Exhibit No. 269

Staff – Exhibit 269
Seoung Joun Won, PhD
Surrebuttal & True-Up Direct
File No. ER-2024-0189

Exhibit No.:	
Issue(s):	*Rate of Return*
Witness:	*Seoung Joun Won, PhD*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Surrebuttal / True-Up Direct Testimony*
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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 MISSOURI WEST, INC.,

d/b/a Evergy Missouri West

CASE NO. ER-2024-0189

Jefferson City, Missouri
September 10, 2024

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CASE NO. ER-2024-0189

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 the Commission's 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 27, 2024 and Rebuttal Testimony on August 6, 2024, in this proceeding?

A. Yes, I am.

I. EXECUTIVE SUMMARY

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. Ms. Bulkley sponsored return on equity ("ROE"), cost of debt, capital structure and overall rate of return ("ROR") testimony on behalf of Evergy Missouri West, Inc., d/b/a Evergy Missouri West ("Evergy Missouri West" or "EMW"), subsidiaries of Evergy, Inc. ("Evergy Inc." or "Evergy").

Mr. Murray sponsored ROE, cost of debt, capital structure and ROR testimony on behalf of the Missouri Office of the Public Counsel ("OPC"). Within this testimony, Staff will address issues related to ROE, cost of debt, and capital structure, which pertain to a just and reasonable ROR to be applied to EMW's electric utility rate base for ratemaking purposes in this proceeding.

The purpose of my true-up direct testimony is to present Staff's true-up recommendations for EMW's ratemaking capital structure and cost of debt in this proceeding. Staff's analyses and conclusions are supported by the data presented in Staff's surrebuttal / true-up direct schedules attached.

Q. What is the overview of your response to the testimonies of Ms. Bulkley?

A. Staff's surrebuttal will focus on the rebuttal testimonies of Ms. Bulkley regarding ROE and capital structure. Ms. Bulkley did not change her conclusions or recommendations in her direct testimony.[1] Without any correction of her inaccurate methods, Ms. Bulkley continues to propose an ROE of 10.50% within a range of 10.25% to 11.25% and also continues to support EMW's projected June 30, 2024, standalone capital structure consisting of 52.04% common equity and 47.96% long-term debt. However, as of June 30, 2024, the standalone capital structure of EMW's regulated utility business unit consisted of 49.88% common equity and 50.12% long-term debt.[2] Ms. Bulkley did not comment on her ROR and cost of debt recommendations in her rebuttal testimony.

For the authorized ROE issue, in her rebuttal testimony, Ms. Bulkley made incorrect claims about Staff's estimation methodology based on her misunderstandings and erroneous

[1] Page 5, lines 11-12, Bulkley's Rebuttal Testimony.
[2] Staff's Data Request No. 0105.5.

assumptions. In this testimony, Staff will recount the reasons why Ms. Bulkley's unreasonable cost of equity ("COE") estimates are still incorrect. Although there are many issues with Ms. Bulkley's rebuttal testimony, Staff will only address major issues related to Ms. Bulkley's disagreement with Staff's COE estimation methods.

Q. What is the overview of your response to the testimony of Mr. Murray?

A. Mr. Murray did not revise any of his recommendations in his rebuttal testimony. Mr. Murray recommends an ROE of 9.50% within a range of 9.25% to 9.75% and an ROR of 6.60% based on his recommended capital structure of 47.20% common equity and 52.80% long-term debt and applying EMW's embedded cost of long-term debt of 4.01% at December 31, 2023.[3] Staff will respond to Mr. Murray's argument about Staff's recommended ROE and capital structure.

Q. Please summarize the results of the ROR analysis based on Staff's true-up recommendations for EMW's ratemaking capital structure and cost of debt in this proceeding.

A. Staff recommends that the Commission use an actual capital structure as of true-up period, June 30, 2024, of 49.88% common equity and 50.12% long-term debt for the purposes of setting EMW's ROR in this proceeding.[4] Consistent with Staff's capital structure recommendation and an ROE of 9.74% within the range of 9.49% to 9.99%, Staff also recommends at this time that the Commission use EMW's embedded cost of debt value of 4.34% as of June 30, 2024,[5] resulting in the overall midpoint ROR of 7.03%, taken from the calculated range of 6.91% to 7.16%.[6]

[3] Schedule DM-D-8, Murray's Direct Testimony.
[4] Staff's Data Request No. 0105.5.
[5] Staff's Data Request No. 0106.2.
[6] Schedule SJW-td1, Won's Surrebuttal / True-up Direct Testimony.

II. RESPONSE TO TESTIMONY OF EMW'S WITNESS

Q. Please summarize Ms. Bulkley's rebuttal testimony.

A. Ms. Bulkley updated her COE analyses based on market data through June 30, 2024, and maintained her recommended 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 Risk Premium ("BYRP") analysis from her direct testimony.[7] Additionally, Ms. Bulkley discusses the changes in capital market conditions since her direct testimony and their effect on the COE.[8] Ms. Bulkley also responded to Staff's and Mr. Murray's direct testimony regarding the ROE and capital structure issues.

Q. What are Staff's key issues with Ms. Bulkley's rebuttal testimony?

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

1. Ms. Bulkley confused Staff's analysis method for recommending authorized ROE in this proceeding with the comparative COE analysis that Staff used in past rate proceedings. Based on her misunderstanding of Staff's analysis, Ms. Bulkley proposed logical fallacies such as that Staff must use the exact same methods and input values it used in The Empire District Electric Company's rate proceeding, Case No. ER-2019-0374, ("2019 Empire Case").[9] At the beginning of each rate proceeding, Staff conducts market and corporate analyses and selects the most appropriate method to recommend an authorized ROE based on the characteristics of the available input data. Ms. Bulkley's arguments ignore the most basic principle of Staff's analysis;

[7] Page 8, Figure 2, Bulkley's Rebuttal Testimony.
[8] Page 3, lines 22-25, Bulkley's Rebuttal Testimony.
[9] Pages 22-23, Bulkley's Rebuttal Testimony.

2. Ms. Bulkley did not correctly apply basic financial concepts. For example, because of her erroneous assumption that the market-data-derived COE is equal to the authorized ROE, Ms. Bulkley mischaracterized the relationship between Staff's COE estimation and its authorized ROE recommendation. An authorized ROE cannot be mechanically determined by any COE analysis, such as DCF or CAPM.[10] Instead, the results of such COE analyses are used, not relied upon exclusively, to recommend a just and reasonable authorized ROE.[11] Although Staff clarified the difference between COE and authorized ROE in its direct testimony,[12] Ms. Bulkley made many incorrect arguments based on her confusion of the two concepts. Due to her misunderstanding of this basic regulatory principle, Ms. Bulkley built a baseless argument against Staff's analysis; and,

3. Ms. Bulkley did not correctly characterize Staff's methodology, distorting the facts by mentioning only part of the truth rather than the whole truth, and without providing proper context. For example, referencing Paragraph 131 in *Entergy Arkansas, et al.*, Opinion No. 575, 175 FERC ¶ 61,136 (2021), Ms. Bulkley stated, '[t]he FERC has consistently relied on projected earnings per share ("EPS") growth rates as the short-term growth rate, not on historical growth rates or DPS or BVPS growth rates, as Dr. Won has done.'"[13] The truth is that FERC neither mentioned projected EPS nor historical growth rates, DPS, or BVPS growth rates. Staff will provide the exact quote from Paragraph 131 of FERC's Opinion No. 575, along with a detailed explanation and context, later in this testimony.

[10] Page 28, Amended Report and Order, Case No. GR-2017-0215.
[11] The end-result principle: The validity of an order of the Federal Power Commission fixing rates under the Natural Gas Act is to be determined on judicial review by whether the impact or total effect of the order is just and reasonable, rather than by the method of computing the rate base. P. 320 U. S. 602. FPC v. Hope Nat. Gas Co., 320 U.S. 591 (1944).
[12] Page 3, Footnote No. 2, Won's Direct Testimony.
[13] Page 24, lines 10-12, and Footnote No. 38, Bulkley's Rebuttal Testimony.

Staff identified additional issues in Ms. Bulkley's rebuttal testimony. However, due to the numerous mertiless arguments in Ms. Bulkley's rebuttal testimony, Staff cannot address everything in this testimony. Instead, Staff will explain some of the major problems in detail and clarify why Ms. Bulkley's assertions are unfounded in the sections below.

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

A. Staff is responding to the rebuttal testimonies of Ms. Bulkley. The areas in which Staff addresses issues of Ms. Bulkley's rebuttal testimony include:

- Capital Structure,
- COE and Authorized ROE,
- Comparable Return Standard,
- Bulkley's Updated COE Analysis,
- Updated Capital Market Conditions,
- DCF and Growth Rates,
- CAPM and Market Risk Premium, and
- Staff's Bond Yield Plus Risk Premium ("BYPRP") vs BYRP.

Staff will discuss each in turn, below.

1. Capital Structure

Q. What capital structure did Ms. Bulkley support for EMW in this proceeding?

A. Ms. Bulkley continued to support the projected EMW standalone capital structure proposed by Kirkland B. Andrews in his direct testimony.[14] Mr. Andrews proposed a projected capital structure as of June 30, 2024, consisting of 52.04% common equity and 47.96% long-term debt for EMW.[15]

[14] Page 5, lines 11-12, Bulkley's Rebuttal Testimony, and Page 3, lines 4-7. Bulkley's Direct Testimony.
[15] Page 4, lines 9-10, and Table 1, Andrew's Direct Testimony.

Q. Does Staff have concerns with the capital structure proposed by EMW's witness?

A. Yes. EMW's projected capital structure as of June 30, 2024 (filed February 2, 2024), is not the same as the actual capital structure as of June 30, 2024, for EMW (49.88% common equity and 50.12% long-term debt).[16] There is no reason for EMW to recommend an unrealized projected capital structure instead of an actual capital structure for the purpose of ratemaking without sensible justification.

Q. Do you agree with Ms. Bulkley's statement, "Specifically, Dr. Won concludes that the capital structure of the KCP&L Greater Missouri Operations Company ("GMO") business unit of Evergy West is the appropriate capital structure to be used for ratemaking purposes, and that the average actual equity ratio of the GMO portion of Evergy West has been 54.99 percent since 2020. Therefore, these conclusions support the Company's proposed equity ratio of 52.04 percent."?[17]

A. No, I do not. Although Staff considers the capital structure of the GMO business unit of EMW to be appropriate for ratemaking purposes, there is no reason to use the average of historical equity ratios of the GMO portion of EMW. Considering the actual rate impact of this proceeding, the most recent actual capital structure is better suited for ratemaking purposes.

The most recent actual capital structure is generally preferred over the average historical capital structure for ratemaking purposes for several reasons. First, the most recent actual capital structure provides a snapshot of the utility's current financial position. It reflects the company's current mix of debt and equity, which is crucial for determining an accurate cost of

[16] Staff's Data Request No. 0105.5.
[17] Page 65, lines 6-11, Bulkley's Rebuttal Testimony.

capital. This ensures that the rates charged to customers are based on the actual financial conditions the utility is operating under, rather than outdated information. Second, historical averages can include periods when the company's financial structure was significantly different due to past events that may no longer be relevant, such as mergers, acquisitions, or changes in financial strategy. Using a historical average could distort the capital structure, leading to an inaccurate cost of capital and, consequently, incorrect rates. Third, the current capital structure is a better indicator of the utility's current risk profile, which is critical in determining the appropriate ROE. A historical average might not accurately capture changes in the company's risk over time. Therefore, using the most recent actual capital structure allows for more accurate, fair, and relevant ratemaking, which benefits both the utility and its customers by ensuring that rates are set based upon current financial realities.

Q. Does that mean Staff recommends the use of the capital structure of the GMO business unit of EMW as of June 30, 2024?

A. Yes. Staff will explain in its true-up direct testimony why EMW's actual capital structure as of June 30, 2024, is the most appropriate ratemaking capital structure in this proceeding.

2. COE and Authorized ROE

Q. Do you agree with Ms. Bulkley that Staff did not rely on the results of its COE estimation using DCF and CAPM when recommending an authorized ROE?[18]

A. No, I do not. On the contrary, Staff actively utilized its COE estimates to assess a just and reasonable authorized ROE using its COE analysis. Staff relied on its COE estimation

[18] Page 6, lines 4-5, Bulkley's Rebuttal Testimony.

results using DCF and CAPM when it recommended an authorized ROE of 9.74% within the range of 9.49% to 9.99%. Staff clearly reports in its direct testimony the range of DCF COE estimates from 7.64% to 9.75%,[19] and the range of CAPM COE estimates from 8.98% to 10.32%.[20] Relying on this wide ranges of COE estimates, Staff recommend an authorized ROE of 9.74% using its analysis result of the range of BYPRP ROE estimates 9.73% to 9.75%.[21]

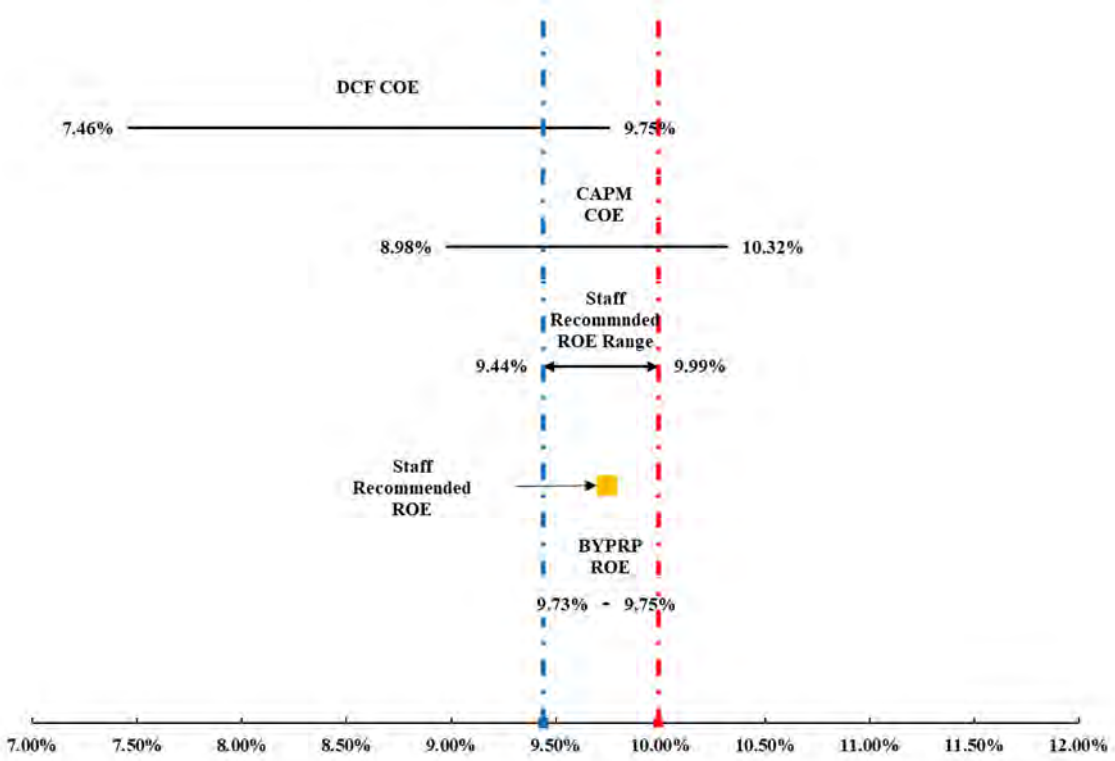
Interestingly, if it is true that Staff did not rely on the results of its COE estimation using DCF, then Ms. Bulkley also did not rely on her own DCF COE estimations. Ms. Bulkley disregarded the results of her own DCF COE estimates, which ranged from 8.93% to 9.48% for minimum growth rates.[22] These ranges are significantly lower than her proposed ROE of 10.50%. Therefore, if Staff did not rely on its COE estimation, it follows that Ms. Bulkley also did not rely on hers.

In her direct testimony, Ms. Bulkley proposed an ROE of 10.50%, within a range of 10.25% to 11.25%,[23] relying on her COE analysis results such as the range of mean DCF COE estimates 8.93% to 11.33%, the range of median DCF COE estimates 9.15% to 11.29%, the range of CAPM COE estimates from 10.31% to 11.73%, the range of ECAPM COE estimates 10.87% to 11.94%, and the range of BYRP COE estimates 10.40% to 10.79% (*see* Table 2 on Page 17).[24] Despite this, it is unclear how Ms. Bulkley gets her proposed ROE of 10.50% from her wide span of COE estimates ranging from 8.93% to 11.94%.[25]

[19] Page 35 line 19, Won's Direct Testimony.
[20] Page 38, line 3, Won's Direct Testimony.
[21] Table 3 (p.41), Won's Direct Testimony.
[22] Schedule AEB-1, Bulkley's Direct Testimony.
[23] Page 7, lines 26-27, Bulkley's Direct Testimony.
[24] Schedule AEB-1, Bulkley's Direct Testimony.
[25] 1 Summary, Won's Surrebuttal Workpaper.

In contrast, in its direct testimony, the Staff clearly explained how both the COE and ROE estimates support its recommendation of an authorized ROE of 9.74%.[26] As shown in Figure 1, these ranges of COE estimates were used to develop Staff's recommendation of an authorized ROE of 9.74% with the range of BYPRP ROE estimates from 9.73% to 9.75%.

Figure 1. Staff's COE and ROE Estimates



Q. Did Ms. Bulkley explain why she insists that Staff did not rely on the results of its COE estimation when it recommended an authorized ROE?

A. No, she did not explain the reason in this case. Despite this, Staff noticed Ms. Bulkley's misunderstanding of Staff's concepts regarding the relationship between COE and authorized ROE, which could lead to such a conclusion. In its direct testimony, Staff clearly

[26] Table 3 (p.41), Won's Direct Testimony.

noted that COE and authorized ROE do not need to be the same because they are different concepts.[27] However, Ms. Bulkley has used COE and ROE interchangeably.[28] Staff's methodology is based on the following financial basics. First, a market COE and an authorized ROE are different concepts. Second, an authorized ROE cannot be directly calculated using a formula or some specific model. Third, a COE can be estimated using financial models and appropriate input values from market data for a given time period.

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.[29] In contrast, an authorized ROE is an accounting book value-based concept.[30] Therefore, a simple calculation of COE does not automatically produce a just and reasonable authorized ROE.

Q. Why is the market value-based concept of COE not the same as the book value-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 Ms. Bulkley contends that COE and ROE are interchangeable, Staff's position is that they are not. Observed utility COEs have been, generally, significantly lower than ROEs in recent years.[31] Because observed COEs have been significantly lower lately, instead of directly recommending the estimated COEs, Staff had

[27] Page 6, lines 12-21, and Footnote No. 2 (p.3), Won's Direct Testimony.
[28] Footnote No.1, Bulkley's Direct Testimony, ER-2024-0319.
[29] Page 378, CFA Program Curriculum, 2020, Level I, Volume 4.
[30] Page 389, CFA Program Curriculum, 2020, Level I, Volume 4.
[31] Steve Huntoon, Nice Work If You Can Get It, Public Utility Fortnightly, August 2016 (http://energy-counsel.com/docs/Nice-Work-If-You-Can-Get-It-Fortnightly-August-2016.pdf).

recommended the authorized ROE be compared to 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 rate of return and compare it to their required rate of return from their investment. The COE can be thought of as the minimum expected rate of return 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.[32] 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 rate of return of common equity, investors estimate COE using the stock valuation of models such as the DCF or the CAPM.[33] Investors' expected return 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 proceedings, rates are decided by the revenue requirement determined by the Commission. The revenue requirement is calculated by multiplying its 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

[32] Page 378, CFA Program Curriculum, 2020, Level I, Volume 4.
[33] Page 379, CFA Program Curriculum, 2020, Level I, Volume 4.

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. 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, just and reasonable rates are required.

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 proceedings provides important information to calculate and recommend a just and reasonable authorized

ROE. In many rate proceedings, Staff found that the changes in the COE over time, such as between rate proceeding 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 proceedings, 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 [Emphasis Added].[34]

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.

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

More importantly, finding a just and reasonable authorized ROE in utility rate regulation is a long-term iterative procedure. After a utility rate proceeding a set of new 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, a company may file its next rate proceeding sooner than originally expected based upon the performance results of the current set of rates.

3. Bulkley's Updated COE Analysis

Q. Did Ms. Bulkley change her recommended ROE and capital structure based on her updated analysis using market data through June 30, 2024?

A. No, she did not.[35] Ms. Bulkley maintained her recommended ROE of 10.50% in a range of 10.25% to 11.25% and continued to support a proposed capital structure of 52.04% common equity and 47.96% long-term debt for EMW.[36]

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

A. Ms. Bulkley's COE estimation models and input variables estimation methods remained the same except for the time period of the data values and the proxy group.[37] Ms. Bulkley's updated COE analysis is now based on data as of June 30, 2024.[38] Ms. Bulkley

[35] Page 5, lines 11-12, Bulkley's Rebuttal Testimony.
[36] Page 7, lines 26-27, and Page 8, lines 1-3, Bulkley's Direct Testimony.
[37] Page 7, lines 22-27, Bulkley's Rebuttal Testimony.
[38] Page 6, lines 2-3, Bulkley's Rebuttal Testimony.

selected 15 electric utility companies for her proxy group in her rebuttal testimony, while 16 companies were selected in her direct testimony.[39] Ms. Bulkley removed ALLETE, Inc. from her original electric utility proxy group.[40] Table 1 presents the list of Ms. Bulkley's updated electric utility proxy group and associated Ticker symbols and Standard & Poor's ("S&P") credit ratings:

Table 1. Bulkley Proxy Group and S&P Credit Rating[41]

	Company	Ticker	Credit Rating
1	Alliant Energy Corporation	LNT	A-
2	Ameren Corporation	AEE	BBB+
3	American Electric Power Company, Inc.	AEP	BBB+
4	Avista Corporation	AVA	BBB
5	CMS Energy Corporation	CMS	BBB+
6	Duke Energy Corporation	DUK	BBB+
7	Entergy Corporation	ETR	BBB+
8	IDACORP, Inc.	IDA	BBB
9	NextEra Energy, Inc.	NEE	A-
10	NorthWestern Corporation	NWE	BBB
11	OGE Energy Corporation	OGE	BBB+
12	Pinnacle West Capital Corporation	PNW	BBB+
13	Portland General Electric Company	POR	BBB+
14	Southern Company	SO	A-
15	Xcel Energy Inc.	XEL	BBB+
	Evergy Missouri West, Inc. d/b/a Evergy Missouri West		BBB+

[39] Figure 13 (p.65), Bulkley's Direct Testimony.
[40] Page 7, lines 26-27, Bulkley's Rebuttal Testimony.
[41] AEB-R2 and AEB-R3, Bulkley's Rebuttal Workpaper and S&P Capital IQ, retrieved August 22, 2024.

In her updated COE analysis, Ms. Bulkley indicated lower DCF COE estimates and higher CAPM and BYPRP COE estimates compared to the COE estimates in her direct testimony. The summary of Ms. Bulkley's updated COE estimates are presented in Table 2:

Table 2. Bulkley's COE estimates Comparison[42]

	Direct			Rebuttal		
	As of December 31, 2023			As of June 30, 2024		
	Low	Average	High	Low	Average	High
DCF (Mean)	8.93%	10.18%	11.33%	9.46%	10.57%	11.58%
DCF (Median)	9.15%	10.20%	11.29%	9.79%	10.57%	11.31%
CAPM	10.31%	11.00%	11.73%	10.55%	11.16%	12.06%
ECAPM	10.87%	11.39%	11.94%	11.07%	11.54%	12.21%
BYRP	10.40%	10.60%	10.79%	10.51%	10.55%	10.62%

Because Ms. Bulkley did not change her estimation models and input parameters, Staff's concerns with her recommended COE remains the same as expressed in my rebuttal testimony. Staff will not repeat here all of its 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 flawed COE estimation procedures used by Ms. Bulkley, along with brief summaries, updated analysis results, and the page numbers of the associated explanations in my rebuttal testimony, is as follows:

[42] 1 Summary, Won's Surrebuttal Workpaper.

A. Overstated Recommended ROE (Pages 4-6, Won's Rebuttal Testimony)

Ms. Bulkley's recommended ROE of 10.50% is much higher than the average authorized ROE of 9.69% in vertically-integrated electric utility rate proceedings completed in the first half of 2024.[43] Ms. Bulkley's recommended ROE is based on overstated COE estimates that use upwardly-biased input variables such as projected growth rates for the DCF model, market return and market risk premium ("MRP") for the CAPM method, and inappropriate variables in the regression model for the BYRP analysis.

B. Inadequate Proxy Group Selection (Pages 6-9, Ibid)

Ms. Bulkley's COE estimates are unreasonably upwardly biased due to her unreasonable proxy group selection. In its direct testimony, Staff disagreed with Ms. Bulkley including ALLETE, Inc. ("ALE") and NextEra Energy, Inc. ("NEE") in her proxy group because EEI reported that ALE's and NEE's non-regulated assets are more than 20% of their total assets.[44] Although Ms. Bulkley has now excluded ALE from her proxy group, she still includes NEE in her updated proxy group for her rebuttal testimony.[45] Ms. Bulkley insisted that including NEE in her proxy group is reasonable because approximately 77% of NEE's total revenue and 88% of its total operating income come from regulated operations.[46] However, Ms. Bulkley's argument is baseless because the percentages of operating income and revenue generally vary too much over time to serve as an appropriate measure for comparing non-regulatory risk.

[43] S&P Global Market Intelligence, Retrieved in July 2, 2024.
[44] EEI, 2023 Financial Review: Annual Report of the U.S. Investor-Owned Electric Utility Industry.
[45] Page 7, lines 26-27, Bulkley's Rebuttal Testimony.
[46] Page 19, lines 11-14, Bulkley's Rebuttal Testimony.

C. Excessive Growth Rate for DCF (Pages 10-12, 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 called long-term growth rates.[47] Ms. Bulkley's DCF COE estimates would be reasonable if she would use a combination of commonly-used growth rates of EPS, dividend per share ("DPS"), book value per share ("BVPS"), and gross domestic product ("GDP").[48] Analysts' projected growth rates are for periods of three to five years,[49] which is considered short-term given the infinite investment horizon assumed in the DCF. Analysts are of the consensus that long-term growth rates for utilities will eventually converge to the level of the long-term GDP growth rate.[50] Because of her overstated growth rates, Ms. Bulkley's DCF COE estimates are unreasonably upwardly biased. If Ms. Bulkley had used a more reasonable 4.10% as her projected GDP growth rate in the DCF model, her mean DCF COE estimate would be 9.80%.[51]

D. Inflated Market Risk Premium in the CAPM (Pages 12-16, Ibid)

Ms. Bulkley employed the CAPM and the ECAPM using an updated total market return of 12.65%,[52] resulting in three different MRP of 8.15%, 8.33% and 8.35%.[53] 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%.[54] When she calculated her MRP, Ms. Bulkley included companies not having dividend payment information.[55] With more reasonable assumptions, such as a market

[47] Page 36, lines 6-13 and Schedule AEB-13, Bulkley's Direct Testimony.
[48] Howe, Keith M. and Eugene F. Rasmussen. Public Utility Economics and Finance, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1982.
[49] Value Line, Value Line - Value Line University, retrieved in July 15, 2022.
[50] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 302.
[51] 1 Summary, Won's Surrebuttal Workpaper.
[52] Exhibit AEB-R5, Bulkley's Rebuttal Testimony.
[53] Exhibit AEB-R3, Bulkley's Rebuttal Testimony.
[54] Figure 2. "MRP and corresponding COE" (p.14), Won's Rebuttal Testimony.
[55] Exhibit AEB-R6, Bulkley's Rebuttal Testimony.

return of 10.64% and a current risk-free rate of 4.50%,[56] Ms. Bulkley's average CAPM COE estimate would be 9.51%.[57]

E. Unreliable Empirical Capital Asset Pricing Model (Pages 16-17, Ibid)

Ms. Bulkley's adjusted ECAPM COE estimate of 11.54% is unreliable.[58] Ms. Bulkley used Dr. Roger Morin's adjustment factor of 25% in the ECAPM analysis.[59] Dr. Morin's adjustment factor of 25% was estimated using data from 1926 to 1984 under the assumption that CAPM underestimated COE.[60] 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.[61] Such variations in findings do not lend credibility to Ms. Bulkley's use of the ECAPM.

F. Inappropriate Bond Yield Risk Premium Analysis (Pages 17-21, Ibid)

Ms. Bulkley's updated BYRP ROE estimates range from 10.51% to 10.62% with an average of 10.55%.[62] Ms. Bulkley's BYRP using a regression analysis is different from the conventional BYRP.[63] Because Ms. Bulkley's BYRP relies on a single independent input value of 30-year treasury bonds yield,[64] it is unavoidable that her BYRP COE estimates are unreasonably excessive under the current Federal Reserve ("Fed") monetary policy increasing

[56] The assumption of the estimated MRP of 5.57% is the average of the seven MRP in 4 CAPM, Won's surrebuttal workpaper. The risk-free rate of 3.126% is an average of 30-year Treasury bond at yields of 30-day Bloomberg Professional, as of June 15, 2022. See AEB-R4, Bulkley's Rebuttal Testimony.
[57] 3 CAPM, Won's Surrebuttal Workpaper.
[58] Exhibit AEB-R4, Bulkley's Rebuttal Testimony.
[59] Page 22, lines 1-2, and Footnote 31, Bulkley's Direct Testimony.
[60] Footnote No. 12 (p.190), Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports.
[61] Table 6-2 (p.190), Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports.
[62] Exhibit AEB-R6, page 4, Bulkley's Rebuttal Testimony.
[63] Pages 18-19, Won's Rebuttal Testimony.
[64] Page 18, lines 15-17, Won's Rebuttal Testimony.

interest rates with unusual speed.[65] Staff recommends the Commission not consider Ms Bulkley's BYRP COE estimate to determine a just and reasonable authorized ROE.

G. Mischaracterization of Regulatory and Business Risks (Pages 26-31, Ibid)

Ms. Bulkley considered business risk and regulatory risk to determine where EMW's required ROE falls within the range of her analytic results.[66] Ms. Bulkley continued to insist that the risk level for EMW is greater than her peer group companies because of their capital expenditure requirements.[67] However, according to S&P, Missouri is classified in the category of "Very Credit Supportive," with a "Strong and Adequate" utility regulatory environment in jurisdictions among U.S. states and Canadian provinces.[68]

The credit ratings of EMW are not lower than the average credit rating of any proxy group companies considered in these proceedings.[69] S&P has assigned the corporate credit ratings of EMW as 'BBB+', and Moody's has assigned 'Baa2'.[70] 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.[71] As shown in Table 1, of the 15 electric utility proxy group companies, three have a higher credit rating of 'A-' compared to EMW's 'BBB+' rating, nine have the same credit rating as EMW, and three have lower credit rating of 'BBB'. Therefore, Ms. Bulkley's assertion that Staff did not "[r]eview the relative risks of the proxy group companies and the subject company to determine how the subject

[65] Page 16, lines 1-6, and Table 1, Won's Direct Testimony.
[66] Pages 3-4, Bulkley's Direct Testimony.
[67] Pages 48-50, Bulkley's Direct Testimony.
[68] S&P Global Ratings, North American Utility Regulatory Jurisdictions Update: Ontario Remains Unchanged, Notable Developments Elsewhere, published March 11, 2024.
[69] Schedule SJW-d8, Won's Direct Testimony.
[70] S&P Rating Report.
[71] 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.

company's risk profile compares with the group to determine the appropriate placement of the ROE within the range of results established using the proxy group companies"[72] is baseless.

4. Updated Capital Market Conditions

Q. Do you agree with Ms. Bulkley that there is no basis for your conclusion that Staff's DCF and CAPM results are overstated due to the current capital market conditions?[73]

A. No, I do not.

Q. Why does Ms. Bulkley insist that your conclusion is baseless?

A. According to Ms. Bulkley, my recommended ROE for EMW in this proceeding (9.74%) is actually greater than the results of either of Staff's DCF and CAPM analyses (8.70% and 9.65%, respectively) so therefore my conclusion is invalidated.[74]

Q. What is your response to Ms. Bulkley's reasoning that your conclusion is invalidated?

A. This is a good example of how Ms. Bulkley does not understand Staff's methodology and misrepresents what the Staff actually did in its analysis. First, Ms. Bulkley does not understand why I conclude that Staff's DCF and CAPM are overstated as a result of the current market conditions. In the last EMW rate proceeding, Case No. ER-2022-0130, Staff recommended an authorized ROE of 9.62% and reported the estimated range of its DCF and CAPM COE estimates as 7.40% to 8.96% and 5.83% to 8.62%, respectively.[75] However, as explained in its direct testimony, the current COE, as estimated by the DCF and CAPM methods

[72] Page 63, lines 17-19, and Page 63, lines 1-2, Bulkley's Rebuttal Testimony.
[73] Page 10, lines 15-17, Bulkley's Rebuttal Testimony.
[74] Page 10, lines 18-20, Bulkley's Rebuttal Testimony.
[75] Schedules SJW-d13, SJW-d14, and SJW-d15, Won's Direct Testimony, ER-2022-0129 and ER-2022-0130.

(with ranges of 7.64% to 9.75% and 8.98% to 10.32%, respectively),[76] is overstated when considering utility bond market conditions.[77]

Table 3. Comparison of Staff COE Analysis Results

	COE Analysis on Electric Utility					
	DCF			CAPM		
Case No.	Lower	Average	Upper	Lower	Average	Upper
ER-2022-0130	7.40%	8.18%	8.96%	5.83%	7.23%	8.62%
ER-2024-0189	7.64%	8.70%	9.75%	8.98%	9.65%	10.32%
Difference	0.25%	0.52%	0.79%	3.15%	2.42%	1.69%

As shown in Table 3, COE estimates in the current rate proceeding are higher compared to the last EMW rate proceeding. Specifically, the average CAPM COE estimates increased by more than 240 basis points, which does not explain why the quarterly average authorized ROE has changed by less than 50 basis points, remaining within a range of 9.34% to 9.75% since the 2022 EMW rate proceeding.[78] In this context, Staff explained that the current DCF and CAPM COE estimates are 'overstated' and recommended a proper authorized ROE.[79]

Second, Ms. Bulkley's assertion that Staff's conclusion of its DCF and CAPM results being overstated is invalidated, because the recommended ROE of 9.74% is greater than Staff's COE estimates, is based on her incorrect belief that ROE and COE are interchangeable. Staff reemphasized that market COE and authorized ROE are different concepts, and market COE cannot directly determine a just and reasonable authorized ROE. The fact that Staff's recommended ROEs are greater than Staff's DCF and CAPM estimates in both the last and

[76] Schedule SJW-d15, Won's Direct Testimony.
[77] Page 21, Won's Direct Testimony.
[78] S&P Capital IQ Pro: Regulatory Research Association, retrieved August 12, 2024.
[79] Page 16, lines 6-8, Won's Direct Testimony.

current EMW rate proceedings is evidence of Ms. Bulkley's incorrect belief that ROE and COE are interchangeable.

Q. Do you agree with Ms. Bulkley that changes in capital market conditions since the filing of EMW's direct testimony in this proceeding continue to indicate an increase in the COE?[80]

A. No, I do not. Staff found no evidence of changes in capital market conditions since the filing of EMW's direct testimony in this proceeding to indicate an increase in the COE. On the contrary, Staff found some evidence that changes in current capital market conditions may indicate a decrease in the COE. One of the major reasons for a higher COE estimate is the Fed's monetary policy to maintain a high interest rate to combat inflation.[81] The Federal Open Market Committee ("FOMC") decided to maintain the target range for the federal funds rate at 5.25% to 5.50% as part of its policy since inflation has eased over the past year but remains somewhat elevated and there has been further progress toward the Committee's 2% inflation objective.[82] According to the Labor Department, in July 2024, the consumer-price index rose 2.9% from a year earlier, the lowest reading since 2021 and slightly below economists' expectations of 3%.[83] On August 23, 2024, Fed Chair Powell signaled 'time has come' for interest rate cuts.[84]

[80] Page 12, lines 18-20, Bulkley's Rebuttal Testimony.
[81] Page 15, lines 3-11, Won's Direct Testimony.
[82] Federal Reserve issues Federal Open Market Committee (FOMC) Statement, published on July 31, 2024, https://www.federalreserve.gov/monetarypolicy/files/monetary20240731a1.pdf.
[83] Wall Street Journal, Cooling July Inflation Sets Stage for Fed's September Rate Cut, Published August 14, 2024.
[84] Reuters, Fed's Powell, in policy shift, says 'time has come' to cut rates, Howard Schneider and Ann Saphir, Published August 23, 2024, https://www.reuters.com/markets/us/with-fed-pivot-hand-powell-may-opt-broad-brush-approach-jackson-hole-2024-08-23/.

5. DCF and Growth Rates

Q. Do you agree with Ms. Bulkley that Staff's DCF analysis results are not reasonable because its ROE recommendation is more than 100 basis points greater than the of its DCF analysis?[85]

A. No, I do not. This is another example of Ms. Bulkley's misunderstanding or misrepresentation of Staff's analysis. First, it is not true that Staff's ROE recommendation is more than 100 basis points greater than that of its DCF analysis. Staff recommended an authorized ROE of 9.74%, supported by an estimated range of DCF COE estimates from 7.64% to 9.75%.[86] Staff never says that a specific COE estimate should be the authorized ROE. As explained previously, the principles of Staff's analysis are that market COE and authorized ROE are different concepts, and no COE estimation method can mechanically produce an authorized ROE.[87] Therefore, the ranges of COE estimates are used to recommend a just and reasonable ROE. Staff recommended an authorized ROE of 9.74%, based on the approximate upper end of the DCF COE estimated range of 7.64% to 9.75%.

Second, as Staff mentioned, observed utility COEs have generally been significantly lower than authorized ROEs in recent years.[88] In addition, the difference between COE estimates and Staff's recommended ROE in this proceeding is smaller than previous proceedings. For example, in the last EMW rate proceeding, Staff recommended an authorized ROE of 9.62% and reported the estimated range of its DCF COE estimates as 7.40% to 8.96%.[89]

[85] Page 20, lines 17-19, Bulkley's Rebuttal Testimony.
[86] Schedule SJW-d15, Won's Direct Testimony.
[87] Pages 6-7, Won's Direct Testimony.
[88] Footnote No. 2 (p.3), Won's Direct Testimony.
[89] Schedules SJW-d13, SJW-d14, and SJW-d15, Won's Direct Testimony, ER-2022-0129 and ER-2022-0130.

Q. Do you agree with Ms. Bulkley that Staff should solely use the EPS analysts' projected growth rates and should not use the DPS or BVPS growth rate within its DCF calculations?[90]

A. No, I do not. The projected EPS, DPS, and BVPS are acceptable measures of a company's growth rate.[91] Analysts occasionally use these measures of growth rates in the DCF model. Staff has considered EPS growth rate for calculating the perpetual growth rate for the DCF model in past rate proceedings. At the same time, Staff has found numerous publications that support the use of projected DPS and BVPS growth rates in a DCF model. First, Howe and Rasmussen stated that the three most commonly-used financial indicators of growth are DPS, EPS, and BVPS.[92] 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, multiple times, indicated that the growth rate for DCF models is the "constant growth rate in DPS in the future."[93] I could cite additional publications, but the most important point is that using the DPS and BVPS growth rates in DCF is an acceptable method.

Q. Do you agree with Ms. Bulkley that there is significant academic research demonstrating that EPS growth rates are most relevant in stock price valuation?[94]

A. No. I do not. To justify her assertion, Ms. Bulkley referenced multiple articles in her Footnote Nos. 30 and 32. However, these articles do not support Ms. Bulkley's assertion that the EPS growth rate should be used "solely" within the DCF model. Interestingly, some of the referenced articles do not even include the key terms "earnings per share" or "EPS" (such

[90] Page 21, 10-16, Bulkley's Rebuttal Testimony.
[91] Page 139, The Cost of Capital – A Practitioner's Guide, David C. Parcell, 2020 Edition.
[92] Howe, Keith M. and Eugene F. Rasmussen. Public Utility Economics and Finance, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1982.
[93] Pages 130-134, The Cost of Capital – A Practitioner's Guide, David C. Parcell, 2020 Edition.
[94] Page 22, lines 1-2, Bulkley's Rebuttal Testimony.

as Robert S. Harris, 'Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return,' and Robert S. Harris and Felicia C. Marston, 'Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts'). According to Ms. Bulkley's response to Staff's data request, the relevant actual citations and summaries for the articles are the following:

(1) Brigham and Houston,[95]

> 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);[96]

(2) Jing Liu,[97]

> "Forward earnings explained stock prices remarkably well" and were generally superior to other value drivers analyzed;[98]

(3) C.A. Gleason,[99]

> Sell-side analysts with the most accurate stock price targets were those whom the researchers found to have more accurate earnings forecasts;[100] and

(4) Stanley Block,[101]

> The majority of the survey respondents ranked earnings as the most important variable in valuing a security;[102]

[95] Footnote No.30, (p.20) Bulkley's Rebuttal Testimony, Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, at 317 (Concise Fourth Edition, Thomson South-Western, 2004).
[96] Staff's Data Request Nos. 0522 and 0525, ER-2022-0129 and ER-2022-0130, respectively.
[97] Footnote No.31 (p.21), Bulkley's Rebuttal Testimony, Liu, Jing, et al., "Equity Valuation Using Multiples," Journal of Accounting Research, Vol. 40 No. 1, March 2002.
[98] Staff's Data Request Nos. 0533 and 0526, ER-2022-0129 and ER-2022-0130, respectively.
[99] Footnote No.31 (p.21), 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.
[100] Staff's Data Request Nos. 0533 and 0526, ER-2022-0129 and ER-2022-0130, respectively.
[101] Footnote No.32 (p.21), Bulkley's Rebuttal Testimony, Block, Stanley B., "A Study of Financial Analysts: Practice and Theory," Financial Analysts Journal (July/August 1999).
[102] Staff's Data Request Nos. 0533 and 0526, ER-2022-0129 and ER-2022-0130, respectively.

Staff completely agrees with all four referenced statements to the effect that EPS is important and useful information in various financial analyses. Staff also used EPS growth rate in Staff's DCF model.[103] 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. Therefore, the articles Ms. Bulkley referenced do not support Ms. Bulkley's arguments.

Q. Do you agree with Ms. Bulkley that Staff has previously relied solely on EPS growth rates in prior cases for the short-term growth rate?

A. Yes. As Ms. Bulkley identified in the 2019 Empire District Electric ("Empire") rate proceeding, Staff witness Mr. Chari relied solely on historical and projected EPS growth rates as short-term growth rates in the DCF, and did not rely on either DPS or BVPS growth rates.[104] However, this is not the whole story of Mr. Chari's position on short-term growth rates in the DCF. In the 2021 Empire rate proceeding, Mr. Chari relied on EPS, DPS, and BVPS for estimating the growth rate in his DCF model.[105] Mr. Chari stated, "It is a common practice in financial analysis to average the averages of the three growth measures, EPS, DPS, and BVPS, to discern the appropriate growth rate for the DCF model."[106]

Q. Do you agree with Ms. Bulkley's statement, "Similarly, in the Ameren Missouri 2021 rate proceeding, Staff witness Mr. Chari relied solely on projected EPS growth rates from both Value Line and S&P Global Market Intelligence as short-term growth rates, and did not rely either on historical EPS growth rates or any DPS or BVPS growth rates."?[107]

[103] Page 26, lines 10-12, Won's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[104] Page 14, Staff Report, filed January 15, 2020, No. ER-2019-0374.
[105] Schedule PC-7-1, Staff Report, filed October 29, 2021, No. ER-2021-0312.
[106] Page 21, Staff Report, filed October 29, 2021, No. ER-2021-0312.
[107] Page 23, lines 1-5, Bulkley's Rebuttal Testimony.

A. No, I do not. Ms. Bulkley's statement is not true. In his surrebuttal testimony from the Ameren Missouri 2021 rate proceeding, Mr. Chari stated, "Staff reviewed historical earnings per share ("EPS"), historical dividend per share ("DPS"), historical book value per share ("BVPS"), analysts' projected EPS growth rates, as well as long-term GDP growth rates to arrive at an appropriate DCF growth rate to use in the DCF model."[108]

Q. Do you agree with Ms. Bulkley's concerns about Staff's reliance on Value Line's projected DPS, BVPS, and EPS growth rates in its DCF COE estimation?

A. No, I do not. The Value Line EPS, DPS, and BVPS growth rates relied upon by Staff in its COE analysis is one of the most reliable sources of financial information. Ms. Bulkley also relied on the Value Line projected EPS growth rate in her DCF model. There is no evidence the Value Line EPS, DPS, and BVPS growth rates introduced bias. Ms. Bulkley also used sources in addition to Value Line, including Yahoo! Finance and Zacks Investment Research ("Zacks").[109]

Q. Do you agree with the growth rates provided by Ms. Bulkley from Yahoo! Finance and Zacks?[110]

A. No, I do not. Staff found that the growth rates provided by Ms. Bulkley from Yahoo! Finance and Zacks are inconsistent and unreliable for estimating COE using the DCF analysis. For example, Ms. Bulkley did not include OGE Energy Corporation's growth rate reported by Yahoo! Finance because it was negative, nor did she include the growth rates of Avista Corporation, IDACORP, Inc., NorthWestern Corporation, and Portland General Electric

[108] Page 7, lines 17-20, Chari's Surrebuttal Testimony, ER-2021-0240.
[109] Page 37, lines 2-4, Bulkley's Direct Testimony.
[110] Page 22, lines 13-20, Bulkley's Rebuttal Testimony.

Company reported by Zacks because those were not available.[111] In contrast, Value Line consistently reported growth rates for all of Ms. Bulkley's proxy group.

Q. Do you agree with Ms. Bulkley that Staff's DCF analysis is not consistent with FERC's current methodology for calculating DCF COE estimates?[112]

A. Yes, I agree. Staff did not intend to be consistent with the FERC methodology. Staff considers FERC's decisions, but FERC's decisions are changed very often, so Staff does not rely on the FERC methodology. Following Karl Popper's theory of falsification, 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 proceedings. Staff used growth rates in its DCF model estimated by combining analysts' short-term estimated growth rates and long-term GDP growth rates at four-fifths and one-fifth weightings, respectively.[113] This is an approach that FERC used before it was changed in its May 2020 order.[114] Staff is not bound to change its approach simply because FERC's approach changed. Staff is under no obligation to follow FERC's methodology on this point. There are no FERC orders against Staff's position regarding the growth rate of DCF analysis.

Q. Do you agree with Ms. Bulkley regarding FERC Opinion No. 575?

A. No, I do not. Ms. Bulkley made a misrepresentation regarding FERC's Opinion No. 575, Paragraph 131 in *Entergy Arkansas, et al*, 175 FERC ¶ 61,136 (2021).[115] Ms. Bulkley stated,

[111] Exhibit AEB-R2, Bulkley's Rebuttal Testimony.
[112] Pages 24-27, Bulkley's Rebuttal Testimony.
[113] FERC Opinion 575.
[114] FERC Opinion 569-A.
[115] Footnote No. 38 (p.24), Bulkley's Rebuttal Testimony.

> Specifically, as stated in Opinion No. 575, the FERC:
>
> • has consistently relied on projected EPS growth rates as the short-term growth rate, not historical growth rates or DPS or BVPS growth rates such as Dr. Won has done; and,
>
> • has consistently relied on projected EPS growth rates from International Brokers' Estimate System ("IBES") (i.e., consistent with the projected EPS growth rates reported on First Call and Yahoo! Finance), not Value Line, such as Dr. Won has used in his DCF analysis [Omitted Footnote No.39].[116]

However, in Paragraph 131 of Opinion No. 575, FERC stated:

> 131. As the Commission stated in Opinion No. 569-A, short-term growth rate projections for electric utilities have declined and are now closer to the current GDP growth projection than those from the 1990s when the Commission adopted the two-step DCF using one-third weighting for GDP in the long-term growth rate for natural gas and oil pipelines that was subsequently adopted for public utilities. Additionally, the Commission noted that, when IBES growth projections are only marginally higher than GDP projections, investors are likely to view those rates as more sustainable than the substantially higher natural gas pipeline IBES growth projections when the Commission established its two-thirds/one-third weighting policy. Accordingly, we find it reasonable to give the IBES short-term growth projection 80% weighting and the long-term growth rate 20% weighting [Omitted Footnotes].[117]

In Opinion No. 575, the Staff reviewed all documents and could not find any FERC comments regarding the exclusive use of the projected EPS growth rate for DCF analysis or the rejection of other growth rates, such as DPS or BVPS. In addition, Staff wants to clarify two points to prevent any confusion regarding Ms. Bulkley's statements. First, Staff did not use historical DPS and BVPS growth rates for its DCF COE estimation but only monitored them to

[116] Page 24, lines 10-17, Bulkley's Rebuttal Testimony.
[117] Paragraph 131, *Entergy Arkansas, et al.*, Opinion No. 575, 175 FERC ¶ 61,136 (2021).

ensure data consistency, using the average of projected EPS, DPS, and BVPS growth rates.[118] Second, Ms. Bulkley also relied on Value Line growth rates for her DCF analysis.[119]

6. CAPM and Market Risk Premium

Q. Do you agree with Ms. Bulkley that Staff should use projected data forecasted by analysts instead of Staff's data based on historical data for purposes of the CAPM analysis?[120]

A. No, I do not. For example, in CAPM applications, current 30-year Treasury security yields are universally recognized as appropriate for use as the risk-free rate.[121] Dr. Morin stated the yield on very long-term government bonds, such as the yield on 30-year Treasury bonds, is the best measure of the risk-free rate for use in the CAPM.[122] Ms. Bulkley's insistence that the estimation of COE being a forward-looking analysis was for her own convenience.[123]

This assertion reveals that Ms. Bulkley may not fully understand the characteristics of CAPM analysis. The major input variables of CAPM are a risk-free rate, Beta (risk measure), and the MRP. In Staff's CAPM analysis, these three variables represent the current market condition and should be used to produce a current market-required cost of equity. However, Ms. Bulkley used historical and forecasted 30-year Treasury Bond yields and current Value Line Beta as the risk measure in her direct testimony,[124] while insisting that forward-looking market returns and MRP should be used in establishing the ROE in this

[118] Schedules SJW-d10 and SJW-d12, Won's Direct Testimony.
[119] Schedule AEB-3, Bulkley's Direct Testimony.
[120] Page 31, lines 3-6, Bulkley's Rebuttal Testimony.
[121] Page 107, David C. Parcell, Cost of Capital Manual, Society of Utility and Regulatory Financial Analysts, 2010 Edition.
[122] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 151.
[123] Pages 30-36, Bulkley's Rebuttal Testimony.
[124] Schedules AEB-4 and AEB-5, Bulkley's Direct Testimony.

proceeding.[125] By doing so, Ms. Bulkley confessed she used inconsistent input variables in her CAPM COE estimation. In other words, relying on a forward-looking value for one input while using non-forward-looking values for other inputs is not appropriate because all input variables, such as the risk-free rate, Beta, and MRP, need to be consistent with the same market conditions.[126] Financial analysis using data from mismatched time periods could produce cherry-picked results.

Q. Do you agree with Ms. Bulkley that Staff's use of the historical MRP that is unrelated to the current risk-free rate does not correctly reflect the inverse relationship between interest rates and MRP?[127]

A. No, I do not. Ms. Bulkley's argument is based on flawed logic. Ms. Bulkley falsely assumed that because of the inverse relationship between interest rates and the MRP and her false calculated MRP of 7.17%,[128] the MRP should be well above the long-term historical averages of 4.61% to 6.71% that Staff calculated.[129] This argument does not make sense because, if the inverse relationship between interest rates and the MRP is true, then the MRP should be lower due to the current interest rate hikes. In addition, the MRP estimate of 4.61% to 6.71% is not only the result of Staff's calculations but is also supported by reliable sources, such as Kroll (formerly Duff & Phelps), Dr. Damodaran, a professor of Finance at the Stern School of Business at New York University, and many others.[130] A more fundamental problem is that Ms. Bulkley assumed the market-based COE and the authorized ROE are the same

[125] Exhibit AEB-R3, Bulkley's Rebuttal Testimony.
[126] Even though projected Beta and MRP are used, the problem is not resolved. First, to estimate projected Beta and MRP is not easy. Second, to use projected COE estimate for determining authorized ROE is a highly arguable issue.
[127] Page 30, lines 5-6, Bulkley's Rebuttal Testimony.
[128] Page 37, lines 1-2, Bulkley's Rebuttal Testimony.
[129] Page 37, lines 5-11, Bulkley's Rebuttal Testimony.
[130] Pages 12-15, Bulkley's Rebuttal Testimony.

concepts and that these estimated values should be identical. Staff explained why this assumption is incorrect in Section 2, 'COE and Authorized ROE,' of this testimony.

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

A. No, I do not. The MRP, market risk premium, is the difference between the expected return on a market portfolio and the risk-free rate. There are many theoretical and empirical studies to support the use of geometric means to calculate MRP. A prominent MRP expert and the Kerschner Family chair professor of Finance at the Stern School of Business at New York University, Aswath 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.[131] Dr. Damodaran also stated that there are strong arguments that can be made for the use of geometric average in both empirical studies and the asset pricing model theory.[132]

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.[133] Moreover, many other theoretical and empirical studies support the use of geometric means to calculate MRP.[134]

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

[131] Damodaran, A. (1999). Estimating Equity Risk Premiums.
[132] Ibid.
[133] Modugno, V. (2012). Estimating Equity Risk Premiums.
[134] 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.

A. Staff calculated MRP by subtracting the risk-free rate from the expected market return. For the risk-free rate, Staff used the average yield on 30-year U.S. Treasury bonds for the fourth quarter of 2023, which was 4.58%. For the MRP estimate, Staff used an average of long-term geometric mean and arithmetic mean from two data sets: (1) the long-term historical return differences between large company stocks and long-term government bonds from 1926-2023,[135] and (2) the long-term historical return differences between S&P 500 and long-term government bonds from 1928-2023.[136]

Q. Why do you use the averaging 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 on-going controversial research topics in financial analysis.[137] Many theoretical and empirical studies and financial reports presented MRP estimates using both arithmetic means and geometric means.[138] The geometric mean return is a multi-period rate of return 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 rate of return and therefore it should be used in association with a short-term risk-free rate in the CAPM.[139]

[135] Duff & Phelps, the Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly Dataset.
[136] Risk Premium, Damodaran Online, Stern School of Business, NYU.
[137] 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.
[138] Ibbotson, R. G. (2011). The equity risk premium. Rethinking the Equity Risk Premium, CFA Research Foundation Publications, 4, 18-26.
[139] 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.

For typical investment horizons, the proper compounding rate for forecasting returns is in between the arithmetic and geometric means.[140] Many financial analysts use a compromise of the two, a weighted average of arithmetic and geometric mean.[141] 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.[142] Using both methods and determining the average of high and low bounds ensures a fair and reasonable result.

7. BYPRP vs BYRP

Q. Do you agree with Ms. Bulkley that Staff's BYPRP analysis is similar to the BYRP analysis that she conducted?[143]

A. No, I do not fully agree with Ms. Bulkley. Staff's BYPRP and Ms. Bulkley's BYRP are superficially similar, but there are fundamental differences. First, the definitions of 'Bond Yield' are not the same. In Staff's BYPRP analysis, the definition of bond yield refers specifically to public utility bond yields, ensuring that the yields used in the analysis reflect the financial conditions of the utility sector financial market.[144] In contrast, the definition of bond yield in Ms. Bulkley's BYRP refers to the 30-year Treasury bond yield, which is directly affected by government monetary policy.[145]

Second, the definitions of 'Risk Premium' differ. In Staff's BYPRP analysis, the risk premium is defined as the difference between the authorized ROE for electric utilities and the

[140] Jacquier, E., Kane, A., & Marcus, A. J. (2003). Geometric or arithmetic mean: A reconsideration. Financial Analysts Journal, 59(6), 46-53.
[141] Blume, M. E. (1974). Unbiased estimators of long-run expected rates of return. Journal of the American Statistical Association, 69(347), 634-638.
[142] Hammond, B., & Leibowitz, M. (2011). Rethinking the equity risk premium: An overview and some new ideas. Rethinking the Equity Risk Premium, 1-17.
[143] Page 40, lines 3-4, Bulkley's Rebuttal Testimony.
[144] Page 39, lines 6-9, Won's Direct Testimony.
[145] Page 46, line 11, Bulkley's Direct Testimony.

yield on public utility bonds, ensuring that the risk premium accurately measures the premium of utility equity risk relative to utility bonds.[146] On the other hand, Ms. Bulkley defined her risk premium as the difference between electric utility authorized ROEs and the yield on 30-year Treasury bonds.[147] Because of this, her risk premium does not properly measure the electric utility equity risk premium as defined by the Chartered Financial Analyst ("CFA").[148]

Q. Do you agree with Ms. Bulkley that the resulting average ROE, based on Staff's stated range, would be 10.22% for A-rated utility bonds and 10.44% for Baa-rated utility bonds, using a risk premium range of 3.50% to 5.50% in the 2022 EMW rate proceeding?

A. No, I do not. This calculation is another example of Ms. Bulkley's misleading calculations aimed at those unfamiliar with the detailed procedures. Due to limited resources, I cannot address all of Ms. Bulkley's misrepresentations of Staff's procedures in this proceeding. However, I will explain step by step how Ms. Bulkley's recalculation of Staff's Rule-of-Thumb method, used in the 2022 EMW rate proceeding, is inaccurate. As Ms. Bulkley acknowledged, the risk premium and interest rate are inversely related.[149] In her direct testimony, Ms Bulkley stated:

> It is important to recognize both academic literature and market evidence indicating that the equity risk premium (as used in this approach) is inversely related to the level of interest rates (i.e., as interest rates increase, the equity risk premium decreases, and vice versa).[150]

[146] Page 38, lines 14-16, Won's Direct Testimony.
[147] Page 46, lines 7-8, Bulkley's Direct Testimony.
[148] Stowe, J. D., Robinson, T. R., Pinto, J. E., & McLeavey, D. W. (2002) Analysis of Equity Investment: Valuation. Association for Investment Management and Research
[149] Figure 1 (p.44), Bulkley's Direct Testimony.
[150] Page 44, lines 15-16, and Page 45, line 1, Bulkley's Direct Testimony

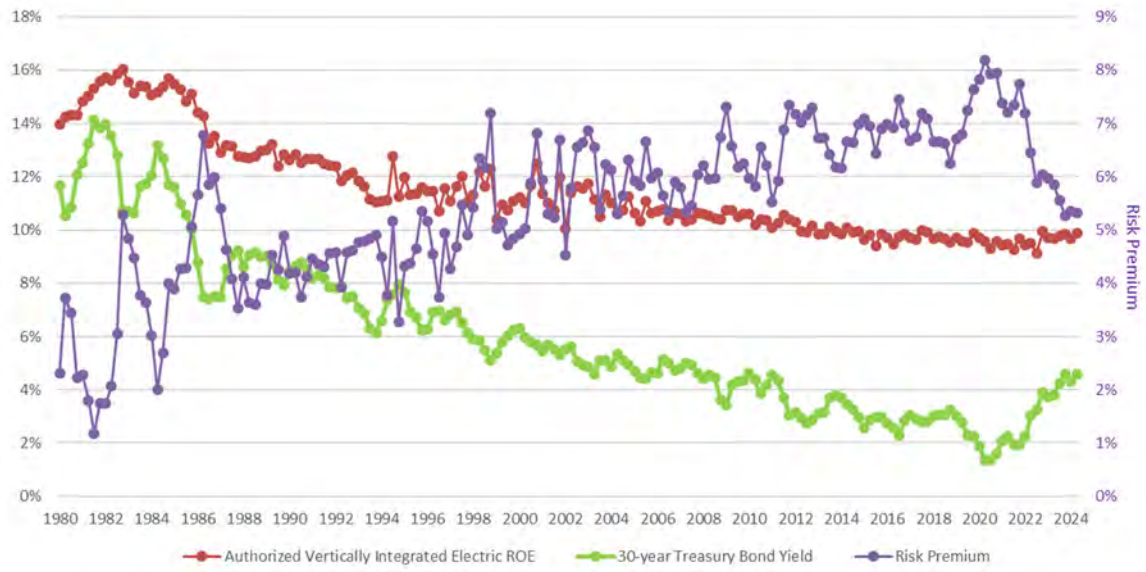
For her recalculation in her rebuttal testimony, Ms. Bulkley reported 3-month average yields of 5.72% and 5.94% for Moody's A-rated and Baa-rated utility bonds, respectively, for the second quarter of 2024.[151] The average interest rate on Fed funds for the second quarter of 2024 was 5.33%.[152] However, when Staff conducted the "Rule of Thumb" analysis in the 2022 EMW rate proceeding, the average interest rate on Fed funds for the first quarter of 2022 was 0.12%.[153] In summary, between the two time periods, interest rates increased by more than 500 basis points. As Ms. Bulkley recognized, there is an inverse relationship between the interest rate and the risk premium. Therefore, the associated risk premium for the second quarter of 2024 is much lower than the range of 3.50% to 5.50% used by Ms. Bulkley in her recalculation for the 2022 EMW rate proceeding.[154] The properly calculated risk premia for Moody's A-rated and Baa-rated utility bonds are 4.03% and 3.81%, respectively, so that "Rule of Thumb" ROE estimates are 9.74% and 9.75%.[155] In conclusion, Ms. Bulkley's average ROE of 10.22% for A-rated utility bonds and 10.44% for Baa-rated utility bonds are inaccurate and misguiding.

Q. Do you agree with Ms. Bulkley' statement "Dr. Won only utilizes a 10-year period of data for the analysis when a significantly longer period of utility bond yield and authorized ROE data is available that incorporates a much broader set of market conditions than has been considered in Dr. Won's analysis and is more appropriate to be considered in setting the return on equity."?[156]

[151] Exhibit AEB-R9, Ms. Bulkley's Rebuttal Testimony.
[152] FRED, Federal Reserve Bank of St. Louis, retrieved August 16, 2024. https://fred.stlouisfed.org/series/FEDFUNDS.
[153] FRED, Federal Reserve Bank of St. Louis, retrieved August 16, 2024. https://fred.stlouisfed.org/series/FEDFUNDS.
[154] Page 40, lines 18-19, Bulkley's Rebuttal Testimony.
[155] A-rated ROE: 9.74% = 5.71% + 4.03% and Baa-rated ROE: 9.75% = 5.94% + 3.81%.
[156] Page 41, lines 12-16, Bulkley's Rebuttal Testimony.

A. No, I do not. Staff found no evidence that the relationship between utility bond yields and authorized ROEs over a period longer than 10 years is statistically stable enough to be used for calculating a reliable risk premium through a regression model. Both Staff's BYPRP and Ms. Bulkley's BYRP utilized a regression analysis based on an inverse relationship between authorized ROE and bond yield. If the inverse relationship is consistent over time, the variation in authorized ROEs will be well explained by bond yields. However, the relationship between the two financial variables keeps changing and is inconsistent over time.

Figure 2. Ms. Bulkley's 40-Year Quarterly Average Data of 30-year Treasury Bond yields, Authorized Vertically Integrated Electric ROE, and Risk Premium.



Staff found that Ms. Bulkley's regression model, which used 40 years of data, is inappropriate for her BYRP COE estimation. Because the relationship between authorized ROEs and 30-year Treasury bond yields has been inconsistent and statistically unstable over the past 40 years, Ms. Bulkley's BYRP, based on her regression analysis used this data, is not reliable.[157] As shown in Figure 2, there has not been a consistent relationship over the past

[157] Exhibit AEB-R6, Bulkley's Rebuttal Testimony.

40 years among major variables such as 30-year Treasury bond yields, authorized vertically integrated electric ROEs, and risk premiums. Therefore, Ms. Bulkley's BYRP cannot reliably estimate an authorized ROE using her regression analysis.

In a regression analysis, the extent to which this variation is explained is measured by the R-squared value of the regression model. The R-squared value of Staff's BYPRP regression model, using 10 years of data, is 92%.[158] In contrast, in Ms. Bulkley's BYRP regression model, using 40 years of data, the R-squared value is only 84%.[159] These results indicate that the variation in authorized ROEs is 92% explained by bond yields using Staff's regression model, but only 84% explained by bond yields using Ms. Bulkley's model. In other words, Ms. Bulkley's 40-year data shows less consistency over time in the inverse relationship between authorized ROE and bond yield compared to Staff's 10-year data. Therefore, there is no evidence that Staff's BYPRP ROE estimate would be considered more appropriate if Staff used a period longer than 10 years.

8. Overall Bulkley's Rebuttal Testimony

Q. What is Staff's conclusion from reviewing Ms. Bulkley's rebuttal testimony regarding the appropriate authorized ROE and ratemaking capital structure for EMW in this proceeding?

A. Based on Staff's review of Ms. Bulkley's rebuttal testimony, nothing has caused Staff to change its recommendations regarding the appropriate authorized ROE and ratemaking capital structure for EMW in this proceeding.

[158] Schedule SJW-d14-2, Won's Direct Testimony.
[159] Schedule AEB-7, Bulkley's Direct Testimony.

Q. Do you agree with Ms. Bulkley that her recalculation of Staff's COE analysis results in 10.58%?[160]

A. No, I do not. In Figure 5 of her rebuttal testimony, Ms. Bulkley presented the results of the recalculation of Staff's COE and ROE analysis. While she accepted Staff's BYPRP ROE estimate of 9.74%, Ms. Bulkley reported COE estimates of 10.69% and 11.29% from her recalculation of Staff's DCF and CAPM analysis using her overstated input values.[161] As Staff already explained in this testimony, Ms. Bulkley's input values used for her recalculation of Staff's COE analysis were produced based on her misunderstanding and misrepresentation of Staff's methodology. Staff updated its COE analysis using data of the second quarter 2024, 3-month ending June 30, 2024 and is presented in Table 4.

Table 4. COE and ROE Analysis (as of June 30, 2024)

		COE Analysis		
		Lower	Average	Upper
COE Estimation	DCF	7.49%	8.55%	9.60%
	CAPM	9.04%	9.72%	10.40%
		8.27%	9.13%	10.00%

		ROE Analysis		
		Lower	Estimate	Upper
ROE Estimation	BYPRP	9.73%	9.74%	9.75%
ROE Recommendation			9.74%	

[160] Page 43, lines 1-5, Bulkley's Rebuttal Testimony.
[161] Figure 5 (p.43), Bulkley's Rebuttal Testimony.

Q. Do you have any evidence that Staff's recommended ROE of 9.74% is more reasonable than Ms. Bulkley's proposed ROE of 10.50% when compared with electric utility companies of commensurate risk?

A. Yes. In the first half of 2024, recently authorized comparable ROEs ranged from 9.26% to 9.94%, with an average of 9.69% across all 20 electric utility cases with an average of 9.74% for the 10 vertically integrated electric utility cases.[162] Of the 20 electric rate case decisions regarding authorized ROEs in the U.S. in the first half of 2024, none fall within Ms. Bulkley's proposed reasonable ROE range of 10.25% to 11.25%,[163] while 18 of the 20 authorized ROEs fall within Staff's zone of reasonableness, ranging from 9.49% to 9.99%.[164] Two exceptions outside Staff's zone of reasonableness are the authorized ROEs of 9.23% and 9.40%. Therefore, Staff's recommended ROE of 9.74% is more reasonable than Ms. Bulkley's proposed ROE of 10.50% when compared with electric utility companies of commensurate risk.

Q. Does this conclude your response to the rebuttal testimony of EMW's witness?

A. Yes, it does.

continued on next page

[162] S&P Global Market Intelligence, Retrieved in July 2, 2024.
[163] Page 7, lines 26-27, Bulkley's Direct Testimony.
[164] Page 40, line 20, 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. The areas in which Staff addresses issues of Mr. Murray's rebuttal testimony include:

- Capital Structure, and
- Recommended ROE.

Staff will discuss each in turn, below.

1. Capital Structure

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

A. Mr. Murray continued to support a capital structure of 47.2% common equity and 52.8% long-term debt for EMW.[165] In his direct testimony, Mr. Murray recommended this capital structure based on his analysis of Evergy Inc.'s and EMW's quarterly capital structures from the beginning of the test year (July 1, 2022) through the end of the update period (December 31, 2023).[166]

Q. What is Mr. Murray's response to your original recommended capital structure in your direct testimony?

A. In his rebuttal testimony, Mr. Murray only summarized the recommended capital structure from my direct testimony without providing any additional comments. Mr. Murray stated that "Dr. Won recommends that MO West's authorized ratemaking capital structure be set at 50/50. Dr. Won's recommended ratemaking common equity ratio is slightly lower than the approximate 52% ratio Evergy Inc. ("Evergy") targets for its utility

[165] Page 11, lines 6-20, Murray's Rebuttal Testimony.
[166] Page 30, lines 17-20, Murray's Direct Testimony.

subsidiaries."[167] Staff will address its revised ratemaking capital structure recommendation in its true-up direct testimony in a later section.

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

A. Staff has one major concern with Mr. Murray's recommendation. Mr. Murray's recommended capital structure was developed considering Evergy Inc.'s consolidated capital structure, instead of the GMO portion of EMW's electric service standalone capital structure. Staff did not find any critical reason not to use the GMO portion of EMW's standalone capital structure for the purpose of ratemaking.[168] More details regarding Staff's issues with Mr. Murray's capital structure recommendation were explained in my rebuttal testimony.[169]

2. Authorized ROE

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

A. Mr. Murray continued to support that the Commission set EMW's authorized ROE at 9.50%.[170] In his direct testimony, Mr. Murray recommended 9.50% based on a range of 9.25% to 9.75%.[171]

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

A. Because the two reasonable ROE ranges overlap, Mr. Murray did not clearly disagree with Staff's recommended ROE of 9.74%, but expressed some concern about the range of 9.49% to 9.99%. Mr. Murray stated, "The Commission should disregard any ROE

[167] Page 2, lines 3-5, Murray's Rebuttal Testimony.
[168] Pages 29-31, Won's Direct Testimony.
[169] Pages 34-39, Won's Rebuttal Testimony.
[170] Page 11, line 15, Murray's Rebuttal Testimony.
[171] Page 2, lines 18-19, Murray's Direct Testimony.

above 9.75%. However, considering my 9.5% ROE recommendation is still 100 basis points over the COE, I still recommend the Commission adopt my point recommendation."[172]

Q. What are Staff's concerns regarding Mr. Murray's response about an authorized ROE?

A. While Staff does not agree with all of Mr. Murray's responses to Staff's recommended ROE, it does not have any major concerns with his recommended ROE of 9.50% since it falls within Staff's recommended range of 9.49% to 9.99%.[173] One point Staff wants to note is that Mr. Murray did not provide any clear evidence to support his insistence that the Commission should specifically disregard any ROE above 9.75%..[174] As Staff reported, recently authorized comparable ROEs ranged from 9.26% to 9.94% across all 20 electric utility cases in the first half of 2024.[175]

Q. Does this conclude your response to the rebuttal testimony of OPC's witness?

A. Yes, it does.

continued on next page

[172] Page 34, lines 3-5, Murray's Rebuttal Testimony.
[173] Schedule SJW-d16, Won's Direct Testimony.
[174] Page 34, lines 3-5, Murray's Rebuttal Testimony.
[175] S&P Global Market Intelligence, Retrieved in July 2, 2024.

IV. TRUE-UP DIRECT TESTIMONY

Q. In which specific areas does Staff want to update its recommendations in the true-up direct testimony?

A. Staff wants to update its recommendations on the ratemaking capital structure and the cost of debt for calculating the allowed ROR of EMW in this proceeding.

Q. Did you perform a capital structure analysis as of June 30, 2024, which is the end of the true-up period for this proceeding?

A. Yes, I did.

Q. What is the result of Staff's capital structure analysis for the true-up process?

A. As of June 30, 2024, the end of the true-up period, Evergy Inc.'s consolidated capital structure consisted of 55.19% common equity and 44.81% long-term debt, EMW's consolidated capital structure consisted of 44.13% common equity and 55.87% long-term debt, and the standalone capital structure of EMW's regulated utility business unit consisted of 49.88% common equity and 50.12% long-term debt.[176]

Staff did not find any significant change in the financial relationship between Evergy Inc. and EMW during the true-up period. EMW is financially independent from Evergy Inc., and the overall financial relationship could be considered normal within the regular relationship between a parent company and its subsidiary.[177] In addition, only the financial information of EMW's regulated utility business unit has been included for purposes of ratemaking as it was expressly created to segregate the regulated utility and non-utility operations of the legacy Aquila entity.[178]

[176] Staff's Data Request No. 0105.5.
[177] Page 29, lines 4-14, Won's Direct Testimony.
[178] Staff's Data Request No. 0105.1.

Q. Based on its true-up capital structure analysis, what is Staff's recommended ratemaking capital structure for EMW in this proceeding?

A. Staff recommends that the standalone capital structure of EMW's regulated utility business unit which consists of 49.88% common equity and 50.12% long-term debt, as of June 30, 2024.

Q. Did you calculate a cost of long-term debt as of June 30, 2024, the end of the true-up period for this proceeding?

A. Yes, I did.

Q. What is the result of Staff's calculation of EMW's cost of long-term debt for the true-up process?

A. The embedded cost of long-term debt for EMW as of June 30, 2024, is 4.34%.[179]

Q. What is Staff's recommendation for the allowed ROR of EMW in this proceeding based on the true-up results?

A. Staff's recommended ROE of 9.74% for EMW, along with an embedded cost of debt of 4.34% applied to a ratemaking capital structure of 49.88% common equity and 50.12% long-term debt, results in an allowed ROR of 7.03%.[180]

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

A. Yes, it does.

continued on next page

[179] Staff Data Request No. 0106.1.
[180] Schedule SJW-td1, Won' Surrebuttal / True-Up Direct Testimony.

V. SUMMARY AND CONCLUSIONS

Q. Please summarize the conclusions of your surrebuttal / true-up direct testimony.

A. Global financial market environments, including the U.S. utility capital investments market, have changed rapidly, especially after the COVID-19 pandemic. Some ROR analysts have continued using methods and data they are accustomed to, even though these may no longer be appropriate. Furthermore, some experts have expressed concerns about changes in Staff's methods and data compared to past rate proceedings. With consistent principles and methodology, Staff has investigated and improved its methods and data using the best available resources at each new rate proceeding to recommend a just and reasonable ratemaking cost of capital and capital structure.

Ms. Bulkley and Staff disagree on the appropriate ROE for EMW. Ms. Bulkley's proposed ROE of 10.50% is not just and reasonable due to her reliance on inappropriate and unreasonable inputs for her COE analyses. Ms. Bulkley's belief that the COE and the authorized ROE are equivalent contradicts basic financial logic and market evidence. Staff does not have major concerns with Mr. Murray's recommended ROE of 9.50% as it falls within Staff's recommended range of 9.49% to 9.99%.[181] After reviewing the rebuttal testimonies of Ms. Bulkley and Mr. Murray, Staff continues to recommend an authorized ROE of 9.74%.

Ms. Bulkley continued to support Mr. Andrew's projected standalone capital structures as of June 30, 2024, filed on February 2, 2024, which consist of 52.04% common equity and 47.96% long-term debt for EMW,[182] despite these projections differing from the actual capital structures as of that date. Staff also disagrees with Mr. Murray's capital structure that

[181] Schedule SJW-d16, Won's Direct Testimony.
[182] Table 1 (p.4), Andrews' Direct Testimony.

consists of 47.2% common equity and 52.8% long-term debt based on his analysis of Evergy Inc.'s and EMW's quarterly capital structures.[183] Based on its true-up analysis, Staff recommends a cost of long-term debt of 4.34% and a ratemaking capital structure of 49.88% common equity and 50.12% long-term debt. Along with Staff's recommended ROE of 9.74%, these figures result in an allowed ROR of 7.03% for this proceeding.[184]

Q. Does this conclude your Surrebuttal / True-up Direct testimony?

A. Yes, it does.

[183] Page 30, lines 17-20, Murray's Direct Testimony.
[184] Schedule SJW-td1, Won' Surrebuttal / True-Up Direct Testimony.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Request for Authority to Implement A General Rate Increase for Electric Service	))))	Case No. ER-2024-0189

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 3rd day of September 2024.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

Notary Public

Evergy Missouri West, Inc.
Case No. ER-2024-0189

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]
	2024 Q2		Past 10-Years			Past 5-Year			Projected			Average			Projective	GDP	DCF
	Electric Utility Companies	Ticker	EPS	DPS	BVPS	EPS	DPS	BVPS	EPS	DPS	BVPS	EPS	DPS	BVPS	Growth	Growth	Growth
1	Alliant Energy Corporation	LNT	6.00%	6.50%	6.00%	7.00%	6.50%	6.50%	6.00%	6.00%	4.00%	6.33%	6.33%	5.50%	5.33%	4.10%	4.35%
2	Ameren Corporation	AEE	4.00%	3.50%	2.00%	8.00%	5.00%	5.50%	6.50%	6.50%	6.50%	6.17%	5.00%	4.67%	6.50%	4.10%	4.58%
3	American Electric Power Company, Inc.	AEP	5.00%	5.00%	3.50%	4.00%	5.00%	3.50%	6.50%	5.50%	6.00%	5.17%	5.17%	4.33%	6.00%	4.10%	4.48%
4	Avista Corporation	AVA	3.00%	4.50%	4.00%	1.00%	4.50%	3.50%	6.00%	4.50%	3.50%	3.33%	4.50%	3.67%	4.67%	4.10%	4.21%
5	CMS Energy Corporation	CMS	6.00%	7.00%	6.50%	5.50%	6.50%	8.00%	5.00%	4.00%	4.00%	5.50%	5.83%	6.17%	4.33%	4.10%	4.15%
6	Duke Energy Corporation	DUK	3.00%	3.00%	2.00%	4.50%	3.50%	1.00%	5.00%	2.00%	2.50%	4.17%	2.83%	1.83%	3.17%	4.10%	3.91%
7	Entergy Corporation	ETR	2.50%	2.00%	2.00%	5.50%	3.00%	6.50%	0.50%	3.50%	4.00%	2.83%	2.83%	4.17%	2.67%	4.10%	3.81%
8	IDACORP, Inc.	IDA	4.00%	8.50%	4.50%	3.50%	6.50%	4.50%	5.00%	5.50%	4.00%	4.17%	6.83%	4.33%	4.83%	4.10%	4.25%
9	Northwestern Corporation	NWE	3.50%	5.50%	6.00%		3.50%	4.00%	4.00%	2.00%	3.00%	3.75%	3.67%	4.33%	3.00%	4.10%	3.88%
10	OGE Energy Corp.	OGE	3.00%	7.50%	4.00%	4.50%	6.00%	1.50%	6.50%	3.00%	5.50%	4.67%	5.50%	3.67%	5.00%	4.10%	4.28%
11	Pinnacle West Capital Corporation	PNW	3.50%	4.00%	4.00%	2.00%	5.00%	3.50%	4.50%	1.50%	4.50%	3.33%	3.50%	4.00%	3.50%	4.10%	3.98%
12	Portland General Electric Company	POR	3.50%	5.00%	3.50%	3.00%	6.00%	3.00%	6.00%	5.50%	4.00%	4.17%	5.50%	3.50%	5.17%	4.10%	4.31%
13	The Southern Company	SO	3.00%	3.50%	3.00%	3.00%	3.50%	2.50%	6.50%	3.50%	3.50%	4.17%	3.50%	3.00%	4.50%	4.10%	4.18%
14	Xcel Energy Inc.	XEL	5.50%	6.00%	5.00%	6.50%	6.50%	6.00%	6.00%	6.50%	5.00%	6.00%	6.33%	5.33%	5.83%	4.10%	4.45%
	Average		3.96%	5.11%	4.00%	4.46%	5.07%	4.25%	5.29%	4.25%	4.29%	4.55%	4.81%	4.18%	4.61%	4.10%	4.20%

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

Evergy Missouri West, Inc.
Case No. ER-2024-0189

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

			[1]	[2]	[3]	[4]	[5]	[6]	[7]
	2024 Q2		April 2024		May 2024		June 2024		(4/01/24 - 6/30/24)
	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	50.61	47.23	52.31	49.05	52.03	49.25	50.08
2	Ameren Corporation	AEE	75.02	70.10	76.15	70.00	74.16	69.39	72.47
3	American Electric Power Company, Inc.	AEP	88.30	79.16	93.44	85.70	91.00	85.93	87.26
4	Avista Corporation	AVA	36.12	33.00	38.91	35.84	37.24	33.58	35.78
5	CMS Energy Corporation	CMS	60.97	56.61	63.70	60.16	63.44	58.54	60.57
6	Duke Energy Corporation	DUK	99.61	92.75	104.60	97.49	104.87	99.30	99.77
7	Entergy Corporation	ETR	108.45	100.38	114.28	105.04	112.49	105.35	107.66
8	IDACORP, Inc.	IDA	95.88	88.70	99.21	92.18	96.01	90.64	93.77
9	Northwestern Corporation	NWE	51.02	47.48	53.03	49.99	52.39	48.91	50.47
10	OGE Energy Corp.	OGE	34.76	32.37	37.30	34.18	36.70	34.84	35.03
11	Pinnacle West Capital Corporation	PNW	75.28	70.73	78.89	73.14	78.86	74.45	75.22
12	Portland General Electric Company	POR	44.75	40.10	45.49	42.60	44.74	41.86	43.26
13	The Southern Company	SO	74.85	67.53	80.23	73.20	80.84	77.18	75.64
14	Xcel Energy Inc.	XEL	55.69	52.17	56.79	52.85	56.54	52.68	54.45

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 Missouri West, Inc.
Case No. ER-2024-0189

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

	2024 Q2 DCF COE estimate		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
	Electric Utility Companies	Ticker	2023 Dividend per Share	Stock Price	Dividend Yield	Expected Dividend Yield	Projected Growth	Projected GDP Growth	Growth Rate	COE
1	Alliant Energy Corporation	LNT	1.81	50.08	3.61%	3.71%	5.33%	4.10%	5.09%	8.79%
2	Ameren Corporation	AEE	2.52	72.47	3.48%	3.58%	6.50%	4.10%	6.02%	9.60%
3	American Electric Power Company, Inc.	AEP	3.37	87.26	3.86%	3.97%	6.00%	4.10%	5.62%	9.59%
4	Avista Corporation	AVA	1.84	35.78	5.14%	5.26%	4.67%	4.10%	4.55%	9.81%
5	CMS Energy Corporation	CMS	1.95	60.57	3.22%	3.29%	4.33%	4.10%	4.29%	7.58%
6	Duke Energy Corporation	DUK	4.06	99.77	4.07%	4.14%	3.17%	4.10%	3.35%	7.49%
7	Entergy Corporation	ETR	4.34	107.66	4.03%	4.09%	2.67%	4.10%	2.95%	7.04%
8	IDACORP, Inc.	IDA	3.20	93.77	3.41%	3.49%	4.83%	4.10%	4.69%	8.18%
9	Northwestern Corporation	NWE	2.52	50.47	4.99%	5.07%	3.00%	4.10%	3.22%	8.29%
10	OGE Energy Corp.	OGE	1.66	35.03	4.74%	4.85%	5.00%	4.10%	4.82%	9.67%
11	Pinnacle West Capital Corporation	PNW	3.49	75.22	4.64%	4.72%	3.50%	4.10%	3.62%	8.34%
12	Portland General Electric Company	POR	1.88	43.26	4.35%	4.45%	5.17%	4.10%	4.95%	9.41%
13	The Southern Company	SO	2.78	75.64	3.68%	3.76%	4.50%	4.10%	4.42%	8.18%
14	Xcel Energy Inc.	XEL	2.08	54.45	3.82%	3.92%	5.83%	4.10%	5.49%	9.41%
	Average		2.68	67.24	4.07%	4.17%	4.61%	4.10%	4.51%	8.67%
									DCF Lower Bound	7.53%
									DCF Upper Bound	9.64%
									DCF COE	8.59%

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 Missouri West, Inc.
Case No. ER-2024-0189

Based on Historical Return Differences Between Common Stocks and Long-Term U.S. Treasuries
Based on Dividend per Share, Earning per Share, Stock Price, and Growth Rate

2024 Q2 CAPM Estimate		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]
				Kroll, LLC (1926-2023)				NYU Stern (1928-2023)				Market Risk Premium				CAPM Cost of Common Equity			
				Large Company Stocks		Long-term G-Bonds		S&P 500		US Treasury Bond		Kroll, LLC		NYU Stern		Kroll, LLC		NYU Stern	
Electric Utility Companies	Ticker	Risk-Free Rate	Beta	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return
Alliant Energy Corporation	LNT	4.57%	0.90	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.66%	9.92%	9.28%	10.69%
Ameren Corporation	AEE	4.57%	0.90	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.66%	9.92%	9.28%	10.69%
American Electric Power Company, Inc.	AEP	4.57%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.44%	9.62%	9.02%	10.35%
Avista Corporation	AVA	4.57%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.89%	10.22%	9.54%	11.03%
CMS Energy Corporation	CMS	4.57%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.44%	9.62%	9.02%	10.35%
Duke Energy Corporation	DUK	4.57%	0.90	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.66%	9.92%	9.28%	10.69%
Entergy Corporation	ETR	4.57%	1.00	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	9.12%	10.51%	9.80%	11.37%
IDACORP, Inc.	IDA	4.57%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.44%	9.62%	9.02%	10.35%
Northwestern Corporation	NWE	4.57%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.89%	10.22%	9.54%	11.03%
OGE Energy Corp.	OGE	4.57%	1.05	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	9.34%	10.81%	10.06%	11.71%
Pinnacle West Capital Corporation	PNW	4.57%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.89%	10.22%	9.54%	11.03%
Portland General Electric Company	POR	4.57%	0.90	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.66%	9.92%	9.28%	10.69%
The Southern Company	SO	4.57%	0.90	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.66%	9.92%	9.28%	10.69%
Xcel Energy Inc.	XEL	4.57%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.44%	9.62%	9.02%	10.35%
Average		4.57%	0.91	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.73%	10.01%	9.35%	10.79%
																	CAPM Lower Bound		9.04%
																	CAPM Upper Bound		10.40%
																	CAPM COE		9.72%

Schedule SJW-S2

Evergy Missouri West, Inc.
Case No. ER-2024-0189

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

	[1] Bond Yield (%)		[2] Risk Premium (%)		[3] Estimated ROE (%)	
Month-Year	A	Baa	A	Baa	A	Baa
Jan-24	5.48	5.73	4.25	4.01	9.73	9.74
Feb-24	5.56	5.79	4.18	3.96	9.74	9.75
Mar-24	5.55	5.79	4.19	3.96	9.74	9.75
Apr-24	5.79	6.01	3.96	3.75	9.75	9.76
May-24	5.74	5.97	4.00	3.79	9.74	9.76
Jun-24	5.61	5.84	4.13	3.91	9.74	9.75
Q1 2024	5.53	5.77	4.20	3.98	9.73	9.75
Q2 2024	5.71	5.94	4.03	3.81	9.74	9.75
Total	5.62	5.86	4.12	3.90	9.74	9.75
				BYPRP Lower Bound		9.74
				BYPRP Upper Bound		9.75
				BYPRP ROE		9.74

Notes:

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

[2] = 9.47 - 0.9515 x [1]

[3] = [1] + [2]

Evergy Missouri West, Inc.
Case No. ER-2024-0189

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

Regression Statistics	
Multiple R	0.9598
R Square	0.9212
Adjusted R Square	0.9209
Standard Error	0.2325
Observations	244

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	153.0035	153.0035	2830.6037	0.0000
Residual	242	13.0809	0.0541		
Total	243	166.0844			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	9.4665	0.0789	119.9612	0.0000	9.3110	9.6219	9.3110	9.6219
Bond Yield	-0.9515	0.0179	-53.2034	0.0000	-0.9867	-0.9163	-0.9867	-0.9163

Evergy Missouri West, Inc.
Case No. ER-2024-0189

COST OF EQUITY AND RETURN ON EQUITY
(as of June 30, 2024)

		COE Analysis		
		Lower	Average	Upper
COE Estimation	DCF	7.53%	8.59%	9.64%
	CAPM	9.04%	9.72%	10.40%
	Average	8.29%	9.13%	10.02%

		ROE Analysis		
		Lower	Estimate	Upper
ROE Estimation	BYPRP	9.74%	9.74%	9.75%

ROE Recommendation	9.74%

Schedule SJW-S4

Evergy Missouri West, Inc.
Case No. ER-2024-0189

TRUE-UP UPDATED ALLOWED RATE OF RETURN

Evergy West			Allowed Rate of Return Common Equity Return of:		
	Percentage	Embedded	Lower	ROE	Upper
Capital Component	of Capital	Cost	**9.49%**	**9.74%**	**9.99%**
Common Stock Equity	49.88% [1]	-	4.73%	4.86%	4.98%
Preferred Stock	0.00% [1]	-	0.00%	0.00%	0.00%
Long-Term Debt	50.12% [1]	4.34% [2]	2.18%	2.18%	2.18%
Total	**100.00%**		**6.91%**	**7.03%**	**7.16%**

Note:

1 Staff's Data Request No. 0105.5.

2 Staff's Data Request No. 0106.2.