Exhibit No.: _____
Issue(s): Rate of Return/Capital Structure
Witness/Type of Exhibit: Murray/Rebuttal
Sponsoring Party: Public Counsel
Case No.: GR-2022-0179

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

SPIRE MISSOURI, INC.

CASE NO. GR-2022-0179

** _____ **
Denotes Confidential Information that has been redacted

October 7, 2022

PUBLIC

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REBUTTAL TESTIMONY

OF

DAVID MURRAY

SPIRE MISSOURI INC.

FILE NO. GR-2022-0179

Q. Please state your name and business address.

A. My name is David Murray and my business address is P.O. Box 2230, Jefferson City, Missouri 65102.

Q. Are you the same David Murray who filed direct testimony in this case?

A. Yes.

Q. What it the purpose of your testimony?

A. I will respond to the direct testimony of Spire Missouri Inc.'s ("Spire Missouri") witness, Adam Woodard. I will also respond to the direct testimonies of Staff witnesses, Seoung Joun Won, PhD and Kimberly K. Bolin.

Q. What issues does Mr. Woodard address in his direct testimony?

A. Mr. Woodard sponsors Spire Missouri's recommended rate of return ("ROR"), which includes his analysis of all issues required to develop a ROR.

Q. What issues does Dr. Won address?

A. Dr. Won mainly addresses ROE, but he also explains his rationale for relying on Spire Missouri's per books capital structure ratios (excluding short-term debt) rather than giving consideration to Spire Inc.'s capital structure ratios.

Q. What issue does Ms. Bolin address?

A. Ms. Bolin specifically addresses Staff's recommendation as to whether short-term debt should be included in Spire Missouri's ratemaking capital structure. She recommends excluding short-term debt from Spire Missouri's ratemaking capital structure.

Q. What issue will you address first?

A. Capital structure.

CAPITAL STRUCTURE

Q. Can you summarize the main disputes regarding the recommended ratemaking capital structures for purposes of setting Spire Missouri's authorized ROR?

A. Yes. Consistent with my recommendation in Spire Missouri's 2021 rate case, Case No. GR-2021-0108, I still recommend the Commission adopt capital structure ratios consistent with Spire Inc.'s typical capital structure ratios for the period encompassing the ordered updated test year in this case, May 31, 2021. Both the Company's and Staff's recommended ratemaking capital structures are based on Spire Missouri's per books long-term capital balances (*i.e.* common equity and long-term debt), but based on differing periods. The Company's recommended 55% common equity ratio and 45% long-term debt ratio is based on average and point-in-time estimates for the period March 31, 2021 through March 31, 2022 (see Schedule DM-R-1, p. 4 for Company response to OPC DR No. 3015). Staff recommends Spire Missouri's ratemaking capital structure be consistent with Spire Missouri's long-term capital ratios at June 30, 2022.

Q. Is it still your position that the Commission should consider Spire Inc.'s capital structure ratios in setting a fair and reasonable ROR for Spire Missouri?

A. Yes. In fact, considering that the Company is introducing new methodologies/approaches to analyzing whether short-term debt should be included in its ratemaking capital structure, as well as communicating to investors that it will adjust Spire Missouri's capital structure balances to accomplish its desired ratemaking capital structure,[1] the evidence is even more compelling that Spire Inc.'s capital structure is the more objective and market-tested capital structure due to the fact that it is the only capital structure in which third-party equity investors can invest.

[1] Spire Inc. FQ4 2021 Earnings Call Transcripts, November 22, 2021, p. 10.

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Specific Response to Staff Arguments for Spire Missouri Capital Structure

Q. Does Dr. Won offer new evidence to argue against considering Spire Inc.'s more cost efficient capital structure ratios?

A. No. Dr. Won indicates that there has not been any discernible changes to Spire Inc.'s or Spire Missouri's capital structure policies that cause Staff to recommend a capital structure other than that which was consistent with the Commission's previous decisions in the 2021 and 2017 rate cases.

Q. Have you introduced evidence that further demonstrates that Spire Inc.'s management is more concerned about managing Spire Inc.'s capital structure for cost efficiency than Spire Missouri's capital structure?

A. Yes. I attached Spire Inc.'s 2021 Financing Plan to my Direct Testimony as Schedule DM-D-3. This plan demonstrated Spire Inc.'s active management of its consolidated capital structure for cost efficiency and lack of the same concern for Spire Missouri's capital structure.

Q. Why does Spire Inc.'s 2021 Financing Plan support your position of using Spire Inc.'s consolidated capital structure to set Spire Missouri's ROR?

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[redacted]

Q. How could Spire Inc. create more flexibility to ensure that it, and therefore Spire Missouri, maintains financial flexibility with ready access to commercial paper markets?

A. It could target a common equity ratio similar to that which it targets for Spire Missouri. Of course, this would require Spire Inc. to issue additional common shares, which dilutes earnings to its existing shareholders. However, if Spire Missouri's holding company considers a 55% common equity ratio to be too costly, then the same should hold true for the capital structure supported by Spire Missouri's ratepayers. Requiring Spire Missouri's ratepayers to pay for an equity-rich capital structure enables Spire Inc. to continue to leverage its shareholders' returns at the expense of Spire Missouri's financial stability.

Q. What process did Dr. Won undertake to support his view that Spire Missouri's capital structure is independent from Spire Inc.'s capital structure?

A. Dr. Won issued Data Request No. 212.1 (attached as Schedule DM-R-2) requesting the Company affirm or deny eight specific statements. Apparently, Dr. Won relied on Spire Missouri's affirmation or denial of these statements to conclude that Spire Missouri has an independent capital structure. It is not clear what independent analysis Dr. Won performed to determine whether he agreed with Spire Missouri's answers, and whether opposite answers for any of the items would have caused Dr. Won to conclude that Spire Missouri's capital structure is not independent.

Q. Have any of the facts Dr. Won relied on in the 2021 rate case for purposes of supporting his position that Spire Missouri has an independent capital structure, been proven wrong?

A. Yes. In the 2021 rate case, Dr. Won indicated that Spire Inc. is not the primary source of short-term debt financing for Spire Missouri.[2] OPC demonstrated this was not true in Spire Missouri's 2021 rate case.[3] In this case, Mr. Woodard testifies that Spire Missouri relies

[2] Case No. GR-2021-0108, Staff Cost of Service Report, May 2021, p. 22, lns. 11-12.
[3] *Id.,* Murray Surrebuttal, p. 17, lns. 12-15; Tr., p. 780, l. 17 – p. 781, l. 3

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on Spire Inc.'s consolidated commercial paper program for its access to short-term debt.[4] Dr. Won now recognizes such arrangement,[5] but apparently this fact was not significant to Dr. Won's conclusion that Spire Missouri's capital structure is independent of Spire Inc.'s capital structure. Mr. Woodard testifies that a consolidated commercial paper program is extremely common in the utility sector. However, Ameren Missouri, Evergy Metro and Evergy Missouri West still maintain their own independent commercial paper programs.

Dr. Won continues to testify that Spire Missouri's capital structure supports its own credit rating and that Spire Missouri's debt is rated based on Spire Missouri's stand-alone credit quality.[6] However, in the last rate case, OPC established that Spire Missouri's Standard & Poor's ("S&P") hypothetical stand-alone credit profile ("SACP") is consistent with an 'A+', but nonetheless, it rated 'A-' due to its affiliation with Spire Inc.'s much more leveraged financial risk profile. As I explain in the next few paragraphs, the attached Schedules DM-R-3 and DM-R-4 provide the S&P reports identifying this impact on Spire Missouri's assigned credit rating.

Dr. Won also states that the rating agencies rate Spire Missouri and its debt higher than Spire Inc., which also appears to be a fact that he believes supports his decision to rely on Spire Missouri's balance sheet for purposes of his recommended capital structure. The fact that Spire Inc.'s rating is lower than Spire Missouri's is not a relevant fact as it relates to evaluating whether Spire Missouri's rating is constrained by Spire Inc.'s financial and business risk profile. The credit ratings assigned to Spire Missouri's debt issuances should be higher than Spire Inc.'s for two primary reasons – (1) Spire Missouri's debt is secured by first mortgage bonds (this explains why Moody's assigns Spire Missouri's debt an 'A1' rating and Spire Alabama's unsecured debt an 'A2' rating, which is one notch lower, although Spire Alabama has a stronger credit profile and (2) any Spire Inc. debt will be subordinated to subsidiary debt issuances due to corporate "structural" subordination. The relevant fact is that Spire Inc.'s business and financial risk constrains Spire Missouri's rating. Schedule DM-R-3 is S&P's most recent ratings report on Spire Missouri. As shown

[4] Woodard Direct, p. 14, lns. 13-15.
[5] Won Direct, p. 24, lns. 11-13.
[6] *Id.,* p. 24, lns. 5-6.

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on page 8 of this report, Spire Missouri's SACP is 'A+', but it is ultimately rated 'A-' due to its affiliation with Spire Inc.

Q. What is the primary reason Spire Inc. has a lower overall credit profile than Spire Missouri?

A. Spire Inc.'s higher financial risk from its issuance of holding company debt. This fact causes S&P to assign Spire Inc.'s a Financial Risk profile of "highly leveraged" compared to Spire Missouri's Financial Risk profile of "significant" (see page 8 of Schedule DM-R-4). This fact causes S&P to assign Spire Missouri a corporate credit rating of 'A-', which is two notches below its SACP.

Q. What does this mean as it relates to the more equity-rich capital structure Staff and the Company want Spire Missouri's ratepayers to support through a higher revenue requirement?

A. Spire Missouri's ratepayers won't receive the benefit of a higher credit rating associated with the capital structure they are being charged for. Dr. Won's statement that Spire Missouri's capital structure supports its own credit rating and is rated on a stand-alone basis is factually incorrect, as shown in Schedules DM-R-3 and DM-R-4.

Q. What about the rating Moody's assigns to Spire Missouri?

A. Moody's commentary and analysis is not as explicit about the impact of Spire Inc.'s business and financial risk on Spire Missouri's creditworthiness, but it does state the following:

> The rating is also constrained by the substantial leverage at its parent company, Spire Inc., at about 23% of consolidated debt. Although this is down considerably from over 30% historically, the parent's debt service obligations are supported by Spire Missouri including upstream dividend distributions from time to time.[7]

[7] Schedule DM-R-5, p. 1.

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Q. What do the rating agencies' assessment of the impact of Spire Missouri's affiliation with Spire Inc. demonstrate?

A. That Dr. Won is incorrect in testifying that Spire Missouri's capital structure supports its own credit rating and therefore, Spire Missouri's cost of debt is independent of Spire Missouri's affiliation with Spire Inc.

Q. Does Dr. Won misinterpret a couple of other characteristics which he believes supports using Spire Missouri's capital structure for ratemaking?

A. Yes. Dr. Won still appears to believe the fact that Spire Inc.'s business-risk profile is primarily driven by its regulated natural gas distribution operations, supports the use of Spire Missouri's capital structure. Dr. Won specifically testifies that he has no significant concerns about the financial relationship between Spire Inc.'s non-regulated operations and Spire Missouri's regulated gas distribution operations because Spire Inc.'s non-regulated are approximately 5% of the operations.[8] If Spire Inc. had more significant non-regulated exposure, such as Algonquin Power & Utilities Corp.'s approximate 20-25% exposure to non-regulated operations, then it would need to reduce the amount of debt it issues in order to offset the higher business risk. It is Spire Inc.'s low exposure to non-regulated operations that allows Spire Inc. the ability to use more debt on a consolidated basis. Spire Inc.'s consolidated capital structure provides a transparent view of managements' view of the debt capacity of its predominately regulated utility assets.

Dr. Won also continues to rely on the fact that Spire Inc. does not guarantee Spire Missouri's debt obligations to support his testimony that Spire Missouri's capital structure should be used for ratemaking. As I explained in Spire Missouri's last rate case, this factor needs to be considered more broadly. Spire Inc. does not guarantee Spire Missouri's debt obligations because Spire Missouri's cash flows provide Spire Inc. its credit capacity, not the other way around. Spire Inc. is required to guarantee its non-regulated subsidiary obligations because counterparties consider Spire Inc.'s cash flows from its regulated utilities to be more dependable. In reviewing Spire Inc.'s BOD materials, I discovered that

[8] Won Direct, p. 25, lns. 1-3.

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Spire Inc. had issued ** _____ _____ **[9]

As it relates to double leverage, Dr. Won indicates that Spire Inc. has not raised debt in order to contribute equity in Spire Missouri. This is a narrow interpretation of double leverage. Just the fact that Spire Inc. issues debt and its subsidiaries issues debt, establishes double leverage.[10] Considering that Spire Missouri's financial stability allows Spire Inc. to issue debt for other investments is the relevant fact as it relates to setting a fair and reasonable ratemaking capital structure in this case. Spire Inc.'s ability to consistently maintain a common equity ratio below 45% should certainly be considered in determining a reasonable ratemaking capital structure for Spire Missouri.

Spire Missouri's Capital Structure

Q. Assuming the Commission continues to rely on Spire Missouri's per books capital balances to set its authorized ROR, what are the main disputes between OPC, Staff and the Company?

A. First, as a matter of procedure, the Commission ordered an updated test year of May 31, 2021 for purposes of this case. My direct testimony followed the Commission's ordered test year. Mr. Woodard's direct testimony analyzes data through February 2022. In its direct testimony, the Company had requested an updated test year of December 2021. Staff performed its analysis based on data through June 30, 2022. Considering that one of the most controversial issues in the 2021 rate case was adjusting the amount of short-term for extraordinary gas costs related to Storm Uri, using periods that fully capture these costs defeats this purpose. However, because higher unrecovered gas costs have continued subsequent to Storm Uri, to the extent Spire Missouri uses short-term debt to fund such continued higher gas costs, the true-up period in this case will allow parties to analyze and capture such financial realities in their recommendations.

[9] Spire Inc. Regular Board of Director Meeting, April 28, 2022, p. 98
[10] David C. Parcell, "The Cost of Capital – A Practitioner's Guide," 2020 Edition, p. 46.

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Second, regardless of the date or dates used to analyze Spire Missouri's capital structure, Spire Missouri has introduced a new approach to determine whether short-term debt consistently exceeds assets not included in rate base. In the last rate case, Mr. Woodard compared monthly short-term debt balances to assets assigned short-term debt costs, which included over/under collections of actual gas costs from ratepayers through the PGA adjustment clause and construction work in progress ("CWIP"), which is assigned a rate consistent with a cost of short-term debt, consistent with the Federal Energy Regulatory Commission's ("FERC") allowance for funds used during construction ("AFUDC") formula. In this case, Mr. Woodard now includes the difference in accounts receivable and accounts payable in his short-term asset assessment. The extra step Mr. Woodard included is already captured in ratemaking through the analysis of cash working capital ("CWC"), which is included in rate base. Mr. Woodard also includes other regulatory asset account balances not included in his previous approach. These assets are supported by all forms of capital (liabilities plus owners' equity), not just short-term debt.

Third, Mr. Woodard's estimate of deferred gas costs and unamortized PGA balances is higher in this case. Mr. Woodard's adjustment for non-cash deferred gas cost balances caused an increase to deferred gas costs. I am not certain why, but the unamortized PGA balances are also higher in this case as compared to the 2021 rate case.

Fourth, neither Staff nor the Company have specifically considered Spire Missouri's issuance of a 3-year $300 million First Mortgage Bond in December 2021 to support excess gas costs. Therefore, short-term debt balances after December 2021 do not support excess gas costs, at least those loosely related to Storm Uri.

Finally, Mr. Woodard claims that Spire Missouri's per books capital structure does not include goodwill.[11] This is not correct. Spire Missouri recorded an acquisition adjustment/goodwill asset when it acquired Missouri Gas Energy ("MGE") from Southern Union. Attached are Spire Missouri's FERC Form 2 balance sheet as of September 30, 2021 (Schedule DM-R-6), and Spire Missouri's SEC Form 10-K balance sheet as of

[11] Woodard Direct, p. 13, lns. 19-23.

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September 30, 2021 (Schedule DM-R-7), showing the adjustment to Spire Missouri's assets for an acquisition/goodwill adjustment. Spire Missouri had to fund this additional premium over book value by raising additional capital, which is recorded on Spire Missouri's balance sheets.

Q. As it relates to procedure, does the procedural schedule anticipate all parties filing true-up direct testimony to capture data through September 30, 2022?

A. Yes. The procedural schedule orders parties to file true-up direct on November 4, 2022 to consider financial data through September 30, 2022. Because issues such as the proper treatment of the $300 million First Mortgage Bond are based on financial data subsequent to the ordered updated test year in this case, I will provide my recommendation in this testimony regarding how to treat this bond if Spire Missouri's capital structure at September 30, 2022 is used to set its ROR.

Q. How does Mr. Woodard's determination of deferred gas costs and unamortized PGA balances in this case compare to balances he provided in the 2021 rate case?

A. Schedule DM-R-8 compares Mr. Woodard's figures from the 2021 rate case to his figures in this case. Mr. Woodard's approach in this case caused an increase to the deferred gas cost and unamortized PGA balance by an average of around $25 million over the period from March 2021 to June 2022 (the period of higher gas costs starting with Storm Uri impacts).

Q. What change does Mr. Woodard's make to his approach for estimating deferred gas costs?

A. Mr. Woodard's makes a further adjustment to remove non-cash changes to deferred gas cost accounts.

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Q. Do you accept Mr. Woodard's further adjustment to these balances for purposes of explaining increases to short-term balances?

A. Yes. The amount of capital needed to support excess gas costs is driven by cash needs. Although Spire Missouri expects to recover a portion of the gas costs it incurred related to Operation Flow Orders ("OFO"), as the provider of last resort, it still incurred these costs, which required Spire Missouri to finance these costs.

Q. How much did Spire Missouri record on its books related to the OFOs?

A. Approximately $195 million, but this amount also includes penalties assessed to gas marketers, which would reduce the out-of-pocket costs incurred by Spire Missouri.

Q. Is there other information available to corroborate an approximate amount of capital Spire Missouri had to raise for purposes of financing excess gas costs related to Storm Uri?

A. Yes. The Company communicated to investors that the net amount of excess gas costs, after consideration for expected recovery of the OFO amounts, was approximately $110 million.[12] Adding the excess gas costs of approximately $195 million to this amount approximates $300 million of capital needed to fund the excess gas costs, which equals the $300 million of FMB bonds Spire Missouri issued in December 2021 to support the excess costs over the next three years.

Q. What is the status of Spire Missouri's potential recovery of the excess gas costs it incurred related to the OFO?

A. In March 2022, Spire Missouri entered a settlement in principle to recover approximately $150 million of its excess gas costs.[13]

[12] Spire Inc.'s 2021 Fiscal Second Quarter Earnings Conference Call, May 7, 2021, p. 5 of transcripts.
[13] Case No. GC-2021-0316, et. al.

Q. Has Spire Missouri started to receive proceeds from the $150 million settlement?

A. Yes. According to Spire Inc.'s 2022 fiscal third quarter SEC Form 10-Q Filing, gas marketers began making payments to Spire Missouri. Spire Inc. indicated that these payments will be credited to Spire Missouri's PGA/ACA asset balances, thereby refunding capital Spire Missouri raised to fund these gas costs.

Q. Did Spire Missouri use these proceeds to reduce the balance on its 3-year FMB issued in December 2021?

A. Not as of June 30, 2022.

Q. If this balance has not been reduced, then how should the balance be treated for purpose of determining the amount of short-term debt and 3-year FMB debt funding gas purchases and CWIP?

A. It should still be included. Neither Staff nor the Company considered any part of this $300 million debt in their analysis of additional debt that should be included in Spire Missouri's authorized capital structure to determine its ROR.

Q. Do you agree with Mr. Woodard's adjustment to include the difference between accounts receivable and accounts payable in the amount of short-term assets to offset the amount of short-term debt to include in Spire Missouri's ratemaking capital structure?

A. No. Accounts receivable and accounts payable are categorized as current assets and current liabilities, respectively. Cash receipts related to accounts receivable and cash disbursements related to accounts payable are captured in ratemaking through consideration of cash working capital ("CWC"). Although I have not personally analyzed the details underlying each party's recommended amount of CWC to include in rate base, I understand that an estimate of the time to collect revenues from customers (i.e. accounts receivable) and pay operating and maintenance expenses (i.e. accounts payable) are already factored into rates. I understand that Staff and the Company have recommended an approximate $10 million to $12 million increase to rate base to account for CWC needs.

According to Staff's Cost of Service Report in Spire Missouri's last rate case, a positive CWC requirement is funded by shareholders, which requires them to be compensated through an increase to rate base.[14]

Q. What does Mr. Woodard's assignment of short-term debt to recent cash deficiencies related to working capital highlight regarding current ratemaking practices as it relates to Spire Missouri?

A. That shareholders should not be rewarded for the amount of CWC included in rate base. Mr. Woodard's revised approach logically attributes short-term debt capital to CWC needs. Therefore, the cost of short-term debt should be assigned to such.

Q. Is this consistent with Spire Missouri's past positions on CWC?

A. Yes. In Spire Missouri's rate cases in 2001 and 2002, Spire Missouri witnesses assigned short-term debt to CWC, gas inventories, and other gas costs.

Q. What is Spire Missouri's primary working capital need?

A. The cost of natural gas, which is backed out of CWC due to the fact that Spire Missouri uses a PGA/ACA mechanism to recover these costs. This explains the logic for assigning short-term debt rates to over/under collection of gas costs. Before Spire Missouri's 2017 rate case, this also explained the logic for assigning short-term debt costs to Spire Missouri's gas inventories, with carrying costs (a ROR based on short-term debt) recovered through PGA tariffs.

Q. Have Spire Missouri's accounts receivables been consistently higher than its accounts payables in recent periods?

A. Yes.

[14] Case No. GR-2021-0108, Staff Cost of Service Report, May 2021, p. 36, lns. 21-25.

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Q. What has been the primary cause for higher accounts receivables in recent periods?

A. The higher costs of natural gas and the delay in recovery of these costs.

Q. Did Spire Missouri have significant capital needs prior to Storm Uri to fund working capital?

A. No. As can be seen in Schedule DM-R-9, which shows the quarterly differences in accounts payable and accounts receivable since September 30, 2017, for the period September 30, 2017 through September 30, 2020, the average cash needs to fund the net difference between accounts receivable and accounts payable was -$29.8 million.

Q. For this period, how much of the difference in accounts receivable and accounts payable is due to natural gas costs incurred by Spire Missouri and eventually recovered from customers?

A. Publicly-available financial statement information does not provide enough detail to determine the specific allocation of gas costs to changes in accounts receivable and accounts payable. Receivables from customers are based on all charges to the customer for the cost of service. Payables, while driven primarily by the cost of gas from gas suppliers, also includes other operating costs incurred by Spire Missouri.

Q. Did Mr. Woodard compare short-term debt to short-term capital needs during this period for purposes of his conclusion that short-term debt has not supported rate base since 2017?

A. No. Mr. Woodard relied on his comparison of changes in long-term capital and rate base since 2017 to conclude that short-term debt is not supporting rate base.[15]

[15] Woodard Direct, p. 15, lns. 15-17.

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Q. Did you request information dating back to the 2017 rate case in order to assess whether the information presented in Mr. Woodard's Schedule AWW-D13 supports his position that short-term debt is not supporting rate base?

A. Yes, but Spire Missouri objected to my DR No. 3033 requesting such information (see attached Schedule DM-R-10). As can be seen in Spire Missouri's objection, Spire Missouri does not consider this information relevant to this rate case because it is outside of the test year. However, Spire Missouri did provide data from October 2018 to current, but this did not capture the same period Mr. Woodard analyzed (September 30, 2017 to May 31, 2021).

Q. What did the data from October 2018 through September 2020 indicate about the differences in Spire Missouri's incurred gas costs compared to charges to customers?

A. Using Mr. Woodard's current proposed methodology to analyze gas costs, the average deferred gas cost and unamortized PGA balance was -$31,742,941 for this two-year period. Using Mr. Woodard's 2021 methodology, the average deferred gas cost and unamortized PGA balances were -$39,905,142.

Q. What was the average CWIP balance over this period?

A. $81,993,549.

Q. What is the amount of the other regulatory asset accounts Mr. Woodard now claims should be assigned short-term debt for purposes of determining whether short-term debt should be included in Spire Missouri's ratemaking capital structure?

A. $12,789,295.

Q. What is the sum of these balances?

A. $54,877,702.

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Q. How does this balance compare to Spire Missouri's short-term debt balances over this period?

A. It is much lower. Spire Missouri's average short-term debt balance over this same period was $291,013,158. For this period the amount of short-term debt in excess of short-term assets was $236,135,456.

Q. If this amount is added to Spire Missouri's long-term capital balances over this same period, what portion of Spire Missouri's capital structure is supported by short-term debt?

A. 9.77% of Spire Missouri's goodwill adjusted capital structure had consistently been supported by short-term debt.

Q. Are there any general regulatory guidelines providing direction as it relates to including short-term debt in a utility's ratemaking capital structure?

A. Yes. I am specifically aware of the treatise, "The Cost of Capital – A Practitioner's Guide," by David C. Parcell. This treatise is an educational resource used as the curriculum for the Society of Utility and Regulatory Financial Analysts' ("SURFA") Certified Rate of Return Analyst ("CRRA") program. The guidelines are as follows:

> Short-term debt is frequently used by utilities to finance construction and/or temporary working capital needs. In addition, natural gas distribution companies often use short-term debt to finance gas inventories.
>
> The inclusion of short-term debt in a utility's ratemaking capital structure is frequently a matter of commission practice, as some commissions include short-term debt while others do not. Among the most frequent criteria for deciding on inclusion of short-term debt are:
>
> 1. the extent to which the utility employs short-term debt on an on-going basis; and,
> 2. the relative level of short-term debt utilized by the utility.[16]

[16] David C. Parcell, "The Cost of Capital – A Practitioner's Guide," 2020 Edition, p. 44.

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Q. Has Spire Missouri been consistently using short-term debt on an on-going basis?

A. Yes. Spire Missouri's capital structure over the last several years consistently contains a high percentage of short-term debt (a quarterly average of above 10% since September 30, 2017).[17]

Q. Does the Commission have a "practice" or "policy" as it relates to including short-term debt in a utility's ratemaking capital structure?

A. I am not aware of a formal "practice" or "policy." In my experience, the Commission evaluates the fact-specific evidence in each case to determine whether or not to include short-term debt in the ratemaking capital structure. While Spire Missouri continues to claim the Commission's practice has been not to include short-term debt in Missouri's utilities' ratemaking capital structures, the Commission has included short-term debt in Missouri utilities' ratemaking capital structures when case-specific evidence justified such, with the most obvious such case being Spire Missouri's 2021 rate case. As it relates to Missouri's electric utilities, short-term debt balances typically have been lower than CWIP balances, which means that short-term debt costs should be fully captured in the AFUDC rate used to capitalize financing costs supporting CWIP. As it relates to Missouri's gas utilities, prior to Spire Inc.'s acquisition of its Spire Missouri West system (then known as Missouri Gas Energy) from Southern Union, the Commission included a short-term debt ratio of 3.206% in Missouri Gas Energy's ("MGE") authorized capital structure in Case No. GR-2009-0355 and 3.3% in Case No. GR-2006-0422.

Q. Have company ROR witnesses in past natural gas utility rate proceedings included short-term debt in their recommended ratemaking capital structures?

A. Yes. MGE's witness in Case No. GR-2009-0355 recommended MGE's ratemaking capital structure include 10.94% of short-term debt based on his analysis of other LDC proxy

[17] Schedule DM-R-11.

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companies.[18] Spire Missouri's witnesses in rate cases prior to 2002 included short-term debt in their recommended ratemaking capital structures.[19]

Q. In spite of the above information demonstrating that short-term debt has not only been included in past authorized capital structures, but also recommended to be included by company witnesses, have Spire Inc.'s Officers communicated to the investment community that the Commission's decision to include such in the 2021 rate case was unprecedented?

A. Yes. In various earnings conference calls Spire Inc. has consistently communicated that the Commission's Order in the 2021 rate case was unprecedented. Mr. Steven L. Lindsay, Executive Vice President and Chief Operating Officer of Spire Inc., specifically indicated the following as it related to the Commission's inclusion of short-term debt:

> …we received the lowest rate of return of any utility in the state. This is due in large part to a lower-than-normal equity capitalization due to the inclusion of short-term debt for the **first time** in the capital structure.[20] (emphasis added).

Q. Do communications such as these contribute to misinformation repeated by sources, such as the Moodys' report quoted by Mr. Scott Weitzel in his Direct Testimony?

A. Yes.

Q. Do you agree with Mr. Woodard that the Company's long-term capital balances at September 30, 2017 exceed its rate base?

A. No. After I subtracted $210 million of goodwill from Spire Missouri's common equity balance, Spire Missouri's rate base was approximately $17.9 million less than total long-term capital.

[18] Schedule DM-R-12
[19] *Id.*, p. 2.
[20] Spire Inc. FQ1 2022 Earnings Call Transcripts, February 2, 2022, p. 5.

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Q. What about as of May 31, 2021, the updated test year in this case?

A. After subtracting goodwill from Spire Missouri's equity balance, Spire Missouri's total long-term capital was approximately $169 million less than Spire Missouri's rate base.

Q. Does Spire Missouri's capital structure only support rate base?

A. No. Spire Missouri's total assets must equal total liabilities (which includes debt, but also other liabilities) plus owners' equity. Therefore, it is inappropriate to only assign long-term capital to rate base. After removing current assets and liabilities (except for current maturities on long-term debt), it is possible to estimate the portion of long-term assets supported by long-term liabilities and owners' equity, which assists in evaluating Mr. Woodard's claim that Spire Missouri does not use short-term debt to support long-term assets on its balance sheet.

Q. Has the Company and Staff agreed in the past that capital in the Treasury is fungible and no particular form of capital can be assigned to specific assets?

A. Yes. This issue has been a particular area of discussion in Spire Missouri's past financing authority applications.[21]

Q. Based on your consideration of Spire Missouri's financial statement data prior to Storm Uri and financial statement data through the more recent periods analyzed by Mr. Woodard and Ms. Bolin, how has Spire Inc. been managing Spire Missouri's capital structure subsequent to the Commission's Order in the 2021 rate case?

A. It appears that Spire Inc. is managing Spire Missouri's capital structure to allow Spire Missouri's excess gas assets to "grow into" its short-term debt balances. If these gas assets remain high, then the cost of short-term debt would be recovered through the interest charged to customers when Spire Missouri recovers the gas costs from customers.

[21] Case Nos. GF-2009-0450 and GF-2015-0181.

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Q. Is it reasonable to expect a continued high balance of deferred gas and unamortized PGA balances?

A. No. If the PGA/ACA process is working properly, there should not be a systematic bias of over- or under-collections. Although natural gas prices have continued to remain high over the past year, these higher gas costs will eventually be reflected in the initial estimated costs of gas charged to customers, which should reduce the under-collection of gas costs or even result in an over-collection of gas costs. However, if there is significant natural gas price volatility, then the magnitude of over- or under-collection is likely to be higher than the period post the advancement in fracking technologies (*i.e.* horizontal and hydraulic fracking) and prior to Covid-19 and world natural gas price instability caused by the Russia invasion of Ukraine.

Q. Although the Commission ordered the use of a May 31, 2021, updated test year for this case, do you agree with Staff's recommendation to not include any short-term debt in Spire Missouri's ratemaking capital structure based on their analysis of data through June 30, 2022?

A. No.

Q. Based on the twelve-month period ending June 30, 2022, what ratemaking capital structure do you recommend if the Commission chooses to continue to adopt Spire Missouri's balance sheet figures as its premise for the appropriate capital structure?

A. I recommend a ratemaking capital structure consisting of 48% common equity, 44.5% long-term debt and 7.5% short-term debt. The support for this alternative is explained below and contained in Schedule DR-R-13 attached to my testimony.

Q. How is the approach you used to arrive at these common equity ratios different than that which the Commission relied in the 2021 rate case?

A. I used a 12-month average of the long-term debt, common equity balances, and net short-term debt balances, as opposed to the use of these balances at June 30, 2022 (*i.e.* a point-in-time). Additionally, I reduced the common equity balance to remove the approximately

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$210 million of goodwill asset Spire Missouri's common equity balance supports. This adjustment was not made in the 2021 rate case. For purposes determining the net short-term debt balance, I subtracted the following balances from short-term debt: deferred gas costs, unamortized PGA, and CWIP. However, because Spire Missouri issued $300 million of 3-year FMB debt in December 2021 to finance excess gas costs, I added this amount to short-term debt since the unamortized PGA and deferred gas cost balances included these higher balances. For purposes of estimating the deferred gas cost and unamortized PGA balances, I accepted Mr. Woodard's non-cash adjustments.

Q. Do you propose updates to any of the return components applied to the capital structure ratios regardless of the capital structure adopted?

A. Yes. Due to the Fed's aggressive increases to the Fed Funds' rate since the beginning of 2022, the cost of A2/P2 commercial paper (the same rating assigned to Spire Inc.'s commercial paper program) has increased dramatically from around 0.2% at the beginning of the year to currently around 3.5%. This rate is 75 basis points higher than the 2.7% cost I used to determine my ROR recommendation in my Direct Testimony.[22] This dramatic increase and continued uncertainty of the future path of short-term interest rates makes it very difficult to determine the appropriate level at which to set the cost of this component of Spire Missouri's capital structure. Fortunately, at least as it relates to the cost of short-term debt Spire Missouri incurs related to gas costs and CWIP, there are ratemaking mechanisms that capture changes in the cost of short-term financing (whether it is to allow Spire Missouri to collect/pay interest from/to ratepayers for gas costs). In fact, because carrying costs on gas inventories were included in PGA tariffs between 2005 through 2017, not only were changes in the costs of gas inventories quickly reflected in rates, but the changes in the cost of short-term debt used to support the gas inventories were quickly and frequently adjusted in the rates charged to customers. The fluctuations in costs of short-term debt for the period from 2005 through 2010 are shown below, as well as the long

[22] Murray Direct, Schedule DM-D-2.

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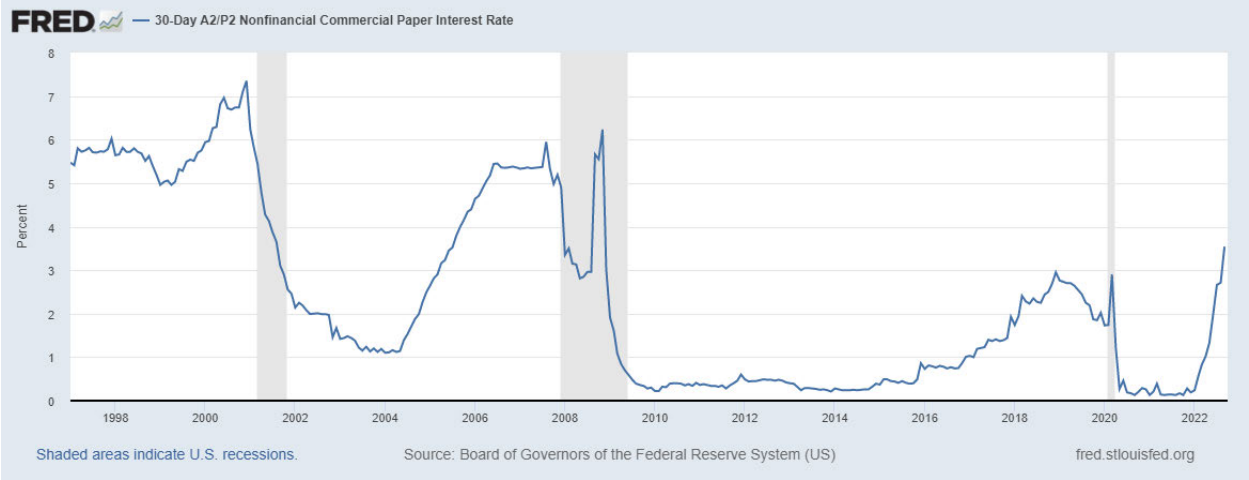
period of extremely low short-term rates for the period after the financial crisis and recession in 2008 to 2009.



Q. What do capital markets currently project the path of the Fed Funds rate to be through next year?

A. Investors expect the Fed Funds rate will peak at around 4.75% in 2023. This compares to the previously projected peak of around 3.5% to 3.75% just a month ago. Therefore, unless Spire Missouri only uses short-term debt to support costs/assets that are assigned the cost of short-term debt in between rate cases, the current market environment is conducive to considerable error in estimating the likely cost of short-term debt over coming periods.

Q. How has the Commission determined the appropriate cost of short-term or variable rate debt to include in a company's authorized ROR in past rate cases?

A. Based on my experience, the Commission had predominately adopted approaches that attempt to capture a company's actual cost of short-term debt, but the proxies have varied.

Q. Can you provide examples?

A. Yes. Most of the examples I readily recall involve Spire Missouri's "West" system under its previous owner, Southern Union. In Case No. GR-2006-0422, the Commission adopted a cost of short-term debt of 5.25% based on an historical 12-month average for 12-months

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ended through the October 31, 2006 true-up period. In Southern Union's next general rate case, Case No. GR-2009-0355, the Commission indicated it adopted Southern Union's actual cost of short-term debt of 5.92%.[23] However, this "actual cost" appears to have been determined through a proxy estimate of Southern Union's cost of short-term debt over the next 6 quarters.[24] The Commission adopted this much higher cost of short-term debt, despite the fact that actual costs of short-term debt had declined through the true-up period to around 1%. The dramatic decrease in the cost of short-term debt was due to the Fed's rapid reduction of the Fed Funds rate in response to the Great Financial Crisis of 2008-2009.

Q. Did Mr. Woodard provide a recommended cost to apply to short-term debt if it is included in Spire Missouri's ratemaking capital structure?

A. Yes. Mr. Woodard recommended a rate consistent with the cost that would be incurred if Spire Missouri hedged its variable commercial paper costs by entering into a fixed-for-floating interest rate swap for the next three years. At the time Mr. Woodard sponsored his direct testimony, he estimated Spire Missouri would be required to pay a 2.75% fixed rate and continue to pay a margin of 50 to 70 basis points over the fixed rate. This implies an indicated rate of around 3.25% to 3.5%.

Q. What fixed rate would Spire Missouri pay based on current market conditions?

A. Based on publicly-available, generic swap information, the current fixed rate for a 3-year fixed-for-floating interest rate swap is 3.88%. Adding the current credit spread of 50 basis points for Spire Missouri's commercial paper over the 1-month SOFR rate of approximately 3%, indicates a fixed rate of 4.38%.

[23] Case No. GR-2009-0355, Report and Order, February 10, 2010, p. 19.
[24] *Id.,* Frank J. Hanley Direct, Schedule FJH-1, p. 1.

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Q. Mr. Woodard suggests another 50 basis points should be added to the cost of short-term debt to allow for recovery of "support" costs. Does Spire Missouri already recover these costs in its rates?

A. Yes. In response to OPC DR No. 3040, Spire Missouri indicated that it recovers the cost of its credit facility fees through the rates allowed for capitalizing the financing costs supporting CWIP and the rates assigned to deferred gas costs. Mr. Woodard's response indicated that the portion of credit facility costs not recovered through CWIP and deferred gas costs are recovered through Account No. 930450 – Misc. General Expenses – LOC.

As it relates to rating agency fees, typically this cost is recovered through expenses in the revenue requirement. I have not seen evidence refuting this usual method of recovery of rating agency fees.

Q. Do you have any other alternative suggestions for assigning a cost to the short-term debt in Spire Missouri's capital structure?

A. It would be reasonable to simply assign Spire Missouri's embedded cost of long-term debt of approximately 4% to this permanent source of financing. If Spire Missouri had reduced its short-term debt to a more reasonable level, then it would have likely added additional amounts to past long-term debt issuances which would have already established an historical cost.

Q. Does Mr. Woodard's suggestion of using a swap rate to determine a reasonable cost to apply to the short-term debt ratio beg any questions?

A. Yes. Considering Spire Missouri's quarter-end short-term debt balance has not dropped below $113 million, or 5.4% of Spire Missouri's total capital structure, for the period September 30, 2013 through September 30, 2019, a significant short-term debt balance has been a permanent and significant component of Spire Missouri's capital structure. The quarterly average short-term debt balance over this period was approximately $224 million or 9.9% of Spire Missouri's capital structure. Considering such consistent and significant exposure to the variable rates associated with short-term debt, it would seem prudent to

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execute an actual hedge rather than a simulated one for ratemaking. Of course, another option would be to simply refinance this permanent level of short-term debt with long-term debt.

Q. Has the Company indicated in the past that it did not intend to consistently carry significant balances of short-term debt?

A. Yes. The Company communicated this to the Commission in testimony related to applications for Commission financing authority.[25]

Q. Does Mr. Woodard claim that past credit rating downgrades have been difficult to reverse after-the-fact?

A. Yes. Mr. Woodard discusses this concern on page 13, lines 1 through 11 of his direct testimony. In order to evaluate and refresh my memory regarding the context of these downgrades, I requested Spire Missouri provide rating agency reports for the three years prior to the downgrades and three years subsequent to the downgrades. Spire Missouri objected to my data request on the basis that it "is not reasonable calculated to lead to admissible evidence in that such materials are not relevant to questions of law and fact at issue in this proceedings." After following up with Spire Missouri to explain OPC's position as to the relevance of the requested information in order to respond to Mr. Woodard's testimony, Spire Missouri indicated that it did not retain reports from this period and the rating agencies do not maintain reports from this period.

Q. Is it true that rating agencies do not maintain an archive of these reports?

A. No. S&P keeps an archive of reports for at least 20 years, which would have captured the period of the downgrade cited in Mr. Woodard's testimony. I found evidence that Moody's has reports since at least 2002 for Laclede Gas Company (previous name for Spire Missouri).

[25] Case Nos. GF-2009-0450, Mark Waltermire Rebuttal Testimony, pages 11-12.

Q. Why did you request reports published +/- three years from the downgrade?

A. Because rating agencies normally analyze three years of historical financial data and three years of projected financial data when assessing an entity's creditworthiness.

Q. Could the OPC have purchased these reports for purposes of its investigation?

A. Yes. Moody's charges a fee of $250/report. Access to S&P's reports requires an annual subscription that costs around $20,000/year.

Q. Is it reasonable for Spire Missouri to provide these reports through discovery?

A. Yes. Spire Inc. and Spire Missouri pay the rating agencies to rate them and their debt. In fact, Spire Missouri includes the costs of these ratings services in the rates customers pay.

Q. Were you able to locate some of the reports in prior proceedings before the Commission?

A. Yes. After dedicating significant time to searching through several past proceedings before the Commission, I located some of the reports.

Q. What reports did you find from S&P?

A. I found the reports S&P published announcing its placement of The Laclede Group Inc.'s and Laclede Gas Company's corporate credit ratings on "Watch Neg." To my knowledge, no other reports were published until both companies' credit ratings were downgraded on July 19, 2013 (Laclede Group report attached as Schedule DM-R-14 and Laclede Gas Company report attached as Schedule DM-R-15).

Q. What was the impetus for S&P's downgrade of Laclede Gas Company's credit rating?

A. Both The Laclede Group Inc. (now Spire Inc.) and Laclede Gas Company were downgraded due to the amount of leverage incurred related to Spire Missouri's acquisition

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of the Spire Missouri West system from Southern Union (Missouri Gas Energy at the time Southern Union owned the system).

Q. So this downgrade was caused by Spire Inc.'s corporate financing strategies related to acquisitions?

A. Yes.

Q. Do you remember why Spire Missouri was downgraded by Moody's in 2002?

A. Not personally. However, Spire Inc.'s (previously The Laclede Group Inc.) 2002 SEC Form 10-K filing indicated that the downgrade was also due to Spire Missouri's earnings and cash flow sensitivity to weather fluctuations in the absence of regulatory relief for warmer-than-normal winters.[26]

Q. Did the Commission subsequently authorize Spire Missouri a weather mitigation rate design?

A. Yes and it has continuously had one since 2002.[27]

Q. Was Spire Missouri subsequently allowed to recover its carrying costs on natural gas inventories through PGA tariffs?

A. Yes. The Commission authorized Spire Missouri to do so in 2005.[28]

Q. What was Moody's rating on Spire Missouri's First Mortgage Bonds before they were downgraded in 2002?

A. A1.

[26] The Laclede Group's 2002 SEC Form 10-K Filing, p. 21.
[27] Case No. GR-2021-0108, Amended Report and Order, November 12, 2021, p. 18.
[28] Case No. GR-2005-0284.

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Q. What was Moodys' rating on Spire Missouri's commercial paper program before the Moody's downgrade?

A. P-1.

Q. Has Spire Missouri targeted recovering its much higher Moodys' ratings prior to these downgrades?

A. Not that I am aware of. In fact, as demonstrated in the 2021 financing plan I attached to my Direct Testimony, Spire Inc. does not believe there are significant benefits to being rated ** _____ **[29]

Q. What common equity ratio did Spire Missouri request for ratemaking purposes in 2002?

A. Around 45%.[30]

Q. Mr. Woodard suggests the Commission can positively influence Moody's potential ratings actions by authorizing it a ROR above its current authorized level.[31] Can Spire Inc. do anything itself to positively influence Spire Missouri's credit ratings?

A. Yes. Spire Inc. can deleverage its consolidated capital structure. As I discussed extensively above, Spire Inc.'s more aggressive use of leverage at the consolidated level constrains Spire Missouri's credit profile. If the Commission appeases Spire Missouri by authorizing a cost inefficient capital structure for ratemaking, then it will enable Spire Inc.'s continued contradiction of its "actions versus its words." However, it is clear from Spire Inc.'s own internal documents that it sees little value in having a stronger credit profile than ** _____ **.

[29] Murray Direct, Schedule DM-D-3.
[30] Case No. GR-2002-356.
[31] Woodard Direct, p. 22, lns. 11-15.

Q. Is there any other relevant information the Commission should consider when determining a fair and reasonable capital structure and ROR in this case?

A. Yes. Although the debate between the parties primarily revolves around whether short-term debt should be included in Spire Missouri's ratemaking capitals structure, it is important to compare the cost of Spire Missouri's short-term debt to the rate it is allowed to charge to ratepayers through its PGA tariff. Pursuant to Spire Missouri's PGA tariff, it is allowed to charge a rate equivalent to the Prime rate, less 2%. This formula allows Spire Missouri to recover more than the cost of its short-term debt and even the variable rate on its 3-year FMB. The margin over Spire Missouri's commercial paper costs has typically been approximately 0.75% and around 0.35% over the rate charged on the 3-year FMB. Applying a 0.50% margin to the deferred gas cost and unamortized PGA balances Mr. Woodard provided in a supplemental response to Staff's Data Request No. 0231.1, indicates that Spire Missouri would recover $1.7 million above its approximate actual cost of debt to fund gas costs.

RECOMMENDED ALLOWED ROE FOR SPIRE MISSOURI

Q. How does Dr. Won approach his recommended allowed ROE in this case?

A. Dr. Won uses the Commission's authorized ROE of 9.37% for Spire Missouri's 2021 rate case as his starting point for determining whether he believes capital market conditions justify authorizing Spire Missouri a different ROE in this case.[32] Dr. Won compared his DCF and CAPM COE estimates from the period of the Spire Missouri 2021 rate case to his DCF and CAPM COE estimates in this case to conclude that Spire Missouri's COE has increased, which in his opinion justifies a 21 basis point increase to Spire Missouri's allowed ROE to 9.58%. After establishing this point estimate, Dr. Won applied a +/- 25 basis point adjustment to this point estimate to establish his range. Dr. Won's rationale for a range of +/25 basis points from his point estimate is not readily apparent.

[32] Won Direct, p. 3, lns. 1-15.

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Q. Do you agree that it is appropriate to consider the Commission's 9.37% authorized ROE for Spire Missouri in its 2021 rate case for purpose of determining a fair and reasonable ROE for Spire Missouri in this case?

A. Yes. The Commission set Spire Missouri's current authorized ROE less than 12 months ago. Any change to such a recent authorized ROE should only occur if there is decisive evidence supporting a significant change in the utility industries' equity capital markets.

Q. Do Dr. Won's COE estimates provide clear and decisive evidence that support increasing Spire Missouri's authorized ROE?

A. No. Dr. Won's comparative DCF COE estimates imply Spire Missouri's COE has declined since the 2021 rate case. This is consistent with the general increase in Spire Inc.'s and the LDC industry's valuation ratios since the 2021 rate case. Dr. Won's comparative CAPM COE estimates imply Spire Missouri's COE has increased since the 2021 rate case. Dr. Won testifies as follows:

> …during economic recovery, utilities underperform the broader market, which, consequently, pushes the COE for utilities higher. Compounded by the current fears of continued rising inflation, the share prices of utility equities are currently depressed and COEs are elevated.[33]

As acknowledged by Dr. Won,[34] utilities are no longer underperforming the broader market. This was the case at the time of Spire Missouri's 2021 rate case, but not in the current year. In fact, utility stocks have outperformed the broader market by 2,050 basis points (i.e. 20.5%) for the past 18 months, resulting in an approximate 20% premium to the S&P 500.[35] Utility stock outperformance has been occurring despite increasing long-term interest rates.

[33] *Id.,* p. 11, lns. 7-10.
[34] Response to Data Request No. 357.
[35] Steve Fleishman, et. al., "The Wolfe Utilities Primer – 2022," Wolfe Research, August 29, 2022.

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Q. Do you agree with the premise of Dr. Won's argument (*i.e.* that utility industry's COE increases if its returns are underperforming the market or vice versa)?

A. No. While it is insightful to estimating the reasonableness of estimated market risk premiums as compared to utility equity risk premiums by analyzing the relative valuation differences between the broader markets and slower-growth sectors, such as the utility industry, the relative difference at any point-in-time or changes in the relative difference over a defined period, does not necessarily signal an increase or decrease in the COE for any particular industry or stock. As an example, the primary cause for utility stocks outperforming broader markets this year is not because utility stocks are earning positive returns, it is because they are not performing as bad as the S&P 500. The S&P 500 declined by 20.6% in the first half of 2022, while utilities declined by a much lower 2.7% over this same period.[36] Because a decline in stock prices may be due to lower expected earnings/dividends, a decline in stock price looked at in isolation does not translate into a higher cost of equity. However, if stock prices decline while expected earnings/dividends remain the same, then the stock price decline can be attributed to increased risk aversion, *i.e.* an increase in the market risk premium. It is for these reasons that it is important to analyze changes in stock prices as they relate to certain financial fundamentals, such as earnings.

Utility stocks are trading at a significant premium (on a P/E basis) to the S&P 500 because the P/E ratios of the S&P 500 have contracted considerably this year. As can be seen below, after the massive monetary and fiscal stimulus policies instituted after the onset of Covid-19, the P/E ratios on the S&P 500 increased to as high as 23x. However, due to monetary policy tightening this year, the P/E on the S&P 500 has contracted to around 16x.

[36] *Id.,* p. 15.

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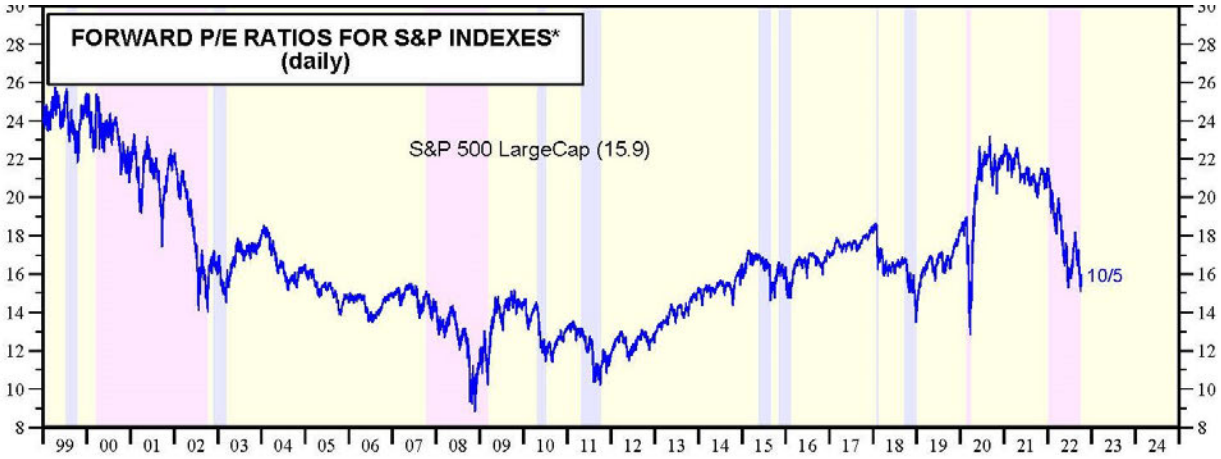

The utility industry's P/E ratios have traded at a very consistent level since shortly after the onset of COVID-19, but the S&P 500 P/E ratio increased dramatically subsequent to the onset of COVID-19 due to the Fed's aggressive monetary policy intervention and the U.S. Congress' aggressive fiscal policy interventions. These significant interventions caused the opportunity cost of investing in bonds and utility stocks to be much higher than usual as compared to investing in broader markets. Many in the investment community characterized these market conditions as "there is no alternative" ("TINA") to investing in stocks because of extremely low interest rates.

Q. Did the dramatic decline in interest rates during 2020 to 2021 cause utility stock prices to increase, consistent with their long-standing inverse correlation with long-term interest rates?

A. No. In fact during this period, utility stock P/E ratios were positively correlated to changes in long-term rates.

Q. Has this positive correlation continued as long-term interest rates increased?

A. Yes.

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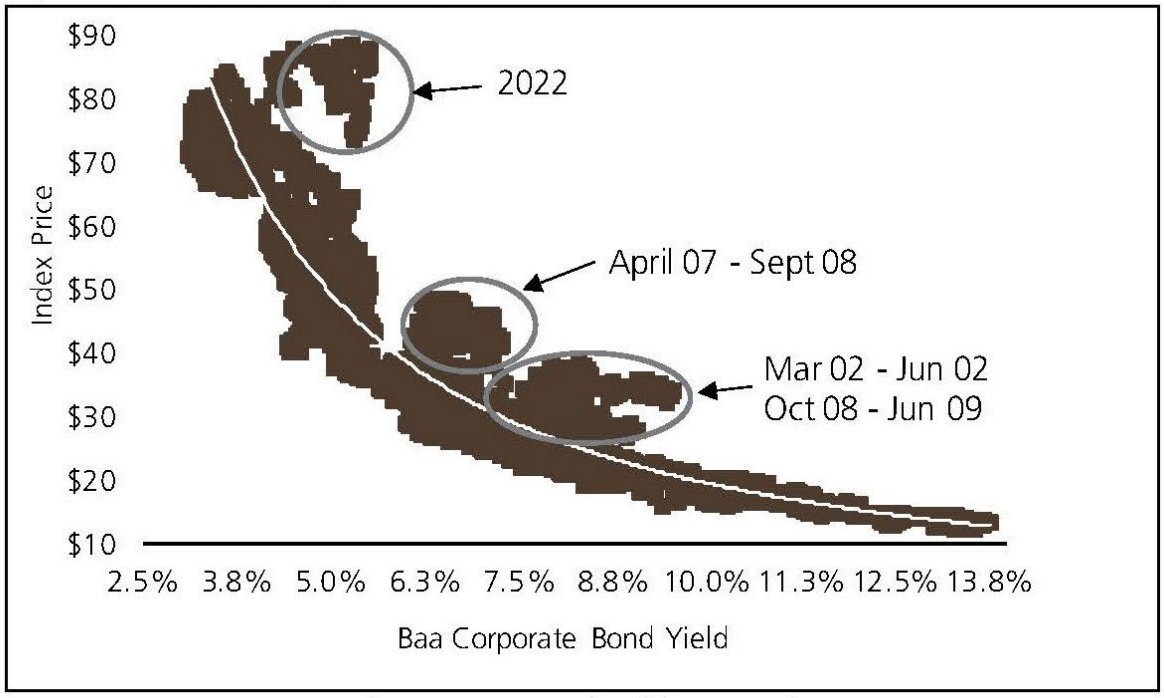
Q. Can you provide investor analysis that illustrates the recent unusual relationship between utility stocks and long-term interest rates?

A. Yes. UBS Securities recently provided the following regression analysis showing utilities' predicted prices compared to actual prices:

Figure 1: BAA vs. Price Regression



Source: Company Reports, Moody's, FactSet, Strategic Insights, UBS Estimates

[37]

As illustrated, based on historical correlations of utility stocks with changes in 'Baa' Corporate Bond yields, the predicted price of utility stocks is around $30 lower than current prices. Current utility stock prices indicate that the required equity risk premium to invest in utility stocks is lower than that predicted by historical correlations.

[37] Ross A. Fowler, CFA and Greg Orrill, "Updated Valuation Correlation to Baa Corp Bond Yields," September 2022.

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Q. Have utility stock prices declined recently as long-term interest rates continued to increase and remain high?

A. Yes. Utility stock prices have declined since mid-August 2022.

Q. Will these declines continue?

A. I don't know. Up until mid-August 2022, utility stock prices actually increased as long-term interest rates increased – the opposite of their historical trading relationship. Utility stock investors are well aware of the typical long-term relationship so in this uncertain economic environment other factors are at play. Utility investors may be factoring in an eventual decline in long-term interest rates and/or the defensive characteristics (ability to recover higher energy costs and plant and equipment costs through regulated rates) of utility stocks are worth the extra opportunity cost of lower returns.

Q. Why is it important to understand these dynamics for purposes of determining a fair and reasonable authorized ROE in this case?

A. Because Dr. Won's CAPM results caused him to recommend an increase to Spire Missouri's authorized ROE from 9.37% to 9.58%. As can be seen on Dr. Won's Schedule SJW-d15, Dr. Won's estimated COE using the CAPM is 80 basis points higher comparing recent market conditions to those that existed during the 2021 rate case. However, his DCF COE estimate is 38 basis points lower. For purposes of Dr. Won's comparative analysis, he gives each of these methods 50% weight for purposes of arriving at his conclusion.

Q. Why do Dr. Won's CAPM and DCF COE estimates provide contradicting indications for the change in the utility industry's COE?

A. Because the CAPM's foundation variable is a risk-free rate. The CAPM formula is as follows:

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$$K_e = Rf + \beta\,(RP_m)$$

Where:
K_e = the cost of equity for a security;
Rf = the risk-free rate;
β = beta; and
RP_m = equity risk premium.

Dr. Won uses a recent 3-month average 30-year United States Treasury ("UST") yield for the foundational variable to which he adds adjusted risk premiums based on historical relationships between utility equity risk premiums as compared to market risk premiums (*i.e.* the S&P 500). Current utility stock price behavior is not consistent with historical patterns, rendering the CAPM much less reliable than DCF COE estimates that do not rely on interest rates for purposes of estimating the COE. DCF COE estimates directly consider recent utility stock prices in determining a reasonable estimate. The constant growth DCF formula is as follows:

$$k = D_1/P_0 + g$$

Where:
k = the cost of equity;
D_1 = the expected next 12 months dividend;
P_0 = the current price of the stock; and
g = the dividend growth rate.

Consequently, the fact that utility stock prices have not declined, at least significantly, due to increases in interest rates, is directly captured in DCF COE estimates.

Q. Can you provide a graphical illustration of the P/E ratios for Spire Inc., its LDC peers and the electric utility industry since January 1, 2021?

A. Yes. A comparison of electric utilities, Spire Inc., and its LDC peers' P/E ratios follows:

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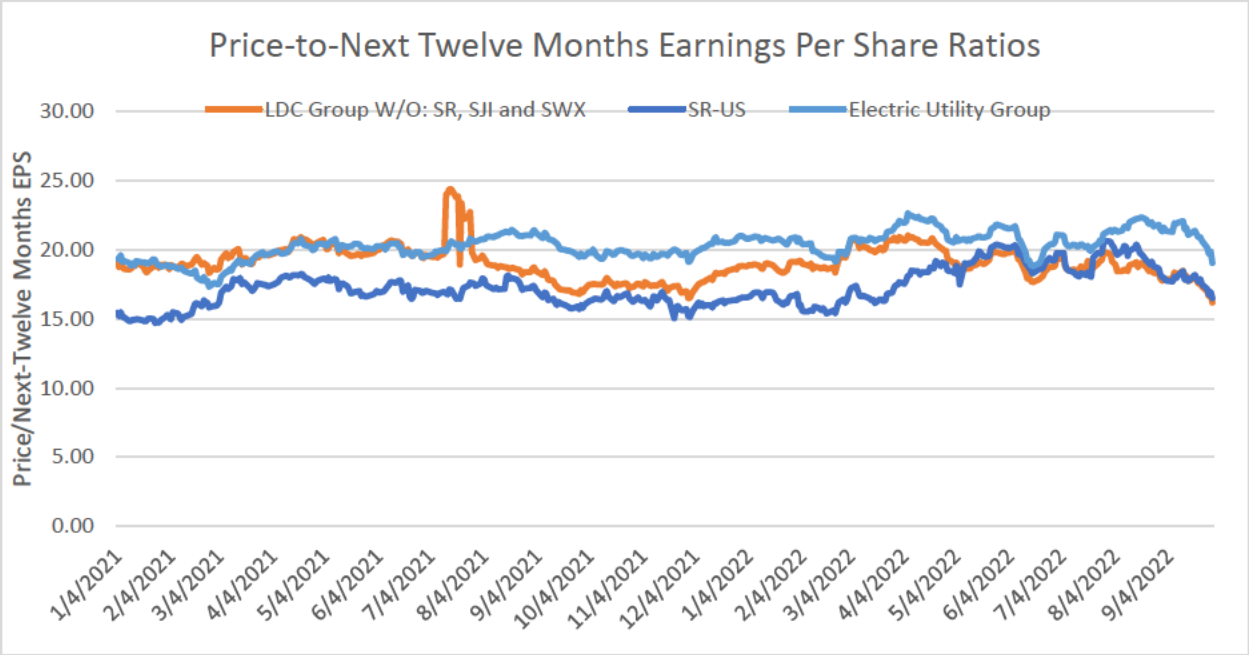

As is evident from the time series of P/E ratios, Spire Inc.'s P/E ratios have increased since the period of the 2021 rate case, and the LDC peer groups' P/E ratios generally traded in line with P/E ratios at least until the Fall of 2021. Electric utilities, LDCs and Spire Inc. traded close to parity around mid-2022, but starting around the end of July 2022 to mid-August 2022, electric utilities started trading at a premium to Spire Inc. and its LDC peers. This divergence coincides with the passage of the Inflation Reduction Act of 2022, which contained provisions favorable to the electric utility industry.

Q. Do the changes in the P/E ratios for the utility industry appear to be at all impacted by the significant changes in long-term interest rates over the last few years?

A. Not until just recently. The below graph shows Spire Inc.'s P/E ratios over the last two years compared to changes in 'Baa' corporate bond yields. As can be seen, until the middle of August 2022, Spire Inc.'s P/E ratio exhibited a positive correlation with interest rates (approximately 76%). Since mid-August 2022, Spire Inc.'s P/E ratio exhibited an 89% negative correlation. For the entire period, Spire Inc.'s P/E ratio exhibited an approximate 71% positive correlation.

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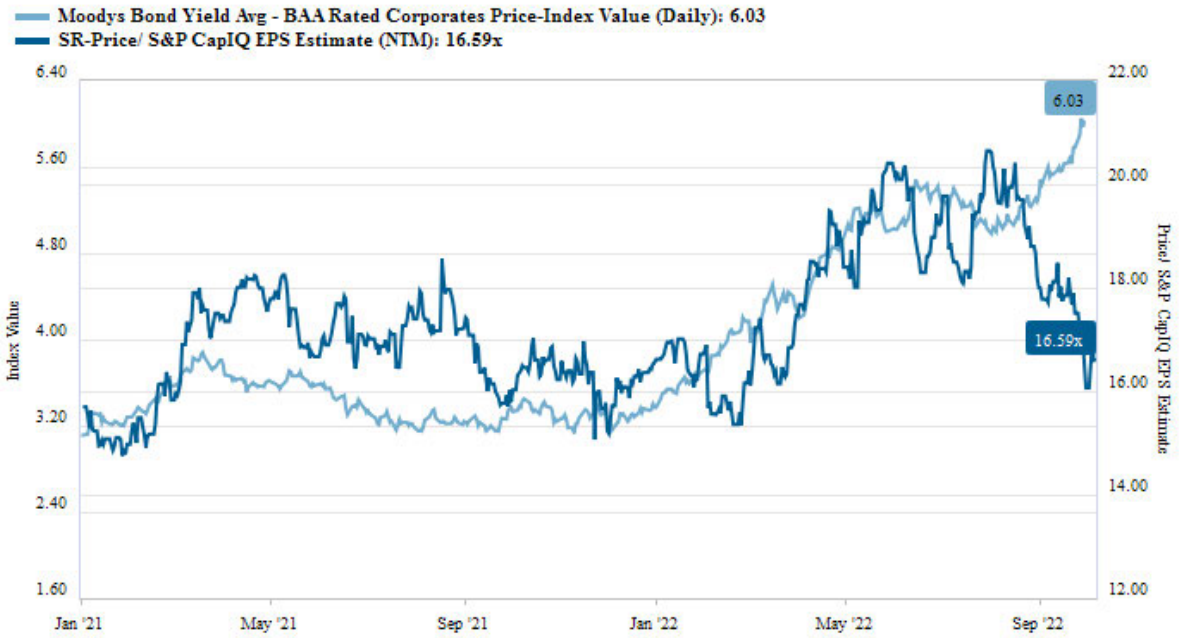

Q. What does this market data demonstrate as it relates to the most reliable approach to determine any potential change in Spire Missouri's COE since the 2021 rate case?

A. Models that rely heavily on changes in bond yields should be given little, if any weight due to current market conditions. Dr. Won's CAPM results are 80 basis points higher than the 2021 rate case due to the approximate 100 basis point increase in 30-year UST yields. As is clear from analysis of utility stock valuation levels since Covid-19, utility stock prices have not exhibited their traditional negative correlation to interest rates. Therefore, unless the beta adjusted risk premium added to current higher risk-free rates are adjusted to consider such, a CAPM cost of equity estimate is not reliable based on current market conditions.

Q. Was Mr. Woodard's estimate of a 70 basis point increase to the COE also dependent on the CAPM?

A. Yes. Mr. Woodard attempted to follow the same approach as Dr. Won, but rather than comparing his current results in the 2021 rate case, he compared his results to the timeframe of the 2017 rate case. Based on Mr. Woodard's CAPM analysis, he concludes that Spire Missouri's COE has increased by 119 basis points since 2017. Mr. Woodard assigns the

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CAPM difference 50% weight and his DCF COE difference of 17 basis points 50% weight to conclude that Spire Missouri's COE has increased by 68 basis points since the 2017 rate case.

Q. Do either of Dr. Won's and Mr. Woodard's conclusions make sense considering recent authorized ROEs for LDC rate cases?

A. No. While I have typically been hesitant to dwell on average authorized ROEs because of circularity, considering the fact that the average authorized ROEs for LDCs for the first three quarters of 2022 of 9.42% (median of 9.4% and a range of 9% to 9.9%) is quite similar to the 9.37% the Commission just authorized Spire Missouri, this data along with the fact that LDC stock prices have not declined along with bond prices, support the Commission at least reaffirming Spire Missouri's 9.37% authorized ROE.[38]

Q. Notwithstanding your view that the CAPM does not provide reliable COE estimates for utility companies based on current market conditions, can you respond to Mr. Woodard's suggested modifications to the CAPM analysis?

A. Yes. Mr. Woodard suggests that it is inappropriate to estimate the market risk premium using geometric mean return spreads between stocks and bonds. He cites to Dr. Morin's book, New Regulatory Finance, who states that there is "no theoretical or empirical justification for the use of geometric mean rates of return as a measure of the appropriate discount rate in computing the cost of capital."[39]

Q. Is there theoretical justification for using expected geometric return spreads for the discount rate in estimating the present value of cash flows?

A. Yes. The CAPM is a one-period model. The required market risk premium is defined by the user of the model. If the user is attempting to determine required returns over annual periods, then arithmetic annual returns are theoretically justified. However, if the user of the model is attempting to determine required returns over multiple-periods, which is the

[38] S&P Capital IQ - Pro.
[39] Woodard Direct, p. 32, lns. 17-21.

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objective in estimating the cost of equity in utility ratemaking, then it is theoretically justified to estimate earned return spreads over holding periods longer than a year. This is also empirically justified because this is exactly how investors determine their expected returns over a multi-year holding period. However, as with many cost of capital issues, this certainly isn't settled science. But in general, the Chartered Financial Analyst ("CFA") curriculum generally uses geometric means in its valuation exercises.

Q. Mr. Woodard also suggests it is more appropriate to use projected interest rates in the CAPM as opposed to recent current interest rates. Do you agree?

A. No. The CAPM model is premised on the efficient market hypothesis, meaning the current market prices reflect investors' expectations of future economic conditions, interest rates and specific non-diversifiable business risks. Long-term treasury yields are essentially investors' expectations of average short-term interest rates over the period of the long-term treasury bond with an additional term risk premium. If investors knew long-term rates would increase or decrease from current levels, they would not transact at current market prices because otherwise, they could arbitrage until long-term treasury prices adjusted to projected interest rates. I addressed this issue in the recent Evergy rate cases, Case No. ER-2022-0129 and ER-2022-0130 when addressing Evergy's ROR witness' proposes use of projected interest rates as opposed to current bond yields.[40] John C. Bogle's, founder of Vanguard Group, view regarding expected returns on bonds was expressed as follows in a 2016 Wall Street Journal article:

> As for bonds, Mr. Bogle has found that essentially all you need to know is the yield to maturity, or the implied interest rate that makes the present value of all of a bond's future cash flows equal to its current market price. Analyzing 10-year periods back to 1906, he found that at least 90% of the subsequent return on bonds could be explained by their initial yields; capital gains and losses barely registered. So, with the Barclays U.S. Aggregate index of government and corporate bonds yielding 2.6%, that's the baseline expectation.[41]

[40] Case Nos. ER-2022-0129 and ER-2022-0130, Murray Surrebuttal and True-up Direct, p. 16, lns. 1-19.
[41] Jason Zweig, "This Simple Was Is the Best Way to Predict the Market," *Wall Street Journal,* January 5, 2016.

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Mr. Bogle is best known for his advocacy of passive investing, hence his creation of low-cost, passive index funds at Vanguard. Mr. Bogle's view is consistent with the fundamental assumptions underlying cost of capital models, such as the DCF and CAPM, which is that market prices reflect all known and public information, which includes possible changes in interest rates and economic factors. Because utility ROR witnesses should be attempting to estimate the market cost of capital, which is based on current market prices, not speculative future prices, the foundation of cost of capital analysis should be similar to Mr. Bogle's view.

Q. Mr. Woodard requests Missouri ratepayers pay a higher ROE to fund flotation costs for Spire Inc.'s issuance of common equity because it "resides permanently on the balance sheet as a negative adjustment" and the "permanent nature of this cost makes it irrelevant whether equity was recently raised." Does Spire Missouri rely on Spire Inc. to access third-party capital markets?

A. Yes. With the exception of direct access to long-term debt, Spire Missouri relies on Spire Inc. to access other forms of capital, including traditional common equity.

Q. In the past, what was the primary driver for Spire Inc.'s need to issued traditional common equity?

A. I established in Spire Missouri's last rate case that Spire Inc.'s primary need to issue common equity in public offerings over the last several years has been primarily due to Spire Inc.'s acquisitions of other entities and investments in other assets. The proceeds raised from Spire Inc.'s 2013 and 2014 equity issuances were for purposes of raising funds to acquire MGE, Alagasco and EnergySouth. As I explained, it is wholly inappropriate to request recovery of issuance costs associated with these acquisitions as these are considered transaction costs. In the stipulation and agreement executed in the MGE acquisition, the Company specifically agreed not to seek recovery of these costs in

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subsequent rate cases. [42] Recovery of issuance costs, at least as it relates to these specific issuances, violates this agreement.

Spire Inc. issued 2.185 million common shares in 2016 to raise $133 million to fund its acquisition of EnergySouth.[43] Spire Inc. issued 2.3 million common shares in 2018 to raise $133.2 million to fund investments in Spire St. Louis Pipeline, storage investments, and ongoing infrastructure upgrades.[44]

Q. Is it possible that some of the proceeds from Spire Inc.'s 2018 equity issuance were used to make infrastructure upgrades to Spire Missouri's system?

A. Yes Spire Inc.'s May 7, 2018, Supplemental Prospectus, indicated the proceeds from the equity issuance were used to redeem Spire Inc.'s commercial paper. To the extent that this commercial paper funded Spire Missouri's infrastructure needs, then transaction costs of this equity issuance could be associated with Spire Missouri's capital needs. However, considering the fungibility of Spire Inc.'s capital management, which has resulted in Spire Missouri not distributing any dividends to Spire Inc. over the last two years, rather than issue commercial paper, it becomes somewhat futile to attempt to determine the exact amount of proceeds from the equity issuance that supported Spire Missouri's capital needs.

Q. Does this fact support adoption of a ratemaking capital structure consistent with the ratios maintained by Spire Inc. on a consolidated basis?

A. Yes.

Q. How did Spire Inc. use the proceeds from its preferred stock issuance in 2019?

A. The $242 million of preferred stock proceeds were used to "(i) refinance long-term and short-term Spire debt and (ii) fund capital expenditures at both the Utilities and Spire's gas-related businesses."[45]

[42] Schedule DM-R-16, p. 9, Section 3.b.
[43] Spire Inc. 2016 SEC Form 10-K Filing, p. 44.
[44] Spire Inc. May 7, 2018, Supplemental Prospectus, p. S-3.
[45] Spire Inc. 2019 SEC Form 10-K Filing, p. 90

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Q. How did Spire Inc. use the proceeds from its issuance of equity units in February 2021?

A. Spire Inc. issued 3.5 million equity units to raise a net $169.3 million in proceeds. Spire Inc. indicated that it used the proceeds for general corporate purposes and to repay short-term indebtedness under their consolidated commercial paper program.[46] Again, due to the fungibility of Spire Inc.'s financial management of the holding company and its subsidiaries, it is difficult to determine how much of the proceeds could be attributed to Spire Missouri.

Q. Has Spire Inc. recently been using equity proceeds from its "At-the-Market" equity program to contribute common equity to Spire Missouri?

A. Yes.

Q. How much capital has Spire Inc. contributed to Spire Missouri through this process?

A. $51.1 million for the six months-ended June 30, 2022.

Q. If the Commission allows Spire Missouri to recover flotation costs associated with Spire Inc.'s common equity issuances, should this trigger the Commission's adoption of Spire Inc.'s consolidated capital structure?

A. Yes. All of the capital issued by Spire Inc. is used in some fashion to support investment in Spire Missouri and its affiliated regulated subsidiaries. As Spire Inc.'s ** ____ _____ _____ **. Spire Inc. indicated that it used the funds raised through the issuance of the equity units for general corporate purposes and to repay short-term indebtedness under its commercial paper program. Spire Inc.'s commercial paper program supports all of its operations. Therefore, Spire Inc.'s long-term capital issuances support Spire Inc.'s consolidated operations, including Spire Missouri. Spire Inc.'s financing transactions reflect Spire Inc.'s transparent market view of the most

[46] Spire Inc. Prospectus Supplement, May 14, 2019, p. S-40.

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economic fashion in which to manage its cost of capital. The only reason Spire Inc. is flowing through the proceeds to Spire Missouri from the common equity it issues through its "At the Market" equity program is because Spire Inc. is targeting a higher-cost capital structure for Spire Missouri to allow for a higher revenue requirement.

Q. If you had recommended a ROR based on matching the cost of Spire Inc.'s capital structure ratios to the returns/costs associated with those ratios, what would it be?

A. Based on the updated test year of May 31, 2021, the overall ROR would be 5.86% (Schedule DM-R-17), which is lower than my recommended ROR of 6.27% (see Schedule DM-D-2 attached to my Direct Testimony).

SUMMARY AND CONCLUSIONS

Q. Can you summarize your rebuttal testimony?

A. Yes. Spire Missouri requests the Commission authorize it a more costly capital structure despite Spire Inc.'s own lack of commitment to maintaining a conservative capital structure. In fact, Spire Missouri seems to place the responsibility on the Commission to preserve a credit rating despite it being constrained by Spire Inc.'s own financial policies. Spire Missouri maintains that this will lower the cost of capital to Spire Missouri ratepayers and improve its financial flexibility. This begs the question, "then why not implement this strategy at Spire Inc.?" ** _____ _____ ** While the Commission may not want to adopt Spire Inc.'s capital structure to set Spire Missouri's ROR, the Commission should certainly consider Spire Inc.'s internal contradictions in determining a reasonable authorized ratemaking capital structure. If Spire Inc. wants Spire Missouri to have a more equity-rich ratemaking capital structure, the answer is simple. Spire Inc. should practice what it preaches.

There is no reason for the Commission to amend its recent authorized ROE for Spire Missouri. While capital market conditions have certainly been unsettling this year with the Fed's aggressive tightening of monetary policy, this has caused investors to place a

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premium on utility stocks, despite rising interest rates. This causes Dr. Won and Mr. Woodard to wrongfully conclude that the COE for LDCs has increased since 2017 and 2021. The most direct and reliable approach for capturing the cost of utility equity, especially considering current market conditions, is the DCF which directly captures utility stock valuation levels.

Q. Does this conclude your testimony?

A. Yes.

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri, Inc. d/b/a Spire's Request for Authority to Implement a General Rate Increase for Natural Gas Service Provided in the Company's Missouri Service Areas	)))))	Case No. GR-2022-0179

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

David Murray, of lawful age and being first duly sworn, deposes and states:

1. My name is David Murray. I am a Utility Regulatory Manager for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

David Murray
Utility Regulatory Manager

Subscribed and sworn to me this 7th day of October 2022.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

TIFFANY HILDEBRAND
My Commission Expires
August 8, 2023
Cole County
Commission #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2023.