Exhibit No.: _____
Issue(s): Rate of Return ("ROR")/Capital Structure
Witness/Type of Exhibit: Murray/Rebuttal
Sponsoring Party: Public Counsel
Case No.: GR-2025-0107

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

SPIRE MISSOURI, INC.

FILE NO. GR-2025-0107

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

*** _____ ***
Denotes Highly Confidential Information that has been Redacted

May 30, 2025

PUBLIC

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REBUTTAL TESTIMONY

OF

DAVID MURRAY

SPIRE MISSOURI INC.

FILE NO. GR-2025-0107

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 W. Woodard and Staff witnesses, Seoung Joun Won, PhD and Kimberly K. Bolin. Although I do not directly address the direct testimony of Missouri Industrial Energy Consumers ("MIEC") witness, Christopher C. Walters, because the premise for his capial structure recommendation is similar to Staff, my rebuttal testimony addressing capital structure is also applicable to his testimony.

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 return on common equity ("ROE"), but he also explains his rationale for relying on Spire Missouri's per books capital structure ratios (exluding 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 issues does Mr. Walters address?

A. Mr. Walters sponsors MIEC's recommended ROR, which includes all ROR issues required to develop a ROR. However, most of his analysis and testimony focuses on his recommended ROE.

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. I recommend the Commission adopt capital structure ratios consistent with Spire Inc.'s typical capital structure ratios for the period encompassing the ordered test year in this case, September 30, 2024. The Company's, Staff's, and MIEC'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. According to Company witness Woodard, the Company's recommended 55% common equity ratio and 45% long-term debt ratio is within the range of Spire Missouri's common equity ratios, after excluding short-term debt, of 52.1% through 56.0% over the last ten years.[1] Staff and MIEC recommend Spire Missouri's ratemaking capital structure be consistent with Spire Missouri's long-term capital ratios at December 31, 2024, which Staff

[1] Woodard Direct Testimony, p. 37, lns. 7-20.

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calculated to consist of 53.19% common equity and 46.81% long-term debt[2] and MIEC calculated to consist of 53.2% common equity.[3]

Q. Conidering the fact that in Spire Missouri's 2021 rate case, the Commission adopted Spire Missouri's capital structure ratios for ratemaking, 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 post the Commission's decision in Spire Missouri's 2021 rate case, the Company introduced new methodologies/approaches to analyzing whether short-term debt should be included in its ratemaking capital structure, 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.

Q. What appears to be Spire Inc.'s primary objective to managing Spire Missouri's capital structure?

A. To target a common equity ratio, exclusive of short-term debt, that it desires for ratemaking purposes. Before the Commission's decision to include short-term debt in Spire Missouri's ratemaking capital structure, which reduced Spire Missouri's authorized ratemaking common equity ratio to 49.86% from the previous ratio of 54.2% in Spire Missouri's 2017 rate case, Spire Inc. managed Spire Missouri's capital structure to achieve a ratio consistent with that which the Commission authorized. In fact, Spire Missouri confirmed such in the following response to a Staff Data Request in the 2021 rate case:

> Spire Missouri manages its capital structure to represent the capital structure that was approved by the Commission in the last rate case (GR-2017-0215 and GR-2015-0216) (*sic*).

Because the Commission did not approve a 54.2% common equity ratio in Spire Missouri's 2021 rate case, Spire Missouri changed its approach in the 2022 rate case and this rate case

[2] Won Direct Testimony, p. 40, lns. 1-12.
[3] Walters Direct Testimony, p. 24, lns. 1-11.

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to request a common equity ratio that it believes to be generally consistent with Spire Missouri's historical common equity ratios and expected common equity ratios.

SPIRE INC. VERSUS SPIRE MISSOURI'S CAPITAL STRUCTURE

Q. Does Mr. Woodard's direct testimony compare and contrast Spire Inc.'s capital structure to that of Spire Missouri's capital structure?

A. No. For purposes of his direct testimony, Mr. Woodard does not debate the merits and demerits of considering Spire Inc.'s capital structure ratios to set Spire Missouri's ratemaking capital structure.

Q. Does Dr. Won's direct testimony provide his argument as to why he chose to recommend a ratemaking capital structure for Spire Missouri based on Spire Missouri's capital structure ratios?

A. Yes. Dr. Won identifies the factors he reviewed to determine whether to recommend a ratemaking capital structure based on Spire Missouri's capital balances or Spire Inc's capital balances. The factors Dr. Won evaluated are similar to those he evaluated in Spire Missouri's 2021 and 2022 rate cases.

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. 0065 (attached as Schedule DM-R-1) requesting the Company affirm or deny eight specific statements. He also issued Data Request No. 0067 (attached as Schedule DM-R-2) to ask the Company if it engages in double leverage. 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 verify Spire Missouri's answers, and whether opposite answers for any of the items would have caused Dr. Won to conclude that Spire Misssouri's capital structure is not independent.

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Q. Why does Dr. Won recommend that the Commission use Spire Missouri's standalone capital structure for determining the revenue requirement in this case?

A. Dr. Won reached his recommendation based on his view that Spire Missouri's financial relationship with Spire Inc. is consistent with past Commission decisions in which it set the authorized ROR based on a standalone capital structure. Therefore, he recommends the Commission set Spire Missouri's ROR "based on its [Spire Missouri's] most recent actual standalone capital structure."[4]

Q. What previous Commission ratemaking decisions did Dr. Won identify in his testimony?

A. Dr. Won identified the Commission's decisions in the following three rate cases: The Empire District Electric Company's ("Empire") Case No. ER-2019-0374, Spire Missouri's Case No. GR-2021-0108, and Confluence Rivers Utility Operating Company, Inc.'s ("Confluence Rivers") Case No. WR-2023-0006.[5]

Q. Which of the above-cited cases are comparable to this case?

A. At risk of stating the obvious, the Spire Missouri rate case.

Q. What makes the financing relationship in the Empire case different to the one in this case?

A. Spire Missouri issues its own long-term debt, but Empire relies on a financing affiliate to access long-term debt funds on its behalf.

[4] Won Direct, p. 40, lns. 2-5.
[5] *Id.,* p. 32, ln. 18 – p. 35, ln. 6.

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Q. Dr. Won testifies that, in Case No. ER-2019-0374, the Commission found that Empire's consolidated capital structure was appropriate for ratemaking.[6] Did the Commission adopt Empire's consolidated capital structure in Case No. ER-2019-0374 for purposes of setting Empire's ROR?

A. No. The Commission used Liberty Utilities Company's ("LUCo") adjusted consolidated capital structure for purposes of setting Empire's ROR. After Algonquin Power & Utilities Corporation ("APUC") acquired Empire, it consolidated the debt financing needs of its North American regulated utility subsidiaries at the LUCo level. Since this consolidation, Empire's capital needs have been funded through affiliate financing transactions.

Q. Is the Commission's decision in the Confluence Rivers rate case an appropriate comparable to this case?

A. No. In that case, the Commission deemed a hypothetical capital structure, consisting of 50% common equity and 50% long-term debt, to be reasonable for purposes of setting Confluence Rivers' ROR. The Commission adopted the hypothetical capital structure because of its concern about the legitimacy of Confluence Rivers' per books capital structure. The Commission was specifically concerned about Confluence Rivers' affiliate financing transactions with its parent companies, U.S. Water Systems LLC and CSWR LLC. Additionally, there was a lack of transparency as to the financing activities of CSWR LLC's private equity owners, Sciens Capital Management LLC.

Q. Do you disagree with any of the circumstances that Dr. Won characterizes as supporting the use of Spire Missouri's standalone capital structure?

A. Yes. I specifically disagree with the following statements, as they relate to Dr. Won's capital structure testimony:

> Spire Missouri operates as an independent entity when considering Spire Missouri's procurement of financing and the cost of that financing...[first statement]

[6] *Id.,* p. 33, lns. 7-8.

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> …Since January 2022, Spire Missouri has not received long-term financing from Spire Inc. or other Spire Inc. subsidiaries…[second statement]
>
> …Spire Missouri's stand-alone capital structure supports its own credit rating. The debt is rated by credit rating agencies based on the stand-alone credit quality of Spire Missouri…[third statement]
>
> …[the financial relationship of] Spire Inc. rais[ing] short-term funding through its [consolidated] commercial paper program and loan[ing] funds to Spire Missouri [is] normal in the utilities sector…[fourth statement]
>
> …no proceeds from Spire Inc.'s long-term debt issuances have been used to infuse equity into Spire Missouri. Therefore, Staff does not find evidence that Spire Inc. has used "double leverage" for investing in Spire Missouri. [fifth statement][7]

Q. Why do you disagree with Dr. Won's first statement?

A. I do not agree with Dr. Won's assertion that Spire Missouri operates as an independent entity as it relates to the procurement of financing. While I agree Spire Missouri issues its own long-term debt, there are clearly other issues which show Spire Missouri is not managed independent of its affiliates. The clearest example is the fact that Spire Missouri relies on Spire Inc.'s consolidated commercial paper program for indirect access to commercial paper via affiliate notes payable to Spire Inc. Additionally, as I explained in my direct testimony, because Spire Missouri often does not distribute a dividend to Spire Inc. to fund dividends to third-party shareholders, Spire Missouri does not access third-party capital markets as often as it would if its capital flows were managed independent of Spire Inc.

Also, Spire Inc. shares a credit facility with Spire Missouri and Spire Alabama. Under the $1.5 billion consolidated credit facility, Spire Inc. can directly borrow up to $525 million, Spire Missouri can borrow up to $700 million and Spire Alabama can borrow up to $275 million.[8] While Spire Inc. is currently allocated $525 million under the credit facility, Spire Inc. can rely on the aggregate amount of the credit facility to allow it to directly

[7] Won Direct, p. 35, ln. 18 through p. 37, ln. 6.
[8] Spire Inc. SEC Form 10-K Filing, September 30, 2024, p. 84.

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borrow up ot $1.5 billion in commercial paper. For the year ended September 30, 2024, Spire Inc.'s peak amount of commercial paper outstanding was $1.135 billion, which funded a peak affiliate loan to Spire Missouri of $643.6 million for the same period. Commercial paper is typically used to support immediate cash needs for purposes such as working capital (including funding gas purchases), construction work in progress ("CWIP"), or dividend payments to third-party shareholders. Spire Inc. owes its ability to access commercial paper to the credit quality of its low risk regulated utility subsidiaries.

Spire Inc. uses its shared credit facilities with its regulated utility subsidiaries to facilitate its access to commercial paper markets (*i.e.* short-term debt). That commercial paper can then fund dividend distributions to shareholders, negating any reliance on the operating cash flows from its subsidiaries.

Q. Why do you disagree with Dr. Won's second statement, that Spire Missouri has not received long-term financing from Spire Inc.?

A. Spire Missouri's financial statements show that Spire Inc. contributed $164.2 million in common equity to Spire Missouri's equity account since January 1, 2022. Not only has Spire Inc. contributed long-term financing, but due to its consolidated financing strategy, it allowed Spire Missouri to retain 87.92% of its earnings over this period, which would be impossible if Spire Missouri were a stand-alone entity required to meet investors' expectations for a steady and consistently growing dividend. Therefore, Spire Inc. has provided long-term financing to Spire Missouri and is able to allow Spire Missouri to retain an unusual amount of long-term capital because Spire Inc. can fund its dividend with the financing capacity created by Spire Inc's regulated utilities.

Q. Why are you confident that Spire Inc.'s credit capacity is primarily provided by its regulated utility subsidiaries?

A. Because Spire Inc.'s non-regulated operations do not have their own credit facilities and Spire Marketing Inc. ("Spire Marketing") and Spire Storage (refers to both Spire Storage West LLC and Spire Storage Salt Plains LLC) do not issue their own long-term debt. For example, rather than providing credit support to Spire Inc., Spire Marketing relies on Spire

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Inc. for corporate guarantess for its financial transactions. Spire Inc. specifically stated the following in its most recent SEC 10-K Filing:

> In addition to its own operating cash flows, Spire Marketing relies on Spire's parental guaranties to secure its purchase and sales obligations of natural gas, and it also has access to Spire's liquidity resources.[9]

Q. Why do you disagree with Dr. Won's third statement, that Spire Missouri's stand-alone capital structure supports its own credit rating?

A. Because its factually incorrect as I will explain in more detail when addressing Mr. Woodard's testimony addressing the importance of credit rating agency opinions. S&P Global ratings assigns Spire Missouri an issuer credit rating based on Spire Inc.'s consolidated credit risk profile, which considers Spire Inc.'s much higher proportion of debt in its capital structure as compared to Spire Missouri.

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

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> _____** [10]

[9] Spire Inc. SEC Form 10-K Filing, September 30, 2024, p. 37.
[10] Moody's August 22, 2024 Credit Opinion on Spire Missouri Inc.

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Q. Why do you disagree with Dr. Won's fourth statement that it is normal for utility companies to participate in consolidated commercial paper programs rather than issue commercial paper directly to debt investors?

A. Despite Ameren Missouri, Evergy Metro and Evergy Missouri West each being owned by a utility holding company, they issue commercial paper directly to third-party commercial paper investors.[11]

Q. What about the fact that Spire Missouri shares a credit facility with Spire Inc.?

A. This also demonstrates integration with Spire Inc. However, as it relates to this financial relationship, Spire Missouri is similar to Missouri's other utility companies as they also share credit facilities with their parent companies. However, this has not always been the case. For example, Spire Inc., Spire Missouri, and Spire Alabama had separate credit facilities prior to December 14, 2016.[12]

Q. Have the parent companies of any Missouri utilities ceased sharing credit facilities with their subsidiaries when the subsidiary's financial condition caused strain on the consolidated credit quality of the enterprise?

A. Yes. Ameren Corp did so in 2010 when it was attempting to limit the impact Ameren Corp's non-regulated subsidiary, Ameren Energy Generating Company had on its credit quality.[13] Ameren Corp also did so in 2006 when it no longer allowed Ameren Illinois (then operating as five different companies: Central Illinois Public Service Company, CILCORP Inc., Central Illinois Light Company, Illinois Power Company and Ameren Energy Resources Generating Company) access to the shared credit facility Ameren Corp had with Ameren Missouri and Ameren Energy Generating Company.[14]

[11] Ameren Corp SEC Form 10-K Filing, December 31, 2024, pgs. 116-117; and Evergy Inc. SEC Form 10-K Filing, December 31, 2024, pgs. 127-128.
[12] Spire Inc. SEC Form 10-K Filing, September 30, 2017, pgs. 95-97.
[13] Ameren Corp 2010 SEC 10-K Filing, pgs. 114-118.
[14] Ameren Corp 2006 SEC 10-K Filing, pgs. 124-128.

Q. Why do you disagree with Dr. Won's fifth statement, that because Spire Inc. has not used long-term debt proceeds to fund its equity contributions into Spire Missouri, no evidence of double leverage exists?

A. Double leverage does not only exist when there is a direct reconciliation between the use of holding company debt to directly purchase equity in any specific subsidiary. Double-leverage, on a broader level, is simply the existence of leverage at the subsidiary and at the holding company, which defines Spire Inc.'s financing strategy. Dr. Won's narrow interpretation of double leverage does not consider the fact that Spire Inc. balances its consolidated capital structure on the business risk of its subsidiaries, including Spire Missouri. As identified in the Certified Rate of Return Analysts ("CRRA") curriculum, evaluating a proper ratemaking capital structure should include the following:

> Whether the subsidiary's capital structure is independent of its parent (i.e. existence of double leverage, absence of proper relationship between risk and leverage of utility and non-utility subsidiaries).[15]

Spire Inc. is not able to use more leverage than Spire Missouri due to its own independent balance sheet capacity. The mere fact that Spire Inc. considers a ** _____ _____ ** as compared to the 55% it urges the Commission authorize its less-risky natural gas distribution operations, illustrates the lack of the proper relationship between risk and leverage for Spire Missouri as compared to the non-regulated subsidiaries, which are financed by Spire Inc. If Spire Inc.'s non-regulated subsidiary, Spire Marketing, could support the debt issued at the holding company, it would not require guarantees from the holding company. Therefore, it is wholly illogical and inconsistent with the relationship between risk and leverage to conclude that Spire Inc. could issue holding company debt without the cash flow support of its low-risk regulated utility assets. The absence of a proper relationship is supported by the fact that S&P determined that Spire Missouri's hypothetical stand-alone credit profile ("SACP") is 'A-', but ultimately assigns Spire Missouri a 'BBB+' credit rating due to Spire Inc.'s weaker credit profile.[16] Additionally, as ** _____

[15] David C. Parcell, "The Cost of Capital – A Pracitioner's Guide," 2020 Edition, p. 456.
[16] William Hernandez and Gerrit W. Jepsen, "Spire Inc. And Subsidiaries Downgraded to 'BBB+' From 'A-' On Weak Financial Measures; Outlook Stable," S&P Global RatingsDirect, June 3, 2024.

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_____ ** Therefore, as it relates to the discrepancy between Spire Inc.'s capital structure and Spire Missouri's capital structure, because Spire Inc.'s consolidated capital structure captures both levels of leverage (the holding company and the operating subsidiaries) afforded by Spire Inc.'s low-risk regulated utilities, the Commission should be guided by Spire Inc.'s consolidated capital structure in setting a fair and reasonable ratemaking capital structure in this case.

Q. Does Spire Missouri need support from Spire Inc. to issue standalone debt?

A. No. In fact, Spire Missouri could have its own standalone credit facility without sharing it with Spire Inc. However, separate credit facilities may limit Spire Inc's access to cheaper commercial paper to fund other investments and dividend payments to shareholders.

Q. Would you summarize your disagreement with the cited assertions that Dr. Won made to support the use of Spire Missouri's standalone capital structure for ratemaking in this case?

A. Yes. I do not agree that Spire Missouri's capital structure supports its own credit rating or that its debt is rated based on its own standalone credit profile. This is crystal clear as it relates to S&P's rationale for its assigned rating. While Moody's is not as clear, it certainly considers Spire Inc.'s liberal use of debt as a credit constraint for Spire Missouri.

Further, there is no reason Spire Missouri's capital structure should be less leveraged than Spire Inc.'s capital structure. Spire Inc.'s ability to carry approximately 60% debt in its capital structure is owed to its low-risk regulated LDCs. Therefore, the Commission should correct this misappropriation of Spire Missouri's debt capacity by authorizing a lower ratemaking common equity ratio.

There are differing degrees of merit in deciding when to consider the holding company's consolidated capital structure or a subsidiary's capital structure. However, the overarching consideration that should be weighed most heavily is whether the use of leverage is consistent with a company's business risk. Dr. Won concludes that because Spire Inc. has

[17] Spire Strategy Committee Meeting, October 16, 2019, p. 78.

less than 10% of its operations in riskier non-regulated operations, this supports the use of Spire Missouri's stand-alone capital structure. Actually, he should have made the opposite conclusion – because Spire Inc. is predominately a pure-play LDC, its consolidated capital structure is consistent with the low-risk of its regulated utility subsidiaries. In fact, based on the understanding that non-regulated operations expose Spire Inc. to more business risk, if anything, its consolidated capital structure should contain a higher common equity ratio than Spire Missouri on a stand-alone basis. Before Spire Inc. increased its leverage to finance acquisitions in 2013 and 2014, this logic held true.

ADAM WOODARD CREDIT RATING AND CAPITAL STRUCTURE TESTIMONY

Q. Mr. Woodard testifies in his direct testimomy that S&P downgraded Spire Missouri's secured long-term debt rating to 'A-' from 'A' in June 2024.[18] Did S&P downgrade Spire Missouri's secured rating in June 2024?

A. No.

Q. Did S&P downgrade any of Spire Missouri's credit ratings in June 2024?

A. Yes. S&P downgraded Spire Missouri's issuer credit rating from 'A-' to 'BBB+'.

Q. Did S&P downgrade Spire Inc.'s and Spire Alabama's issuer credit ratings at the same time?

A. Yes. S&P downgraded the entire family of Spire Inc.'s companies' issuer credit ratings from 'A-' to 'BBB+'.

Q. Why would S&P downgrade Spire Inc. and all of its subsidiaries at the same time and to the same issuer rating?

A. Because while S&P assigns individual issuer ratings to each company, they are all assigned the rating S&P considers appropriate for Spire Inc.'s consolidated risk profile.

[18] Woodard Direct, p. 8, lns. 18-19.

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Q. Mr. Woodard urges the Commission to assist in supporting Spire Missouri's credit rating and capital structure by authorizing Spire Missouri a 55% common equity ratio.[19] Does Spire Inc. do its part in supporting Spire Missouri's credit rating and capital structure?

A. No. Despite Mr. Woodard's plea to the Commission to require ratepayers to pay for Spire Missouri's higher-cost subsidiary capital structure, Spire Inc. does not maintain a higher common equity ratio at the holding company. ** _____ _____ _____ **[20] Although at one point Spire Inc. had planned to reduce the amount of leverage it carries in its capital structure, its simply has not done so. Spire Inc. limits the amount of common equity it issues to minimize the dilution in earnings per share ("EPS") to its existing shareholders. Spire Inc.'s strategy of maintaining a much higher common equity ratio at Spire Missouri is an attempt to increase cash flows to Spire Inc. so it can avoid issuing common equity and attempt to delever gradually over time. Part of S&P's rationale for downgrading Spire Inc. and its subsidiaries' credit rating on June 3, 2024, was as follows:

> Spire has maintained robust capital spending, which the company has funded significantly with incremental debt. Equity issuance from 2021 to 2023 total $95 million, compared with capital spending of $1.8 billion. We thereore expect that Spire's consolidated FFO to debt will reflect 12%-14% through fiscal 2026.[21]

Spire Inc.'s management's goal of mazimizing shareholder value causes a conflict of interest in managing Spire Missouri's capital structrure for the best interest of its ratepayers.

Q. Did S&P determine a hypothetical stand-alone credit profile for Spire Missouri?

A. Yes. According to S&P's June 6, 2024, report published on Spire Missouri's credit rating, it views Spire Missouri's **stand-alone** corporate credit risk profile to be consistent with an

[19] *Id.*, p. 37, ln. 21 – p. 38, ln. 23.
[20] Spire Strategy Committee Meeting, October 16, 2019, p. 78.
[21] William Hernandez, et. al., "Spire Inc. And Subsidiaries Downgraded ot 'BBB+' From 'A-' On Weak Financial Measures; Outlook Stable," S&P Global Ratings, June 3, 2024.

'A-', which if S&P continued to rate Spire Missouri's secured debt two notches higher than its issuer rating, would allow Spire Missouri's secured debt to be rated as high as an 'A+'.

Q. Why is Spire Inc.'s consolidated credit risk profile weaker than Spire Missouri's stand-alone credit risk profile?

A. Primarily because of Spire Inc.'s significant amount and proportion of holding company debt. S&P assigns Spire Inc. a weaker financial risk profile of "Aggressive" as compared to Spire Missouri's financial risk profile of "Significant."

Secondarily, S&P identifies Spire Inc.'s non-utility operations, which consists of its gas storage, gas marketing and gas pipelines, as higher credit risk than Spire Inc.'s regulated natural gas distribution operations.

Q. What hypothetical stand-alone credit profile did S&P assign to Spire Missouri before June 3, 2024?

A. 'A+.'[22]

Q. Why did S&P's hypothetical assigned stand-alone credit profile to Spire Missouri decline by two notches as compared to S&P's one-notch downgrade of Spire Inc.?

A. S&P increased its "anchor" credit rating of 'BBB' for Spire Inc. by one-notch due to its "Comparative Ratings Analysis." I am not certain as to why S&P did not make this same modification to Spire Missouri's anchor credit profile of 'A-'.

Q. What does your discussion of S&P's credit ratings process establish?

A. That Spire Missouri's S&P credit rating is NOT based on Spire Missouri's stand-alone risk profile as Dr. Won and Mr. Woodard suggest.

[22] William Hernandez, et. al., "Spire Missouri Inc. – Ratings Score Snapshot," S&P Global Ratings, May 30, 2023.

SPIRE MISSOURI'S CAPITAL STRUCTURE

Q. Assuming the Commission relies on Spire Missouri's per books capital balances to set its authorized ROR, do you agree with the ratemaking capital structures recommended by the Company, Staff and MIEC?

A. No. None of the other parties to this case recommend including short-term debt in Spire Missouri's ratemaking capital structure. Additionally, Mr. Woodard's logic of attempting to reconcile Spire Missouri's assets to its various forms of capital highlights the fallacies of accepting Spire Missouri's per books capital balances without further adjustment. Also, his argument that Spire Missouri uses short-term debt to support working capital illustrates the appropriateness of including short-term debt in the authorized ROR because cash working capital is included in rate base. In fact, as I will explain, before Spire Missouri was allowed to recover carrying costs for gas inventories through the PGA clause starting in 2004, even the Company recognized the logic that short-term debt supported gas inventories and working capital included in rate base.

Q. Did Staff determine that Spire Missouri's short-term debt balances exceed short-term assets?

A. Yes. For the 12-month period ended December 31, 2024, Staff determined that Spire Missouri's short-term debt exceeded short-term assets by ** _____ **

Q. What assets did Staff include in its quantification of average short-term assets for the 12-month period ended December 31, 2024?

A. CWIP, deferred gas costs and deferred over/under-recovery of revenues related to Spire Missouri's weather normailization adjustment rider ("WNAR").[23]

Q. Do you include the same items in your quantification of short-term asets?

A. No. I did not include amounts of over/under-revovery of revenues related to Spire Missour's WNAR.

[23] Bolin Direct Testimony, p. 4, lns. 4-9.

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Q. Do you agree with including WNAR amounts for purposes of determining a net amount of short-term debt to include in Spire Missouri's ratemaking capital structure?

A. No. While the WNAR allows for Spire Missouri to adjust rates to account for over/under-collection of revenues due to weather variability, these over/undercollections do not require issuance of capital. In the case of CWIP and gas costs, direct capital outlays are required.

Q. Did Staff account for cash working capital in determining whether short-term debt exceeded short-term assets?

A. No. Staff accurately recognized that cash working capital ("CWC") is included in rate base, which actually supports including short-term debt in Spire Missouri's ratemaking capital structure.

Q. Did Staff include the excess amount of short-term debt of ** _____ ** in its recommended ratemaking capital structure?

A. No.

Q. Why not?

A. Staff did not explain why it decided to exclude short-term debt in its recommended ratemaking capital structure. Staff simply stated it "will continue to examine the amount of short-term assets and short-term debt through the true-up period ending May 31, 2025, and may revise its position on short-term debt in the capital structure based upon the new data, if appropriate."[24]

Q. Under what circumstances would Staff include short-term debt in its recommended ratemaking capital structure for purposes of the true-up in this case?

A. As shown in the attached Schedule DM-R-3, Staff indicated it would include short-term debt in its recommended ratemaking capital structure as of the true-up date if the 13-month

[24] Kim K. Bolin Direct, p. 5, lns. 15-19.

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average level of short-term assets is less than the 13-month average level of short-term debt.

Q. If Staff plans on including the excess amount of short-term debt over short-term assets in its true-up recommended ratemaking capital structure, why did they not do so for purposes of their initial recommendation?

A. I do not know. Spire Missouri would have to make fundamental changes to its capital structure policies between the test year and the true-up period for Staff's findings to change significantly.

Q. If Staff had included the ** _____ ** in its ratemaking capital structure, what capital structure ratios would have resulted?

A. 49.21% common equity, 43.30% long-term debt, and 7.49% short-term debt.

Q. Can you quantify the impact on Staff's revenue requirement if it had based its ROR recommendation on including short-term debt?

A. Yes. For purposes of determining the impact, I applied a 4.55% cost of short-term debt, which is consistent with my recommendation. For purposes of the cost of long-term debt and the ROE, I used the parameters Staff used in its direct testimony. If Staff had used the aforementioned capital structure, Staff's revenue reuquirement would be approximately $6.5 million lower for Spire East and approximately $5.8 million lower for Spire West.

Q. Is this the only adjustment that should be made to Staff's capital structure recommendation?

A. No. Based on Staff and the Company's view that it is appropriate to use Spire Misssouri's capital structure because it represents the capital used to support rate base, a further adjustment should be made to exclude goodwill from the capital structure. Staff did so in its recommended capital structure in the recent Evergy Missouri West ("EMW") rate case (Case No. ER-2024-0179), but it did not do so in this case.

Q. How would excluding goodwill impact Spire Missouri's capital structure?

A. Adjusting Spire Missouri's common equity balance for Spire Missouri's goodwill balance of $210.2 million results in the following capital structure ratios: 46.51% common equity, 45.61% long-term debt and 7.88% short-term debt.

Q. How would this adjusted capital structure impact Staff's revenue requirement?

A. Staff's revenue reuquirement would be approximately $11.3 million lower for Spire East and approximately $10 million lower for Spire West.

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 included $29,075,902 of CWC in its recommended rate base, while the Company included $48,715,567 of CWC in its recommended rate base. According to Staff witnesss Keith Majors' Direct Testimony, a positive CWC requirement is funded by shareholders, which requires them to be compensated through an increase to rate base.[25]

[25] Majors Direct, p. 33, lns. 3-8.

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Q. What does Mr. Woodard's assignment of short-term debt to recent cash deficiencies related to working capital highlight regarding current ratemaking practices for 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 and gas inventories.[26]

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 mechansim 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 a proxy for short-term debt costs) recovered through PGA tariffs.

Q. Are there any general regulatory guidelines providing direction as it relates to inluding 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.

[26] Case No. GR-2001-629, Glenn W. Buck Direct Testimony, p. 9, lns. 7-23; and Case No. GR-2002-356, Glenn W. Buck Rebuttal Testimony, p. 4, lns 1-13.

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> 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.[27]

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

A. Yes. Since 2017, Spire Missouri's capital structure has consistently contained at least 10% of short-term debt, with a quarterly average of approximately 12% since June 30, 2021, which covers the period since Spire Missouri's rate cases in 2021 and 2022.

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. After the Commission's decision to include short-term debt in Spire Missouri's 2021 rate case, Spire Inc. communicated to investors that the Commission's decision was unprecented. Spire Inc.'s communications to investors was inaccurate. 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

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

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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 companies.[28] Spire Missouri's witnesses in rate cases prior to 2002 included short-term debt in their recommended ratemaking capital structures.[29]

Q. Despite 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, did Spire Inc.'s Officers communicate 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. 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.[30] (emphasis added).

Q. Did Spire Inc.'s communications contribute to misinformation repeated by the investment community?

A. Yes. Mr. Scott Weitzel cited to a Moodys' report in Spire Missouri's 2022 rate case, which essentially repeated Spire Inc.'s allegations.

[28] Case No. GR-2009-0355, Frank J. Hanley Direct Testimony, p. 2.
[29] *Id.*
[30] Spire Inc. FQ1 2022 Earnings Call Transcripts, February 2, 2022, p. 5.

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Q. Based on the twelve-month period ending March 31, 2025, 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 45.86% common equity, 44.95% long-term debt and 9.19% short-term debt. The support for this alternative is explained below and contained in Schedule DR-R-4 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 March 31, 2025 (*i.e.* a point-in-time). Additionally, I reduced the common equity balance to remove the approximately $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.

RECOMMENDED ALLOWED ROE FOR SPIRE MISSOURI

Q. What ROE does Mr. Woodard request the Commission authorize Spire Missouri?

A. 10.5%.[31]

Q. What is the basis for Mr. Woodard's requested 10.5% authorize ROE?

A. Mr. Woodard estimated Spire Missouri's cost of common equity by applying the constant-growth discounted cash flow ("DCF"), the Capital Asset Pricing Model ("CAPM") and a risk premium analysis to a smaller proxy group of LDCs as well as to a broader proxy group which includes electric and water utility companies.

[31] Woodard Direct, p. 10, lns. 10-13.

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Q. So, to be clear, Mr. Woodard's expert opinion is that Spire Missouri's COE is approximately 10.5%?

A. Yes. Based on his analysis for this rate case, this is his opinion.

Q. What COE did Mr. Woodard estimate using the constant-growth DCF method?

A. 9.37% to 11.29%.[32]

Q. What is the primary cause for Mr. Woodard's higher DCF COE estimates?

A. Mr. Woodard assumes that his proxy groups' dividends per share ("DPS") can grow in perpetuity at the same rate as equity analysts' three-to-five year earnings per share ("EPS") forecasts. I am not aware of any equity analysts who make this assumption when estimating a fair value to pay for a utility stock. **

** Mr. Woodard's assumption causes an upward bias in his COE estimates.

Q. Mr. Woodard claims that because "earnings forecasts are abundantly more available and short-term and long-term earnings growth is a frequent topic in meetings with equity research analysts and investors" and because "earnings growth drives dividend growth," these facts make earnings growth forecasts an appropriate input when estimating growth in a DCF model."[33] Do you agree?

A. Not in the context Mr. Woodard uses equity analysts three-to-five year EPS forecasts. Mr. Woodard jumps to the conclusion that because equity analysts and investors frequently discuss short-term and long-term earnings growth, this proves that equity analysts and investors assume utilities' DPS will grow in perpetuity at this rate when estimating the intrinsic value of stock using absolute valuation methods such as the DCF. This is incorrect. Equity analysts and investors are focused on short-term and long-term earnings growth for purposes of estimating the value of utility stocks using relative valuation techniques, such as comparing P/E ratios across companies and over time.

[32] *Id.,* p. 23, lns. 10-11.
[33] *Id.,* p. 20, lns. 11-14.

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Q. Can you expand on this further?

A. Yes. Many ROR witnesses often cite to a study performed by Burton Malkiel and John G. Cragg to support their assumption that investors assume a company's DPS can grow in perpetuity at equity analysts' projected three-to-five year CAGR in EPS. Malkiel and Cragg did not make this finding in their study. Their study simply found that equity analysts' recommendations influence stock prices more than a simple extrapolation of historical growth rates. Malkiel and Cragg specifically stated the following:

> We would not argue that these estimates necessarily give an accurate picture of general market expectations. It would, however, seem reasonable to suggest that they are representative of opinions of some of the largest professional investment institutions and that they may not be wholly unrepresentative of more general expectations. **Since investors consult professional investment institutions in forming their own expectations, individuals' expectations may be strongly influenced—and so reflect—those of their advisers**. That several of our participating firms find it worthwhile to publish these projections and provide them to their customers provides prima facie evidence that a certain segment of the market places some reliance on such information in forming its own expectations. Also, insofar as other security analysts and investors follow the same sorts of procedures as those used by our sample analysts in forming expectations, general investors' expectations would resemble those of the analysts. Consequently, these predictions may well serve as acceptable proxies for general expectations and surely seem worthy of detailed analysis. (emphasis added)[34]

Considering the above, in which the foundation for the study concludes that investors rely and depend on their investment advisors, and therefore, stock prices reflect these expectations, it is much more reasonable to conclude that the COE assumptions used by these investment analysts are reflected in share prices. To assume that investors utilize the information provided by equity analysts in a way that is wholly inconsistent with how these analysts use the data in their own analysis, is not credible. Equity analysts often use the dividend discount model ("DDM") to estimate a fair price to pay for the stock. The DDM is synonymous with the DCF in utility ratemaking settings. The DCF in utility ratemaking is simply solving for the required return/cost of equity variable. In valuation, the goal is to

[34] Malkiel, Burton G., and John G. Cragg. "Expectations and the Structure of Share Prices." *The American Economic Review*, vol. 60, no. 4, 1970, pp. 601–617.

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solve for the fair price of the stock. Consequently, if equity analysts are of value to their clients, then the stock prices will reflect their estimates of future dividends and the required return from these dividends. Therefore, if one accepts the studies that security analysts' expectations influence investors, which is Malkiel and Cragg's conclusion, then this means that stock prices reflect the COE used by these very same analysts, which as I discussed in my direct testimony, is in the range of 8% to 8.5%.[35]

Q. Mr. Woodard requests Missouri ratepayers pay a higher ROE to fund flotation costs for Spire Inc.'s issuance of common equity because "common equity is not issued for free."[36] 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. 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 since the update period of September 30, 2022, in Spire Missouri's last rate case?

A. $113.1 million .

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. I testified to this at length in Spire Missouri's last rate case. For example, I discovered that Spire Inc. issued less costly equity units (as opposed to traditional common equity) for general corporate purposes and to repay short-term indebtedness under its commercial paper program. Spire Inc.'s

[35] Murray Direct, p. 16, ln. 26 – p. 17, ln. 3.
[36] *Id.,* p. 23, lns. 14-15.

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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 economic fashion in which to manage its cost of capital. The only reason Spire Inc. is directly 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 attempt to justify a higher revenue requirement.

Q. What COE did Mr. Woodard estimate using the CAPM?

A. 10.74% to 11.15% using the traditional CAPM and 10.91% to 11.22% using a version of the CAPM referred to as the Empirical CAPM ("ECAPM").[37]

Q. Why are Mr. Woodard's CAPM estimates so high?

A. They are high for several reasons. First, Mr. Woodard's market risk premium of 6.80% is higher than that which is typically used to estimate fair values of utility stocks and utility companies' total enterprise value. Second, Mr. Woodard accepts Value Line's published betas as being representative of utility's systematic risk going forward. Third, Mr. Woodard applies his calculated market risk premium of 6.8% to a 30-year UST yield rather than the 10-year UST yield used to calculate the earned market risk premium for the period 1928 to 2023.

Q. How did Mr. Woodard calculate the 6.80% market risk premium he used in his CAPM analysis?

A. Mr. Woodard calculated the arithmetic average of annual historical returns on the S&P 500 and the 10-year UST note returns for the period 1928 through 2023. Mr. Woodard determined that the arithmetic average return on the S&P 500 was 11.66% for this period and the arithmetic average return on the 10-year UST note was 4.86%. The difference of the two figures, 6.80%, represents his view of a forward-looking market risk premium.

[37] Woodard Direct, p. 29, lns. 7-10.

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Q. Did Mr. Woodard use the same data source as Dr. Won to calculate the historical earned risk premium on the market compared to 10-year UST notes?

A. Yes. Both Mr. Woodard and Dr. Won relied on return data Dr. Aswath Damadoran, Professor of Finance at the Stern School of Business, New York University, provides on his website.

Q. Did Dr. Won consider geometric earned risk premiums in his CAPM analysis?

A. Yes. Dr. Won considered the 5.44% geometric earned risk premium data Dr. Damadoran also posts to his website.

Q. Does Mr. Woodard consider geometric earned risk premiums in estimating the COE using the CAPM?

A. No. Mr. Woodard testifies that "[w]hen utilizing historical risk premiums, only arithmetic average returns should be used for estimating cost of capital." Mr. Woodard cites to Dr. Morin's book, New Regulatory Finance, who states that "Only arithmetic means are correct for forecasting purposes and for estimating the cost of capital."[38]

Q. Is there 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 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 excercises.

[38] *Id.*, p. 27, lns. -21-22.

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Q. What does Dr. Damadoran suggest in his treatises, which have at times been part of the CFA Program curriculum?

A. Dr. Damadoran specifically states the following in his Investment Valuation treatise:

> There is just as much disagreement among pracitioners on the usage of the arithmetic versus the geometric mean. Those who use the arithmetic mean argue that it is much more consistent with the mean-variance framework of the CAPM and a better predictor of the premium in the next period. Use of the geometric mean is justified on the grounds that it takes into account compounding and that it is a better predictor of the average premium in the long term. There can be dramatic differences in premiums based upon the choices made at this stage, as illustrated in Table 4.1 based upon historical data on stock and bond returns.
>
> The geometric mean generally yields lower premium estimates than the arithmetic mean. In the context of valuation, where cashflows over a long time horizon are discounted back to the present, the geometric mean provides a better estimate of the risk premium. Thus the premium of 5.50% (the geometric mean of the premium of Treasury bonds) is used throughout this book for calculating expected returns.[39]

Q. Does Spire Inc. rely on Dr. Damodaran's recommended market risk premiums for internal cost of capital estimates?

A. *** _____
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_____
_____
_____
_____
_____

[39] Aswath Damodaran, "Investment Valuation: Tools and techniques for determining the value of *any* asset," John Wiley & Sons, Inc., 1996, p. 48
[40] Spire Inc. Strategy Committee Meeting, October 19, 2022, p. 30.

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Q. If Mr. Woodard had applied the CAPM as Spire Inc. does for purposes of estimating Spire Inc.'s enterprise value, what is Spire Inc.'s implied COE?

A. *** _____ *** Please see Schedule DM-R-5 for the detail underlying this calculation.

Q. Why are Mr. Woodard's beta estimates so high?

A. Because he accepts Value Line's mechanical beta calculations, which capture the past five years of weekly returns for the S&P 500 as compared to his proxy group. As I have documented in several recent rate cases, mechanical beta calculations that capture market activity at the onset of Covid-19 are skewed high.

Q. Why are they skewed high?

A. The spike in utility stock betas occurred when the market plummeted at the onset of the Covid-19 pandemic in March 2020. It is quite common for all securities, both higher-risk and lower-risk securities, to move in tandem during significant market corrections. Because betas measure the relative volatility of a company or a portfolio as it relates to the market, if all securities rapidly decline at the same time, this causes all betas to converge toward one.

Q. Can you provide a chart showing how the synchronized market contraction at the beginning of Covid-19 skewed utility betas higher?

A. Yes. The following chart illustrates the impact on one-year betas of Mr. Woodard's chosen LDC proxy group:

[41] Spire Inc. Strategy Committee Meeting, April 26, 2023, p. 91.

As is evident from the chart above, after the market data from the spring of 2020 drops off the beta calculations, the betas of Mr. Woodard's LDC proxy group were more similar to betas experienced before Covid-19.

Q. Why does Mr. Woodard's use of 30-year UST bonds as the first variable in his CAPM analysis cause an upward bias to his COE estimate?

A. Because he calculated the earned risk premium spread by subtracting 10-year UST returns from the returns on large company stocks. The returns on longer-dated UST securities are higher over the long-term because investors require compensation for being exposed to changes in interest rates over the tenor of the security. This compensation is referred to as the term premium. Considering such, the earned return spread between the 10-year UST note and large company stocks is higher than the earned return spread on 30-year UST notes and large company stocks.

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Q. How much lower would Mr. Woodard's CAPM COE estimates be if he had used the same tenor of UST securities for the first variable in the CAPM equation as he used to determine the market risk premium?

A. Anywhere from 22 to 43 basis points based on monthly spreads between 10-year UST notes and 30-year UST bonds during the first four months of 2025.

Q. What are your thoughts on Mr. Woodard's risk premium analysis?

A. Mr. Woodard's risk premium approach is a regression analysis of allowed ROEs to interest rates. Mr. Woodard concludes from his regression analysis that because allowed ROEs haven't changed as much as interest rates, an adjustment needs to be made to recognize that regulators have been hesitant to adjust allowed ROEs as much as interest rates would suggest. This approach is circular in that the regression coefficient is dependent on commissions' regulatory decisions rather than on market required returns. As I testified in my direct testimony, the investment community recognizes that authorized ROEs did not decline along with the COE.

STAFF'S RECOMMENDED ROE

Q. What is Dr. Won's recommended allowed ROE?

A. Dr. Won recommends an ROE of 9.63%, which is the mid-point of his ROE range of 9.38% to 9.88%.

Q. Can you summarize the analysis Dr. Won performed for purposes of his testimony?

A. Yes. Dr. Won performed a COE analysis using two COE methods/models – a constant-growth DCF and the CAPM. Dr. Won's COE estimates using the DCF method were in the range of 7.86% to 9.49%.[42] Dr. Won's COE estimates using the CAPM were in the range of 9.19% to 10.52%.[43] Dr. Won then takes an average of his CAPM and DCF COE results for purposes of determining his final estimated COE range of 8.52% to 10.00%.[44]

[42] Won Direct, p. 44, lns. 11-15.
[43] *Id.,* p. 46, lns. 13-18.
[44] *Id.* p. 49, lns. 8-14.

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Dr. Won also performed a risk premium analysis which he classified as a bond yield plus risk premium ("BYPRP") model. Dr. Won classified his BYPRP method as an "ROE" estimation approach rather than a COE estimation method. Dr. Won's indicated ROE using this approach was in the range of 9.62% to 9.64%.[45]

Q. Do you agree with Dr. Won that his BYPRP analysis should not be characterized as a COE analysis?

A. Yes. My own COE analysis, since at least 2010, has consistently established that authorized ROEs are higher than the COE. I have also consistently and frequently provided corroborating information/analysis from the investment community and from utility companies' internal analysis that corroborate the fact that authorized ROEs are higher than the COE.

Q. What methodology did Dr. Won rely on for purposes of developing his recommended ROE?

A. His BYPRP method. He applied a +/- 25 basis point adjustment to his mean indicated ROE of 9.63% to arrive at a range of 9.38% to 9.88%.

Q. Considering that authorized ROEs have been higher than the COE, what does Dr. Won's regression analysis of bond yields to authorized ROEs prove about authorized ROEs since 2014?

A. That they are "sticky" as investors often characterize them. Applying Dr. Won's regression equation to the lowest monthly bond yield of 2.77% since 2014 indicates an ROE of 9.55% would be appropriate. Applying the regression equation to the highest bond yield of 6.32% since 2014 indicates an ROE of 9.65% would be appropriate.

[45] *Id.*

Q. Considering the narrow range of only 10 basis points based on Dr. Won's regression analysis, is it logical to recommend an ROE range of 50 basis points?

A. No. The Commission should disregard any ROE above 9.63%. However, considering my 9.5% ROE recommendation is still approximately 150 basis points over the COE, the Commission should adopt my ROE recommendation.

Q. Although Dr. Won does not appear to rely on some of his higher COE estimates to determine his authorized ROE recommendation, can you address what causes those higher estimates?

A. Yes. Dr. Won's higher COE estimates are primarily a function of his CAPM analysis. The high-end of Dr. Won's CAPM range is premised on a market risk premium estimate of 7.00%.[46] Dr. Won calculated the high-end of the historical market risk premiums by calculating the annual arithmetic average returns for large company stocks and long-term government bonds and taking the difference of the two. Dr. Won relied on two different data sources and historical periods for purpose of calculating the historical risk premiums. For his first historical risk premium spread, Dr. Won used historical return data for the period 1926 to 2024 provided by Kroll, LLC in the Stocks, Bonds, Bills and Inflation ("SBBI") Yearbook.[47] For his second historical risk premium spread, Dr. Won used historical return data for the period 1928 to 2024 provided on the previously mentioned Dr. Damadoran website.

Q. Does SBBI provide actual market return data for the period 1928 to 2024?

A. Yes. If Dr. Won desired to determine the earned return spreads for the period 1928 to 2024, he did not need to rely on a different source for this period.

[46] Won Direct, Schedule SJW-d13
[47] This is the same data source and period I used for my CAPM analysis in my direct testimony.

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Q. Using the SBBI return data for the period 1928 to 2024, what was the arithmetic earned return spread between large-cap stocks and long-term government bonds?

A. 6.63%, which is lower than the 7.0% Dr. Won calculated from the realized return data provided on Dr. Damadoran's website.

Q. What is the primary cause for the difference in the realized return spread between the two sources?

A. The government bond return data available on Dr. Damadoran's website is based on 10-year UST bonds, where the government bond return data provided by SBBI is based on 20-year UST bonds.

Q. What was the difference in the arithmetic average annual returns for 20-year UST bonds compared to 10-year UST bonds for the period reviewed by Dr. Won?

A. The arithmetic average total return for 20-year UST bonds was 5.41%, whereas the arithmetic average total return for 10-year UST bonds was 4.79%, a difference of 62 basis points.

Q. Is there anything wrong with determining an earned risk premium spread between large capitalization stocks compared to 10-year UST bonds?

A. No, but if the analyst uses a 10-year UST bond to calculate the historical earned risk premium, then for purposes of estimating the COE, this historical earned risk premium should be added to the yield of the same security – 10-year UST bonds.

Q. What tenor of UST bonds did Dr. Won use for the risk-free rate in his CAPM analysis?

A. A 30-year UST bond, which typically trades at higher yields than 10-year UST bonds.

Q. What is a recent typical spread between 10-year UST notes and 30-year UST bonds?

A. Around 20 to 40 basis points based based on monthly yields since January 1, 2025. Use of the same tenor of UST notes for Dr. Won's CAPM analysis using the 1928 to 2024 annual

data on Dr. Damodaran's website would reduce Dr. Won's COE estimates by 20 to 40 basis points.

Q. What market risk premium does Dr. Damodaran view as reasonable based on recent market conditions?

A. As of March 1, 2025, a market risk premium of 4.41% to 4.58% over the 10-year UST yield.[48] Based on recent 10-year UST yields fo approximately 4.3%, this implies a market COE of approximately 8.71% to 8.88%.

Q. What COE does Dr. Damodaran estimate for the utility industry?

A. 6.28% as of January 2025.[49]

Q. What market risk premium does Kroll, Dr. Won's other data source, consider reasonable based on current market conditions?

A. Kroll considers a 5% market risk premium as reasonable based on current market conditions. Because Kroll evaluates large company stocks as compared to 20-year UST bonds, it applies its recommended market risk premium estimate to a recent 20-year UST bond yield. If the 20-year UST bond yield is below 3.5%, then Kroll recommends adding 5% to 3.5%. Based on recent 20-year UST bond yields of around 4.75%, this implies a market COE of 9.75%.

Q. Based on these authoritative sources, what is a current reasonable estimate of the market COE?

A. In the range of 8.75% to 9.75%. Applying a typical utility beta of approximately 0.75 to the market risk premium estimates from these authoritative sources indicates a utility industry COE in the range of 7.68% to 8.50%.

Q. What beta does Dr. Won apply to his market risk premium estimates?

A. 0.90.

[48] https://pages.stern.nyu.edu/~adamodar/
[49] *Id.*

Q. Why are Dr. Won's beta estimates so high?

A. The same reason Mr. Woodard's were too high. Dr. Won uses Value Line's published betas, which capture the abnormal period that occurred at the start of the Covid-19 pandemic in the spring of 2020. As I testified in my direct testimony, updated 5-year historical beta calculations that exclude this abnormal period result in a historical beta of approximately 0.70.[50]

Q. If Dr. Won had used a 0.70 beta, how would this impact his CAPM COE estimates?

A. Dr. Won's COE estimate would decline by 20% of the market risk premium. Based on the low-end and high-end of Dr. Won's market risk premium estimates, this would lower his COE estimates by 1.00% and 1.29%, respectively.

Q. Using Dr. Won's market risk premium estimates, what is the final indicated COE if you changed the beta to 0.70?

A. The CAPM COE would be in the range of approximately 8.2% to 9.2%.

SUMMARY AND CONCLUSIONS

Q. Can you summarize your rebuttal testimony?

A. Yes. Spire Missouri urges the Commission to authorize it a more costly capital structure to support its credit rating, despite Spire Inc.'s own lack of commitment to maintaining a conservative capital structure. Spire Missouri places 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 determing a reasonable authorized ratemaking capital structure. If Spire Inc. wants Spire Missouri to have a more equity-rich

[50] Murray Direct, p. 32, lns. 1-17.

ratemaking capital structure, the answer is simple. Spire Inc. should practice what it preaches.

There is no reason for the Commission to authorize Spire Missouri an ROE over 9.5%. While capital market conditions have tightened since Spire Missouri's 2021 and 2022 rate cases, Spire Missour's COE is still well below 9.5%. ** _____ _____ _____ **

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-2025-0107

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 28th day of May 2025.

TIFFANY HILDEBRAND
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES AUGUST 8, 2027
COLE COUNTY
COMMISSION #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2027.