Schedule No:	**___**
Issue:	**Capital Structure and Rate of Return (ROR)**
Witness:	**Adam Woodard**
Type of Schedule:	**Direct Testimony**
Sponsoring Party:	**Spire Missouri Inc.**
Case No.:	**GR-2022-0179**
Date Testimony Prepared:	**April 1, 2022**

SPIRE MISSOURI INC.

CASE NO. GR-2022-0179

DIRECT TESTIMONY

OF

ADAM WOODARD

Denotes Confidential Information P

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DIRECT TESTIMONY OF ADAM WOODARD

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Adam Woodard, and my business address is 700 Market, St. Louis, MO 63101.

Q. BY WHOM AND IN WHAT POSITION ARE YOU EMPLOYED?

A. I am the Chief Financial Officer and Treasurer of Spire Missouri ("Spire Missouri" or "Company") and Vice President and Treasurer of Spire Inc.

Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES IN THAT POSITION?

A. As Chief Financial Officer and Treasurer of Spire Missouri, I am responsible for managing the financial and credit profile of the Company. Among other things, I am responsible for managing the Company's financial plan, including its cash balances and overall liquidity, short-term borrowing and investing, investor relations, long-term financing, interest rate risk management, and credit agency engagement.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I received a Bachelor of Arts degree in English Literature from the University of Kansas in 1993 and received a Juris Doctor from the Saint Louis University School of Law in 1997. I am an inactive member of the Missouri Bar.

Q. WHAT IS YOUR PROFESSIONAL EXPERIENCE?

A. I began my career in the Investment Banking Division of A.G. Edwards & Sons, Inc. (which was later acquired by Wells Fargo Securities) in 1997. In this role, I developed financial models for enterprises throughout the energy sector, provided advice on merger and acquisitions, and executed financing transactions for companies across the equity and

debt capital markets. I joined Spire Inc. as the Treasurer in 2018 and added the role of Chief Financial Officer of Spire Missouri in 2019.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION ("COMMISSION")?

A. Yes. I provided cost of capital testimony in Case No. GR-2021-1018.

II. PURPOSE OF TESTIMONY AND SUMMARY OF CONCLUSIONS

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A. The purpose of my direct testimony is to identify and support the overall rate of return on Spire Missouri's rate base ("rate of return" or "ROR") that the Commission should use in establishing its rates. I present and support the capital structure that Spire Missouri will use during its test year to support its rate base investments and its obligation to provide gas service. Among the components of this capital structure, I provide the embedded cost of Spire Missouri's long-term debt, including both its interest cost and the cost of maintaining the necessary facilities to access the capital markets. I also calculate the rate of return on common equity ("ROE") that Spire Missouri should be allowed for ratemaking purposes.

Q. WHAT ARE THE CONCLUSIONS OF YOUR DIRECT TESTIMONY?

A. The Company's rates should include a 7.57% rate of return on rate base, which reflects its weighted cost of capital supporting its rate base. The total cost of capital accurately considers the costs of each of source of capital the Company relies upon to fund its rate base including a cost of equity of 10.50% (inclusive of flotation costs) and a total embedded cost of long-term debt of 3.98%.

The overall rate of return is based on a capital structure consisting of 55% common equity and 45% long-term debt. This capital structure represents how Spire Missouri actually expects to continue to finance the Company's natural gas utility services and is consistent with our current business and financing plans. It is consistent with the capital structure that the Company has maintained for several years (at least a decade). This capital structure has allowed Spire Missouri to successfully support its financial obligations and maintain a robust access to the capital markets in order to provide a reliable and essential service to customers on reasonable terms and at a reasonable cost.

The proposed capital structure is reasonable and will permit Spire Missouri to maintain its financial strength and credit quality, as well as ready, reliable, and reasonable cost access to the capital markets. This capital structure also allows Spire Missouri the financial resilience necessary to respond to the financial and business risks the Company faces and is comparable to capital structures of other similar gas local distribution companies. *See* Schedule AWW-D1. In fact, the recommended equity layer requested by Spire Missouri is lower than the peer average of 56.8%. The Commission has approved similar capital structures for Spire Missouri based on the same goals and financial planning approaches in the past.

The overall recommended rate of return is summarized in Table 1 below:

Table 1: Summary of Overall Rate of Return

Type of Capital	Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	45%	3.98%	1.79%
Common Equity	55%	10.50%	5.78%
Total	100.00%		7.57%

Approval of the Company's recommended rate of return in this case will support its financial objectives by allowing timely recovery of its investment in rate base, provide sufficient cash flows to fund necessary capital expenditures and service debt incurred to do so with the appropriate amount of coverage to maintain its current credit ratings.

Q. WHAT GENERAL PRINCIPLES SHOULD THE COMMISSION BROADLY CONSIDER WHEN DETERMINING A UTILITY'S AUTHORIZED RATE OF RETURN ON RATE BASE?

A. The U.S. Supreme Court established the guiding principles for establishing a fair return for capital in two cases: (1) *Bluefield Water Works and Improvement Co. v. Public Service Comm'n*. ("*Bluefield*");[1] and (2) *Federal Power Comm'n v. Hope Natural Gas Co.* ("*Hope*").[2] In *Bluefield*, the Court stated:

> A public utility is entitled to such rates as will permit it to earn a return upon the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit, and enable it to raise the money necessary for the proper discharge of its public duties.[3]

In this case, the Court recognized that: (1) a regulated public utility cannot remain financially sound unless the return it is allowed to earn on its invested capital is at least equal to the cost of capital (the principle relating to the demand for capital); and (2) a regulated public utility will not be able to attract capital if it does not offer investors an

[1] *See* Bluefield Water Works and Improvement Co. v. Public Service Comm'n., 262 U.S. 679, 692 (1923).
[2] *See* Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944).
[3] Bluefield Water Works and Improvement Co. v. Public Service Comm'n,. 262 U.S. 679, 692 (1923).

opportunity to earn a return on their investment equal to the return they expect to earn on other investments of similar risk (the principle relating to the supply of capital).

In *Hope*, the Court reiterated the financial integrity and capital attraction principles of the *Bluefield* case:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock... By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[4]

The Hope Court also established the "end result" test as a constitutional standard: "[i]f the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry... is at an end."[5]

Additionally, in the *Duquesne* case, the Court noted that regulatory risk is a distinct risk that should be recognized in setting a fair rate of return:

> The risks a utility faces are in large part defined by the rate methodology, because utilities are virtually always public monopolies dealing in an essential service, and so relatively immune to the usual market risks. Consequently, a State's decision to arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions.[6]

In summary, the Court has recognized that the fair rate of return on equity should be: (1) comparable to returns investors expect to earn on other investments of similar risk; (2) sufficient to assure confidence in the company's financial integrity; (3) adequate to

[4] *Federal Power Comm'n v. Hope Natural Gas Co*., 320 U.S. 591, 603 (1944).
[5] *Id*., at 602.
[6] *Duquesne Light Co. v. Barasch*, 488 U.S. 299 (1989).

maintain and support the company's credit and to attract capital; and (4) should take into account regulatory risk.

Q. DOES MISSOURI PRECEDENT PROVIDE SIMILAR GUIDANCE?

A. Yes. For example, in a 2014 Order, the Commission stated the following:

> [] The Commission must draw primary guidance in the evaluation of the expert testimony from the Supreme Court's *Hope* and *Bluefield* decisions. Pursuant to those decisions, returns for Liberty's shareholders must be commensurate with returns in other enterprises with corresponding risks. Just and reasonable rates must include revenue sufficient to cover operating expenses, service debt and pay a dividend commensurate with the risk involved. The language of *Hope* and *Bluefield* unmistakably requires a *comparative method*, based on a quantification of risk.
>
> [] Investor expectations are not the sole determiners of ROE under *Hope* and *Bluefield*; we must also look to the performance of other companies that are similar to Liberty in terms of risk. *Hope* and *Bluefield* also expressly refer to objective measures. The allowed return must be sufficient to ensure confidence in the financial integrity of the company in order to maintain its credit and attract necessary capital. By referring to confidence, the Court again emphasized risk.[7]

The Commission also stated in this Order:

> [] The Commission cannot simply find a rate of return on equity that is "correct"; a "correct" rate does not exist. However, there are some numbers that the Commission can use as guideposts in establishing an appropriate return on equity. The Commission stated that it does not believe that its return on equity finding should "unthinkingly mirror the national average." [*citation omitted*] Nevertheless, the national average is an indicator of the capital market in which [the utility] will have to compete for necessary capital.[8]

Based on these standards, the ROE authorized in this proceeding should provide the Company with the opportunity to earn a fair and reasonable return and enable efficient access to external capital under a variety of market conditions.

[7] *In the Matter of Liberty Utilities,* File No. GR-2014-0152, 2014 Mo. PSC LEXIS 1054, at *42-*45 (Mo. PSC; 12/3/2014).
[8] *Id.*

Q. WHY IS IT IMPORTANT FOR A UTILITY TO BE ALLOWED THE OPPORTUNITY TO EARN A RETURN ADEQUATE TO ATTRACT CAPITAL AT REASONABLE TERMS?

A. A return that is adequate to attract capital at reasonable terms enables the utility to provide service while maintaining its financial integrity. The consequence of the Commission's order in this case, therefore, should be to provide Spire Missouri with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks. To the extent Spire Missouri is provided a reasonable opportunity to earn its market-based cost of equity, neither customers nor shareholders should be disadvantaged. In fact, a return that is adequate to attract capital at reasonable terms enables Spire Missouri to provide safe, reliable, and essential gas utility service while maintaining its financial integrity, all to the benefit of both investors and customers.

Q. WHAT FACTORS SHOULD THE COMMISSION BROADLY CONSIDER WHEN DETERMINING AN AUTHORIZED RATE OF RETURN ON RATE BASE?

A. In unregulated industries, the competition of the marketplace is the principal determinant of the price of products or services. For regulated public utilities, regulation must act as a substitute for marketplace competition. Assuring that the utility can fulfill its obligations to the public, while providing safe and reliable service at all times, requires a level of earnings sufficient to maintain the integrity of invested capital. Sufficient earnings also permit the attraction of needed new capital at a reasonable cost, for which the utility must compete with other firms of comparable risk, consistent with the fair rate of return

standards established by the U.S. Supreme Court in the previously cited *Hope* and *Bluefield* decisions. Consequently, marketplace data must be relied on in assessing a common equity cost rate appropriate for ratemaking purposes. Just as the use of the market data for the proxy group adds reliability to the informed expert's judgment used in arriving at a recommended common equity cost rate, the use of multiple generally accepted common equity cost rate models also adds reliability and accuracy when arriving at a recommended common equity cost rate.

Q. WHAT KINDS OF RISKS DOES A GAS UTILITY SUCH AS SPIRE MISSOURI FACE?

A. Gas utilities such as Spire Missouri face both *business risk* and *financial risk*.

Q. WHAT DO YOU MEAN BY "BUSINESS RISK"?

A. Business risk refers to a threat to the Company's ability to achieve its financial goals. Examples of such general business risks faced by all utilities (*i.e.*, natural gas distribution, electric, and water) include size, the quality of management, the regulatory environment in which utilities operate, customer mix and concentration of customers, service territory growth, and capital intensity. All of these have a direct bearing on earnings.

Consistent with the basic financial principle of risk and return, business risk is important to the determination of a fair rate of return, because the higher the level of risk, the higher the rate of return investors demand.

Q. WHAT BUSINESS RISKS DO NATURAL GAS LOCAL DISTRIBUTION UTILITIES FACE IN GENERAL?

A. Natural gas local distribution utilities, in general, face business risks such as: severe weather, supply chain disruptions, regulatory risk, demand and seasonality, commodity price volatility and supply constraints; public safety, pandemics, and economic activity.

Q. WHAT DO YOU MEAN BY "REGULATORY RISK"?

A. A significant type of business risk faced by natural gas local distribution utilities is *regulatory risk*. Regulatory risk is the effect of changes in laws or regulations that can materially impact the utility by increasing operating costs, reducing the attractiveness of the investment, or changing the competitive landscape. Regulatory quality is assessed by investors when judging a utility's risk. Investor opinion is informed by meetings with company management and regulators, rating agency reports and equity research reports. Credit rating agencies focus on regulatory risk, and in judging such risk, consider factors such as transparency, predictability, consistency, as well as the opportunity for the utility to recover its prudent costs of providing service and a fair return on its capital investments. Regulatory risk is specifically recognized by the Supreme Court as a risk to be taken into account in *Duquesne*.

Q. CAN YOU GIVE EXAMPLES OF BUSINESS RISKS SPIRE MISSOURI CURRENTLY FACES OR HAS RECENTLY FACED?

A. The recent events surrounding Winter Storm Uri in February of 2021 provides an excellent example of how severe weather can create cascading risks for a gas distribution utility. This winter weather which brought severe cold, snow, and ice across North America for the better part of a week created supply and demand shocks to Spire's utility distribution system and many of its peers. The storm impacted natural gas production throughout the region due to widespread freeze-offs at the wellhead with the resulting limitation on supply

inhibiting interstate transportation supply of local distribution companies while demand was peaking based on the cold weather and demands of gas power generators. This sent daily gas prices skyrocketing to unprecedented levels. Electric generation was strained, including renewables, and many customers experienced rolling black outs as part of regional transmission operator planning.

The required procurement of natural gas took a significant financial commitment by Spire Missouri on behalf of its customers. This obligation extended to our transportation customers. These customers are not included in our gas supply planning as they are supplied by third parties, but Spire Missouri stepped up to supply many of these customers when gas was not delivered on the system. The lack gas of deliveries during Winter Storm Uri led to additional procurement of gas by Spire Missouri at unprecedented cost. Notably, Spire Missouri's financial position was bolstered by a substantial equity layer. Surging gas pricing required supplemental liquidity. Spire Missouri took on a significant amount of unplanned short-term debt to provide essential service to its customers. Spire Missouri spent $980 million on natural gas in 2021 – a 131% increase year-over-year despite only buying 2.7% more gas than 2020. Extreme weather is a material business risk that can create widespread impacts on the operations of natural gas distribution utilities.

Another example of business risk faced by utilities generally, and Spire Missouri in particular, relates to the Company's capital expenditure ("capex") plans. Obviously, the importance of credit quality is underscored when a company such as Spire Missouri has a need to finance significant capital expenditures. However, a utility's capital expenditures themselves can increase the amount of fixed cost versus variable cost, which in turn increases the utility's operating leverage – the proportion of fixed cost in the utility's

overall cost structure. This heightens the utility's business risk by making the utility even more susceptible to fluctuations in revenue, and can become acute when a utility's revenue generation profile weakens and reduces the utility's ability to recover fixed costs.

Q. DOES SPIRE MISSOURI HAVE SIGNIFICANT CAPITAL EXPENDITURE PLANS?

A. Yes. Spire has made nearly $1.7 billion of critical infrastructure investments in the state of Missouri over the last five years and has plans to invest even more in years to come. Current capital expenditure plans call for over $2.2 billion of infrastructure investment in the next five years. These plans would be more difficult to accomplish at a reasonable cost if Spire Missouri is downgraded by the rating agencies.

Q. PLEASE DEFINE FINANCIAL RISK AND EXPLAIN WHY IT IS IMPORTANT TO THE DETERMINATION OF A FAIR RATE OF RETURN.

A. Financial risk is the additional risk created by the introduction of debt and preferred stock (if applicable) into the capital structure. The higher the proportion of debt and preferred stock in the capital structure, the higher the financial risk (*i.e.*, likelihood of default). Therefore, consistent with the basic financial principle of risk and return, investors demand a higher common equity return as compensation for bearing higher default risk.

Q. CAN THE REGULATORY TREATMENT OF A UTILITY'S CAPITAL STRUCTURE AFFECT FINANCIAL RISK?

A. Yes. As an example, the introduction of short-term debt into the capital structure in Spire Missouri's last rate case adds to the financial risk it is facing given the expected variability of this rate. This risk is exacerbated by the setting of this rate based on an interpretation of historical short-term rates in the face of universally understood expectations for a rapid rise

in this cost of funding. Allocating a large portion of the capital structure to a class of capital that can be a volatile in size and cost is also not in the best interest of customers. The customer savings produced by inclusion are fleeting as short-term debt balances decline and funding costs increase. A downward adjustment of the equity layer by regulation also increases financial risk as leverage increases.

Q. CAN CREDIT RATINGS BE A PROXY FOR THE COMBINED BUSINESS AND FINANCIAL RISK (*I.E.*, INVESTMENT RISK OF AN ENTERPRISE)?

A. Yes, similar credit ratings reflect, and are representative of, similar combined business and financial risks (*i.e.*, total risk) faced by bond investors.[9] Although specific business or financial risks may differ between companies, the same credit rating indicates that the combined risks are roughly similar, albeit not necessarily equal, as the purpose of the credit rating process is to assess credit quality or credit risk, and not common equity risk.

III. ITEMIZED ATTACHMENTS

Q. ARE THERE ANY SCHEDULES ATTACHED TO YOUR TESTIMONY?

A. Yes. I am sponsoring and have attached the following Schedules:

- 2021-2022 Survey of Natural Gas Utilities – Schedule AWW-D1
- Moody's Issuer Comment dated 11/17/2021 – Confidential Schedule AWW-D2
- Moody's Rating Action dated 11/29/2021 – Confidential Schedule AWW-D3
- Moody's Credit Opinion dated 12/1/2021 – Confidential Schedule AWW-D4
- S&P Credit Metrics – Confidential Schedule AWW-D5
- Woodard Base ROE Model – Schedule AWW-D6

[9] Risk distinctions within S&P's bond rating categories are recognized by a plus or minus, *i.e.*, within the A category, an S&P rating can be at A+, A, or A-. Similarly, risk distinctions for Moody's ratings are distinguished by numerical rating gradations, *i.e.*, within the A category, a Moody's rating can be A1, A2 and A3.

- Peer Group Survey – Schedule AWW-D7
- Wall Street Journal Article dated 3/10/2022 – Schedule AWW-D8
- Flotation Cost Adjustment – Confidential Schedule AWW-D9
- Woodard Base Plus ROE Model – Schedule AWW-D10
- Embedded Cost of Long-Term Debt) – Schedule AWW-D11
- Cost of Short-Term Debt – Schedule AWW-D12
- Short-Term Assets and Liabilities – Conf. Schedule AWW-D13

IV. SPIRE MISSOURI CORPORATE STRUCTURE AND CAPITALIZATION

Q. HOW IS SPIRE MISSOURI ORGANIZED AND HOW IS IT RELATED TO SPIRE INC.?

A. Spire Missouri is a Missouri corporation authorized to provide regulated natural gas distribution service as a Missouri public utility. It is a wholly owned subsidiary of Spire Inc., a Missouri corporation and holding company which owns regulated utility operating companies in other jurisdictions as well as non-regulated businesses. The rates being proposed here are rates for Spire Missouri, and they are designed to recover the Company's reasonable and prudent costs of providing public utility services to its Missouri customers.

Q. WHAT TYPES OF CAPITAL DOES SPIRE MISSOURI USE TO SUPPORT ITS PROVISION OF UTILITY SERVICES?

A. Spire Missouri funds its business using both equity and debt capital. Spire Missouri's equity balance for ratemaking purposes includes the proceeds of past issuances of common stock and retained earnings. It does not include goodwill. Spire Missouri's borrowings, which also support its operations and investments, are reflected in its short-term and long-term debt balances.

Q. IS SPIRE MISSOURI'S COMMON EQUITY PUBLICLY OWNED AND TRADED ON THE PUBLIC EQUITY MARKETS?

A. No. Spire Inc. owns all of Spire Missouri's equity, and Spire Missouri has no plans to issue common equity to any other entity. Spire Inc.'s common equity trades on the New York Stock Exchange (ticker: SR). Spire Inc. contributes equity to Spire Missouri from time to time in order to maintain the requisite financial strength to provide essential service to its utility customers. This equity was most recently raised by Spire Inc. in the public market and simultaneously contributed to Spire Missouri.

Q. DOES SPIRE MISSOURI ISSUE ITS OWN DEBT?

A. Yes. Spire Missouri's long-term debt is in the form of first mortgage bonds that have been, and will continue to be, issued in the capital markets to fund long-term rate base investments or to retire or refinance other debt. The Company's long-term debt is owned entirely by outside investors and not by Spire Inc. or any of its other affiliates. Spire Missouri issues short-term debt through term loans and intercompany notes tied to Spire Inc.'s commercial paper program or its bank borrowings. The intercompany notes are part of a money pool arrangement that is extremely common in the utility sector. The Spire Inc. credit facility has a specific sub-limit for the benefit of Spire Missouri.

Q. WHAT IS SPIRE MISSOURI'S POLICY REGARDING SHORT-TERM FINANCING, INCLUDING ITS USES, SOURCES, AND LIMITATIONS?

A. Spire Missouri uses short-term debt as a source of working capital to assist in meeting seasonal cash requirements and to cover short-term cash flow fluctuations. Access to short-term debt enables the Company to quickly respond to variations in working capital requirements and available cash flow. For example, the Company may use short-term debt

as a source of funds for the purchase of natural gas in anticipation of delivery to, and receipt of payment from, customers. Procurement of natural gas is a significant and necessary part of Spire Missouri's short-term indebtedness under normal operating conditions. Specific balances will vary over time depending on a variety of factors, including, but not limited to, the timing and size of capital investments and payments of large invoices, debt issuances, seasonality of earnings, changes to inventory balances, equity infusions received from the parent, and dividend payments made to the parent company. Achieving an approved regulatory capital structure as recommended is consistent with the Company's financial objectives and overall plan to finance operations at favorable rates for customers.

Q. IS SPIRE MISSOURI'S SHORT-TERM DEBT USED TO FINANCE LONG-TERM ASSETS?

A. No. This is evident upon an examination of Spire Missouri's publicly available financial statements filed quarterly with the Securities and Exchange Commission. Rate base (which are the long-term assets actually earning a return) at year end 2021 was just over $3 billion. Long-term capitalization exceeded $2.9 billion. Additions to long-term capitalization have exceeded additions to rate base over the last several years. This would indicate that rate base is being financed with long-term debt and equity and not short-term debt. Spire Missouri primarily incurs short-term debt to finance short-term assets and in some cases bridge capital in-between offerings of long-term debt. The current (or short-term) assets of Spire Missouri exceed its short-term liabilities at year end 2021.

Q. WHAT ARE SPIRE MISSOURI'S CURRENT CREDIT RATINGS?

A. All of Spire Missouri's long-term debt is secured by a first mortgage and rated 'A1' by Moody's and 'A' by Standard & Poor's. If Spire Missouri were to issue unsecured debt it would be rated one notch lower by both rating agencies – *i.e.*, A2 and A-, respectively.

Q. DO SPIRE MISSOURI'S CUSTOMERS BENEFIT FROM THE COMPANY'S STRONG CREDIT RATINGS?

A. Yes. To ensure reliable and cost-effective service, compliance with federal pipeline safety regulations and to fulfill its obligations to serve customers, the Company has undertaken and will continue to undertake significant capital projects. This is the nature of regulated, capital-intensive industries like natural gas utilities. Spire Missouri has an obligation to serve and must be able to operate and maintain its business without interruption and refinance maturing debt on time, regardless of financial market conditions. The financial markets can encounter periods of significant volatility and Spire Missouri must be able to finance its needs through such periods. Strong investment-grade credit ratings provide Spire Missouri with greater access to the capital markets on reasonable terms during such periods of volatility. Any factors that negatively impact Spire Missouri's credit ratings, including an inadequate rate of return, have the potential to reduce the Company's access to the capital markets and to increase the cost of such access.

One example of capital market challenges that are encountered is Spire Missouri's December 2021 bond offering. This offering, which was designed around the 3-year recovery path created by the Commission's approval of the Company's most recent PGA tariff, was originally planned earlier in November but was moved into December given the uncertainty surrounding the Commission's order in the Company's last general rate case. Spire Missouri's December offering was met with limited enthusiasm from investors in

stark contrast to its May 2021 bond offering just seven months earlier. It was downsized from its original amount and received the bare minimum of orders to clear the transaction. Moody's had just shifted its outlook to negative, and investors were uncertain as to Spire Missouri's level of regulatory support. In contrast, the May 2021 offering received orders for almost five times the intended amount of the offering. The level of subscription within an order book is a good signal as to the market receptivity for a given offering. If there is a significant amount of over subscription the Company and its banking team has more leverage to tighten pricing (and lower the overall cost of debt). This demonstrates that Spire Missouri's access to the debt capital markets has been affected by recent regulatory developments.

Q. HAVE ANY OF THE CREDIT RATING AGENCIES RECENTLY EXPRESSED CONCERNS WITH RESPECT TO SPIRE MISSOURI?

A. Yes. Both Moody's and Standard & Poor's have expressed concern regarding the outcome of Spire Missouri's last rate proceeding. Standard & Poor's expressed its concerns to the Company privately while Moody's issued a comment and a report.

The headline of Moody's comment released on November 17, 2021 (five days after the Commission's Amended Report and Order in Case No. GR-2021-0108 ("2021 Order") is **"[redacted]". ** *See* Confidential Schedule AWW-D2. The comment goes on to cite both qualitative and quantitative factors of concern. Moody's recognizes the decision's adverse impact on Spire Missouri's cash flow and credit metrics while also citing a ** [redacted] ** The

allowed return of equity of 9.37% was observed to be ** [redacted] **

Moody's followed up the comment by changing the outlook of Spire Missouri's "A1" senior secured rating to negative on November 29, 2021 (*see* Confidential Schedule AWW-D3) – two days before Spire Missouri placed a $300 million debt issue. Moody's stated that Spire Missouri could be downgraded ** [redacted] **

The rating action was followed by a published credit opinion on December 1, 2021 (*see* Confidential Schedule AWW-D4). The opinion observes: ** [redacted] ." Moody's noted the extra debt Spire Missouri incurred to cover higher gas costs resulting from Winter Storm Uri and that recovery of key metrics will likely take time '[redacted] **

Both Moody's and Standard & Poor's have similar concerns with the status quo in Missouri. The 2021 Order establishes a rate of return that significantly lowers Spire Missouri's Funds from Operations to Debt percentage which calls into question the sustainability of current ratings. The qualitative aspects of the currently effective rate order

also undermine current ratings as these independent third-party observers both have intensified questioning as to the consistency and predictability of regulatory outcomes into the future. Both the quantitative and qualitative aspects of the Order suggest that Spire Missouri is likely to be downgraded unless a more supportive outcome is reached in this rate proceeding.

Q. WHAT WOULD THE IMPACT OF DOWNGRADE FROM ONE OR BOTH RATING AGENCIES MEAN FOR SPIRE MISSOURI?

A. A downgrade by the credit rating agencies would increase Spire Missouri's cost of capital. A lower rating would raise the cost of long-term debt and could limit Spire Missouri's access to the debt capital markets. An example of this was given earlier when comparing the market receptivity to the bond issues in May 2021 and December 2021. A rating downgrade would also be felt in the short-term debt markets. Short-term debt ratings track long-term debt ratings. As has been evident over the last few years, the market for commercial paper can completely disappear for lower rated companies in times of financial distress. This would make it more likely that Spire Missouri would need to access short-term capital directly through the bank market which could cost 100-200 basis points more than the commercial paper market. While the credit agencies are not providing their assessment of Spire's equity, a ratings downgrade does inform the equity market as to the level of regulatory support Spire Missouri is receiving and its ability to mitigate the requisite business and financial risks of a natural gas local distribution company. It should be expected that a ratings downgrade would negatively impact Spire Missouri's cost of equity as well.

Q. WHAT HAS SPIRE MISSOURI'S FUNDS FROM OPERATIONS TO DEBT ("FFO TO DEBT") PERCENTAGE BEEN IN RECENT YEARS?

A. Spire Missouri's FFO to Debt (and similar ratio Cash from Operations pre-Working Capital to Debt "CFO pre-WC to Debt") from 2017 to 2020 averaged ** [redacted]**. At year-end 2021 (9/30/21) Spire Missouri's FFO to Debt had declined to ** [redacted]** given the extra debt incurred during Winter Storm Uri coupled with the longer recovery times in the PGA. Moody's reported an even lower CFO pre-WC to Debt percentage of ** [redacted]%** which is attributable to their differing examination of working capital in the equation. *See* Confidential Schedule AWW-D5.

Q. WHAT IS SPIRE MISSOURI'S FFO TO DEBT PERCENTAGE EXPECTED TO BE OVER THE NEXT FEW YEARS?

A. Spire Missouri's FFO to Debt percentage based on the rate of return in the last rate order is expected to approximate ** [redacted]** after Winter Storm Uri costs are fully recovered (thus reducing a portion of debt). The percentage will remain lower than this during the recovery period. This is a substantial reduction to cash flow.

Q. WHAT WOULD SPIRE MISSOURI'S FFO TO DEBT PERCENTAGE BE IF THE COMMISSION ACCEPTS THE RECOMMENDED RATE OF RETURN IN THIS CASE?

A. If the Commission accepts Spire Missouri's filing position the FFO to Debt would approximate ** [redacted]** after Winter Storm Uri and other deferred costs are fully recovered. This would keep Spire Missouri above the downgrade threshold specifically cited by Moody's in its December report.

Q. WHAT OTHER QUANTITATIVE METRICS FACTOR INTO CREDIT RATING ANALYSIS?

A. FFO to debt (and its CFO pre-WC to debt) metric receives the most attention but other factors do receive some attention. Moody's includes a four-factor scorecard with its current assessment and future expectations with its regularly published credit opinion. (*See* Exhibit 5 to Confidential Schedule AWW-D4.)

"Financial Strength" receives the highest weighting in Moody's system at 40%. Moody's reviews two other cash flow metrics (one inclusive of interest and one exclusive of dividends). The fourth measure in Moody's financial strength scorecard is debt to capitalization.

Q. WHAT IS IMPACT OF THE CURRENT ORDER ON THESE OTHER QUANTITATIVE METRICS?

A. The 2021 Order fundamentally lowers cash flow in relation to debt, so these other cash flow metrics can be presumed to be weaker as well. The 2021 Order specifically moves the debt to capitalization factor higher thus weakening Spire Missouri's position relative to Moody's expectations. The Commission's 2021 Order weakens each of Moody's financial performance metrics contributing to the likelihood of a downgrade.

Q. WHAT QUALITATIVE CONCERNS HAS MOODY'S CITED IN RELATION TO THE CURRENT REGULATORY ENVIRONMENT?

A. While Moody's positively cited recent legislative support in the passage of HB2120 and existing weather normalization and gas cost recovery mechanisms, the agency did express apprehension around the consistency and predictability of regulatory support, specifically citing the first-time inclusion of short-term debt and treatment of overhead expenses in the

most recent rate Order. Moody's aforementioned scorecard has two factors that come into play around these qualitative factors. The first, "Regulatory Framework," is weighted 25% in their analysis. This factor is subdivided into: (1) examination of legislative and judicial support from the regulatory framework, and (2) consistency and predictability of regulation. The second sub-factor is specifically being called into question by Moody's. The "Ability to Recover Costs and Earn Returns" is a third factor that receives a 25% weighting by Moody's. This factor is subdivided into: (1) timeliness of recovery of operating and capital costs, and (2) sufficiency of returns. Moody's has already lowered its future assessment of sufficiency of returns as a result of the Commission's Order in Spire Missouri's most recent rate case.

Q. HOW CAN THE COMMISSION POSITIVELY INFLUENCE MOODY'S POTENTIAL RATING ACTIONS?

A. The Commission can dispel Moody's concerns by providing a consistent and predictable approach to regulatory recovery while also raising the rate of return above the current level, which has already been identified as insufficient to support the current credit rating level.

Q. IN YOUR OPINION, WILL SPIRE MISSOURI'S CREDIT RATINGS BE DOWNGRADED IF THE RELIEF REQUESTED IN THIS CASE IS NOT GRANTED?

A. Yes, Moody's has moved Spire Missouri to negative outlook and will downgrade if its concerns are not addressed in this case. I have had discussions with Standard & Poor's in which they have shared similar concerns. I believe Standard & Poor's will take a negative rating action against Spire Missouri if the relief requested in this case is not granted.

Q. IN YOUR EXPERIENCE, HOW LONG DOES IT TAKE FOR A UTILITY TO RECOVER FROM A CREDIT DOWNGRADE?

A. If downgraded, it can take a significant amount of time for Spire Missouri to regain its former rating. Spire Missouri was last downgraded by Moody's in August of 2002. It did not receive an upgrade until 2009 (and was also upgraded in 2014). Standard & Poor's last downgraded Spire Missouri in 2013 and has not been upgraded since then. Rating agencies typically are slow to upgrade a company even after it may seem to be warranted. Since a potential downgrade would be premised on a lack of regulatory consistency and predictability, it could take a longer period of time to rehabilitate the credit rating position. The agencies would want to witness consistency and support through multiple recovery cycles in order to consider any potential upgrade.

V. ESTIMATING THE COST OF COMMON EQUITY

Q. HOW IS A UTILITY'S COST OF COMMON EQUITY TYPICALLY ESTIMATED?

A. There are various methods for determining the cost of common equity. One of the most prominent methods is what is referred to as the "market-determined" approach. The market-determined approach relies upon stock market transactions and estimates of investor expectations. Examples of market-determined methods are the discounted cash flow ("DCF") model and the capital asset pricing model ("CAPM").

Q. PLEASE DESCRIBE, AT A HIGH LEVEL, THE DCF AND CAPM MODELS.

A. At a high level, a DCF model calculates cost of equity based on the discounted value of future dividends, with expected dividend yields and expected dividend growth rates being key components in the analysis. A CAPM model focuses on the relationship between a

security's investment risk and its market rate of return. This relationship identifies the rate of return that investors expect a security to earn so that its market return is comparable to the market returns earned by other securities that have similar risk. Key components of a CAPM model include risk-free rates, betas (systemic risk), and market risk premiums. Most cost of equity experts use some combination of approaches.

Q. PLEASE EXPLAIN YOUR APPROACH TO ESTIMATING SPIRE MISSOURI'S COST OF EQUITY IN THIS PROCEEDING.

A. Due to the recency of Spire Missouri's last rate case and the Commission's conclusion that the Staff's approach was the most reasonable approach presented in that case, my approach in this case utilizes the Staff's approach from that last rate case. The Commission entered the 2021 Order in Spire Missouri's last rate proceeding in November of 2021. In its 2021 Order, the Commission found that Staff's estimated ROE was the most persuasive and set Spire Missouri's return on equity at 9.37%, which Staff presented as the midpoint of its comparative model-based approach. In the interest of administrative efficiency and an expeditious conclusion to this case, Spire Missouri is adopting Staff's approach, by using their model with updates, which was deemed most persuasive by the Commission less than five months ago.

Q. PLEASE DESCRIBE STAFF'S APPROACH TO ESTIMATING COST OF EQUITY IN THE COMPANY'S LAST RATE CASE, CASE NO. GR-2021-0108.

A. Staff examined and evaluated the estimated cost of equity in the then-current and recent Spire Missouri rate cases and the just and reasonable range of authorized return on equity ordered by the Commission in the prior most recent Spire Missouri rate case (the 2018

Order[10]). Staff specifically compared the output of peer group DCF and CAPM models from 2017-18 and 2020-2021 to ascertain its recommended range in the last rate case.

Q. WHAT ARE THE RESULTS OF USING THE STAFF'S COMPARATIVE APPROACH IN THIS CASE?

A. My testimony demonstrates that this comparative approach analyzing the cost of equity at the time of the development of the 2018 Order (Case No. GR-2017-0215/0216) and the cost of equity as of February 28, 2022 (the time of this filing) produces a recommended range of 9.82% to 10.32% with a 10.07% midpoint based upon the calculated cost of equity being 27 basis points higher today than it was in 2017. The methodology used to calculate this range is identical to that used by Staff in the last rate proceeding (GR-2021-0108). This base model is contained in Schedule AWW-D6.

Q. IS SPIRE MISSOURI RECOMMENDING A RETURN ON EQUITY RANGE OF 9.82% TO 10.32% IN THIS CASE?

A. No. I offer two simple modifications to Staff's comparative cost of equity methodology for the Commission's consideration in recommending a specific range, both related to the CAPM model. The range of 9.82% to 10.32% provides the Commission with the cost of equity results pursuant to Staff's exact methodology as was found persuasive in the last rate proceeding, albeit with several inputs from the 2021 case updated to reflect current data. The individual components of these models and the market conditions that populate the inputs will be explored below, followed by a discussion of the two modifications I am proposing.

[10] Case Nos. GR-2017-0215 and GR-2017-0216, Amended Report and Order issued March 7, 2018.

Q. PLEASE EXPLAIN AND COMPARE THE MARKET CONDITIONS SURROUNDING THE DEVELOPMENT OF THE 2018 ORDER AND TODAY VIS A VIS THE DCF AND CAPM MODELS.

A. The results of DCF and CAPM models are driven by a handful of variable inputs. An examination of these inputs in the different time periods in question can shed some light and set expectations on results. The peer groups are the same for both periods consisting of a core group of publicly traded natural gas distribution utilities. These peer companies are shown on Schedule AWW-D7.

Dividend growth rates have decreased somewhat, but those decreases are outweighed by increases in dividend yields. Both of these variables are important in a DCF analysis. Risk-free rates have decreased, but that decrease is outweighed by fairly significant increases in betas, and increases in market risk premiums, all important elements of a CAPM analysis. Overall, the impact of these changes in market conditions demonstrate an increase in Spire Missouri's cost of equity. More specifically, current market conditions dictate a higher cost of equity when compared to conditions as they existed in 2017. The Commission ordered a 9.80% rate of return to Spire Missouri in the 2018 Order based on these circumstances. The comparative analysis, discussed below, suggests a current rate of return that is at least 27 basis points higher at the midpoint of a reasonable range of 9.82% to 10.32%.

Q. PLEASE EXPAND UPON THE CURRENT MARKET CONDITIONS.

A. The financial backdrop as of March 2022 points to more challenging market conditions ahead. Inflation does not appear to be transitory. U.S. inflation climbed to a 7.9% rate in February -- a level that has not been seen in four decades (according to the Wall Street

Journal, March 10, 2022, *see* Schedule AWW-D8). This increase has been driven by supply chain disruptions and excess money printing (COVID stimulus), as well as recent global economic disruptions in commodity markets caused by the Ukrainian conflict. This has created additional volatility in all financial markets.

Q. WHAT DOES THIS MEAN FOR SPIRE MISSOURI?

A. All costs are rising rapidly. Many items are exceeding budgeted amounts. Interest rates are also rising rapidly. The Federal Reserve Board of Governors voted to begin hiking the Fed Funds rate last month by 25 basis points. They are expected to continue to raise rates at each of their upcoming meetings through next May with the next two increases expected to be 50 basis points each. May 2023 Fed Fund expectations now stand at 2.75% to 3.25%. This has obvious implications for the rest of the yield curve. The 30-year Treasury rate, which is utilized as the risk-free rate in the Staff's discounted cash flow model, will be materially higher than the Fed Funds rate and stands at 2.46% as this testimony is filed. The Treasury curve is currently inverted with the 20-year Treasury rate is 2.61%. It is also inverted between the 5-year and 10-year with the former at 2.41% and the latter at 2.32%. In fact, interest rates have already risen substantially so far this year with the 30-year rising over 50 basis points and 10-year rising nearly 100 basis points since January 1.

One can debate the ultimate path of interest rates, but it would not be credible to suggest they are not moving higher in a material way. Higher interest rates and a correspondingly higher risk-free rate raises Spire Missouri's cost of debt and cost of equity. The cost of short-term debt is already rising rapidly and is expected to more than triple over the next twelve months. The cost of long-term debt will rise as new transactions are priced with the next offering expected in 2023. The cost of equity will rise directly through

the risk-free rate input in Staff's CAPM analysis and indirectly through typical upward pressure that interest rates have on growth rates in the Staff's DCF analysis.

The equity market for gas local distribution utilities has improved from the significant downturn the sector took throughout COVID, but is still short of the supportive market that was witnessed in the 2017-2018 timeframe (during the prior rate case). The comparison can readily be made through forward price-earnings ratios. It should be noted that while some peers have recovered more fully, Spire remains at a historically depressed valuation based upon concerns over its last Missouri rate case order.

Q. PLEASE DESCRIBE IN MORE DETAIL THE VARIOUS CHANGES IN THESE MARKET COMPONENTS OF THE DCF MODEL.

A. The comparative DCF analysis between the 2018 Order (2017 market conditions) and today suggests the COE is 17 basis points higher today than it was in 2017. The primary inputs of Staff's DCF model consist of dividend yields and growth rates.

Dividend yields are 38% higher for the peer group in 2022 relative to 2017. While the peer group (including Spire) grew its dividend distributions over the last five years this explains very little of the relative growth. Most of the growth in dividend yields is attributable to *a lower stock price* coupled with a higher dividend. This dynamic is also visible in the relative stock price to earnings (P/E) between the two periods. The peer group traded at a substantially higher price relative to earnings in 2017 than it does today. The tracking of a company's trading multiple to earnings informs as to the general direction of its cost of equity. As investors are willing to pay more for a similar amount of earnings (raising the P/E multiple) a company's cost of equity goes down (and vice versa).

Growth rates are the other important component of a DCF model. Staff's methodology uses historical and projected dividend and earnings per share growth rates sourced from Value Line, as well as a longer-term projected growth rate for the entire economy sourced from the Congressional Budget Office. The overall growth rate (as calculated pursuant to Staff's methodology) for the peer group declined between 2017 and today. The model is more weighted towards dividend growth which declined while earnings growth actually rose between 2017 and today, according to Value Line. The CBO lowered its longer-term (2050) US economic growth projection from 4.00% to 3.80%. The primary growth rate used in Staff's DCF model declined approximately 17% between the two periods in time. It rose for certain companies within the peer group while declining more significantly for others. A lower growth rate lowers the cost of equity in a DCF model.

The lower observed growth rates derived from Value Line reports coupled with a lower CBO long-term rate mitigates the more significant impact of higher dividend yields between 2017 and today on the DCF calculation of cost of equity. However, the net increase in COE is still significant and should be expected based on relative market conditions, which have shifted down valuations in the sector leading to a corresponding increase in dividend yields.

Q. PLEASE DESCRIBE IN MORE DETAIL THE VARIOUS CHANGES IN THE PRIMARY COMPONENTS OF THE CAPM MODEL.

A. The comparative CAPM analysis would suggest the COE is 38 basis points higher today than it was in 2017. The inputs of Staff's CAPM model consist of a risk-free rate, betas

and market risk premiums. The measurement of each of these values are relatively straightforward.

The risk-free rate utilized in Staff's CAPM methodology is a trailing three-month average yield of the 30-year U.S. Treasury bond. This value was a historically low 2.90% in 2017 but stands at an even lower -- 2.07% as of this filing. The 30-year Treasury bond hit an all-time low yield of 1.175% shortly after the beginning of the pandemic (and unprecedented Federal Reserve purchases of U.S. Treasury securities) and has climbed higher in recent months. A lower risk-free rate as a component of the CAPM model produces a downward impact on the cost of equity calculation, but this effect should not be overstated in light of the other inputs. Movements in cost of equity do not correspond solely with the path of interest rates, as demonstrated by the relative shifts in the other CAPM components which together can yield a higher cost of equity even in a declining risk-free rate environment.

Beta is a key input to any CAPM analysis. Beta is a measure of volatility, or systematic risk, of a security or portfolio of securities relative to the overall market. It is estimated by regressing the returns of a given stock against the returns on an index representing the market portfolio over a reasonable period. Staff has elected to use the Value Line methodology in calculating a beta. This calculation entails a five-year regression of weekly security values relative to the NYSE index returns. It is then adjusted, as there is a general tendency for betas of all companies to converge towards a value of one (Blume adjustment). This is a widely accepted measurement of beta for use in CAPM models. While it is common to reference the "estimation" of beta, it should be understood once a methodology has been established (as it has been here), it is a calculation that is

performed with available data that results in a single objective value. These values are also reported quarterly by Value Line. The peer group average beta of 0.90 is substantially higher today than it was in 2017 when the calculated average was 0.73. This is not surprising as utility shares sold off significantly during the COVID-19 pandemic with heightened volatility being broadly observed. A higher beta can have a more significant impact in the CAPM model than the risk-free rate.

Market Risk Premiums are the third component to the CAPM model. Staff's methodology uses four separate calculations of the expected rate of return and risk-free rate based on historical values available from Duff & Phelps and the Damodaran-NYU Stern website. The market risk premium is the expected return or hurdle rate an investor is seeking which is then multiplied by beta to adjust for risk. All four market risk premiums are higher today than they were in 2020. Unsurprisingly, higher market risk premium raises the cost of equity in a CAPM model.

While the lower risk-free rate in the current market mitigates the cost of equity somewhat, a higher market risk premium multiplied by a higher beta would be expected to produce a higher cost of equity through the CAPM calculation.

Q. WHAT MODIFICATIONS ARE YOU PROPOSING BE MADE TO THE CAPM ANALYSIS?

A. Starting with the baseline results of Staff's comparative analysis as outlined above, the Company asks that the Commission consider a few commonsensical refinements to this approach when determining a rate of return in this proceeding. To be clear, Spire Missouri is adopting an identical methodology that the Commission found to be persuasive and adopted the exact midpoint of the range produced by Staff's analysis in the last rate

proceeding, but is asking the Commission to consider a few reasonable modifications, along with market and rate updates.

The Commission is not retrospectively setting rates that should have existed in the past based on historical data. This rate proceeding will set rates prospectively for at least the next few years. In doing so, it is entirely proper for the Commission to prospectively examine market expectations when calculating cost of equity and setting a return on equity that is required to support Spire Missouri's business into the future.

The first modification for the Commission to consider is eliminating the averaging of both *arithmetic* and *geometric* means when calculating the market risk premiums in the CAPM analysis. Both calculations are useful but in different ways. The geometric mean provides the constant return required to match the return achieved by the stock market. The primary use of the geometric mean is in the measurement of performance over a long period of time. The arithmetic mean provides the best estimate of the growth rate that will be produced by continually reinvesting in the stock market, and hence provides a better prospective estimation of the cost of equity. As mentioned earlier, and the appropriate average is the one that most accurately approximates the expected future rate of return. Noted ROE expert Roger A. Morin states in his treatise: "The best estimate of expected returns over a given future holding period is the arithmetic average…only arithmetic means are correct for forecasting purposes and for estimating the cost of capital. There is no theoretical or empirical justification for the use of geometric mean rates of return as a measure of the appropriate discount rate in computing the cost of capital…"[11] This is just a tweak to Staff's methodology in that the arithmetic calculations are already included. My

[11] Roger A. Morin, *New Regulatory Finance*, at p. 156. Dr. Morin includes an entire chapter on this topic in his treatise.

recommendation is to further simplify the model by the elimination of the use of geometric means, which is theoretically proper.

The second suggested modification to the CAPM analysis is easy to understand. The risk-free rate input currently is a trailing 3-month average of the 30-year US Treasury. This is certainly not a prospective indication of the risk-free rate and does not properly capture the expected path of interest rates that will impact the Company in the future under newly ordered rates. This is hard to overlook in the current market with 40-year high inflation and near unanimity as to the where interest rates are going in the near future. The current 30-year US Treasury rate is 2.46%. Expectations are for this rate to be 2.75% by year-end 2022. Spire Missouri will monitor this rate over the course of this case to determine the appropriate risk-free rate in the CAPM analysis.

An additional adjustment that Spire Missouri is offering for the Commission's consideration is a flotation cost adjustment. The real cost of equity capital is higher than the investor-required rate of return because of flotation costs – *e.g.*, underwriting fees, legal fees, registration fees. Accordingly, regulatory commissions generally make an allowance or adjustment for flotation costs in the authorized cost of capital. This adjustment is currently measured to be 13 basis points (see Confidential Schedule AWW-D9). It is not being added specifically to the recommended midpoint return on equity of 10.49%, but is being offered for consideration and support of the recommended range. It is important for the Commission to take into account flotation costs because these costs are not being recovered elsewhere and reside permanently on the balance sheet as a negative adjustment. The permanent nature of this cost makes it irrelevant whether equity was recently raised, but in the case of Spire Missouri, equity was recently raised and these costs need to be recognized

and accounted for properly in the return on equity. More specifically, Spire Inc. recently sold shares to external investors and then simultaneously contributed that equity capital to Spire Missouri. This transaction occurred during what is expected to be the true-up period in this case.

These three reasonable modifications to the methodology that has already been endorsed by the Commission would yield a reasonable range of return on equity of 10.24% to 10.74% with a midpoint of 10.49%. (*See* Schedule AWW-D10.) Accordingly, 10.50% is Spire Missouri's recommended return on equity in this proceeding.

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR USE OF STAFF'S COMPARATIVE DCF AND CAPM MODEL APPROACH, INCLUDING THE TWO MODIFICATIONS YOU DISCUSSED ABOVE.

A. Staff's comparative methodology with the two suggested modifications yields a reasonable range of return on equity of 10.24% to 10.74% with a midpoint of 10.49%.

The DCF is unchanged from the prior summary. Dividends yields are higher due to lower valuations within the sector which more than offset a relative decline in prospective dividend growth rates as sourced from Value Line. A comparison of the 2017 and 2022 time periods would suggest that the peer group's cost of equity increased 17 basis points.

The CAPM analysis suggests a significantly higher increase in the cost of equity between 2017 and 2022 based on a higher assumed risk-free rate a focus solely on the arithmetic calculation of the market risk premium. This additional spread exemplifies the drivers of cost of equity within the CAPM model beyond interest rates. The assumed risk-free rate of 2.75% is still a little bit shy of the 2.90% risk-free rate assumed in 2017 but the

model would suggest the cost of equity is 122 basis points higher. Risk and volatility are higher (and rising) in the equity markets, and this is evident in the CAPM model results.

VI. OVERALL RATE OF RETURN

Q. WHAT FACTORS SHOULD THE COMMISSION CONSIDER WHEN ESTABLISHING A RATE OF RETURN ON SPIRE MISSOURI'S RATE BASE?

A. Spire Missouri would encourage the Commission to keep the larger picture in mind – the "end result" – when working through the distinct components in the derivation of the rate of return. Do the components, taken together, actually yield a fair and reasonable return? It is evident by Moody's reaction to the Commission's 2021 Order that the rate of return can have a substantial impact on the credit profile of the utility. Any erosion in longstanding support contributes to a weakening of financial integrity. A fair and reasonable recovery allows a utility to serve its customers in a safe and reliable manner while maintaining its financial integrity. Regulation impacts the quality and consistency of earnings. A utility's risk rises as regulation becomes less transparent and more unpredictable.

Financial risk increases with additional leverage leading to a higher cost of debt and equity. Leverage increases the risk of default thus raising the cost of debt. Leverage increases earnings magnification and thereby raises an equity investor's required returns. It can be tempting to pursue a ratemaking path towards the lowest common denominator setting a rate of return that sits right above the threshold of reasonableness *based upon normal conditions*. But this is a risky and arguably imprudent approach in supporting a utility providing an essential service with an obligation to serve its customers no matter

what conditions exist at the time. A significant equity layer and strong cash flows allow a utility to withstand extreme circumstances that could inhibit its obligation to serve.

Winter Storm Uri provides a perfect case study around this concept. Spire Missouri was able to successfully address the operational challenges presented by this impactful weather and did not experience nearly the same sort of financial impact of many of its regional peers. However, Spire Missouri did have significantly higher gas costs. The Company was able to successfully face these financial challenges at the time because of its strong credit rating and substantial equity layer which allowed it to weather the storm. Spire Missouri specifically did not pursue securitization of the additional costs incurred given its financial standing at the time. The Company was able to do this because of the Commission's historical regulatory support prior to Winter Storm Uri. The lack of Commission support in the 2021 order following this weather event, however, has left Spire Missouri on the verge of getting downgraded by the rating agencies and creates doubts in the minds of debt and equity investors if that support will be there if faced with other significant challenges.

Spire Missouri is presently challenged by inflationary pressures in the economy. We respectfully request a fair and reasonable return on our rate base that supports the utility's obligation to serve while preserving its financial integrity. The rate of return being requested by Spire Missouri is designed to maintain its historical level of financial integrity and avoid ratings downgrades. It will produce cash flows sufficient to keep Spire Missouri's key financial metrics (particularly FFO/debt) above the downgrade thresholds.

Q. PLEASE PROVIDE A SUMMARY OF RECENT ROR'S AND ROE'S IN THE GAS UTILITY SECTOR.

A. Authorized ROEs in the gas sector rose in 2021. Excluding Spire Missouri, gas utilities were authorized an average return on equity of 9.58% across 44 cases. Fully litigated rate proceedings yielded a higher average of 9.66%. Relatively few cases have been finalized in 2022, but the last twelve-month average continues to support 9.58% through the end of March 2022. Of course, these are simple averages that do not take into account the relative size of a company or mechanisms within a given jurisdiction that allow a company to earn above its authorized return on equity. It should also be noted that the average authorized *rate of return* for gas utilities was **6.85%**.

VII. LONG TERM DEBT

Q. WHAT ARE SPIRE MISSOURI'S SOURCES OF LONG-TERM DEBT?

A. Spire Missouri typically raises long-term debt to support the long-term capitalization of its rate base. Long-term debts are non-current liabilities with obligations beyond one year. Most of the Company's long-term debt consists of private placed or publicly issued first mortgage bonds. This type of obligation is secured by the Company's underlying assets. Spire Missouri can only issue long-term debt as authorized by the Commission. A new three-year $800 million authorization was issued on February 23, 2022. Spire Missouri is also authorized to issue unsecured debt, but currently has none outstanding.

Q. HOW OFTEN DOES SPIRE MISSOURI ISSUE LONG-TERM DEBT?

A. At its current pace of capital replacement and outstanding maturity profile, Spire Missouri issues new long-term debt every 18 to 24 months. The bonds issued in May 2021 were preceded by an issuance in November 2019, an unsecured term loan in December 2018, and a bond issuance in September 2017.

Q. WAS THERE ANYTHING UNUSUAL ABOUT THE TIMING OF THE MAY 2021 DEBT ISSUANCE?

A. No, it was consistent with past practice and driven by the needs of the business. The financing authorizations that Spire Missouri has received by the Commission contain no limitations as to when the Company can issue long-term debt. Spire Missouri had just placed a large bond offering 17 months earlier. This issue was planned well in advance and the timing was shared with Staff and OPC.

Q. PLEASE CONTINUE WITH YOUR DESCRIPTION OF SPIRE MISSOURI'S DEBT ISSUANCE PRACTICES.

A. As it has grown in size, Spire Missouri has issued debt in larger tranches. These larger issues are more efficiently placed among a deeper pool of investors in the public debt market which is accessible to Spire Missouri as a SEC registrant. This efficiency comes with some reduced flexibility in timing. Spire, by corporate policy, cannot issue public debt while it is in a black-out period. These periods occur two weeks before the end of each quarter and extend five to six weeks after the end of the quarter (until earnings are reported) and are meant to control the issuance of securities while new disclosure is pending. While this is not a SEC mandate, it is widely considered a best practice in corporate finance. This functionally limits Spire Missouri's ability to issue long-term debt to approximately half the year.

Other things can influence the timing of a debt offering, as well. Rating agency actions, court rulings and Commission orders are all examples of events that can influence the timing of a debt offering. One recent example is the delay of Spire Missouri's last debt offering which was originally scheduled to follow the year-end earnings release was

pushed from mid-November to early December because of uncertainty around the then-recently issued 2021 Order in Spire's prior rate case and pending rating agency reaction thereto.

The Commission would note similar timing constraints in the corporate finance practices of Ameren and Evergy.

Q. WHAT IS SPIRE MISSOURI'S COST OF LONG-TERM DEBT?

A. Spire Missouri's cost of long-term debt as of March 1, 2022, is 3.982%. Supporting detail may be found in Schedule AWW-D11. This calculation excludes the bonds issued in December of 2021.

Q. WHY SHOULD THE FIRST MORTGAGE BONDS ISSUED IN DECEMBER OF 2021 BE EXCLUDED FROM THE CALCULATION OF THE COST OF LONG-TERM DEBT?

A. This $300 million first mortgage bond issue was structured as a three-year index-linked offering with a call option to allow for the debt to be retired as Spire Missouri recovers gas costs pursuant to the amended Purchase Gas Adjustment Rider as approved by the Commission on October 14, 2021. The Commission agreed with Spire Missouri's request and Staff's recommendation to spread these costs over a three-year period to mitigate some of the impact of these extraordinary costs on the customer bill (GT-2022-0083/0084).

Some utilities in the State have filed to securitize these costs over a longer period of time. Spire Missouri did not believe this was necessary and was comfortable funding these gas costs directly on its balance sheet. This is a rare instance of Spire Missouri funding temporary assets with long-term debt. Securitized debt is generally not included in capital structure and cost of capital calculations. Spire Missouri is recommending

similar treatment from the Commission in this instance for cost of debt and capital structure purposes. This offering was designed to track the recovery of some of Winter Storm Uri costs. It is callable anytime after June 2, 2022, which allows for Spire Missouri to retire like amounts of debt upon recovery in rates. However, it should be understood that cash is fungible, and if short-term debt costs rise (and they are expected to move up considerably) above the cost of this particular long-term debt, the Company would elect to keep some of it outstanding (managing it as an extension of short-term debt).

Another consideration that supports the Company's recommendation as to this particular tranche of debt is that the gas costs which served as the premise for this issue are already being recovered through the cost of carry mechanism within the ACA (at the prime rate minus 2%). This long-term debt issue is structured as a temporary debt, which will be retired upon full recovery of the gas costs and should not be included in a rate of return calculation.

VIII. COST OF SHORT-TERM DEBT

Q. WHAT ARE SPIRE MISSOURI'S SOURCES OF SHORT-TERM DEBT?

A. Spire Missouri incurs short-term debt to support its short-term (temporary) capital needs through its $450 million sub-limit of Spire Inc.'s general revolving credit facility, intercompany notes representing commercial paper sold by Spire Inc. (and supported by the aforementioned credit facility) to various money market investors, and independent third-party term loan facilities.

Q. WHAT IS SPIRE MISSOURI'S COST OF SHORT-TERM DEBT?

A. The fully recognized cost of short-term debt involves more than the interest rate paid on commercial paper. Spire Inc.'s access to the commercial paper markets is made possible

by its revolving credit facility supported by eleven highly rated commercial banks. This facility includes an undrawn fee of 10 basis points which is based on Spire Missouri's unsecured credit rating. This undrawn fee is allocated to Spire Missouri based upon its $450 million sub-limit within the facility. Rating agency fees are assessed quarterly based upon amounts outstanding and are properly included in the cost of debt as well. Other bank and legal fees are also included as support costs. While the commercial paper rate was 0.41% for the month of February, the all-in cost of this component of short-term debt was 1.051% after taking into account rating agency and bank fees. *See* Schedule AWW-D12.

As this testimony was being prepared, Spire Missouri also had a 364-day term loan outstanding with a smaller syndicate of five commercial banks that was originally put in place to support liquidity needs following Winter Storm Uri. The cost of this term loan floats at a spread to LIBOR and amounted to 0.755% in the most recent month. This loan matured in the month of March, and the balance was moved into commercial paper.

The cost of short-term debt based on these two active components, and allocated based on average amounts outstanding for *the last month* equaled 0.854%. This rate can change on a daily basis. There is a very high degree of certainty that this rate will increase substantially over the next 24 months given the public comments by the Federal Reserve. Current commercial paper quotes (without support costs) for 30-day and 60-day placement are 1.00% and 1.10% respectively.

Q. SHOULD SHORT-TERM DEBT BE INCLUDED IN SPIRE MISSOURI'S REGULATORY CAPITAL STRUCTURE?

A. No. As mentioned at the outset of this testimony, short-term debt is used to finance working capital and short-term operational needs. These include construction-work-in-progress and

deferred regulatory assets, until such are reflected in rate base. Short-term debt is not used to finance rate base assets. Accordingly, Spire Missouri's is NOT recommending that short-term debt be included in the capital structure.

Q. CAN YOU DEMONSTRATE HOW SPIRE MISSOURI'S LONG-TERM DEBT FINANCES ITS RATE BASE ASSETS AND ITS SHORT-TERM DEBT FINANCES NON-RATE BASE ASSETS AND EXPENSES?

A. As mentioned earlier, Spire Missouri's current assets exceed its current liabilities. This would indicate that short-term debt is not financing rate base. Additions to long-term capitalization have outpaced additions to rate base. This would also indicate short-term debt is not financing rate base. Details around what short-term debt is financing outside of rate base is provided in Confidential Schedule AWW-D13. The 13-month average would indicate a *de minimis* amount of short-term debt after accounting for deferrals. The current position at the time of this filing is substantially tilted towards a ** [redacted] ** million net asset position. No short-term debt is financing rate base.

Q. WHAT ARE THE IMPLICATIONS OF INCLUDING A UTILITY'S SHORT-TERM DEBT IN ITS REGULATORY CAPITAL STRUCTURE?

A. The primary implication is a mismatch of debt and associated debt rates to the capital and expenses such debt is financing, resulting in an arbitrary rate of return calculation. Doing so effectively gives customers the benefit of short-term debt rates twice – once in the capital structure used to calculate overall rate of return, and a second time through the utility's AFUDC rate used for deferrals.

Q. IF, DESPITE THIS, THE COMMISSION CONTINUES TO INCLUDE SHORT-TERM DEBT IN SPIRE MISSOURI'S REGULATORY CAPITAL STRUCTURE, WHAT SHORT-TERM DEBT RATE SHOULD BE USED?

A. Spire Missouri strongly believes that including short-term debt in the Company's regulatory capital structure is wrong. Nevertheless, if the Commission continues to include short-term rate in Spire Missouri's capital structure the current cost of short-term debt ** [redacted] ** as provided earlier should **NOT** be used as the assigned cost of short-term debt. While the absolute level of the expected rise in short-term rates can be debated, it is undeniable that short-term rates will be rising substantially in the near term. The Federal Reserve just raised the Fed Funds rate by 25 basis point on March 15 and has indicated this rate will be at least 2.75% by the middle of 2023. In fact, interest rates are universally expected to rise consistently throughout the timeline of this rate proceeding. The assignment of a low fixed cost of a rapidly rising variable rate would be very punitive and without precedent. It would also raise Spire Missouri's financial risk substantially given the assignment of a low fixed rate to cover an otherwise rapidly rising variable rate.

If the Commission continues to include a short-term component in the capital structure, Spire Missouri recommends using a prospective rate supplied by the swap market. This would provide some objective indication of the path of short-term rates that would properly inform the Commission's decision. The swap market is very liquid, and Spire Missouri regularly receives interest rate hedging indications. Spire Missouri can currently swap the floating rate underlying its commercial paper rate to a three-year fixed rate (on a cancellable basis) at 2.75%. The current rate (one-month SOFR is ** [redacted] **). Spire Missouri's current commercial paper rate is ** [redacted] **, indicating a credit spread

of 70 basis points. This credit spread can and will fluctuate and historically widens in higher interest rate environments. Supports costs as outlined earlier also fluctuate. Spire Missouri would estimate at least 50 basis points of credit spread and 50 basis points of support costs should be applied to the forward rate derived from the swap market. This would provide a prospective indication of the cost of short-term debt of 3.75%.

This estimation of the cost of short-term debt assumes fair and reasonable treatment in the current proceeding by the Commission and the maintenance of a rate of return sufficient to support its current credit ratings. If the current depressed rate of return (6.37%) remains following this rate proceeding, Spire Missouri will almost certainly be downgraded by both rating agencies thereby raising each component of cost of capital including short-term debt. The severity of these negative actions could substantially impact *how* Spire Missouri sources short-term debt. If the commercial paper market was no longer available, Spire Missouri would resort to bank borrowing which would add 100-200 basis points to the projected cost of short-term debt provided above.

Q. Q. DOES SPIRE INC.'S CAPITAL STRUCTURE PROVIDE A MODEL FOR THE APPROPRIATE CAPITAL STRUCTURE AT SPIRE MISSOURI?

A. No. Certain intervenors in Missouri rate proceedings appear to be confused by the utility holding company concept. Spire Inc. is the owner of Spire Missouri. Spire Inc. owns other regulated utilities and non-regulated businesses. The capital structure of Spire Inc. is unique to this business mix and does not provide an example as to the appropriate capital structure of any of its individual wholly owned subsidiary companies. Spire Missouri should not be confused with its owner.

Moreover, as it has been the case in the last several rate cases, no double leverage exists. In fact, recent equity contributions by the owner (Spire Inc.) to Spire Missouri were specifically raised in the external equity market before being contributed to the operating company. This is the opposite of double leverage.

In Spire Missouri's 2021 general rate case, the Commission appropriately rejected the argument that the capital structure of Spire Inc. should be used for Spire Missouri ratemaking purposes. That decision was supported by the relevant evidence, none of which has changed since the conclusion of that proceeding.

IX. CONCLUSION

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

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

AFFIDAVIT

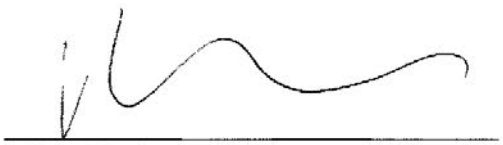
STATE OF MISSOURI	)	
	)	SS.
CITY OF ST. LOUIS	)	

I, Adam Woodard, of lawful age, being first duly sworn, deposes and states:

1. My name is Adam Woodard. I am the Chief Financial Officer and Treasurer of Spire Missouri Inc. and Vice President and Treasurer of Spire Inc. My business address is 700 Market St., St Louis, Missouri, 63101.

2. Attached hereto and made a part hereof for all purposes is my direct testimony on behalf of Spire Missouri Inc. for the above referenced case.

3. Under penalty of perjury, I hereby declare that the foregoing is true and correct to the best of my knowledge and belief



Adam Woodard

April 1, 2022

Date