2.54%	0.01%	7.75%	0.03%
Cencora Inc	COR	190.82717	323.6	61,751.67	0.13%	0.74%	0.00%	8.13%	0.01%
Costco Wholesale Corp	COST	443.4788	943.89	418,595.20	0.87%	0.62%	0.01%	10.78%	0.09%
Corpay Inc	CPAY	65.6596	404.3	26,546.18	0.06%			11.97%	0.01%
Copart Inc	CPRT	925.81148	32.99	30,542.52	0.06%			7.00%	0.00%
Camden Property Trust	CPT	100.53935	105.8	10,637.06		4.01%		-0.96%	
CRH PLC	CRH	665.28451	94.29	62,729.68	0.13%	1.65%	0.00%	9.74%	0.01%
Charles River Laboratories International Inc	CRL	47.73887	288.24	13,760.25	0.03%			10.84%	0.00%
Salesforce Inc	CRM	823	257.54	211,955.42	0.44%	0.68%	0.00%	14.02%	0.06%
Crowdstrike Holdings Inc	CRWD	1023.93484	231	236,528.95				31.61%	
Cisco Systems Inc	CSCO	3941.43467	110.49	435,489.12	0.91%	1.52%	0.01%	10.50%	0.10%
CoStar Group Inc	CSGP	405.19759	32.07	12,994.69				29.11%	
CSX Corp	CSX	1852.47492	50.51	93,568.51	0.20%	1.11%	0.00%	13.17%	0.03%
Cintas Corp	CTAS	400.16956	201.79	80,750.22	0.17%	1.03%	0.00%	13.00%	0.02%
Cognizant Technology Solutions Corp	CTSH	450.44421	64.58	29,089.69	0.06%	2.04%	0.00%	9.00%	0.01%
Corteva Inc	CTVA	667.018	84.45	56,329.67	0.12%	0.85%	0.00%	11.22%	0.01%
Carvana Co	CVNA	719.91642	73.46	52,885.06	0.11%			18.46%	0.02%
CVS Health Corp	CVS	1278.97037	93.91	120,108.11	0.25%	2.83%	0.01%	6.79%	0.02%
Chevron Corp	CVX	1975.77127	206.14	407,285.49	0.85%	3.45%	0.03%	14.33%	0.12%
Dominion Energy Inc	D	879.52771	66.01	58,057.62	0.12%	4.04%	0.00%	7.50%	0.01%
Delta Air Lines Inc	DAL	657.62434	78	51,294.70	0.11%	1.10%	0.00%	12.17%	0.01%

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DoorDash Inc	DASH	409.08289	231.74	94,800.87				46.38%	
DuPont de Nemours Inc	DD	135.04298	134.59	18,175.43	0.04%	1.78%	0.00%	12.15%	0.00%
Datadog Inc	DDOG	334.90461	237.04	79,385.79	0.17%			15.05%	0.02%
Deere & Co	DE	269.62541	654.91	176,580.38	0.37%	0.99%	0.00%	9.84%	0.04%
Deckers Outdoor Corp	DECK	136.18186	87.08	11,858.72	0.02%			8.34%	0.00%
Dell Technologies Inc	DELL	325.04669	456.01	148,224.54		0.55%		25.68%	
Dollar General Corp	DG	220.61679	126.75	27,963.18	0.06%	1.86%	0.00%	8.36%	0.00%
Quest Diagnostics Inc	DGX	110.37336	240.3	26,522.72	0.06%	1.43%	0.00%	9.14%	0.01%
DR Horton Inc	DHI	279.70127	144.56	40,433.62	0.08%	1.25%	0.00%	4.78%	0.00%
Danaher Corp	DHR	702.98605	213.56	150,129.70	0.31%	0.75%	0.00%	7.11%	0.02%
Walt Disney Co/The	DIS	1726.6869	107.55	185,705.18	0.39%	1.39%	0.01%	14.34%	0.06%
Digital Realty Trust Inc	DLR	370.03618	185.59	68,675.01	0.14%	2.63%	0.00%	7.57%	0.01%
Dollar Tree Inc	DLTR	187.6303	126.59	23,752.12				21.21%	
Healthpeak Properties Inc	DOC	689.52726	20.82	14,355.96	0.03%	5.86%	0.00%	4.58%	0.00%
Dover Corp	DOV	134.68023	194.23	26,158.94	0.05%	1.08%	0.00%	7.84%	0.00%
Dow Inc	DOW	722.34071	30.52	22,045.84		4.59%		37.19%	
Domino's Pizza Inc	DPZ	33.08174	342.06	11,315.94	0.02%	2.33%	0.00%	12.09%	0.00%
Darden Restaurants Inc	DRI	113.54176	214.26	24,327.46	0.05%	3.02%	0.00%	9.15%	0.00%
DTE Energy Co	DTE	208.02812	135.63	28,214.85	0.06%	3.44%	0.00%	5.20%	0.00%
Duke Energy Corp	DUK	780	119.91	93,529.80	0.20%	3.62%	0.01%	6.59%	0.01%
DaVita Inc	DVA	63.8	176.01	11,229.44	0.02%			18.50%	0.00%
Devon Energy Corp	DVN	1100	48.51	53,361.00	0.11%	2.64%	0.00%	7.50%	0.01%
Dexcom Inc	DXCM	377.36077	91.06	34,362.47	0.07%			19.09%	0.01%
eBay Inc	EBAY	445	103.56	46,084.20	0.10%	1.20%	0.00%	11.75%	0.01%
EchoStar Corp	ECHO	159.14224	86.44	13,756.26					
Ecolab Inc	ECL	280.3286	283.2	79,389.06	0.17%	1.03%	0.00%	10.50%	0.02%
Consolidated Edison Inc	ED	369.82863	107.02	39,579.06	0.08%	3.32%	0.00%	6.83%	0.01%
Equifax Inc	EFX	117.4849	189.16	22,223.44	0.05%	1.18%	0.00%	12.92%	0.01%
Everest Group Ltd	EG	38.34273	374.65	14,365.10	0.03%	2.14%	0.00%	8.29%	0.00%
Edison International	EIX	384.81398	53.98	20,772.26	0.04%	6.50%	0.00%	4.73%	0.00%
Estee Lauder Cos Inc/The	EL	247.29122	102.3	25,297.89	0.05%	1.37%	0.00%	11.00%	0.01%
Elevance Health Inc	ELV	216.86929	392.54	85,129.87	0.18%	1.75%	0.00%	4.40%	0.01%
EMCOR Group Inc	EME	44.1099	734.54	32,400.49	0.07%	0.22%	0.00%	19.00%	0.01%
Emerson Electric Co	EMR	557.79777	152.44	85,030.69	0.18%	1.46%	0.00%	11.51%	0.02%
EOG Resources Inc	EOG	524.52918	144.96	76,035.75	0.16%	2.81%	0.00%	6.50%	0.01%
Equinix Inc	EQIX	98.67169	1046.72	103,281.63	0.22%	1.97%	0.00%	16.54%	0.04%
EQT Corp	EQT	625.516	54.18	33,890.46	0.07%	1.22%	0.00%	16.00%	0.01%
Erie Indemnity Co	ERIE	46.18907	255.56	11,804.08	0.02%	2.29%	0.00%	13.50%	0.00%
Eversource Energy	ES	376.67475	70.14	26,419.97	0.06%	4.49%	0.00%	2.33%	0.00%
Essex Property Trust Inc	ESS	64.26844	282.96	18,185.40	0.04%	3.66%	0.00%	3.35%	0.00%
Eaton Corp PLC	ETN	388.4	401.88	156,090.19	0.33%	1.09%	0.00%	12.50%	0.04%
Entergy Corp	ETR	466.6315	106.31	49,607.59	0.10%	2.41%	0.00%	11.50%	0.01%
Evergy Inc	EVRG	229.74594	81.02	18,614.02	0.04%	3.43%	0.00%	7.54%	0.00%
Edwards Lifesciences Corp	EW	576.4	90.75	52,308.30	0.11%			11.43%	0.01%
Exelon Corp	EXC	1023.17509	43.72	44,733.21	0.09%	3.84%	0.00%	7.10%	0.01%
Expand Energy Corp	EXE	231.50379	98.16	22,724.41		2.34%			
Expeditors International of Washington Inc	EXPD	129.99062	189.65	24,652.72	0.05%	0.85%	0.00%	10.84%	0.01%
Expedia Group Inc	EXPE	114.49589	317.12	36,308.94		0.61%		20.83%	
Extra Space Storage Inc	EXR	211.26111	141.1	29,808.94	0.06%	4.59%	0.00%	1.11%	0.00%
Ford Motor Co	F	3916.74359	13.94	54,599.41	0.11%	4.30%	0.00%	16.62%	0.02%
Diamondback Energy Inc	FANG	280.02435	200.48	56,139.28	0.12%	2.19%	0.00%	3.50%	0.00%
Fastenal Co	FAST	1147.49757	49.31	56,583.11	0.12%	2.11%	0.00%	9.99%	0.01%
Freeport-McMoRan Inc	FCX	1436.01752	75.74	108,763.97		0.79%		24.39%	
FactSet Research Systems Inc	FDS	35.56554	313.55	11,151.58	0.02%	1.48%	0.00%	7.29%	0.00%
FedEx Corp	FDX	236.67044	327.4	77,485.90	0.16%	1.49%	0.00%	7.00%	0.01%
Fedex Freight Holding Co Inc	FDXF	149.51813	133.74	19,996.55	0.04%			19.04%	0.01%
FirstEnergy Corp	FE	578.43118	45.86	26,526.85	0.06%	4.06%	0.00%	6.60%	0.00%
Ferguson Enterprises Inc	FERG	193.45272	224.51	43,432.07	0.09%	1.59%	0.00%	9.03%	0.01%
F5 Inc	FFIV	56.62718	407.13	23,054.62	0.05%			10.00%	0.00%
Fair Isaac Corp	FICO	21.59764	1147.21	24,777.03				24.66%	
Fidelity National Information Services Inc	FIS	515.70592	40.77	21,025.33	0.04%	4.32%	0.00%	10.00%	0.00%
Fiserv Inc	FISV	531.76672	53.31	28,348.48	0.06%			5.00%	0.00%
Fifth Third Bancorp	FITB	906.89256	53.77	48,763.61	0.10%	2.98%	0.00%	11.50%	0.01%
Comfort Systems USA Inc	FIX	35.19433	1545.62	54,397.06		0.23%		30.50%	
Flex Ltd	FLEX	369.40298	109.25	40,357.28				27.69%	
Fox Corp	FOX	220.70512	60.22	13,290.86	0.03%	0.96%	0.00%	6.98%	0.00%
Fox Corp	FOXA	199.40139	67.35	13,429.68	0.03%	0.86%	0.00%	6.98%	0.00%
Federal Realty Investment Trust	FRT	86.88913	116.03	10,081.75	0.02%	4.00%	0.00%	3.70%	0.00%

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First Solar Inc	FSLR	107.45336	201.9	21,694.83				26.00%	
Fortinet Inc	FTNT	733.71072	170.93	125,413.17	0.26%			15.03%	0.04%
Fortive Corp	FTV	302.01705	58.84	17,770.68	0.04%	0.48%	0.00%	7.00%	0.00%
General Dynamics Corp	GD	270.55719	371.35	100,471.41	0.21%	1.71%	0.00%	11.45%	0.02%
GoDaddy Inc	GDDY	126.6477	97.88	12,396.28	0.03%			5.50%	0.00%
General Electric Co	GE	1037.56251	335.71	348,320.11	0.73%	0.56%	0.00%	18.54%	0.13%
GE HealthCare Technologies Inc	GEHC	451.68625	71.23	32,173.61	0.07%	0.20%	0.00%	7.02%	0.00%
Gen Digital Inc	GEN	598.58703	31	18,556.20	0.04%	1.61%	0.00%	11.50%	0.00%
GE Vernova Inc	GEV	266.33358	898.53	239,308.71		0.22%		67.72%	
Gilead Sciences Inc	GILD	1239.95019	146.34	181,454.31	0.38%	2.24%	0.01%	10.44%	0.04%
General Mills Inc	GIS	533.70786	41.2	21,988.76		5.92%		-2.20%	
Globe Life Inc	GL	76.84945	172.67	13,269.59	0.03%	0.76%	0.00%	9.00%	0.00%
Corning Inc	GLW	861.38833	148.73	128,114.29		0.75%		35.50%	
General Motors Co	GM	877.45154	86.32	75,741.62	0.16%	0.83%	0.00%	12.72%	0.02%
Generac Holdings Inc	GNRC	59.00636	185.38	10,938.60	0.02%			18.50%	0.00%
Alphabet Inc	GOOG	5527	335.41	1,853,811.07	3.87%	0.26%	0.01%	18.65%	0.72%
Alphabet Inc	GOOGL	5868	339.35	1,991,305.80	4.16%	0.26%	0.01%	19.79%	0.82%
Genuine Parts Co	GPC	137.85976	135.67	18,703.43	0.04%	3.13%	0.00%	2.00%	0.00%
Global Payments Inc	GPN	264.61839	91.05	24,093.50		1.10%		29.00%	
Garmin Ltd	GRMN	192.85254	284.11	54,791.34	0.11%	1.48%	0.00%	7.50%	0.01%
Goldman Sachs Group Inc/The	GS	291.17141	1020.9	297,256.89	0.62%	1.96%	0.01%	14.01%	0.09%
WW Grainger Inc	GWW	47.10094	1309.49	61,678.21	0.13%	0.76%	0.00%	8.70%	0.01%
Halliburton Co	HAL	833.13037	36.85	30,700.85	0.06%	1.85%	0.00%	7.16%	0.00%
Hasbro Inc	HAS	141.04447	94.1	13,272.28	0.03%	2.98%	0.00%	11.19%	0.00%
Huntington Bancshares Inc/OH	HBAN	2020.41483	16.685	33,710.62	0.07%	3.72%	0.00%	11.12%	0.01%
HCA Healthcare Inc	HCA	216.5015	414.45	89,729.05	0.19%	0.75%	0.00%	8.57%	0.02%
Home Depot Inc/The	HD	997.68963	327.83	327,072.59	0.68%	2.84%	0.02%	5.31%	0.04%
Hartford Insurance Group Inc/The	HIG	270.87092	136.7801	37,049.75	0.08%	1.75%	0.00%	4.69%	0.00%
Huntington Ingalls Industries Inc	HII	39.4046	291.2	11,474.62	0.02%	1.90%	0.00%	15.28%	0.00%
Hilton Worldwide Holdings Inc	HLT	225.06491	316.28	71,183.53	0.15%	0.19%	0.00%	13.23%	0.02%
Honeywell International Inc	HON	316.94001	213.53	67,676.20	0.14%	1.31%	0.00%	15.08%	0.02%
Honeywell Aerospace Inc	HONA	316.95273	158.11	50,113.40					
Robinhood Markets Inc	HOOD	790.63023	104.81	82,865.95				24.42%	
Hewlett Packard Enterprise Co	HPE	1324.20352	52.24	69,176.39		1.09%		24.64%	
HP Inc	HPQ	901.79097	30.02	27,071.76	0.06%	4.00%	0.00%	2.71%	0.00%
Hormel Foods Corp	HRL	550.3508	21.85	12,025.16	0.03%	5.35%	0.00%	5.59%	0.00%
Henry Schein Inc	HSIC	111.91622	89.8	10,050.08	0.02%			12.06%	0.00%
Host Hotels & Resorts Inc	HST	685.1244	21.93	15,024.78	0.03%	3.65%	0.00%	5.20%	0.00%
Hershey Co/The	HSY	146.31214	176.21	25,781.66	0.05%	3.30%	0.00%	13.19%	0.01%
Hubbell Inc	HUBB	52.83257	453	23,933.15	0.05%	1.25%	0.00%	7.50%	0.00%
Humana Inc	HUM	120.08031	383.23	46,018.38	0.10%	0.92%	0.00%	9.20%	0.01%
Howmet Aerospace Inc	HWM	398.8014	244.95	97,686.40	0.20%	0.23%	0.00%	18.00%	0.04%
Interactive Brokers Group Inc	IBKR	453.07777	97.2025	44,040.29	0.09%	0.36%	0.00%	18.09%	0.02%
International Business Machines Corp	IBM	942.13439	233.87	220,336.97	0.46%	2.89%	0.01%	7.77%	0.04%
Intercontinental Exchange Inc	ICE	561.39224	160.7	90,215.73	0.19%	1.29%	0.00%	11.07%	0.02%
IDEXX Laboratories Inc	IDXX	78.78112	556.69	43,856.66	0.09%			12.33%	0.01%
IDEX Corp	IEX	73.7199	228.64	16,855.32	0.04%	1.28%	0.00%	4.50%	0.00%
International Flavors & Fragrances Inc	IFF	255.14996	86.33	22,027.10	0.05%	1.85%	0.00%	3.50%	0.00%
Incyte Corp	INCY	202.69775	123.22	24,976.42	0.05%			18.84%	0.01%
Intel Corp	INTC	5285.06951	89.51	473,066.57				66.19%	
Intuit Inc	INTU	273.537	359.3	98,281.84	0.21%	1.54%	0.00%	10.48%	0.02%
Invitation Homes Inc	INVH	590.62323	29.14	17,210.76	0.04%	4.12%	0.00%	4.60%	0.00%
International Paper Co	IP	529.5646	37.93	20,086.39	0.04%	4.88%	0.00%	9.50%	0.00%
IQVIA Holdings Inc	IQV	164.6	261.19	42,991.87	0.09%			8.14%	0.01%
Ingersoll Rand Inc	IR	387.99943	77.05	29,895.36	0.06%	0.10%	0.00%	8.50%	0.01%
Iron Mountain Inc	IRM	297.70162	115.35	34,339.88	0.07%	3.00%	0.00%	10.00%	0.01%
Intuitive Surgical Inc	ISRG	353.27804	376.86	133,136.36	0.28%			13.48%	0.04%
Gartner Inc	IT	63.14898	198.11	12,510.44	0.03%			10.31%	0.00%
Illinois Tool Works Inc	ITW	284.8	275.37	78,425.38	0.16%	2.50%	0.00%	9.09%	0.01%
Invesco Ltd	IVZ	441.49978	32.78	14,472.36		2.62%		25.82%	
Jacobs Solutions Inc	J	117.03861	149.05	17,444.60	0.04%	0.97%	0.00%	10.64%	0.00%
JB Hunt Transport Services Inc	JBHT	93.91494	265.47	24,931.60	0.05%	0.68%	0.00%	17.77%	0.01%
Jabil Inc	JBL	104.78709	305.26	31,987.31		0.10%		22.02%	
Johnson Controls International plc	JCI	605.7445	138.24	83,738.12	0.18%	1.16%	0.00%	19.48%	0.03%
Jack Henry & Associates Inc	JKHY	70.11261	167.91	11,772.61	0.02%	1.45%	0.00%	7.00%	0.00%
Johnson & Johnson	JNJ	2409.8986	265.85	640,671.54	1.34%	2.02%	0.03%	7.54%	0.10%
JPMorgan Chase & Co	JPM	2658.1862	356.02	946,367.45	1.98%	1.69%	0.03%	10.35%	0.20%
Keurig Dr Pepper Inc	KDP	1360.82604	31.86	43,355.92	0.09%	2.89%	0.00%	10.22%	0.01%

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KeyCorp	KEY	1067.12855	21.405	22,841.89	0.05%	3.83%	0.00%	14.57%	0.01%
Keysight Technologies Inc	KEYS	170.3	322.7	54,955.81	0.11%			13.00%	0.01%
Kraft Heinz Co/The	KHC	1185.82376	25.67	30,440.10		6.23%		-0.76%	
Kimco Realty Corp	KIM	674.40321	23.71	15,990.10	0.03%	4.72%	0.00%	10.74%	0.00%
KKR & Co Inc	KKR	897.6356	109.72	98,488.58	0.21%	0.71%	0.00%	18.81%	0.04%
KLA Corp	KLAC	1306.54678	175.45	229,233.63		0.52%		22.06%	
Kimberly-Clark Corp	KMB	332.57904	107.95	35,901.91	0.08%	4.74%	0.00%	4.36%	0.00%
Kinder Morgan Inc	KMI	2226.79986	32.24	71,792.03	0.15%	3.69%	0.01%	8.14%	0.01%
Coca-Cola Co/The	KO	4302.54924	88.67	381,507.04	0.80%	2.39%	0.02%	7.84%	0.06%
Kroger Co/The	KR	612.64851	57.54	35,251.80	0.07%	2.71%	0.00%	6.29%	0.00%
Kenvue Inc	KVUE	1920.77347	18.88	36,264.20	0.08%	4.45%	0.00%	16.77%	0.01%
Loews Corp	L	204.42772	108.29	22,137.48	0.05%	0.23%	0.00%	12.50%	0.01%
Leidos Holdings Inc	LDOS	125.49221	140.21	17,595.26	0.04%	1.23%	0.00%	7.28%	0.00%
Lennar Corp	LEN	210.506	84.11	17,705.66	0.04%	2.38%	0.00%	0.27%	0.00%
Labcorp Holdings Inc	LH	81.1	332.66	26,978.73	0.06%	0.87%	0.00%	9.02%	0.01%
L3Harris Technologies Inc	LHX	186.21462	266.25	49,579.64	0.10%	1.88%	0.00%	16.00%	0.02%
Lennox International Inc	LII	34.56068	382.64	13,224.30	0.03%	1.42%	0.00%	11.00%	0.00%
Linde PLC	LIN	460.98016	489.58	225,686.67	0.47%	1.31%	0.01%	7.91%	0.04%
Lumentum Holdings Inc	LITE	89.7	914.76	82,053.97					
Eli Lilly & Co	LLY	941.35707	1156.73	1,088,895.96		0.60%		26.50%	
Lockheed Martin Corp	LMT	230.79075	557.78	128,730.46	0.27%	2.47%	0.01%	16.57%	0.04%
Alliant Energy Corp	LNT	259.2847	67.98	17,626.17	0.04%	3.15%	0.00%	6.15%	0.00%
Lowe's Cos Inc	LOW	561.05402	204.7	114,847.76	0.24%	2.44%	0.01%	4.88%	0.01%
Lam Research Corp	LRCX	1251.321	301.49	377,260.77		0.44%		22.50%	
Lululemon Athletica Inc	LULU	108.43796	120.26	13,040.75	0.03%			0.18%	0.00%
Southwest Airlines Co	LUV	489.2082	38.53	18,849.19		1.87%		49.48%	
Las Vegas Sands Corp	LVS	647.70118	43.81	28,375.79	0.06%	2.74%	0.00%	19.97%	0.01%
LyondellBasell Industries NV	LYB	323.03795	65.08	21,023.31		4.24%		27.91%	
Live Nation Entertainment Inc	LYV	235.63386	179.89	42,388.18				80.36%	
Mastercard Inc	MA	869.46412	589.31	512,383.90	1.07%	0.59%	0.01%	15.29%	0.16%
Mid-America Apartment Communities Inc	MAA	116.02149	128.85	14,949.37	0.03%	4.75%	0.00%	1.15%	0.00%
Marriott International Inc/MD	MAR	260.76629	341.76	89,119.49	0.19%	0.85%	0.00%	11.16%	0.02%
Masco Corp	MAS	197.18743	72.16	14,229.04	0.03%	1.77%	0.00%	8.38%	0.00%
McDonald's Corp	MCD	707.64153	261.68	185,175.64	0.39%	2.84%	0.01%	7.57%	0.03%
Microchip Technology Inc	MCHP	543.00869	73.45	39,883.99		2.48%		31.24%	
McKesson Corp	MCK	116.59036	884.38	103,110.18	0.22%	0.43%	0.00%	12.23%	0.03%
Moody's Corp	MCO	173.2	504.64	87,403.65	0.18%	0.82%	0.00%	11.04%	0.02%
Mondelez International Inc	MDLZ	1276.30806	62.07	79,220.44	0.17%	3.35%	0.01%	7.36%	0.01%
Medtronic PLC	MDT	1279.98086	90.65	116,030.26	0.24%	3.18%	0.01%	6.69%	0.02%
MetLife Inc	MET	635.47693	95.17	60,478.34	0.13%	2.49%	0.00%	10.68%	0.01%
Meta Platforms Inc	META	2205.12851	572.34	1,262,083.25	2.64%	0.37%	0.01%	18.32%	0.48%
MGM Resorts International	MGM	251.59276	41.36	10,405.88	0.02%			3.00%	0.00%
McCormick & Co Inc/MD	MKC	254.05515	54.22	13,774.87	0.03%	3.54%	0.00%	5.54%	0.00%
Martin Marietta Materials Inc	MLM	71.02033	517.86	36,778.59	0.08%	0.65%	0.00%	9.50%	0.01%
3M Co	MMM	515.72242	171.83	88,616.58		1.82%		32.11%	
Monster Beverage Corp	MNST	1959.05176	45.92	89,959.66	0.19%			10.86%	0.02%
Altria Group Inc	MO	1669.74393	68.48	114,344.06	0.24%	6.48%	0.02%	5.04%	0.01%
Mosaic Co/The	MOS	317.89565	24.12	7,667.64	0.02%	3.65%	0.00%	2.11%	0.00%
Marathon Petroleum Corp	MPC	280.82476	373.32	104,837.50	0.22%	1.07%	0.00%	16.56%	0.04%
Monolithic Power Systems Inc	MPWR	49.143	1267.77	62,302.02	0.13%	0.63%	0.00%	18.50%	0.02%
Merck & Co Inc	MRK	2467.17164	147.76	364,549.28	0.76%	2.30%	0.02%	10.32%	0.08%
Moderna Inc	MRNA	399.23589	140.34	56,028.76				26.31%	
Marsh & McLennan Cos Inc	MRSH	477.21127	189.8	90,574.70	0.19%	2.09%	0.00%	7.81%	0.01%
Marvell Technology Inc	MRVL	876.9	211.66	185,604.65		0.11%		41.48%	
Morgan Stanley	MS	1570.56629	213.32	335,033.20	0.70%	2.16%	0.02%	13.82%	0.10%
MSCI Inc	MSCI	72.7	570.64	41,485.53	0.09%	1.44%	0.00%	11.11%	0.01%
Microsoft Corp	MSFT	7425.54549	507.29	3,766,904.97	7.87%	0.72%	0.06%	13.72%	1.08%
Motorola Solutions Inc	MSI	165.49379	485.3	80,314.14	0.17%	1.00%	0.00%	10.05%	0.02%
M&T Bank Corp	MTB	144.41626	232.44	33,568.12	0.07%	2.58%	0.00%	8.92%	0.01%
Mettler-Toledo International Inc	MTD	20.03656	1405.14	28,154.17	0.06%			9.52%	0.01%
Micron Technology Inc	MU	1129.39315	958.73	1,082,783.09		0.06%			
Norwegian Cruise Line Holdings Ltd	NCLH	459.18785	16.14	7,411.29				-1.93%	
Nasdaq Inc	NDAQ	558.97737	98.61	55,120.76	0.12%	1.26%	0.00%	14.71%	0.02%
Nordson Corp	NDSN	55.69937	321.72	17,919.60	0.04%	1.17%	0.00%	9.00%	0.00%
NextEra Energy Inc	NEE	2085.97821	82.34	171,759.45	0.36%	3.03%	0.01%	8.48%	0.03%
Newmont Corp	NEM	1053.69227	126.06	132,828.45	0.28%	0.83%	0.00%	17.13%	0.05%
Netflix Inc	NFLX	4163.93968	81.05	337,487.31				21.06%	
NiSource Inc	NI	479.5601	40.92	19,623.60	0.04%	2.93%	0.00%	9.23%	0.00%

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NIKE Inc	NKE	1202.11095	38.65	46,461.59	0.10%	4.24%	0.00%	2.92%	0.00%
Northrop Grumman Corp	NOC	142.06303	539.7	76,671.42	0.16%	1.83%	0.00%	7.10%	0.01%
ServiceNow Inc	NOW	1034	147.99	153,021.66	0.32%			17.00%	0.05%
NRG Energy Inc	NRG	210.21048	110.12	23,148.38		1.73%		26.50%	
Norfolk Southern Corp	NSC	224.60837	342.79	76,993.50	0.16%	1.58%	0.00%	11.00%	0.02%
NetApp Inc	NTAP	196.23544	185.29	36,360.46	0.08%	1.12%	0.00%	8.53%	0.01%
Northern Trust Corp	NTRS	182.95565	185.56	33,949.25	0.07%	1.90%	0.00%	12.92%	0.01%
Nucor Corp	NUE	226.87568	249.64	56,637.24	0.12%	0.90%	0.00%	19.27%	0.02%
NVIDIA Corp	NVDA	24100	220.78	5,320,798.00		0.45%		51.52%	
NVR Inc	NVR	2.66486	6315.23	16,829.20	0.04%			1.82%	0.00%
News Corp	NWS	184.3403	34.41	6,343.15		0.58%			
News Corp	NWSA	360.50375	30.71	11,071.07	0.02%	0.65%	0.00%	19.50%	0.00%
NXP Semiconductors NV	NXPI	252.47108	224.64	56,715.10	0.12%	1.81%	0.00%	15.96%	0.02%
Realty Income Corp	O	946.21993	61.28	57,984.36	0.12%	5.31%	0.01%	4.09%	0.00%
Old Dominion Freight Line Inc	ODFL	207.35662	199.96	41,463.03	0.09%	0.58%	0.00%	11.99%	0.01%
ONEOK Inc	OKE	630.36967	96.01	60,521.79	0.13%	4.46%	0.01%	6.89%	0.01%
Omnicom Group Inc	OMC	274.34597	87.53	24,013.50	0.05%	3.66%	0.00%	12.78%	0.01%
ON Semiconductor Corp	ON	389.31172	74.09	28,844.11				23.91%	
Oracle Corp	ORCL	2880.471	149.12	429,535.84		1.34%		24.04%	
O'Reilly Automotive Inc	ORLY	808.96079	88.8	71,835.72	0.15%			10.02%	0.02%
Otis Worldwide Corp	OTIS	380.66934	71.13	27,077.01	0.06%	2.47%	0.00%	9.00%	0.01%
Occidental Petroleum Corp	OXY	999.63737	60.18	60,158.18		1.86%			
Palo Alto Networks Inc	PANW	815	382.13	311,435.95				22.87%	
Paychex Inc	PAYX	355.68286	127.34	45,292.66	0.09%	3.74%	0.00%	7.50%	0.01%
PACCAR Inc	PCAR	526.36495	124.13	65,337.68	0.14%	1.13%	0.00%	10.28%	0.01%
PG&E Corp	PCG	2202.36691	13.27	29,225.41	0.06%	1.51%	0.00%	9.06%	0.01%
Public Service Enterprise Group Inc	PEG	498.42003	73.33	36,549.14	0.08%	3.65%	0.00%	7.26%	0.01%
PepsiCo Inc	PEP	1364.89156	140.34	191,548.88	0.40%	4.22%	0.02%	5.49%	0.02%
Pfizer Inc	PFE	5699.67359	28.46	162,212.71	0.34%	6.04%	0.02%	0.70%	0.00%
Principal Financial Group Inc	PFG	214.10464	110.16	23,585.77	0.05%	3.05%	0.00%	7.75%	0.00%
Procter & Gamble Co/The	PG	2322.67231	145.12	337,066.21	0.70%	3.00%	0.02%	4.81%	0.03%
Progressive Corp/The	PGR	583.5	218.08	127,249.68	0.27%	0.18%	0.00%	5.36%	0.01%
Parker-Hannifin Corp	PH	126.08639	979.44	123,494.05	0.26%	0.82%	0.00%	9.19%	0.02%
PulteGroup Inc	PHM	187.45254	126.32	23,679.00	0.05%	0.82%	0.00%	4.24%	0.00%
Packaging Corp of America	PKG	89.0983	233.94	20,843.66	0.04%	2.56%	0.00%	7.39%	0.00%
Prologis Inc	PLD	948.0811	139.92	132,655.51	0.28%	3.06%	0.01%	4.00%	0.01%
Palantir Technologies Inc	PLTR	2300.71333	186.38	428,806.95				61.00%	
Philip Morris International Inc	PM	1558.61344	187.3	291,928.30	0.61%	3.14%	0.02%	9.75%	0.06%
PNC Financial Services Group Inc/The	PNC	398.94367	239.63	95,598.87	0.20%	3.34%	0.01%	12.28%	0.02%
Pentair PLC	PNR	159.63795	60.46	9,651.71	0.02%	1.79%	0.00%	8.45%	0.00%
Pinnacle West Capital Corp	PNW	121.19723	97.64	11,833.70	0.02%	3.73%	0.00%	6.51%	0.00%
Insulet Corp	PODD	69.3542	148.66	10,310.20				26.87%	
PPG Industries Inc	PPG	222.3	112.17	24,935.39	0.05%	2.64%	0.00%	6.57%	0.00%
PPL Corp	PPL	752.54484	34.13	25,684.36	0.05%	3.34%	0.00%	7.81%	0.00%
Prudential Financial Inc	PRU	345	117.6	40,572.00	0.08%	4.76%	0.00%	5.38%	0.00%
Public Storage	PSA	186.74575	306.99	57,329.08	0.12%	3.91%	0.00%	5.53%	0.01%
Paramount Skydance Corp	PSKY	1090.44569	10.91	11,896.76	0.02%	1.83%	0.00%	18.10%	0.00%
Phillips 66	PSX	399.02092	246.58	98,390.58		2.06%		26.22%	
PTC Inc	PTC	108.50626	155.74	16,898.76	0.04%			9.22%	0.00%
Quanta Services Inc	PWR	150.34339	607.09	91,271.97		0.07%		21.34%	
PayPal Holdings Inc	PYPL	855.46087	52.665	45,052.85	0.09%	1.06%	0.00%	7.41%	0.01%
Qnity Electronics Inc	Q	209.20854	119.43	24,985.78		0.27%			
QUALCOMM Inc	QCOM	1050	170.48	179,004.00	0.37%	2.16%	0.01%	4.73%	0.02%
Royal Caribbean Cruises Ltd	RCL	268.19283	268.74	72,074.14	0.15%	2.23%	0.00%	14.35%	0.02%
Reddit Inc	RDDT	146.1032	147.81	21,595.51				57.00%	
Regency Centers Corp	REG	183.12055	74.77	13,691.92	0.03%	4.04%	0.00%	10.08%	0.00%
Regeneron Pharmaceuticals Inc	REGN	101.13784	799.08	80,817.23	0.17%	0.47%	0.00%	12.79%	0.02%
Regions Financial Corp	RF	851.92951	29.58	25,200.07	0.05%	4.06%	0.00%	9.15%	0.00%
Raymond James Financial Inc	RJF	192.36094	178.17	34,272.95	0.07%	1.21%	0.00%	15.07%	0.01%
Ralph Lauren Corp	RL	37.70096	346.9	13,078.46	0.03%	1.15%	0.00%	13.77%	0.00%
ResMed Inc	RMD	144.25231	240.1	34,634.98	0.07%	1.10%	0.00%	9.26%	0.01%
Rockwell Automation Inc	ROK	111.04868	424.43	47,132.39	0.10%	1.30%	0.00%	13.19%	0.01%
Rollins Inc	ROL	481.1454	36.07	17,354.91	0.04%	2.02%	0.00%	8.61%	0.00%
Roper Technologies Inc	ROP	98.90087	424.64	41,997.27	0.09%	0.86%	0.00%	6.50%	0.01%
Ross Stores Inc	ROST	320.78108	228.54	73,311.31	0.15%	0.78%	0.00%	11.24%	0.02%
Republic Services Inc	RSG	306.21298	220.92	67,648.57	0.14%	1.21%	0.00%	8.82%	0.01%
RTX Corp	RTX	1347.75814	207.73	279,969.80	0.59%	1.41%	0.01%	12.10%	0.07%
Revvity Inc	RVTY	111.5864	128.67	14,357.82	0.03%	0.22%	0.00%	7.63%	0.00%

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] Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
SBA Communications Corp	SBAC	106.08811	189.66	20,120.67	0.04%	2.64%	0.00%	3.87%	0.00%
Starbucks Corp	SBUX	1140	106.25	121,125.00	0.25%	2.33%	0.01%	12.70%	0.03%
Charles Schwab Corp/The	SCHW	1729.33571	109.82	189,915.65	0.40%	1.17%	0.00%	17.18%	0.07%
Sherwin-Williams Co/The	SHW	242.75815	338.81	82,248.89	0.17%	0.94%	0.00%	10.58%	0.02%
J M Smucker Co/The	SJM	106.82318	131.16	14,010.93	0.03%	3.42%	0.00%	7.37%	0.00%
SLB Ltd	SLB	1484.14323	60.1	89,197.01	0.19%	1.96%	0.00%	6.78%	0.01%
Super Micro Computer Inc	SMCI	656.96538	37.28	24,491.67	0.05%			18.15%	0.01%
Snap-on Inc	SNA	51.72712	386.31	19,982.70	0.04%	2.53%	0.00%	4.50%	0.00%
Sandisk Corp	SNDK	146.419	1566.7	229,394.65				48.16%	
Synopsys Inc	SNPS	191.63665	439.59	84,241.55	0.18%			14.31%	0.03%
Southern Co/The	SO	1128.31983	88	99,292.15	0.21%	3.45%	0.01%	6.95%	0.01%
Solventum Corp	SOLV	170.22373	91.06	15,500.57	0.03%			10.75%	0.00%
Simon Property Group Inc	SPG	323.55152	212.32	68,696.46	0.14%	4.24%	0.01%	4.78%	0.01%
S&P Global Inc	SPGI	302	435.84	131,623.68	0.28%	0.89%	0.00%	10.41%	0.03%
Sempra	SRE	653.90035	81.7	53,423.66	0.11%	3.22%	0.00%	7.88%	0.01%
STERIS PLC	STE	97.50011	232.64	22,682.43	0.05%	1.19%	0.00%	8.00%	0.00%
Steel Dynamics Inc	STLD	143.32809	232.62	33,340.98	0.07%	0.91%	0.00%	15.68%	0.01%
State Street Corp	STT	274.70177	191.38	52,572.42	0.11%	1.92%	0.00%	16.09%	0.02%
Seagate Technology Holdings PLC	STX	226.64678	828.38	187,749.66		0.36%		53.63%	
Constellation Brands Inc	STZ	170.75183	130.62	22,303.60	0.05%	3.15%	0.00%	3.07%	0.00%
Smurfit Westrock PLC	SW	524.52291	46.9	24,600.12		3.86%		43.54%	
Stanley Black & Decker Inc	SWK	151.01664	96.37	14,553.47	0.03%	3.49%	0.00%	20.00%	0.01%
Skyworks Solutions Inc	SWKS	150.47278	67.01	10,083.18		4.24%		-1.37%	
Synchrony Financial	SYF	325.37149	77.08	25,079.63	0.05%	1.76%	0.00%	8.11%	0.00%
Stryker Corp	SYK	383.57305	323.8	124,200.95	0.26%	1.09%	0.00%	10.25%	0.03%
Sysco Corp	SYY	478.18356	81.08	38,771.12	0.08%	2.71%	0.00%	6.50%	0.01%
AT&T Inc	T	6852.38565	25.89	177,408.26	0.37%	4.29%	0.02%	8.20%	0.03%
Molson Coors Beverage Co	TAP	174.11799	39.76	6,922.93	0.01%	4.83%	0.00%	1.39%	0.00%
TransDigm Group Inc	TDG	55.27653	1171.74	64,769.72	0.14%			15.28%	0.02%
Teledyne Technologies Inc	TDY	46.35567	612.95	28,413.71	0.06%			10.16%	0.01%
Bio-Techne Corp	TECH	156.81824	72.31	11,339.53	0.02%	0.44%	0.00%	16.50%	0.00%
TE Connectivity PLC	TEL	289.51323	205.25	59,422.59	0.12%	1.52%	0.00%	11.76%	0.01%
Teradyne Inc	TER	156.34075	349.83	54,692.68		0.15%		39.69%	
Truist Financial Corp	TFC	1221.62619	49.58	60,568.23	0.13%	4.20%	0.01%	10.45%	0.01%
Target Corp	TGT	454.29674	160.88	73,087.26	0.15%	2.88%	0.00%	8.11%	0.01%
TJX Cos Inc/The	TJX	1099.97406	133.91	147,297.53	0.31%	1.43%	0.00%	10.68%	0.03%
TKO Group Holdings Inc	TKO	73.1111	182.61	13,350.82		1.73%			
Thermo Fisher Scientific Inc	TMO	369.74729	617.1	228,171.05	0.48%	0.30%	0.00%	9.46%	0.05%
T-Mobile US Inc	TMUS	1072.67805	180.44	193,554.03	0.40%	2.26%	0.01%	16.50%	0.07%
Texas Pacific Land Corp	TPL	68.97468	373.74	25,778.60	0.05%	0.64%	0.00%	10.00%	0.01%
Tapestry Inc	TPR	199.39168	123.39	24,602.94	0.05%	1.50%	0.00%	10.96%	0.01%
Targa Resources Corp	TRGP	214.43102	293.65	62,967.67	0.13%	1.70%	0.00%	17.99%	0.02%
Trimble Inc	TRMB	233.17985	59.94	13,976.80	0.03%			8.50%	0.00%
T Rowe Price Group Inc	TROW	213.31585	111.28	23,737.79	0.05%	4.67%	0.00%	5.22%	0.00%
Travelers Cos Inc/The	TRV	208.57502	365.93	76,323.86	0.16%	1.37%	0.00%	3.45%	0.01%
Tractor Supply Co	TSCO	521.04014	34.9	18,184.30	0.04%	2.75%	0.00%	2.80%	0.00%
Tesla Inc	TSLA	3949.54739	367.95	1,453,235.96	3.04%			10.00%	0.30%
Tyson Foods Inc	TSN	281.79251	54.63	15,394.32	0.03%	3.73%	0.00%	11.54%	0.00%
Trane Technologies PLC	TT	220.02318	444.4	97,778.30	0.20%	0.95%	0.00%	13.08%	0.03%
Trade Desk Inc/The	TTD	426.77157	13.72	5,855.31	0.01%			7.82%	0.00%
Take-Two Interactive Software Inc	TTWO	186.98044	219.7	41,079.60				44.69%	
Texas Instruments Inc	TXN	913.24769	260.91	238,275.45	0.50%	2.18%	0.01%	12.50%	0.06%
Textron Inc	TXT	171.98692	80.56	13,855.27	0.03%	0.10%	0.00%	12.05%	0.00%
Tyler Technologies Inc	TYL	40.95227	372.22	15,243.25	0.03%			9.00%	0.00%
United Airlines Holdings Inc	UAL	324.64938	107.99	35,058.89	0.07%			13.57%	0.01%
Uber Technologies Inc	UBER	2042.56012	75.65	154,519.67	0.32%			12.33%	0.04%
UDR Inc	UDR	321.26422	36.95	11,870.71	0.02%	4.71%	0.00%	2.78%	0.00%
Universal Health Services Inc	UHS	51.68777	170.13	8,793.64	0.02%	0.47%	0.00%	6.93%	0.00%
Ulta Beauty Inc	ULTA	42.75747	537.1	22,965.04	0.05%			9.85%	0.00%
UnitedHealth Group Inc	UNH	897.59485	389.41	349,532.41	0.73%	2.38%	0.02%	9.61%	0.07%
Union Pacific Corp	UNP	594.08025	300.67	178,622.11	0.37%	1.89%	0.01%	9.41%	0.04%
United Parcel Service Inc	UPS	749.34941	104.23	78,104.69	0.16%	6.29%	0.01%	8.06%	0.01%
United Rentals Inc	URI	62.24249	1038	64,607.70	0.14%	0.76%	0.00%	14.73%	0.02%
US Bancorp	USB	1558.05145	61.58	95,944.81	0.20%	3.38%	0.01%	10.16%	0.02%
Visa Inc	V	1704.11269	379.37	646,489.23	1.35%	0.71%	0.01%	13.28%	0.18%
Veeva Systems Inc	VEEV	161.90885	285.69	46,255.74	0.10%			12.50%	0.01%
VICI Properties Inc	VICI	1101.07756	25.65	28,242.64	0.06%	7.02%	0.00%	8.00%	0.00%
Valero Energy Corp	VLO	287.92746	358.92	103,342.92		1.34%		22.88%	

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] Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Veralto Corp	VLTO	243.79334	98.57	24,030.71	0.05%	0.53%	0.00%	8.50%	0.00%
Vulcan Materials Co	VMC	129.57874	269.58	34,931.84	0.07%	0.77%	0.00%	5.50%	0.00%
Vivmark Residential	VMRK	774.94516	65.14	50,479.93	0.11%	4.31%	0.00%	4.48%	0.00%
Verisk Analytics Inc	VRSK	130.15601	193.78	25,221.63	0.05%	1.03%	0.00%	11.53%	0.01%
VeriSign Inc	VRSN	90.3	288.28	26,031.68	0.05%	1.12%	0.00%	8.00%	0.00%
Vertiv Holdings Co	VRT	384.98817	258.72	99,604.14		0.10%		32.04%	
Vertex Pharmaceuticals Inc	VRTX	253.46092	544.52	138,014.54	0.29%			15.67%	0.05%
Vistra Corp	VST	335.6352	137.37	46,106.21		0.67%		60.69%	
Ventas Inc	VTR	512.94636	91.17	46,765.32		2.28%		25.08%	
Viatris Inc	VTRS	1148.59086	16.51	18,963.24	0.04%	2.91%	0.00%	3.33%	0.00%
Verizon Communications Inc	VZ	4154.7752	50.02	207,821.86	0.43%	5.66%	0.02%	4.18%	0.02%
Westinghouse Air Brake Technologies Corp	WAB	168.91085	285.93	48,296.68	0.10%	0.43%	0.00%	15.30%	0.02%
Waters Corp	WAT	98.24811	414.63	40,736.61	0.09%			10.91%	0.01%
Warner Bros Discovery Inc	WBD	2510.70331	28.53	71,630.37					
Workday Inc	WDAY	196	197.45	38,700.20					
Western Digital Corp	WDC	344.68213	450.55	155,296.53		0.13%		86.63%	
WEC Energy Group Inc	WEC	325.84938	106.17	34,595.43	0.07%	3.59%	0.00%	6.55%	0.00%
Welltower Inc	WELL	720.74495	236.24	170,268.79		1.44%		22.33%	
Wells Fargo & Co	WFC	3023.99934	86.39	261,243.30	0.55%	2.32%	0.01%	11.10%	0.06%
Waste Management Inc	WM	399.71518	218.92	87,505.65	0.18%	1.73%	0.00%	9.08%	0.02%
Williams Cos Inc/The	WMB	1222.85695	75.05	91,775.41	0.19%	2.80%	0.01%	19.36%	0.04%
Walmart Inc	WMT	7933.74624	104.87	832,011.97	1.74%	0.94%	0.02%	9.58%	0.17%
W R Berkley Corp	WRB	371.22753	67.56	25,080.13	0.05%	0.59%	0.00%	8.02%	0.00%
Williams-Sonoma Inc	WSM	117.77917	228.25	26,883.10	0.06%	1.33%	0.00%	7.21%	0.00%
West Pharmaceutical Services Inc	WST	70.37576	341.11	24,005.88	0.05%	0.26%	0.00%	10.11%	0.01%
Willis Towers Watson PLC	WTW	92.87194	338.55	31,441.80	0.07%	1.13%	0.00%	14.80%	0.01%
Weyerhaeuser Co	WY	720.736	23.37	16,843.60		3.59%		29.62%	
Wynn Resorts Ltd	WYNN	102.97389	91.28	9,399.46	0.02%	1.10%	0.00%	17.02%	0.00%
Xcel Energy Inc	XEL	624.63431	75.69	47,278.57	0.10%	3.13%	0.00%	8.00%	0.01%
ExxonMobil Holdings Corp	XOM	4144.45556	160.95	667,050.12	1.39%	2.56%	0.04%	11.96%	0.17%
Xylem Inc/NY	XYL	233.48681	110.11	25,709.23	0.05%	1.56%	0.00%	10.50%	0.01%
Block Inc	XYZ	540.816	82.02	44,357.73					
Yum! Brands Inc	YUM	272.90109	153.31	41,838.47	0.09%	1.96%	0.00%	10.50%	0.01%
Zimmer Biomet Holdings Inc	ZBH	190.73769	100.04	19,081.40	0.04%	0.96%	0.00%	5.17%	0.00%
Zebra Technologies Corp	ZBRA	47.31066	353.55	16,726.68	0.03%			10.00%	0.00%
Zoetis Inc	ZTS	413.2236	77.1	31,859.54	0.07%	2.75%	0.00%	7.00%	0.00%

Notes:

[1] Equals sum of Col. [9]

[2] Equals sum of Col. [11]

[3] Equals ([1] x (1 + (0.5 x [2]))) + [2]

[4] Bloomberg Professional as of August 31, 2026

[5] Bloomberg Professional as of August 31, 2026

[6] Equals [4] x [5]

[7] Equals weight in S&P 500 based on market capitalization [6] if Growth Rate >0% and ≤20%

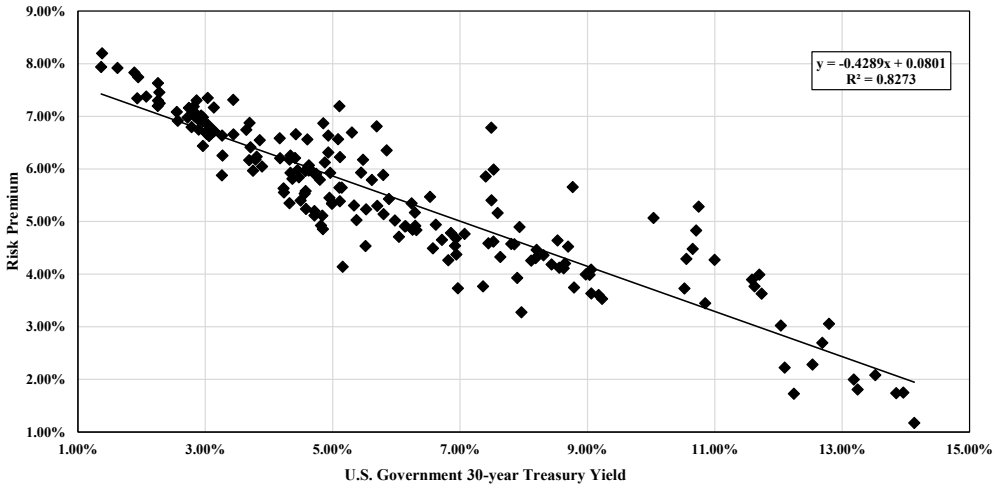
[8] Source: Bloomberg Professional, as of August 31, 2026

[9] Equals [7] x [8]

[10] Average of Bloomberg Professional and Value Line, as of August 31, 2026

[11] Equals [7] x [10]

BOND YIELD PLUS RISK PREMIUM



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9094194
R Square	0.8270436
Adjusted R Square	0.8261087
Standard Error	0.0058749
Observations	187

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.03053	0.03053	884.63372	0.00000
Residual	185	0.00639	0.00003		
Total	186	0.03692			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0800	0.00	83.04	0.0000	0.0781	0.0819	0.0781	0.0819
U.S. Govt. 30-year Treasury	(0.4274)	0.01	(29.74)	0.0000	(0.4558)	(0.3991)	(0.4558)	(0.3991)

	[7] U.S. Govt. 30-year Treasury [7]	[8] Risk Premium [8]	[9] ROE [9]
Current 30-day average of 30-year U.S. Treasury bond yield [4]	5.21%	5.78%	10.98%
Blue Chip Near-Term Projected Forecast (Q4 2026 - Q4 2027) [5]	5.00%	5.87%	10.87%
Blue Chip Long-Term Projected Forecast (2028-2032) [6]	4.70%	5.99%	10.69%
AVERAGE			10.85%

Notes:

[1] Regulatory Research Associates, rate cases through August 31, 2026

[2] 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] S&P Capital IQ Pro, 30-day average as of June 30, 2026

[5] Blue Chip Financial Forecasts, September 2026 Edition, September 1, 2026, at 9

[6] Blue Chip Financial Forecasts, Vol. 45, No. 6, June 1, 2026, at 14

[7] See notes [4], [5] & [6]

[8] Equals 0.080026 + (-0.427445 x Column [7])

[9] Equals Column [7] + Column [8]

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%	12.24%	1.73%
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%

BOND YIELD PLUS RISK PREMIUM

Quarter	[1] Average Authorized VI Electric ROE	[2] U.S. Govt. 30-year Treasury	[3] Risk Premium
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%
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%

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
Quarter	Average Authorized VI Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
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%
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	9.54%	1.62%	7.92%
2021.1	9.45%	2.07%	7.38%
2021.2	9.55%	2.26%	7.30%
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	9.88%	3.05%	6.83%
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	10.04%	3.81%	6.23%
2023.3	9.79%	4.23%	5.55%
2023.4	9.82%	4.58%	5.24%
2024.1	9.67%	4.32%	5.35%
2024.2	10.16%	4.58%	5.58%
2024.3	9.86%	4.23%	5.63%
2024.4	9.90%	4.50%	5.40%
2025.1	9.83%	4.72%	5.11%
2025.2	9.95%	4.84%	5.11%
2025.3	9.70%	4.85%	4.85%
2025.4	9.91%	4.71%	5.20%
2026.1	9.74%	4.82%	4.93%
2026.2	10.89%	4.96%	5.92%

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
Quarter	Average Authorized VI Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
2026.3	9.30%	5.16%	4.14%
AVERAGE	11.44%	6.01%	5.43%
MEDIAN	10.89%	5.11%	5.55%

COMPARISON OF MINNESOTA POWER AND PROXY GROUP COMPANIES
REGULATORY RISK ASSESSMENT

				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
					Revenue Stabilization			Alternative Regualtion Plans			
Company	Operating Subsidiary	State	Utility Type	Test Year Convention	Revenue Decoupling	Straight Fixed Variable Rate Design	Overall Revenue Stabilization	Formula-Based Rates	Multi-Year Rate Plans	Overall Alternative Regulation Plans	Capital Cost Recovery
Alliant Energy Corporation	Interstate Power & Light Co.	Iowa	Electric	Fully Forecast	No	No	No	No	No	No	Yes
	Interstate Power & Light Co.	Iowa	Gas	Fully Forecast	No	No	No	No	No	No	No
	Wisconsin Power & Light Co.	Wisconsin	Electric	Fully Forecast	No	No	No	No	Yes	Yes	No
	Wisconsin Power & Light Co.	Wisconsin	Gas	Fully Forecast	No	No	No	No	Yes	Yes	No
Ameren Corporation	Ameren Illinois Co.	Illinois	Electric	Fully Forecast	Yes	No	Yes	No	Yes	Yes	Yes
	Ameren Illinois Co.	Illinois	Gas	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	Union Electric Co.	Missouri	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Union Electric Co.	Missouri	Gas	Historical	Yes	No	Yes	No	No	No	Yes
American Electric Power Company, Inc.	Southwestern Electric Power Co.	Arkansas	Electric	Historical	Yes	No	Yes	Yes	No	Yes	Yes
	Indiana Michigan Power Co.	Indiana	Electric	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	Kentucky Power Co.	Kentucky	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Southwestern Electric Power Co.	Louisiana	Electric	Historical	Yes	No	Yes	Yes	No	Yes	Yes
	Indiana Michigan Power Co.	Michigan	Electric	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	Ohio Power Co.	Ohio	Electric	Partially Forecast	Yes	No	Yes	No	No	No	Yes
	Public Service Co. of Oklahoma	Oklahoma	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Kingsport Power Co.	Tennessee	Electric	Historical	No	No	No	No	No	No	No
	AEP Texas	Texas	Electric	Historical	No	No	No	No	No	No	Yes
	Southwestern Electric Power Co.	Texas	Electric	Historical	No	No	No	No	No	No	Yes
	Appalachian Power Co.	Virginia	Electric	Historical	No	No	No	No	No	No	Yes
	Appalachian Power Co./Wheeling Power Co.	West Virginia	Electric	Historical	No	No	No	No	No	No	Yes
Avista Corporation	Alaska Electric Light and Power Co.	Alaska	Electric	Historical	No	No	No	No	No	No	No
	Avista Corp.	Idaho	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Avista Corp.	Idaho	Gas	Historical	Yes	No	Yes	No	No	No	Yes
	Avista Corp.	Oregon	Gas	Fully Forecast	Yes	No	Yes	No	No	No	No
	Avista Corp.	Washington	Electric	Historical	Yes	No	Yes	No	Yes	Yes	Yes
	Avista Corp.	Washington	Gas	Historical	Yes	No	Yes	No	Yes	Yes	Yes
CMS Energy Corporation	Consumers Energy Co.	Michigan	Electric	Fully Forecast	No	No	No	No	No	No	Yes
	Consumers Energy Co.	Michigan	Gas	Fully Forecast	Yes	No	Yes	No	No	No	Yes
DTE Energy Company	DTE Electric Co.	Michigan	Electric	Fully Forecast	No	No	No	No	No	No	Yes
	DTE Gas Co.	Michigan	Gas	Fully Forecast	Yes	No	Yes	No	No	No	Yes
Duke Energy	Duke Energy Florida LLC	Florida	Electric	Fully Forecast	No	No	No	No	Yes	Yes	Yes
	Duke Energy Indiana LLC	Indiana	Electric	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	Duke Energy Kentucky Inc.	Kentucky	Electric	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	Duke Energy Kentucky Inc.	Kentucky	Gas	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	Duke Energy Carolinas LLC	North Carolina	Electric	Historical	Yes	No	Yes	No	Yes	Yes	Yes
	Duke Energy Progress LLC	North Carolina	Electric	Historical	Yes	No	Yes	No	Yes	Yes	Yes
	Piedmont Natural Gas Co. Inc.	North Carolina	Gas	Historical	Yes	No	Yes	No	No	No	Yes
	Duke Energy Ohio Inc.	Ohio	Electric	Partially Forecast	Yes	No	Yes	No	No	No	Yes
	Duke Energy Ohio Inc.	Ohio	Gas	Partially Forecast	No	Yes	Yes	No	No	No	Yes
	Duke Energy Progress LLC	South Carolina	Electric	Historical	No	No	No	No	No	No	Yes
	Duke Energy Carolinas LLC	South Carolina	Electric	Historical	No	No	No	No	No	No	Yes
	Piedmont Natural Gas Co.	South Carolina	Gas	Historical	No	No	No	No	No	No	No
Entergy Corporation	Entergy Arkansas LLC	Arkansas	Electric	Fully Forecast	Yes	No	Yes	Yes	No	Yes	Yes
	Entergy New Orleans LLC	Louisiana-NOCC	Electric	Partially Forecast	Yes	No	Yes	Yes	No	Yes	Yes
	Entergy New Orleans LLC	Louisiana-NOCC	Gas	Partially Forecast	No	No	No	Yes	No	Yes	No
	Entergy Louisiana LLC	Louisiana	Electric	Historical	Yes	No	Yes	Yes	No	Yes	Yes
	Entergy Louisiana LLC	Louisiana	Gas	Historical	No	No	No	Yes	No	Yes	Yes
	Entergy Mississippi LLC	Mississippi	Electric	Fully Forecast	No	No	No	Yes	No	Yes	Yes
	Entergy Texas Inc.	Texas	Electric	Fully Forecast	No	No	No	No	No	No	Yes
Evergy, Inc.	Evergy Kansas Central Inc	Kansas	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Evergy Metro Inc.	Kansas	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Evergy Metro Inc	Missouri	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Evergy Missouri West Inc.	Missouri	Electric	Historical	Yes	No	Yes	No	No	No	Yes
IDACORP, Inc.	Idaho Power Co.	Idaho	Electric	Partially Forecast	Yes	No	Yes	No	No	No	No
	Idaho Power Co.	Oregon	Electric	Partially Forecast	No	No	No	No	No	No	Yes
OGE Energy Corporation	Oklahoma Gas and Electric Company	Arkansas	Electric	Historical	Yes	No	Yes	Yes	No	Yes	Yes
	Oklahoma Gas and Electric Company	Oklahoma	Electric	Historical	Yes	No	Yes	No	No	No	Yes
Pinnacle West Capital Corporation	Arizona Public Service Co.	Arizona	Electric	Historical	Yes	No	Yes	No	No	No	Yes
PPL Corporation	Kentucky Utilities Co.	Kentucky	Electric	Fully Forecast	Yes	No	Yes	No	No	No	Yes

COMPARISON OF MINNESOTA POWER AND PROXY GROUP COMPANIES
REGULATORY RISK ASSESSMENT

				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
					Revenue Stabilization			Alternative Regualtion Plans			
Company	Operating Subsidiary	State	Utility Type	Test Year Convention	Revenue Decoupling	Straight Fixed Variable Rate Design	Overall Revenue Stabilization	Formula-Based Rates	Multi-Year Rate Plans	Overall Alternative Regulation Plans	Capital Cost Recovery
	Louisville Gas & Electric Co.	Kentucky	Electric	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	Louisville Gas & Electric Co.	Kentucky	Gas	Fully Forecast	Yes	No	Yes	No	No	No	Yes
	PPL Electric Utilities Corp.	Pennsylvania	Electric	Fully Forecast	No	No	No	No	No	No	Yes
	Narragansett Electric Co.	Rhode Island	Electric	Historical	Yes	No	Yes	No	Yes	Yes	Yes
	Narragansett Electric Co.	Rhode Island	Gas	Historical	Yes	No	Yes	No	Yes	Yes	Yes
	Kentucky Utilities Co.	Virginia	Electric	Historical	No	No	No	No	No	No	No
Southern Company	Alabama Power Co.	Alabama	Electric	Fully Forecast	No	No	No	Yes	No	Yes	Yes
	Georgia Power Co.	Georgia	Electric	Fully Forecast	No	No	No	No	No	No	Yes
	Atlanta Gas & Light Co.	Georgia	Gas	Fully Forecast	Yes	Yes	Yes	Yes	No	Yes	Yes
	Northern Illinois Gas Co.	Illinois	Gas	Fully Forecast	Yes	Yes	Yes	No	No	No	Yes
	Mississippi Power Co.	Mississippi	Electric	Fully Forecast	No	No	No	Yes	No	Yes	Yes
	Chattanooga Gas Co.	Tennessee	Gas	Historical	Yes	No	Yes	Yes	No	Yes	No
	Virginia Natural Gas Inc.	Virginia	Gas	Partially Forecast	Yes	Yes	Yes	No	No	No	Yes
Xcel Energy	Public Service Co. of Colorado	Colorado	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Public Service Co. of Colorado	Colorado	Gas	Historical	Yes	No	Yes	No	No	No	Yes
	Northern States Power Co.-Minnesota	Minnesota	Electric	Fully Forecast	Yes	No	Yes	Yes	No	Yes	Yes
	Northern States Power Co.-Minnesota	Minnesota	Gas	Fully Forecast	No	No	No	No	No	No	Yes
	Southwestern Public Service Co.	New Mexico	Electric	Fully Forecast	No	No	No	No	No	No	Yes
	Northern States Power Co.-Minnesota	North Dakota	Electric	Fully Forecast	No	No	No	No	No	No	Yes
	Northern States Power Co.-Minnesota	North Dakota	Gas	Fully Forecast	No	Yes	Yes	No	No	No	No
	Northern States Power Co.-Minnesota	South Dakota	Electric	Historical	Yes	No	Yes	No	No	No	Yes
	Southwestern Public Service Co.	Texas	Electric	Historical	No	No	No	No	No	No	No
	Northern States Power Co.-Wisconsin	Wisconsin	Electric	Fully Forecast	No	No	No	No	Yes	Yes	No
	Northern States Power Co.-Wisconsin	Wisconsin	Gas	Fully Forecast	No	No	No	No	Yes	Yes	No
Proxy Group Totals				Fully Forecast 36							
				Partially Forecast 8			Yes 51			Yes 26	68
				Historical 39			No 32			No 57	15
				% Forecast 53.01%			% Yes 61.45%			% Yes 31.33%	81.93%
Minnesota Power [9]		Minnesota	Electric	Fully Forecast	Proposed	No	Proposed	No	No	No	Yes

Notes:
[1] Regulatory Research Associates, effective as of July 31, 2026.
[2] S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated September, 2025. Operating subsidiaries not covered in this report were excluded from this exhibit. Designated "Yes" if full or partial decoupling.
[3] S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated September 2025.
[4] Equals IF(AND([2]=No, [3]=No), No, Yes)
[5] S&P Capital IQ Pro, Alternative Regulation
[6] S&P Capital IQ Pro, Alternative Regulation
[7] Equals IF(AND([5]=No, [6]=No), No, Yes)
[8] S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated September 2025. Designated "Yes" if noted by S&P as a having a capital tracker to recover either "Traditional generation",

CAPITAL STRUCTURE ANALYSIS

		Most Recent 8 Quarters (2024Q1 - 2025Q4)			
Proxy Group Company	Ticker	Common Equity Ratio	Long-Term Debt Ratio	Preferred Equity Ratio	Total Capitalization
Alliant Energy Corporation	LNT	52.02%	47.98%	0.00%	100.00%
Ameren Corporation	AEE	53.14%	46.41%	0.44%	100.00%
American Electric Power Company, Inc.	AEP	49.17%	50.83%	0.00%	100.00%
Avista Corporation	AVA	50.25%	49.75%	0.00%	100.00%
CMS Energy Corporation	CMS	48.52%	51.33%	0.15%	100.00%
DTE Energy Company	DTE	48.97%	51.03%	0.00%	100.00%
Duke Energy Corporation	DUK	53.22%	46.78%	0.00%	100.00%
Entergy Corporation	ETR	50.61%	49.31%	0.08%	100.00%
Evergy, Inc.	EVRG	59.83%	40.17%	0.00%	100.00%
IDACORP, Inc.	IDA	48.93%	51.07%	0.00%	100.00%
OGE Energy Corporation	OGE	53.30%	46.70%	0.00%	100.00%
Pinnacle West Capital Corporation	PNW	51.91%	48.09%	0.00%	100.00%
PPL Corporation	PPL	56.23%	43.77%	0.00%	100.00%
Southern Company	SO	55.53%	44.47%	0.00%	100.00%
Xcel Energy Inc.	XEL	53.76%	46.24%	0.00%	100.00%
	Average	52.36%	47.60%	0.05%	
	Median	52.02%	47.98%	0.00%	
	Maximum	59.83%	51.33%	0.44%	
	Minimum	48.52%	40.17%	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.