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MISSOURI PUBLIC SERVICE COMMISSION

FINANCIAL AND BUSINESS ANALYSIS DIVISION

FINANCIAL ANALYSIS DEPARTMENT

SURREBUTTAL / TRUE-UP DIRECT TESTIMONY

OF

SEOUNG JOUN WON, PHD

EVERGY METRO, INC.,
d/b/a Evergy Missouri Metro

CASE NO. ER-2026-0143

Jefferson City, Missouri
September 2026

** Denotes Confidential Information **

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SEOUNG JOUN WON, PHD

EVERGY METRO, INC., d/b/a EVERGY MISSOURI METRO

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SURREBUTTAL / TRUE-UP DIRECT TESTIMONY

OF

SEOUNG JOUN WON, PHD

EVERGY METRO, INC., d/b/a EVERGY MISSOURI METRO

CASE NO. ER-2026-0143

Q. Please state your name and business address.

A. My name is Seoung Joun Won and my business address is P.O. Box 360, Jefferson City, Missouri 65102.

Q. Who is your employer and what is your present position?

A. I am employed by the Missouri Public Service Commission ("Commission") as a member of Commission Staff ("Staff") and my title is Regulatory Compliance Manager for the Financial Analysis Department, in the Financial and Business Analysis Division.

Q. Are you the same Seoung Joun Won who filed Direct Testimony on June 30, 2026, and Rebuttal Testimony on August 11, 2026, in this proceeding?

A. Yes, I am.

Q. What is the purpose of your surrebuttal / true-up direct testimony?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimonies of Ann E. Bulkley and David Murray regarding rate of return ("ROR") related issues including return on equity ("ROE") and capital structure. Ms. Bulkley sponsored testimonies on behalf of Evergy Metro, Inc., d/b/a Evergy Missouri Metro ("EMM"), a subsidiary of Evergy, Inc. ("Evergy"). Mr. Murray sponsored testimonies on behalf of the

Missouri Office of the Public Counsel ("OPC"). Within this testimony, Staff will address issues related to just and reasonable cost of capital components to be applied to EMM's electric utility rate base for ratemaking purposes in this proceeding.[1]

The purpose of my true-up direct testimony is to update my recommended ratemaking capital structure for EMM as of June 30, 2026. In addition, I will provide an updated overall ROR recommendation resulting from the changes in the capital structure and the embedded costs of debt that have occurred through June 30, 2026.

I. EXECUTIVE SUMMARY

Q. What is the overview of your response to the testimonies of EMM's witnesses, Ms. Bulkley?

A. Ms. Bulkley updated her COE analyses based on market data through June 30, 2026. Ms. Bulkley maintained her proposed ROE of 10.50%, using estimation methods such as the Constant Growth form of the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and the Bond Yield Plus Risk Premium ("BYRP") analysis that are the same methods in her direct testimony. Additionally, Ms. Bulkley addressed capital market conditions and EMM's business and regulatory risks. Ms. Bulkley also responded to Staff and Mr. Murray's direct testimonies respectively, regarding ROE related issues.

Q. What are Staff's findings in Ms. Bulkley's rebuttal testimony regarding the appropriate authorized ROE for EMM in this proceeding?

[1] Please refer to Appendix 1, Schedule SJW-d1-Updated though Schedule SJW-d17-Updated.

A. Staff found that most of Ms. Bulkley's responses to Staff's direct testimony are unreasonable and unsupported. Staff will explain this finding in more detail later in this testimony. In addition, Staff found that Ms. Bulkley's proposed ROE of 10.50% is substantially higher than the current authorized ROE determinations in the U.S. In 2026 to date, the average electric utility authorized ROE is 9.83% and the average vertically integrated electric utility authorized ROE is 9.85%,[2] both of which are within Staff's reasonable range of 9.48% to 9.98%. Staff found that the results of its analysis, which consider updated capital market conditions, the capital attraction and comparable return standards, and company-specific risks, indicate that Ms. Bulkley's proposed ROE of 10.50% is too high compared to the appropriate authorized ROE for EMM in this proceeding. While considering both Ms. Bulkley's rebuttal testimony and updated capital market conditions, Staff found no reason to change Staff's recommended authorized ROE of 9.73%.

Q. What are Staff's key issues with Ms. Bulkley's rebuttal testimony regarding her response to Staff's ROE recommendation in Won's direct testimony?

A. Staff's key issues with Ms. Bulkley's rebuttal testimony are the following:

1. In her updated COE analyses based on market data as of June 30, 2026, Ms. Bulkley again failed to properly apply basic financial concepts. For example, because of her erroneous underlying assumption that the market-data-derived COE is equal to the book-value-based authorized ROE, Ms. Bulkley mischaracterized the relationship between her COE estimation and her authorized ROE recommendation.[3] Ms. Bulkley's erroneous

[2] Regulatory Research Associates, S&P Capital IQ, retrieved August 20, 2026.
[3] Figure 2 (p.11), Bulkley's Rebuttal Testimony.

assumptions and inputs led her to maintain her proposed ROE range of 10.25% to 11.25% and EMM's proposed ROE of 10.50%, both of which she derived directly from her estimated COEs.[4] In addition, Ms. Bulkley made several incorrect arguments about Staff's analyses based on her confusion of the two concepts even though Staff has clarified the difference between COE and authorized ROE;[5]

2. In responding to my direct testimony, Ms. Bulkley again demonstrates that she does not correctly understand the relationship between Staff's COE model-based estimates and its authorized ROE recommendation. Based on her misunderstanding of Staff's analysis, Ms. Bulkley characterized Staff's recommended authorized ROE of 9.73% as problematic because it is based on Staff's Bond Yield Plus Risk Premium ("BY+RP")[6] model and gives no weight to Staff's DCF and CAPM analyses.[7] As I explained in my direct and rebuttal testimonies,[8] a market-value-based COE and a book-value-based ROE authorized by the Commission are distinct concepts. The distinction between these two measures is well recognized in academic literature.[9] The distinction reflects, among other things, that COE is based on market value of stock, whereas authorized ROE is applied using the book value of rate base. Ms. Bulkley's assumption that the COE estimates produced by the DCF and CAPM models should equal the authorized ROE estimate produced by the BY+RP model ignores the fundamental principles of rate-of-return analysis; and,

3. In her rebuttal arguments concerning my analysis, Ms. Bulkley demonstrated a lack of understanding and raised several internally

[4] Page 11, lines 4-6, Bulkley's Rebuttal Testimony.
[5] Footnote No. 2 (p.3), Won's Direct Testimony.
[6] Because Staff's method differs from Ms. Bukley's BYRP method, Staff's method is abbreviated as BY+RP.
[7] Page 9, lines 1-7, Bulkley's Rebuttal Testimony.
[8] Footnote No. 2 (p.3), Won's Direct Testimony, and Pages 28-32, Won's Rebuttal Testimony.
[9] Werner, K. D., & Jarvis, S. (2026). Rate of return regulation revisited. Journal of Public Economics, 259, 105654.

self-contradictory criticisms. Ms. Bulkley also provided misleading information suggesting that Staff's analysis had deficiencies. For example, Ms. Bulkley asserted that I used outdated data in my direct testimony because Staff's DCF analysis relied on stock-price and dividend data from the fourth quarter of 2025.[10] While that is true, there is nothing improper about Staff's use of that data because the test year and update period in this proceeding are the 12 months ending June 30, 2025, and December 31, 2025, respectively.[11] Moreover, Ms. Bulkley relied on even more outdated data in her direct testimony, as her DCF analysis used stock-price and dividend data as of November 28, 2025.[12] Therefore, Staff recommends that the Commission evaluate Ms. Bulkley's misleading arguments in her testimony with caution.

Q. What are the specific areas in which Staff is responding to Ms. Bulkley's rebuttal testimony?

A. Staff addresses issues raised in Ms. Bulkley's rebuttal testimony include:

- **Comparable Return Standard,**
- **COE and Authorized ROE,**
- **Updated COE,**
- **Updated Capital Market Conditions,**
- **Proxy Group,**
- **Growth Rates and DCF Model, and**
- **Market Risk Premium and CAPM.**

Staff will explain in detail why Ms. Bulkley's assertions are unfounded in the sections below.

[10] Page 9, lines 8-9, Bulkley's Rebuttal Testimony.
[11] Case Management Memo – Case No. ER-2026-0143.
[12] Schedule AEB-3, Bulkley's Direct Testimony.

II. RESPONSE TO TESTIMONY OF EVERGY MISSOURI METRO WITNESS

1. Comparable Return Standard

Q. Do you agree with Ms. Bulkley's statement that Staff has not provided any support for its contention that the results of the DCF and CAPM analyses may be overstated because of current capital-market conditions? [13]

A. No. Staff explained in several places in my direct testimony why the DCF and CAPM analyses may be overstated because of current capital-market conditions. For example,

> Current utility debt market conditions serve as a critical benchmark for COE estimation because they represent the "floor" for investor expectations; with public utility bond yields reaching 5.85% in March 2026, the risk-weighted return on equity must logically exceed this debt-cost threshold to remain competitive. Historically, elevated interest rates have functioned as a primary driver of **upward pressure on the COE**. This trend is currently amplified by a notable decoupling between monetary policy and market yields; while the Fed has implemented 125 basis points of cumulative easing since September 2024, the 30-year Treasury yield has remained elevated, reaching 4.92% in April 2026. This persistent elevation, **approximately 320 basis points above** December 2021 levels, reflects a significant increase in the risk-free rate driven by expansionary fiscal policy and heightened long-term inflation uncertainty. [Emphasis added.] [14]

It is basic financial knowledge that a significant increase in the 30-year Treasury yield, the risk-free rate, can result in higher CAPM-based COE estimates.[15] Likewise, changes in the cost of debt can contribute to stock-market volatility and

[13] Page 13, lines 12-16, Bulkley's Rebuttal Testimony.
[14] Page 28, lines 8-18, Won's Direct Testimony.
[15] Pratt, S. P., & Grabowski, R. J. (2014). Cost of Capital, 5th Ed. (pp.197-199), John Wiley & Sons.

may result in overstated DCF-based COE estimates.[16] Therefore, it is unclear why Ms. Bulkley asserted that Staff has not provided any support for its contention that the results of the DCF and CAPM analyses may be overstated because of current capital-market conditions.

Q. Does Ms. Bulkley have a similar understanding of the "comparable return standard" used by Staff for setting an authorized ROE?

A. Yes. Ms. Bulkley has a similar understanding of the comparable return standard used by Staff for setting the authorized ROE based on the *Hope* and *Bluefield* decisions as explained in my direct testimony.[17] In her rebuttal testimony, Ms. Bulkley stated:

> The *Hope* and *Bluefield* decisions, which Dr. Won acknowledges are standards to be followed in setting a just reasonable return, require the authorized return to be comparable to other returns available to investors in companies with similar risk.[18]

and

> As previously discussed, the *Hope* and *Bluefield* decisions require a utility's authorized return to be comparable to other returns available to investors in companies with similar risk.[19]

Q. Does Ms. Bulkley's proposed ROE meet the comparable return standard as she stated in her rebuttal testimony?

[16] Allen, F., Brealey, R. A., & Myers, S. C. (2011). Principles of corporate finance (p.1043). New York: McGraw-Hill/Irwin.
[17] Pages 6-9, Won's Direct Testimony.
[18] Page 20, lines 7-9, Bulkley's Rebuttal Testimony.
[19] Page 29, lines 16-18, Bulkley's Rebuttal Testimony.

A. No, it does not. Ms. Bulkley proposed an ROE of 10.50%, which is 65 basis points higher than the average electric utility authorized ROE of 9.85% in the first half of 2026.[20] Standard & Poor's ("S&P") currently assigns EMM an issuer credit rating of 'A-,' which is one notch above the 'BBB+' rating commonly observed among U.S. electric utilities.[21] According to the comparable return standard of the *Hope* and *Bluefield* decisions, there is no apparent basis for EMM to have a significantly higher authorized ROE than the average electric utility authorized ROE given its comparable credit quality. In addition, Ms. Bulkley's assertion that Staff's model results fail to meet the comparable-return requirement is unsupported and appears to rest largely on her COE estimates, which Staff believes are based on unreasonable input values.[22]

Q. Does Ms. Bulkley state that Staff's recommendation of authorized ROE does not meet the comparable return standard?

A. No, she did not. Ms. Bulkley merely asserted that Staff's COE estimates fail to satisfy the comparable return standard.[23]

Q. Why is this information important to the Commission?

A. Because this information shows that Ms. Bulkley does not demonstrate that Staff's recommendation of authorized ROE fails to satisfy the comparable return standard. Ms. Bulkley merely asserted that Staff's COE estimates fail to satisfy the comparable return standard. Staff's recommended ROE of 9.73% is consistent with

[20] Regulatory Research Associates, S&P Capital IQ Pro, Retrieved on July 3, 2026.
[21] S&P Global Ratings.
[22] Page 8, lines 10-15, Bulkley's Rebuttal Testimony.
[23] Page 20, lines 9-10, Bulkley's Rebuttal Testimony.

the comparable return standard established by the U.S. Supreme Court in *Hope* and *Bluefield*.[24]

Q. What are the necessary factors Ms. Bulkley considered other than the comparable return standard of the *Hope* and *Bluefield* decisions in setting an authorized ROE?

A. Ms. Bulkley stated that four factors are to be considered in setting up the ROE. In her rebuttal testimony, Ms. Bulkley stated,

> The primary factors that should be considered are: (1) the importance of providing a return that is comparable to returns on alternative investments with commensurate risk; (2) the need for a return that supports a utility's ability to attract needed capital at reasonable terms; (3) the effect of current and expected capital market conditions; and (4) achieving a reasonable balance between the interests of investors and customers.[25]

As explained in Staff's previous testimonies in this proceeding, Staff considered these factors.[26] Staff will explain again while comparing how Ms. Bulkley considered these necessary factors.

Q. Does Ms. Bulkley properly consider these factors to set her proposed ROE?

A. No, she does not. Ms. Bulkley used these factors to support an inappropriate authorized ROE for ratemaking purposes for EMM in this proceeding. First, Ms. Bulkley relied on current, atypical capital-market conditions to support her proposed ROE. In response to high inflation rates, the Federal Reserve ("Fed") has

[24] Pages 6-8, Won's Direct Testimony.
[25] Page 5, lines 10-14, Bulkley's Rebuttal Testimony.
[26] Pages 6-29, Won's Direct Testimony.

increased interest rates with unusual speed. Because of the Fed's aggressive monetary policy, the market yield on U.S. Treasury securities at 30-year constant maturity increased 417 basis points from 0.99% on March 9, 2020, to 5.18% on May 19, 2026.[27]

In this atypical market environment, CAPM-based analyses should be applied cautiously in estimating the COE because risk-premium models, including the CAPM, are highly sensitive to the risk-free rate derived from government bond yields. If COE models can directly estimate authorized ROE, as Ms. Bulkley contends, the average authorized ROE in 2026 should be approximately 400 basis points higher than the 2020 average of 9.44%. However, the average authorized ROE to date in 2026 is 9.83%, only 39 basis points higher than the 2020 average.[28] Therefore, this comparison indicates that CAPM COE estimates may overstate an authorized ROE. In addition, Ms. Bulkley's median results of updated DCF COE estimates, using minimum growth rates, have a range of 9.87% to 10.03%.[29] However, she did not use these results to support her proposed ROE of 10.50%.

Second, Ms. Bulkley insisted that she considered EMM's specific risks to set her proposed ROE.[30] Ms. Bulkley provided eight pages (pp. 41-48) of information in her direct testimony regarding how regulatory risks are assessed by credit rating agencies. However, there is no evidence explaining how she considered EMM's specific regulatory risks in determining her proposed ROE of 10.50%. Furthermore, Ms. Bulkley incorrectly

[27] FRED, St. Louis Fed, Market Yield on U.S. Treasury Securities at 30-Year Constant Maturity, Quoted on an Investment Basis, https://fred.stlouisfed.org/series/DGS30.
[28] Regulatory Research Associates, S&P Capital IQ Pro, Retrieved on July 3, 2026.
[29] Figure 2 (p.11), Bulkley's Rebuttal Testimony.
[30] Page 4, lines 13-15, Bulkley's Direct Testimony.

stated that Staff did not assess EMM's risk relative to the proxy group in setting the ROE.[31] On the contrary, Staff clearly explained how EMM's risk is comparable to electric utilities in the U.S. as follows:

> The electric utilities have average bond ratings of 'Baa1' and 'BBB+' provided by Moody's and S&P, respectively. While EMM's credit rating is slightly superior, the overall agency ratings for both Evergy and EMM remain consistent with the average for U.S. electric utilities. This means Evergy and EMM are perceived to have similar credit risks as the average electric utilities in the U.S.[32] [Omitted Footnotes]

When a company's credit rating is determined, rating agencies consider overall risks faced by the company including business risk, financial risk, and regulatory risk. Ms. Bulkley recognized this fact and she even stated:

> 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.[33]

In other words, assigning the same credit rating implies exposing to the same level of overall risk and expecting the same level of return from the same investment if everything else is equal.[34] Therefore, absent unusual circumstances, EMM's authorized

[31] Page 75, lines 20-22, Bulkley's Rebuttal Testimony.
[32] Page 36, lines 1-5, Won's Direct Testimony.
[33] Page 61, lines 5-12, Bulkley's Direct Testimony, File No. ER-2024-0319.
[34] CFA Program Level I, Portfolio Management and Wealth Planning, Portfolio Risk and Return: Part I.

ROE should be set within a reasonable range compared to the average authorized ROE of electric utility companies in the U.S.

Because Ms. Bulkley's proposed ROE of 10.50% is 65 basis points higher than the average authorized ROE of 9.85% for vertically integrated electric utilities in 2026 to date,[35] she has not demonstrated that she appropriately accounted for EMM's specific risks to set her proposed ROE. In contrast, the fact that Staff's recommended ROE of 9.73% is only 12 basis points below the average authorized ROE of 9.85% during the first half of 2026 is consistent with Staff's consideration of EMM's above-average A– credit rating and company-specific risks in setting its recommended ROE. The regulatory environment for EMM is wholly considered in the assigned credit rating by assessing the regulatory risk of EMM. Therefore, Ms. Bulkley did not properly consider it, but Staff did as explained above in the second factor.

Q. Do you agree with Ms. Bulkley that credit ratings are assessments of the likelihood that a company could default on its debt, whereas the topic of the current proceeding is to determine the riskiness and cost of EMM's equity, not debt? [36]

A. No, I do not. It does not render them irrelevant, as debt and equity risks are closely interconnected. While debt ratings specifically measure debt default risk and rate proceedings focus on determining the COE, debt risk and equity risk are fundamentally tied to the same underlying enterprise risk. Debt and equity sit on the same balance sheet. Equity holders are residual claimants, meaning they only get paid

[35] Regulatory Research Associates, S&P Capital IQ Pro, Retrieved on July 3, 2026.
[36] Page 75, lines 5-7, Bulkley's Rebuttal Testimony.

after all operating expenses and debt service (interest and principal) are satisfied. Debt risk represents senior obligation risk, while equity risk represents residual risk. Because both flow from a company's business environment and financial structure, debt risk is a direct indicator and driver of equity risk.

Q. Do you agree with Ms. Bulkley that credit rating agencies consider the business risks of an individual company, they do not conduct a comparative analysis of business risks relative to the proxy group when establishing its debt credit rating?[37]

A. Credit rating agencies, such as S&P Global, Moody's, and Fitch, consider comparable companies and industry peers as a part of their assessment of a company's business risk and overall credit profile.[38] While credit rating agencies evaluate a company's standalone characteristics (e.g., operational scale, profitability, cost structure, and market environment), business risk cannot be measured in a vacuum. Major credit rating methodologies explicitly incorporate a peer comparison step. For example, S&P's Corporate Ratings Methodology includes a relative analysis step that compares the issuer's overall business and financial risk profiles against similarly situated companies in the same industry sector to ensure rating consistency.

Q. What are the most recent authorized ROEs for electric utilities since July 1, 2026?

[37] Page 75, lines 7-10, Bulkley's Rebuttal Testimony.
[38] S&P Global Rating. https://www.burlington.org/DocumentCenter/View/7306/S-and-P-Guide-to-Credit-Ratings#:~:text=Instead%2C%20they%20are%20primarily%20intended%20to%20provide,individual%20debt%20issues%20that%20the%20agency%20rates.

A. Among the nine (9) electric rate cases closed since July 1, 2026, only one resulted in an authorized ROE decision of 9.65%. Detailed case information is presented in Table 1.

Table 1. Authorized ROE of Electric Rate Case since July 1, 2026[39]

State	Company	Case Type	Decision Type	Date	ROE (%)
TX	Texas-New Mexico Power Co.	Distribution	Settled	7/30/2026	9.65

Q. What is your conclusion regarding recent authorized ROEs?

A. While authorized ROEs depend on economic and market conditions, it is clear that Ms. Bulkley's proposed ROE of 10.50% is too high compared to authorized ROEs in recent electric rate cases. Most of these authorized ROEs are within Staff's reasonable range of 9.48% to 9.98% and are consistent with Staff's recommended ROE of 9.73% in this proceeding as explained in my rebuttal testimony.[40] Staff's recommended authorized ROE of 9.73% is more credible than Ms. Bulkley's 10.50% for a just and reasonable authorized ROE.

2. COE and Authorized ROE

Q. Do you agree with Ms. Bulkley's statement, "It is also unclear how Dr. Won considered the results of his DCF and CAPM analyses in the determination of his recommended ROE"?[41]

[39] Regulatory Research Associates, S&P Capital IQ, retrieved August 20, 2026.
[40] Pages 31-32, Won's Rebuttal Testimony.
[41] Page 6, lines 3-4, Bulkley's Rebuttal Testimony.

A. No, I do not. I clearly explained in my direct testimony how Staff considered the results of its DCF and CAPM analyses in the determination of its recommended ROE of 9.73%.

> Staff conducted two COE estimation analyses using DCF and CAPM. In addition, Staff directly estimated an authorized ROE using the BY+RP method. Based on Staff's estimation analyses described above, Staff estimates EMM's current market COE to be in the range of 7.11% to 10.34%, as summarized in Table 4. Staff recommends that the Commission grant EMM an authorized ROE of 9.73% within a reasonable range of 9.48% to 9.98%.[42]

Staff did not disregard the results of its DCF and CAPM COE analyses when it recommended an authorized ROE of 9.73%, which falls within the range of 9.48% to 9.98%. As Staff clearly explained, its recommended range of 9.48% to 9.98% falls within the broader range of 7.11% to 10.34% produced by Staff's DCF and CAPM analyses. In addition, Staff actively used its COE estimates in its comparative COE analysis to assess a just and reasonable authorized ROE. In recommending an authorized ROE for EMM in this proceeding, Staff compared changes in market COEs and authorized ROEs across different time periods to test the reasonableness of its recommendation.

Q. Why did Ms. Bulkley insist that Staff disregarded the results of its COE estimation when it recommended an authorized ROE?

A. Ms. Bulkley has an underlying assumption that COE estimate can directly determine the authorized ROE. However, this is a totally false idea as Staff explained many times in its testimonies in various rate cases. For example, as explained in my

[42] Page 57, lines 10-15, Won's Direct Testimony.

Direct Testimony, Staff recognizes that market-based COE is different from authorized ROE.[43] COE is the return required by investors; authorized ROE is the return set by a regulatory utility commission. Staff's position is that COE is not the same as authorized ROE. It is well known that estimated COEs have been much lower than authorized ROEs in recent years.[44] Staff's recommended authorized ROE properly considered the COE estimates. Therefore, Ms. Bulkley's claim that Staff does not rely on the results of its DCF and CAPM COE estimates when recommending an authorized ROE is simply wrong.

Q. Why is Ms. Bulkley's assumption that the market-based COE estimate is equal to the authorized ROE wrong?

A. Ms. Bulkley's assumption that a market-based COE and a regulatory authorized ROE are equal is not supported by theoretical or recent empirical evidence. First of all, COE is defined as a stock market value-based concept.[45] In contrast, an authorized ROE is an accounting book value-based concept.[46] Therefore, a simple calculation of COE does not produce a just and reasonable authorized ROE.

Q. Why is the market-based concept of COE not the same as the book-based concept of an authorized ROE?

A. COE is the return required by investors and an authorized ROE is the return set by a regulatory utility commission. Although some experts contend that COE and ROE are synonymous, Staff's position is that they are not. Observed utility COEs have been,

[43] Page 3, Footnote No. 4, Won's Direct Testimony.
[44] Werner, K. D., & Jarvis, S. (2026). Rate of return regulation revisited. Journal of Public Economics, 259, 105654. https://www.sciencedirect.com/science/article/pii/S0047272726000903.
[45] Page 378, CFA Program Curriculum, 2020, Level I, Volume 4.
[46] Page 389, CFA Program Curriculum, 2020, Level I, Volume 4.

generally, significantly lower than ROEs in recent years.[47] Because observed COEs have been significantly lower lately, instead of directly recommending the estimated COEs, Staff recommends the authorized ROE be based on the change in COE from one period to the next period.

The easiest way to understand the difference between COE and authorized ROE is to consider how the two return measures are used in practice. When investors buy common equity stock of a company, they want to know the expected ROR and compare it to their required ROR from their investment. The COE can be thought of as the minimum expected ROR that a company must offer its investors to induce the purchase of its shares in the primary market and to maintain its share price in the secondary market.[48] The important point here is that investors pay their money based on the market value of the common equity stock and not just based on the book value of the equity of a company. To calculate the expected minimum ROR of common equity, investors estimate COE using the stock valuation of models such as the DCF or the CAPM.[49] Investors' expected returns from their common stock can be easily calculated by multiplying the COE by the market value of a common stock.

In contrast, an authorized ROE has a very different financial context. The purpose of an authorized ROE is to calculate just and reasonable rates for utility companies. In utility rate cases, rates are determined based upon the revenue requirement

[47] Steve Huntoon, Nice Work If You Can Get It, Public Utility Fortnightly, August 2016. https://www.fortnightly.com/fortnightly/2016/08/nice-work-if-you-can-get-it.
[48] Page 378, CFA Program Curriculum, 2020, Level I, Volume 4.
[49] Page 379, CFA Program Curriculum, 2020, Level I, Volume 4.

determined by the Commission. The revenue requirement is calculated by multiplying a company's rate base by the allowed ROR. The allowed ROR is the weighted average cost of capital, which includes the authorized ROE and cost of debt. The rate base calculation is based on the book value of the utility's regulatory assets. The book value of equity is calculated by subtracting a company's total liabilities from its total assets. Clearly, the two concepts, COE and ROE, are different; therefore, there is no reason market COE estimates and recommended authorized ROEs should be the same.

Q. How do investors consider the Commission's authorized ROE differently from the market value COE?

A. The book value of common equity is not as volatile as stock prices. Since COE is associated with the market value of common stock, which can have a volatile value, if the COE is directly used to set an authorized ROE value and to calculate the revenue requirement, an authorized ROE would be as volatile as the stock market. With an authorized ROE as volatile as the stock market, the overall revenue requirement would be just as volatile. Investors of utility common stock expect and require a reliable revenue stream based on just and reasonable utility rates. Investors know that utility rates higher or lower than just and reasonable amounts are unsustainable and are eventually harmful to both ratepayers and investors. Therefore, for ratemaking purposes, a reliable and stable earning multiplier associated with the rate base, based on utility book value, needs to be produced. Just and reasonable rates are required to properly meet the expectations and requirements of investors when they choose to invest in or lend their money to a utility company, rather than in some other investment opportunity.

Q. Does this mean that COE estimation procedures are useless in the ratemaking process?

A. No, it does not. COE estimates provide valuable equity financial market information including investors' expected minimum rates of return based on the market value of stocks. Specifically, the comparison of COE estimates for two different rate cases provides important information to calculate and recommend a just and reasonable authorized ROE. In many rate cases, Staff found that the changes in the COE over time, say between rate case periods, provide essential information on whether to increase or decrease authorized ROE recommendations considering financial market changes. However, simply equating COE estimates with ROE recommendations is not appropriate.

Q. Why does a simple calculation of COE estimates not produce a just and reasonable authorized ROE?

A. In its Amended Report and Order in the Spire Missouri rate cases, Case Nos. GR-2017-0215 and GR-2017-0216, the Commission stated:

> To determine a return on equity, the Commission must consider the expectations and requirements of investors when they choose to invest their money in Spire Missouri rather than in some other investment opportunity. As a result, the Commission cannot simply find a rate of return on equity that is unassailably scientifically, mathematically, or legally correct. Such a "correct" rate does not exist. Instead, the Commission must use its judgment to establish a rate of return on equity attractive enough to investors to allow the utility to fairly compete for the investors' dollar in the capital market without permitting an excessive rate of return on equity that would drive up rates for Spire's ratepayers.[50]

[50] Page 28, Amended Report and Order, Case No. GR-2017-0215.

As the Commission explained above, setting authorized ROEs is not a purely mathematical exercise where the results of COE estimation models are simply accepted from the results of a mathematical formula. Setting fair and reasonable ROEs involves judgement, which means that in some cases the results of COE estimates are adjusted to account for what is considered just and fair. As explained earlier, the COE and the authorized ROE are developed in different financial contexts. If COE estimates determined by market value-based methods such as the DCF and the CAPM are simply quoted for the authorized ROE, the result would be neither just nor reasonable to investors or ratepayers.

More importantly, finding a just and reasonable authorized ROE in utility rate regulation is a long-term iterative procedure. After a utility rate case, a new set of utility rates go into effect based on an authorized ROE determined by the Commission. Under the new rates, the utility company will soon have its performance results. If the new rates are overpriced, ratepayers will overpay and the company and its stock price will generally outperform. If the new rates are underpriced, the company will have a lower net income than the market expected. Because of the disappointing earnings report, investors would not be attracted to the company's stock and its stock price will underperform the total stock market. Therefore, the company may file its next rate case sooner or later than originally expected based upon the performance results of the current set of rates.

continued on next page

3. Bulkley Updated COE Analysis

Q. Did Ms. Bulkley update her COE analyses from her direct testimony?

A. Yes. Ms. Bulkley updated the results of her COE analyses using the same erroneous methodologies that Staff addressed in my rebuttal testimony, but with market data updated through June 30, 2026.[51] Ms. Bulkley did not correct any of the methodological errors or inappropriate assumptions used in her COE analysis. Therefore, her COE analysis results remain biased upward relative to reasonable COE estimates.

Q. Did Ms. Bulkley change her recommended ROE based on her updated analysis using market data through June 30, 2026?

A. No, she did not. Ms. Bulkley maintained that the updated results, reflecting market data through June 30, 2026, continue to support her proposed ROE of 10.50%.[52]

Q. What did Ms. Bulkley change in her updated COE analysis?

A. Ms. Bulkley's COE estimation models and methods for estimating input variables remained unchanged, except for the time periods used for proxy-group data and the composition of the proxy group.[53] Ms. Bulkley's updated COE analysis is now based on data through June 30, 2026, instead of the November 30, 2025 data used in her original COE analysis for her direct testimony.[54] In her direct testimony, Ms. Bulkley used 16 electric utility companies for her proxy group.[55] However, Ms. Bulkley excluded

[51] Page 4, lines 6-8, Bulkley's Rebuttal Testimony.
[52] Page 4, lines 8-10, Bulkley's Rebuttal Testimony.
[53] Page 10, lines 13-18, Bulkley's Rebuttal Testimony.
[54] Page 4, lines 18-19, Bulkley's Direct Testimony.
[55] Figure 4 (p.20), Bulkley's Direct Testimony.

NextEra Energy, Inc. and Dominion Energy Resources, Inc. from her revised proxy group, consistent with Staff's exclusion of those companies.[56] Table 2, presents the list of Ms. Bulkley's updated electric utility proxy group, associated Ticker symbols, and credit ratings by S&P and Moody's:

Table 2. Bulkley Updated Proxy Group and Credit Ratings[57]

	Company	Ticker	S&P	Moody's
1	Alliant Energy Corporation	LNT	BBB+	Baa2
2	Ameren Corporation	AEE	BBB+	Baa1
3	American Electric Power Company, Inc.	AEP	BBB+	Baa2
4	Avista Corporation	AVA	BBB	Baa2
5	CMS Energy Corporation	CMS	BBB+	Baa2
6	DTE Energy Company	DTE	BBB+	Baa2
7	Entergy Corporation	ETR	BBB+	Baa2
8	IDACORP, Inc.	IDA	BBB	Baa3
9	OGE Energy Corporation	OGE	BBB+	Baa1
10	Pinnacle West Capital Corporation	PNW	BBB+	Baa2
11	Portland General Electric Company	POR	BBB+	A3
12	PPL Corporation	PPL	A-	Baa1
13	Southern Company	SO	A-	Baa1
14	Xcel Energy Inc.	XEL	BBB+	Baa1
	Evergy Inc.	EVRG	BBB+	Baa2
	Evergy Metro		A-	Baa1

The approximate seven-month time difference shows mixed directional changes in her COE estimates. In her updated COE analysis, Ms. Bulkley indicated lower CAPM and ECAPM COE estimates and higher DCF and BYRP COE estimates compared to the COE estimates in her direct testimony. The summary of Ms. Bulkley's updated COE estimates are presented in Table 3:

[56] Schedule SJW-d9, Won's Direct Testimony.
[57] S&P and AEB-R2 Proxy Selection, Bulkley's Rebuttal Workpaper.

Table 3. Bulkley's COE estimates Comparison[58]

	Direct			Rebuttal		
	As of November 30, 2025			As of June 30, 2026		
	Low	Average	High	Low	Average	High
DCF	9.12%	10.56%	11.81%	9.87%	10.79%	11.85%
CAPM	11.30%	11.40%	11.50%	11.07%	11.26%	11.44%
ECAPM	11.86%	11.93%	12.01%	11.64%	11.78%	11.92%
BYRP	10.64%	10.65%	10.67%	10.70%	10.79%	10.87%

Because Ms. Bulkley did not change her estimation models and input variables, Staff's concerns with her recommended COE remain the same as expressed in my rebuttal testimony. Staff will not repeat here the full explanation of its concerns with Ms. Bulkley's estimation models and input data. For a detailed explanation of Staff's concerns with Ms. Bulkley's COE estimation models and input data, please see my rebuttal testimony.

Q. Please summarize Staff's concerns with Ms. Bulkley's COE estimation models and input data.

A. The list of Ms. Bulkley's flawed COE estimation procedures, with brief summaries and updated analysis results, and the page numbers of the associated explanation in my rebuttal testimony, are as follows:

A. Overstated Recommended ROE (Pages 5-7, Won's Rebuttal Testimony)

Ms. Bulkley's recommended ROE of 10.50% is much higher than the average authorized ROE of 9.83% in fully litigated electric utility rate cases completed in 2026 to date.[59] Ms. Bulkley's proposed ROE is based on overstated COE estimates using upwardly-biased input variables such as projected growth rates for the DCF model and market risk premium ("MRP") for the CAPM method. In addition, Ms. Bulkley's proposed

[58] 1 Summary, Won's Surrebuttal Workpaper.
[59] Regulatory Research Associates, S&P Capital IQ, retrieved August 20, 2026.

ROE, based on a regression model of the BYRP analysis, is overstated because she ignored the downward trend of authorized ROE in her regression model.

B. Inadequate Proxy Group Selection (Pages 7-12, Ibid)

Although Ms. Bulkley removed NextEra Energy, Inc. and Dominion Energy Resources, Inc., as Staff recommended,[60] her COE estimates remain unreasonably upwardly biased because of her unreasonable proxy-group selection. For example, Ms. Bulkley excluded Duke Energy Corporation from her electric utility proxy group.[61] In addition, Ms. Bulkley still included an inappropriate company in her proxy group such as PPL Corporation. PPL's five-year dividend growth rate is -8.07%, indicating long-term stagnation, and its free cash flow yield has been negative for several years (-3.16%, -1.94%, and -5.41% from 2023 to 2025).[62] Ms. Bulkley's COE estimates are unreasonably upwardly biased due to her inclusion of these inappropriate proxy group selections.

C. Excessive Growth Rate for DCF (Pages 12-15, Ibid)

Ms. Bulkley used an excessively high growth rate for her DCF COE estimates. Ms. Bulkley exclusively used analysts' projected earnings growth rates, which she erroneously referred to as long-term earnings growth rates.[63] Ms. Bulkley's DCF COE estimates would be reasonable if she used a combination of commonly-used growth rates of earnings per share ("EPS"), dividend per share ("DPS"), book value per share ("BVPS") and GDP.[64] Analysts' projected growth rates are for periods of three to five

[60] Pages 9-12, Won's Rebuttal Testimony.
[61] Page 12, lines 1-15, Bulkley's Direct Testimony.
[62] Stock Market Online, PPL: Dividend Analysis - PPL Corporation, published April 13, 2026. https://www.stockmarketonline.com/PPLdpdp-Dividend-Analysis-minmin-PPL-Corporation-at-date-2026-04-13.
[63] Page 19, line 7, Bulkley's Direct Testimony.
[64] Howe, Keith M. and Eugene F. Rasmussen. Public Utility Economics and Finance, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1982.

years,[65] which is a relatively short period given the infinite investment horizon assumed in the DCF. Analysts are generally of the view that long-term growth rates for utilities will eventually converge to the level of the long-term gross domestic product ("GDP") growth rate.[66] Because of her overstated growth rates, Ms. Bulkley's DCF COE estimates are unreasonably upwardly biased. If Ms. Bulkley had used a more reasonable perpetual growth rate as her projected growth rate in the DCF model, her DCF COE estimate would have been 9.91%.[67]

D. Inflated Market Risk Premium in the CAPM (Pages 12-15, Ibid)

Ms. Bulkley's adjusted CAPM COE estimate range of 11.07% to 11.44% is unreliable.[68] Ms. Bulkley employed the CAPM and the ECAPM using Value Line Beta with three different updated risk-free rates of 4.96%, 4.86% and 4.70% and an updated total market return of 13.36%, resulting in three different MRPs of 8.38%, 8.50% and 8.66%.[69] Ms. Bulkley's MRPs are much higher than the regular U.S. financial services industry's MRP estimates of around 4.00% to 7.00%.[70] When she calculated her MRP, Ms. Bulkley included companies not having dividend payment information.[71] With more reasonable assumptions, such as an MRP of 6.45% and a risk-free rate of 4.70%,[72] Ms. Bulkley's average CAPM COE estimate would be 9.41%.[73]

[65] Value Line, Value Line - Value Line University, retrieved in July 15, 2022.
[66] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 302.
[67] 1 Summary, Won's Surrebuttal Workpaper.
[68] Schedule AEB-1R, Bulkley's Rebuttal Testimony.
[69] Schedule AEB-3R, Bulkley's Rebuttal Testimony.
[70] Figure 2 (p.19), Won's Rebuttal Testimony.
[71] Schedule AEB-5R, Bulkley's Rebuttal Testimony.
[72] The assumption of the estimated MRP of 5.57% is the average of the seven MRP in 3 CAPM, Won's surrebuttal workpaper. The risk free rate of 3.71% is an average of 30-year Treasury bond at yields of 30 day Bloomberg Professional, as of December 31, 2022. See AEB-R1, Attachment 2, CAPM, Bulkley's Rebuttal Testimony.
[73] 4 CAPM, Won's Surrebuttal Workpaper.

E. Unreliable Empirical Capital Asset Pricing Model (Pages 15-20, Ibid)

Ms. Bulkley's adjusted ECAPM COE estimate range of 11.67% to 11.92% is unreliable.[74] Ms. Bulkley used Dr. Roger Morin's adjustment factor of 25% in the ECAPM analysis.[75] Dr. Morin's adjustment factor of 25% was estimated using data from 1926 to 1984 under the assumption that CAPM underestimated COE.[76] However, there is no evidence Dr. Morin's finding would be consistent with data after 1984. Furthermore, Dr. Morin also cited other studies that found that CAPM produced returns between –9.61% and 13.56%, meaning that the CAPM can actually overestimate COE in some instances.[77] Such variations in findings do not lend credibility to Ms. Bulkley's use of the ECAPM.

F. Inappropriate Bond Yield Plus Risk Premium Analysis (Pages 22-26, Ibid)

Ms. Bulkley's updated BYRP ROE estimates range of 10.70% to 10.87% and are unreliable.[78] Ms. Bulkley's BYRP using a regression analysis is different from the conventional BYRP.[79] Because Ms. Bulkley's BYRP relies on a single independent input value of the 30-year treasury bond yield, it is unavoidable that her BYRP COE estimates are unreasonably excessive under the current Fed's monetary policy of increasing interest rates with unusual speed.[80] Staff recommends the Commission not consider Ms. Bulkley's BYRP COE estimate to determine a just and reasonable authorized ROE.

[74] Schedule AEB-1R, Bulkley's Rebuttal Testimony.
[75] Page 30, lines 2-13, Bulkley's Direct Testimony.
[76] Page 189, Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports.
[77] Page 190, Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports.
[78] Schedule AEB-R1, Attachment 1, Bulkley's Rebuttal Testimony.
[79] Pages 22-23, Won's Rebuttal Testimony.
[80] Pages 24-26, Won's Rebuttal Testimony.

G. Mischaracterization of Regulatory and Business Risks (Pages 33-36, Ibid)

Ms. Bulkley considered several additional factors including business risk and regulatory risk to determine where EMM's required ROE falls within the range of her analytic results.[81] Ms. Bulkley asserted that EMM faces a higher level of risk than the companies in her proxy group due to EMM's substantial capital expenditure requirements[82] and its ownership risk of nuclear generation.[83] According to S&P, Missouri is classified in the category of "Highly Credit Supportive," with a "Strong and Adequate" utility regulatory environment in jurisdictions among U.S. states and Canadian provinces.[84] The credit ratings of EMM are not lower than the average credit rating of any proxy group company considered in these proceedings.[85] S&P has assigned the corporate credit ratings of EMM as 'A-'.[86] It is a well-known fact that the corporate credit rating is determined by credit agencies' assessment of corporate risks, including financial, business and regulatory risk profiles.[87] As shown by S&P's credit ratings in Table 2, none of the 14 electric utility companies in Ms. Bulkley's proxy group has a higher credit rating than EMM. Two (2) companies have the same credit rating and 12 of the 14 companies have lower credit ratings such as 'BBB+' or 'BBB'. Therefore, Ms. Bulkley's assertion that the risk level for EMM is greater than that of her peer group companies is baseless.

[81] Page 35, lines 1-3, Bulkley's Direct Testimony.
[82] Page 36, lines 7-8, Bulkley's Direct Testimony.
[83] Page 50, lines 7-9, Bulkley's Direct Testimony.
[84] S&P Global Ratings, North American Utility Regulatory Jurisdictions, published May 7. 2026.
[85] Schedule SJW-d9, Won's Direct Testimony.
[86] S&P Global Rating Report.
[87] Page 15, Guide to Credit Rating Essentials - S&P Global, retrieved on July 17, 2022. https://www.spglobal.com/ratings/_division-assets/pdfs/guide_to_credit_rating_essentials_digital.pdf.

4. Updated Capital Market Conditions

Q. Do you agree with Ms. Bulkley's statement, "Therefore, by extension, if Dr. Won believes the cost of equity results produced by the DCF and CAPM may be overstated, he must also believe that interest rates are expected to decline thus lowering the cost of equity"?[88]

A. No, I do not. Ms. Bulkley confuses an evaluation of the level of the estimated COE with a forecast of the future direction of interest rates. A conclusion that DCF and CAPM estimates may overstate the COE does not require the assumption that interest rates will decline. The concern is that the models may produce an estimated COE that is higher than the return investors require, given the models' assumptions and limitations.

For example, the DCF COE depends not only on interest rates but also on assumptions regarding expected growth and dividend yields. Similarly, CAPM depends on the risk-free rate, beta, and the equity risk premium. An estimate can therefore be overstated even if interest rates remain unchanged or increase, if other model inputs or assumptions result in an excessive estimate of investors' required return.

More fundamentally, the proposition that a model produces an overstated current COE is not equivalent to a forecast that interest rates will decline in the future. The former is a statement about the accuracy of an estimated required return in the market; the latter is a statement about the expected future path of a particular market variable. There is no necessary logical connection between the two.

[88] Page 14, lines 8-10, Bulkley's Rebuttal Testimony.

Indeed, the overstatement of the DCF and CAPM results is not premised on a forecast of declining interest rates. Rather, it is based on the possibility that the models' estimated COE does not fully correspond to the return actually required by investors and that certain model assumptions can systematically produce estimates above the appropriate COE in the regulatory context.

The assertion also overlooks the fact that the COE is not synonymous with the interest rate. Interest rates are one component of the economic environment affecting the COE, while the authorized ROE also incorporates compensation for equity risk. Consequently, a critique that DCF and CAPM estimates may be overstated does not imply that interest rates must decline. Rather, it means only that the overall estimated COE may exceed the return reasonably required by investors in the context of rate regulation.

Moreover, if DCF and CAPM estimates are systematically above the appropriate COE, the appropriate response is to examine the models' assumptions, inputs, empirical performance, and the effects of specific monetary-policy changes. It is clear that an overstated COE estimate does not require the conclusion that interest rates will decline.

Finally, as Ms. Bulkley recognized,[89] I clearly stated in my direct testimony that the Fed is expected to maintain the current federal funds rate until it achieves its desired inflation rate.[90] Therefore, based on her logically and theoretically flawed statement,

[89] Page 14, lines 10-12, Bulkley's Rebuttal Testimony.
[90] Page 27, lines 1-2, Won's Direct Testimony.

Ms. Bulkley advanced the baseless argument that Staff does not support its conclusion that the results of the DCF and CAPM may be overstated.[91]

5. Proxy Group

Q. Do you agree with Ms. Bulkley's statement, "Dr. Won's exclusion of PPL appears to be incorrect and inconsistent with his current and previous screening criterion"?[92]

A. No, I do not. Ms. Bulkley misunderstands Staff's screening criterion.

Q. Do you agree with Ms. Bulkley's statement, "Dr. Won indicates that PPL fails his screening criterion because the company has not had a positive dividend payout since 2020, however, that is not accurate."?[93]

A. No, I do not. Staff did not have a screening criterion requiring 'Positive Dividend Payout' since 2020, as Ms. Bulkley appears to have misunderstood. PPL is excluded by Staff's screening criterion of 'Positive Dividend Growth Rate' since 2020.[94] PPL's five-year dividend growth rate is -8.07%, indicating long-term stagnation, and its free cash flow yield has been negative for several years (-3.16%, -1.94%, and -5.41% from 2023 to 2025).[95]

Q. How would including PPL in the proxy group affect the estimated COE?

[91] Page 14, lines 12-14, Bulkley's Rebuttal Testimony.
[92] Page 18, lines 6-8, Bulkley's Rebuttal Testimony.
[93] Page 17, lines 16-17, Bulkley's Rebuttal Testimony.
[94] Schedule SJW-d8, Won's Direct Testimony.
[95] Stock Market Online, PPL: Dividend Analysis - PPL Corporation, published April 13, 2026. https://www.stockmarketonline.com/PPLdpdp-Dividend-Analysis-minmin-PPL-Corporation-at-date-2026-04-13.

A. Because of its unstable financial condition, PPL exhibits a relatively volatile growth rate and elevated risk. These factors may result in a higher projected earnings growth rate, a higher dividend yield as compensation for risk, and a higher beta. In turn, these inputs may produce overstated COE estimates under the DCF and CAPM models.

6. Growth Rates and DCF Model

Q. Do you agree with Ms. Bulkley's statement, "Dr. Won's estimated cost of equity from his two-step DCF analysis of 8.18 percent is significantly below the average authorized ROE for electric utilities nationally in 2025, which, as Dr. Won notes in Table 5 of his testimony, was 9.84 percent for vertically integrated electric utilities nationally in 2025."?[96]

A. No, I do not. Staff's estimated COE should not be rejected simply because its DCF result of 8.18% is below the average authorized ROE for vertically integrated electric utilities. While Staff used a COE analysis to recommend an authorized ROE, a direct comparison is inappropriate because the two measures serve different purposes and are not necessarily expected to be equal. On the contrary, this difference between COE and authorized ROE is consistent with peer-reviewed, published academic research.[97]

First, the 9.84% figure cited by Ms. Bulkley is an average of regulatory decisions, not a direct measurement of investors' current required return on utility equity. The COE is not directly observable; it must be estimated using market-based models.

[96] Page 19, lines 10-13, Bulkley's Rebuttal Testimony.
[97] Werner, K. D., & Jarvis, S. (2026). Rate of return regulation revisited. Journal of Public Economics, 259, 105654.

Regulatory commissions, in establishing an authorized ROE, consider a broader set of factors than the estimated market COE, including the overall regulatory environment, capital structure, rate-case circumstances, regulatory lag, operating risks, and other considerations relevant to setting a just and reasonable rate. S&P Global similarly recognizes that an authorized ROE cannot be conclusively equated with a utility's actual COE because the required return is an investor expectation that is not directly observable.[98]

Second, the national average authorized ROE is an outcome of rate cases decided over a period of time and therefore does not necessarily represent the forward-looking market conditions applicable to EMM in this proceeding. Indeed, the 9.84% figure for vertically integrated electric utilities was reported for 2025, while Staff's DCF analysis is designed to estimate the forward-looking return required by stock market investors. More recent evidence also demonstrates that authorized ROEs can move independently of any market-based estimate of the COE.[99]

Third, the fact that an authorized ROE is higher than an estimated market COE does not establish that the DCF is unreasonable. Regulatory decisions themselves recognize that authorized ROE and market-based COE need not move one-for-one.[100]

[98] Lowrey, D. (2024, May 29). Underearning spread widens for gas, electric utilities in ROE analysis. S&P Global Market Intelligence. https://www.spglobal.com/market-intelligence/en/news-insights/research/underearning-spread-widens-for-gas-electric-utilities-in-roe-analysis.

[99] J. Pollock Blog, 2023 Electric Utility Authorized ROEs, published February 23, 2024. https://jpollockinc.com/2023-electric-utility-authorized-roes/?utm.

[100] California Public Utilities Commission Decision D.08-05-035, A Multi-Year Cost of Capital Mechanism. https://docs.cpuc.ca.gov/published/FINAL_DECISION/83554-04.htm?utm.

A national average of historical regulatory outcomes, by itself, does not demonstrate that an 8.18% market-based COE estimate is unreasonable.

Accordingly, Ms. Bulkley's comparison of Staff's 8.18% DCF result to the 9.84% national average authorized ROE does not provide a valid basis for rejecting Staff's estimate. It compares a forward-looking, market-based estimate of the required return on equity with an average of regulatory outcomes that reflect numerous factors beyond the contemporaneous market COE.

Q. Do you agree with Ms. Bulkley's statement "Dr. Won's DCF result of 8.18 percent does not meet this standard."?[101]

A. No, I do not. By 'this standard,' Ms. Bulkley refers to the following statement: "The *Hope* and *Bluefield* decisions, which Dr. Won acknowledges are standards to be followed in setting a just and reasonable return, require the authorized return to be comparable to other returns available to investors in companies with similar risk."[102]

In other words, Ms. Bulkley's proposition is based on a comparison of Staff's DCF COE estimate of 8.18% with the average authorized ROE of 9.84%. However, as explained above, COE and authorized ROE are not directly comparable. To properly apply the *Hope* and *Bluefield* decisions regarding comparable returns for investments with similar risks, a COE should be compared with other COE estimates, and an authorized ROE should be compared with other authorized ROEs. Ms. Bulkley's comparison of a COE estimate with

[101] Page 20, lines 9-10, Bulkley's Rebuttal Testimony.
[102] Page 20, lines 7-9, Bulkley's Rebuttal Testimony.

an authorized ROE is not directly comparable because the two figures represent fundamentally different measures.

Q. Do you agree with Ms. Bulkley's statement, "Dr. Won references the FERC's ROE methodology in Opinion No. 575 as support for his two-step DCF analysis; however, he fails to follow that methodology"?[103]

A. No, I do not. While Staff referenced the methodology in Federal Energy Regulatory Commission ("FERC") Opinion No. 575 to support its calculation of the sustainable growth rate, this does not mean that Staff's analysis is limited to the specific methods used by FERC. From the outset, Staff did not intend to follow the FERC methodology. Staff considered FERC's decisions, but FERC's decisions have changed over time, so Staff does not rely on a single FERC methodology. Following Karl Popper's theory of falsification,[104] there is no guarantee that FERC's specific procedure is perfectly correct, but, in many cases, FERC's decision to reject something is very useful information to consider in rate cases. FERC rejected relying solely on short-term projected earnings-growth rates in its DCF COE estimation.[105] Staff used growth rates in its DCF model estimated by combining analysts' short-term estimated growth rates and long-term GDP growth rates at two-thirds and one-third weightings, respectively. This is an approach that FERC used before it was changed in its May 2020 order.[106] Staff is not required to change its approach merely because FERC modified certain aspects of its

[103] Page 20, lines 12-13, Bulkley's Rebuttal Testimony.
[104] From a regulator's perspective, Karl Popper's theory of falsification suggests that regulatory frameworks, policy assumptions and expert claims should be evaluated by whether they can be objectively tested against evidence and potentially rejected when the evidence contradicts them.
[105] FERC Opinion 531, 147 FERC ¶ 61,234.
[106] FERC Opinion 569-A, 171 FERC ¶ 61,154.

methodology, as Staff is under no obligation to follow FERC's methodology on this point. However, Staff agrees with FERC's decision to reject high short-term growth rates because those rates are not sustainable in perpetuity, as assumed by the DCF model.[107]

Q. Do you agree with Ms. Bulkley that Staff should solely use the earnings per share ("EPS") growth rate and should not use the dividend per share ("DPS") or book value per share ("BVPS") growth rate within its DCF calculations?[108]

A. No, I do not. EPS, DPS, and BVPS are acceptable measures of growth rate.[109] Analysts occasionally use these measures of growth rates in the DCF model. Staff has considered EPS growth rates for calculating the perpetual growth rate for the DCF model in past rate cases. At the same time, there are many publications that support the use of projected DPS and BVPS growth rates for use in a DCF model. First, Howe and Rasmussen stated that the three most commonly-used financial indicators of growth are DPS, EPS, and BVPS.[110] Second, when Parcell introduced the DCF model in his Cost of Capital Manual, which is the training manual for the Society of Utility and Regulatory Financial Analysts, he clearly indicated multiple times that the growth rate for DCF models is the "constant growth rate in DPS in the future."[111] The most important point is that using the DPS and BVPS growth rates in a DCF is an acceptable method.

[107] FERC Docket No. EL11-66-001, 194 FERC ¶ 61,208. https://www.ferc.gov/sites/default/files/2026-03/EL11-66-001.pdf?utm.
[108] Page 22, lines 2-6, and Pages 23-24, Bulkley's Rebuttal Testimony.
[109] Page 139, The Cost of Capital – A Practitioner's Guide, David C. Parcell, 2020 Edition.
[110] Howe, Keith M. and Eugene F. Rasmussen. Public Utility Economics and Finance, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1982.
[111] Pages 130-134, The Cost of Capital – A Practitioner's Guide, David C. Parcell, 2020 Edition.

To justify her assertion, Ms. Bulkley referenced four articles in her Footnote Nos. 45 through 48. However, these articles do not support Ms. Bulkley's assertion that "solely" the EPS growth rate should be used within the DCF model. Some examples of the actual citations and summaries for the articles are as follows:

(1) Brigham and Houston,[112]

> Growth in dividends occurs primarily as a result of growth in earnings per share (EPS). Earnings growth, in turn, results from a number of factors, including (1) inflation, (2) the amount of earnings the company retains and invests, and (3) the rate of return the company earns on its equity (ROE);[113]

(2) Stanley Block,[114]

> Investment analysts report predominant reliance on EPS growth projections. In a survey completed by 297 members of the Association for Investment Management and Research, the majority of respondents ranked earnings as the most important variable in valuing a security (more important than cash flow, dividends, or book value).;[115]

(3) Jing Liu, et al,[116]

> "Forward earnings explained stock prices remarkably well" and were generally superior to other value drivers analyzed;[117] and

(4) C.A. Gleason, et al,[118]

> Sell-side analysts with the most accurate stock price targets were those whom the researchers found to have more accurate earnings forecasts.[119]

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[112] Footnote No. 45, Bulkley's Rebuttal Testimony.
[113] Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, at 317 (Concise Fourth Edition, Thomson South-Western, 2004).
[114] Footnote No. 48, Bulkley's Rebuttal Testimony.
[115] Block, Stanley B., "A Study of Financial Analysts: Practice and Theory," Financial Analysts Journal (July/August 1999).
[116] Footnote No. 47, Bulkley's Rebuttal Testimony. Liu, Jing, et al., "Equity Valuation Using Multiples," Journal of Accounting Research, Vol. 40 No. 1, March 2002.
[117] Staff's Data Request Nos. 0533 and 0526, ER-2022-0129 and ER-2022-0130, respectively.
[118] Footnote No. 47, Bulkley's Rebuttal Testimony. Gleason, C.A., et al., "Valuation Model Use and the Price Target Performance of Sell-Side Equity Analysts," Contemporary Accounting Research.
[119] Staff's Data Request Nos. 0533 and 0526, ER-2022-0129 and ER-2022-0130, respectively.

Staff completely agrees with Ms. Bulkley's referenced statements to the effect that EPS is important and useful information in various financial analyses. Staff also used EPS growth rates in Staff's DCF model.[120] However, there is no statement that only the EPS growth rate should be used, and that DPS or BVPS growth rates should not be used for the DCF model. Any concerns on using DPS and BVPS cited by Ms. Bulkley does not match to Staff's DCF analysis. Therefore, the articles Ms. Bulkley referenced do not support Ms. Bulkley's arguments.

Q. Do you agree with Ms. Bulkley that Staff does not actually rely on any of Staff's analyses to support its recommendation?[121]

A. No, I do not. As I explained above, Staff relies on its DCF COE estimates to assess the appropriate authorized ROE using its comparative COE analysis.[122]

Q. Do you agree with Ms. Bulkley that Staff's DCF analysis does not reasonably reflect the utility growth that is expected to occur over the long term?[123]

A. No, I do not. It is basic regulatory economics that long-term growth rates for utilities will eventually converge to the level of long-term gross domestic product ("GDP").[124] Staff has consistently held the view that while it is possible that a company or industry could grow at a rate faster than the GDP in the short to medium term, no company or industry will do so in perpetuity.[125]

[120] Page 50, lines 11-13, Won's Direct Testimony.
[121] Page 20, lines 6-7, Bulkley's Rebuttal Testimony.
[122] Schedule SJW-d15, Won's Direct Testimony.
[123] Page 25, lines 12-13, Bulkley's Rebuttal Testimony.
[124] Morin, R. A. (2006), New Regulatory Finance. Public Utilities Reports, page 302.
[125] Page 10, lines 17-19, Won's Rebuttal Testimony.

Q. Do you agree with Ms. Bulkley's statement, the DCF analysis was "corrected to rely solely on projected EPS growth rates for the short-term growth rates consistent with the FERC's methodology"?[126]

A. No, I do not. Ms. Bulkley's statement that the DCF analysis was "corrected to rely solely on projected EPS growth rates for the short-term growth rates consistent with FERC's methodology" is misleading. While FERC uses five-year IBES projected growth rates as the short-term growth component of its two-step DCF methodology, FERC does not rely solely on projected EPS growth rates in determining the growth rate used in its DCF analysis. FERC expressly requires a long-term growth component in addition to the short-term IBES growth projection.[127]

Indeed, FERC adopted a two-step DCF methodology precisely because short-term growth rates cannot reasonably be assumed to continue indefinitely. FERC has explained that, over the long term, companies cannot maintain their short-term growth rates and must, to some extent, converge toward the growth rate of the overall economy.

FERC subsequently modified the weighting of the two components in Opinion No. 569-A, assigning 80% weight to the short-term growth rate and 20% to the long-term growth rate.[128] Thus, even under FERC's current methodology, the DCF does not rely solely on projected EPS growth rates.

[126] Page 28, lines 8-10, Bulkley's Rebuttal Testimony.
[127] FERC, Docket No. PL07-2-000, Composition of Proxy Groups for Determining Gas and Oil Pipeline Return on Equity (123 FERC ¶ 61,048).
[128] FERC Opinion 569-A, 171 FERC ¶ 61,154.

Q. Do you agree with Ms. Bulkley's statement, "revised to reflect long-term growth rates consistent with the Morningstar methodology."?[129]

A. No, I do not. Ms. Bulkley's use of a 5.28% long-term nominal GDP growth rate based on Morningstar's methodology does not establish that 5.28% is an appropriate long-term growth rate for purposes of the DCF analysis. The relevant issue is not simply whether 5.28% can be calculated from historical real GDP growth and projected inflation, but whether that growth rate represents a reasonable and sustainable long-term growth rate for a mature, regulated utility. For a thorough analysis, Morningstar's methodology, as explained by Ms. Bulkley, should be properly understood:

> As shown on Schedule AEB-8R when longer-term GDP growth is estimated consistent with the methodology outlined by Morningstar, the long-term nominal GDP growth rate is 5.28 percent. Specifically, the long-term nominal GDP growth rate is based on the real GDP growth rate of 3.17 percent from 1929 through 2025, and a projected inflation rate of 2.04 percent. The projected rate of inflation is based on three measures: (1) the average long-term projected growth rate in the Consumer Price Index ("CPI") of 2.20 percent, as reported by Blue Chip Financial Forecasts; (2) the compound annual growth rate of the CPI for all urban consumers for 2035-2050 of 1.99 percent as projected by the Energy Information Administration ("EIA") in its Annual Energy Outlook 2026; and (3) the compound annual growth rate of the GDP chain-type price index for 2035-2050 of 1.93 percent, also reported by the EIA in the Annual Energy Outlook 2025.[130] [Footnotes Omitted]

First, the 3.17% real GDP growth rate cited by Ms. Bulkley is based on the historical period from 1929 through 2025. A nearly century-long historical average encompasses

[129] Page 28, lines 10-11, Bulkley's Rebuttal Testimony.
[130] Pages 26-27, Bulkley's Rebuttal Testimony.

economic conditions that are materially different from those expected to prevail over the indefinite future, including periods of unusually rapid economic expansion, demographic changes, substantial changes in productivity, and extraordinary economic events. A historical average of real GDP growth therefore does not necessarily provide a reliable estimate of the sustainable long-term growth rate applicable to a regulated utility today.

Second, Ms. Bulkley's calculation effectively assumes that the utility can sustain a 3.17% real growth rate indefinitely, before adding projected inflation of 2.04%. That assumption warrants scrutiny for a mature, regulated utility. Long-term growth in a regulated utility ultimately depends on factors such as customer and service-territory growth, demand growth, rate-base expansion, productivity, and the utility's ability to earn a return on incremental investment. It does not necessarily track the historical growth rate of the entire U.S. economy on a one-for-one basis.

Third, the 5.28% figure is sensitive to the methodology used to construct the inflation component. Ms. Bulkley combines three different inflation measures, including a *Blue Chip Financial Forecasts* and two EIA projections covering future periods, to produce a 2.04% inflation rate. Even if each individual forecast is reasonable, combining forecasts based on different measures, periods, and sources does not by itself demonstrate that 2.04% is the appropriate inflation assumption for a DCF intended to estimate perpetual utility growth.

Finally, the use of a GDP-based long-term growth rate should be consistent with the theoretical premise of the DCF model. A long-term growth rate cannot simply be selected because it produces a higher or more favorable COE result. It must represent

a sustainable growth rate that is consistent with the long-run economic and financial characteristics of the companies being analyzed. The fact that Morningstar uses a particular methodology to estimate long-term GDP growth does not establish that the resulting 5.28% rate should be used as the perpetual growth rate in this proceeding. The relevant question is whether 5.28% is supported by the long-term growth characteristics of the proxy-group utilities and is consistent with the assumptions underlying the DCF model. Ms. Bulkley has not demonstrated that a mature, regulated utility can sustainably grow at 5.28% nominally over an indefinite period. In contrast, Staff's long-term nominal GDP growth rate of 3.8% is consistent with projections by the Federal Open Market Committee ("FOMC") and the Congressional Budget Office ("CBO").[131] Accordingly, the Morningstar-based 5.28% GDP growth rate should not be accepted merely because it can be derived from the methodology described by Morningstar.

continued on next page

[131] Federal Open Market Committee, retrieved on December 10, 2025, (https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20251210.pdf).
The Budget and Economic Outlook: 2026 to 2036, Congressional Budget Office, February 2026, (https://www.cbo.gov/system/files/2026-02/61882-By-the-Numbers.pdf).

7. Market Risk Premium and CAPM

Q. Do you agree with Ms. Bulkley that the results of Staff's CAPM scenarios are not reasonable nor do they meet the comparable return standard of *Hope* and *Bluefield* given they are well below the low end of the range of comparable authorized returns for any electric or natural gas utility in at least since at least 1980, including during periods with extremely low long-term interest rates?[132]

A. No, I do not. As previously discussed, Ms. Bulkley's comparison of COE and authorized ROE is misleading. It is a classic "apples-to-oranges" comparison because COE and authorized ROE are conceptually and empirically distinct measures.[133]

Q. Do you agree with Ms. Bulkley that the MRP published by *Kroll* and Professor Damodaran, as used in Staff's CAPM analyses, is not consistent with the inverse relationship between interest rates and the MRP?

A. No, I do not. According to Ms. Bulkley,

> As shown in Figure 4, the risk free rates that Dr. Won relies upon are slightly lower than the historical average, which would suggest that a market risk premium that is slightly higher than the historical average. The market risk premia reported by *Kroll* and Professor Damodaran are well below the historical average and inconsistent with the inverse relationship between interest rates and the market risk premium.[134]

Ms. Bulkley's argument incorrectly assumes that a below-average risk-free rate necessarily requires an above-average MRP. That conclusion does not follow from the

[132] Pages 29-30, Bulkley's Rebuttal Testimony.
[133] Werner, K. D., & Jarvis, S. (2026). Rate of return regulation revisited. Journal of Public Economics, 259, 105654.
[134] Page 31, lines 3-7, Bulkley's Rebuttal Testimony.

CAPM framework. Although risk-free rates and MRPs may exhibit an inverse relationship over certain periods, such a relationship is neither mechanical nor one-for-one. The MRP reflects investors' compensation for bearing overall equity-market risk and is affected by a variety of factors, including expected economic growth, corporate earnings expectations, market valuations, investor risk aversion, and the perceived level of systematic risk.

More importantly, the fact that Staff's risk-free rate is somewhat below a historical average does not establish that the appropriate forward-looking market risk premium must be above its historical average. A historical average is not itself a measure of the current market-required return. The relevant question is what MRP is supported by current and prospective capital-market conditions. Both *Kroll* and Professor Aswath Damodaran, a prominent MRP expert and the Kerschner Family Chair Professor of Finance at the Stern School of Business at New York University, estimate the forward-looking risk premium using methodologies designed to reflect prevailing market conditions rather than simply assuming that the premium must revert to a historical average whenever the risk-free rate is below its historical average.

Ms. Bulkley's argument also conflates an empirical tendency with a deterministic relationship. Even if an inverse relationship between interest rates and MRPs can be observed over some historical periods, this does not mean that every decline in the risk-free rate must be accompanied by a corresponding increase in the MRP. The magnitude and even the direction of changes in the two variables can depend on the underlying economic circumstances. For example, a decline in interest rates associated

with lower expected economic growth or increased risk aversion may affect the MRP differently from a decline in interest rates resulting from lower inflation expectations or changes in monetary policy.

Finally, Ms. Bulkley's reliance on the historical average as a benchmark creates a circularity problem. If current market conditions indicate a lower risk-free rate and contemporary market-based measures indicate a particular MRP, those observations should not be dismissed simply because the resulting premium is below its historical average. A market-based COE analysis should use the best available evidence regarding investors' current required returns, rather than impose an assumed historical relationship between two separate components of the CAPM.

Accordingly, the fact that *Kroll*'s and Professor Damodaran's reported MRPs are below a historical average does not demonstrate that those estimates are unreasonable or inconsistent with economic theory. Nor does the fact that Staff's risk-free rate is below a historical average establish that its MRP must be above its historical average. Ms. Bulkley's conclusion requires a stronger empirical showing than simply pointing to an inverse relationship between interest rates and equity risk premiums.

Q. Do you agree with Ms. Bulkley that the MRPs relied upon by Staff are not reasonable because Staff relies on two estimates of the historical MRP?[135]

A. No, I do not. Ms. Bulkley's reasons why the MRPs relied upon by Staff are unreasonable are not persuasive. Staff used the MRPs from two widely accepted sources

[135] Page 33, lines 6-10, Bulkley's Rebuttal Testimony.

in the financial industry. One is reported by *Kroll*.[136] The other is developed by Aswath Damodaran.[137] Interestingly, Ms. Bulkley stated:

> *Morningstar*, which is the prior publisher of the historical dataset relied on by Dr. Won for his CAPM that is now published by *Kroll*, specifically supports that the market risk premium should be a forward-looking, not historical, analysis.[138]

This sentence demonstrates that *Kroll*'s MRP is not based solely on historical analysis but is forward-looking. Ms. Bulkley's characterization of Staff's MRP estimates as unreasonable because *Kroll* and Professor Damodaran provide "historical" rather than "forward-looking" estimates is incorrect. The fact that an MRP methodology incorporates historical market returns does not, by itself, make the resulting estimate irrelevant to a forward-looking COE analysis. Historical market data provides important information regarding the compensation investors have required for bearing equity risk over time and is widely used to estimate the equity risk premium.

Moreover, *Kroll*'s equity risk premium analysis does not simply report a single historical average without consideration of current market conditions. *Kroll* publishes both historical equity risk premium estimates and forward-looking country risk and other market-related inputs, and its methodology is specifically designed to provide estimates of the premium investors require for equity investments.[139]

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[136] Kroll, Kroll Cost of Capital Inputs at Year-End 2025, published January 30. 2026, and Impact of the Middle East Conflict on Cost of Capital Assumptions – March 2026 Update, published March 24, 2026.
[137] New York University, Stern School of Business, https://pages.stern.nyu.edu/adamodar/.
[138] Page 33, lines 13-15, Bulkley's Rebuttal Testimony.
[139] Kroll, Kroll Recommended U.S. Equity Risk Premium and Corresponding Risk-Free Rates to be Used in Computing Cost of Capital. https://www.kroll.com/en/reports/cost-of-capital/recommended-us-equity-risk-premium-and-corresponding-risk-free-rates.

Similarly, Professor Damodaran publishes both historical return-based estimates and implied equity risk premium estimates derived from current market prices, expected cash flows, and growth assumptions.[140] Thus, it is incorrect to characterize Damodaran's work generally as providing only a historical MRP.

More fundamentally, there is no requirement that a reasonable MRP estimate be derived exclusively from a single forward-looking methodology. The equity risk premium is not directly observable. Consequently, estimating the MRP necessarily involves judgment and consideration of multiple sources of evidence. Historical market returns provide information about the premium investors have required over extended periods, while implied or other forward-looking measures provide information about the premium suggested by current market conditions. Considering both types of evidence can provide a more robust estimate than relying exclusively on either approach.

The distinction between "historical" and "forward-looking" estimates also should not be overstated. A historical estimate is used to infer the premium that investors are likely to require in the future based on the long-run relationship between equity returns and risk-free investments. The fact that the estimate is derived from historical observations does not mean that the resulting MRP is itself a forecast of past returns. It is an estimate of an unobservable parameter.

In addition, Ms. Bulkley has not demonstrated that a forward-looking MRP is necessarily superior to a historical MRP for purposes of this proceeding. Forward-looking

[140] Damodaran, Country Default Spreads and Risk Premiums, Last updated: January 5, 2026 https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html.

estimates require assumptions concerning expected market returns, earnings, dividends, growth, valuation levels, and other factors that are themselves uncertain. An implied MRP can therefore change substantially as market valuations and assumptions change, even when the underlying long-term risk characteristics of equity investments have not changed materially. Historical evidence provides an important independent benchmark against which forward-looking estimates can be evaluated.

Accordingly, the relevant question is not whether an MRP estimate is labeled "historical" or "forward-looking." The relevant question is whether the methodology and underlying evidence provide a reasonable estimate of the equity risk premium applicable to investors during the period for which the cost of equity is being estimated. *Kroll*'s and Damodaran's estimates provide established and widely recognized evidence regarding the MRP. Ms. Bulkley's assertion that those estimates are unreasonable merely because they incorporate historical market data therefore does not provide a sufficient basis for rejecting Staff's MRP estimates.

Q. Do you agree with Ms. Bulkley that Staff's historical MRP fails to consider the inverse relationship between interest rates and the MRP under current market conditions?[141]

A. No, I do not. Staff is aware of the potential inverse relationship between interest rates and the MRP under current market conditions. Because of this potential inverse relationship between interest rates and the MRP, CAPM estimates may be overestimated using a CAPM model under current market conditions where the Fed has

[141] Page 40, lines 14-15, Bulkley's Rebuttal Testimony.

been under pressure to increase interest rates with unusual speed. Therefore, Staff is aware of the potential for upwardly biased CAPM COE estimates. As used in her CAPM analysis, Ms. Bulkley's reliance on higher forecasted MRP estimates specifically addresses this concern,[142] but a higher MRP could further increase CAPM COE estimates that may already be subject to upward bias. Therefore, Staff properly considered the potential inverse relationship between interest rates and the MRP under current market conditions, but Ms. Bulkley does not.

Q. Do you agree with Ms. Bulkley that Staff incorrectly used the total return on long-term government bonds to calculate the historical MRP instead of the income-only return on long-term government bonds?[143]

A. No, I do not. Because Staff used long-term historical data over a 97-year span, 1928-2025, and found utilizing income return or total return does not make a material change.[144] To justify her assertion of only using the income return, Ms. Bulkley quoted an article published by *Morningstar*, which is the former publisher, *Duff & Phelps*, of the historical dataset Staff relied upon for my historical MRPs that is now published by *Kroll*.[145] It is interesting to note that the most recent *Kroll* equity risk premium in the United States, i.e. MRP,[146] is 5.0%.[147] This is consistent with Professor Damodaran's

[142] Page 35, lines 12-13, Bulkley's Rebuttal Testimony.
[143] Pages 37-38, Bulkley's Rebuttal Testimony.
[144] Schedule SJW-d13, Won' s Direct Testimony.
[145] Page 36, lines 12-14, Bulkley's Rebuttal Testimony.
[146] Kroll's article lists this figure as "equity risk premium" and then describes it as a key input "used to calculate the cost of equity capital in the context of the Capital Asset Pricing Model (CAPM) and other models used to develop discount rates." CAPM identifies this figure as "Market Risk Premium" (MRP).
[147] Kroll, Kroll Recommended U.S. Equity Risk Premium and Corresponding Risk-Free Rates to be Used in Computing Cost of Capital. https://www.kroll.com/en/reports/cost-of-capital/recommended-us-equity-risk-premium-and-corresponding-risk-free-rates.

historical MRP estimation of 5.48% using total return on long-term government bonds data.[148]

In contrast, Ms. Bulkley utilized an MRP estimate range of 8.38% to 8.66% in her rebuttal testimony, more than 300 basis points higher than *Kroll*'s MRP of 5.0%, using the income-only return on long-term government bonds.[149] This is further evidence that Ms. Bulkley's MRP is overstated in her CAPM COE estimates. The MRPs Ms. Bulkley used in her CAPM analysis appear to be unreasonably high.[150]

Q. Do you agree with Ms. Bulkley that Staff inappropriately relied on the geometric mean to estimate a historical market return when calculating the MRP for the CAPM?[151]

A. No, I do not. The MRP is the difference between the market return and the risk-free rate. It is a well-known fact that numerous theoretical and empirical studies support the use of geometric means to calculate the MRP.

Professor Damodaran stated that conventional wisdom argues for the use of the arithmetic average to calculate MRP, but, in reality, the argument for geometric average premiums is stronger.[152] Dr. Damodaran also stated that there are strong arguments that can be made for the use of the geometric average in both empirical studies and the asset pricing model theory.[153]

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[148] Schedule SJW-d13, Won's Direct Testimony.
[149] Schedule AEB-3R, Bulkley's Rebuttal Testimony.
[150] Figure 2 (p.19), Won's Rebuttal Testimony.
[151] Page 38, lines 16-19, Bulkley's Rebuttal Testimony.
[152] Damodaran, A. (1999). Estimating Equity Risk Premiums.
[153] Damodaran, A, ValuationN1: Estimating Inputs for Valuation.
https://pages.stern.nyu.edu/~adamodar/New_Home_Page/lectures/dcfinput.html.

In addition, research sponsored by the Society of Actuaries' Pension Section Research Committee found that the geometric mean was superior to the arithmetic mean in predicting long-term returns for calculating equity risk premium ("ERP"), and the arithmetic mean produces forecasts much higher than actual returns over most time-periods.[154] Moreover, many other theoretical and empirical studies support the use of geometric means to calculate MRP.[155]

Q. What is Staff's method to calculate the MRP in the CAPM analysis?

A. Staff used four different MRPs from well-respected, reliable sources. The first MRP is *Kroll*'s recommended 5.0%, based on its year-end 2025 and March 2026 updates, which serves as a benchmark incorporating the impact of the Middle East conflict on global cost of capital assumptions.[156] The other three MRPs are the implied ERP, and the historical geometric and arithmetic mean MRPs produced by Dr. Aswath Damodaran.[157]

Q. Why do you use an average of both arithmetic and geometric means when calculating the MRP in the CAPM analysis instead of just using geometric means?

A. Whether to use "arithmetic" or "geometric" mean returns when calculating the average return for calculating the MRP in the CAPM analysis is one of many ongoing controversial research topics in financial analysis.[158] Many theoretical and empirical

[154] Modugno, V. (2012). Estimating Equity Risk Premiums.
[155] Sadler, R. (2017). Estimation of the Market Risk Premium: A review of weighting of arithmetic and geometric means, Report to the ERA on Gas Rate of Return Guidelines.
[156] Kroll, Kroll Cost of Capital Inputs at Year-End 2025, published January 30. 2026, and Impact of the Middle East Conflict on Cost of Capital Assumptions – March 2026 Update, published March 24, 2026.
[157] Page 53, lines 11-12, Won's Direct Testimony.
[158] Sadler, R. (2017). Estimation of the Market Risk Premium: A review of weighting of arithmetic and geometric means, Report to the ERA on Gas Rate of Return Guidelines.

studies and financial reports present MRP estimates using both arithmetic means and geometric means.[159] The geometric mean return is a multi-period ROR so it should be used in the CAPM together with the yield on a long-term government security. In contrast, the arithmetic mean return is a single period ROR and therefore it should be used in association with a short-term risk-free rate in the CAPM.[160]

For typical investment horizons, the proper compounding rate for forecasting returns is in between the arithmetic and geometric means.[161] Many financial analysts use a compromise of the two, a weighted average of arithmetic and geometric means.[162] Therefore, Staff's method to consider both arithmetic and geometric means when calculating the MRP in the CAPM analysis is a widely accepted approach in financial analysis.[163] Using both methods and determining the average of the high and low bounds provides a balanced estimate of the MRP.

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[159] Ibbotson, R. G. (2011). The equity risk premium. Rethinking the Equity Risk Premium, CFA Research Foundation Publications, 4, 18-26.
[160] Soenen, L., & Johnson, R. (2008). The equity market risk premium and the valuation of overseas investments. Journal of Applied Corporate Finance, 20(2), 113-121.
[161] Jacquier, E., Kane, A., & Marcus, A. J. (2003). Geometric or arithmetic mean: A reconsideration. Financial Analysts Journal, 59(6), 46-53.
[162] Blume, M. E. (1974). Unbiased estimators of long-run expected rates of return. Journal of the American Statistical Association, 69(347), 634-638.
[163] Hammond, B., & Leibowitz, M. (2011). Rethinking the equity risk premium: An overview and some new ideas. Rethinking the Equity Risk Premium, 1-17.

8. BYRP Analysis

Q. Do you agree with Ms. Bulkley that Staff should have used a longer period of utility bond-yield and authorized-ROE data, rather than only 12 years of data from 2014 through 2025, to reflect a broader range of market conditions in setting the ROE?[164]

A. No, I do not. A longer period does not necessarily produce more reliable results. The BYRP analysis is based on the inverse relationship between bond yields and risk premiums.[165] However, the relationship between authorized ROEs for vertically integrated electric utilities and 30-year Treasury bond yields appears to have shifted materially following the COVID-19 pandemic.[166] In the regression analysis, Staff's model has an R^2 of 0.9406,[167] compared with an R^2 of 0.7994 for Ms. Bulkley's revised model.[168] Consequently, Staff's BYRP analysis based on a 12-year period (2014–2025) of produced more reliable results than Ms. Bulkley's revised analysis based on a 33-year period (1993–June 2026).

Q. Do you agree with Ms. Bulkley that Staff did not conduct separate regressions of the risk premium and bond yield for A-rated versus Baa-rated utility bond yields?[169]

A. No, I do not. Staff conducted separate regressions of the risk premium and bond yield for A-rated versus Baa-rated utility bond yields.[170]

[164] Page 51, lines 15-16, Bulkley's Rebuttal Testimony.
[165] Page 56, lines 5-7, Won's Direct Testimony.
[166] Figure 3 and Pages 24-25, Won's Rebuttal Testimony. Under the same economic assumption, a higher R2 means the model explains a larger proportion of the variation in the dependent variable.
[167] Schedule SJW-d14-2, Won's Direct Testimony.
[168] Schedule AEB-11R, Bulkley's Rebuttal Testimony.
[169] Page 46, lines 1-5, Bulkley's Rebuttal Testimony.
[170] Page 56, lines 10 12, Won's Direct Testimony.

III. RESPONSE TO TESTIMONY OF OPC WITNESS

Q. What are the specific areas in which Staff is responding to OPC's witness?

A. Staff is responding to the rebuttal testimony of Mr. Murray. Mr. Murray disagrees with Staff's recommendation of an authorized ROE, ratemaking capital structure and allowed ROR for EMM in this proceeding.[171] The areas in which Staff addresses issues raised in Mr. Murray's rebuttal testimony include:

- **Capital Structure,** and
- **Recommended ROE.**

Staff will discuss each in turn, below.

1. Capital Structure

Q. What is Mr. Murray's response to Staff's recommended capital structure?

A. In his rebuttal testimony, Mr. Murray summarized Staff's position on the ratemaking capital structure but did not directly respond to Staff's specific recommendation. However, Mr. Murray disagreed with Staff's recommendation to use EMM's actual standalone capital structure for ratemaking purposes because he maintained his position that a capital structure consisting of 45% equity and 55% long-term debt, which he states reflects Evergy's consolidated capital structure, should be used.[172] Mr. Murray asserted that Evergy's targeted common equity ratio is consistent with the 52% to 53% common equity ratios that most of Missouri's other larger regulated utilities owned by holding companies target for ratemaking.[173]

[171] Page 37, lines 3-25, Murray's Rebuttal Testimony.
[172] Pages 46-47. Murray's Direct Testimony.
[173] Page 2, lines 17-19, Murray's Rebuttal Testimony.

Q. What capital structure did Mr. Murray support for EMM in this proceeding?

A. Mr. Murray recommended a capital structure that consists of 45.00% common equity and 55.00% long-term debt, based on his analysis of Evergy's and EMM's quarterly capital structures from the beginning of the test year (July 1, 2024) through March 31, 2026 (most recent quarterly capital structure information available before the true-up period of June 30, 2026).[174]

Q. What is Staff's concern with Mr. Murray's recommendation?

A. Staff has one major concern with Mr. Murray's capital structure recommendation. Mr. Murray's recommended capital structure was developed based on Evergy's more leveraged consolidated capital structure, instead of EMM's standalone capital structure. However, Staff did not find any critical reason to avoid using EMM's standalone capital structure for the purpose of ratemaking as explained in my rebuttal testimony.[175] Mr. Murray further asserts that, including short-term debt, Evergy's adjusted equity ratio has been in the range of approximately 40% to 43% for the quarterly periods ending June 30, 2024, through March 31, 2026,[176] which is more than approximately 1,000 basis points below EMM's average actual equity ratio of approximately 52% during the same period.[177] Because a more highly leveraged capital structure could result in a higher cost of debt for EMM, Staff recommends using EMM's actual standalone capital structure in this proceeding.[178]

[174] Page 46, lines 3-6. Murray's Direct Testimony.
[175] Pages 52-56, Won's Rebuttal Testimony.
[176] Page 47, lines 3-5, Murray's Direct Testimony.
[177] Staff's Data Request No. 0107.
[178] As the proportion of debt in the capital structure increases, the company has greater fixed interest and principal obligations relative to its equity cushion and cash flows. Lenders therefore face greater credit risk and generally require a higher interest rate (cost of debt) to compensate for that additional risk.

2. Recommended ROE

Q. Do you agree with Mr. Murray's statement, "Dr. Won recommends a ROE of 9.74%, which is the mid-point of his ROE range of 9.48% to 9.98%."?[179]

A. No, I do not. Staff recommended a ROE of 9.73% for this proceeding.[180]

Q. Do you agree with Mr. Murray that Staff's recommended ROE and range of ROEs have remained essentially unchanged since 2024?[181]

A. No. I do not. Staff has continuously changed its ROE recommendations based on its analysis of industry, economic, and financial market conditions. Table 4 summarizes Staff's and OPC's recommended ROEs in major rate cases since 2024.

Table 4. The Comparison of Recommended ROE and Its Range since 2024

		Staff		OPC	
Company	Case No.	ROE	Range	ROE	Range
Missouri Water	WR-2024-0104	9.45%	9.00% to 9.90%	9.25%	9.00% to 9.50%
Midstates Natural Gas	GR-2024-0106	9.45%	9.00% to 9.90%	9.50%	9.25% to 9.75%
Evergy Missouri West	ER-2024-0189	9.74%	9.49% to 9.99%	9.50%	9.25% to 9.75%
Empire District Compony	ER-2024-0261	9.50%	9.00% to 9.50%	9.25%	9.00% to 9.50%
Ameren Missouri	ER-2024-0319	9.74%	9.49% to 9.99%	9.50%	9.00% to 9.50%
Missouri-American Water Co.	WR-2024-0320	9.50%	8.85% to 10.15%	9.25%	9.00% to 9.50%
Ameren Missouri	GR-2024-0369	9.64%	9.39% to 9.89%	9.50%	9.00% to 9.50%
Spire Missouri	GR-2025-0107	9.63%	8.52% to 10.00%	9.50%	9.00% to 9.50%

Mr. Murray has recommended an ROE of either 9.25% or 9.50% in all major rate cases since 2024, regardless of utility type.

[179] Page 39, lines 3-4, Murray's Rebuttal Testimony.
[180] Page 4, line 3, Won's Direct Testimony.
[181] Page 39, lines 13-14, Murray's Rebuttal Testimony.

Q. What ROE did Mr. Murray support for EMM in this proceeding?

A. Mr. Murray continued to support an authorized ROE at 9.25% for EMM.[182] In his direct testimony, Mr. Murray recommended 9.25% based on a range of 9.00% to 9.50%.[183]

Q. What is Mr. Murray's response to Staff's recommended ROE?

A. Mr. Murray did not agree with Staff's recommended ROE of 9.73% in a range of 9.48% to 9.98% because it is circular.[184] Mr. Murray stated, "Considering such experience and circularity, the Commission should set Metro's authorized ROE at 9.25%, or at the very least hold the line on Metro's last authorized ROE of 9.5%, as these ROEs are still above the COE."[185]

Q. What are Staff's concerns regarding Mr. Murray's response to Staff's recommended ROE?

A. Staff's concerns are that Mr. Murray speculated about Staff's recommended ROE process without supporting evidence and presented his arguments using unclear reasoning. Mr. Murray stated:

> Investors typically factored in the "stickiness" of authorized ROEs despite clear evidence for the period from 2010 through 2022 that the cost of capital, which includes the COE, for utility companies experienced a significant secular decline. Dr. Won's regression of average authorized ROEs against the secular decline in interest rates over this period demonstrates this stickiness. Dr. Won's correlation coefficients indicate that while utility companies' cost of debt exhibited a spread of approximately 355 to 360 basis

[182] Page 42, lines 13-15, Murray's Rebuttal Testimony.
[183] Page 2, lines 3-4, Murray's Direct Testimony.
[184] Page 39, lines 18-19, Murray's Rebuttal Testimony.
[185] Page 42, lines 13-16, Murray's Rebuttal Testimony.

> points since 2014, authorized ROEs only varied by approximately 30 basis points. While I did not advocate for dramatic reductions in authorized ROEs during this period, I did advocate for the Commission to at least gradually start reducing authorized ROEs for Missouri's utilities over this period. My position was consistent with investors' expectations that commissions would likely eventually reduce authorized ROEs, even if at a lag, since overwhelming evidence—lower bond yields, lower dividend yields and high utility P/E ratios—became too obvious to dismiss. However, as demonstrated by Dr. Won's regression analysis, whether wittingly or unwittingly, commissions did not reduce authorized ROEs much even though the COE was in the 5-6% range in late 2019/early 2020. Considering such experience and circularity, the Commission should set Metro's authorized ROE at 9.25%, or at the very least hold the line on Metro's last authorized ROE of 9.5%, as these ROEs are still above the COE was in the 5-6% range in late 2019/early 2020.[186]

These statements are unclear, but Staff's response follows. The historical stability of authorized ROEs, what Mr. Murray characterizes as circularity, does not demonstrate that authorized ROEs were excessive or that investors expected commissions to reduce them. It demonstrates, at most, that commissions did not adjust authorized ROEs in direct proportion to changes in interest rates. That is not surprising because the COE is not equivalent to the cost of debt and does not move one-for-one with bond yields. A decline in interest rates can be offset, in whole or in part, by changes in the ERP and other determinants of investors' required returns. Accordingly, the observation that utility bond yields declined by substantially more than authorized ROEs does not establish that authorized ROEs should have declined by a similar amount.

[186] Pages 41-42, Murray's Rebuttal Testimony.

Moreover, the assertion that investors "factored in" an eventual reduction in authorized ROEs is not demonstrated by the historical record cited. In fact, the continued market valuation of regulated utilities during this period reflects investors' assessment of the overall risk and expected returns associated with utility equities; it does not establish a particular expected path for authorized ROEs. Inferring investors' expectations from the historical behavior of commissions would also be circular: the argument assumes that investors expected ROE reductions because commissions had not yet made them, while simultaneously using the absence of those reductions as evidence that the cost of equity was lower.

Most importantly, the regression results should not be interpreted as demonstrating that the COE was 5% to 6% in late 2019 or early 2020. A regression showing a less-than-proportional relationship between interest rates and authorized ROEs does not independently establish the level of the COE. The level of the COE must be supported by market-based evidence and the assumptions underlying DCF, CAPM, and other accepted methodologies. Interest rates are only one component of the required return on equity.

Q. Do you agree with Mr. Murray's statement, "Dr. Won's failure to make this adjustment caused an additional 26 basis point upward bias in his COE estimate using Dr. Damodaran's implied risk premium estimate."?[187]

[187] Page 45, lines 24-26 Murray's Rebuttal Testimony.

A. No, I do not. The assertion that Staff's use of Damodaran's 5.03% implied ERP creates a 26 basis point upward bias in my CAPM COE estimate is incorrect.[188] The 26 basis point adjustment discussed by Professor Damodaran relates to the appropriate risk-free rate associated with the U.S. Treasury's credit-rating change; it does not represent an additional component that must be deducted from an ERP that has already been estimated from market data.

Professor Damodaran's implied ERP is an estimate of the additional return investors require for investing in the equity market rather than in a risk-free, or appropriately risk-free-equivalent, security. The COE is calculated by combining the applicable risk-free rate with the MRP. Accordingly, the relevant question is whether the 5.03% implied ERP and the risk-free rate used in my analysis are measured on a consistent basis. It is not appropriate to characterize the 26 basis point adjustment as a correction to the 5.03% ERP itself.

More importantly, even accepting Professor Damodaran's treatment of the Treasury credit-rating change, Mr. Murray has not demonstrated that Staff's application of the 5.03% ERP produces a 26 basis point upward bias. The 26 basis point figure is an adjustment to the assumed risk-free rate, not evidence that the MRP should be reduced by 26 basis points. If the analysis instead uses Professor Damodaran's adjusted risk-free

[188] MRP is risk premium for the overall equity market in CAPM. ERP is Broader term for the risk premium associated with equity investment. Professor Aswath Damodaran's implied ERP is a forward-looking, market-implied estimate of the premium investors require for investing in the U.S. equity market over the risk-free rate. It is not the historical average equity premium. In regulatory cost-of-capital work, people frequently use ERP and MRP as synonyms. However, this distinction is particularly important because changing the risk-free rate and changing the MRP are not necessarily the same adjustment. A 26-basis-point adjustment to the risk-free rate does not, by itself, establish that Damodaran's 5.03% MRP should also be reduced by 26 basis points.

rate, that adjustment should be made to the risk-free-rate component of the CAPM, rather than retroactively reducing the implied ERP.

The distinction is important. Under the CAPM, the COE is generally expressed as:

$$\text{CAPM COE} = \text{Risk-Free Rate} + \text{Beta} \times \text{MRP}.$$

Thus, a 26 basis point adjustment to the risk-free rate does not automatically imply a 26 basis point adjustment to the MRP or to the resulting COE. The effect on the CAPM estimate depends on precisely how the risk-free rate and MRP have been defined and measured.

In addition, Mr. Murray's argument assumes that Professor Damodaran's treatment of the U.S. Treasury credit rating must be incorporated into every application of his implied ERP. That conclusion does not follow. Damodaran's adjustment reflects his analytical treatment of the Treasury's credit risk and his methodology for estimating a risk-free rate. It does not establish that an analyst using his published implied ERP has inadvertently overstated the COE by 26 basis points.

Therefore, the characterization of Staff's Damodaran-based COE estimate as having a 26 basis point upward bias is unsupported. At most, Mr. Murray has identified a methodological issue concerning the consistency between the selected risk-free rate and Damodaran's treatment of Treasury credit risk. That issue does not establish an upward bias in the implied equity risk premium itself, nor does it justify reducing the resulting COE estimate by 26 basis points.

Q. Do you agree with Mr. Murray's statement, "Dr. Won's calculation of his proxy groups' COE using Dr. Damodaran's implied risk premium estimate would have been 7.61% compared to the 8.41% included in Dr. Won's Schedule SJW-d13."?

A. No, I do not. Staff recalculated its CAPM analysis using updated data, including the average 30-year Treasury bond yield as the risk-free rate, Value Line beta data for the second quarter of 2026, and Professor Damodaran's implied ERP of 4.28%, updated as of August 1, 2026. Using the other MRPs—*Kroll*'s and Damodaran's historical MRPs—the updated CAPM COE results range from 7.75% to 10.41%, with a midpoint of 9.08%.

continued on next page

IV. TRUE-UP DIRECT TESTIMONY

Q. Did you perform an analysis of EMM's capital structure as of June 30, 2026, the end of the true-up period for this proceeding?

A. Yes, I did.

Q. What is the result of your analysis?

A. As of June 30, 2026, EMM's capital structure consisted of 52.19% common equity and 47.81% long-term debt.[189]

Q. Is this capital structure reasonable for setting EMM's ROR in this proceeding?

A. Yes. The true-up information does not change Staff's earlier conclusion that EMM meets the guidelines for using its own standalone capital structure, not its parent company's capital structure, for ratemaking purposes. EMM still meets the guidelines for determining when to use its own capital structure for ratemaking purpose.[190] The guidelines are the following: (1) EMM does not obtain all of its capital from Evergy.[191] (2) Evergy does not guarantee any of the securities issued by EMM.[192] (3) Evergy has not employed double leverage in its financing history, based on the credit quality of EMM's regulated utility business.[193] (4) The parent company of EMM, or Evergy's consolidated enterprise, is not significantly diversified into non-utility operations.[194]

[189] Staff's Data Request No. 0107 and Appendix 2, Schedule SJW-TD-1.
[190] David C. Parcell in The Cost of Capital – A Practitioner's Guide prepared for SURFA.
[191] Staff's Data Request No. 0120(1).
[192] Staff's Data Request No. 0120(5)(6).
[193] Staff's Data Request No. 0123.
[194] Staff's Data Request No. 0122.

Q. What is the embedded cost of long-term debt for Evergy and EMM as of June 30, 2026?

A. As of June 30, 2026, the cost of long-term debt of Evergy and EMM are 5.353% and 4.541%, respectively. [195]

Q. What is Staff's recommended cost of long-term debt in this proceeding?

A Staff recommends the cost of long-term debt of 4.54% for setting EMM's ROR in this proceeding.[196]

Q. Have you updated Staff's COE and ROE analyses as of June 30, 2026?

A. Yes, I did. I updated the COE and ROE analyses presented in my direct testimony using market data through June 30, 2026. The DCF input variables, including stock prices and growth rates, and the CAPM input variables, including the risk-free rate and beta, were updated. Table 5 summarizes the results and compares them with Staff's analysis for the update period, as presented in my direct testimony.

Table 5. The Comparison of COE and ROE Analyses

	As of June 30, 2026			As of December 31, 2025		
	COE Analysis					
	Lower	Mean	Upper	Lower	Mean	Upper
DCF	7.07%	8.26%	9.44%	7.11%	8.18%	9.25%
CAPM	7.75%	9.08%	10.41%	7.97%	9.16%	10.34%
	7.07%	8.67%	10.41%	7.11%	8.67%	10.34%
	ROE Analysis					
	Lower	Estimate	Upper	Lower	Estimate	Upper
BYPRP	9.72%	9.73%	9.75%	9.72%	9.73%	9.74%
		9.73%			9.73%	

[195] Staff's Data Request No. 0108.
[196] Appendix 1, Schedule SJW-d7-1-Updated.

Q. Are there any noticeable changes between the results of the updated COE and ROE analyses and Staff's original analysis reported in your direct testimony?

A. No, there are not. The DCF- and CAPM-based COE estimates changed from a range of 7.11%–10.34% to a range of 7.07%–10.41%. Considering estimation error, Staff did not find the changes to be material.

Q. Do you update your ROE recommendation?

A. No, I do not. I maintain my recommended ROE of 9.73%, with a range of 9.48% to 9.98%, after considering statistical estimation error at an approximately 95% confidence level.

continued on next page

V. SUMMARY AND CONCLUSIONS

Q. Please summarize the conclusions of your surrebuttal and true-up testimonies.

A. Ms. Bulkley and Staff disagree over the appropriate ROE for EMM. Ms. Bulkley's proposed ROE of 10.50% is not just and reasonable considering her inappropriate reliance on unreasonable inputs to her COE analyses. Ms. Bulkley's belief that the COE and the authorized ROE are equivalent defies basic financial logic and, more importantly, market evidence. Staff disagrees with Mr. Murray's recommended ROE of 9.25%. Considering the current trend of interest rate hikes,[197] Staff continues to recommend an authorized ROE of 9.73%, in a reasonable range of 9.48% to 9.98%.

Staff disagrees with Mr. Murray's recommendation based on his analysis of Evergy's consolidated capital structure consisting of 45% common equity and 55% long-term debt.[198] EMM's target capital structure, ** [redacted] **,[199] is consistent with its actual capital structure as of June 30, 2026.[200] Staff continues to recommend using EMM's standalone capital structure for the purpose of ratemaking in this proceeding.

[197] Reuters, Bar to Fed rate hike this week remains high even as markets see a chance, published July 28, 2026. https://www.reuters.com/business/bar-fed-rate-hike-this-week-remains-high-even-markets-see-chance-2026-07-28/.
[198] Schedule DM-D-10, Murrey's Direct Testimony.
[199] Staff's Data Request No. 0112.
[200] Staff's Data Request No. 0107 and Appendix 2, Schedule SJW-TD-1.

Staff recommends an overall ROR of 7.25% for EMM, as of June 30, 2026. Staff's ROR recommendation for EMM incorporates a capital structure consisting of 52.19% common equity and 47.81% long-term debt, with an authorized ROE of 9.73% and a 4.54% cost of long-term debt.[201]

Q. Does this conclude your surrebuttal / true-up direct testimony?

A. Yes, it does.

[201] Appendix 2, Schedule SJW-TD-2.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement a General Rate Increase for Electric Service	))))	Case No. ER-2026-0143

AFFIDAVIT OF SEOUNG JOUN WON, PhD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW SEOUNG JOUN WON, PhD and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Surrebuttal / True-Up Direct Testimony of Seoung Joun Won, PhD*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

SEOUNG JOUN WON, PhD

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 2nd day of September 2026.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2029
Commission Number: 12412070

Notary Public

SURREBUTTAL / TRUE-UP TESTIMONY

FOR

Evergy Metro, Inc.,
d/b/a Evergy Missouri Metro

CASE NO. ER-2026-0143

APPENDIX 1

SCHEDULES-Updated

BY

Seoung Joun Won, PhD

Financial Analysis

MISSOURI PUBLIC SERVICE COMMISSION

September 10, 2026

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

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Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Federal Reserve Discount Rate and Federal Reserve Funds Rate

Date	Federal Reserve Discount Rate	Federal Reserve Funds Rate	Date	Federal Reserve Discount Rate	Federal Reserve Funds Rate	Date	Federal Reserve Discount Rate	Federal Reserve Funds Rate
Jan 2001	5.52	5.50	Jan 2006	5.50	4.50	Jan 2011	0.75	0.13
Feb	5.00	5.50	Feb	5.50	4.50	Feb	0.75	0.13
Mar	4.81	5.00	Mar	5.75	4.75	Mar	0.75	0.13
Apr	4.28	4.50	Apr	5.75	4.75	Apr	0.75	0.13
May	3.73	4.00	May	6.00	5.00	May	0.75	0.13
Jun	3.47	3.75	June	6.25	5.25	Jun	0.75	0.13
Jul	3.25	3.75	July	6.25	5.25	Jul	0.75	0.13
Aug	3.16	3.50	Aug	6.25	5.25	Aug	0.75	0.13
Sep	2.77	3.00	Sep	6.25	5.25	Sep	0.75	0.13
Oct	2.02	2.50	Oct	6.25	5.25	Oct	0.75	0.13
Nov	1.58	2.00	Nov	6.25	5.25	Nov	0.75	0.13
Dec	1.33	1.75	Dec	6.25	5.25	Dec	0.75	0.13
Jan 2002	1.25	1.75	Jan 2007	6.25	5.25	Jan 2012	0.75	0.13
Feb	1.25	1.75	Feb	6.25	5.25	Feb	0.75	0.13
Mar	1.25	1.75	Mar	6.25	5.25	Mar	0.75	0.13
Apr	1.25	1.75	Apr	6.25	5.25	Apr	0.75	0.13
May	1.25	1.75	May	6.25	5.25	May	0.75	0.13
Jun	1.25	1.75	Jun	6.25	5.25	Jun	0.75	0.13
Jul	1.25	1.75	Jul	6.25	5.25	Jul	0.75	0.13
Aug	1.25	1.75	Aug	5.75	5.25	Aug	0.75	0.13
Sep	1.25	1.75	Sep	5.25	4.75	Sep	0.75	0.13
Oct	1.25	1.75	Oct	5.00	4.75	Oct	0.75	0.13
Nov	0.83	1.25	Nov	5.00	4.50	Nov	0.75	0.13
Dec	0.75	1.25	Dec	4.75	4.25	Dec	0.75	0.13
Jan 2003	2.25	1.25	Jan 2008	3.50	3.50	Jan 2013	0.75	0.13
Feb	2.25	1.25	Feb	3.50	3.00	Feb	0.75	0.13
Mar	2.25	1.25	Mar	2.50	2.25	Mar	0.75	0.13
Apr	2.25	1.25	Apr	2.25	2.25	Apr	0.75	0.13
May	2.25	1.25	May	2.25	2.00	May	0.75	0.13
Jun	2.00	1.25	Jun	2.25	2.00	Jun	0.75	0.13
Jul	2.00	1.00	Jul	2.25	2.00	Jul	0.75	0.13
Aug	2.00	1.00	Aug	2.25	2.00	Aug	0.75	0.13
Sep	2.00	1.00	Sep	2.25	2.00	Sept	0.75	0.13
Oct	2.00	1.00	Oct	1.25	1.25	Oct	0.75	0.13
Nov	2.00	1.00	Nov	1.25	1.25	Nov	0.75	0.13
Dec	2.00	1.00	Dec	0.50	0.13	Dec	0.75	0.13
Jan 2004	2.00	1.00	Jan 2009	0.50	0.13	Jan 2014	0.75	0.13
Feb	2.00	1.00	Feb	0.50	0.13	Feb	0.75	0.13
Mar	2.00	1.00	Mar	0.50	0.13	Mar	0.75	0.13
Apr	2.00	1.00	Apr	0.50	0.13	Apr	0.75	0.13
May	2.00	1.00	May	0.50	0.13	May	0.75	0.13
Jun	2.25	1.00	Jun	0.50	0.13	Jun	0.75	0.13
Jul	2.25	1.25	Jul	0.50	0.13	Jul	0.75	0.13
Aug	2.50	1.50	Aug	0.50	0.13	Aug	0.75	0.13
Sep	2.75	1.50	Sep	0.50	0.13	Sep	0.75	0.13
Oct	2.75	1.75	Oct	0.50	0.13	Oct	0.75	0.13
Nov	3.00	2.00	Nov	0.50	0.13	Nov	0.75	0.13
Dec	3.25	2.25	Dec	0.50	0.13	Dec	0.75	0.13
Jan 2005	3.25	2.25	Jan 2010	0.50	0.13	Jan 2015	0.75	0.13
Feb	3.50	2.50	Feb	0.75	0.13	Feb	0.75	0.13
Mar	3.75	2.50	Mar	0.75	0.13	Mar	0.75	0.13
Apr	3.75	2.75	April	0.75	0.13	Apr	0.75	0.13
May	4.00	3.00	May	0.75	0.13	May	0.75	0.13
Jun	4.25	3.00	Jun	0.75	0.13	Jun	0.75	0.13
Jul	4.25	3.25	Jul	0.75	0.13	Jul	0.75	0.13
Aug	4.50	3.50	Aug	0.75	0.13	Aug	0.75	0.13
Sep	4.75	3.75	Sep	0.75	0.13	Sep	0.75	0.13
Oct	4.75	3.75	Oct	0.75	0.13	Oct	0.75	0.13
Nov	5.00	4.00	Nov	0.75	0.13	Nov	0.75	0.13
Dec	5.25	4.25	Dec	0.75	0.13	Dec	1.00	0.38

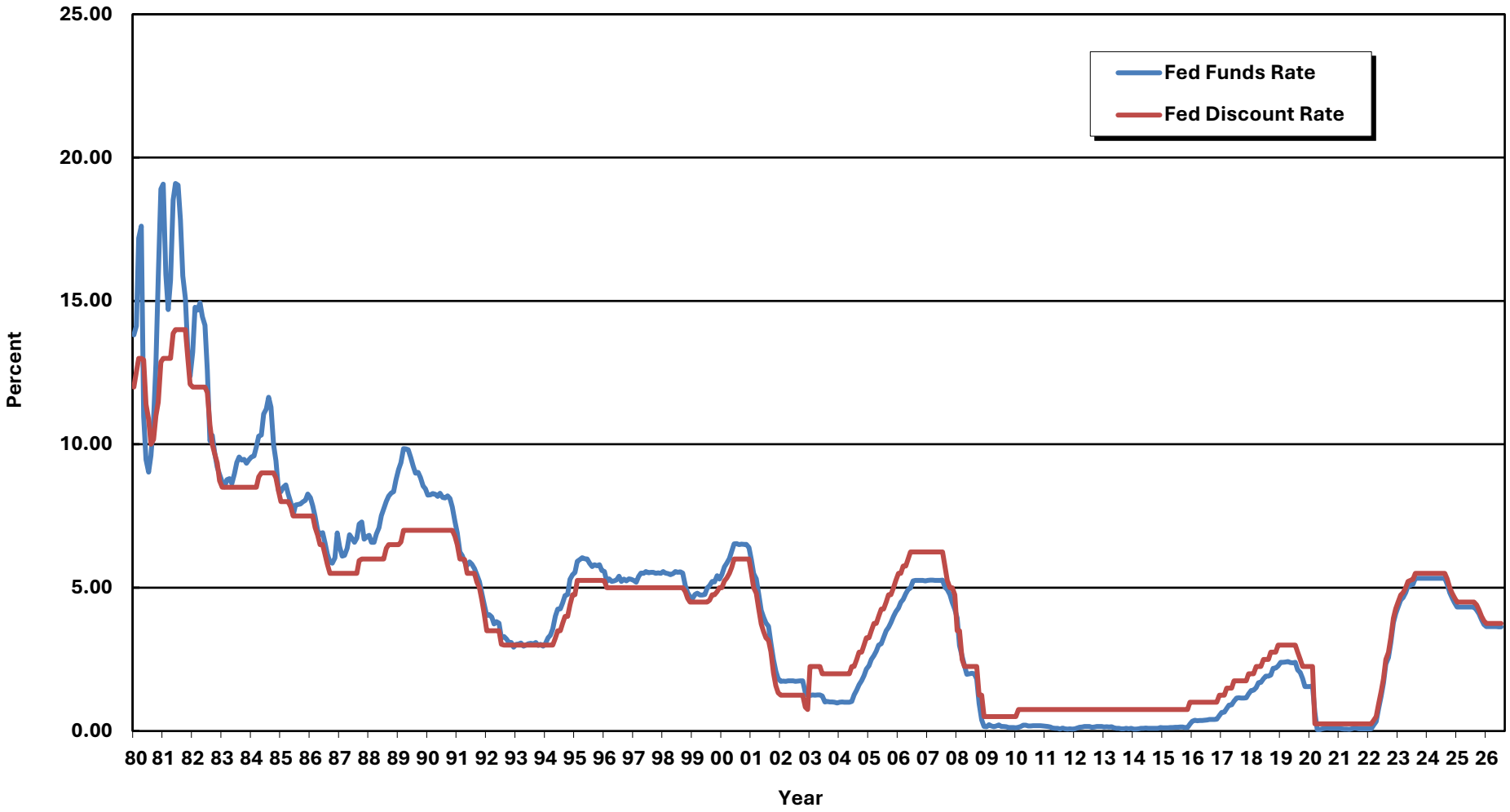
Federal Reserve Discount Rate and Federal Reserve Funds Rate

Date	Federal Reserve Discount Rate	Federal Reserve Funds Rate
Jan 2016	1.00	0.38
Feb	1.00	0.38
Mar	1.00	0.38
Apr	1.00	0.38
May	1.00	0.38
Jun	1.00	0.38
Jul	1.00	0.39
Aug	1.00	0.40
Sep	1.00	0.40
Oct	1.00	0.40
Nov	1.00	0.41
Dec	1.25	0.54
Jan 2017	1.25	0.65
Feb	1.25	0.66
Mar	1.50	0.79
Apr	1.50	0.90
May	1.50	0.91
Jun	1.75	1.04
July	1.75	1.15
Aug	1.75	1.16
Sep	1.75	1.15
Oct	1.75	1.15
Nov	1.75	1.16
Dec	2.00	1.30
Jan 2018	2.00	1.41
Feb	2.00	1.42
Mar	2.25	1.51
Apr	2.25	1.69
May	2.25	1.70
Jun	2.50	1.82
Jul	2.50	1.91
Aug	2.50	1.91
Sep	2.75	1.95
Oct	2.75	2.19
Nov	2.75	2.20
Dec	3.00	2.27
Jan 2019	3.00	2.40
Feb	3.00	2.40
Mar	3.00	2.41
Apr	3.00	2.42
May	3.00	2.39
Jun	3.00	2.38
Jul	3.00	2.40
Aug	2.75	2.13
Sept	2.50	2.04
Oct	2.25	1.83
Nov	2.25	1.55
Dec	2.25	1.55
Jan 2020	2.25	1.55
Feb	2.25	1.58
Mar	0.25	0.65
Apr	0.25	0.05
May	0.25	0.05
Jun	0.25	0.08
Jul	0.25	0.09
Aug	0.25	0.10
Sep	0.25	0.09
Oct	0.25	0.09
Nov	0.25	0.09
Dec	0.25	0.09
Jan 2021	0.25	0.09
Feb	0.25	0.08
Mar	0.25	0.07
Apr	0.25	0.07
May	0.25	0.06
Jun	0.25	0.08
Jul	0.25	0.10
Aug	0.25	0.09
Sep	0.25	0.08
Oct	0.25	0.08
Nov	0.25	0.08
Dec	0.25	0.08
Jan 2022	0.25	0.08
Feb	0.25	0.08
Mar	0.25	0.20
Apr	0.25	0.33
May	0.25	0.77
Jun	0.25	1.21
Jul	0.25	1.68
Aug	0.25	2.33
Sep	0.25	2.56
Oct	0.25	3.08
Nov	0.25	3.78
Dec	0.25	4.10
Jan 2023	0.25	4.33
Feb	0.25	4.57
Mar	0.25	4.65
Apr	0.25	4.83
May	0.25	5.06
Jun	0.25	5.08
Jul	0.25	5.12
Aug	0.25	5.33
Sep	0.25	5.33
Oct	0.25	5.33
Nov	0.25	5.33
Dec	0.25	5.33
Jan 2024	5.50	5.33
Feb	5.50	5.33
Mar	5.50	5.33
Apr	5.50	5.33
May	5.50	5.33
Jun	5.50	5.33
Jul	5.50	5.33
Aug	5.50	5.33
Sep	5.31	5.13
Oct	5.00	4.83
Nov	4.81	4.64
Dec	4.65	4.48
Jan 2025	4.50	4.33
Feb	4.50	4.33
Mar	4.50	4.33
Apr	4.50	4.33
May	4.50	4.33
Jun	4.50	4.33
Jul	4.50	4.33
Aug	4.50	4.33
Sep	4.40	4.22
Oct	4.23	4.09
Nov	4.00	3.88
Dec	3.84	3.72
Jan 2026	3.75	3.64
Feb	3.75	3.64
Mar	3.75	3.64
Apr	3.75	3.64
May	3.75	3.64
Jun	3.75	3.63
Jul	3.75	3.63
Aug		
Sep		
Oct		
Nov		
Dec		

Source: International Monetary Fund, Interest Rates, Discount Rate for United States [INTDSRUSM193N], retrieved from FRED, Federal Reserve Bank of St. Louis;
https://fred.stlouisfed.org/series/INTDSRUSM193N

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Federal Reserve Discount Rates and Federal Funds Rates
1980 - 2026



SCHEDULE SJW-d2-2-Updated

Evergy Metro, Inc., Evergy Missouri Metro
Case No. ER-2026-0143

Rate of Inflation

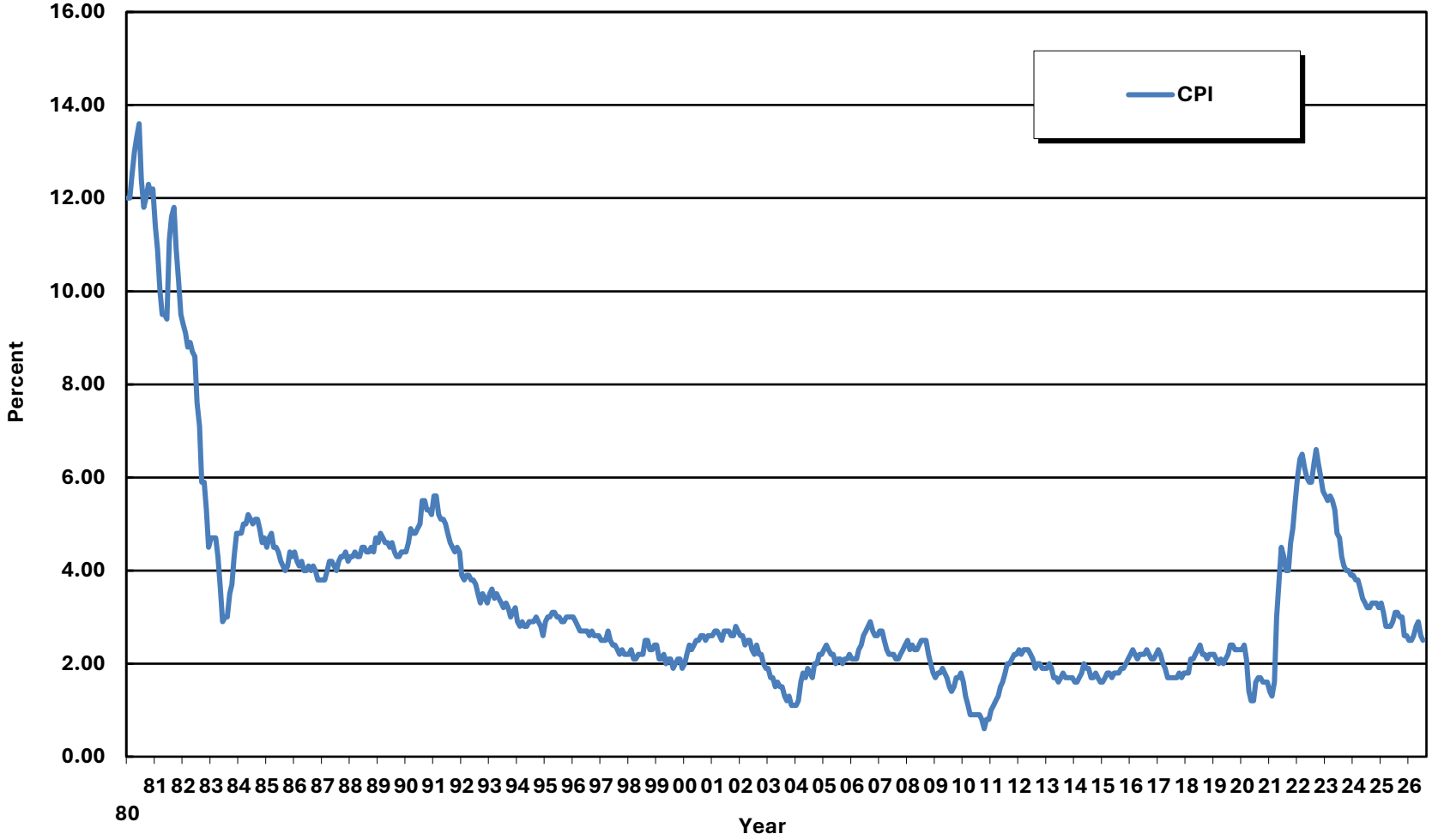
Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.00	Jan 1987	3.80	Jan 1994	2.90	Jan 2001	2.60	Jan 2008	2.50	Jan 2015	1.60	Jan 2022	6.00
Feb	12.00	Feb	3.80	Feb	2.80	Feb	2.70	Feb	2.30	Feb	1.70	Feb	6.40
Mar	12.50	Mar	4.00	Mar	2.90	Mar	2.70	Mar	2.40	Mar	1.80	Mar	6.50
Apr	13.00	Apr	4.20	Apr	2.80	Apr	2.60	Apr	2.30	Apr	1.80	Apr	6.20
May	13.30	May	4.20	May	2.80	May	2.50	May	2.30	May	1.70	May	6.00
Jun	13.60	Jun	4.10	Jun	2.90	Jun	2.70	Jun	2.40	Jun	1.80	Jun	5.90
Jul	12.40	Jul	4.00	Jul	2.90	Jul	2.70	Jul	2.50	Jul	1.80	Jul	5.90
Aug	11.80	Aug	4.20	Aug	2.90	Aug	2.70	Aug	2.50	Aug	1.80	Aug	6.30
Sep	12.00	Sep	4.30	Sep	3.00	Sep	2.60	Sep	2.50	Sep	1.90	Sep	6.60
Oct	12.30	Oct	4.30	Oct	2.90	Oct	2.60	Oct	2.20	Oct	1.90	Oct	6.30
Nov	12.10	Nov	4.40	Nov	2.80	Nov	2.80	Nov	2.00	Nov	2.00	Nov	6.00
Dec	12.20	Dec	4.20	Dec	2.60	Dec	2.70	Dec	1.80	Dec	2.10	Dec	5.70
Jan 1981	11.40	Jan 1988	4.30	Jan 1995	2.90	Jan 2002	2.60	Jan 2009	1.70	Jan 2016	2.20	Jan 2023	5.60
Feb	10.90	Feb	4.30	Feb	3.00	Feb	2.60	Feb	1.80	Feb	2.30	Feb	5.50
Mar	10.00	Mar	4.40	Mar	3.00	Mar	2.40	Mar	1.80	Mar	2.20	Mar	5.60
Apr	9.50	Apr	4.30	Apr	3.10	Apr	2.50	Apr	1.90	Apr	2.10	Apr	5.50
May	9.50	May	4.30	May	3.10	May	2.50	May	1.80	May	2.20	May	5.30
Jun	9.40	Jun	4.50	Jun	3.00	Jun	2.30	Jun	1.70	Jun	2.20	Jun	4.80
Jul	11.10	Jul	4.50	Jul	3.00	Jul	2.20	Jul	1.50	Jul	2.20	Jul	4.70
Aug	11.60	Aug	4.40	Aug	2.90	Aug	2.40	Aug	1.40	Aug	2.30	Aug	4.30
Sep	11.80	Sep	4.40	Sep	2.90	Sep	2.20	Sep	1.50	Sep	2.20	Sep	4.10
Oct	10.90	Oct	4.50	Oct	3.00	Oct	2.20	Oct	1.70	Oct	2.10	Oct	4.00
Nov	10.20	Nov	4.40	Nov	3.00	Nov	2.00	Nov	1.70	Nov	2.10	Nov	4.00
Dec	9.50	Dec	4.70	Dec	3.00	Dec	1.90	Dec	1.80	Dec	2.20	Dec	3.90
Jan 1982	9.30	Jan 1989	4.60	Jan 1996	3.00	Jan 2003	1.90	Jan 2010	1.60	Jan 2017	2.30	Jan 2024	3.90
Feb	9.10	Feb	4.80	Feb	2.90	Feb	1.70	Feb	1.30	Feb	2.20	Feb	3.80
Mar	8.80	Mar	4.70	Mar	2.80	Mar	1.70	Mar	1.10	Mar	2.00	Mar	3.80
Apr	8.90	Apr	4.60	Apr	2.70	Apr	1.50	April	0.90	Apr	1.90	Apr	3.60
May	8.70	May	4.60	May	2.70	May	1.60	May	0.90	May	1.70	May	3.40
Jun	8.60	Jun	4.50	Jun	2.70	Jun	1.50	Jun	0.90	Jun	1.70	Jun	3.30
Jul	7.60	Jul	4.60	Jul	2.70	Jul	1.50	Jul	0.90	July	1.70	Jul	3.20
Aug	7.10	Aug	4.40	Aug	2.60	Aug	1.30	Aug	0.90	Aug	1.70	Aug	3.20
Sep	5.90	Sep	4.30	Sep	2.70	Sep	1.20	Sep	0.80	Sep	1.70	Sep	3.30
Oct	5.90	Oct	4.30	Oct	2.60	Oct	1.30	Oct	0.60	Oct	1.80	Oct	3.30
Nov	5.30	Nov	4.40	Nov	2.60	Nov	1.10	Nov	0.80	Nov	1.70	Nov	3.30
Dec	4.50	Dec	4.40	Dec	2.60	Dec	1.10	Dec	0.80	Dec	1.80	Dec	3.20
Jan 1983	4.70	Jan 1990	4.40	Jan 1997	2.50	Jan 2004	1.10	Jan 2011	1.00	Jan 2018	1.80	Jan 2025	3.30
Feb	4.70	Feb	4.60	Feb	2.50	Feb	1.20	Feb	1.10	Feb	1.80	Feb	3.10
Mar	4.70	Mar	4.90	Mar	2.50	Mar	1.60	Mar	1.20	Mar	2.10	Mar	2.80
Apr	4.30	Apr	4.80	Apr	2.70	Apr	1.80	Apr	1.30	Apr	2.10	Apr	2.80
May	3.60	May	4.80	May	2.50	May	1.70	May	1.50	May	2.20	May	2.80
Jun	2.90	Jun	4.90	Jun	2.40	Jun	1.90	Jun	1.60	Jun	2.30	Jun	2.90
Jul	3.00	Jul	5.00	Jul	2.40	Jul	1.80	Jul	1.80	Jul	2.40	Jul	3.10
Aug	3.00	Aug	5.50	Aug	2.30	Aug	1.70	Aug	2.00	Aug	2.20	Aug	3.10
Sep	3.50	Sep	5.50	Sep	2.20	Sep	2.00	Sep	2.00	Sep	2.20	Sep	3.00
Oct	3.70	Oct	5.30	Oct	2.30	Oct	2.00	Oct	2.10	Oct	2.10	Oct	NA
Nov	4.30	Nov	5.30	Nov	2.20	Nov	2.20	Nov	2.20	Nov	2.20	Nov	2.60
Dec	4.80	Dec	5.20	Dec	2.20	Dec	2.20	Dec	2.20	Dec	2.20	Dec	2.60
Jan 1984	4.80	Jan 1991	5.60	Jan 1998	2.20	Jan 2005	2.30	Jan 2012	2.30	Jan 2019	2.20	Jan 2026	2.50
Feb	4.80	Feb	5.60	Feb	2.30	Feb	2.40	Feb	2.20	Feb	2.10	Feb	2.50
Mar	5.00	Mar	5.20	Mar	2.10	Mar	2.30	Mar	2.30	Mar	2.00	Mar	2.60
Apr	5.00	Apr	5.10	Apr	2.10	Apr	2.20	Apr	2.30	Apr	2.10	Apr	2.80
May	5.20	May	5.10	May	2.20	May	2.20	May	2.30	May	2.00	May	2.90
Jun	5.10	Jun	5.00	Jun	2.20	Jun	2.00	Jun	2.20	Jun	2.10	Jun	2.60
Jul	5.00	Jul	4.80	Jul	2.20	Jul	2.10	Jul	2.10	Jul	2.20	Jul	2.50
Aug	5.10	Aug	4.60	Aug	2.50	Aug	2.10	Aug	1.90	Aug	2.40	Aug	
Sep	5.10	Sep	4.50	Sep	2.50	Sep	2.00	Sep	2.00	Sept	2.40	Sep	
Oct	4.90	Oct	4.40	Oct	2.30	Oct	2.10	Oct	2.00	Oct	2.30	Oct	
Nov	4.60	Nov	4.50	Nov	2.30	Nov	2.10	Nov	1.90	Nov	2.30	Nov	
Dec	4.70	Dec	4.40	Dec	2.40	Dec	2.20	Dec	1.90	Dec	2.30	Dec	
Jan 1985	4.50	Jan 1992	3.90	Jan 1999	2.40	Jan 2006	2.10	Jan 2013	1.90	Jan 2020	2.30		
Feb	4.70	Feb	3.80	Feb	2.10	Feb	2.10	Feb	2.00	Feb	2.40		
Mar	4.80	Mar	3.90	Mar	2.10	Mar	2.10	Mar	1.90	Mar	2.10		
Apr	4.50	Apr	3.90	Apr	2.20	Apr	2.30	Apr	1.70	Apr	1.40		
May	4.50	May	3.80	May	2.00	May	2.40	May	1.70	May	1.20		
Jun	4.40	Jun	3.80	Jun	2.10	June	2.60	Jun	1.60	Jun	1.20		
Jul	4.20	Jul	3.70	Jul	2.10	July	2.70	Jul	1.70	Jul	1.60		
Aug	4.10	Aug	3.50	Aug	1.90	Aug	2.80	Aug	1.80	Aug	1.70		
Sep	4.00	Sep	3.30	Sep	2.00	Sep	2.90	Sept	1.70	Sep	1.70		
Oct	4.10	Oct	3.50	Oct	2.10	Oct	2.70	Oct	1.70	Oct	1.60		
Nov	4.40	Nov	3.40	Nov	2.10	Nov	2.60	Nov	1.70	Nov	1.60		
Dec	4.30	Dec	3.30	Dec	1.90	Dec	2.60	Dec	1.70	Dec	1.60		
Jan 1986	4.40	Jan 1993	3.50	Jan 2000	2.00	Jan 2007	2.70	Jan 2014	1.60	Jan 2021	1.40		
Feb	4.20	Feb	3.60	Feb	2.20	Feb	2.70	Feb	1.60	Feb	1.30		
Mar	4.10	Mar	3.40	Mar	2.40	Mar	2.50	Mar	1.70	Mar	1.60		
Apr	4.20	Apr	3.50	Apr	2.30	Apr	2.30	Apr	1.80	Apr	3.00		
May	4.00	May	3.40	May	2.40	May	2.20	May	2.00	May	3.80		
Jun	4.00	Jun	3.30	Jun	2.50	Jun	2.20	Jun	1.90	Jun	4.50		
Jul	4.10	Jul	3.20	Jul	2.50	Jul	2.20	Jul	1.90	Jul	4.30		
Aug	4.00	Aug	3.30	Aug	2.60	Aug	2.10	Aug	1.70	Aug	4.00		
Sep	4.10	Sep	3.20	Sep	2.60	Sep	2.10	Sep	1.70	Sep	4.00		
Oct	4.00	Oct	3.00	Oct	2.50	Oct	2.20	Oct	1.80	Oct	4.60		
Nov	3.80	Nov	3.10	Nov	2.60	Nov	2.30	Nov	1.70	Nov	4.90		
Dec	3.80	Dec	3.20	Dec	2.60	Dec	2.40	Dec	1.60	Dec	5.50		

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers less food and energy, Change for 12-Month Period, Bureau of Labor Statistics,
https://www.bls.gov/cpi/data.htm

SCHEDULE SJW-d3-1-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Rate of Inflation
1980 - 2026



SCHEDULE SJW-d3-2-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Average Yields on Moody's Public Utility Bonds

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.12	Jan 1987	8.77	Jan 1994	7.31	Jan 2001	7.76	Jan 2008	6.08	Jan 2015	3.83	Jan 2022	3.46
Feb	13.48	Feb	8.81	Feb	7.44	Feb	7.69	Feb	6.28	Feb	3.91	Feb	3.73
Mar	14.33	Mar	8.75	Mar	7.83	Mar	7.59	Mar	6.29	Mar	3.97	Mar	4.02
Apr	13.50	Apr	9.30	Apr	8.20	Apr	7.81	Apr	6.36	Apr	3.96	Apr	4.34
May	12.17	May	9.82	May	8.32	May	7.88	May	6.38	May	4.38	May	4.79
Jun	11.87	Jun	9.87	Jun	8.31	Jun	7.75	Jun	6.50	Jun	4.60	Jun	4.91
Jul	12.12	Jul	10.01	Jul	8.47	Jul	7.71	Jul	6.50	Jul	4.63	Jul	4.84
Aug	12.82	Aug	10.33	Aug	8.41	Aug	7.57	Aug	6.48	Aug	4.54	Aug	4.80
Sep	13.29	Sep	11.00	Sep	8.65	Sep	7.73	Sep	6.59	Sep	4.68	Sep	5.33
Oct	13.53	Oct	11.32	Oct	8.88	Oct	7.64	Oct	7.70	Oct	4.63	Oct	5.91
Nov	14.07	Nov	10.82	Nov	9.00	Nov	7.61	Nov	7.80	Nov	4.73	Nov	5.78
Dec	14.48	Dec	10.99	Dec	8.79	Dec	7.86	Dec	6.87	Dec	4.69	Dec	5.30
Jan 1981	14.22	Jan 1988	10.75	Jan 1995	8.77	Jan 2002	7.69	Jan 2009	6.77	Jan 2016	4.62	Jan 2023	5.23
Feb	14.84	Feb	10.11	Feb	8.56	Feb	7.62	Feb	6.72	Feb	4.44	Feb	5.32
Mar	14.86	Mar	10.11	Mar	8.41	Mar	7.83	Mar	6.85	Mar	4.40	Mar	5.44
Apr	15.32	Apr	10.53	Apr	8.30	Apr	7.74	Apr	6.90	Apr	4.16	Apr	5.20
May	15.84	May	10.75	May	7.93	May	7.76	May	6.83	May	4.06	May	5.44
Jun	15.27	Jun	10.71	Jun	7.62	Jun	7.67	Jun	6.54	Jun	3.93	Jun	5.46
Jul	15.87	Jul	10.96	Jul	7.73	Jul	7.54	Jul	6.15	Jul	3.70	Jul	5.48
Aug	16.33	Aug	11.09	Aug	7.86	Aug	7.34	Aug	5.80	Aug	3.73	Aug	5.77
Sep	16.89	Sep	10.56	Sep	7.62	Sep	7.23	Sep	5.60	Sep	3.80	Sep	5.91
Oct	16.76	Oct	9.92	Oct	7.46	Oct	7.43	Oct	5.64	Oct	3.90	Oct	6.38
Nov	15.50	Nov	9.89	Nov	7.40	Nov	7.31	Nov	5.71	Nov	4.21	Nov	5.99
Dec	15.77	Dec	10.02	Dec	7.21	Dec	7.20	Dec	5.86	Dec	4.39	Dec	5.46
Jan 1982	16.73	Jan 1989	10.02	Jan 1996	7.20	Jan 2003	7.13	Jan 2010	5.83	Jan 2017	4.24	Jan 2024	5.51
Feb	16.72	Feb	10.02	Feb	7.37	Feb	6.92	Feb	5.94	Feb	4.25	Feb	5.59
Mar	16.07	Mar	10.16	Mar	7.72	Mar	6.80	Mar	5.90	Mar	4.30	Mar	5.59
Apr	15.82	Apr	10.14	Apr	7.88	Apr	6.68	April	5.87	Apr	4.19	Apr	5.83
May	15.60	May	9.92	May	7.99	May	6.35	May	5.59	May	4.19	May	5.78
Jun	16.18	Jun	9.49	Jun	8.07	Jun	6.21	Jun	5.62	Jun	4.01	Jun	5.65
Jul	16.04	Jul	9.34	Jul	8.02	Jul	6.54	Jul	5.41	July	4.06	Jul	5.68
Aug	15.22	Aug	9.37	Aug	7.84	Aug	6.78	Aug	5.10	Aug	3.92	Aug	5.42
Sep	14.56	Sep	9.43	Sep	8.01	Sep	6.58	Sep	5.10	Sep	3.93	Sep	5.23
Oct	13.88	Oct	9.37	Oct	7.76	Oct	6.50	Oct	5.20	Oct	3.97	Oct	5.44
Nov	13.58	Nov	9.33	Nov	7.48	Nov	6.44	Nov	5.45	Nov	3.88	Nov	5.58
Dec	13.55	Dec	9.31	Dec	7.58	Dec	6.35	Dec	5.64	Dec	3.85	Dec	5.60
Jan 1983	13.46	Jan 1990	9.44	Jan 1997	7.79	Jan 2004	6.23	Jan 2011	5.64	Jan 2018	3.91	Jan 2025	5.89
Feb	13.60	Feb	9.66	Feb	7.68	Feb	6.17	Feb	5.73	Feb	4.15	Feb	5.74
Mar	13.28	Mar	9.75	Mar	7.92	Mar	6.01	Mar	5.62	Mar	4.21	Mar	5.75
Apr	13.03	Apr	9.87	Apr	8.08	Apr	6.38	Apr	5.62	Apr	4.24	Apr	5.93
May	13.00	May	9.89	May	7.94	May	6.68	May	5.38	May	4.36	May	6.06
Jun	13.17	Jun	9.69	Jun	7.77	Jun	6.53	Jun	5.32	Jun	4.37	Jun	5.95
Jul	13.28	Jul	9.66	Jul	7.52	Jul	6.34	Jul	5.34	Jul	4.35	Jul	5.90
Aug	13.50	Aug	9.84	Aug	7.57	Aug	6.18	Aug	4.78	Aug	4.33	Aug	5.79
Sep	13.35	Sep	10.01	Sep	7.50	Sep	6.01	Sep	4.61	Sep	4.41	Sep	5.63
Oct	13.19	Oct	9.94	Oct	7.37	Oct	5.95	Oct	4.66	Oct	4.56	Oct	5.53
Nov	13.33	Nov	9.76	Nov	7.24	Nov	5.97	Nov	4.37	Nov	4.65	Nov	5.65
Dec	13.48	Dec	9.57	Dec	7.16	Dec	5.93	Dec	4.47	Dec	4.51	Dec	5.71
Jan 1984	13.40	Jan 1991	9.56	Jan 1998	7.03	Jan 2005	5.80	Jan 2012	4.48	Jan 2019	4.48	Jan 2026	5.70
Feb	13.50	Feb	9.31	Feb	7.09	Feb	5.64	Feb	4.47	Feb	4.35	Feb	5.64
Mar	14.03	Mar	9.39	Mar	7.13	Mar	5.86	Mar	4.59	Mar	4.26	Mar	5.85
Apr	14.30	Apr	9.30	Apr	7.12	Apr	5.72	Apr	4.54	Apr	4.18	Apr	5.84
May	14.95	May	9.29	May	7.11	May	5.60	May	4.36	May	4.10	May	5.92
Jun	15.16	Jun	9.44	Jun	6.99	Jun	5.39	Jun	4.26	Jun	3.93	Jun	5.83
Jul	14.92	Jul	9.40	Jul	6.99	Jul	5.50	Jul	4.12	Jul	3.79	Jul	6.00
Aug	14.29	Aug	9.16	Aug	6.96	Aug	5.51	Aug	4.18	Aug	3.36	Aug	
Sep	14.04	Sep	9.03	Sep	6.88	Sep	5.54	Sep	4.17	Sept	3.44	Sep	
Oct	13.68	Oct	8.99	Oct	6.88	Oct	5.79	Oct	4.04	Oct	3.45	Oct	
Nov	13.15	Nov	8.93	Nov	6.96	Nov	5.88	Nov	3.95	Nov	3.48	Nov	
Dec	12.96	Dec	8.76	Dec	6.84	Dec	5.83	Dec	4.10	Dec	3.45	Dec	
Jan 1985	12.88	Jan 1992	8.67	Jan 1999	6.87	Jan 2006	5.77	Jan 2013	4.24	Jan 2020	3.34		
Feb	13.00	Feb	8.77	Feb	7.00	Feb	5.83	Feb	4.29	Feb	3.16		
Mar	13.66	Mar	8.84	Mar	7.18	Mar	5.98	Mar	4.29	Mar	3.59		
Apr	13.42	Apr	8.79	Apr	7.16	Apr	6.28	Apr	4.08	Apr	3.31		
May	12.89	May	8.72	May	7.42	May	6.39	May	4.24	May	3.22		
Jun	11.91	Jun	8.64	Jun	7.70	June	6.39	Jun	4.63	Jun	3.10		
Jul	11.88	Jul	8.46	Jul	7.66	July	6.37	Jul	4.78	Jul	2.77		
Aug	11.93	Aug	8.34	Aug	7.86	Aug	6.20	Aug	4.85	Aug	2.76		
Sep	11.95	Sep	8.32	Sep	7.87	Sep	6.03	Sept	4.90	Sep	2.88		
Oct	11.84	Oct	8.44	Oct	8.02	Oct	6.01	Oct	4.78	Oct	2.98		
Nov	11.33	Nov	8.53	Nov	7.86	Nov	5.82	Nov	4.86	Nov	2.89		
Dec	10.82	Dec	8.36	Dec	8.04	Dec	5.83	Dec	4.88	Dec	2.80		
Jan 1986	10.66	Jan 1993	8.23	Jan 2000	8.22	Jan 2007	5.96	Jan 2014	4.72	Jan 2021	2.94		
Feb	10.16	Feb	8.00	Feb	8.10	Feb	5.91	Feb	4.64	Feb	3.13		
Mar	9.33	Mar	7.85	Mar	8.14	Mar	5.87	Mar	4.64	Mar	3.48		
Apr	9.02	Apr	7.76	Apr	8.14	Apr	6.01	Apr	4.52	Apr	3.33		
May	9.52	May	7.78	May	8.56	May	6.03	May	4.37	May	3.36		
Jun	9.51	Jun	7.68	Jun	8.22	Jun	6.34	Jun	4.42	Jun	3.19		
Jul	9.19	Jul	7.53	Jul	8.17	Jul	6.28	Jul	4.35	Jul	2.99		
Aug	9.15	Aug	7.21	Aug	8.06	Aug	6.28	Aug	4.28	Aug	2.99		
Sep	9.42	Sep	7.01	Sep	8.15	Sep	6.24	Sep	4.40	Sep	3.00		
Oct	9.39	Oct	6.99	Oct	8.08	Oct	6.17	Oct	4.24	Oct	3.13		
Nov	9.15	Nov	7.30	Nov	8.03	Nov	6.04	Nov	4.29	Nov	3.06		
Dec	8.96	Dec	7.33	Dec	7.79	Dec	6.23	Dec	4.18	Dec	3.17		

Source:
https://fred.stlouisfed.org/series/DBAA

SCHEDULE SJW-d4-1-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

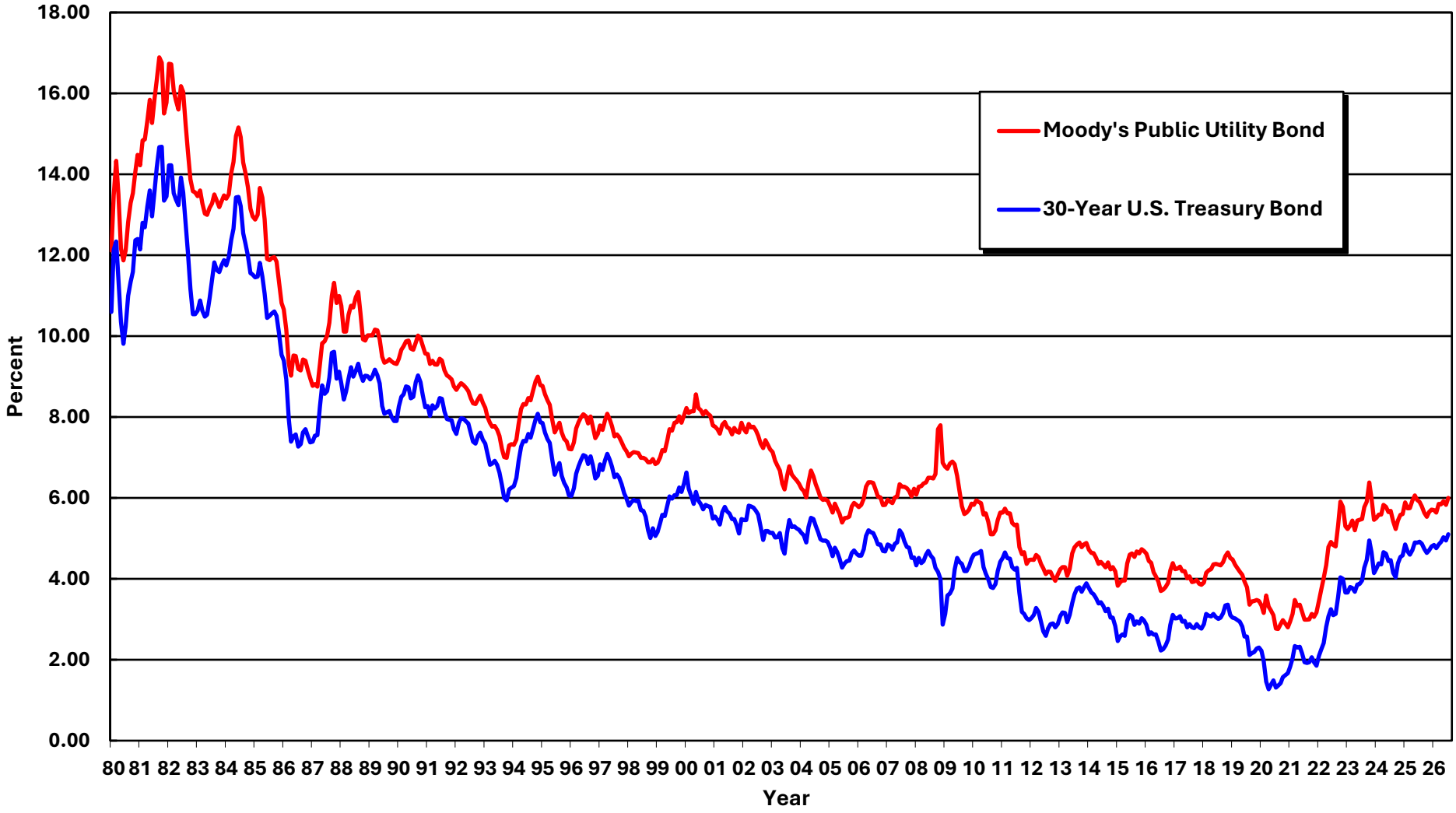
Average Yields on Thirty-Year U.S. Treasury Bonds

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	10.60	Jan 1987	7.39	Jan 1994	6.29	Jan 2001	5.54	Jan 2008	4.33	Jan 2015	2.46	Jan 2022	2.10
Feb	12.13	Feb	7.54	Feb	6.49	Feb	5.45	Feb	4.52	Feb	2.57	Feb	2.25
Mar	12.34	Mar	7.55	Mar	6.91	Mar	5.34	Mar	4.39	Mar	2.63	Mar	2.41
Apr	11.40	Apr	8.25	Apr	7.27	Apr	5.65	Apr	4.44	Apr	2.59	Apr	2.81
May	10.36	May	8.78	May	7.41	May	5.78	May	4.60	May	2.96	May	3.07
Jun	9.81	Jun	8.57	Jun	7.40	Jun	5.67	Jun	4.69	Jun	3.11	Jun	3.25
Jul	10.24	Jul	8.64	Jul	7.58	Jul	5.61	Jul	4.57	Jul	3.07	Jul	3.10
Aug	11.00	Aug	8.97	Aug	7.49	Aug	5.48	Aug	4.50	Aug	2.86	Aug	3.13
Sep	11.34	Sep	9.59	Sep	7.71	Sep	5.48	Sep	4.27	Sep	2.95	Sep	3.56
Oct	11.59	Oct	9.61	Oct	7.94	Oct	5.32	Oct	4.17	Oct	2.89	Oct	4.04
Nov	12.37	Nov	8.95	Nov	8.08	Nov	5.12	Nov	4.00	Nov	3.03	Nov	4.00
Dec	12.40	Dec	9.12	Dec	7.87	Dec	5.48	Dec	2.87	Dec	2.97	Dec	3.66
Jan 1981	12.14	Jan 1988	8.83	Jan 1995	7.85	Jan 2002	5.45	Jan 2009	3.13	Jan 2016	2.86	Jan 2023	3.66
Feb	12.80	Feb	8.43	Feb	7.61	Feb	5.45	Feb	3.59	Feb	2.62	Feb	3.80
Mar	12.69	Mar	8.63	Mar	7.45	Mar	5.81	Mar	3.64	Mar	2.68	Mar	3.77
Apr	13.20	Apr	8.95	Apr	7.36	Apr	5.79	Apr	3.76	Apr	2.62	Apr	3.68
May	13.60	May	9.23	May	6.95	May	5.76	May	4.23	May	2.63	May	3.86
Jun	12.96	Jun	9.00	Jun	6.57	Jun	5.68	Jun	4.52	Jun	2.45	Jun	3.87
Jul	13.59	Jul	9.14	Jul	6.72	Jul	5.59	Jul	4.41	Jul	2.23	Jul	3.96
Aug	14.17	Aug	9.32	Aug	6.86	Aug	5.28	Aug	4.37	Aug	2.26	Aug	4.28
Sep	14.67	Sep	9.06	Sep	6.55	Sep	4.96	Sep	4.19	Sep	2.35	Sep	4.47
Oct	14.68	Oct	8.89	Oct	6.37	Oct	5.18	Oct	4.19	Oct	2.50	Oct	4.95
Nov	13.35	Nov	9.02	Nov	6.26	Nov	5.18	Nov	4.31	Nov	2.86	Nov	4.66
Dec	13.45	Dec	9.01	Dec	6.06	Dec	5.13	Dec	4.49	Dec	3.11	Dec	4.14
Jan 1982	14.22	Jan 1989	8.93	Jan 1996	6.05	Jan 2003	5.14	Jan 2010	4.60	Jan 2017	3.02	Jan 2024	4.26
Feb	14.22	Feb	9.01	Feb	6.24	Feb	5.02	Feb	4.62	Feb	3.03	Feb	4.38
Mar	13.53	Mar	9.17	Mar	6.60	Mar	5.03	Mar	4.64	Mar	3.08	Mar	4.36
Apr	13.37	Apr	9.03	Apr	6.79	Apr	5.13	April	4.69	Apr	2.94	Apr	4.66
May	13.24	May	8.83	May	6.93	May	4.76	May	4.29	May	2.96	May	4.62
Jun	13.92	Jun	8.27	Jun	7.06	Jun	4.62	Jun	4.13	Jun	2.80	Jun	4.44
Jul	13.55	Jul	8.08	Jul	7.03	Jul	5.13	Jul	3.99	July	2.88	Jul	4.46
Aug	12.77	Aug	8.12	Aug	6.84	Aug	5.45	Aug	3.80	Aug	2.80	Aug	4.15
Sep	12.07	Sep	8.15	Sep	7.03	Sep	5.28	Sep	3.77	Sep	2.78	Sep	4.04
Oct	11.17	Oct	8.00	Oct	6.81	Oct	5.30	Oct	3.87	Oct	2.88	Oct	4.38
Nov	10.54	Nov	7.90	Nov	6.48	Nov	5.25	Nov	4.19	Nov	2.80	Nov	4.54
Dec	10.54	Dec	7.90	Dec	6.55	Dec	5.21	Dec	4.42	Dec	2.77	Dec	4.58
Jan 1983	10.63	Jan 1990	8.26	Jan 1997	6.83	Jan 2004	5.13	Jan 2011	4.52	Jan 2018	2.88	Jan 2025	4.85
Feb	10.88	Feb	8.50	Feb	6.69	Feb	5.08	Feb	4.65	Feb	3.13	Feb	4.68
Mar	10.63	Mar	8.56	Mar	6.93	Mar	4.90	Mar	4.51	Mar	3.09	Mar	4.60
Apr	10.48	Apr	8.76	Apr	7.09	Apr	5.28	Apr	4.50	Apr	3.07	Apr	4.71
May	10.53	May	8.73	May	6.94	May	5.51	May	4.29	May	3.13	May	4.90
Jun	10.93	Jun	8.46	Jun	6.77	Jun	5.48	Jun	4.23	Jun	3.05	Jun	4.89
Jul	11.40	Jul	8.50	Jul	6.51	Jul	5.31	Jul	4.27	Jul	3.01	Jul	4.92
Aug	11.82	Aug	8.86	Aug	6.58	Aug	5.15	Aug	3.65	Aug	3.04	Aug	4.87
Sep	11.63	Sep	9.03	Sep	6.50	Sep	4.98	Sep	3.18	Sep	3.15	Sep	4.74
Oct	11.58	Oct	8.86	Oct	6.33	Oct	4.94	Oct	3.13	Oct	3.34	Oct	4.64
Nov	11.75	Nov	8.54	Nov	6.11	Nov	4.95	Nov	3.02	Nov	3.36	Nov	4.70
Dec	11.88	Dec	8.24	Dec	5.99	Dec	4.91	Dec	2.98	Dec	3.10	Dec	4.80
Jan 1984	11.75	Jan 1991	8.27	Jan 1998	5.81	Jan 2005	4.77	Jan 2012	3.03	Jan 2019	3.04	Jan 2026	4.84
Feb	11.95	Feb	8.03	Feb	5.89	Feb	4.56	Feb	3.11	Feb	3.02	Feb	4.76
Mar	12.38	Mar	8.29	Mar	5.95	Mar	4.77	Mar	3.28	Mar	2.98	Mar	4.85
Apr	12.65	Apr	8.21	Apr	5.92	Apr	4.65	Apr	3.18	Apr	2.94	Apr	4.91
May	13.43	May	8.27	May	5.93	May	4.49	May	2.93	May	2.82	May	5.03
Jun	13.44	Jun	8.47	Jun	5.70	Jun	4.28	Jun	2.70	Jun	2.57	Jun	4.95
Jul	13.21	Jul	8.45	Jul	5.68	Jul	4.38	Jul	2.59	Jul	2.57	Jul	5.10
Aug	12.54	Aug	8.14	Aug	5.54	Aug	4.44	Aug	2.77	Aug	2.12	Aug	
Sep	12.29	Sep	7.95	Sep	5.20	Sep	4.45	Sep	2.88	Sept	2.16	Sep	
Oct	11.98	Oct	7.93	Oct	5.01	Oct	4.64	Oct	2.90	Oct	2.19	Oct	
Nov	11.56	Nov	7.92	Nov	5.25	Nov	4.70	Nov	2.80	Nov	2.28	Nov	
Dec	11.52	Dec	7.70	Dec	5.06	Dec	4.62	Dec	2.88	Dec	2.30	Dec	
Jan 1985	11.45	Jan 1992	7.58	Jan 1999	5.16	Jan 2006	4.57	Jan 2013	3.08	Jan 2020	2.22		
Feb	11.47	Feb	7.85	Feb	5.37	Feb	4.57	Feb	3.17	Feb	1.97		
Mar	11.81	Mar	7.97	Mar	5.58	Mar	4.73	Mar	3.16	Mar	1.46		
Apr	11.47	Apr	7.96	Apr	5.55	Apr	5.06	Apr	2.93	Apr	1.27		
May	11.05	May	7.89	May	5.81	May	5.20	May	3.11	May	1.38		
Jun	10.45	Jun	7.84	Jun	6.04	June	5.15	Jun	3.40	Jun	1.49		
Jul	10.50	Jul	7.60	Jul	5.98	July	5.13	Jul	3.61	Jul	1.31		
Aug	10.56	Aug	7.39	Aug	6.07	Aug	5.00	Aug	3.76	Aug	1.36		
Sep	10.61	Sep 1992	7.34	Sep	6.07	Sep	4.85	Sept	3.79	Sep	1.42		
Oct	10.50	Oct	7.53	Oct	6.26	Oct	4.85	Oct	3.68	Oct	1.57		
Nov	10.06	Nov	7.61	Nov	6.15	Nov	4.69	Nov	3.80	Nov	1.62		
Dec	9.54	Dec	7.44	Dec	6.35	Dec	4.68	Dec	3.89	Dec	1.67		
Jan 1986	9.40	Jan 1993	7.34	Jan 2000	6.63	Jan 2007	4.85	Jan 2014	3.77	Jan 2021	1.82		
Feb	8.93	Feb	7.09	Feb	6.23	Feb	4.82	Feb	3.66	Feb	2.04		
Mar	7.96	Mar	6.82	Mar	6.05	Mar	4.72	Mar	3.62	Mar	2.34		
Apr	7.39	Apr	6.85	Apr	5.85	Apr	4.87	Apr	3.52	Apr	2.30		
May	7.52	May	6.92	May	6.15	May	4.90	May	3.39	May	2.32		
Jun	7.57	Jun	6.81	Jun	5.93	Jun	5.20	Jun	3.42	Jun	2.16		
Jul	7.27	Jul	6.63	Jul	5.85	Jul	5.11	Jul	3.33	Jul	1.94		
Aug	7.33	Aug	6.32	Aug	5.72	Aug	4.93	Aug	3.20	Aug	1.92		
Sep	7.62	Sep	6.00	Sep	5.83	Sep	4.79	Sep	3.26	Sep	1.94		
Oct	7.70	Oct	5.94	Oct	5.80	Oct	4.77	Oct	3.04	Oct	2.06		
Nov	7.52	Nov	6.21	Nov	5.78	Nov	4.52	Nov	3.04	Nov	1.94		
Dec	7.37	Dec	6.25	Dec	5.49	Dec	4.53	Dec	2.83	Dec	1.85		

Sources:
http://research.stlouisfed.org/fred2/data/GS30.txt

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

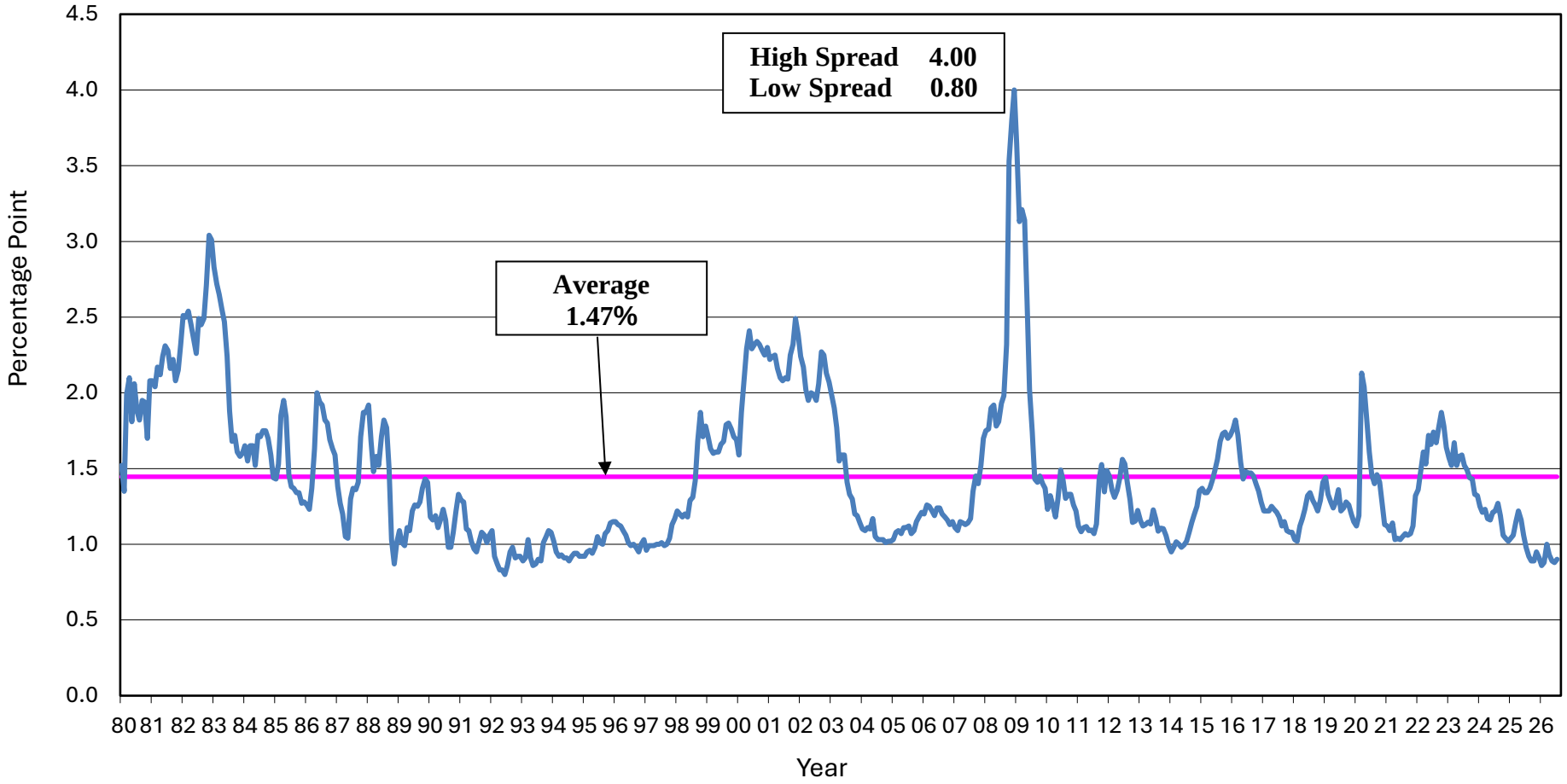
Average Yields on Mergent's Public Utility Bonds and Thirty-Year U.S. Treasury Bonds (1980 - 2026)



SCHEDULE SJW-d4-3-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

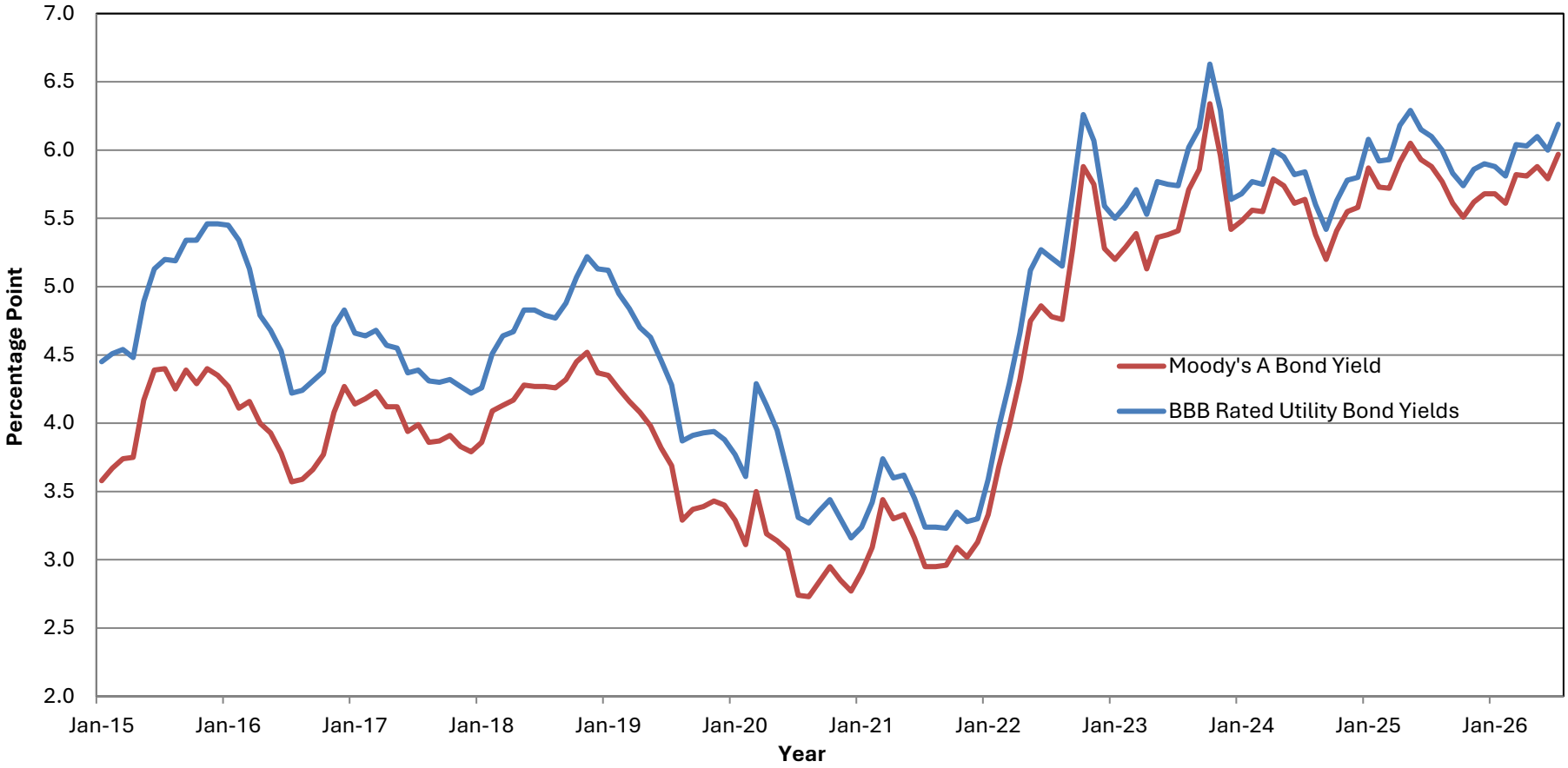
Monthly Spreads Between Yields on Moody's Public Utility Bonds and 30-Year U.S. Treasury Bonds (1980 - 2026)



SCHEDULE SJW-d4-4-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Average Yields on A and BBB rated Utility Bonds (2015- 2026)



SCHEDULE SJW-d4-5-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Historical Consolidated Capital Structures for Evergy, Inc.

(Dollars in Millions)

Capital Components	December 31, 2020	December 31, 2021	December 31, 2022	December 31, 2023
Common Equity	$8,739.0	$9,241.7	$9,483.7	$9,663.1
Preferred Stock	$0.0	$0.0	$0.0	$0.0
Long-Term Debt	$9,251.8	$9,297.9	$9,905.7	$11,053.3
Total Capitalization	$17,990.8	$18,539.6	$19,389.4	$20,716.4

Capital Components	March 31, 2024	June 30, 2024	September 30, 2024	December 31, 2024
Common Equity	$9,639.2	$9,703.5	$100,250.8	$9,955.0
Preferred Stock	$0.0	$0.0	$0.0	$0.0
Long-Term Debt	$11,658.4	$11,954.6	$11,571.1	$11,809.2
Total Capitalization	$21,297.6	$21,658.1	$111,821.9	$21,764.2

Capital Components	March 31, 2025	June 30, 2025	September 30, 2025	December 31, 2025
Common Equity	$9,930.6	$9,958.9	$10,289.0	$10,221.3
Preferred Stock	$0.0	$0.0	$0.0	$0.0
Long-Term Debt	$12,405.5	$12,398.0	$12,446.3	$13,039.2
Total Capitalization	$22,336.0	$22,356.9	$22,735.3	$23,260.4

Capital Components	March 31, 2026	June 30, 2026
Common Equity	$10,156.6	$10,223.1
Preferred Stock	$0.0	$0.0
Long-Term Debt	$13,147.0	$12,315.7
Total Capitalization	$23,303.7	$22,538.8

Historical Consolidated Capital Structures for Evergy Missouri Metro, Inc., d/b/a Evergy Missouri Metro

(Dollars in Millions)

Capital Components	December 31, 2020	December 31, 2021	December 31, 2022	December 31, 2023
Common Equity	$2,758.9	$3,022.5	$3,186.3	$3,193.0
Preferred Stock	$0.0	$0.0	$0.0	$0.0
Long-Term Debt	$2,949.4	$2,949.4	$2,547.1	$2,924.4
Total Capitalization	$5,708.3	$5,971.9	$5,733.4	$6,117.4

Capital Components	March 31, 2024	June 30, 2024	September 30, 2024	December 31, 2024
Common Equity	$3,225.7	$3,300.3	$3,408.5	$3,376.4
Preferred Stock	$0.0	$0.0	$0.0	$0.0
Long-Term Debt	$3,217.6	$3,222.5	$2,872.8	$2,873.4
Total Capitalization	$6,443.4	$6,522.7	$6,281.4	$6,249.8

Capital Components	March 31, 2025	June 30, 2025	September 30, 2025	December 31, 2025
Common Equity	$3,363.2	$3,396.9	$3,548.6	$3,456.6
Preferred Stock	$0.0	$0.0	$0.0	$0.0
Long-Term Debt	$2,874.0	$2,874.6	$3,271.2	$3,271.4
Total Capitalization	$6,237.2	$6,271.6	$6,819.8	$6,728.0

Capital Components	March 31, 2026	June 30, 2026
Common Equity	$3,492.7	$3,571.4
Preferred Stock	$0.0	$0.0
Long-Term Debt	$3,272.0	$3,272.0
Total Capitalization	$6,764.7	$6,843.3

Sources:

Form 10-Q, 10-K.

Staff Data Request No. 0107.

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Historical Consolidated Capital Structures for Evergy, Inc.

(Dollars in Millions)

Capital Components	December 31, 2020	December 31, 2021	December 31, 2022	December 31, 2023
Common Equity	48.57%	49.85%	48.91%	46.64%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	51.43%	50.15%	51.09%	53.36%
Total Capitalization	100.00%	100.00%	100.00%	100.00%

Capital Components	March 31, 2024	June 30, 2024	September 30, 2024	December 31, 2024
Common Equity	45.26%	44.80%	89.65%	45.74%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	54.74%	55.20%	10.35%	54.26%
Total Capitalization	100.00%	100.00%	100.00%	100.00%

Capital Components	March 31, 2025	June 30, 2025	September 30, 2025	December 31, 2025
Common Equity	44.46%	44.54%	45.26%	43.94%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	55.54%	55.46%	54.74%	56.06%
Total Capitalization	100.00%	100.00%	100.00%	100.00%

Capital Components	March 31, 2026	June 30, 2026
Common Equity	43.58%	45.36%
Preferred Stock	0.00%	0.00%
Long-Term Debt	56.42%	54.64%
Total Capitalization	100.00%	100.00%

Historical Consolidated Capital Structures for Evergy Missouri Metro, Inc., d/b/a Evergy Missouri Metro

(Dollars in Millions)

Capital Components	December 31, 2020	December 31, 2021	December 31, 2022	December 31, 2023
Common Equity	48.33%	50.61%	55.57%	52.20%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	51.67%	49.39%	44.43%	47.80%
Total Capitalization	100.00%	100.00%	100.00%	100.00%

Capital Components	March 31, 2024	June 30, 2024	September 30, 2024	December 31, 2024
Common Equity	50.06%	50.60%	54.26%	54.02%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	49.94%	49.40%	45.74%	45.98%
Total Capitalization	100.00%	100.00%	100.00%	100.00%

Capital Components	March 31, 2025	June 30, 2025	September 30, 2025	December 31, 2025
Common Equity	53.92%	54.16%	52.03%	51.38%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	46.08%	45.84%	47.97%	48.62%
Total Capitalization	100.00%	100.00%	100.00%	100.00%

Capital Components	March 31, 2026	June 30, 2026
Common Equity	51.63%	52.19%
Preferred Stock	0.00%	0.00%
Long-Term Debt	48.37%	47.81%
Total Capitalization	100.00%	100.00%

Sources:

Form 10-Q, 10-K.

Staff Data Request No. 0107.

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Capital Structure as of June 30, 2026
Evergy, Inc.
(Dollars in Millions)

Capital Component	Amount	Percentage of Capital
Common Stock Equity	$10,223	45.36%
Preferred Stock	$0	0.00%
Long-Term Debt	$12,316	54.64%
Total Capitalization	**$22,539**	**100.00%**

Capital Structure as of June 30, 2026
Evergy Missouri Metro, Inc., d/b/a Evergy Missouri Metro
(Dollars in Millions)

Capital Component	Amount	Percentage of Capital
Common Stock Equity	$3,571	52.19%
Preferred Stock	$0	0.00%
Long-Term Debt	$3,272	47.81%
Total Capitalization	**$6,843**	**100.00%**

Sources:

Form 10-Q, 10-K.

Staff Data Request No. 0107.

SCHEDULE SJW-d6-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Cost of Long-Term Debt as of June 30, 2026

Evergy, Inc.
(In millions)

Total Annual Cost:	$724.9
Total Carrying Value:	$13,542.3
Embedded Cost = Total Annual Cost/Total Carrying Value	5.353%

Evergy Missouri Metro, Inc., d/b/a Evergy Missouri Metro
(In millions)

Total Annual Cost:	$149.8
Total Carrying Value:	$3,299.4
Embedded Cost = Total Annual Cost/Total Carrying Value	4.541%

Note:
Source:
Staff Data Requests No. 0108

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Cost of Preferred Stock as of June 30, 2026

Evergy, Inc.
(In millions)

Total Annual Cost:	N/A
Total Carrying Value:	N/A
Embedded Cost = Total Annual Cost/Total Carrying Value	N/A

Evergy Missouri Metro, Inc., d/b/a Evergy Missouri Metro
(In millions)

Total Annual Cost:	N/A
Total Carrying Value:	N/A
Embedded Cost = Total Annual Cost/Total Carrying Value	N/A

Note:
Source:
Staff Data Requests No. 0108.

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

PROXY GROUP SCREENING DATA AND RESULTS

				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	
		Edison Electric Institute (EEI) U.S. Investor-Owned Electric Utilities	Ticker	Stock Publicly Traded?	Information Provided by Value Line	Information Provided by WSJ	5-Year Financial Data Available	80% of Assets U.S. Regulated?	At Least Investment Grade Credit Rating? (S&P)	At Least Investment Grade Credit Rating? (Moody's)	Long-Term Growth Rates From at Least 2 Sources?	Positive Dividend Growth Rate Since 2020?	At Least 60% of Regulated Income from Electric Utility	At least 50% of Plant from Electric Utility?	Positive Projected Growth Rates?	No Recent or Pending Merger or Acquisitions ?	Comparable Company Met All Criteria?
1		ALLETE, Inc.		No													No
2	1	**Alliant Energy Corporation**	**LNT**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
3	2	**Ameren Corporation**	**AEE**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa1)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
4	3	**American Electric Power Company, Inc.**	**AEP**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
5	4	**Avista Corporation**	**AVA**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
6		Berkshire Hathaway Energy		No													No
7		Black Hills Corporation	BKH	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No	No			No
8		CenterPoint Energy, Inc.	CNP	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	No					No
9		Cleco Corporation		No													No
10	5	**CMS Energy Corporation**	**CMS**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (BBB+)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
11		Consolidated Edison, Inc.	ED	Yes	Yes	Yes	Yes	Yes	Yes (A-)	Yes (Baa1)	Yes	Yes	Yes	No			No
12		Dominion Resources, Inc.	D	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	No					No
13		DPL Inc.		No													No
14	6	**DTE Energy Company**	**DTE**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
15	7	**Duke Energy Corporation**	**DUK**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
16		Edison International	EIX	Yes	Yes	Yes	Yes	Yes	Yes (BBB-)	Yes (Baa2)	Yes	Yes	Yes	No			No
17	8	**Entergy Corporation**	**ETR**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
18		Evergy Inc.	EVRG	Yes	Yes	Yes	No	Yes	Yes (BBB+)	Yes (Baa2)							No
19		Eversource Energy	ES	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	No	No
20		Exelon Corporation	EXC	Yes	Yes	Yes	Yes	Yes	Yes (A-)	Yes (Baa2)	Yes	No					No
21		FirstEnergy Corp.	FE	Yes	Yes	Yes	No	Yes	Yes (BBB+)	Yes (Baa3)							No
22		Hawaiian Electric Industries, Inc.	HE	Yes	Yes	Yes	Yes	Yes	No (B+)	No (Ba3)							No
23	9	**IDACORP, Inc.**	**IDA**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
24		IPALCO Enterprise Inc.		No													No
25		MDU Resources Group, Inc.	MDU	Yes	Yes	Yes	Yes	Yes	Yes (BBB)	Yes (Baa2)	Yes	Yes	No	No			No
26		MGE Energy, Inc.	MGEE	Yes	Yes	Yes	Yes	Yes	N/A	N/A							No
27		NextEra Energy, Inc.	NEE	Yes	Yes	Yes	Yes	No									No
28		NiSource Inc.	NI	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No	No			No
29		Northwestern Corporation	NWE	Yes	Yes	Yes	Yes	Yes	Yes (BBB)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	No	No
30	10	**OGE Energy Corp.**	**OGE**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa1)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
31		Otter Tail Corporation	OTTR	Yes	Yes	Yes	Yes	No	Yes (BBB)	Yes (Baa2)	Yes	Yes	No				No
32		PG&E Corporation	PCG	Yes	Yes	Yes	Yes	Yes	No (BB)	No (Ba3)							No
33	11	**Pinnacle West Capital Corporation**	**PNW**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa2)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
34	12	**Portland General Electric Company**	**POR**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (A3)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
35		PPL Corporation	PPL	Yes	Yes	Yes	Yes	Yes	Yes (A-)	Yes (Baa1)	Yes	No					No
36		Public Service Enterprise Group Incorporated	PEG	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No				No
37		Puget Energy, Inc.		No													No
38		Sempra Energy	SRE	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No				No
39	13	**The Southern Company**	**SO**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (A-)**	**Yes (Baa1)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
40		TXNM Energy Inc.	TXNM	Yes	Yes	Yes	Yes	Yes	Yes (BBB)	Yes (Baa3)	Yes	Yes	Yes	Yes	Yes	No	No
41		Unitil Corporation	UTL	Yes	Yes	Yes	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No				No
42		WEC Energy Group, Inc.	WEC	Yes	Yes	Yes	Yes	Yes	Yes (A-)	Yes (Baa1)	Yes	Yes	No				No
43	14	**Xcel Energy Inc.**	**XEL**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes (BBB+)**	**Yes (Baa1)**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Note:

[1] Source: Edison Electric Institute, https://www.eei.org/issues-and-policy/finance-and-tax#financialreview.
[2] Source: Value Line, https://valueline.com/.
[3] Source: Wall Street Journal, Market Data, https://www.wsj.com/market-data?msockid=0f356b4670d06c833ece78c071bf6dd9.
[4] Source: Value Line, https://valueline.com/.
[5] Source: Edison Electric Institute, https://www.eei.org/issues-and-policy/finance-and-tax#financialreview.
[6] Source: S&P Capital IQ Pro.
[7] Source: S&P Capital IQ Pro.
[8] Source: Value Line Investment Survey, Yahoo! Finance, and Zacks.
[9] Source: Value Line Investment Survey, Yahoo! Finance, and Zacks.
[10] Source: SEC Form 10-K Filings.
[11] Source: SEC Form 10-K Filings.
[12] Source: Value Line, https://valueline.com/.
[13] Source: S&P Capital IQ Pro.

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

PROXY GROUP LIST

	Electric Utility Companies	Ticker
1	Alliant Energy Corporation	LNT
2	Ameren Corporation	AEE
3	American Electric Power Company, Inc.	AEP
4	Avista Corporation	AVA
5	CMS Energy Corporation	CMS
6	DTE Energy Company	DTE
7	Duke Energy Corporation	DUK
8	Entergy Corporation	ETR
9	IDACORP, Inc.	IDA
10	OGE Energy Corp.	OGE
11	Pinnacle West Capital Corporation	PNW
12	Portland General Electric Company	POR
13	The Southern Company	SO
14	Xcel Energy Inc.	XEL

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Growth Rate Estimates
Earning per Share (EPS), Based on Dividend per Share (DPS) and Book Value per Share
for the Comparable Electric Utility Companies

			[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
	2025 Q4		Past 10-Years			Past 5-Year			Projected			Average			Projective	GDP	DCF
	Natural Gas Utility Companies	Ticker	EPS	DPS	BVPS	EPS	DPS	BVPS	EPS	DPS	BVPS	EPS	DPS	BVPS	Growth	Growth	Growth
1	Alliant Energy Corporation	LNT	5.50%	6.50%	6.00%	4.50%	6.00%	5.50%	6.00%	6.00%	4.00%	5.33%	6.17%	5.17%	5.33%	3.80%	4.11%
2	Ameren Corporation	AEE	4.00%	3.50%	2.00%	8.00%	5.00%	5.50%	7.50%	5.00%	3.00%	6.50%	4.50%	3.50%	5.17%	3.80%	4.07%
3	American Electric Power Company, Inc.	AEP	5.00%	5.00%	3.50%	4.00%	5.00%	3.50%	5.50%	3.50%	3.50%	4.83%	4.50%	3.50%	4.17%	3.80%	3.87%
4	Avista Corporation	AVA	2.00%	4.00%	3.00%	-0.50%	4.00%	2.50%	5.00%	4.00%	1.50%	2.17%	4.00%	2.33%	3.50%	3.80%	3.74%
5	CMS Energy Corporation	CMS	6.50%	6.50%	7.00%	6.00%	6.50%	8.50%	8.50%	7.50%	5.00%	7.00%	6.83%	6.83%	7.00%	3.80%	4.44%
6	DTE Energy Company	DTE	4.50%	4.50%	2.00%	1.50%	1.50%	-1.50%	6.00%	5.50%	4.50%	4.00%	3.83%	1.67%	5.33%	3.80%	4.11%
7	Duke Energy Corporation	DUK	4.00%	2.50%	1.00%	3.50%	2.00%	1.00%	6.50%	4.00%	4.00%	4.67%	2.83%	2.00%	4.83%	3.80%	4.01%
8	Entergy Corporation	ETR	3.00%	3.50%	3.00%	3.00%	4.50%	7.00%	11.50%	7.00%	5.00%	5.83%	5.00%	5.00%	7.83%	3.80%	4.61%
9	IDACORP, Inc.	IDA	3.50%	6.50%	4.50%	3.00%	5.00%	4.00%	5.00%	4.00%	3.50%	3.83%	5.17%	4.00%	4.17%	3.80%	3.87%
10	OGE Energy Corp.	OGE	1.50%	6.00%	3.50%	N/A	2.00%	3.00%	6.00%	1.50%	4.50%	3.75%	3.17%	3.67%	4.00%	3.80%	3.84%
11	Pinnacle West Capital Corporation	PNW	3.00%	4.50%	3.50%	0.50%	3.00%	3.00%	6.00%	3.50%	5.00%	3.17%	3.67%	3.83%	4.83%	3.80%	4.01%
12	Portland General Electric Company	POR	3.50%	5.50%	3.50%	2.00%	5.00%	3.50%	6.50%	5.50%	5.00%	4.00%	5.33%	4.00%	5.67%	3.80%	4.17%
13	The Southern Company	SO	3.00%	3.50%	3.00%	3.00%	3.50%	2.50%	7.00%	3.00%	2.00%	4.33%	3.33%	2.50%	4.00%	3.80%	3.84%
14	Xcel Energy Inc.	XEL	6.00%	6.00%	5.50%	6.00%	6.00%	6.50%	8.00%	6.50%	7.50%	6.67%	6.17%	6.50%	7.33%	3.80%	4.51%
	Average		3.93%	4.86%	3.64%	3.42%	4.21%	3.89%	6.79%	4.75%	4.14%	4.72%	4.61%	3.89%	5.23%	3.80%	4.09%

Note:
[1] Source: The Value Line Investment Survey
[2] Source: The Value Line Investment Survey
[3] Source: The Value Line Investment Survey
[4] Source: The Value Line Investment Survey
[5] Source: The Value Line Investment Survey
[6] Source: The Value Line Investment Survey
[7] Source: The Value Line Investment Survey
[8] Source: The Value Line Investment Survey
[9] Source: The Value Line Investment Survey
[10] =([1]+[4]+[7])/3
[11] =([2]+[5]+[8])/3
[12] =([3]+[6]+[9])/3
[13] =([7]+[8]+[9])/3
[14] Source: Congress Budget Office (CBO), Budget Economic Outlook
[15] = (4 x [13] + [14]) / 5

SCHEDULE SJW-d10-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Average High / Low Stock Price
for the Comparable Electric Utility Companies

			[1]	[2]	[3]	[4]	[5]	[6]	[7]
	2025 Q4		April 2026		May 2026		June 2026		(4/01/26 - 6/30/26)
	Company Name	Ticker	Max High Stock Price	Min Low Stock Price	Max High Stock Price	Min Low Stock Price	Max High Stock Price	Min Low Stock Price	Average High/Low Stock Price
1	Alliant Energy Corporation	LNT	73.01	71.84	73.35	72.11	74.05	72.79	72.86
2	Ameren Corporation	AEE	112.68	110.71	110.77	108.88	111.01	108.86	110.48
3	American Electric Power Company, In	AEP	135.20	133.02	131.74	129.44	131.54	129.11	131.67
4	Avista Corporation	AVA	41.57	40.81	41.35	40.66	41.77	40.87	41.17
5	CMS Energy Corporation	CMS	74.27	73.17	74.50	73.00	75.68	74.18	74.13
6	DTE Energy Company	DTE	148.60	146.22	144.88	142.40	148.60	146.06	146.12
7	Duke Energy Corporation	DUK	130.22	128.18	125.80	124.03	125.51	123.37	126.19
8	Entergy Corporation	ETR	115.56	113.37	113.14	111.44	112.51	110.32	112.72
9	IDACORP, Inc.	IDA	147.24	144.44	144.26	141.87	144.21	141.58	143.93
10	OGE Energy Corp.	OGE	48.60	47.74	48.06	47.37	48.12	47.27	47.86
11	Pinnacle West Capital Corporation	PNW	103.52	101.84	101.81	100.14	104.15	102.27	102.29
12	Portland General Electric Company	POR	52.74	51.86	49.58	48.68	51.07	50.14	50.68
13	The Southern Company	SO	95.92	94.50	94.54	93.14	94.42	92.69	94.20
14	Xcel Energy Inc.	XEL	80.97	79.36	80.96	79.53	79.95	78.30	79.85

Note:

[1] Source: Wall Street Journal, https://www.wsj.com/market-data

[2] Source: Wall Street Journal, https://www.wsj.com/market-data

[3] Source: Wall Street Journal, https://www.wsj.com/market-data

[4] Source: Wall Street Journal, https://www.wsj.com/market-data

[5] Source: Wall Street Journal, https://www.wsj.com/market-data

[6] Source: Wall Street Journal, https://www.wsj.com/market-data

[7] = ([1]+[2]+[3]+[4]+[5]+[6]) / 6

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Discounted Cash Flow (DCF) Costs of Common Equity (COE) Estimates
Based on Dividend per Share, Earning per Share, Stock Price, and Growth Rate
for the Comparable Electric Utility Companies

	2025 Q4 DCF COE estimate		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
	Electric Utility Companies	Ticker	2025 Dividend per Share	Stock Price	Dividend Yield	Expected Dividend Yield	Projected Growth	Projected GDP Growth	Sustainable Growth Rate	COE
1	Alliant Energy Corporation	LNT	2.03	72.86	2.79%	2.86%	5.33%	3.80%	5.03%	7.88%
2	Ameren Corporation	AEE	2.84	110.48	2.57%	2.63%	5.17%	3.80%	4.89%	7.53%
3	American Electric Power Company, Inc	AEP	3.74	131.67	2.84%	2.90%	4.17%	3.80%	4.09%	6.99%
4	Avista Corporation	AVA	1.96	41.17	4.76%	4.85%	3.50%	3.80%	3.56%	8.41%
5	CMS Energy Corporation	CMS	2.17	74.13	2.93%	3.02%	7.00%	3.80%	6.36%	9.38%
6	DTE Energy Company	DTE	4.44	146.12	3.04%	3.11%	5.33%	3.80%	5.03%	8.14%
7	Duke Energy Corporation	DUK	4.22	126.19	3.34%	3.42%	4.83%	3.80%	4.63%	8.05%
8	Entergy Corporation	ETR	2.44	112.72	2.16%	2.24%	7.83%	3.80%	7.03%	9.27%
9	IDACORP, Inc.	IDA	3.48	143.93	2.42%	2.47%	4.17%	3.80%	4.09%	6.56%
10	OGE Energy Corp.	OGE	1.69	47.86	3.53%	3.60%	4.00%	3.80%	3.96%	7.56%
11	Pinnacle West Capital Corporation	PNW	3.61	102.29	3.53%	3.61%	4.83%	3.80%	4.63%	8.24%
12	Portland General Electric Company	POR	2.08	50.68	4.10%	4.21%	5.67%	3.80%	5.29%	9.51%
13	The Southern Company	SO	2.94	94.20	3.12%	3.18%	4.00%	3.80%	3.96%	7.14%
14	Xcel Energy Inc.	XEL	2.28	79.85	2.86%	2.95%	7.33%	3.80%	6.63%	9.58%
	Average		2.85	95.30	3.14%	3.22%	5.23%	3.80%	4.94%	8.16%
									DCF Lower Bound	7.07%
									DCF Upper Bound	9.44%
									DCF COE	8.26%

Note:

[1] Source: The Value Line Investment Survey: Ratings & Reports.

[2] Source: The Wall Street Journal; Monthly Average.

[3] = [1] / [2]

[4] = [3] x (1 + .5 x [7])

[5] Source: [12] of Growth Rate SJW-11

[6] Source: Congress Budget Office (CBO), Budget Economic Outlook

[7] = (4 x [5] + [6]) / 5

[8] = [4] + [7]

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Capital Asset Pricing Model (CAPM) Costs of Common Equity (COE) Estimates
Based on Historical Return Differences Between Common Stocks and Long-Term U.S. Treasuries
for the Comparable Electric Utility Companies

	2025 Q4 CAPM Estimate		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Market Risk Premium				CAPM Cost of Common Equity			
					Kroll, LLC	NYU Stern	Damodaran Historical		Kroll, LLC	NYU Stern	Damodaran Historical	
	Electric Utility Companies	Ticker	Risk-Free Rate	Beta	Duff & Phelps Recommended	Adjusted Implied ERP	Geometric Mean MRP	Arithmetic Mean MRP	Recommended	Adjusted Implied ERP	Geometric Mean MRP	Arithmetic Mean MRP
1	Alliant Energy Corporation	LNT	4.96%	0.80	5.00%	4.28%	5.48%	7.03%	8.96%	8.39%	9.35%	10.59%
2	Ameren Corporation	AEE	4.96%	0.75	5.00%	4.28%	5.48%	7.03%	8.71%	8.17%	9.08%	10.24%
3	American Electric Power Company, Inc	AEP	4.96%	0.70	5.00%	4.28%	5.48%	7.03%	8.46%	7.96%	8.80%	9.89%
4	Avista Corporation	AVA	4.96%	0.70	5.00%	4.28%	5.48%	7.03%	8.46%	7.96%	8.80%	9.89%
5	CMS Energy Corporation	CMS	4.96%	0.70	5.00%	4.28%	5.48%	7.03%	8.46%	7.96%	8.80%	9.89%
6	DTE Energy Company	DTE	4.96%	0.75	5.00%	4.28%	5.48%	7.03%	8.71%	8.17%	9.08%	10.24%
7	Duke Energy Corporation	DUK	4.96%	0.65	5.00%	4.28%	5.48%	7.03%	8.21%	7.75%	8.53%	9.53%
8	Entergy Corporation	ETR	4.96%	0.75	5.00%	4.28%	5.48%	7.03%	8.71%	8.17%	9.08%	10.24%
9	IDACORP, Inc.	IDA	4.96%	0.65	5.00%	4.28%	5.48%	7.03%	8.21%	7.75%	8.53%	9.53%
10	OGE Energy Corp.	OGE	4.96%	0.85	5.00%	4.28%	5.48%	7.03%	9.21%	8.60%	9.62%	10.94%
11	Pinnacle West Capital Corporation	PNW	4.96%	0.75	5.00%	4.28%	5.48%	7.03%	8.71%	8.17%	9.08%	10.24%
12	Portland General Electric Company	POR	4.96%	0.75	5.00%	4.28%	5.48%	7.03%	8.71%	8.17%	9.08%	10.24%
13	The Southern Company	SO	4.96%	0.65	5.00%	4.28%	5.48%	7.03%	8.21%	7.75%	8.53%	9.53%
14	Xcel Energy Inc.	XEL	4.96%	0.70	5.00%	4.28%	5.48%	7.03%	8.46%	7.96%	8.80%	9.89%
	Average		4.96%	0.73	5.00%	4.28%	5.48%	7.03%	8.59%	8.07%	8.94%	10.06%
										CAPM Lower Bound		7.75%
										CAPM Upper Bound		10.41%
										CAPM COE		9.08%

Note:

[1] Source: 3-Month Average of 30-Year Treasury Bond

[2] Source: Value Line, Investment Survey.

[3] Source: Kroll, LLC, Kroll Cost of Capital Inputs at Year-End 2025.

[4] Source: Implied Equity Risk Premiums, Damodaran Online, Stern School of Business, NYU.

[5] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.

[6] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.

[7] = [1] + [2] x [3]

[8] = [1] + [2] x [4]

[9] = [1] + [2] x [5]

[10] = [1] + [2] x [16]

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Bond Yield Plus Risk Premium (BYPRP) Return on Equity (ROE) Estimates
Risk Premium Calculated by Authorized ROE and Utility Bond Yields

	[1]	[2]	[3]	[4]	[5]	[6]
	Bond Yield (%)		Risk Premium (%)		Estimated ROE (%)	
Month-Year	A	Baa	A	Baa	A	Baa
Jan-26	5.68	5.86	4.05	3.87	9.73	9.73
Feb-26	5.61	5.78	4.12	3.94	9.73	9.72
Mar-26	5.82	5.99	3.92	3.75	9.74	9.74
Apr-26	5.81	5.99	3.93	3.75	9.74	9.74
May-26	5.88	6.06	3.87	3.69	9.75	9.75
Jun-26	5.79	5.96	3.95	3.78	9.74	9.74

BYPRP Lower Bound	9.72
BYPRP Upper Bound	9.75
BYPRP ROE	9.73

Notes:

[1] Mergent Bond Record, Moody's Utility Bonds Yields

[2] Mergent Bond Record, Moody's Utility Bonds Yields

[3] = 9.33 - 0.9299 x [1]

[4] = 9.23 - 0.9145 x [2]

[5] = [1] + [3]

[6] = [2] + [4]

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Risk Premium Estimation Using Regression Analysis
Plus Risk Premium (BYPRP) Return on Equity (ROE) Estimates
Risk Premium as Difference Between Authorized ROE and Utility Bond Yield

SUMMARY OUTPUT (Baa)

Regression Statistics	
Multiple R	0.9699
R Square	0.9406
Adjusted R Square	0.9402
Standard Error	0.2109
Observations	144

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	100.0785	100.0785	2249.1999	0.0000
Residual	142	6.3183	0.0445		
Total	143	106.3968			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	9.2304	0.0938	98.4201	0.0000	9.0450	9.4158	9.0450	9.4158
X Variable 1	-0.9146	0.0193	-47.4257	0.0000	-0.9527	-0.8765	-0.9527	-0.8765

SUMMARY OUTPUT (A)

Regression Statistics	
Multiple R	0.9701
R Square	0.9411
Adjusted R Square	0.9406
Standard Error	0.2155
Observations	144

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	105.2813	105.2813	2267.2102	0.0000
Residual	142	6.5940	0.0464		
Total	143	111.8753			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	9.3342	0.0867	107.6377	0.0000	9.1628	9.5057	9.1628	9.5057
X Variable 1	-0.9300	0.0195	-47.6152	0.0000	-0.9686	-0.8914	-0.9686	-0.8914

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

RETURN ON EQUITY (as of June 30, 2026)

		COE Analysis			
		Lower	Mean	Upper	
COE Estimation	DCF	7.07%	8.26%	9.44%	A
	CAPM	7.75%	9.08%	10.41%	B
		7.07%	8.67%	10.41%	C

		ROE Analysis			
		Lower	Estimate	Upper	
ROE Estimation	BYPRP	9.72%	9.73%	9.75%	D
ROE Recommandation			9.73%		

Note:

A Schedule SJW-d12

B Schedule SJW-d13

C = ([A] + [B]) / 2

D Schedule SJW-d14-1

SCHEDULE SJW-d15-Updated

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

RATE OF RETURN

Capital Component	Percentage of Capital [1]	Embedded Cost	Allowed Rate of Return Common Equity Return of: Lower **9.48%**	ROE [4] **9.73%**	Upper **9.98%**
Common Stock Equity	52.19%	-	4.95%	5.08%	5.21%
Preferred Stock	0.00%	N/A [2]	0.00%	0.00%	0.00%
Long-Term Debt	47.81%	4.54% [3]	2.17%	2.17%	2.17%
Total	**100.0%**		**7.12%**	**7.25%**	**7.38%**

Note:
[1] Schedule SJW-d6
[2] Schedule SJW-d7-2
[3] Schedule SJW-d7-1
[4] Schedule SJW-d15

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

Authorized ROE and Equity Ratio of the U.S Utility by Sector
2010-2026

	Electric								
	Fully Litigated			Settled			Total		
Year	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)
2010	10.35	47.68	27	10.39	49.49	34	10.37	48.63	61
2011	10.39	48.17	26	10.12	48.01	16	10.29	48.11	42
2012	10.28	49.98	29	10.06	51.40	29	10.17	50.62	58
2013	9.85	48.25	17	10.12	49.70	32	10.03	49.14	49
2014	10.05	50.14	21	9.73	50.26	17	9.91	50.19	38
2015	9.66	48.98	16	10.04	49.28	15	9.84	49.12	31
2016	9.74	49.75	25	9.80	47.51	17	9.77	48.85	42
2017	9.73	49.23	24	9.75	49.30	29	9.74	49.26	53
2018	9.63	48.70	22	9.57	49.76	26	9.60	49.27	48
2019	9.58	51.07	27	9.76	49.66	20	9.66	50.62	47
2020	9.43	49.87	32	9.46	50.45	23	9.44	50.12	55
2021	9.23	50.71	30	9.57	49.79	25	9.38	50.31	55
2022	9.48	51.25	32	9.62	50.32	21	9.54	50.93	53
2023	9.64	52.10	39	9.52	50.57	24	9.60	51.59	63
2024	9.77	50.64	68	9.86	50.18	22	9.79	50.48	90
2025	9.86	49.39	56	9.78	50.09	30	9.84	49.74	86
2026	9.88	47.48	10	9.80	48.97	16	9.83	48.60	26

	Vertically Integrated Electric								
	Fully Litigated			Settled			Total		
Year	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)
2010	10.32	47.37	16	10.49	49.63	25	10.42	48.65	41
2011	10.46	48.51	17	10.14	48.47	11	10.33	48.50	28
2012	10.10	49.69	16	10.10	52.34	23	10.10	51.09	39
2013	9.91	46.46	9	9.96	50.90	22	9.95	49.42	31
2014	10.03	51.39	9	9.86	51.03	10	9.94	51.24	19
2015	9.74	49.03	13	9.78	52.00	4	9.75	49.59	17
2016	9.62	49.47	9	9.88	47.21	11	9.77	48.28	20
2017	9.69	47.89	8	9.85	50.15	20	9.80	49.40	28
2018	9.62	46.44	9	9.72	49.63	14	9.68	48.38	23
2019	9.74	50.83	10	9.74	49.80	15	9.74	50.32	25
2020	9.52	48.71	15	9.57	51.93	12	9.55	50.13	27
2021	9.24	49.03	8	9.67	49.71	17	9.53	49.45	25
2022	9.82	50.85	12	9.68	50.94	13	9.75	50.89	25
2023	9.96	52.93	19	9.61	51.57	17	9.80	52.39	36
2024	9.84	49.71	17	9.91	50.24	18	9.88	49.97	35
2025	9.83	47.05	14	9.89	52.51	19	9.87	50.22	33
2026	9.71	47.48	5	9.92	49.56	10	9.85	48.82	15

Note:

Source: S&P Global Market Intelligence, Retrieved in August 20, 2026

SCHEDULE SJW-d17-Updated

SURREBUTTAL / TRUE-UP TESTIMONY

FOR

Evergy Metro, Inc.,
d/b/a Evergy Missouri Metro

CASE NO. ER-2026-0143

APPENDIX 2

SCHEDULES

BY

Seoung Joun Won, PhD

Financial Analysis

MISSOURI PUBLIC SERVICE COMMISSION

September 10, 2026

Evergy Metro, Inc,
d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

TRUE-UP UPDATED CAPITAL STRUCTURE
Evergy Missouri Metro Regulated Electric Service
(True-Up as of June 30, 2026)

		Balance	Weight
Capital Structure:			
	Common Stock Equity	$ 3,571,363,839	52.19%
	Preferred Equity	-	0.00%
	Long-term Debt	$ 3,271,974,333	47.81%
	Total Capitalization	$ 6,843,338,172	100.00%

Note:

Staff's Data Request No. 0107

SEC 10-K

Evergy Metro, Inc,
d/b/a Evergy Missouri Metro
Case No. ER-2026-0143

TRUE-UP UPDATED ALLOWED RATE OF RETURN
(True-Up as of June 30, 2026)

Evergy Metro			Allowed Rate of Return Common Equity Return of:		
Capital Component	Percentage of Capital	Embedded Cost	Lower 9.48%	ROE 9.73%	Upper 9.98%
Common Stock Equity	52.19% [1]	-	4.95%	5.08%	5.21%
Preferred Stock	0.00% [1]	-	0.00%	0.00%	0.00%
Long-Term Debt	47.81% [1]	4.54% [2]	2.17%	2.17%	2.17%
Total	100.00%		7.12%	7.25%	7.38%

Note:
1 Staff's Data Request No. 0107
2 Staff's Data Request No. 0108