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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

UNION ELECTRIC COMPANY, d/b/a AMEREN MISSOURI

CASE NO. GR-2021-0241

Jefferson City, Missouri
November 2021

** Denotes Confidential Information **

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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") 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 prepared the Rate of Return section of Staff's Cost of Service Report ("COS Report"), filed September 3, 2021, and the rebuttal testimony on the same topic filed October 15, 2021, in this proceeding?

A. Yes, I am.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimonies of Ann E. Bulkley, Darryl T. Sagel, and David Murray. Ms. Bulkley sponsored return on equity ("ROE") and capital structure testimony on behalf of Ameren Missouri Inc. ("Ameren Missouri" or the "Company"), a wholly-owned subsidiary of Ameren Corporation ("Ameren Corp." or the "parent Company"). Mr. Sagel sponsored ROE, rate of return ("ROR") and capital structure testimony on behalf of Ameren Missouri. Mr. Murray sponsored ROE, ROR, and capital structure testimony on behalf of The Office of the Public Counsel ("OPC"). Within this testimony, Staff will address issues related to a just and reasonable ROR to be applied to Ameren Missouri's gas utility rate base for ratemaking purposes in this proceeding. Staff's analyses and conclusions are supported by the data and evidence presented in my Attachment 1, Schedules SJW-S1 though SJW-S17 and surrebuttal workpapers.

I. EXECUTIVE SUMMARY

Q. Please provide a summary overview of your surrebuttal testimony.

A. In Staff's COS Report, Staff recommended an authorized ROE of 9.50%, within a reasonable range of 9.25% to 9.75%.[1] In this surrebuttal testimony, for the purpose of its comparative analysis, Staff will provide an updated and revised ROE analysis and Schedules for this case to be consistent with the Commission's recent order authorizing Spire Missouri a ROE of 9.37%.[2] Staff's updated comparative analysis will use the 9.37% authorized ROE as its new benchmark. Nonetheless, Staff maintains its recommended authorized ROE of 9.50% for this proceeding. For capital structure and cost of debt issues, Staff continues to recommend that the Commission use Ameren Missouri's stand-alone capital structure consisting of 48.93% long-term debt, 0.75% preferred stock and 50.32% common equity with 4.18% cost of preferred stock and 3.91% cost of debt, as of June 30, 2021, resulting in the overall midpoint ROR of 6.72%, taken from the calculated range of 6.60% to 6.85%. Staff is still reviewing data through the true-up cut-off date of September 30, 2021, to decide if its capital structure and cost of debt recommendations and, subsequently, ROR, will change.

[1] On page 9, Staff's COS Report.
[2] Report and Order, Case No. GR-2021-0108.

In this surrebuttal testimony, Staff will respond to the rebuttal testimony of Ameren Missouri's witnesses, Ms. Bulkley, on the ROE issue, and to Mr. Sagel, on the capital structure issue and then respond to the rebuttal testimony of OPC witness, Mr. Murray, on the ROE and capital structure issues.

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

A. Ms. Bulkley maintained her recommendation for an ROE of 9.80% within a range of 9.65% to 10.40%.[3] Mr. Sagel maintained his recommendation for an ROR of 6.94% based on a pro forma capital structure, as of September 30, 2021, consisting of 47.345% long-term debt, 0.728% preferred stock and 51.927% common equity with a cost of debt of 3.853% and a cost of preferred stock of 4.180%.[4] Staff's surrebuttal will focus on Ms. Bulkley's recommended ROE because Mr. Sagel did not address any issues about Staff's capital structure recommendation in his rebuttal testimony. In her rebuttal testimony, Ms. Bulkley made incorrect claims about Staff's authorized ROE estimation methodology based on her misunderstandings and erroneous assumptions. In this testimony, Staff will only briefly recount the reasons why Staff holds that Ms. Bulkley's biased cost of equity ("COE") estimates are incorrect because a detailed explanation on these points was already provided in my rebuttal testimony. 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?

[3] On page 5, line 8, Bulkley Rebuttal Testimony.
[4] Schedule DTS-D1, Sagel's Direct Testimony.

A. Mr. Murray maintained his original recommendations of 9.25% for ROE, 8.5% to 9.5% for a reasonable ROE range, 6.34% for ROR based on his recommended capital structure of 45.00% common equity, 54.18% long-term debt, and 0.82% preferred stock, and applying cost of long-term debt of 3.95% and cost of preferred stock of 4.18%.[5] Staff will respond to Mr. Murray's argument that, for the 2017 Spire rate case, the Commission's decision to authorize Spire Missouri a ROE of 9.8% was incorrect because it was too high.[6] Mr. Murray's recommended common equity to total capital ratio ("equity ratio") of 45.00% is 600 basis points lower than the average level of actual Ameren Missouri common equity ratio of 51%.[7] Staff expresses concern with Mr. Murray's recommended capital structure using Ameren Corp.'s capital structure ratios instead of Ameren Missouri's. In Mr. Murray's rebuttal testimony, Staff did not find any proper reason to use Ameren Corp.'s capital structure for ratemaking purposes in this proceeding.

II. RESPONSE TO THE TESTIMONY OF AMEREN MISSOURI WITNESSES

Q. Please summarize Mr. Sagel's rebuttal testimony.

A. Mr. Sagel maintained his recommendation of a projected capital structure, as of September 30, 2021, with 51.93% common equity, 0.73% preferred stock and 47.34% long-term debt, for Ameren Missouri.[8] Ameren Missouri requested an update of all elements of the capital structure at the proposed September 30, 2021, true-up cut-off date. Mr. Sagel recommended an authorized ROR of 6.943%, calculated using Ms. Bulkley's recommended ROE of 9.80%, cost of preferred stock of 4.180%, and embedded cost of debt of 3.853%, applied to a capital structure consisting of 47.345% long-term debt, 0.728% preferred stock and 51.927% common equity.[9]

[5] Schedule DM-D-8, Murray's Direct Testimony.
[6] On page 31, lines 19-20, Murray's Rebuttal Testimony.
[7] Schedule SJW-5-2, Staff COS Report.
[8] Table 2, Sagel Direct Testimony.
[9] Schedule DTS-D1, Sagel Direct Testimony.

In this surrebuttal testimony, Staff will not respond to Mr. Sagel's rebuttal testimony because he did not address Staff's recommendations.[10]

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

A. Ms. Bulkley updated her COE analyses as of as of August 31, 2021, using estimation methods such as the Constant Growth form of the Discounted Cash Flow ("DCF") model, the Multi-Stage DCF model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and the Bond Yield Plus Risk Premium ("BYPRP") analysis from her direct testimony. Additionally, Ms. Bulkley addressed capital market conditions, the capital attraction and comparable return standards, and Company-specific risks and their effect on Ameren Missouri's investor-required return. Ms. Bulkley also responded to Staff's COS report and Mr. Murray's direct testimony regarding the ROE and capital structure issues.

Q. What is Ms. Bulkley's updated recommended ROE?

A. Ms. Bulkley maintained her recommended ROE of 9.80%. Ms. Bulkley updated her COE analysis and market-based data for the proxy group companies as of August 31, 2021, and supports a ROE range of 9.65% to 10.40% for Ameren Missouri. Within that range, Ms. Bulkley recommended the Company's requested ROE of 9.80%.

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

A. Ms. Bulkley's updated COE analysis is now based on data as of August 31, 2021, instead of January 31, 2021. The seven months' time difference shows mixed directional changes in her COE estimates. 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 1:

[10] On page 1, lines 10-12, Sagel's Rebuttal Testimony.

Table 1. Bulkley's COE estimates Comparison[11]

	Direct			Rebuttal		
	As of January 31, 2021			As of August 31, 2021		
	Min	Average	Max	Min	Average	Max
Constant Growth DCF	7.94%	10.15%	12.98%	8.60%	10.10%	11.72%
Multi-Stage Growth DCF	8.97%	9.76%	10.76%	8.86%	9.47%	10.10%
CAPM	10.68%	11.69%	12.67%	11.03%	12.15%	13.22%
ECAPM	11.54%	12.30%	13.04%	11.91%	12.75%	13.55%
Bond Yield Plus Risk Premium	9.71%	9.46%	9.28%	9.33%	9.63%	10.00%

Ms. Bulkley's COE estimation models and input variables estimation methods remained the same except for time period of the data values.[12] Ms. Bulkley did not change her natural gas utility proxy group. Table 2 presents the list of Ms. Bulkley's natural gas utility proxy group and associated Ticker symbols:

Table 2. Natural Gas Utility Proxy Group

Natural Gas Utility	Ticker
Atmos Energy Corporation	ATO
NiSource Inc.	NI
Northwest Natural Holding Company	NWN[13]
ONE Gas, Inc.	OGS
South Jersey Industries, Inc.	SJI
Southwest Gas Holdings, Inc.[14]	SWX
Spire Inc.	SR

Because Ms. Bulkley did not change her estimation models and input variables, Staff's concerns with her recommended COE remains the same as expressed in rebuttal testimony. Staff will not

[11] 1 Summary, Won's Surrebuttal Workpaper.

[12] Bulkley's Surrebuttal Workpaper.

[13] In Figure 5 on page 32 of her direct testimony, with Ticker "NWN", Ms. Bulkley's listed the company name as "Northwest Natural Gas Company" not "Northwest Natural Holding Company." However Northwest Natural Gas Company is a private company. In her workpaper, NWN is a ticker symbol of Northwest Natural Holding Company in the New York Stock Exchange.

[14] In Figure 5 on page 32 of her direct testimony, with Ticker "SWX", Ms. Bulkley's listed the company name as "Southwest Gas Corporation" not "Southwest Gas Holdings, Inc." However, Southwest Gas Corporation is a private company. In her workpaper, SWX is a ticker symbol of Southwest Gas Holdings, Inc. in the New York Stock Exchange.

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

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

Ms. Bulkley's recommended ROE of 9.80% is much higher than the average authorized ROE of 9.40% in gas utility rate cases completed in the third quarter of 2020.[15] Ms. Bulkley's recommended ROE is based on overstated COE estimates using upwardly-biased input variables such as projected growth rates for the DCF model, market risk premium ("MRP") for the CAPM method, and projected risk-free rates for the BYPRP analysis.

2. **Inadequate Proxy Group Criteria** (Pages 6-8, Ibid)

Ms. Bulkley's screening criterion that the company should have a mean constant growth DCF result greater than 7.00% to be considered for ROE recommendation represents Ms. Bulkley's inappropriate screening of her proxy group to overstate COE estimates.[16] In contrast, Ms. Bulkley's selection criteria ignore utilities with unreasonably high mean constant growth DCF results. Ms. Bulkley's inappropriate screening of her proxy group serves to overstate her COE estimates.

[15] S&P Global Market Intelligence, Retrieved in October 15, 2021.
[16] On page 31, lines 8-18, Bulkley's Direct Testimony.

3. Excessive Projected Short-Term Growth Rate for DCF (Pages 8-11, Ibid)

For her DCF COE estimates, Ms. Bulkley exclusively used analysts' projected earnings growth rates, which she erroneously called long-term earnings growth rates.[17] Analysts' projected growth rates are for periods of three to five years, which is considered short 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 gross domestic product ("GDP") growth rate.[18] In addition, Ms. Bulkley used an excessively high updated GDP growth rate estimate of 5.49% for her multistage DCF COE estimates.[19] Because of her overstated growth rates, Ms. Bulkley's DCF COE estimates are unreasonably upwardly biased. If Ms. Bulkley had more reasonably used 3.70% as her projected GDP growth rate in the DCF model, her DCF COE estimate would be 7.97%.[20]

4. Inflated Market Risk Premium in the CAPM (Pages 11-16, Ibid)

Ms. Bulkley employed the traditional CAPM and the empirical CAPM ("ECAPM") using Value Line Beta, Bloomberg Beta and long-term average Beta with three different updated risk-free rates of 1.91%, 2.42% and 3.50% and a updated total market return of 14.56%, resulting in three different MRP of 12.64%, 12.14% and 11.06%.[21] Ms. Bulkley's MRPs of 12.36%, 12.07% and 11.33% are much higher than the regular U.S. financial services industry's MRP estimates of around 4.00% to 7.00%.[22] When she calculated her MRP, Ms. Bulkley included companies having unreasonably high projected EPS growth rates or not having dividend payment

[17] On page 39, Ibid.
[18] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 302.
[19] Schedule AEB-R1, Attachment 4, Bulkley's Rebuttal Testimony.
[20] 4 Multi-Stage DCF 1, Won's Rebuttal Workpaper.
[21] Schedule AEB-D2, Attachment 7, CAPM Alt, Bulkley's Direct Testimony.
[22] See Figure 2. "MRP and corresponding COE", on page 15, Won's Rebuttal Testimony.

information.[23] With more reasonable assumptions, such as a MRP of 5.49% and a risk-free rate of 1.93%,[24] Ms. Bulkley's average CAPM COE estimate would be 5.89%.[25]

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

Ms. Bulkley's adjusted CAPM (ECAPM) COE estimate of 12.05% is unreliable.[26] Ms. Bulkley used Dr. Roger Morin's adjustment factor of 25%.[27] Dr. Morin's adjustment factor of 25% was estimated using data from 1926 to 1984. However, there is no evidence Dr. Morin's finding would hold with data after 1984.[28] Furthermore, Dr. Morin also cited other studies that found that CAPM produced returns between −9.61% and 13.56%, meaning that the CAPM actually can overestimate COE in some instances.[29] Such variations in findings do not lend credibility to Ms. Bulkley's use of the ECAPM.

6. Inconsistent Bond Yield Plus Risk Premium Analysis (Pages 17-18, Ibid)

Ms. Bulkley's updated BYPRP ROE estimates range from 9.33% to 10.00% with a mean of 9.63%.[30] These updated BYPRP ROE estimates increased from her original BYPRP ROE estimates range from 9.28% to 9.71% with a mean of 9.46%.[31] For her updated BYPRP calculation, Ms. Bulkley did not just simply use updated data but newly employed improper input variables that are not consistent with her BYPRP regression model. More detailed problems with her revised input variables are addressed later in this testimony.

[23] Schedule AEB-R1, Attachment 8, Bulkley's Rebuttal Testimony.
[24] The assumption of the estimated MRP of 5.49% is the average of the four MRP in Schedule-R-14, Won's Rebuttal Testimony. The risk free rate of 2.26% is an average of 30-year Treasury bond at yields of three months ending September 30, 2021.
[25] 6 CAPM Alt, Won's Rebuttal Workpaper.
[26] Schedule AEB-R1, Attachment 6, Bulkley's Rebuttal Testimony.
[27] 1 Summary, Won's Surrebuttal Workpaper.
[28] On page 17, Footnote 55. Won's Rebuttal Testimony.
[29] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports. page 190.
[30] Schedule AEB-R1, Attachment 9, Bulkley's Rebuttal Testimony.
[31] On page 69, Bulkley's Direct Testimony.

7. Mischaracterization of Regulatory and Business Risks (Pages 19-21, Ibid)

Ms. Bulkley considered business risk, small-size risk and regulatory risk to determine where Ameren Missouri's required ROE falls within the range of her analytic results. Ms. Bulkley insisted that Ameren Missouri's natural gas distribution operations are substantially smaller than the median for the proxy group companies in terms of market capitalization. However, Ameren Missouri is not a small-size company in terms of its utility services even if its gas utility service is small. Ameren Missouri is the largest utility company in Missouri.[32] Also, Ms. Bulkley insisted that Regulatory Research Associates ("RRA") jurisdictional ranking and the S&P credit supportiveness ranking for Missouri indicates that Ameren Missouri has greater risk than the average for the proxy group.[33] However, 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.[34] Missouri's regulatory environment improved because the Commission has allowed several favorable regulatory mechanisms for Ameren Missouri's gas utility service. On the expense side, Ameren Missouri has cost recovery mechanisms consisting of the Purchased Gas Adjustment ("PGA") and the Actual Cost Adjustment ("ACA"). On the income side, Ameren Missouri has the revenue stabilization mechanism of the Delivery Charge Adjustment ("DCA") rider that is designed to isolate usage ranges where variations are primarily related to weather and conservation.[35] In addition, Ameren Missouri has an ability to use a capital tracking mechanism consisting of an Infrastructure System Replacement Surcharge ("ISRS") rider that allows it to recover a portion of capital investment costs between rate cases. Currently,

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[32] Ameren Fact Sheet, retrieved September, 29, 2021, (https://www.ameren.com/company/about-ameren).
[33] On pages 60- 67, Bulkley's Direct Testimony.
[34] S&P Global Ratings, Updated Views On North American Utility Regulatory Jurisdictions - June 2021, (https://www.spglobal.com/ratings/en/research/articles/210629-updated-views-on-north-american-utility-regulatory-jurisdictions-june-2021-11998892).
[35] Tariff Sheet No. 31, Union Electric Company Gas Service.

Ameren Missouri uses various and considerable protections against business risks that were granted to it by the Commission. On April 9, 2021, the Commission authorized Ameren Missouri to track and defer into a regulatory asset the incremental costs caused by the COVID-19 pandemic.[36] Staff expert John P. Cassidy addresses in more detail the regulatory lag mitigation - business risk reduction mechanisms such as the Plant In Service Accounting ("PISA") and Renewable Energy Standard Rate Adjustment Mechanisms ("RESRAM") in his rebuttal testimony in the current Ameren Missouri electric utility service rate case, Case No. ER-2021-0240.

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

A. The following are the specific areas in which Staff is responding to the testimony of Ms. Bulkley:

- Capital Market Conditions,
- COE and Authorized ROE,
- The Discounted Cash Flow Model,
- The Capital Asset Pricing Model and Empirical CAPM,
- The Rule of Thumb Test using the Risk Premium Model,
- Risk Free Rate and Bond Yield Plus Risk Premium, and
- Comparable Authorized ROEs.

Staff will discuss each in turn, below.

Q. Please summarize the key issues in Ms. Bulkley's rebuttal testimony that you will address in your surrebuttal testimony.

A. In her rebuttal testimony, Ms. Bulkley did not correctly understand how Staff utilized various capital market indicators in its comparative COE analysis to show that COE has

[36] Order Approving Stipulation and Agreement, Case No. GU-2021-0112.

decreased since Spire Missouri's 2017 general rate cases. Ms. Bulkley focused on the isolated effect of each economic variable such as volatility or interest rate, leading her to miscomprehend the aggregate effect of various economic indicators on COE estimation models. Furthermore, Ms. Bulkley adopted inappropriate input values for her DCF and CAPM analyses and misrepresented Staff's proper input variables. Overall, 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.

1. Capital Market Conditions

Q. What is Staff's response to Ms. Bulkley's analysis of COE estimation based on her understanding of capital market conditions?

A. Staff agrees with most of Ms. Bulkley's understanding and description of overall capital market conditions. The issue is how Ms. Bulkley used the capital market data in her COE estimation. Ms. Bulkley used what Staff would call a "cherry picking" analysis. In other words, if some information supports a higher COE estimation, then she would directly apply the information to her analysis. However, if some other information indicated a lower COE estimation, Ms. Bulkley would tweak the information to fit her preferred interpretation.

An example of one of the tweaking techniques is a manipulation of timing perspective. For example, the current yield of the 30-year Treasury Bond reached a low in August 2020 of 1.32%.[37] Because a lower 30-year Treasury Bond yield results in lower CAPM COE estimates and thus authorized ROE, Ms. Bulkley insisted that the yield will be increased in the near term, and so the use of projected bond yields is more proper. For bond yields and interest rates, Ms. Bulkley alluded

[37] Bloomberg Professional, as of August 31, 2021.

to attention to **future,** not **current** conditions. On the contrary, she asserted that **current** data should be directly used in similar analyses. As an example, it is true that the utility sector has underperformed the broader market since March 2020 and that the dividend yields of utilities have increased since 2017. This information indicates higher DCF COE estimates and thus authorized ROE. Because currently, a lower utility stock market condition is favorable to her recommendation, without considering stock market changes, Ms. Bulkley directly used the **current** utility stock market information to support her position and insisted other witnesses' COE estimates were too low.

In contrast, Staff's comparative analysis can prevent this kind of opportunistic bias in order to determine a just and reasonable authorized ROE. In comparative analysis, each time period's information is consistently constructed, and input values applied to the same model, and then an apples-to-apples comparison is conducted. Therefore, such biases are theoretically and practically impossible in Staff's comparative analysis.

2. COE and Authorized ROE

Q. Do you agree with Ms. Bulkley that Staff disregarded the results of its COE estimation when recommending an authorized ROE?[38]

A. No, I do not. Staff did not disregard its COE estimation results when it recommended an authorized ROE of 9.50%. On the contrary, Staff actively utilized its DCF COE estimates to assess a just and reasonable authorized ROE using its comparative COE analysis. Interestingly, it is Ms. Bulkley who actually disregarded the results of her COE and ROE estimation when she excluded some of her DCF COE estimates and BYPRP ROE estimates.

[38] Page 32, lines 3-4, Bulkley's Rebuttal Testimony.

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

A. According to Ms. Bulkley, Staff's estimated COEs are much lower than prevailing authorized ROEs. That is true, and it is because recently COE estimates have been much lower than authorized ROEs.[39] Staff used the results of its 2017 COE estimates to compare to the results of the current COE estimates to discern a change in COE. As indicated in Staff's analysis, COE has decreased by 30 basis points.[40] Staff adjusted downward, by 30 basis points, the Commission's Spire Missouri authorized ROE of 9.80%, to 9.50%. In other words, Staff's current COE estimates were never intended to directly determine Staff's recommended authorized ROE of 9.50%.

Q. Why do you think Ms. Bulkley, not Staff, disregarded the results of COE estimates when recommending an authorized ROE?

A. Ms. Bulkley estimated her recommended ROE directly from her COE estimates. Ms. Bulkley recommended a range of authorized ROE that excludes some of her COE estimates. For example, Ms. Bulkley's BYPRP COE estimate was 9.48% but her recommended ROE is 9.80%, in a range of 9.65% to 10.40%. Ms. Bulkley claims that COE and ROE are the same.[41] If that is the case, then the recommended range of her authorized ROE should include all her COE estimates. However, Ms. Bulkley clearly disregarded her original BYPRP COE estimate of 9.48% and updated BYPRP COE estimate of 9.33%.[42]

In contrast, as explained in Staff's COS report, Staff recognizes that market-based COE is different from authorized ROE.[43] COE is the return required by investors; authorized ROE is the

[39] 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).
[40] On page 10, lines 1-2, Staff's COS Report.
[41] On page 3, lines 14-20, Bulkley's Direct Testimony.
[42] Schedule AEB-R1, Attachment 9, Bulkley's Rebuttal Testimony.
[43] Page 9, Footnote No. 4, Staff's COS Report.

return set by a regulatory utility commission. Staff's position is that COE is not the same as authorized ROE. It is well known that estimated COEs have in recent years been much lower than authorized ROEs.[44] Staff's recommended authorized ROE is a function of change in COE between time periods. Therefore, Ms. Bulkley's claim that Staff disregarded the results of its COE estimates when recommending authorized ROE is simply wrong.

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

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

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

A. As was already explained in Staff's COS Report, COE is the return required by investors and authorized ROE is the return set by a regulatory utility commission. Although some experts contend that COE and ROE are synonymous, Staff's position is that they need not be. Observed utility COEs have been, generally, significantly lower than ROEs in recent years.[47] Because observed COEs have been significantly lower lately, instead of directly recommending

[44] 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).
[45] On page 378, CFA Program Curriculum, 2020, Level I, Volume 4.
[46] On page 389, Ibid.
[47] On page 9, Footnote 4, Staff's COS Report.

the estimated COEs, Staff recommends the authorized ROE based on change in COE from period to period.

The easiest way to understand the difference between COE and authorized ROE is thinking about how the two return measures are used in practice. When investors invest their money to buy the 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 purchase its shares in the primary market and to maintain its share price in the secondary market.[48] The important point here is that investors pay their money based on the market value of the common equity stock and not just based on the book value of the equity of a company. To calculate the expected minimum rate of return of common equity, investors estimate COE using the stock valuation of models such as the discounted cash flow ("DCF") or the capital asset pricing model ("CAPM").[49] Investors' expected return from their common stock can be easily calculated by multiplying COE by the market value of common stock.

In contrast, an authorized ROE has a totally different financial context. The purpose of an authorized ROE is to calculate just and reasonable rates for utility companies. In utility rate cases, rates are decided by the revenue requirement determined by the Commission. The revenue requirement is calculated by multiplying rate base by allowed ROR. The allowed ROR is the weighted average cost of capital, which includes authorized ROE and cost of debt. Rate base is calculated based on the book value of the utility's regulatory assets. Book value of equity is

[48] On page 378, CFA Program Curriculum, 2020, Level I, Volume 4.
[49] On page 379, Ibid.

calculated by subtracting a company's total liabilities from its total assets. Clearly, the two concepts are different; therefore, there is no reason COE and authorized ROE 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, that means that if COE is directly used to set authorized ROE values and to calculate revenue requirement, authorized ROE would be as volatile as the stock market. With authorized ROE as volatile as the stock market, it means 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 because investors know that higher or lower than just and reasonable utility rates 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 Ameren Missouri rather than in some other investment opportunity requires just and reasonable rates.

Q. Does it 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 rate of return based on the market value of stock. Specifically, the comparison between COE estimates for two different rate cases provides important information to calculate a just and reasonable authorized ROE. In many rate cases, Staff found that the changes in the COE over time, say between rate case periods, provide essential information on whether to increase or decrease authorized ROE recommendations, considering financial market changes. However, simply equating COE estimates with recommended ROE is often not appropriate.

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

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

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

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 outputs 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 above, the COE and the authorized ROE are developed in different financial contexts. If COE estimates determined by market value-based methods such as DCF and CAPM are simply quoted for authorized ROE, the result would be neither just nor reasonable to investors or ratepayers.

More importantly, finding a just and reasonable authorized ROE in utility rate regulation is a long-term iterative procedure. After a utility rate case, based on an authorized ROE determined

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

by the Commission, a set of new utility rates go into effect. Under the new rates, the utility company will soon have its performance results. If given rates are overpriced, ratepayers will overpay and the company and its stock price will generally outperform. If given rates are underpriced, the company will have a lower net income than what the market expected. Because of the disappointing earnings report, investors would not be attracted to the company's stock and its stock price will underperform the total stock market. Therefore, the company may file its next rate case sooner or later than originally expected based upon the performance results for the current set of rates.

3. The Discounted Cash Flow Model

Q. Do you agree with Ms. Bulkley that Staff should not use the dividend per share ("DPS") growth rate but should solely use the earnings per share ("EPS") growth rate within its DCF calculations?

A. No, I do not. EPS and DPS are both acceptable measures of growth rate.[51] Analysts occasionally use either or both 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 cases. However, for the current rate case, EPS growth rates are not reliable to use for calculating the perpetual growth rate for the DCF model. According to Value Line, in the past five years, three out of eight companies in Staff's original natural gas proxy group show negative EPS growth rates. Northwest Natural Holding Company (Ticker "NWN"), NiSource Inc. (Ticker "NI"), and South Jersey Industries, Inc. (Ticker "SJI"), reported negative EPS growth rates of 17.0%, 8.0% and 2.5%, respectively.[52] The DCF model is not valid with a negative growth rate. Therefore, Staff

[51] On page 139, David C. Parcell, Cost of Capital Manual, Society of Utility and Regulatory Financial Analysts, 2010 Edition.
[52] The Value Line Investment Survey.

cannot only rely on the analysts' projected EPS growth rates used by Ms. Bulkley. However, Staff's natural gas proxy group shows positive DPS growth rate over 10 years and also has anticipated positive projected DPS growth rates. Staff agrees with Dr. Morin's statement that investors rely on analysts' forecasts to a greater extent than on historic data only.[53] So, Staff used a weighted average of projected DPS and EPS growth rates in its DCF calculations.

Q. Do you know of any financial literature publications that support the use of projected DPS growth rates for use in a DCF model?

A. Yes. There are many publications that support the use of projected DPS growth rates for use in a DCF model. First, Howe and Rasmussen stated that the three most commonly-used financial indicators of growth are DPS, EPS, and book value per share ("BVPS").[54] 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 use "constant growth rate in DPS in future."[55] There are many more but the most important point is that using the DPS growth rate in DCF is an acceptable method.

Q. Do you agree with Ms. Bulkley that Staff's projected GDP growth rate of 3.70% is unreasonable and her historical growth rate of 5.56% is reasonable for her multi-stage DCF model?[56]

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53 Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, page 298.
54 Howe, Keith M. and Eugene F. Rasmussen. Public Utility Economics and Finance, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1982.
55 On pages 130-134, David C. Parcell, Cost of Capital Manual, Society of Utility and Regulatory Financial Analysts, 2010 Edition.
56 On page 39, lines 7-10, Bulkley's Rebuttal Testimony. However, Ms. Bulkley indicated 5.49% GDP growth rate in her Schedule AEB-R1, Attachment 4 of Rebuttal Testimony.

A. No, I do not. First, it is a basic principle of economics that the GDP growth rates are generally decreasing in time because of decreasing marginal returns to capital – the so called "diminishing returns of scale."[57] In the last 20 years, the U.S. real GDP growth rate has never been over 4%.[58] It is inconceivable that the projected GDP growth rate will be any higher than it has been. Staff's projected growth rate of 3.70%, published by the Congressional Budget Office ("CBO"), fits the economic principle of diminishing marginal returns.[59] Since the perpetual growth rate is assumed in the DCF model, a proper long-term real GDP growth rate will be lower than 3.70%. It is therefore absurd that Ms. Bulkley believes that, because of uncertainty in the forecasting process, Staff's estimate of projected GDP growth may understate a reasonable expectation of long-term economic growth. On the contrary, according to basic economic principles, 3.70% could actually overstate the perpetual GDP growth rate.

In her direct testimony, Ms. Bulkley relied on the 5.56% percent long-term historical GDP growth rate as reported by the Bureau of Economic Analysis ("BEA") from 1929 to 2019 and projected inflation rates from Blue Chip Financial Forecasts and the Energy Information Administration ("EIA").[60] This is another example of Ms. Bulkley cherry picking data that works to support her preferred results. Since Ms. Bulkley thinks only **forward-looking** data should be used, it is curious that she would now choose to use **historical** GDP data for her calculation.[61]

Q. Do you agree with Ms. Bulkley that Staff did not follow FERC's current methodology to calculate DCF COE estimates?[62]

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[57] Mankiw, N. G. (2020). Brief principles of macroeconomics. Cengage Learning.
[58] The Word Bank, (https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=US)
[59] Congressional Budget Office, "Additional Information About the Updated Budget and Economic Outlook: 2021 to 2031," July 2021, at 27.
[60] Schedule AEB-D2, Attachment 5, Bulkley's Direct Testimony.
[61] On page 42, lines 6-8, Ibid.
[62] On page 40, lines 2-24, Bulkley's Rebuttal Testimony.

A. I agree. Staff never intended to follow the FERC methodology. Staff considers FERC's decisions, but FERC's decisions are changed very often so that 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 cases. Staff used growth rates in its DCF model estimated by combining short-term analysts' estimated growth rates and long-term GDP growth rates at two-thirds and one-third weightings, respectively. This is an approach that FERC used before it changed in its May 2020 order.[63] Staff is not bound to change its own approach because FERC's approach changed. Staff is under no obligation to follow FERC's methodology on this point.

4. The Capital Asset Pricing Model and Empirical CAPM

Q. Do you agree with Ms. Bulkley that it is unclear how Staff developed the proxy group average range of 6.43% to 8.05% for the four MRP scenarios?[64]

A. No, I do not. All calculation procedures for the average CAPM COE estimates of 6.43% and 8.05% are clearly explained in the CAPM SJW-14 tab of Dr. Won's MS Excel file workpapers, provided to Ms. Bulkley.[65] The average CAPM COE estimate of 6.43% is the proxy group average COE estimate using an MRP of 4.63% from the Duff & Phelps geometric mean total return. The average CAPM COE estimate of 8.05% is the proxy group average COE estimates using an MRP of 6.43% from Professor Damodaran's arithmetic mean total return.

[63] FERC Opinion 569-A.
[64] On page 47, lines 16-18, Bulkley's Direct Testimony.
[65] MS Excel file, ROR_Won_Schedule_Direct. Won's Direct Workpaper.

Q. Do you agree with Ms. Bulkley that Staff should use a projected risk-free rate of 3.50%?[66]

A. No, I do not. In CAPM applications, current 30-year Treasury security yields are universally recognized as appropriate for use as the risk-free rate.[67] 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.[68] Ms. Bulkley insisted that the estimation of COE is a forward-looking analysis for her convenience.[69] 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. These three variables represent the current market condition and should be used to produce a current market-required cost of equity. Therefore, a projected risk-free rate of 3.50% is not proper because Beta and MRP would also have to be projected like the risk-free rate.[70]

Q. Do you agree with Ms. Bulkley that Staff should have incorporated an empirical CAPM ("ECAPM") analysis into its overall COE analysis?

A. No, I do not. The reason Staff does not utilize the ECAPM is because currently there is no known reliable adjustment factor for MRP. Ms. Bulkley's use of Dr. Morin's ECAPM approach is unreliable and should be rejected as Staff explained in its rebuttal testimony.

[66] On page 48, lines 10-13, Bulkley's Rebuttal Testimony.
[67] On page 107, David C. Parcell, Cost of Capital Manual, Society of Utility and Regulatory Financial Analysts, 2010 Edition.
[68] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 151.
[69] On page 48, lines 7-8, Bulkley's Rebuttal Testimony.
[70] 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.

5. The Rule of Thumb Test using Risk Premium Model

Q. Do you agree with Ms. Bulkley that if Staff had relied on the MRP range of 4.00% to 6.00% from Staff's COS Report in the Missouri-American Water Company ("MAWC") rate case, Case No. WR-2020-0344, for purposes of recommending an ROE for Ameren Missouri in this proceeding, the results of Staff's "Rule of Thumb" methodology would have been from 7.26% to 9.41%?[71]

A. No, I do not. While Ms. Bulkley's recalculated range of 7.26% to 9.41% still supports the reasonableness of Staff's proxy group average COE point estimate of 8.32%, her argument regarding Staff's testing of reasonableness of DCF COE estimates using Staff's "Rule of Thumb" analysis is incorrect for multiple reasons. First of all, Ms. Bulkley misunderstands Staff's "Rule of Thumb" methodology as a form of the risk premium method.[72] Ms. Bulkley stated Staff added an average utility bond yield to an estimate of the MRP. However, Staff's risk premium method did not use an MRP. Staff clearly stated in the COS Report that Staff's rule of thumb is an original form of the bond yield-plus risk premium method that uses an ERP.[73] MRP is estimated as the difference between the total return of stock market and the government bond yield. In contrast, ERP is a company or industry specific risk premium measured by the difference between its equity return and bond yield.[74] Staff thinks Ms. Bulkley might have inadvertently misread Staff's COS report because conceptual differences between MRP and ERP are too basic for financial analysts to otherwise confuse.

[71] On page 52, lines 17-19, Bulkley Rebuttal Testimony.
[72] On page 51, lines 10-12, Bulkley Rebuttal Testimony.
[73] On page 23, lines 21-24, Staff's COS Report.
[74] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, pages 121-123,

The ERP range of 3% to 5% is reasonable considering the corporate credit ratings assigned to Ameren Missouri by Moody's and S&P are 'Baa1' and 'BBB+', respectively.[75] The general ERP range of 3% to 5% is supported by the Chartered Financial Analyst ("CFA") program.[76] The reason Staff used an ERP range of 4% to 6% in Case No. WR-2020-0334 for MAWC is because MAWC does not have an independent credit rating. Actually, some high risk company's ERP could be greater than 5% because of a higher risk premium as explained by Dr. Morin.[77] Therefore, Staff assigned a higher ERP range considering MAWC's higher company-specific risk, consistent with financial industry standards.

6. Risk Free Rate and Bond Yield Plus Risk Premium

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

A. Ms. Bulkley's recalculated BYPRP ROE estimates range from 9.33% to 10.00% with a mean of 9.63%. These results are higher than her original BYPRP ROE estimates range of 9.28% to 9.71%, with a mean of 9.46%.[78] In her direct testimony, for her BYPRP ROE estimation, Ms. Bulkley used three risk-free rates: the 30-day average of the 30-year U.S. Treasury bond yield (i.e., 1.77%), the near-term (Q2 2021 – Q2 2022) projections of the 30-year U.S. Treasury bond yield (i.e., 2.06%), and a longer-term (2022 – 2026) projection of the 30-year U.S. Treasury bond yield (i.e., 2.80%). However, in her rebuttal testimony, Ms. Bulkley used one risk-free rate of the current 30-day average of the 30-year U.S. Treasury bond yield (i.e., 1.91%), and two Blue Chip forecast yields, near-term (i.e., 2.42%) and long-term (i.e., 3.50%).

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[75] S&P Global Market Intelligence, retrieved March 19, 2021 (https://platform.marketintelligence.spglobal.com).
[76] CFA® Program Curriculum, 2020, Level I, Volume 4, p. 93, CFA Institute, retrieved on March 18, 2021. (https://www.cfainstitute.org/en/programs/cfa/policies).
[77] Morin, R. A. (2006). New Regulatory Finance. Public Utilities Reports, page 129.
[78] Schedule AEB-R1, Attachment 1, Bulkley's Rebuttal Testimony.

Q. Does Ms. Bulkley explain why she changed her input values to use Blue Chip forecast yields instead of her original input values based on government bond yields?

A. No, she does not.

Q. Do you agree with Ms. Bulkley's use of Blue Chip forecast yields for her BYPRP ROE estimates?

A. No, I do not. To discern why Ms. Bulkley's use of Blue Chip forecast yields for her BYPRP ROE estimates is incorrect, Staff first needs to explain her BYPRP method.

Q. Please explain Ms. Bulkley's BYPRP method.

A. Ms. Bulkley's BYPRP method estimates authorized ROE using a regression analysis based on authorized ROEs for utility companies relative to risk-free rates (30-year Treasury bond yields).[79] Ms. Bulkley used monthly data of risk-free rates and authorized ROEs derived from 678 natural gas utility rate cases from 1992 through January 2021 as reported by RRA.[80] Because Ms. Bulkley defined the risk premium as the authorized ROE minus the risk-free rate based on government bond yields, Ms. Bulkley's BYPRP analysis method can directly estimate the authorized ROE.

Q. Why should Ms. Bulkley not use Blue Chip forecast yields for her BYPRP ROE estimates?

A. As explained above, Ms. Bulkley developed her BYPRP regression model based on the relationship between monthly authorized ROE and 30-year Treasury bond yield as the risk free rate. In other words, Ms. Bulkley used an irrelevant risk-free rate measure and an incorrect time-period so that her estimated authorized ROE is invalid. This means Ms. Bulkley's regression

[79] On page 52, lines 7-17, Bulkley's Direct Testimony.
[80] According to Ms. Bulkley this analysis began with a total of 1,084 natural gas cases across the U.S., which were screened to eliminate limited issue rider cases, transmission cases, and cases that did not specify an authorized ROE. After applying those screening criteria, the analysis was based on data for 678 cases.

model is only able to properly estimate authorized ROE when she uses the proper input variable at the associated time (i.e., the 30-year Treasury bond yield at the corresponding time period). If the input values are not proper, Ms. Bulkley's BRPRP regression model produces irrelevant output. The use of Blue Chip forecast yields by Ms. Bulkley is improper, because the yields are neither government bond yields nor do the time period of the yields correspond to the time period of Ms. Bulkley's analysis. Blue Chip forecast yields are not interchangeable with government bond yields. The failure of Ms. Bulkley to properly choose valid inputs for use in her regression model renders most of her BYPRP ROE estimates to be useless. In Ms. Bulkley's rebuttal testimony, the only properly updated BYPRP ROE estimate was 9.33% using current 30-day average of the 30-year U.S. Treasury bond yield.[81]

7. Comparison of Authorized ROEs

Q. Do you agree with Ms. Bulkley that Staff's recommended ROE of 9.50% is too low because that is 24 basis points below the average authorized ROE for natural gas utilities from 2010-2020 of 9.74% and 305 basis below the highest ROE awarded during this period for a natural gas utility?[82]

A. No, I do not. Ms. Bulkley's assertion does not make sense because of several reasons. First, the highest authorized ROE of 12.55% in the 2010 ENSTAR Natural Gas Co. rate case of Alaska cannot be a proper reference to determine a just and reasonable authorized ROE. The 12.55% authorized ROE is clearly an outlier. It is absurd to compare reasonable authorized ROEs to an outlier. Second, the average authorized ROE in the 3rd quarter of 2021 is only 9.40%.83 The third quarter of 2021 is the proper reference time because it is roughly within the

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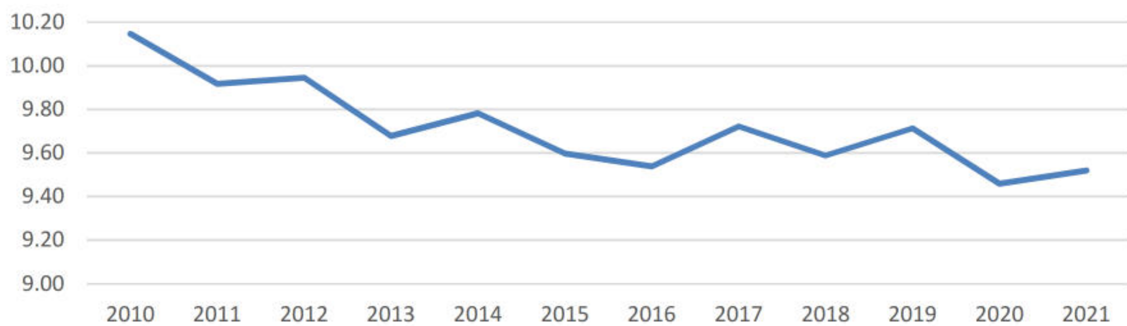
[81] Schedule AEB-R1, Attachment 9, Bulkley's Rebuttal Testimony.
[82] On page 53, lines 21-22, and page 54, line 1, Ibid.
[83] 11 Authorized ROE, Won's Surrebuttal Workpaper.

time period of the current rate case. Finally, considering a period of 11 years as a reference point is inappropriate. Authorized ROEs have declined steadily in the eleven years referred to by Ms. Bulkley. Figure 1 shows authorized ROEs in the period between 2010 and 2021.

Figure 1. Authorized ROE (2010-2021)



As presented in Figure 1, the average authorized ROE in 2010 was 10.15% as compared to an average authorized ROE of 9.52% in 2021. There is a clear downward trend in authorized ROEs for natural gas utilities from 2010-2021. Therefore, the 9.74% average authorized ROE in the 11 years referred to by Ms. Bulkley cannot be a proper reference for a just and reasonable authorized ROE.

Q. Do you agree with Ms. Bulkley that the majority of authorized returns for gas distribution companies (67 out of 115 decisions) from 2018 through August 2021 have been between 9.60% and 10.25%?[84]

A. No, I do not for multiple reasons. First, there is a data credibility issue. Ms. Bulkley claimed that there were 115 authorized natural gas rate cases from S&P Capital IQ between January 2018 and August 2021.[85] Upon investigation, Staff found out that between January 2018 and August 2021, there were 127 authorized gas cases recorded in Ms. Bulkley's workpapers but

[84] On page 18, lines 3-4, Bulkley's Rebuttal Testimony.
[85] Staff's Data Request No. 0418.

only 115 cases included in Ms. Bulkley's analysis.[86] Staff cannot understand why 12 authorized gas cases were excluded from Ms. Bulkley's analysis.

Second, Ms. Bulkley used an irrelevant range. Ms. Bulkley used a range of 9.60% to 10.25% instead of her recommended authorized ROE range of 9.65% to 10.40%.[87] Staff has no idea why Ms. Bulkley used 9.60% for the lower end of her range instead of the lower end of her recommended ROE range of 9.65%. Staff thinks that 10.25% is the maximum authorized ROE from January 2018 through August 2021. If she really wants to show a relevant statistical distribution, Ms. Bulkley must compare the number of authorized ROEs in her recommended ROE range to the number of authorized ROEs in Staff's recommended ROE range.

Staff calculated ROE distributions using the data set from S&P Capital IQ from January 2018 through September 2021. There were 132 natural gas rate cases that reported authorized ROE decisions from January 2018 to September 2021. Among them, only 60 rate cases out of 132 (around 45%) were in the range of Ms. Bulkley's recommended authorized ROE range of 9.65% to 10.40%. In other words, 72 rate case decisions had authorized ROEs less than 9.65%. In contrast, a total of 80 rate cases out of 132 (around 61%) were in the range of Staff's recommended authorized ROE range of 9.25% to 9.75%.[88] Therefore, the recent historical authorized ROE decisions support Staff's recommended ROE range more than they support Ms. Bulkley's.

8. Updated Authorized ROE Analysis

Q. Did Staff update its ROE analysis?

A. Yes. Staff updated its ROE analysis with data through September 30, 2021.

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[86] MPSC 0418 Recalculated, Won's Surrebuttal Workpaper.
[87] On page 21, line 9, Bulkley's Rebuttal Testimony
[88] MPSC 0418 Recalculated, Won's Surrebuttal Workpaper.

Q. Why did Staff update its ROE analysis?

A. There are three reasons to update Staff's ROE analysis. First, Staff wants to reflect more up-to-date financial information to recommend an authorized ROE. Staff has updated financial market data including capital market and macroeconomic indicators. Second, Staff wants to reflect more recent regulatory environment changes including other utility rate case decisions in the U.S. Staff also revised its ROE analysis to incorporate a new ROE benchmark of 9.37% determined by the Commission for Spire Missouri on October 27, 2021.[89] Third, Staff wants to remove unnecessary minor issues that might prevent the Commission from deciding on a proper authorized ROE. Some issues Ms. Bulkley raised about Staff's ROE analysis are nonessential to determine a just and reasonable authorized ROE but are enough to create confusion.

Q. Please briefly explain the issues that Ms. Bulkley raised that Staff will address in its updated analysis.

A. Staff considered three issues Ms. Bulkley raised in her rebuttal testimony in Staff's revised ROE analysis.

(1) Projected EPS growth rate – Ms. Bulkley criticized Staff's use of a weighted average of projected DPS and EPS for growth rate instead of only using projected EPS. Ms. Bulkley argued that DPS growth rate estimates do not provide a reliable estimation for a company's stock performance; instead, Ms. Bulkley argued that EPS growth estimates are the appropriate measure of a company's stock performance.[90] Staff disagrees with Ms. Bulkley's assertion. As explained above in this testimony, Staff maintained the position that DPS, EPS and BVPS are equally appropriate for estimating growth rate. However, to minimize unnecessary

[89] Report and Order, Case No. GR-2021-0108.
[90] On pages 35-36, Bulkley's Rebuttal Testimony.

conflict, Staff uses only projected EPS for calculating short-term growth rate for the DCF model in its revised ROE analysis.

(2) Perpetual DCF growth rate – Ms. Bulkley argued that Staff should have used FERC's new approach on adjusting DCF growth rates. FERC's new approach combines analysts' EPS growth estimates with long-term GDP growth estimates at 80% analysts' EPS growth estimates and 20% long-term GDP growth rates.[91] Staff used 66.7% analysts' EPS growth estimates plus 33.3% long-term GDP growth estimate of 3.8%.[92] There was nothing wrong with the weightings used by Staff to calculate the growth rates for its DCF model. However, to minimize unnecessary conflict, Staff chose to use a compromise set of weighting factors that are in between Staff's original position and the FERC weighting factors suggested by Ms. Bulkley. The weighting factors for Staff's revised DCF COE comparison analysis uses 75% analysts' EPS growth estimates plus 25% long-term GDP growth estimates.

(3) Use of CAPM for comparative analysis – Ms. Bulkley suggested that Staff should have used CAPM to estimate its authorized ROE.[93] The CAPM COE estimate is too volatile to provide an accurate COE estimation because the CAPM model is too sensitive to input variables such as Beta and risk-free rates. However, to respond to Ms. Bulkley's suggestion, Staff conducted a new CAPM comparison analysis.

Q. Please briefly explain the new ROE benchmark that Staff is using in its updated ROE analysis.

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[91] On page 40, lines 12-13, Ibid.
[92] Staff still thinks the most recent projected long-term GDP growth rate of 3.7% reported by CBO in July 2021 is appropriate. However, to minimize unnecessary conflict, Staff decided to use the 3.8% long-term GDP growth rate reported by the CBO in February 2021 that was decided by the Commission (Report and Order, Case No. GR-2021-0108) to be a realistic projected long-term nominal GDP growth rate.
[93] On page 50, lines 16-21, Ibid.

A. Staff used an ROE of 9.37% as a benchmark for its updated comparative analysis. A ROE of 9.37% is what Staff recommended in the Spire Missouri's general rate case, Case No. GR-2021-0108. In its revised ROE analysis, Staff uses the recommended authorized ROE of 9.37% based on the Commission orders an authorized ROE of 9.37% for the Spire Missouri rate case.[94]

Q. Please summarize the findings of Staff's updated ROE analysis.

A. Staff's updated ROE analysis confirms Staff's original finding that a reasonable authorized ROE for Ameren Missouri is 9.50%. According to the revised comparative analysis based on the DCF, COE has increased by less than 10 basis points in the time period since Staff recommended an authorized ROE of 9.37% for Spire Missouri. This amount of DCF COE change supports Staff's recommended authorized ROE of 9.5%. According to the comparative analysis based on the CAPM COE, COE has decreased since Staff recommended Spire Missouri be authorized ROE of 9.37%. The reason the CAPM analysis indicates a decrease in COE is because of the recent downward trend of 30-year Treasury bond yields. While variables such as Beta and MRP of the CAPM remained unchanged, 30-year Treasury bond yields decreased, causing the COE indicated by the CAPM to decrease. The details of Staff's updated ROE analysis are presented in Dr. Won's Surrebuttal Testimony Schedules. Staff stresses here that the COE estimates are only meaningful for comparative analysis purposes. In other words, COE estimates cannot be directly used to determine a proper estimation of authorized ROE.

Q. What are Staff's conclusions regarding Ameren Missouri's witnesses' rebuttal testimony?

A. Like in her direct testimony, Ms. Bulkley's updated analysis in her rebuttal testimony is based on invalid and incorrect assumptions. Therefore, Ms. Bulkley's recalculated

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[94] Schedule SJW-S15, Won's Surrebuttal Testimony.

COE estimates should not be considered as the basis for a just and reasonable authorized ROE recommendation.[95]

III. RESPONSE TO THE TESTIMONY OF OPC WITNESS MURRAY

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

A. In his rebuttal testimony, Mr. Murray did not change his Direct Testimony recommendation that the Commission set Ameren Missouri's authorized ROE at 9.25%, in a range of 8.5% to 9.5%, based on his COE estimates range of 6.5% to 7.0%.[96] Mr. Murray estimated his COE using a multi-stage DCF approach and a CAPM analysis.

Q. Do you have any concerns with the ROE issues that Mr. Murray addressed in his rebuttal testimony?

A. Staff does not have any major concerns with Mr. Murray's ROE recommendation. Mr. Murray's recommended ROE of 9.25% is 25 basis points lower than Staff's 9.50%, but within Staff's reasonable range of 9.25% to 9.75%.[97] Mr. Murray's recommended ROE is the same as the Commission's authorized ROE of 9.25% in the Empire District's electric rate case (Case No. ER-2019-0374).[98] Staff however, expresses concern with Mr. Murray's position that it is inappropriate to consider the Commission's 9.8% allowed ROE in the 2017 Spire Missouri rate case for determining a ROE for Ameren Missouri.[99]

[95] On page 45, Bulkley's Rebuttal Testimony.
[96] On page 2, lines 16-19, Murray's Direct Testimony.
[97] On page 2, lines 20-22, Ibid.
[98] On page 6, lines 2-5, Ibid.
[99] On page 31, lines 5-8, Murray's Rebuttal Testimony.

Q. Please explain Staff's concern with Mr. Murray's position that it is inappropriate to consider the Commission's 9.8% allowed ROE in the 2017 Spire Missouri rate cases for determining a ROE for Ameren Missouri in this proceeding.[100]

A. Staff does not agree with Mr. Murray that it is inappropriate to consider the Commission's 9.8% allowed ROE in the 2017 Spire Missouri rate cases because he believes the Commission "went in the wrong direction in that case."[101] As a witness in the Spire Missouri rate cases, Mr. Murray recommended an authorized ROE of 9.25%. Mr. Murray believes his ROE recommendation was correct and the Commission erred when it authorized 9.8% instead of the 9.25% that Mr. Murray recommended. Staff accepts the Commission's finding in the Spire Missouri rate cases and therefore considers the 9.8% authorized ROE as an appropriate benchmark to consider for recommending a fair and reasonable authorized ROE for Ameren Missouri in this proceeding.

Q. What is Mr. Murray's analysis showing that the Commission went in the wrong direction in the 2017 Spire Missouri rate cases?

A. As a witness in that case, Mr. Murray testified that Spire Missouri should be authorized an ROE of 9.25% based on capital market conditions at the time. Although there was a slight increase in interest rates at the time of the Spire Missouri gas rate cases, the overall trend since 2015 had been a continued decline in the cost of capital.[102] According to Mr. Murray's research, RRA Regulatory Focus reported that the average allowed ROE for gas utility companies was then closer to 9.6%, not 9.8%, after eliminating the 11.88% outlier that was included in the average at that time.[103]

[100] On page 31, lines 5-8, Murray's Rebuttal Testimony.
[101] On page 31, lines 19-20, Ibid.
[102] On page 31, lines 17-19, Ibid.
[103] RRA Regulatory Focus, Major Rate Case Decisions January – September 2017, October 26, 2017.

Q. Does Staff agree with Mr. Murray's analysis showing that the Commission went in the wrong direction in the 2017 Spire Missouri rate cases?

A. No, Staff does not. It is true that the Commission considered that the average authorized ROE for gas utility companies in the U.S. was 9.8% in 2017. It is also true that if the 11.88% outlier is eliminated then the average authorized ROE was closer to 9.6%. However, the Commission's decision of authorized ROE did not solely rely on the average authorized ROE for gas utility companies. The authorized ROE of 9.8% was determined by the Commission after examining testimonies of all parties and cross-examination as part of an evidentiary hearing before the Commission. Furthermore, Mr. Murray's recommendation of 9.25% is only based on his analysis. Therefore, Mr. Murray's analysis showing that the Commission went in the wrong direction in the 2017 Spire Missouri rate cases is just his personal opinion.

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

A. In his rebuttal testimony, Mr. Murray maintained his Direct Testimony recommendation that Ameren Corp.'s capital structure consisting of approximately 45.00% common equity, 0.82% preferred stock, and 54.18% long-term debt for use in setting Ameren Missouri's ROR.[104] Mr. Murray's recommended common equity ratio is not exactly the same as Ameren Corp.'s consolidated capital structure as of December 31, 2020, the end of the test year. Mr. Murray argued that the capital structure he recommended is in line with the capital structure ratios Ameren Corp. is targeting for its consolidated operations over the long-term.[105]

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

[104] On page 32, lines 12-13, Murray's Direct Testimony.
[105] On page 32, lines 13-16, Ibid.

A. Staff maintains its concern with Mr. Murray's choice to base his capital structure recommendation on Ameren Corp.'s consolidated capital structure, instead of Ameren Missouri's. Mr. Murray argued that Ameren Corp. consistently manages Ameren Missouri's capital flows to achieve a common equity ratio of approximately 52% for the capital structure it desires for ratemaking.[106] Mr. Murray's recommended equity ratio of 45% is much lower than the average of his natural gas proxy group's equity ratio of approximately 51%.[107] Also, the recent average equity ratio for other gas utility companies throughout the U.S. is approximately 51%.[108] Table 3 shows updated common equity ratios determined in natural gas utility general rate cases:

Table 3. Common Equity Ratio of Natural Gas Utility (2010-2021)[109]

	Fully Litigated		Settled		Natural Gas Total	
Year	ROE (%)	Case (No.)	ROE (%)	Case (No.)	ROE (%)	Case (No.)
2010	48.72	27	48.87	12	48.76	39
2011	52.64	8	51.82	8	52.33	16
2012	51.06	21	50.97	14	51.03	35
2013	51.98	12	48.53	9	50.60	21
2014	52.86	15	48.61	11	51.06	26
2015	51.17	5	49.32	11	49.94	16
2016	52.11	10	48.60	16	50.01	26
2017	50.39	7	50.63	17	50.55	24
2018	50.56	17	50.27	23	50.39	40
2019	52.00	12	52.30	20	52.18	32
2020	52.38	12	52.68	22	52.57	34
2021	51.11	9	50.51	17	50.74	26
Q1 2021	53.10	2	51.12	8	51.52	10
Q2 2021	50.63	4	50.31	2	50.56	6
Q3 2021	50.43	3	49.73	7	49.96	10

As can be seen in the Table 3 above, Mr. Murray's recommended equity ratio of 45% falls far below the lowest average authorized equity ratio of 48.53% shown on the chart above.

106 On page 2, lines 9-11, Murray's Rebuttal Testimony.
107 15 Proxy Capital Structure, Won's Rebuttal Workpaper.
108 16 Rate Case Equity Ratio, Ibid.
109 S&P Global Market Intelligence, Retrieved in October 15, 2021.

Q. Do you agree with Mr. Murray about the existence of double leverage between Ameren Corp. and Ameren Missouri?[110]

A. No, I do not. Staff has not found the existence of double-leverage, or absence of a proper relationship between risk and leverage of utility and non-utility subsidiaries.[111] Staff reviewed ten years of Ameren Corp.'s and Ameren Missouri's capital structures to see if there is any evidence of double-leverage.[112] In a situation where double-leverage exists between a parent company and its subsidiary, we would see an increase in debt ratio in the parent company's capital structure and a corresponding increase in equity ratio in the capital structure of the subsidiary.[113] While Ameren Corp.'s debt ratio significantly increased from 42.96% to 56.12% during the 10-year period ending in 2020, Ameren Missouri's equity ratio only fluctuated around 50% and 52%. This is not evidence of double-leverage. Interestingly, Mr. Murray did not provide any evidence of the existence of double-leverage between Ameren Corp. and Ameren Missouri.

Q. Do you agree with Mr. Murray that Ameren Corp.'s capital structure should be used for the purpose of Ameren Missouri's ratemaking because Ameren Corp. shares a credit facility with Ameren Missouri?[114]

A. No, I do not. Ameren Corp.'s shared credit facility with Ameren Missouri is typically used to support immediate cash needs, such as for working capital and construction work in progress ("CWIP"). These types of short-term debts have historically not been included by the Commission in the ratemaking capital structure.[115] In addition, having a shared credit facility for short-term debt between a parent company and its subsidiaries is not unusual for any utility

[110] On page 8, line 5, Murray's Rebuttal Testimony.
[111] Staff's Data Request No. 0122.
[112] On pages 27-28. Won's Rebuttal Testimony.
[113] Giacchino, L. R., & Lesser, J. A. (2011). Principles of Utility Corporate Finance. Public Utilities Reports.
[114] On page 8, lines 25-26, Murray's Rebuttal Testimony.
[115] On page 44, Amended Report and Order issued March 7, 2018, in Case Nos. GR-2017-0215 and GR-2017-0216.

company. Therefore, it is not reasonable to recommend the use of Ameren Corp.'s capital structure for the purpose of Ameren Missouri's ratemaking because Ameren Corp. shares a credit facility with Ameren Missouri.

Q. Do you agree with Mr. Murray that S&P does not assign Ameren Missouri a credit rating based on its own capital structure?[116]

A. No, I do not. Mr. Murray misunderstands the meaning of assigning Ameren Missouri a credit rating based on its own capital structure. Mr. Murray quoted two paragraphs in the S&P Global Ratings, RatingsDirect, report describing S&P Global Ratings' methodology that considers group influence in assessing Ameren Missouri's credit ratings.[117] It is true that S&P analysts consider Ameren Corp.'s group credit profile to assign Ameren Missouri's credit rating. However, to assign Ameren Missouri's credit rating, S&P analysts primarily decide Ameren Missouri's financial risk profile using Ameren Missouri's capital structure and financial ratios, not Ameren Corp.'s.[118] S&P Global Ratings, RatingsDirect, report is attached as Attachment 2 to this testimony to confirm that Ameren Missouri's financial statements were used to evaluate Ameren Missouri's credit rating.

Q. Please briefly explain how S&P assigned Ameren Missouri's credit rating.

A. S&P's ratings analysis involved assessing Ameren Missouri's business risk profile ("BRP"), financial risk profile ("FRP"), liquidity and group influence. According to S&P Global Ratings, Ameren Missouri's BRP of 'Excellent' is supported by the Missouri regulatory framework. Ameren Missouri's FRP of 'Significant' was assigned after examining Ameren Missouri's (not Ameren Corp.'s) financial statements. Ameren Missouri's liquidity of 'Adequate'

[116] On pages 9-10, Murray's Rebuttal Testimony.
[117] On page 10, lines 4-6, Ibid.
[118] William Hernandez, et. al., Union Electric Co. d/b/a Ameren Missouri, S&P Global Ratings – RatingsDirect, April 30, 2021.

was also determined by Ameren Missouri's own financial ratios. Included in the Ameren Missouri credit report are three tables detailing Ameren Missouri's (not Ameren Corp.'s) financial data (see Attachment 2), including capital structure. As usual, the analysis of Ameren Missouri's credit profile also includes the influence of its affiliates (group influence). There is nothing in the report that suggests that Ameren Missouri's credit ratings are influenced entirely by group influence. Therefore, it would be inappropriate for Mr. Murray to dismiss the fact that Ameren Missouri's capital structure was used to determine Ameren Missouri's credit rating. As Mr. Murray indicated in his rebuttal testimony, Moody's confirms that Ameren Missouri's capital structure is used to assess Ameren Missouri's credit rating of 'Baa1'.

Q. Does the fact that Ameren Missouri shares a credit facility, for short-term debt, with Ameren Corp. changes Staff's position that Ameren Corp. is not the primary source of financing for Ameren Missouri?[119]

A. No, it does not. Even though Staff did not directly explain this in Staff's COS Report, it is Staff's position that the sharing of a short-term debt facility between a parent company and its subsidiaries is a usual aspect of the financial relationship of a parent company and its subsidiaries. Staff, in its rebuttal testimony, clearly stated that money pool borrowings are a usual financial relationship between the holding company and its subsidiaries.[120] Money pools are an inter-company lending arrangement whereby depository, surplus cash funds are loaned or borrowed by an electric or gas public utility or other utility within the public utility holding company system to meet short-term operating cash (short-term debt) requirements.[121] There are many forms of mutually beneficial financial agreements that exist between the holding company

[119] On page 16, lines 18-20, Murray Rebuttal Testimony.
[120] On page 26, lines 20-22, Won's Rebuttal testimony.
[121] Law Insider, retrieved October 26, 2021, (https://www.lawinsider.com/dictionary/money-pool).

and subsidiaries.[122] As Staff stated earlier, short-term debt from shared credit facilities has traditionally not been included in the ratemaking capital structure, so short-term debt facilities do not affect capital structure for ratemaking purposes. Therefore, the existence of a money pool should not be the reason to use Ameren Corp's capital structure in this proceeding.

Q. Do you know any rate case decision in which the Commission ordered the use of operating utility's stand-alone capital structure instead of the holding company's capital structure even though there was an intra-company short-term finance mechanism?

A. Yes. In the 2017 Spire Missouri rates cases, the Commission ordered that Spire Missouri's capital structure be used for ratemaking purposes even though Spire Missouri shares a credit facility similar to Ameren Missouri and Ameren Corp.[123] Spire Inc. has a consolidated commercial paper program backed by a consolidated credit facility with borrowing sub-limits for Spire Inc., Spire Missouri, and Spire Alabama. Investors purchase Spire Inc.'s commercial paper issuances and then Spire Inc. loans these proceeds to its subsidiaries through intra-company short-term loans.[124]

Q. Do you agree with Mr. Murray that Ameren Corp.'s equity ratio of 45% is the capital structure that reflects Ameren Missouri's debt capacity?

A. No, I do not. As Staff explained above, Ameren Missouri's capital structure, not Ameren Corp.'s capital structure, is what is used to assess Ameren Missouri's credit profile. It therefore means that Ameren Missouri's capital structure composed of 48.93% long-term debt is the capital structure that reflects Ameren Missouri's debt capacity.

[122] Staff's response to OPC's Data Request No. 0431.
[123] Report and Order, Case No. GR-2021-0108.
[124] On page 52, lines 20-23, David Murray Direct Testimony.

Q. Do you agree with Mr. Murray that Ameren Missouri's 45% common equity ratio has been deemed appropriate and optimal considering the low business risk of its regulated assets?[125]

A. No, I do not. There is no evidence a 45% common equity ratio for Ameren Missouri is the optimal capital structure. Actually, it could be detrimental to both Ameren Missouri and rate payers. S&P determines corporate FRP (financial risk profile) based on benchmark financial metrics such as funds from operation to debt ("FFO/Debt"), debt to earnings before interest, taxes, depreciation, and amortization ("Debt/EBITDA") and debt ratio.[126] According to S&P, FFO/Debt in the range of 12% to 20%, Debt/EBITDA in the range of 4x to 5x, and debt ratio in the range of 50% to 60% indicate an "Aggressive" FRP.[127] Table 4 presents historical and estimated Ameren Missouri FFO/Debt and Debt/EBITDA. As of December 31, 2020, Ameren Missouri's FFO/Debt and Debt/EBITDA are 22.2% and 3.7x, respectively.[128] S&P Ratings anticipate that in 2021, Ameren Missouri's FRP will change to "Aggressive" because Ameren Missouri's FFO/Debt (%) and Debt/EBITDA will be in the ranges of 18% to 20% and 4x to 4.5x, respectively:[129]

Table 4. Ameren Missouri's FFO/Debt and Debt/EBITDA[130]

	2016	2017	2018	2019	2020	2021^e
FFO to Debt (%)	27.8	24.7	28.2	23.2	22.2	18 - 20
Debt to EBITDA (x)	2.9	2.9	2.7	3.3	3.7	4 - 4.5

[125] On page 4, lines 2-4, Murray's Rebuttal Testimony.
[126] RatingDirect®, S&P Global Ratings, Methodology: Business Risk/ Financial Risk Matrix Expanded, September 18, 2012.
[127] Ibid.
[128] RatingDirect®, S&P Global Ratings, Union Electric Co. d/b/a/ Ameren Missouri, April 30, 2021.
[129] Ibid.
[130] Ibid, Column 2021^e is S&P Ratings estimated financial ratios. All other columns are historical year-end records of 2016 to 2020.

Under a scenario where Ameren Missouri's debt ratio increases to 55% and all else being equal, Ameren Missouri's FFO/Debt and Debt/EBITDA will change to 20.0% and 4.1%, respectively.[131] If Ameren Missouri increases debt to the level of Mr. Murray's recommended debt ratio of 54.18%, Staff worries that Ameren Missouri's credit metrics and credit ratings (BBB+) might deteriorate. Mr. Murray insists Ameren Missouri has a higher debt capacity, but it is financial common sense that a higher debt ratio results in a lower credit rating, all other things being equal. For S&P, a bond is considered investment grade if its credit rating is BBB- or higher, and if its rating is below BBB- a bond is considered to be speculative grade, sometimes also referred to as "junk" bonds.[132] A lower equity ratio could end up causing a higher cost of capital. Therefore, Mr. Murray's recommendation of a lower equity ratio of 45% could be an inefficient capital structure for Ameren Missouri and detrimental to Missouri rate payers.

Q. Do you agree with Mr. Murray that Staff is incorrect in stating that Ameren Corp. and Ameren Missouri have similar amounts of financial risk in their capital structure?[133]

A. No, I do not. While it is true that Ameren Corp's capital structure has had an equity ratio around 7% lower than Ameren Missouri's,[134] financial risks are not only determined by equity ratio or debt ratio. Other financial ratios are equally important for evaluating the financial risk profile of a corporate entity. Rating analysts use multiple financial risk rating criteria when they measure corporate financial risks. According to Staff's research, credit analysts have the opinion that Ameren Corp. and Ameren Missouri have similar amounts of financial risk.

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[131] 12 Financial Ratios, Staff's Surrebuttal Workpaper.
[132] S&P Global Ratings, (https://www.spglobal.com/ratings/en/).
[133] On page 16, lines 4-5, Murray Rebuttal Testimony.
[134] OPC's response to Staff's Data Request No. 0425.

For instance, S&P rating analysts assigned a "Significant" financial risk profile to both Ameren Corp. and Ameren Missouri after considering the capital structures of both companies.[135]

Q. Do you agree with Mr. Murray that Ameren Corp.'s capital structure should be used because of the lower business risk afforded by Ameren Missouri's ability to elect plant in service accounting ("PISA") in 2018?[136]

A. No, I do not. The lower business risk of Ameren Missouri should be considered to determine a just and reasonable authorized ROE of Ameren Missouri, not the ratemaking capital structure.

Q. What is Staff's overall opinion about Mr. Murray's rebuttal testimony concerning Staff's capital structure?

A. In the 2017 Spire Missouri rate cases, the Commission's decision on capital structure was based on whether the operating utility subsidiary had an independently determined capital structure with its own long-term debt issuances secured by its own assets that were the subject of that rate case, and that those assets did not secure the debt of the parent or its other utilities or unregulated operations.[137] It is Staff's position that Ameren Missouri meets the criteria set by the Commission in the Spire Missouri rate cases. In addition, it should be noted that, as a test of reasonableness, Ameren Missouri's own capital structure is consistent with the capital structure ratios maintained by, or authorized for, other natural gas utilities. Therefore, Mr. Murray's recommendation that Ameren Corp.'s capital structure be used for Ameren Missouri's ratemaking purposes should be rejected.

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[135] William Hernandez, RatingsDirect, Union Electric Co. d/b/a/ Ameren Missouri and Ameren Corp. April 30, 2021.
[136] On page 16, lines 25-26, Murray's Rebuttal Testimony.
[137] On page 43, Amended Report and Order issued March 7, 2018, in Case Nos. GR-2017-0215 and GR-2017-0216.

IV. TRUE-UP DIRECT

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

A. The purpose of my true-up direct testimony is to update Ameren Missouri's capital structure and cost of capital and to address Staff's concerns about the true-up capital structure of Ameren Missouri, as of September 30, 2021.

Q. Did you perform an analysis of Ameren Missouri's capital structure as of September 30, 2021, the end of the true-up period for this proceeding?

A. Yes, I did.

Q. What is the result of your analysis?

A. As of September 30, 2021, the end of Ameren Missouri's true-up period, Ameren Missouri's capital structure consisted of 51.974% common equity, 0.728% preferred stock and 47.298% long-term debt.[138] This capital structure shows a slightly higher equity ratio compared to a capital structure Ameren Missouri's witness, Mr. Sagel, sponsored for use in setting Ameren Missouri's ROR in this proceeding. The equity ratio at September 30, 2021, capital structure is also much higher than Ameren Missouri's actual capital structure as of June 30, 2021.

Q. What was the capital structure Mr. Sagel recommended for setting Ameren Missouri's ROR in this proceeding?

A. In his direct testimony, Mr. Sagel recommended a pro forma capital structure as of September 30, 2021, composed of 51.93% common equity, 47.34% long-term debt and 0.73% preferred stock.[139]

Q. What was the actual capital structure of Ameren Missouri as of June 30, 2021?

[138] Staff's Data Request No. 0651, Case No. ER-2021-0240.
[139] On page 11, Sagel's Direct Testimony, Case No. GR-2021-0241.

A. Ameren Missouri's capital structure as of June 30, 2021, was composed of 50.32% common equity, 48.92% long-term debt and 0.75% preferred stock.[140] Staff recommended this actual capital structure for the purposes of ratemaking in this proceeding.

Q. What are Staff's concerns about Ameren Missouri's true-up capital structure?

A. Staff has two major concerns about Ameren Missouri's reported true-up capital structure. One is data inconsistency, and the other is an unexplained increase in equity ratio.

Q. Please explain the data inconsistency issue of Ameren Missouri's true-up capital structure.

A. The capital structure figures presented by Ameren Missouri as of September 30, 2021, and the capital structure figures in the balance sheet presented as a draft balance for the Securities and Exchange Commission ("SEC") third quarter (3-month ended September 30, 2021) filing differ.[141] Based on Staff's calculations, the capital structure figures in the SEC balance sheet produce a capital structure composed of 48.70% long-term debt, 0.70% preferred stock and 50.60% common equity. The actual capital structure provided by Ameren Missouri as of September 30, 2021, is composed of 47.298% long-term debt, 0.728% preferred stock and 51.974% common equity.[142] As can be seen, the two capital structures reported for the same date of September 30, 2021, differ. Staff has sent a data request to Ameren Missouri asking it to explain the difference.[143]

Q. Please describe the unexplained increase in equity ratio issue for Ameren Missouri.

A. Ameren Missouri's equity ratio of 50.32% as of June 30, 2021, increased by 165 basis points to its true-up equity ratio of 51.974% as of September 30, 2021. A comparison of equity ratios for Ameren Missouri is presented in Figure 2:

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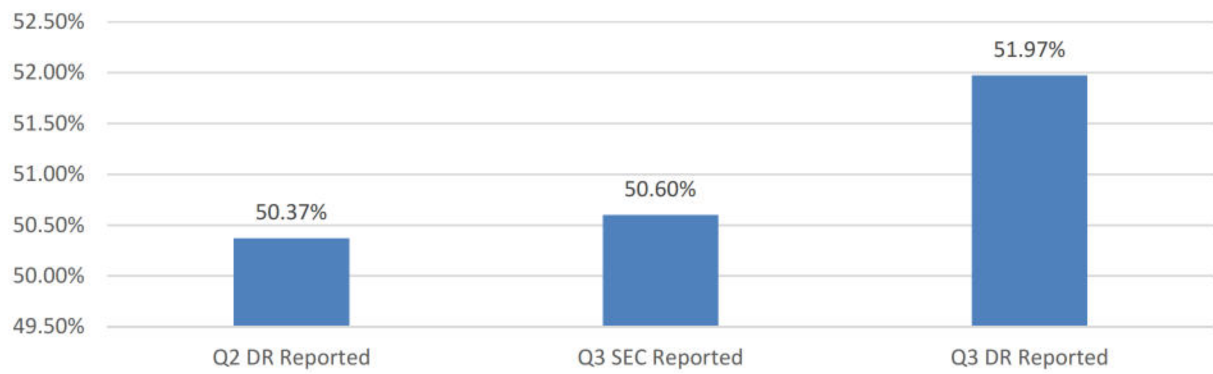
[140] Ameren Missouri response to Staff's Data Request No. 065, Case No. ER-2021-0240.
[141] AI-SEC-9-30-2021 UEC CONF.
[142] Staff's Data Request No. 0651, Case No. ER-2021-0240.
[143] Staff's Data Request No. 0890, Case No. ER-2021-0240.

Figure 2. Equity Ratio Comparison.[144]



Q. What is Mr. Sagel's explanation for this significant change in equity ratio?

A. Mr. Sagel explained that the difference between the June 30, 2021, and September 30, 2021, capital structures was due in part to ** [redacted] ** which temporarily reduced the equity ratio below typical levels.[145] According to Mr. Sagel, the range of Ameren Missouri's typical level of equity ratio is between 51.81% and 52.51% based on the equity ratios between the years ended 2016 and 2019.[146]

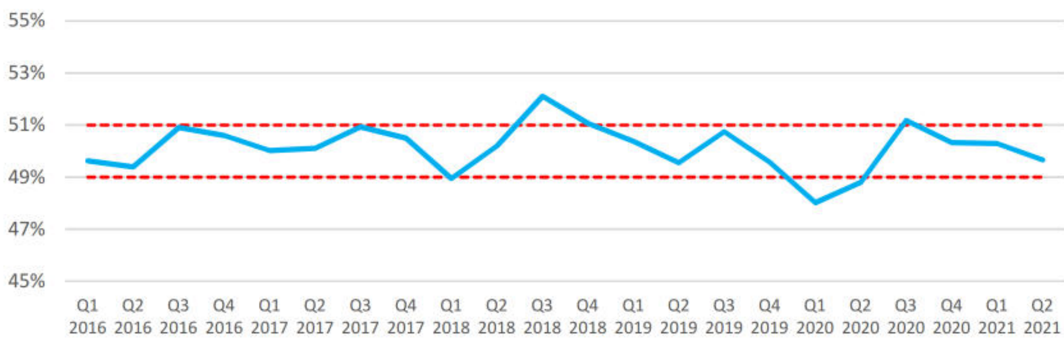
Mr. Sagel insisted that because of Ameren Missouri's historically ** [redacted] ** similar to those included in his direct testimony.[147]

Q. Do you agree with Mr. Sagel that the range of Ameren Missouri's typical level of equity ratio is between 51.81% and 52.51%?

[144] Staff True Up Workpaper.
[145] Ameren Missouri's response to Staff's Data Request No. 0651, Case No. ER-2021-0240.
[146] On page 11, Sagel's Direct Testimony.
[147] Ameren Missouri's response to Staff's Data Request No. 0651, Case No. ER-2021-0240.

A. No, I do not. Figure 3 presents the historical equity ratio changes for Ameren Missouri. According to Staff's analysis based on data reported by S&P Global Market Intelligence, Ameren Missouri's equity ratios have typically been in the range between 48.02% and 52.11% in the period 2016-2021. Staff thinks the typical range of Ameren Missouri's equity ratio is 49% to 51%.

Figure 3. Historical Equity Ratio (2016-2021)[148]



Q. How did you investigate Ameren Missouri's true-up capital structure?

A. Staff issued an additional data request to understand the exact form of cash flow that Mr. Sagel referred to and to determine if such cash flow is consistent with how Ameren Missouri funded its capital expenditure.[149] Mr. Sagel indicated that the cash flow that he referred to was "operating cash flow."[150] Mr. Sagel also pointed out that operating cash flow "is not the primary means by which the Company finances capital expenditures".[151] However, Mr. Sagel's response raises a serious question as to why Ameren Missouri is placing operating cash flow (presumably in the form of retained earnings) in the capital structure, resulting in a boost to its equity ratio only. Staff is worried that Ameren Missouri's actions are meant solely to

[148] Staff True Up Workpaper.
[149] Staff's Data Request No. 0651.3, Case No. ER-2021-0240.
[150] Ameren Missouri's response to Staff's Data Request No. 0651.3, Case No. ER-2021-0240.
[151] Ibid.

boost its equity ratio for ratemaking purposes. Staff asked detailed follow-up questions about Ameren Missouri's dividend payment policy to see if it is consistent with the level of its retained earnings level.[152] This date request has not been responded to. Staff will consider updating Ameren Missouri's capital structure through September 30, 2021 if Ameren Missouri provides additional support for its capital structure balances at that point in time.

Q. What is Ameren Missouri's true-up cost of capital?

A. Ameren Missouri reported a 4.180% cost of preferred stock and a 3.909% embedded cost of debt, as of September 30, 2021. Staff does not have concerns with Ameren Missouri's true-up cost of capital data.

IV. SUMMARY AND CONCLUSIONS

Q. Please summarize the conclusions of your surrebuttal testimony.

A. Ms. Bulkley's recommended ROE of 9.80% for Ameren Missouri remains unfair and unreasonable despite her updated input values, because of her use of inappropriate procedures and unreasonable input variables to her COE estimation models. Ms. Bulkley's misunderstanding of the relationship between authorized ROE and market-based COE values and other erroneous assumptions result in her presenting many inaccurate characterizations in her rebuttal testimony about the rate of return analysis in Staff's COS Report. Staff stands by its recommendation that the reasonable authorized ROE to use in this proceeding is 9.50%, in a reasonable range of 9.25% to 9.75%. Staff's revised ROE analysis supports its recommended authorized ROE of 9.50%. Staff is still investigating Ameren Missouri's and Ameren Corp.'s true-up data to determine if any changes to capital structure and debt cost recommendations through September 30, 2021, are

[152] Staff's Data Request No. 0888, Case No. ER-2021-0240.

appropriate. Until that time, Staff stands by its recommendation from its direct testimony for the appropriate capital structure to use to set Ameren Missouri's allowed ROR in this proceeding. Staff's recommended ROR of 6.72% is based on Ameren Missouri's stand-alone capital structure consisting of 48.93% long-term debt, 0.75% preferred stock and 50.32% common equity with 4.18% cost of preferred stock and 3.91% cost of debt, as of June 30, 2021.

Q. Does this conclude your surrebuttal testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues for Natural Gas Service	)))	Case No. GR-2021-0241

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

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 November, 2021.

Dianna L. Vaught

Notary Public

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2023
Commission Number: 15207377