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Witness: *Seoung Joun Won, PhD*
Sponsoring Party: *MoPSC Staff*
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Case Nos.: *ER-2022-0129 and ER-2022-0130*
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MISSOURI PUBLIC SERVICE COMMISSION

FINANCIAL AND BUSINESS ANALYSIS DIVISION

FINANCIAL ANALYSIS DEPARTMENT

REBUTTAL TESTIMONY

OF

SEOUNG JOUN WON, PhD

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2022-0129

Evergy Missouri West, Inc., d/b/a Evergy Missouri West
Case No. ER-2022-0130

Jefferson City, Missouri
July 2022

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Case No. ER-2022-0129

Evergy Missouri West, Inc., d/b/a Evergy Missouri West
Case No. ER-2022-0130

Q. Please state your name and business address.

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

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

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

Q. Are you the same Seoung Joun Won who filed Direct Testimony on June 8, 2022?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the direct testimonies of Ann E. Bulkley, Kirkland B. Andrews, and David Murray. Ms. Bulkley sponsored return on equity ("ROE") and overall rate of return ("ROR") testimony on behalf of Evergy Metro, Inc., d/b/a Evergy Missouri Metro ("Evergy Metro" or "EMM") and Evergy Missouri West, Inc., d/b/a Evergy Missouri West ("Evergy West" or "EMW"), subsidiaries of Evergy, Inc. ("Evergy Inc." or "Evergy"). Mr. Andrews sponsored ROR and capital structure testimony on behalf of Evergy Metro and Evergy West. Mr. Murray sponsored ROE, ROR, and capital structure testimony on behalf of the Missouri Office of the Public Counsel ("OPC"). Within this testimony, Staff will address issues related to a just and reasonable ROR to be applied to Evergy Metro's and Evergy West's electric utility rate base for ratemaking purposes in this proceeding. Staff's analyses and conclusions are supported by the data presented in Staff's rebuttal workpapers.

I. EXECUTIVE SUMMARY

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

A. Staff's rebuttal will focus on Ms. Bulkley's recommended ROE and Mr. Andrews's capital structure and recommended ROR. For Evergy Metro, Ms. Bulkley recommended an ROE of 10.00% within a range of 9.90% to 10.50%.[1] Mr. Andrews recommended an ROR of 7.032% based on what Evergy Metro's standalone capital structure was projected to be on May 31, 2022, consisting of 51.19% common equity and 48.81% long-term debt with a cost of debt of 3.920%.[2] For Evergy West, Ms. Bulkley also recommended an ROE of 10.00% within a range of 9.90% to 10.50%.[3] Mr. Andrews recommended an ROR of 7.006% based on what Evergy West's standalone capital structure was projected to be on May 31, 2022, consisting of 51.81% common equity and 48.19% long-term debt with a cost of debt of 3.787%.[4]

During the audit review process, Staff discerned that Ms. Bulkley introduced a series of biased estimates for her cost of equity ("COE") to recommend an overstated ROE.[5] Ms. Bulkley overestimated her COE by using inflated input data and improper estimation methods in her direct

[1] On page 7, lines 5-9, Bulkley's Direct Testimony, ER-2022-0129.
[2] On page 4, Table 1, Andrews' Direct Testimony, ER-2022-0129.
[3] On page 7, lines 6-10, Bulkley's Direct Testimony, ER-2022-0130.
[4] On page 4, Table 1, Andrews' Direct Testimony, ER-2022-0130.
[5] Ms. Bulkley falsely used the terms ROE and COE interchangeably. As explained in footnote No.4 of Won's Direct Testimony, COE is the return required by investors; ROE is the return set by a regulatory utility commission.

testimony. In this rebuttal testimony, Staff will provide a detailed explanation on how Ms. Bulkley used unreasonable upwardly-biased input data in the Constant Growth form of the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and the Bond Yield Plus Risk Premium ("BYPRP") analysis.[6]

Mr. Andrews's proposed ROR is based on Evergy Metro's and Evergy West's projected standalone capital structure and cost of debt as of May 31, 2022, with Ms. Bulkley's recommended ROE. Staff found that Evergy Metro and Evergy West's actual equity ratios of 51.37% and 51.47% as of May 31, 2022 are slightly different from Mr. Andrews's projected equity ratios of 51.19% and 51.81% as of May 31, 2022, respectively. At this time, Staff will not address any major issues with the projected standalone capital structures of Evergy Metro and Evergy West. Currently, the changes of Evergy Metro, Evergy West and Evergy Inc.'s true-up capital structures are under review. Staff will make a final recommendation in later testimony filings after investigating the reason for Evergy Metro and Evergy West's actual capital structure changes.

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

A. Mr. Murray recommended an ROE of 9.0% within a range of 8.5% to 9.5% and a ROR of 6.34% based on his recommended capital structure of 48.0% common equity and 52.0% long-term debt and applying a cost of long-term debt of 3.92%.[7] Mr. Murray's recommended ROE of 9.0% is even lower than the most recent Commission's authorized ROE of 9.25% in July 2020.[8]

Mr. Murray's recommended common equity to total capital ratio ("equity ratio") of 48.0% is more than 300 basis points lower than the actual Evergy Metro's and Evergy West's common

[6] On pages 3-6, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[7] Schedule DM-D-9, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[8] *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.

equity ratios of 51.37% and 51.47% as of May 31, 2022, respectively.[9] Mr. Murray's recommended common equity ratio is based on his analysis of Evergy Inc.'s, Evergy Metro's and Evergy West's quarterly capital structures from the beginning of the test year (July 1, 2020) through the end of the update period (December 31, 2021).[10] Staff expresses concern with Mr. Murray's recommended capital structure using Evergy Inc.'s capital structure ratios instead of Evergy Metro and Evergy West's. Mr. Murray's recommended equity ratio of 48% is much lower than Evergy Metro's and Evergy West's current common equity ratios.

II. RESPONSE TO TESTIMONY OF EVERGY'S WITNESSES

Q. What are the specific areas in which Staff is responding to Evergy Metro and Evergy West's witnesses?

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

- Recommended ROE,
- Proxy Group Criteria,
- Growth Rates for DCF Model,
- Market Risk Premium for CAPM,
- Empirical CAPM Method,
- BYPRP Analysis, and
- Regulatory and Business Risks.

Then, Staff will address Mr. Andrews's recommended capital structure. Staff will discuss each in turn, below.

[9] Staff's Data Request No. 0115, ER-2022-0129 and ER-2022-0130.
[10] On page 31, lines 20-22, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.

1. Recommended ROE

Q. What is Ms. Bulkley's recommended ROE for Evergy Metro and Evergy West in this proceeding?

A. Ms. Bulkley recommended an ROE of 10.00%, within a range of 9.90% to 10.50%, for use in this proceeding.[11]

Q. How did Ms. Bulkley determine her recommended ROE?

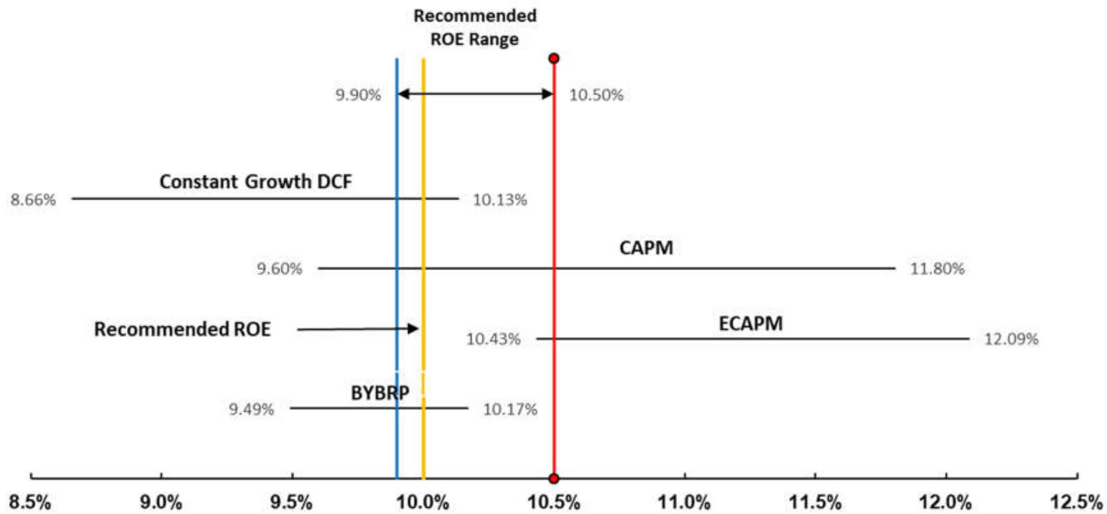
A. Ms. Bulkley determined her recommended ROE from a range of the results of her COE estimates. Ms. Bulkley calculated a COE estimate range of 8.66% to 12.09%.[12] For her ROE recommendation, Ms. Bulkley considered company-specific risk factors along with current and prospective capital market conditions.[13] However, Ms. Bulkley did not precisely state her procedure for selecting the recommended ROE point estimation of 10.00% or the ends of her reasonable COE range of 9.90% to 10.50% from within her COE estimate analytic results of 8.66% to 12.09%.[14]

Q. How did Ms. Bulkley estimate her COE?

A. Ms. Bulkley applied COE estimation models such as constant-growth DCF, the CAPM, the ECAPM, and the BYPRP to electric utility proxy group.[15] Ms. Bulkley's COE estimates for each analysis method and recommended ROE are summarized in Figure 1:[16]

[11] On page 7, lines 6-9, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[12] On page 80 and 83, Figure 10, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130, respectively.
[13] On pages 6-7, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[14] On page 7, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[15] On pages 3-6, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[16] 1 Summary, Won's Rebuttal Workpaper.

Figure 1. Ms. Bulkley's COE Estimates and ROE Recommendation



Q. What are Staff's concerns with Ms. Bulkley's recommended ROE?

A. Staff's concern is that Ms. Bulkley's recommended ROE of 10.00% is too high compared to the average authorized ROE of 9.39% in electric utility rate cases completed in in the first half of 2022.[17] Ms. Bulkley's recommended ROE is based on her overstated COE estimates. Ms. Bulkley presented unreasonable COE estimation procedures using exaggerated input values for her COE estimation models. Ms. Bulkley utilized a variety of data sources and analysis methods to produce inflated input values. The following summarizes the steps that led to Ms. Bulkley's overestimation of her COE:

1. Selecting inappropriate biased data,
2. Producing overestimated input values, and
3. Utilizing inadequate estimation methods.

Staff will describe how each of Ms. Bulkley's COE estimates are overstated by presenting detailed investigation results later in this testimony.

[17] S&P Capital IQ Pro, Retrieved on July 2, 2022.

2. Proxy Group Criteria

Q. What is Ms. Bulkley's proxy group for estimating Evergy Metro and Evergy West's COE?

A. Ms. Bulkley selected fifteen (15) electric utility companies for her proxy group for Evergy Metro and Evergy West's COE estimation. Ms. Bulkley's electric utility proxy group was selected from 36 publicly-traded electric distribution utility companies classified by Value Line as electric utilities.[18] The following is the list of Ms. Bulkley's electric utility proxy group and associated ticker symbols:

Table 1. Electric Utility Proxy Group and Ticker

	Electric Utility Proxy	Ticker
1	ALLETE, Inc.	ALE
2	Alliant Energy Corporation	LNT
3	Ameren Corporation	AEE
4	American Electric Power Company, Inc.	AEP
5	Avista Corporation	AVA
6	Duke Energy Corporation	DUK
7	Entergy Corporation	ETR
8	IDACORP, Inc.	IDA
9	MGE Energy, Inc.	MGEE
10	NextEra Energy, Inc.	NEE
11	NorthWestern Corporation	NWE
12	Otter Tail Corporation	OTTR
13	Portland General Electric Company	POR
14	Southern Company	SO
15	Xcel Energy Inc.	XEL

Q. What is Staff's concern with Ms. Bulkley's proxy group selection criteria?

[18] On page 25 and 26, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130, respectively.

A. Ms. Bulkley excluded Pinnacle West Capital Corporation ("PNW") from her electric utility proxy group because the stock price of PNW decreased approximately 24 percent over a one-month period from October to November of 2021 resulting from a negative regulatory decision for its largest operating company, Arizona Public Service Company. Staff disagrees with her exclusion of PNW. The highest stock price of PNW in October of 2021 was $74.18 on October 6, 2021. However, the stock price of PNW fell to a low of $63.36 by November 9, 2021 but the stock price then rebounded to $80.49 by April 6, 2022, exceeding its October 2021 high.[19] Considering PNW's stock price changes, Ms. Bulkley's argument of excluding PNW in her electric utility proxy group is unwarranted.

3. Growth Rates for Discounted Cash Flow Models

Q. What is Staff's concern with Ms. Bulkley's constant-growth DCF model?

A. Ms. Bulkley used unreasonably high growth rates in her constant-growth DCF model, which overstated her COE estimates. Ms. Bulkley exclusively used projected earnings growth rates, which she erroneously called long-term earnings growth rates.[20] Analysts' projected growth rates are for periods of 3 to 5 years, which is considered short given the infinite investment horizon assumed in the DCF. Furthermore, Ms. Bulkley excluded individual companies' DCF COE results in her calculation of DCF COE estimates if a company's DCF COE estimate was lower than 7%.[21] Because of overstated growth rates and a one-sided selection, Ms. Bulkley's DCF COE estimates are unreasonably upward biased.

[19] S&P Capital IQ Pro.
[20] On pages 35-36, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[21] On page 36 and 37, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130, respectively.

Q. What is wrong with using exclusively projected earnings growth rates for Ms. Bulkley's constant-growth DCF COE estimates?

A. Analysts' projected earnings growth rates are not suitable for use, exclusively, in the constant-growth DCF model because the growth rates that Ms. Bulkley utilized are not perpetual growth rates and are often shorter than five-year projected growth rates. The constant-growth DCF model assumes a perpetual investment horizon. By exclusively using these analysts' projected growth rates in the context of the constant-growth DCF model, Ms. Bulkley makes an unreasonable assumption that electric utilities will grow at these often high and precarious shorter term growth rates, in perpetuity. Analysts are of the consensus opinion that long-term growth rates for utilities will eventually converge to the level of long-term gross domestic product ("GDP").[22] Staff has consistently held the view that while it is possible that a company or industry may grow at a rate faster than the GDP in the short to medium term, no company or industry will do so in perpetuity. Currently, the nominal GDP is projected to grow at a longer run rate of 3.80% and 3.90% reported by Federal Open Market Committee ("FOMC") and the Congressional Budget Office ("CBO"), respectively.[23] An example of Ms. Bulkley's unreasonably high growth rates is the 10.50% growth rate with 180-day average stock price used to produce NextEra Energy, Inc.'s mean and high DCF COE estimates of 10.95% and 12.58%, respectively.[24] Such high growth rates should not be used in constant-growth DCF COE estimates.

[22] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 302.
[23] Federal Open Market Committee, retrieved on June 17, 2022, (https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20220615.pdf).
An Update to the Economic Outlook: 2022 to 2032, Congressional Budget Office, June 2, 2022, (https://www.cbo.gov/system/files/2022-05/57950-Outlook.pdf).
[24] Schedule AEB-3, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.

Q. What is wrong with the low-end threshold of 7% in Ms. Bulkley's DCF COE estimates?

A. To explain why she excluded a company if its DCF COE estimate is below 7%, Ms. Bulkley stated that:[25]

> The average credit rating for the companies in my proxy group is BBB+ from S&P and Baa1 from Moody's. The average yield on Moody's Baa-rated utility bonds for the 30 trading days ending September 30, 2021, was 3.19 percent. [Footnote 44] Therefore, for example, a 7.00 percent DCF result would only provide a risk premium of 381 basis points above Baa-rated utility bonds. As a result, I have determined that a Constant Growth DCF result lower than 7.00 percent would not provide equity investors a sufficient risk premium above long-term debt costs.

In her reasoning, without any justification, Ms. Bulkley assumed the Baa-rated electric utility company's risk premium of 3.81% is too low. However, based on general U.S. capital-market and regulated utilities data, the equity risk premium is approximately in the range of 3.5% to 5.5%.[26] Therefore, Ms. Bulkley's rejection criterion of the low-end threshold of 7% COE is baseless and only serves for supporting her upward biased COE estimate. Hence, Ms. Bulkley's DCF COE estimates using a 7% low-end threshold criterion should be rejected.

Q. What growth rates should Ms. Bulkley have used?

A. As Staff alluded to above, appropriate growth rates for use in the constant-growth DCF model should give consideration to the long-term growth rates, represented by the projected long-term nominal GDP growth rates of 3.90%.[27] For example, the Federal Energy Regulatory Commission ("FERC") incorporates long-term GDP growth rates into calculations within the

[25] On page 36, lines 8-14, Bulkley's Direct Testimony, ER-2022-0129.
[26] Roger A. Morin, New Regulatory Finance (Public Utilities Reports, Inc. 2006).
[27] Page 134, An Update to the Economic Outlook: 2022 to 2032, Congressional Budget Office, May 2022, (https://www.cbo.gov/system/files/2022-05/57950-Outlook.pdf).

constant-growth DCF by using a ratio of 80% analyst projected long-term growth rates to 20% long-term GDP growth rates.[28] If Ms. Bulkley had used a similar approach with a proper GDP growth rate in the constant-growth DCF model, her DCF COE estimate for the 180-day average stock price would be 8.79% instead of 9.17%.[29] Therefore, reasonable DCF COE results are much lower than Ms. Bulkley's estimations.

4. Market Risk Premium of Capital Asset Pricing Models

Q. Please explain Ms. Bulkley's CAPM COE estimation methods.

A. Ms. Bulkley employed the traditional CAPM and the empirical CAPM ("ECAPM") using Value Line Beta, Bloomberg Beta and Value Line long-term average Beta with three different risk-free rates of 1.93%, 2.50% and 3.50% and a total market return of 12.94% resulting in three different market risk premiums ("MRP") of 11.01%, 10.44% and 9.44%.[30] For her electric utility proxy group, the ranges of Ms. Bulkley's CAPM and ECAPM COE estimates are 9.60% to 11.80% and 10.43% to 12.09%, respectively.[31]

Q. What is Staff's concern with Ms. Bulkley's CAPM COE estimates?

A. Ms. Bulkley's CAPM and ECAPM COE estimates are too high. Even compared to her average COE estimate of 9.43% using constant-growth DCF, Ms. Bulkley's average CAPM and ECAPM COE estimate of 10.81% and 11.34%, respectively, are too high.[32] Staff found that Ms. Bulkley's CAPM COE estimates are too high mainly because she used unreasonably high

[28] *Entergy Arkansas, Inc*., Opinion No. 575, 175 FERC ¶ 61,136 (2021).
[29] 3 Constant DCF 1, Won's Rebuttal Workpaper.
[30] Schedules AEB-4 and AEB-6, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[31] Schedule AEB-4, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[32] 1 Summary, Won's Rebuttal Workpaper.

MRPs. Ms. Bulkley's MRPs of 11.01%, 10.44% and 9.44% are much higher than regular US financial service industry's MRP estimates of around 4.00% to 7.00%.[33]

Q. How were Ms. Bulkley's MRPs estimated?

A. Ms. Bulkley calculated her MRPs as the difference between the expected market return on the S&P 500 Index and the risk-free rate. For estimating expected market return, Ms. Bulkley conducted several steps of calculations. First, using the data of companies on the S&P 500 Index, Ms. Bulkley calculated an estimated weighted average dividend yield of 1.56% and an estimated weighted average long-term growth rate of 11.29%.[34] Second, using the constant growth DCF model with her estimated dividend yield and growth rate, Ms. Bulkley estimated the required market return of 12.94%.[35] Finally, Ms. Bulkley calculated implied MRPs estimated as the difference between the implied expected equity market returns and the various risk-free rates. Ms. Bulkley's implied MRP over the current 30-day average of the 30-year U.S. Treasury bond yield, and projected yields on the 30-year U.S. Treasury bond, range from 9.44% to 11.01%.[36] Table 2 shows Ms. Bulkley's three MRP estimates and their associated estimation methods:[37]

Table 2. Bulkley's Market Risk Premium Estimation

	Estimate Method	MRP
[1]	Current 30-day average of 30-year U.S. Treasury bond yield	11.01%
[2]	Near-term projected 30-year U.S. Treasury bond yield	10.44%
[3]	Blue Chip Projected 30-year U.S. Treasury bond yield	9.44%
	Average	10.29%

[33] See Figure 2, Page 14. "MRP and corresponding COE".
[34] Schedule AEB-6, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[35] Ibid.
[36] Schedule AEB-4, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[37] Ibid.

Q. What is wrong with Ms. Bulkley's constant-growth DCF model estimation of the required market return of 12.94%?

A. Ms. Bulkley's constant-growth DCF procedure has two critical faults. First, for her expected total market return estimation using the DCF model, Ms. Bulkley's data set included companies that do not pay dividends or for which dividend information was not available. Dividend yield information is essential to utilizing the DCF model.[38] Second, consistent with Staff's position that the DCF model assumes a long-term investment horizon, Staff further finds that the growth rates that Ms. Bulkley used are short-term in horizon, which makes them unsuitable for the constant-growth DCF model she used to estimate her expected market return. Staff recalculated an expected total return including only companies with available dividend yields and found a reasonable total market return of 9.57%. Taking into account all three risk-free rates that Ms. Bulkley used results in Ms. Bulkley's estimated MRPs of less than 8%.[39]

Q. What are other financial institutions' current MRP estimates?

A. Other financial institutions' MRP estimates range from 4.61% to 6.71%.[40] According to a 2021 survey research based on 1,794 responses from business and economic professors, the North America average MRP estimate is 5.55%.[41] The American Appraisal Risk Premium Quarterly, Value Line, and Duff & Phelps (now Kroll) calculated MRPs of 6.0%, 5.5%, and 5.0%, respectively.[42] Kroll's current MRPs range from 4.61% (geometric average), to 6.03% (arithmetic average) using the historical Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly

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[38] David C. Parcell in The Cost of Capital – A Practitioner's Guide prepared for SURFA.
[39] 6 Market Return, Won's Rebuttal Workpaper.
[40] 4 CAPM, Won's Rebuttal Workpaper.
[41] Fernandez, P., Bañuls, S., & Fernandez Acin, P. (2021). Survey: Market Risk Premium and Risk-Free Rate used for 88 countries in 2021. SSRN-Social Science Research Network, 1–17.
[42] FERC Opinion No. 569, 169 FERC ¶ 61,129.

Dataset from 1926 to 2021.[43] Professor Aswath Damodaran of NYU Stern School of Business, a noted equity valuation professor, currently estimates MRPs in the range of 5.13% (geometric average) to 6.71% (arithmetic average):[44]

Figure 2. MRP and corresponding COE

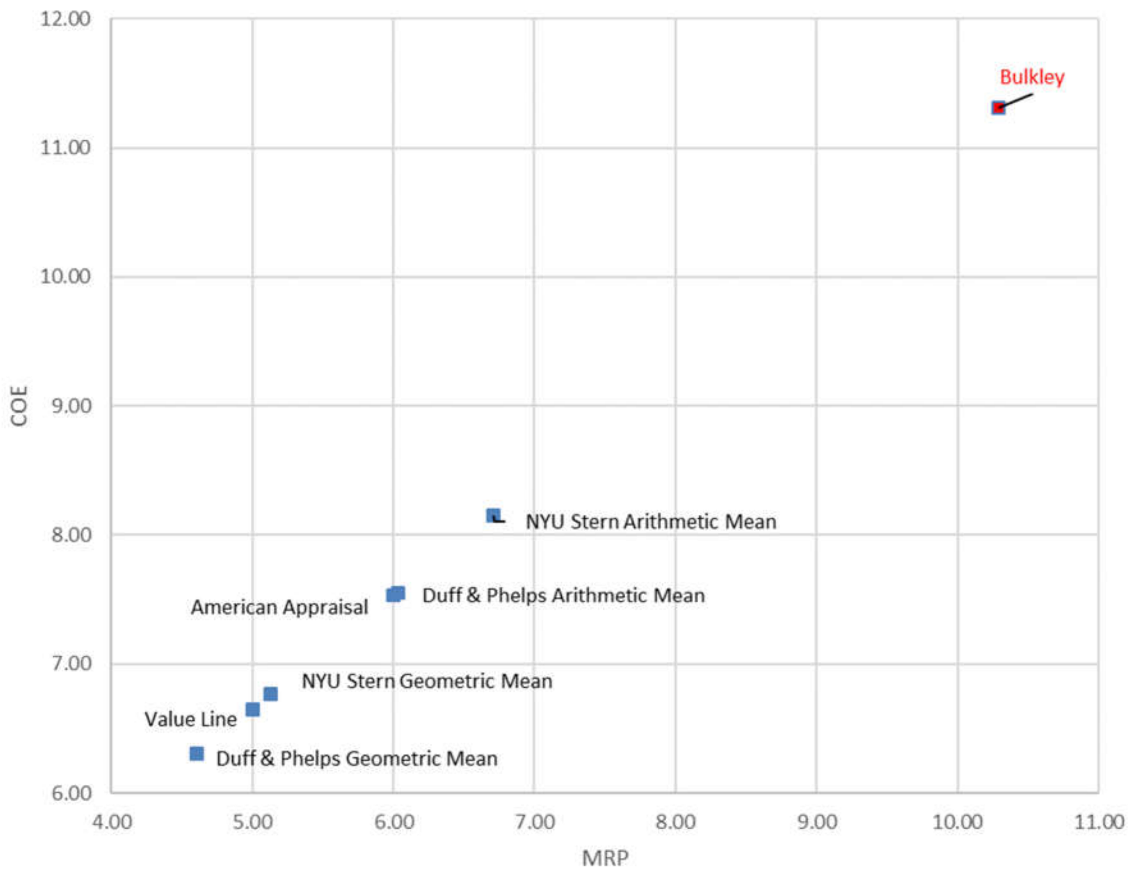

Figure 2 compares COE estimates with their corresponding MRPs, for Ms. Bulkley's electric proxy group, calculated with other reputable financial institution's reasonable MRPs and Ms. Bulkley's unreasonable MRPs, assuming the same projected 30-Year U.S. Treasury bond yield of 2.50% used in Ms. Bulkley's estimation.[45] As shown in Figure 2, Ms. Bulkley's CAPM

[43] Kroll, the Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly Dataset.
[44] Risk Premium, Damodaran Online, Stern School of Business of New York University, updated January 5, 2022.
[45] Schedule AEB-4, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.

COE estimate of 11.56%, with her corresponding average MRP of 10.29%, is an extreme outlier when compared with the other reliable published estimates. This clearly indicates that Ms. Bulkley's MRPs are too high and, consequently, her COE estimates are too high as well.

Q. Please summarize your concern with Ms. Bulkley's MRPs.

A. As presented in Table 2, Ms. Bulkley used three MRP estimates. As Staff already pointed out, all three MRP estimates are too high compared to other widely accepted MRP estimates in the financial industry.

Q. What would Ms. Bulkley's CAPM COE estimates be if she had used proper input data?

A. With more reasonable assumptions, such as an MRP of 5.50% and a risk-free rate of 2.26%,[46] Ms. Bulkley's average CAPM COE estimate would be 6.22%.[47] This is well within the range of Staff's COE estimates of 6.14% to 8.64%, which are much lower than Ms. Bulkley's average CAPM COE estimate of 10.81%.

5. Empirical Capital Asset Pricing Model

Q. What is your concern with Ms. Bulkley's ECAPM model?

A. Like her average CAPM COE estimate of 10.81%, Ms. Bulkley's average ECAPM COE estimate of 11.34% assumes too high an MRP.[48] In addition, the ECAPM model itself overestimates COE because of an adjustment to account for the supposed tendency of the CAPM method to underestimate COE for companies with low Beta coefficients.

Q. How did Ms. Bulkley adjust her CAPM COE to ECAPM COE?

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[46] The assumption of the estimated MRP of 5.51% is the average of the eight MRP estimates in Figure 2. The risk free rate of 2.26% is an average of 30-year Treasury bond at yields of three months ending June 2021.
[47] 7 CAPM Alt, Won's Rebuttal Workpaper.
[48] 1 Summary, Ibid.

A. Ms. Bulkley multiplied 75% of her MRPs by the Beta coefficient and added the remaining 25% MRPs, unadjusted.[49] This adjustment is consistent with Dr. Roger Morin's formula.[50] Dr. Morin's formula was based on his finding, with data between 1926 and 1984, that the regular CAPM underestimated returns by about 2.00%. However, there is no evidence that Dr. Morin's adjustment factor of 25% would hold with data after 1984.[51] Furthermore, Dr. Morin also cited other studies that found that the CAPM produced returns between 9.61% and 13.56%, meaning that the CAPM actually overestimated COE in some instances.[52] Such variations in findings do not lend credibility to Ms. Bulkley's use of the ECAPM.

6. Bond Yield Plus Risk Premium Analysis

Q. What is BYPRP analysis?

A. The conventional BYPRP analysis is based on the idea that since investors in stocks take greater risks than investors in bonds, the former expect to earn a return on a stock investment that reflects a premium over and above the return they expect to earn on a bond investment.[53] This premium required by investors for an investment in common stock over an investment in corresponding debt is called the risk premium.[54] Multiple approaches have been developed to determine the risk-premium for a utility. Ms. Bulkley's BYPRP is different from the conventional method.

Q. What is Ms. Bulkley's BYPRP method?

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[49] Original CAPM COE estimate equals Risk-Free Rate + Beta × MRP but ECAMP COE estimate equals Risk-Free Rate + 0.25 × MRP + 0.75 × Beta × MRP or Risk-Free Rate + Alpha + Beta × (MRP – Alpha) where Alpha = 0.25 × MRP.

[50] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 190.

[51] Ibid.

[52] Ibid.

[53] Brigham, E. F., Shome, D. K., & Vinson, S. R. (1985). The risk premium approach to measuring a utility's cost of equity. Financial Management, 33-45.

[54] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 108.

A. Ms. Bulkley's BYPRP used a regression analysis based on authorized ROEs for utility companies relative to risk-free rates (30-year Treasury bond yields).[55] Ms. Bulkley used monthly data of risk-free rates and authorized ROEs derived from 678 electric utility rate cases from 1992 through January 2021 as reported by Regulatory Research Associates ("RRA").[56] Ms. Bulkley's regression analysis result in the following equation:

Risk Premium (%) = 8.67% – 0.5707 Risk-Free Rate (%).[57]

Because Ms. Bulkley defined the risk premium as the authorized ROE minus the risk-free rate, Ms. Bulkley's BYPRP ROE estimates are only determined by 30-year Treasury bond yields. While in contrast, DCF and CAPM are able to estimate COE using multiple input variables. For example, Ms. Bulkley's CAPM COE estimates are determined by not only the risk-free rate (30-year Treasury bond yield) but also the total market risk (MRP) and a stock's risk (Beta).

Q. What are Ms. Bulkley's BYPRP ROE estimates?

A. Ms. Bulkley's BYPRP ROE estimates range from 9.49% to 10.17%, with a mean of 9.80%.[58] For her BYPRP ROE estimation, Ms. Bulkley used three risk-free rates: 30-day average of the 30-year U.S. Treasury bond yield (i.e., 1.93%), the near-term (Q2 2022 – Q2 2023) projections of the 30-year U.S. Treasury bond yield (i.e., 2.50%), and a longer-term (2023 – 2027) projection of the 30-year U.S. Treasury bond yield (i.e., 3.50%).

Q. What is Staff's concern with Ms. Bulkley's BYPRP ROE estimates?

[55] On page 46, lines 7-17, Bulkley's Direct Testimony.
[56] According to Ms. Bulkley this analysis began with a total of 1,321 electric utility cases, which were screened to eliminate limited issue rider cases, transmission cases, distribution only cases, and cases that did not specify an authorized ROE. After applying those screening criteria, the analysis was based on data for 666 cases (see footnote No. 52, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130).
[57] Schedule AEB-7, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[58] Page 53, line 4 to page 54, line 2, Bulkley's Direct Testimony.

A. Staff has multiple concerns with Ms. Bulkley's BYPRP model. First, Ms. Bulkley used projected risk-free rates. It is Staff's position that projecting interest rates has been proven to be very difficult, which renders the use of projected risk-free rates unreliable. Especially considering the current financial market situation that results in unstable interest rates, Ms. Bulkley's use of a projected interest rate is not acceptable for rate making purposes. Second, intended to combat the highest inflation in four decades, the Federal Reserve ("Fed") began increasing interest rates with unusual speed. This results in unreliable BYPRP ROE estimates because Ms. Bulkley's estimates are literally only determined by the 30-year Treasury yield. Third, Ms. Bulkley's regression analysis for BYPRP was conducted based on an approximately 30-year time period of 1992–2021. Staff has not found any theoretical conclusions that the relationship between the 30-year Treasury yield and authorized ROEs is constant over time. These stale authorized ROEs might not provide a proper up to date COE estimate.

Staff agrees with FERC that the BYPRP is likely to provide a less accurate current COE estimate than the DCF or CAPM models because it relies on previous ROE determinations, whose resulting ROE may not necessarily be directly determined by a market-based method.[59] Ms. Bulkley's use of a projected risk-free rate should be rejected because it introduces unnecessary speculation in ratemaking. In conclusion, Staff recommends the Commission not to consider BYPRP COE estimate as reliable information to determine a just and reasonable authorized ROE.

7. Recalculated Ms. Bulkley's COE Estimates

Q. Has Staff recalculated Ms. Bulkley's COE estimate for Evergy Metro and Evergy West using proper inputs and models?

[59] Paragraph 342, FERC Opinion No. 569, 169 FERC ¶ 61,129.

A. Staff's recalculated Ms. Bulkley's COE estimates using proper inputs and models are summarized in Table 3:

Table 3. Bulkley's Estimation and Staff's Recalculation[60]

	Cost of Equity	
COE Estimation Methods	Bulkley' Estimate	Staff Recalculation
Discounted Cash Flow	9.44%	9.30%
Capital Asset Pricing Model	11.07%	8.13%

As is evident in Table 3, Ms. Bulkley's COE estimates are too high compared to Staff's recalculated COE. Although DCF and CAPM are reliable COE estimation methods, Ms. Bulkley's COE estimates are unreasonably high due to her choice of biased input values in the model. Staff recommends that Ms. Bulkley's DCF and CAPM COE estimates should not be utilized for calculating a just and reasonable authorized ROE

8. Regulatory and Business Risks

Q. What adjustments of COE did Ms. Bulkley make to her recommendation of authorized ROE regarding Evergy Metro and Evergy West's business and regulatory risks?

A. Ms. Bulkley did not make specific adjustments to the COE in her recommendation of an authorized ROE when she estimated the effect of Evergy Metro and Evergy West's business and regulatory risks.[61] Ms. Bulkley did take regulatory and business risks into consideration to determine where Evergy Metro and Evergy West's required ROE falls within the range of COE estimates based on her analytic results.[62] Ms. Bulkley recommended an authorized ROE of 10.00%, but her recommended ROE is too high compared to the average authorized ROE of 9.39%

[60] 1 Summary, Won's Rebuttal Workpaper.
[61] On page 4, lines 3-4, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[62] On page 4, lines 4-6, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.

in electric utility rate cases completed in the first half of 2022.[63] Even if we just consider vertically integrated electric utilities in the first half of 2022, the average authorized ROE is 9.47%.[64]

Q. Do you agree with Ms. Bulkley that the risk level for Evergy Metro and Evergy West is greater than the her proxy group companies because of their capital expenditure requirements?[65]

A. No. Ms. Bulkley's argument is that the ratio of expected capital expenditures as a percentage of net utility plant ("capital expenditure ratio") for Evergy Metro and Evergy West are higher compared to her proxy group companies and as a result, their risk profiles are adversely affected.[66] Ms. Bulkley cited S&P's explanation of the importance of regulatory support for utilities' significant capital expenditures.[67] Although Staff agrees with S&P's explanation, Staff disagrees with Ms. Bulkley's argument that Evergy Metro and Evergy West should have a higher authorized ROE because of higher capital expenditure requirements.

First, Evergy Metro's capital expenditure ratio of 53.82% is not significantly higher than the average ratio of capital expenditures for Ms. Bulkley's proxy group companies of 50.72%.[68] Six proxy companies have a higher capital expenditure ratio. For example, NextEra Energy, Inc. in Ms. Bulkley's proxy group has a capital expenditure ratio of 94.05%.

Second, Evergy West's capital expenditures ratio of 77.55% does not mean that Evergy West faces a higher risk of under-recovery than the proxy group and warranting a higher authorized ROE. Evergy Metro and Evergy West, like other utilities in Missouri, benefit from an improved

63 S&P Capital IQ Pro, Retrieved on July 2, 2022.
64 Ibid.
65 On pages 49-50, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
66 Figure 11, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
67 On pages 49, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
68 8 CapEX 2, Won's Rebuttal Workpaper.

regulatory environment. Evergy Metro and Evergy West elected to use Plant in Service Accounting ("PISA"), which allows electric utilities in Missouri to defer for future recovery 85% of their depreciation expense and returns from plant and equipment placed in service between rate cases.[69] While the Commission does not allow all possible cost recovery mechanisms included in Ms. Bulkley Schedule AEB-9, Staff disagrees with Ms. Bulkley that the use of PISA does not reduce the Company's regulatory risk relative to its peers.[70]

Third, Evergy West's significant capital expenditures are related to the Sustainability Transformation Plan ("STP") by Evergy Inc. that began on January 21, 2020, when a letter from Elliott Management ("Elliott") to Evergy Inc. was made public by Elliott.[71] According to Evergy Inc.'s notice of filing for the STP, Evergy did not address a cost increase, but rather a cost reduction due to the STP.[72] Therefore, Staff disagrees with Ms. Bulkley that Evergy Metro and Evergy West should request a higher authorized ROE only because of a higher ratio of capital expenditures.

Fourth, if Ms. Bulkley's assertion is true, then Evergy Metro and Evergy West's risk profiles were affected by their significant capital expenditures and their credit rating should have been changed. However, Evergy Inc., Evergy Metro and Evergy West's credit ratings did not change before or after the STP had been implemented.[73] Evergy Inc., Evergy Metro and Evergy West are currently rated by Moody's and Standard & Poor's ("S&P"). The corporate credit ratings assigned to Evergy by Moody's and S&P are 'Baa2' and 'A-', respectively.[74] The corporate credit ratings assigned to Evergy Metro by Moody's and S&P are 'Baa1' and 'A', respectively.[75] The

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[69] Section 393.1400.2(1) and related provisions of the Missouri Revised Statutes.
[70] On pages 52, lines 21-22, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[71] Staff Report, EO-2021-0032.
[72] Evergy Notice of Filing of Sustainability Transformation Plan, EO-2021-0032.
[73] S&P Capital IQ Pro and Staff's Data Request No. 0028, Moody's Credit Opinion, page 1, EO-2021-0032.
[74] S&P Rating Report – Evergy, Inc.
[75] S&P Rating Report - Evergy Metro, Inc.

corporate credit ratings assigned to Evergy West by Moody's and S&P are 'Baa2' and 'A-', respectively.[76]

Q. Do you agree with Ms. Bulkley that Evergy Metro and Evergy West have significantly greater risk than the proxy group and would likely require an upward adjustment to the ROE to reflect this incremental risk?[77]

A. No. Evergy Metro and Evergy West take advantage of several alternative regulatory mechanisms such as PISA and the Renewable Energy Standard Rate Adjustment Mechanism ("RESRAM"). It is true there is some regulatory lag and time limits, but Staff does not find any evidence that Evergy Metro and Evergy West have a significantly greater risk than the proxy group that requires an upward adjustment to the ROE to reflect any incremental risk. The topic of Evergy Metro and Evergy West's regulatory lag is also addressed in the rebuttal testimony of Staff witness Keith Majors.

Q. Do you agree with Ms. Bulkley that Evergy Metro and Evergy West have greater volumetric risk compared to the proxy group as a result of the residential rate design?[78]

A. No. Ms. Bulkley insisted that because its residential rate class has a low customer charge of $11.47 and has an inclining block rate ("IBR") structure for the energy charge in the summer season, Evergy Metro and Evergy West face increased volumetric risk associated with the residential rate class. Ms. Bulkley's reasoning ignored that IBR could be used to promote energy efficiency by reducing energy consumption so that IBR could contribute to reduce summer peak usage. Ms. Bulkley did not provide how much volatility of Evergy Metro and Evergy West's residential customer class's total revenue was changed by the implementation of IBR.

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[76] S&P Rating Report - Evergy Missouri West, Inc.
[77] On pages 61-62, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[78] On page 63-64, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.

Staff disagrees with Ms. Bulkley that the rate payers should pay a higher rate because the electric utility service adopted a low customer charge and IBR. Staff witness Francisco Del Pozo has been compiling information on the percentage of sales attributable to residential customers of Evergy Metro and Evergy West. The topic of Evergy Metro and Evergy West's regulatory risk regarding IBR is also addressed in the rebuttal testimony of Staff witness Sarah Lange.

Q. Do you agree with Ms. Bulkley that the Commission should be concerned about authorizing equity returns that are at the low end of the range established by other state regulatory jurisdictions?[79]

A. No. First of all, it is not true that Missouri's authorized ROEs are at the low end of the range established by other state regulatory jurisdictions. The Commission's most recent decision on the authorized ROE for an electric utility is 9.25% in the Empire rate case on July 23, 2020.[80] In 2020, of the 55 electric rate cases with an available authorized ROE, 20 authorized ROEs were less than or equal to 9.25%.[81] The lowest authorized ROE was 8.20% for a vertically integrated electric utility, Green Mountain Power Corp. in Vermont. In other words, the Commission's authorized ROE was not at the low end of the range established by other state regulatory jurisdictions because 36% of other authorized ROEs were lower than or equal to 9.25%. Therefore, Ms. Bulkley's regulatory risk consideration is meaningless for Evergy Metro and Evergy West operations as a whole with her upwardly-biased COE estimates.

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[79] On page 65-66, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[80] *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.
[81] S&P Capital IQ Pro.

Q. Do you agree with Ms. Bulkley that the RRA jurisdictional ranking and the S&P credit supportiveness ranking for Missouri indicates greater risk than the average for the proxy group?[82]

A. No, I do not. According to a recently published S&P Global Ratings' article, "Developments In North American Utility Regulatory Jurisdictions" – Mar 24, 2022, 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.[83] Furthermore, the Commission has allowed several favorable regulatory mechanisms for Evergy Metro and Evergy West's electric utility service. Considering the series of favorable regulatory mechanisms and accounting authority orders granted by the Commission to Evergy Metro and Evergy West, Ms. Bulkley's arguments alleging unusually high regulatory risk for the Company are baseless.

9. The Capital Structure for ROR

Q. What capital structure and ROR did Mr. Andrews recommend for Evergy Metro and Evergy West in this proceeding?

A. For Evergy Metro, Mr. Andrews recommended an authorized ROR of 7.032%, calculated using Ms. Bulkley's recommended ROE of 10.00% and an embedded cost of debt of 3.920%, applied to a projected capital structure, as of May 31, 2022, consisting of 51.19% common equity and 48.81% long-term debt.[84] For Evergy West, Mr. Andrews recommended an authorized ROR of 7.006%, calculated using Ms. Bulkley's recommended ROE of 10.00% and an embedded

[82] Pages 68-70, Bulkley's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[83] S&P Global Ratings, Developments In North American Utility Regulatory Jurisdictions: (https://www.spglobal.com/ratings/en/research/articles/220324-developments-in-north-american-utility-regulatory-jurisdictions-from-storm-cost-recovery-to-clean-energy-pla-12304308).
[84] Page 4, Table 1, Andrews Direct Testimony, ER-2022-0129.

cost of debt of 3.787%, applied to a projected capital structure, as of May 31, 2022, consisting of 51.81% common equity and 48.19% long-term debt.[85]

Q. Does Staff have concerns with the capital structure recommended by Evergy Metro and Evergy West's witness?

A. Staff is investigating how Evergy Metro and Evergy West's recommended capital structure, as of May 31, 2022, is achievable. Also, Staff is investigating how Evergy Metro and Evergy West's actual true-up capital structures, as of May 31, 2022, are attained from the previously provided capital structures. In 2021, Evergy Metro's average capital structure was approximately 49.81% common equity and 50.19% long-term debt, and Evergy West's capital structure was 48.84% common equity and 51.16% long-term debt.[86] As of May 31, 2022, Evergy Metro's capital structure was 51.37% common equity and 48.63% long-term debt, and Evergy West's capital structure was 51.47% common equity and 48.53% long-term debt.[87] Currently, Staff is reviewing the changes in Evergy Metro and Evergy West's actual capital structure and cost of debt through May 31, 2022, the end of the true-up period. Staff will address its final recommended capital structure in its surrebuttal and true-up testimony at a later point in the case.

<u>III. RESPONSE TO TESTIMONY OF OPC WITNESS</u>

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

A. Staff is responding to the testimony of Mr. Murray. The areas in which Staff addresses issues of Mr. Murray's direct testimony include:

- Recommended ROE, and
- Capital Structure.

Staff will discuss each in turn, below.

[85] Page 4, Table 1, Andrews Direct Testimony, ER-2022-0130.
[86] Staff's Data Request No. 0115, ER-2022-0129 and ER-2022-0130.
[87] Ibid.

1. Recommended ROE

Q. What is Mr. Murray's recommended ROE for use in this proceeding?

A. Mr. Murray recommended that the Commission set Evergy Metro and Evergy West's authorized ROE at 9.00% based on a range of 8.5% to 9.5%.[88]

Q. Please explain how Mr. Murray's recommended ROE was determined.

A. Mr. Murray asserted that his ROE recommendation is based on his COE analysis and awareness of capital market conditions, investor expectations and recent average allowed ROEs for electric utilities.[89] Mr. Murray estimated Evergy Metro and Evergy West's COE of 7.0% to 7.5% using a multi-stage DCF approach and a CAPM analysis.[90] Mr. Murray insisted that the COE has declined since the Commission approved a settled 9.5% ROE for Kansas City Power & Light Company (Evergy Metro) and KCP&L Greater Missouri Operations Company (Evergy West) in 2015.[91]

Q. What are Staff's concerns with Mr. Murray's recommended ROE?

A. Staff's concern is that Mr. Murray's recommended ROE of 9.00% is too low compared to the average authorized ROE of 9.39% in electric utility rate cases completed during the first half of 2022.[92] Specifically, Mr. Murray's recommended ROE of 9.00% is 47 basis points lower than the average authorized ROE of 9.47% in vertically integrated electric utility rate cases completed during the first half of 2022.[93] More fundamentally, most of the evidence including data and analysis employed by Mr. Murray does not support his recommended ROE of 9.00%.

[88] On page 2, lines 15-16, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[89] On page 4, lines 8-11, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[90] On page 4, lines 6-7, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[91] On page 4, lines 13-15, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[92] S&P Capital IQ Pro, Retrieved on July 2, 2022.
[93] S&P Capital IQ Pro, Retrieved on July 2, 2022.

Mr. Murray insisted that current authorized ROEs have declined compared to 2015, but his research revealed that is not true. In other words Mr. Murray's conclusion does not match his findings and analysis. Staff will explain using some examples of the inconsistency between Mr. Murray's analysis and his conclusion.

Q. What market analyses in Mr. Murray's direct testimony are indicating a current inclined trend of COE for electric utilities?

A. Mr. Murray presented several examples of an inclined trend of COE for electric utilities since the benchmark time period, Q4 2019, when the authorized ROE of 9.25% was determined in the Commission's most recent, fully-litigated electric rate case, The Empire District Electric Company's rate case, Case No. ER-2019-0374, ("2019 Empire rate case").[94]

First, Mr. Murray recognized that current investment grade utility bond yields are higher than yields over the last three years.[95] Bond yields are one of the most important indicators of investors' required COE for utility companies. All other things being equal, a higher bond yield indicates a higher required COE.[96] For instance, Moody's Baa corporate bond yield of 3.16% in December of 2020 has risen more than 211 basis points to 5.27% in June of 2022.[97]

Second, Mr. Murray recognized that at the beginning of 2022, Evergy's P/E ratio began to trade at a consistent discount to the industry. Mr. Murray stated that this implies Evergy's cost of capital may be slightly higher than the industry average.[98] The average authorized ROE was 9.39% in electric utility rate cases completed during the first half of 2022.[99]

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[94] *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.
[95] On page 6, lines 19-21, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[96] Brigham, E. F., Shome, D. K., & Vinson, S. R. (1985). The risk premium approach to measuring a utility's cost of equity. Financial Management, 33-45.
[97] FRED, Economic Data, St louis Federal Reserve, https://fred.stlouisfed.org/series/DBAA.
[98] On page 11, lines 13-16, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[99] S&P Capital IQ Pro, Retrieved on July 2, 2022.

Third, Mr. Murray cited the Wall Street Journal that interest rates have risen swiftly, not because investors are betting on an economic surge, but because accelerating inflation is forcing the Federal Reserve to act quickly to rein in price pressures.[100] All other things being equal, a higher interest rate indicates a higher required COE.[101]

Fourth, Mr. Murray cited another Wall Street Journal article that utility stocks tend not to take well to rising interest rates for two reasons: one is utilities have large debt burdens, and the other is utility stocks are a bond substitute.[102] These reasons imply that utility investors require a higher return from a utilities stock.

Fifth, Mr. Murray suggests that Evergy's underperformance can be largely explained by the uncertainty of Evergy's situation for much of 2020 (evaluation of standalone strategy versus merger) and investors evaluating whether changes by the new management and Board of Directors will be able to execute the current STP. In other words, Mr. Murray showed Evergy's corporate risk is higher than before 2020 because of uncertainty in Evergy's organizational structure. It is financial common sense that a higher risk requires a higher return.[103] The examples listed in Mr. Murray's direct testimony show that his market analyses indicates a current inclined COE trend.

Q. Please explain Mr. Murray's COE estimate methods and results for Evergy Metro and Evergy West?

A. Mr. Murray performed a company-specific COE analysis on Evergy as well as a proxy group COE analysis. Mr. Murray used a multi-stage DCF approach and a CAPM approach

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[100] On page 13, lines 14-17, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[101] Morin, R. A. (2021). Modern Regulatory Finance: Utilities Cost of Capital, PUR Books, (Page 144).
[102] On page 14, lines 19-28, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[103] Modigliani, F., & Pogue, G. A. (1974). An introduction to risk and return: Concepts and evidence. In Financial Analysts Journal.

and then tested the reasonableness of his COE estimates by using a straight-forward bond-yield-plus-risk-premium ("BYPRP") method.[104] It should be noted that Mr. Murray's BYPRP method discussed in the CFA curriculum is different from Ms. Bulkley's BYPRP method. Mr. Murray's BYPRP COE is literally calculated by summing a company's bond yield plus a company's equity risk premium. In contrast, Ms. Bulkley's BYPRP COE is estimated using a regression analysis.

Using Evergy's stock prices since January 1, 2022, and discounting prospective dividends by reasonable growth rates in the intermediate future as well as perpetually, Mr. Murray estimated the implied COE for Evergy is approximately 7.45% to 7.75%.[105] Using a proxy group of 39 electric utilities classified by the Edison Electric Institute ("EEI"),[106] Mr. Murray estimated a DCF COE range of 7.0% to 7.25%.[107] Mr. Murray's CAPM COE analysis indicates that Evergy and the electric utility industry currently have a COE of around 7.5%.[108] In addition, adding a 3% risk premium to recent Yield to Maturities of around 4.6% on Evergy Metro's long-term bonds, Mr. Murray estimated a BYPRP COE of 7.6%.[109]

Q. Please explain what factors were considered when Mr. Murray recommended ROEs for Evergy Metro and Evergy West?

A. Mr. Murray considered the following:[110]

1) Evergy's COE (7.45% to 7.75%),[111]
2) The electric utility industry's COE (7.0% to 7.25%),[112]
3) Investor expectations on allowed ROEs,

[104] On page 18, lines 18-22, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[105] On page 23, lines 4-6, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[106] On page 24, lines 1-4, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[107] On page 24, lines 18-19, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[108] On page 29, lines 13-14, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[109] On page 30, lines 2-3, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[110] On page 30, lines 18-23, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[111] On page 23, lines 4-6, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[112] On page 29, lines 13-14, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.

4) Average electric utility authorized ROE (9.35%),[113] and
5) Evergy's authorized returns for its Kansas electric utility operations (9.3%).[114]

Q. Does Staff agree with Mr. Murray that based on the listed factors his recommended ROE range of 8.5% to 9.5% would be justified with 9% being reasonable for Evergy Metro and Evergy West to attract capital?

A. No. First of all, Mr. Murray did not explicitly explain in his direct testimony how these factors can produce his recommended ROE of 9.0% with a range of 8.5% to 9.5%. Second, it is unclear how Mr. Murray calculated his recommended ROE range of 8.5% to 9.5% from his COE estimated ranges (7.45% to 7.75% and 7.0% to 7.25%). Third, in the first half of 2022, the average vertically integrated electric utility authorized ROE has been 9.47%,[115] although Mr. Murray claimed the recent average of authorized ROEs was approximately 9.35%.[116] Fourth, Evergy's authorized return for its Kansas electric utility operations of 9.3% was determined in 2017, so that does not properly reflect current market conditions.

Q. Please summarize your response to Mr. Murray's direct testimony regarding Evergy Metro and Evergy West's authorized ROE?

A. Staff agrees with most of Mr. Murray's market analysis and COE analysis. However, Staff does not agree with Mr. Murray's recommended ROE of 9.0% because his analyses indicate a lower ROE than the most recent Commission-authorized ROE of 9.25%.[117] When he recommends an authorized ROE, Mr. Murray does not fully consider the fact that the Fed has decided to keep raising interest rates until they are able to reduce the inflation rate to its

[113] On page 4, line 11, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[114] On page 4, line 3-4, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[115] S&P Capital IQ Pro, retrieved in July 2, 2022.
[116] On page 4, line 11, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[117] *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.

2% objective.[118] The Fed said on June 15, 2022, that it is raising its benchmark interest rate by three-quarters of a percentage point, the sharpest hike since 1994, as it seeks to combat the fiercest surge in U.S. inflation in four decades.[119] Considering current market conditions, Mr. Murray's recommended ROE of 9.0% should not be accepted as a reasonable ROE for Evergy Metro and Evergy West.

2. Capital Structure

Q. What is Mr. Murray's recommended capital structure for use in this proceeding?

A. For Evergy Metro and Evergy West, Mr. Murray recommends a capital structure that consists of approximately 48% common equity and 52% long-term debt based on his analysis of Evergy Inc.'s, Evergy Metro's and Evergy West's quarterly capital structures from the beginning of the test year (July 1, 2020) through the end of the update period (December 31, 2021).[120]

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 based on Evergy Inc.'s consolidated capital structure, instead of Evergy Metro's and Evergy West's. Mr. Murray insisted that Evergy Inc.'s capital structure has had a common equity ratio of approximately 48% if short-term debt were excluded.[121] However, as of the end of the true-up period, May 31, 2022, Evergy Inc. has a common equity ratio of approximately 48.36%. Evergy Metro's and Evergy West's capital

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[118] Fed, Federal Reserve issues FOMC statement, June 15, 2022. https://www.federalreserve.gov/newsevents/pressreleases/monetary20220615a.htm.
[119] CBS News, Federal Reserve raises key interest rate 0.75 percentage points as it tries to calm inflation, retrieved in June 17, 2022, https://www.cbsnews.com/news/interest-rate-hike-federal-reserve-inflation-june-2022/.
[120] Page 31, lines 18-24, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.
[121] On page 38, lines 21-22, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.

structures as of the end of the true-up period, May 31, 2022, indicate common equity ratios of 51.37% and 51.47%, respectively.[122] As Mr. Murray recognized in his direct testimony, the target capital structure of Evergy Inc., Evergy Metro and Evergy West is a common equity ratio of 50.0%.[123] Both actual and target capital structures do not support Mr. Murray's common equity ratio of 48%. Also, the recent average equity ratio for other electric utility companies throughout the U.S. is approximately 50.5%.

Q. Please explain more about equity ratios used in other electric utility rate cases.

A. In the first half of 2022, the average equity ratios from fully litigated and settled rate cases are 50.98% and 49.87%, respectively. The average equity ratio of all 19 electric rate cases is 50.57% in the first half of 2022. Considering the historical average equity ratio of approximately 50% used for calculating the allowed ROR for electric utility rate cases, Mr. Murray's recommended equity ratio of 48% appears to be low. Table 4 presents information compiled and published by RRA, which details the average equity ratios from Commissions around the U.S. in the years 2012 to the second quarter of 2022, along with the number of cases considered:

continued on next page

[122] Staff's Data Request No. 0115, ER-2022-0129 and ER-2022-0130.
[123] On page 33, lines 20-22, Murray's Direct Testimony, ER-2022-0129 and ER-2022-0130.

Table 4. Equity Ratios of Electric Utility Rate Cases (2012-2022)[124]

	Electric Utility					
	Fully Litigated		Settled		Electric Total	
Year	Equity (%)	Case (No.)	Equity (%)	Case (No.)	Equity (%)	Case (No.)
2012	49.98	29	51.40	29	50.62	58
2013	48.25	17	49.70	32	49.14	49
2014	50.14	21	50.26	17	50.19	38
2015	48.98	16	49.28	15	49.12	31
2016	49.75	25	47.51	17	48.85	42
2017	49.23	24	49.30	29	49.26	53
2018	48.70	22	49.76	26	49.27	48
2019	51.07	27	49.66	20	50.62	47
2020	49.85	32	50.45	23	50.11	55
2021	50.71	30	49.79	25	50.31	55
2022	50.98	12	49.87	7	50.57	19

Q. Does Mr. Murray's recommendation to use the parent company's capital structure meet the standard of generally-accepted utility ratemaking procedures?

A. No. Mr. Murray's recommendation is not compatible with typical regulatory practices on when to use a parent company's capital structure instead of a subsidiary's own capital structure for the subsidiary's ratemaking. The Society of Utility and Regulatory Financial Analysts ("SURFA") lists the following four guidelines for determining when to use a parent company's capital structure, in its guidebook, The Cost of Capital – A Practitioner's Guide ("CRRA Guide"):

1. Whether the subsidiary utility obtains **all** of its capital from its parent, or issues its own debt and preferred stock;
2. Whether the parent guarantees **any** of the securities issued by the subsidiary;

[124] S&P Capital IQ Pro, Retrieved on July 2, 2022.

3. Whether the subsidiary's capital structure is independent of its parent (i.e., existence of double leverage, absence of proper relationship between risk and leverage of utility and **non**-utility subsidiaries); and,
4. Whether the parent (or consolidated enterprise) is diversified into **non**-utility operations.[125]

There is nothing in these guidelines that suggests that it is appropriate to use Evergy Inc.'s (the parent company of Evergy Metro and Evergy West) capital structure to set Evergy Metro and Evergy West's ROR.

For the first guideline, except for common stock and equity contributions, Evergy Metro and Evergy West has not received any other long-term financing or preferred stock, from Evergy Inc.[126] Although Evergy Metro and Evergy West has predominantly issued commercial paper to external investors for short-term funds, it has borrowed from affiliates via the utility money pool from time to time. This is a usual financial relationship between the holding company and its subsidiaries. Also, Evergy Metro and Evergy West's stand-alone capital structure supports its own bond rating.[127] Evergy Metro, Evergy West and Evergy Inc. are rated by S&P and Moody's.[128] Therefore, Evergy Metro and Evergy West meet the first criterion. For the second guideline, neither Evergy Inc. nor Evergy Inc.'s other subsidiaries guarantee the securities issued by Evergy Metro or Evergy West.[129] For the third guideline, Staff has not found the existence of double leverage, or an absence of a proper relationship between risk and leverage of utility and non-utility

[125] David C. Parcell in The Cost of Capital – A Practitioner's Guide prepared for SURFA.
[126] Staff's Data Request No. 0126, ER-2022-0129 and ER-2022-0130.
[127] RatingDirect®, S&P Global Ratings, Union Electric Co. d/b/a/ Ameren Missouri, April 30, 2021.
[128] S&P Capital IQ Pro.
[129] Staff's Data Request No. 0134, ER-2022-0129 and ER-2022-0130.

subsidiaries.[130] For the fourth guideline, according to Evergy Inc.'s consolidated balance sheet in 2020, Evergy Inc.'s non-utility assets and revenue are less than 1.0% of Evergy Inc.'s total assets and total revenue.[131] This is not concerning because Evergy Inc.'s non-utility operations are insignificant.

IV. SUMMARY AND CONCLUSIONS

Q. Please summarize the conclusions of your rebuttal testimony.

A. Ms. Bulkley's recommended ROE of 10.0% for Evergy Metro and Evergy West is not just and reasonable considering her inappropriate reliance on unreasonable inputs to her DCF and CAPM analyses. Staff recognizes a single independent input, interest rate, of Ms. Bulkley's BYPRP method is inappropriate for estimating proper COE estimates. Staff has concerns with OPC witness Murray's recommended authorized ROE of 9.0% because it does not properly consider the Fed's current fight to reduce the inflation rate. Considering the current interest rate hike, Staff recommends that the reasonable authorized ROE to use in this proceeding is 9.62%, in a reasonable range of 9.37% to 9.87%. Staff is reviewing Evergy Metro and Evergy West's true-up capital structure and cost of debt and will make its final recommendation of ROR in its surrebuttal testimony and true-up testimony in this proceeding.

Q. Does this conclude your rebuttal testimony?

A. Yes.

[130] Staff's Data Request No. 0131, ER-2022-0129 and ER-2022-0130.
[131] Staff's Data Request No. 0135, ER-2022-0129 and ER-2022-0130.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement a General Rate Increase for Electric Service	))))	Case No. ER-2022-0129
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-2022-0130

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 *Rebuttal 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 7th day of July, 2022.

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

D Suzie Mankin
Notary Public