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| **Exhibit No.:** | |
| **Issue(s):** | Rate of Return (ROR)/ Capital Structure |
| **Witness/Type of Exhibit**: | Murray/Rebuttal |
| **Sponsoring Party**: | Public Counsel |
| **Case No**.: | WR-2023-0006 |

# REBUTTAL TESTIMONY

# OF

# DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

## CONFLUENCE RIVERS UTILITY OPERATING COMPANY, INC.

CASE NO. WR-2023-0006

** _____ **

Denotes Confidential Information that has been redacted

June 29, 2023

# PUBLIC

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**REBUTTAL TESTIMONY**

**OF**

**DAVID MURRAY**

**CONFLUENCE RIVERS UTILITY OPERATING COMPANY, INC.**

**FILE NO. WR-2023-0006**

**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 testimonies of Confluence Rivers Utility Operating Company, Inc.'s ("Confluence" or "Company") witnesses, Dylan W. D'Ascendis and Brent Thies. I will also briefly respond to the direct testimony of Staff's rate of return ("ROR") witness, Christopher C. Walters.

**Q. What issues does Mr. D'Ascendis address in his direct testimony?**

A. Mr. D'Ascendis sponsors Confluence's requested return on common equity ("ROE"), cost of debt, and the capital structure to which these components are applied.

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

A. Mr. Thies sponsors Confluence's overall requested revenue requirement and the model used to develop Confluence's requested revenue requirement.

**Q. What issues does Mr. Walters address?**

A. Mr. Walters addresses ROE, cost of debt, and the capital structure to which these components are applied.

**Q. Will your testimony address Mr. Walter's ROE recommendation?**

A. No. Although I do not agree with the details of his methods and assumptions, because his ROE recommendation of 9.5% (based on a range of 9.2% to 9.8%) is within my recommended ROE range of 9.1% to 9.9%, I am not addressing any specific issues regarding his ROE recommendation.

**Q. What issue will you address first?**

A. Capital structure.

## CAPITAL STRUCTURE

**Q. What capital structure ratios does Confluence request the Commission use for purposes of setting its authorized ROR?**

A. I am not sure. While Mr. D'Ascendis testifies that he recommends a ratemaking capital structure consisting of 68.56% common equity and 31.44% long-term debt, Company witness Brent Thies' revenue requirement model specifies a ratemaking capital structure consisting of 65% common equity and 35% long-term debt.

**Q. Are either of these capital structures reasonable for purposes of setting Confluence's authorized ROR in this case?**

A. No. These capital structures do not reflect a reasonable proportion of debt for Confluence's low-risk regulated utility investments.

**Q. What is the basis for Mr. D'Ascendis' recommended capital structure?**

A. Mr. D'Ascendis testifies his recommended capital structure is based on Confluence's actual capital structure.[1] According to Note 1 of Mr. D'Ascendis Schedule DWD-1, his recommended capital structure ratios are based on information provided to him by

[1] D'Ascendis Direct Testimony, p. 2, l. 21 – p. 3, l. 6.



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Confluence. Neither Mr. D'Ascendis' workpapers nor his schedules showed the specific figures he used to determine the ratios in his recommended capital structure.

**Q. Did Mr. Thies' schedules and workpapers indicate how he determined the capital structure he used to develop Confluence's requested ROR?**

A. Yes. Schedule BT1 attached to Mr. Thies' Direct Testimony identifies Confluence's requested ROR of 9.7%. The ROR figure in Schedule BT1 was derived from Mr. Thies' workpaper (Schedule DM-R-1 attached to my testimony) contained in the revenue requirement model he sponsored in his Direct Testimony.

**Q. Did Mr. Thies rely on Confluence's balance sheet for purposes of determining the capital structure he used to determine Confluence's requested revenue requirement?**

A. No.

**Q. How did he determine a 65% common equity ratio and 35% long-term debt ratio?**

A. Mr. Thies subtracted $7,066,268 of long-term debt from Confluence's requested rate base amount of $20,190,644 for purposes of determining the portion of capital he classified as common equity capital.

**Q. What obligation does the $7,066,268 long-term debt balance represent?**

A. The balance of the Fresh Start Venture LLC affiliate loans at June 30, 2022.

**Q. Should these obligations be classified as debt?**

A. No. US Water Systems LLC ("US Water") owns CSWR LLC and Fresh Start Venture LLC. From a lender's perspective, all of this capital would be considered equity.

**Q. To be clear, as of June 30, 2022, what is Confluence's per books actual capital structure?**

A. 100% common equity.



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**Q. If the $7,066,268 were third-party debt, would it be reasonable to deduct this amount from rate base to estimate Confluence's common equity ratio supporting rate base?**

A. Yes.

**Q. Why?**

A. Because this is similar to how a creditor would evaluate Confluence's capital structure. Specifically, in the loan Confluence executed with CoBank on December 5, 2022, CoBank's financial covenants defined Confluence's equity balance as total assets less third-party debt, netted for contributions in aid of construction. Based on CoBank's approach, Confluence's equity-to-total capitalization ratio was 68.7% as of June 30, 2022, which is fairly consistent with the 68.56% common equity ratio Mr. D'Ascendis identified in his direct testimony.

**Q. Does Confluence's December 31, 2022 balance sheet reflect the CoBank loan?**

A. Yes.

**Q. Based on Mr. Thies' approach what is Confluence's implied capital structure after considering the $7 million CoBank loan?**

A. 65.33% common equity and 34.67% long-term debt.

**Q. Is this a reasonable ratemaking capital structure for Confluence?**

A. No.

**Q. Why not?**

A. As I testified in my direct testimony, Confluence could have issued more debt based on CoBank's loan covenants. CSWR's management did not do so because it desires to attempt to maximize the amount of cash flows available to its ultimate parent company, US Water.



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**Q. Have you attempted to discover US Water information in order to further understand and describe US Water's financial strategies?**

A. Yes.

**Q. Why is this information important to determining a fair and reasonable ratemaking capital structure in this case?**

A. Because it would allow me to analyze the true amount of equity investment in CSWR. As I testified in my direct testimony, it is my understanding that US Water raises capital through rounds of private equity funding, but it also raises capital through a financing subsidiary, Sciens Water Financing Corporation ("SWFC"), which "provides debt and other alternative financing solutions to water-related hard asset projects originated by the SWOF [Sciens Water Opportunities Fund] portfolio companies and third-parties."[2]

**Q. Would the Sciens Water Opportunities Fund prefer to limit the amount of debt issued at the operating utility level to increase the amount of cash flows it can lever at the investment level?**

A. Yes. The more debt issued at the utility operating company level with a known and objective cost, the more likely the authorized ROR will be consistent with the level required to service the utility company's costs of capital. If cash flows produced by the utility must service debt at the operating subsidiary, then this reduces the cash flows available to the ultimate parent company and its investors. The lower the cash flows to the ultimate parent company, the less debt it can issue to lever its equity returns. The more cash flow available to the ultimate parent company, the more it can enhance the returns for its equity investors through leverage. While this financing strategy is also employed by publicly-traded utility holding companies that own Missouri utilities, e.g. Ameren Corporation, Spire Inc. and American Water Works Company Inc. ("American Water"), at least this information is public, allowing regulators to compare this information to the operating utility subsidiaries'

[2] https://scienswater.com/our-portfolio/



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capital structures to assess the degree to which such strategies may be detrimental to customers through a cost inefficient capital structure.

**Q.** ** _____

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**Q.** _____

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**Q.** _____

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[3] CSWR's 2023 Budget Presentation to US Water, December 14, 2022, p. 6.



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**Q.** _____

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**Q.** _____

A. _____

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**Q. Did you request a copy of the CSWR memorandum to RSM?**

A. Yes. Confluence indicated it is not privy to RSM's workpapers so "the Company is unable to identify the specific document named" (see Schedule DM-R-4). However, because the document requested is a CSWR document, I am not sure why Confluence could not identify the document requested.

**Q. Did you discuss this document with Confluence during the technical conference on June 14, 2023?**

A. Yes. I mentioned this document during the technical conference. Confluence indicated this memorandum was not necessarily a policy, but rather a memorandum to RSM to summarize/explain CSWR's capitalization policies, which are ultimately guided by the National Association of Regulatory Utility Commissioner's Uniform System of Accounts ("USOA").



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**Q. Did CSWR's memorandum contain other information that would assist the Commission in weighing the evidence in this case?**

A. Yes. This memorandum also identified CSWR's procedure for capitalizing costs associated with construction work in progress ("CWIP"). This memorandum also indicated that CSWR had internal templates for how it capitalized financing costs (allowance for funds used during construction) associated with CWIP.

**Q. Can the Commission determine a fair and reasonable market-based ratemaking capital structure in this case without access to US Water's financial statements?**

A. Yes. As I testified in my direct testimony, CoBank's financial covenants define the amount of capital it is willing to lend Confluence. This is the most objective and observable basis for a market-based capital structure in this case. Based on the financial covenants in the CoBank loan agreement, Confluence's capital structure can be supported by up to 55% debt.

**Q. What about Mr. Walters recommended ratemaking capital structure of 50% common equity and 50% long-term debt?**

A. While Mr. Walters' recommended capital structure is certainly more reasonable than that requested by the Company, his recommended capital structure is based on his observations and analysis of other water utility companies' actual and authorized capital structures. My recommended capital structure is based on a proportion of debt specified in an arms-length transaction directly with Confluence.

## DYLAN D'ASCENDIS' RECOMMENDED ROE FOR CONFLUENCE

**Q. Can you provide a summary of how Mr. D'Ascendis developed his recommended allowed ROE of 11.35%?**

A. Yes. Mr. D'Ascendis' recommended allowed ROE is based on his estimate of Confluence's COE. Mr. D'Ascendis provides a summary of his cost of equity estimates on page 4 of his direct testimony (see Table 2). Mr. D'Ascendis applies the discounted

cash flow ("DCF") method, the Capital Asset Pricing Model ("CAPM"), and the risk premium method ("RPM") to a water utility proxy group and a "non-price regulated" proxy group. He also applied the RPM to the S&P Utilities Index. Mr. D'Ascendis selected his non-price regulated proxy group by evaluating risk factors other than being in the same industry as Confluence. The results of Mr. D'Ascendis' individual methods range from a low of 9.73%, based on his application of the constant-growth DCF analysis to the water utility proxy group, to a high of 12.00%, based on applying the CAPM to the water utility proxy group. Mr. D'Ascendis then made two separate adjustments for business risk (+1.00%) and financial risk (-0.51%) to arrive at his final estimated COE range of 10.85% to 11.85%. Mr. D'Ascendis' recommended ROE of 11.35% is the mid-point of his estimated COE range.

**Q. How did Mr. D'Ascendis determine his estimated COE range given the approximate 225 basis point spread in his COE estimates (9.73% to 12.00%)?**

A. It appears he decided to select the central 100 basis point range within his COE estimates. Adding 63 basis points to his low-end COE estimate of 9.73% results in the low-end of his range of 10.36% while subtracting 64 basis points from his high-end COE estimate of 12% results in the high-end of his range of 11.36%.

**Q. Based on Mr. D'Ascendis approach for estimating the COE, does he assign more weight to any specific COE methodology?**

A. It does not appear so. Based on his final COE estimated range, his approach gives 50% weight to his lowest COE estimate and 50% weight to his highest COE estimates ((12.00% + 9.73%)/2 = 10.86%).

**Q. Should Mr. D'Ascendis have assigned equal weight to his higher COE estimates derived from adding risk premiums to long-term interest rates?**

A. No. As I testified in my direct testimony, COE estimates using standard/typical risk premium estimates currently cause inflated COE estimates in the current higher long-term interest rate environment. Utility stock valuation ratios did not expand with significant declines in long-term interest rates during the 2020 to 2021 period. Subsequently, utility



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stock valuation ratios did not contract in conjunction with the significant increases in long-term interest rates in 2022. Because COE methods using risk premium estimates directly incorporate long-term bond yields into the COE estimate, if one applies a higher than average risk premium to higher long-term bond yields, this causes inflated COE estimates.

**Q. Which of Mr. D'Ascendis' COE methods use risk premium estimates?**

A. The CAPM and the risk premium methods.

The CAPM formula relies on a market risk premium estimate, which is typically defined as the extra compensation (*i.e.* risk premium) investors' require to invest in the broad stock market (*e.g.* the S&P 500) as compared to a risk-free bond, such as a long-term United States Treasury ("UST") bond. While it is possible that investors and equity analysts may individually have some variation in their projected market returns, consensus projected market returns should not be widely divergent. My experience in reviewing both internal (company internal valuation analyses) and external valuation analyses is that market risk premium estimates are typically in the 5% to 7% range.

Mr. D'Ascendis uses several varying risk premiums to derive his risk premium COE estimate of 11.84%. Because of the uniqueness of Mr. D'Ascendis' approaches to estimating risk premiums, it is difficult to compare his risk premiums to those available from third-party data sources. However, the end-results caused by his risk premium assumptions are not consistent with reasonable capital market expectations.

RISK PREMIUM METHODS

**Q. How many individual risk premium estimates underlie Mr. D'Ascendis' final 11.84% COE estimate using the RPM?**

A. Twelve.



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**Q. Does he assign the same weight to all the variations of his RPM estimates in developing his final RPM COE estimate?**

A. No. Mr. D'Ascendis assigns 50% weight to the Predictive Risk Premium Model ("PRPM") he applied directly to the water utility proxy group (12.20% COE) and 50% weight to the other eleven RPM estimates (11.48% based on a weighted average) he refers to as "The Total Market Approach Risk Premium Model."[4]

*Predictive Risk Premium Method*

**Q. What are the range of Mr. D'Ascendis' risk premium estimates using his PRPM approach?**

A. The PRPM individual risk premium estimates range from 7.97% to 15.91%.[5]

**Q. Should a methodology with such a wide dispersion in individual estimates be given much weight?**

A. No. Despite Mr. D'Ascendis' elimination of two of his PRPM COE estimates from his final average PRPM COE estimate, the fact that this model produces individual results that vary by almost 100% for a proxy group of relatively homogenous regulated water utility companies should have caused Mr. D'Ascendis to question the reliability of this method. Instead, he gave it more weight than the approximate 4.2% and 5.0% weighting[6] he applied to each of his eleven other risk premium estimates.

**Q. Did Mr. D'Ascendis provide examples of practical investment analysis that employ the PRPM?**

A. No.

[4] D'Ascendis Direct, Schedule DWD-4, p. 1.
[5] *Id.,* p. 2, and p. 29, lns, 1-6.
[6] Applied approximately 4.2% weighting to each of his six risk premium estimates on page 8 of Schedule DWD-4 (50% x 1/6 x 50%) and 5% weighting to each of his five risk premium estimates on page 11 of Schedule DWD-4 (50% x 1/5 x 50%).

**Q. Is Mr. D'Ascendis aware of any equity analysts who employ the PRPM to determine the COE to value utility stocks?**

A. No. In response to OPC Data Request No. 3055, Mr. D'Ascendis was not able to provide an example (*see* Schedule DM-R-5).

*Total Market Approach Risk Premium Method*

**Q. How did Mr. D'Ascendis determine his estimated risk premium of 5.74% shown on page 7 of Schedule DWD-4?**

A. Mr. D'Ascendis applied 50% weight to a 6.77% risk premium estimate he characterizes as his "calculated equity risk premium based on the total market using the beta approach" (hereinafter referred to as the "Beta-Adjusted Market Return RPM") and 50% weight to a 4.70% risk premium estimate he characterizes as a "mean equity risk premium based on a study using the holding period returns of public utilities with A2 rated bonds" (hereinafter referred to as the "Utility Index RPM").

**Q. Can you provide a brief summary of the primary inputs Mr. D'Ascendis uses to derive his 6.77% risk premium from the Beta-Adjusted Market Return RPM?**

A. Yes. In this variation of Mr. D'Ascendis' RPM, he developed six market risk premium estimates. In each instance, Mr. D'Ascendis compared expected returns on large company stocks (*i.e.* a broad index, such as the S&P 500) to high-grade corporate bond yields (bonds rated 'Aaa' and 'Aa2' by Moody's). Because bond yields are fairly straightforward, the major cause of variability in Mr. D'Ascendis' risk premium estimates is caused by his varying assumptions for market returns.

Mr. D'Ascendis' market risk premium estimates ranged from 6.13% to 11.17% with an average of 8.68%. Mr. D'Ascendis then adjusts his market risk premium estimates by his assumed utility beta of 0.78 to arrive at his forecasted equity risk premium of 6.77%.



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**Q. What is the implied projected market return based on the high-end of Mr. D'Ascendis' risk premium estimates?**

A. 16.91% (11.17% + 5.74%).

**Q. What is the implied projected market return based on the low-end of his risk premium estimates?**

A. 11.87% (6.13% + 5.74%).

**Q. Does Mr. D'Ascendis assign equal weight to each of his risk premium estimates using these projected market returns?**

A. Yes.

**Q. What causes Mr. D'Ascendis to project market returns in the 16% range?**

A. He applies the constant-growth DCF to the S&P 500 making the irrational assumption that the S&P 500 will achieve a constant compound annual capital gains of 14.56% over an infinite holding period. [7]

**Q. What is Mr. D'Ascendis' logic for making such an aggressive projection for compound annual growth for an investment in the S&P 500?**

A. He assumes investors' returns from long-term capital gains will be equivalent to equity analysts' projected 5-year CAGR in EPS for companies in the S&P 500.

**Q. What is his support for making such an assumption?**

A. Mr. D'Ascendis testifies that he uses analysts' 5-year forecasts in EPS growth as a proxy for expected long-term capital gains because retail investors rely on the insight of equity analysts for investment decisions. Mr. D'Ascendis reasons that because retail investors rely on these analysts' insights, this supports his theory that investors assume they can achieve a long-term CAGR in capital gains consistent with analysts' projected 5-year

[7] D'Ascendis Direct Testimony Workpapers, MRP WP3.

CAGR in EPS. Mr. D'Ascendis goes on further to state that "…use of earnings growth rates [as opposed to dividend growth rates] in a DCF analysis provides a better match between investors' market price appreciation expectations and the growth rate component of the DCF."[8]

**Q. Do you agree with Mr. D'Ascendis that equity analysts' opinions influence stock prices?**

A. Yes.

**Q. Do you agree that this translates into proof that investors expect to achieve long-term capital gains equivalent to equity analysts' consensus estimates of 3-5 year CAGR in EPS as he assumes in his constant growth DCF analysis?**

A. No.

**Q. Why?**

A. First, I am not aware of any reputable investors that project market returns anywhere close to the projected returns Mr. D'Ascendis achieves by making this assumption in his constant-growth DCF.

Second, I know of no authoritative source that suggests these higher short-term growth rates are sustainable over the long-term. For example, the Chartered Financial Analyst ("CFA") curriculum suggests the following method for estimating long-term growth rates in context of a DCF analysis for a broad index, such as the S&P 500:

> Earnings growth rate = GDP growth rate + Excess corporate growth (for the index companies)
>
> where the term *excess corporate growth* may be positive or negative depending on whether the sectoral composition of the index companies is viewed as higher or lower growth than that of the overall economy. **If the analyst has chosen a broad-based equity index, the excess corporate growth adjustment, if any, should be small**.[9] (emphasis added)

[8] D'Ascendis Direct, p. 23, l. 19 – p. 24, l. 9.
[9] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.



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Third, Goldman Sachs recently provided its view on the potential impact artificial intelligence could have on their projected 20-year CAGR in EPS for the S&P 500. Goldman Sachs projects that artificial intelligence could boost the S&P 500's EPS growth over the next twenty years to 5.4% from 4.9%.[10]

Finally, one can analyze the impact such high growth assumptions would have on valuation ratios such as the capitalization of the stock market as it compares to United States' gross domestic product ("GDP").

**Q. Can you please elaborate?**

A. Yes. In March 2000 Warren Buffett described his concern about high stock market valuations during the "dot com" bubble. To put the high valuations of the stock market at that time into context, Mr. Buffett compared the total market capitalization of the stock market, as measured by the Wilshire 5000, to that of U.S. GDP. At that time, the Wilshire 5000 was around 1.4x that of GDP. As of March 31, 2023, it was around 1.5x.

**Q. What would this ratio be in 50 years if the market grew at a 14.56% compound annual growth rate assumed by Mr. D'Ascendis?**

A. The Wilshire 5000 index would be approximately 189.34 times the GDP level. Based on the market capitalization of the Wilshire 5000 of approximately $39.84 trillion as of March 31, 2023, the Wilshire 5000 would have a market capitalization of $35.64 quadrillion in 50 years. U.S. GDP was $26.49 trillion as of the same date. Based on a 4.0% long-term growth rate for the U.S. economy, GDP would be approximately $188.23 trillion in 50 years. It is not rational to assume corporate wealth will become much larger than the economy in which it operates, let alone approximately 189 times the size of the economy. This explains why the CFA Program advises against using a perpetual growth rate much, if any, higher than the GDP growth rate of the economy(ies) in which a company operates.

[10] AI can further boost the S&P 500, says Goldman Sachs. Here's how much. - MarketWatch



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**Q. Does the low-end of Mr. D'Ascendis' expected market returns also fail the market/GDP tests for reasonableness?**

A. Yes. The implied market return for the low-end of Mr. D'Ascendis' market risk premium estimate is 11.87% (6.13% + 5.74%). Based on Mr. D'Ascendis estimated S&P 500 dividend yield of 1.85%, this implies a projected CAGR in capital gains of 10.02% (11.87% - 1.85%) ad infinitum.

If the market were to achieve capital gains of 10.02% on a compound basis over the next 50 years, this would result in a market/GDP ratio of 25x.

**Q. Just to be clear, did Mr. D'Ascendis assign equal weight to the low-end and high-end of his risk premium estimates?**

A. Yes. He averaged all six assumptions, which included the high-end and the low-end, for purposes of his aggregate market risk premium estimate of 8.68%.

**Q. Is it logical to take a simple average of such a wide range of market risk premium estimates to arrive at an informed COE estimate?**

A. No. Although I have demonstrated some fundamental tests of reasonableness that prove the severe flaws in Mr. D'Ascendis' high market risk premium estimates, he assigns the high market risk premium estimates the same weight as his lower estimates.

**Q. How many risk premium estimates did Mr. D'Ascendis develop through his Utility Index RPM?**

A. Five. On page 11 of Schedule DWD-4, shows the risk premium estimates Mr. D'Ascendis derived by analyzing financial and market data for the S&P Utility Index.

**Q. Is the S&P Utility Index an appropriate proxy for pure-play regulated utility companies?**

A. Not recently. At least since the late 1990s, the utility industry in the United States has been less homogenous because many states deregulated price regulation of electricity



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generation. In conjunction with the deregulation of generation markets, many companies revised their strategies as well as their corporate structures to pursue such strategies. These events resulted in companies experiencing significant exposure to electric energy price volatility caused by exposure to swings in fuel and purchased power prices.

**Q. What companies currently make up the S&P Utilities Index?**

A. Alliant Energy Corporation, Ameren Corporation, American Electric Power Company Inc., American Water Works Company Inc., Atmos Energy Corporation, CMS Energy Corporation, Centerpoint Energy Inc., Consolidated Edison, Inc., Constellation Energy Corporation, DTE Energy Company, Dominion Energy Inc., Duke Energy Corporation, Edison International, Entergy Corporation, Evergy Inc., Eversource Energy, Exelon Corporation, FirstEnergy Corp, NextEra Energy Inc., NRG Energy Inc., NiSource Inc., PG&E Corporation, PPL Corporation, Pinnacle West Corporation, Public Service Enterprise Group Inc., Sempra, The AES Corporation, The Southern Company, WEC Energy Group Inc. and Xcel Energy Inc.

**Q. Does the composition of the S&P Utilities Index change periodically?**

A. Yes. Many of the above companies did not exist in the past or the structure and composition of the original publicly-traded company has changed over time. For example, Ameren Corporation did not form as a holding company until the late 1990s when it acquired utilities in Illinois, which deregulated electric utility generation pricing. Before 2013, Ameren Corporation's risk-profile was much higher than it is today due to its exposure to non-regulated generation in Illinois. This caused significant volatility in Ameren's earnings during this period. Although not an exhaustive list from the current constituents of the S&P Utilities Index, the following companies also experienced periods of financial uncertainty due to deregulation and other non-regulated utility exposure: CMS Energy, Entergy Corporation, FirstEnergy Corp, PG&E Corporation, PPL Corporation, and Public Service Enterprise Group.



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Additionally, the following companies have current risk profiles consistent with merchant generation/independent power producers as well as international utility exposure: AES Corporation, Constellation Energy Corporation and NRG Energy.

**Q. Did you research the changes in the composition of the S&P Utilities Index for the entire period of the data analyzed by Mr. D'Ascendis?**

A. No. Mr. D'Ascendis analyzed data since 1928. I do not have ready access to the changes in the composition of the S&P Utilities Index over time.

**Q. Despite your concerns about the S&P Utilities Index not representing the risk profile of pure-play regulated utilities, did you analyze the market data Mr. D'Ascendis provided in his workpapers?**

A. Yes. Although I have concerns about the changes in the composition of the index as well as changes in the risk profile of companies included in the index, because Mr. D'Ascendis provided utilities index market data since 1928, I calculated the arithmetic and geometric mean of the total return for the index for the same period Mr. D'Ascendis analyzed.

**Q. What were the total returns for the period 1928 through 2021 (the period analyzed by Mr. D'Ascendis)?**

A. The arithmetic mean annual total returns for the utilities index was 10.9% and the geometric mean was 8.86%. Subtracting the corresponding total returns for long-term UST bonds for the same period results in risk premium estimates of 4.98% on an arithmetic basis and 3.75% on a geometric basis.

**Q. What is an implied utility COE if these risk premiums are added to current long-term UST bond yields?**

A. 7.75% to 9.00% (4% UST bond yield + 3.75% to 5.00%).

**Q. How does your estimate compare to Mr. D'Ascendis' estimate based the spread between S&P Utilities Index's total returns and bond yields?**

A. Mr. D'Ascendis calculates an historical Utility Index RPM COE of approximately 10%.

**Q. What are some of the primary reasons Mr. D'Ascendis' risk premium COE estimates are higher?**

A. First, similar to his Beta-Adjusted Market Return RPM, Mr. D'Ascendis uses projected bond yields to estimate the COE. Mr. D'Ascendis' assumption presumes that investors purchasing bonds today do not factor in potential changes in bond yields in the future. This is incorrect. This is akin to adjusting utility stock prices in a DCF analysis based on an opinion that the market is inefficiently pricing securities based on current and consensus estimates of market conditions. Using projected interest rates violates the basic tenets of estimating the cost of capital, which is to accept that securities are priced efficiently. However, considering that recent A-rated utility bond yields have been around 5.4% to 5.5% compared to the 5.74% used by Mr. D'Ascendis, this is not the primary cause of his COE estimates being almost double that which I estimate for the water utility industry.

Second, Mr. D'Ascendis subtracts only bond yields (for both corporate bonds and UST bonds) from total equity returns (both income and capital gains returns) to determine his estimated risk premiums, instead of subtracting total bond returns from total equity returns. This causes an upward bias in his estimated risk premiums. Investors in stocks, especially utility stocks, and bonds experience unexpected capital gains and losses due to changes in interest rates. For example, if long-term interest rates unexpectedly decline, then typically bond prices and utility stock prices would increase. Investors in both securities realized higher than expected/required returns. Based on Mr. D'Ascendis approach, the higher unexpected total return from utility stocks would be netted by only the yield on the bond, causing a higher implied required risk premium.



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**Q. How much upward bias do these nuances in Mr. D'Ascendis' risk premium analyses cause?**

A. The use of projected bond yields causes an upward bias of approximately 25 basis points. Mr. D'Ascendis' exclusion of capital gains and losses on bond returns causes an upward bias of approximately 100 basis points in his calculation of historical risk premiums.

CAPITAL ASSET PRICING MODEL

**Q. Are Mr. D'Ascendis' CAPM COE estimates fundamentally different than his RPM estimates?**

A. No. Mr. D'Ascendis' Beta-Adjusted Market Return RPM is very similar to the approach he used to derive a market equity risk premium for use in his CAPM. The only differences are: (1) he used market return data for the period 1926 to 2021 rather than 1928 to 2021 and (2) he used UST bond yields rather than high-grade corporate bond yields ('Aaa' and 'Aa-2'). The total expected market returns underlying Mr. D'Ascendis' CAPM and his Beta-Adjusted Market Return RPM are exactly the same for three of his six scenarios, (Measure 4 – 16.40%, Measure 5 – 16.41% and Measure 6 – 12.05%) and only slightly different for the other three scenarios due to two years of additional data and the use of the UST yield rather than a high-grade corporate bond yield. For Measure 1 of the CAPM, Mr. D'Ascendis' implied market return is 11.31% vs. 11.87% in his Beta-Adjusted Market Return RPM; 12.61% for Measure 2 compared to 12.76% for the same method used in his Beta-Adjusted Market Return RPM; and 14.85% for Measure 3 as compared to 15.53% for the same method used in his Beta-Adjusted Market Return RPM.

**Q. Does applying the same approach to only slightly different parameters improve the reliability of Mr. D'Ascendis' COE estimates?**

A. No. No matter which way Mr. D'Ascendis derives his total market returns in the approximate 11.5% to 16.5% range, these are much higher than would be reasonably expected based on current S&P 500 valuation levels.

DISCOUNTED CASH FLOW METHOD APPLIED TO UTILITY PROXY GROUP

**Q. Does Mr. D'Ascendis apply the DCF directly to his water utility proxy group?**

A. Yes. Mr. D'Ascendis applies the constant-growth form of the DCF to his water utility proxy group.

**Q. Do Mr. D'Ascendis' DCF results provide reasonable COE estimates?**

A. No. His 9.73% DCF-supported COE estimate is based on irrational assumptions. Mr. D'Ascendis' individual company DCF COE estimates range from 5.08% for Middlesex Water Company ("Middlesex") to 14.28% for SJW Group ("SJW"). This wide discrepancy in his individual COE estimates indicates there is a serious flaw in his application of the DCF.

**Q. What is the serious flaw in Mr. D'Ascendis' application of the DCF?**

A. Similar to the DCF analysis he performed on the S&P 500, he assumes each water utility company's dividends per share ("DPS") will grow into perpetuity at the projected 5-year CAGR in EPS.

**Q. What constant-growth rate did Mr. D'Ascendis use for purposes of his COE estimate for SJW?**

A. 11.90%. Therefore, his analysis assumes investors in SJW's common equity expect its stock price to appreciate 11.90% per year indefinitely. Not even the S&P 500 has achieved compound annual gains of this level. The compound annual capital gains for the S&P 500 has only been 6.1% for the period 1926 through 2022.

**Q. What constant growth rate did Mr. D'Ascendis assume for Middlesex?**

A. 3.60%.



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**Q. Did Mr. D'Ascendis include Middlesex's COE estimate of 5.08% in his average and median DCF COE estimate of 9.73% for his proxy group?**

A. No. Mr. D'Ascendis reasons that a 5.08% COE is unreasonable because it is less than recent bond yields.

**Q. How much of a risk premium is implied by SJW's COE of 14.28%?**

A. Approximately 8.9%.

**Q. Is this an unreasonably high equity risk premium?**

A. Yes. No reasonable investor in SJW's stock expects a constant annual capital gain of 11.9% forever into the future.

**Q. What is the primary purpose for assessing analysts' projected long-term CAGR in EPS?**

A. For purposes of performing relative P/E analysis to assess the reasonableness of a company's P/E ratio as it compares to its peers. For example, equity analysts typically assign American Water a higher P/E multiple because of its higher long-term CAGR in EPS. The analysts do not assume American Water's DPS can grow perpetually at a rate of 6% to 9% when performing an absolute valuation analysis such as the dividend discount model ("DDM"), which is generally referred to as the DCF in utility regulatory ratemaking settings.

**Q. Have you ever observed DCF analysis in the investment community which assumes a company's cash flows (e.g. DPS) will grow in perpetuity at the same rate as equity analysts' consensus 5-year CAGR in EPS?**

A. No.



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NON-PRICE REGULATED PROXY GROUP COE ANALYSIS

**Q. What is your reaction to Mr. D'Ascendis' "non-regulated" proxy group COE analysis?**

A. A primary consideration in selecting a proxy group is to select companies that are as heavily concentrated in the business segment which you are attempting to evaluate. This is often characterized as a "guideline company" approach when assessing the fair value of a specific business segment within a conglomerate holding company. The goal is to select companies that are considered "pure-play" (100% confined to the segment being evaluated) publicly-traded companies or at least predominately "pure-play" publicly-traded companies in order to ensure the financials and market data are representative of risk and value of the assets analyzed. While it is a worthy goal to select non-regulated companies as a proxy in an attempt to mimic market regulation, the fact of the matter is that regulated utility companies that are granted monopoly franchises creates a much lower business risk profile than any other industry.

**Q. Are you aware of any situations in which the Missouri Public Service Commission set a regulated utility company's authorized ROE based on an analysis of a "non-regulated" proxy group?**

A. No.

COMPANY-SPECIFIC ADJUSTMENTS

**Q. Does Mr. D'Ascendis make company-specific adjustments to his COE estimate for his proxy group?**

A. Yes. Mr. D'Ascendis makes two discrete adjustments to his proxy group COE estimates. First, Mr. D'Ascendis' adjusts his proxy group COE estimate upward by 100 basis points (i.e. 1%) to consider his opinion that Confluence has higher business risk than the average for his proxy group. Second, Mr. D'Ascendis makes a 51 basis point downward adjustment to reflect the fact that he recommends a less leveraged capital structure than the average for his proxy group.

*Business Risk*

**Q. What is the basis for Mr. D'Ascendis' 100 basis point upward adjustment?**

A. Mr. D'Ascendis compares Confluence's size to the average of his proxy group. He then cites generic studies indicating that COE methods applied to smaller companies have historically underestimated the required risk premium to invest in smaller companies.

**Q. What metric does Mr. D'Ascendis use for purposes of ranking the size of his proxy companies as compared to Confluence?**

A. The total market capitalization of each company's common stock as of October 31, 2022. In order to estimate Confluence's market capitalization, Mr. D'Ascendis multiplies the median market-to-book ratio of his proxy group times Confluence's book value of common equity as measured by Mr. Thies.[11]

**Q. Has this Commission allowed adjustments to CSWR's companies' ROEs in past rate cases to consider their smaller size?**

A. Yes. In the Indian Hills Operating Utility Company rate case, Case No. WR-2017-0259, the Commission allowed a 165 basis point upward adjustment based on a range of 134 basis points to 394 basis points.[12]

**Q. What was the basis for the estimated adjustment?**

A. Mr. D'Ascendis' direct testimony in which he provided a recommended range of potential discrete adjustments based on generic small-size risk premium studies.

**Q. Are the studies he relied upon in the Indian Hills rate case the same as those he relies on in this case?**

A. Yes.

[11] D'Ascendis Direct Testimony, Schedule DWD-8, p. 2.
[12] Case No. WR-2017-0259, Report and Order, February 7, 2018, pages 63-66.



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**Q. Should this adjustment be dismissed in this case?**

A. Yes. I will provide evidence that discredits the applicability of the small-size risk premium to regulated water utility companies. Although Indian Hills was even smaller than Confluence, the evidence is applicable in both circumstances.

**Q. Did you sponsor testimony in the Indian Hills' rate case?**

A. No.

**Q. Does Mr. D'Ascendis properly apply the theory of a small size risk premium adjustment?**

A. No. Mr. D'Ascendis suggests the small size risk premium adjustment should be applied to all of his COE methods, including that of his DCF analysis. The small size risk premium studies are based on observing CAPM predicted returns to actual returns for companies of various sizes (most studies group companies in 10 deciles with some deciles being divided into even more refined sub-categories within the decile). I am not aware of small-size risk premium adjustments being applied to DCF COE estimates.

**Q. Why is it inappropriate to make a size premium adjustment to a COE estimate using the DCF method?**

A. Subject companies' stock prices are a direct input in the DCF method. If investors require a higher risk premium because of a company's smaller size, then the company's stock price will be discounted for this additional risk premium.

**Q. Does Mr. D'Ascendis' DCF COE estimates corroborate the theory of the need for a generic small-size risk premium adjustment for regulated utility companies?**

A. No. Despite Middlesex Water Company being the smallest company in Mr. D'Ascendis' proxy group, Mr. D'Ascendis' DCF COE estimate for Middlesex is the lowest of all of the water utility companies. American Water, the largest company in Mr. D'Ascendis' proxy group, has the third-lowest COE estimate of the proxy group, rather than the lowest.

**Q. Should Mr. D'Ascendis' DCF COE estimates be relied upon for purposes of testing the applicability of a small size risk premium for the water utility industry?**

A. No. As I indicated earlier in my testimony, the mere fact that Mr. D'Ascendis' DCF COE estimates range from 5.08% to 14.28% for a relatively homogeneous and stable water utility industry illustrates the fact that Mr. D'Ascendis misapplied the DCF method to estimate the water utility industry's COE. This wide dispersion is caused by Mr. D'Ascendis' naïve assumption that water utility stock prices will increase in perpetuity at a CAGR consistent with equity analysts' short-term projected CAGR in each company's EPS.

**Q. What do your multi-stage DCF COE estimates imply about investors requiring a higher risk premium for smaller water utility companies' stocks?**

A. I estimate American Water's (the largest utility company in my proxy group, as well as the largest water utility company in the United States) COE at 6.52%. I estimate Essential Utilities' COE at 7.13%. Both of these companies are considered large capitalization companies (greater than $10 billion market cap). Essential Utilities' COE should not be compared to smaller water utility companies to test the small size risk premium adjustment because it is not a pure-play water utility. Its natural gas distribution operations are likely causing it to incur a higher COE. However, the fact that the pure-play water utility companies in my proxy group (American States Water, California Water and SJW Group) have either the same or lower COE than American Water refutes the applicability of the generic small size risk premium to regulated water utility companies.

**Q. Although you disagree with the premise of a small-size risk premium adjustment, can you compare the size of CSWR's size using various metrics to that of the water utility companies in your and Mr. D'Ascendis' proxy group?**

A. Yes. Although Mr. D'Ascendis compares Confluence to the proxy companies, Sciens is invested in CSWR through its ownership of membership units in US Water Systems LLC. Therefore, it's important to analyze the size of CSWR.



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Based on 2022 year-end financial data, CSWR's book value of common equity is approximately 35% of the proxy group's simple average. The estimated market value of CSWR's common equity is also approximately 35% of the proxy groups given that Mr. D'Ascendis used the median market-to-book ratio of his proxy group to estimate Confluence's market capitalization. CSWR's total assets as a percentage of the simple average of the proxy group is approximately 15%.

**Q. Are you aware of any publicly-traded water utility companies that are similar or even smaller in size to CSWR?**

A. Yes. The York Water Company ("York Water"), Artesian Resources Corp. ("Artesian") and Global Water Resources Inc. ("Global Water") are smaller than CSWR based on common equity balances, but York Water and Artesian are larger based on total assets.

**Q. Did you or Mr. D'Ascendis include these companies in your proxy groups?**

A. No.

**Q. Why not?**

A. Mr. D'Ascendis and I relied on the Value Line's Standard Edition for purposes of choosing our comparable companies. Value Line's Standard Edition only covers larger companies. Value Line also covers Small to Mid-cap companies in a different publication.

**Q. Are these smaller water utility companies widely followed by equity analysts?**

A. No. Consistent with other smaller companies, they are followed by at most, a couple of equity analysts. The analysts covering these smaller stocks do not publish projections for long-term CAGR in EPS, which I typically incorporate in the first stage of my multi-stage DCF analysis.

**Q. Are these companies rated by any rating agencies?**

A. Only York Water.

**Q. What is York Water's S&P corporate credit rating?**

A. 'A-.'[13]

**Q. Does S&P consider York Water Company's small size when assessing its business risk profile?**

A. Yes. S&P states the following as it relates to York Water Company's business risk:

> Our business risk profile assessment of York Water incorporates its low-risk, rate-regulated water and wastewater utility operations in a supportive regulatory environment, as well as its effective management of regulatory risk. Its small size partly offsets these strengths.[14]

**Q. Does this contradict Mr. D'Ascendis' testimony arguing for a small-size risk premium?**

A. Yes. D'Ascendis testifies as follows:

> Neither S&P nor Moody's have minimum company size requirements for any given rating level. This means, all else equal, a relative size analysis needs to be conducted for companies with similar bond ratings.[15]

S&P clearly states that it considers the smaller size of York Water Company in assessing its credit risk profile.

**Q. Does CSWR rank itself as compared to other water utility companies?**

A. According to ** _____
_____
_____ **

[13] Shiny A Rony, et. al., "The York Water Company," S&P Global Ratings, August 9, 2022.
[14] *Id.*
[15] D'Ascendis Direct, p. 12, lns. 9-11.
[16] CSWR's 2023 Budget Presentation to US Water, December 14, 2022, p. 23.



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**Q. Is it possible to perform a multi-stage DCF analysis on the smaller water utility companies to test the applicability of the "small size" theory to regulated water utility companies?**

A. Yes. Although the smaller water utility companies do not have robust equity analyst coverage, it is possible to use recent company-specific historical growth rates in EPS and DPS to project near-term dividend growth and then use generic long-term sustainable industry growth rates to project a perpetual growth rate. Additionally, because dividend payout ratios are fairly similar across the water utility industry, this minimizes the potential mis-specification of COE estimates caused by idiosyncrasies of any one company's individual financial policies.

**Q. Did you perform a multi-stage DCF on all of the companies CSWR ranks as smaller?**

A. No. Global Water is a highly leveraged company with non-stable historical growth rates. Therefore, I excluded this company from my "small company" group to test the applicability of the "small size" risk premium theory to the water utility industry.

**Q. To be clear, what companies did you include in your "small company" water utility group?**

A. Artesian, Middlesex and York.

**Q. What is the implied COE for these smaller companies based on your direct analysis of these companies' stock prices as compared to their fundamentals?**

A. 6.15% (*see* Schedule DM-R-6, p. 1).

**Q. What is the COE for the larger water utility companies?**

A. 6.4% (excluding Essential Utilities due to its natural gas utility exposure).



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**Q. Does the application of the DCF to the spectrum of differing size water utility companies refute Mr. D'Ascendis' recommended generic small size risk premium adjustment?**

A. Yes.

**Q. Are you aware of other practical examples in which authoritative sources dismiss the applicability of the generic small-size risk premium to regulated utility companies?**

A. Yes. In fact, Mr. D'Ascendis sponsored testimony in the 2021 Spire Missouri rate case, Case No. GR-2021-0108 in which I discussed such an example at pages 31 to 32 of my rebuttal testimony in that case.

**Q. Did you make a company-specific adjustment to your ROE recommendation in your direct testimony?**

A. Yes. However, my adjustment was based on my consideration of the wide dispersion in credit metrics for the three legacy subsidiaries, Hillcrest, Raccoon Creek and Indian Hills.

**Q. Have you been able to update your analysis of these credit metrics through a more recent period?**

A. Yes. Confluence provided a supplemental response to Staff Data Request No. 0155, which provided CSWR's legacy subsidiary financial statement information through year-end 2021. My updated analysis is attached as Schedules DM-R-7 through DM-R-9. However, the supplemental response did not include updated financial statement information through 2022 because Confluence maintains this information is not available due to the merger of the legacy companies into Confluence.

**Q. What do you conclude about the updated data through 2021?**

A. That Hillcrest's, Raccoon Creek's and Indian Hills' financial performance has been consistent with strong investment grade credit ratings since their rates were adjusted after improvements were made to these systems. Although Confluence provided 2021 financial



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statement information for Elm Hills, because its rate increase did not take effect until late February, the 2021 information does not reflect a full year of experience under new rates.

*Financial Risk*

**Q. How do you respond to Mr. D'Ascendis' proposed downward adjustment to the ROE to consider the lower risk in his recommended capital structure?**

A. It is unnecessary if the Commission adopts a reasonable capital structure consistent with my recommendation.

## SUMMARY AND CONCLUSIONS

**Q. Can you summarize your rebuttal testimony?**

A. Yes. Mr. D'Ascendis does not provide sufficient support for his recommended capital structure. While he maintains he recommended Confluence's actual capital structure, his testimony and workpapers are not clear as to why he considers his recommended capital structure to be consistent with Confluence's actual capital structure. Based on Company witness Mr. Thies' workpapers it appears that Confluence determined its actual capital structure based on the same logic its lender, CoBank, uses for purposes of determining whether Confluence complies with its financial covenants. CoBank's financial covenants clearly allow Confluence to carry up to 55% of debt in its capital structure. This formed the basis for my capital structure recommendation in my direct testimony. The Commission should adopt this market-based and specific capital structure scenario to set Confluence's authorized ROR.

Mr. D'Ascendis' estimate of the water utility industry's COE in the 10.36% to 11.36% range is upwardly biased due to many irrational assumptions. Mr. D'Ascendis is inclined to dismiss COE estimates he considers too low, but gives equal weight to those that are influenced by irrational market return assumptions for a market that is already valued above average. While interest rates have been higher, market valuations, specifically those of utilities, have not been equally impacted. Although I estimate the water utility industry's



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COE to be approximately 400 basis points lower than Mr. D'Ascendis, I recognize that investors expect authorize ROEs to be higher than the COE. Therefore, I recommend an ROE that is approximately 250 basis points over the water utility industry's COE.

The Commission should not allow a risk premium adjustment for Confluence's small size. As recognized by CSWR itself, it is now larger than some of the smaller publicly-traded water utility companies. The only factors that should influence the awarded ROE is the potential credit risk profile implied by CSWR's legacy companies.

**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 Confluence Rivers Utility Operating Company, Inc.'s Request for Authority to Implement a General Rate Increase for Water Service and Sewer Service Provided in Missouri Service Areas | ) ) ) ) ) | Case No. WR-2023-0006 |

**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 June 2023.

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.