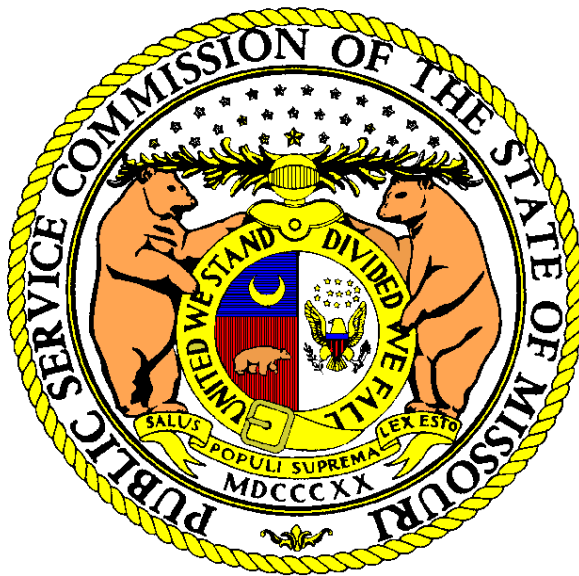


Exhibit No. 101

MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT COST OF SERVICE



SPIRE MISSOURI, INC., d/b/a SPIRE

**SPIRE EAST and SPIRE WEST
GENERAL RATE CASE**

CASE NO. GR-2021-0108

*Jefferson City, Missouri
May 2021*

**** Denotes Confidential Information ****

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 COST OF SERVICE REPORT OF
 SPIRE MISSOURI, INC., d/b/a SPIRE
 SPIRE EAST and SPIRE WEST
 GENERAL RATE CASE
 Case No. GR-2021-0108**

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1 case. Staff's recommended revenue requirement increase for Spire East and Spire West, with
2 Staff's recommended return on equity (ROE) of 9.37%², is \$6,646,349 and \$47,301,955
3 respectively. Staff's recommendation includes an estimated true-up allowance of \$6,300,000
4 for Spire East and \$4,800,000 for Spire West. Including the true-up allowance, Staff's
5 recommendation is comprised of a revenue requirement increase for Spire East and Spire West of
6 \$12,946,349 and \$52,101,955 respectively. Although Staff is recommending a separate revenue
7 requirement increase for Spire East and Spire West, Staff also calculated a Spire Missouri revenue
8 requirement increase in the event the Commission determines consolidation is appropriate.

9 Staff's recommendations regarding assignment of the total cost-of-service to each retail
10 rate customer class for Spire East and Spire West will be included in Staff's rate design testimony
11 that is to be filed on May 26, 2021.

12 *Staff Expert/Witness: Karen Lyons*

13 **II. Background**

14 **A. Background of Spire Missouri, Inc.**

15 Spire Missouri Inc is a wholly owned subsidiary of Spire, Inc. The gas utility segment of
16 Spire, Inc also includes Spire Alabama, Spire Gulf Inc. and Spire Mississippi. Spire East, formerly
17 Laclede Gas (LAC) is an operating unit of Spire Missouri Inc., serving 663,262 residential,
18 commercial and industrial customers in the City of St. Louis and parts of ten counties in eastern
19 Missouri. Spire West, formerly Missouri Gas Energy (MGE) is an operating unit of Spire Missouri
20 Inc., serving 529,714 customers and generally operating in 29 western Missouri counties including
21 the cities of Kansas City, St. Joseph, Warrensburg and Joplin.³

22 **B. Spire East and Spire West Previous Rate Increase**

23 Spire East and Spire West last sought to change its rates in Case Nos. GR-2017-0215 and
24 GR-2017-0216. Based on the Commission's Amended Report and Order, the authorized revenue
25 requirement for Spire East was approximately \$18 million and Spire West was approximately
26 \$15 million.

27 *Staff Expert/Witness: Karen Lyons*

² Staff's recommended ROE of 9.37% is the mid-point of Staff's recommended equity range of 9.12% to 9.62%.

³ The number of customers for Spire East and Spire West are reported in 2020 Annual Report filed with the Commission on April 15, 2021, page 2

1 **III. Test Year/True-Up Period**

2 A test year update period reflects any material, known and measurable changes to Staff's
3 case at a future date near the conclusion of Staff's audit. In contrast, true-ups are updates of major
4 elements of a utility's revenue requirement beyond the end of an ordered test year and update
5 period. True-ups are not required for every rate proceeding, and typically are only ordered when
6 it can be demonstrated that material changes to the revenue requirement will likely occur after the
7 end of the ordered update period within a period close enough to the operation-of law date in the
8 case to allow for a review and verification of these known changes.

9 The ordered test year for these cases is the twelve months ending September 30, 2020. The
10 test year update period ordered for this case is December 31, 2020. Staff also recommends at this
11 time that a true-up audit be performed through May 31, 2021, to address all significant known and
12 measurable changes that occur with regard to Spire East's and Spire West's known and measurable
13 revenues, rate base and expense items.

14 The following list are the items that Staff proposes to update as part of its true-up audit:

15 **RATE BASE**

- 16 ▪ Plant in Service
- 17 ▪ Depreciation Reserve
- 18 ▪ Accumulated Deferred Income Taxes
- 19 ▪ Customer Advances
- 20 ▪ Materials and Supplies
- 21 ▪ Prepayments
- 22 ▪ Pension Tracker Balance
- 23 ▪ OPEB Tracker Balance
- 24 ▪ Gas Storage
- 25 ▪ Other Deferred Regulatory Assets and Liabilities
- 26 ▪ Cash Working Capital

27
28 **CAPITAL STRUCTURE**

- 29 ▪ Capital structure
- 30 ▪ Cost of Debt
- 31 ▪ Cost of Preferred Stock

32
33 **REVENUES AND EXPENSES**

- 34 ▪ Revenues for customer growth
- 35 ▪ Pension and other post-retirement employee benefit costs
- 36 ▪ Employee benefits
- 37 ▪ Payroll (including changes in pay rate, number of employees)

- 1 ▪ Payroll taxes
- 2 ▪ Insurance expense
- 3 ▪ Rate case expense
- 4 ▪ Depreciation expense
- 5 ▪ Various amortizations
- 6 ▪ Income taxes

7
8 As the part of the procedural schedule approved by this Commission in its Order Setting
9 Procedural Schedule issued on February 3, 2021, Spire is required to provide all of this true-up
10 information to the parties of this rate case by July 2, 2021.

11 *Staff Expert/Witness: Karen Lyons*

12 ***IV. Surveillance, General Ledger and CC&B Report***

13 In Spire’s last general rate cases, GR-2017-0215 and GR-2017-0216, Staff recommended
14 that Spire provide the surveillance, general ledger and Customer Care and Billing (CC&B) reports
15 on an annual basis, and more frequently if needed, within 60 days of the close of Spire Missouri’s
16 fiscal year.

17 The Commission stated in its Amended Report and Order in the above referenced cases:

18 The Commission finds that it is reasonable to adopt the agreement of Spire
19 Missouri, Staff, and Public Counsel regarding surveillance. The Commission
20 will order Spire Missouri to provide Staff and Public Counsel the surveillance
21 data in the format agreed upon and set forth in Attachment 1 of *Staff’s Initial*
22 *Post-Hearing Brief* on a quarterly basis. Additionally, the Commission will
23 order Spire Missouri to provide Staff and Public Counsel its general ledger and
24 CC&B subledger on an annual basis, within 60 days of the close of Spire
25 Missouri’s fiscal year, and to make both the ledger and subledger available
26 more frequently in the event further support of the surveillance data is needed.

27 Staff recommends that Spire continue to provide the surveillance, general ledger and
28 CC&B reports consistent with the Commission order in Spire’s last general rate case.

29 *Staff Expert/Witness: Karen Lyons*

30 ***V. Rate of Return (ROE, Cost of Capital, Capital Structure)***

31 ***A. Introduction***

32 In this section, Staff presents evidence and provides a recommendation regarding the
33 appropriate rate of return (“ROR”) to be used in establishing Spire Missouri’s natural gas service
34 rates. Staff estimated the market-based cost of common equity (“COE”) for Spire Missouri using

1 a comparative COE analysis. Staff’s analysis takes into account changes in economic and capital
2 market conditions over time by employing two widely-used and well-respected COE estimation
3 methodologies: the discounted cash flow model (“DCF”) and the capital asset pricing model
4 (“CAPM”).⁴ By using the decision made by the Commission in the most recent Spire Missouri
5 rate cases as a benchmark, the comparative analysis method allowed Staff to calculate changes
6 from period to period in authorized return on equity (“ROE”).⁵ In the Amended Report and Order
7 issued March 7, 2018, in Case Nos. GR-2017-0215 and GR-2017-0216, the Commission found
8 that a 9.80% ROE was fair and reasonable for calculating revenue requirement for Spire Missouri.⁶
9 For the current rate case, Staff recommends that the Commission set Spire Missouri’s authorized
10 ROE at 9.37%, the midpoint of a reasonable range of 9.12% and 9.62%. Staff’s recommended
11 authorized ROE takes into consideration that COE fell by 43 basis points since the period of the
12 last Spire Missouri’s rate cases.⁷

13 Staff’s recommendation of a 9.37% authorized ROE will fairly compensate Spire Missouri
14 for its current market COE and balance the interests of all stakeholders, particularly considering
15 that the current market COE estimates for Spire Missouri are presently in the range of 6.40% to
16 8.10% (see App. 2, Schedule SJW-13 and Schedule SJW-14).

17 Staff also recommends that the Commission use Spire Missouri’s own capital structure of
18 54.25% common equity and 45.75% long-term debt, for purposes of setting ROR in this
19 proceeding.⁸ Among other reasons, Spire Missouri’s own standalone capital structure is the
20 appropriate capital structure for use in this proceeding because Spire Missouri has an
21 independently determined capital structure in that its debt is secured by its own assets and not the

⁴ *Ass’n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019).

⁵ COE is the return required by investors; ROE is the return set by a regulatory utility commission. Although some experts contend that COE and ROE are synonymous, Staff’s position is that they need not be. Observed utility COEs have been generally significantly lower than ROEs in recent years.

⁶ On page 35, Amended Report and Order issued March 7, 2018, in Case Nos. GR-2017-0215 and GR-2017-0216.

⁷ 43 basis points are the difference between the current DCF and CAPM estimated COEs and Spire Missouri’s last rate case (GR-2017-0215 and GR-2017-0216)’s estimated COEs. See Schedules SJW-13 and SJW-14 for more on how Staff calculated the COEs.

⁸ In the response to Staff’s Data Request No. 109.1, an inconsistency among reported actual capital structures by Spire Missouri’s witnesses is discussed. Staff’s recommended capital structure at this time is based on Spire Missouri’s projected capital structure after the placement of approximately \$225-250 million in long term debt that will be funded prior to May 31, 2021, reported by Selinger’ direct testimony (see Schedule WES-1 SCH-F). Staff’s recommendation will be updated later based on Spire Missouri’s true-up capital structure.

1 assets of its parent company, Spire Inc. (“Spire”), or any of Spire's other subsidiaries.⁹
2 Additionally, Spire Missouri’s stand-alone capital structure supports its own bond rating.¹⁰
3 Consistent with Staff’s capital structure recommendation, Staff also recommends at this time that
4 the Commission use a cost of debt value of 4.00%, resulting in the overall midpoint ROR of 6.92%,
5 taken from the calculated range of 6.78% to 7.05% (see App. 2, Schedule SJW-16).

6 Staff’s analyses and conclusions are supported by the data presented in Schedules SJW-1
7 through SJW-17 of Appendix 2. Staff’s workpapers will be provided to the parties at the time of
8 the filing of Staff’s Cost of Service Report. Staff will make any source documents of specific
9 interest available upon the request of any party to this case or to the Commission upon request.

10 **B. Analytical Frameworks**

11 The determination of a fair ROR is guided by principles of economic and financial theory
12 and by certain minimum Constitutional standards. Investor-owned public utilities, such as Spire
13 Missouri, are private property that the state may not confiscate without appropriate compensation.
14 The United States Supreme Court has described the minimum characteristics of a
15 constitutionally-acceptable ROR in two frequently-cited cases: *Bluefield Water Works &*
16 *Improvement Co. v. Public Service Commission of West Virginia*, and *Federal Power Commission*
17 *v. Hope Natural Gas Co.*¹¹

18 From these two decisions, Staff derives and applies the following principles to guide it in
19 recommending a just and reasonable ROR:

- 20 1. A return consistent with returns of investments of comparable risk;
- 21 2. A return that allows the utility to attract capital; and
- 22 3. A return sufficient to assure confidence in the utility’s financial integrity.

23 Embodied in these three principles is the economic theory of the opportunity cost of
24 investment. The opportunity cost of investment is the return that investors forego in order to invest
25 in similar risk investment opportunities that vary depending on market and business conditions.

26 Methodologies of financial analysis have advanced greatly since the *Bluefield* and *Hope*

⁹ Staff’s Data Request No. 0122.

¹⁰ S&P Global Market Intelligence.

¹¹ *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176 (1923); *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 64 S.Ct. 281, 88 L.Ed. 333 (1943).

1 decisions.¹² Additionally, today’s utilities compete for capital in a global market rather than a local
2 market. Nonetheless, the parameters defined in those cases are readily met using current methods
3 and theory. The principle of commensurate return is based on the concept of risk. Financial theory
4 holds that the return an investor may expect is reflective of the degree of risk inherent in the
5 investment, risk being a measure of the likelihood that an investment will not perform as expected
6 by that investor. Any line of business carries with it its own risks and it follows, therefore, that
7 the return Spire Missouri’s shareholders may expect is equal to that required by comparable-risk
8 utility companies.

9 COE is a market-determined, minimum return investors are willing to accept for their
10 investment in a company compared to returns on other available investments. An authorized ROE,
11 on the other hand, is a Commission-determined return granted to monopoly industries, allowing
12 them the opportunity to earn just and reasonable compensation for their investments.

13 Staff has relied primarily on the analysis of a comparable group of companies to estimate the
14 COE for Spire Missouri, applying this comparable-company approach through the use of both the
15 DCF method and the CAPM. Properly used and applied in appropriate circumstances, both the
16 DCF and the CAPM can provide accurate estimates of utilities’ COE. It is a well-accepted
17 economic theory that a company that earns its cost of capital will be able to attract capital and
18 maintain its financial integrity. Therefore, Staff’s recommended authorized ROE based on the
19 COE derived from comparison of peer companies, is consistent with the principles set forth
20 *Bluefield* and *Hope*.

21 **C. Economic and Capital Market Conditions**

22 Determining whether a cost of capital estimate is just and reasonable requires a good
23 understanding of current economic and capital market conditions, with the former having a
24 significant impact on the latter. With this in mind, Staff emphasizes that an estimate of a utility’s
25 COE should pass the “common sense” test when considering the broader current economic and
26 capital market conditions.

¹² Neither the Discounted Cash Flow (“DCF”) nor the Capital Asset Pricing Model (“CAPM”) methods were in use when those decisions were issued.

1 **1. Economic Conditions**

2 The current economic conditions look much stronger than at the beginning of last year (2020)
3 when the COVID-19 pandemic halted most economic activities. When the pandemic hit, the
4 economy was already affected by the weakening global economy, uncertainty emanating from
5 trade conflict between the U.S. and China, and the pending withdrawal (“Brexit”) of the United
6 Kingdom from the European Union.

7 According to the Bureau of Economic Analysis, gross domestic product (“GDP”) declined
8 5.0% and 31.7% in the first, and second quarters of 2020, respectively, and inclined 33.4% and
9 4.1% in the third, and fourth quarters of 2020, respectively. Annual real GDP growth in 2017,
10 2018, 2019 and 2020 measures were 2.2%, 3.0%, 2.2% and – 3.5%, respectively.¹³ Although there
11 are renewed concerns coming from new variants of the COVID-19, consensus among economists
12 is that availability of vaccines and increasing vaccination rates, as well as the economic stimulus,
13 present good prospects for a sustained economic recovery.

14 The International Monetary Fund (“IMF”) projects the U.S. economy to grow 5.1 % in 2021
15 and 2.5 % in 2022.¹⁴ In 2021, the Federal Open Market Committee (“FOMC”) projects real GDP
16 of the U.S will grow between 3.7% and 5.0%.¹⁵ The Organization for Economic Cooperation and
17 Development (“OECD”) projects the nominal GDP growth rate of the U.S. for 2021 and 2022 to
18 rise 6.5 and 4.0, respectively.¹⁶ The International Monetary Fund (“IMF”) projects averages of
19 5.5% and 4.2% global growths for 2021 and 2022, respectively.¹⁷ The FOMC’s long-run
20 projections for nominal GDP of the U.S. is about 3.8%.¹⁸

21 After declining sharply as the pandemic struck, consumer price inflation rebounded along with
22 economic activity although it remains below pre-COVID levels and the Federal Reserve System
23 (“Fed”) 2% target.¹⁹ Annual inflation, measured by Personal Consumption Expenditures (“PCE”)

¹³ Bureau of Economic Analysis, retrieved on March 18, 2021 (<https://www.bea.gov/data/gdp>).

¹⁴ International Monetary Fund, World Economic Outlook, retrieved on March 18, 2020.
(<https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update>)

¹⁵ Federal Open Market Committee, retrieved on March 18, 2021
(<https://www.federalreserve.gov/monetarypolicy/fomcprojt20210317.htm>)

¹⁶ Organization for Economic Cooperation and Development, retrieved on March 18, 2021
(https://www.oecd-ilibrary.org/economics/oecd-economic-outlook_16097408).

¹⁷ International Monetary Fund, World Economic Outlook, retrieved on March 18, 2021
(<https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update>)

¹⁸ Federal Open Market Committee, retrieved on March 18, 2021
(<https://www.federalreserve.gov/monetarypolicy/fomcprojt20200610.htm>).

¹⁹ Ibid.

1 for 2017, 2018, 2019 and 2020 was 1.7%, 1.8%, 1.4%, and 0.4%, respectively, and is expected to
2 be about 1.3% for the year 2021.²⁰

3 The labor market continued to reflect the impact of the COVID-19 pandemic. The
4 unemployment rate has continued to decline from 14.7% in April 2020 to 6.2% in February 2021.²¹
5 Although this metric is currently much lower than its April 2020 highs, the unemployment rate
6 remains well above its pre-pandemic level of 3.5% recorded in February 2020. With an improving
7 economy, the unemployment rate is expected to decline (improve) further.

8 On March 16, 2020, the FOMC decreased the Fed target funds rate (“funds rate”) to 0-0.25%.²²
9 Abrupt and widespread cessation of economic activity in the U.S. necessitated this move by the
10 Fed. But, recently, yields on 10-year Treasury notes have surged to the highest level since
11 February 2020, before the pandemic hit the U.S. economy. Rates on 30-year mortgages rose above
12 3% this month for the first time since July 2020.²³ On September 16, 2020, the Fed chairman,
13 Jerome Powell, signaled that the Fed will keep rates near zero for some time, with all 17 officials
14 present at the 2-day meeting saying they expect to keep rates near zero for at least through 2023
15 until it sees evidence of a tight labor market and inflation reaches 2%.²⁴

16 30-year treasury yields fell throughout 2017 before rising in 2018 and then falling again in
17 2019. 30-year treasury yields were 3.02% in January 2017 and 2.77% by December 2017.
18 2018 saw yields rising from 2.88% in January to 3.10% in December 2018 before falling to 1.27%
19 by April 2020 (see App. 2, Schedule SJW-4-2), and rising to 1.67% in December 2020. Abroad,
20 negative yields are common. There is more than \$16 trillion of bonds with negative yields
21 world-wide, most of them sold in the European Union and Japan.²⁵ Low interest rates abroad have
22 the effect of pushing down U.S interest rates through the force of supply and demand. Lower
23 yields abroad increase demand for U.S debt securities with the effect of lowering yields in the U.S.
24 The average 30-year Treasury bond yield for a 3-month period (April, May, and June 2017)

²⁰ Congressional Budget Office, retrieved on March 18, 2021 (<https://www.cbo.gov/publication/56465>).

²¹ Bureau of Labor Statistics, retrieved on March 18, 2021 (<https://www.bls.gov/news.release/pdf/empst.pdf>).

²² Board of Governors of the Federal Reserve System, retrieved on March 18, 2021
(<https://www.federalreserve.gov/monetarypolicy/openmarket.htm>).

²³ Wall Street Journal, retrieved on March 18, 2021

(<https://www.wsj.com/articles/fed-seen-standing-firm-on-interest-rates-bond-purchases-11615887002>).

²⁴ Wall Street Journal, retrieved on September 17, 2020

(<https://www.wsj.com/articles/fed-signals-interest-rates-to-stay-near-zero-through-2023-11600279214>).

²⁵ Wall Street Journal, retrieved on September 17, 2020

(<https://www.wsj.com/articles/in-bond-anomaly-negative-yields-bring-positive-returns-11567947602>).

1 included within the last Spire Missouri rate cases analysis was 2.90% (see App. 2,
2 Schedule SJW-4-2). The most current average 30-year Treasury bond yield is 2.07% in the
3 3-month period (January, February, and March 2021) of analysis for the current rate case
4 (see App. 2, Schedule SJW-4-3). That is a significant decrease of 83 basis points.

5 Interest rates have a strong relationship with GDP and the inflation rate. Weakening GDP
6 growth will prompt the Fed to cut interest rates as the Fed tries to stimulate the economy.
7 Weakening GDP growth also signals to investors of a weakening economy which causes investors
8 to increase demand for treasury bonds as they flee riskier securities into the safe haven of
9 government treasuries. High demand for treasury bonds causes prices to rise and yields to fall,
10 creating a low cost-of-capital environment. Weak inflation also causes concern about economic
11 growth, which prompts the Fed to cut interest rates. Although long-term utility bond yields have
12 been rising recently, they remain at historical low levels and are expected to remain low due to the
13 Fed's policy to keep interest rates low for some time. Utility bond yields are lower in the period
14 of the current Spire rate case than during the period of the last Spire Missouri rate case (see App.
15 2, Schedule SJW-4-5). With projected low GDP growth, interest rates are set to remain low and
16 continue to support a low COE environment. The takeaway is that capital is now less expensive
17 and the ROE should therefore be lower than at the time of Spire Missouri's last general rate case.
18 Staff's CAPM model, which shows that COE decreased by 34 basis points (see SJW-14), confirms
19 that the CAPM COE estimate is lower in the current period than it was during the period of the
20 last Spire rate case.

21 **2. Capital Market Conditions**

22 **a. Utility Debt Markets**

23 Interest rates are a key factor in determining a utility's COE, as stock investors demand a
24 premium return over those offered by lower-risk, interest-bearing securities, such as U.S. Treasury
25 bonds. An increase [decrease] in interest rates therefore, will increase [decrease] a utility's COE,
26 all else being equal. The current utility debt market indicates a lower cost-of-capital than the
27 period of the last Spire Missouri rate case. Utility bond yields have been on a steady decline since
28 January 2019. Average Moody's utility bond yields, as reported by Mergent Bond Record,
29 declined from 4.01% in June 2017 to 2.80% in December 2020 (see App. 2, Schedule SJW-4-1).

30 Staff compared average utility bond yields in a three-month period (April, May, and June
31 2017) within the timeframe of the last Spire Missouri rate case analysis, to a three-month period

1 (January, February, and March 2021) within the timeframe of the current case. The three-month
2 average utility bond yield was 4.13% in the last Spire Missouri rate case compared to 3.18% in the
3 current rate case, a drop of 95 basis points (see App. 2, Schedule SJW-4-1).

4 Although utilities' COEs are not perfectly correlated to changes in utility debt yields, it is
5 widely recognized in the investment community that regulated utility stocks are a close alternative
6 to bond investments and, therefore, the two values are highly correlated over time. As interest
7 rates fall, utility stock prices rise, pushing COE down as investors substitute debt for utility stock
8 in search for higher yields. Consequently, to the extent the Commission found that a 9.80%
9 authorized ROE of the last Spire Missouri rate case was reasonable, and the cost of debt
10 information was looked at in isolation, without considering COE estimation methodologies, this
11 would suggest that a value lower than the 9.80% recommended authorized ROE may be considered
12 just and reasonable for Spire Missouri's the current case.²⁶

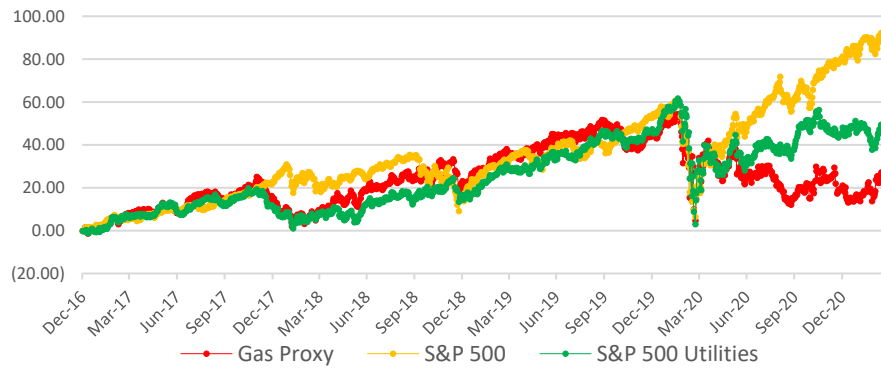
13 **b. Utility Equity Markets**

14 Utility equities have not been spared the effects of the pandemic, which saw equities fall
15 across the board. In the last three years, overall, utility equity total returns fell behind the S&P 500.
16 Over the past four years ending December 31, 2020, Staff's gas proxy group in this case
17 experienced total returns of 21.22% during the same period, well below the 81.35% and 48.18%
18 for the S&P 500 and the overall Utilities sector, respectively, for the same period.²⁷ In times of
19 economic slowdown, utility equities perform better than the overall market as investors seek the
20 'safe haven' of the utilities sector. From around October 2018 to around May 2020, the utilities
21 sector showed similar performance to the overall market, although there was a notable decline
22 starting in March 2020 in both the utilities and the overall market (see Figure 1 below). The current
23 recovery of the economy has seen both the utilities sector and the overall market rise although with
24 the utilities sector lagging. Utilities are expected to lag the overall market when the economic
25 outlook is improving, as investors feel more comfortable to seek high returns in the risky overall
26 market. The net effect of the anemic economic growth, devastating pandemic, and the robust
27 economic recovery of the past four years has led to the utilities sector lagging the overall market:

²⁶ The Commission Order Approving Stipulations and Agreements, WR-2017-0285.

²⁷ Regulatory Research Associates, S&P Global Market Intelligence.

Figure 1. Total Return 2018-2020



To further gain insight on what is happening in the utility equity market, Staff analyzed utility price to earnings (“PE”) measures. PE ratios are higher for firms with strong growth prospects, other things held constant, but they are lower for riskier firms.²⁸ Higher growth prospects increases demand for a company’s stock and all else constant, higher stock prices mean lower COE. Staff’s gas proxy group’s PE ratio for the time period (April, May, and June 2017), corresponding to the time period during the last Spire Missouri rate case, was 13.83x compared to 26.46x in the current period (January, February, and March 2021), corresponding to the time period of Staff’s analysis for the current case.²⁹

The relationship between PE ratios and COE is as follows: at any given point in time, the PE ratio gives you the price of the company (per share) divided by earnings per share. The reciprocal of this is called earnings yield – a metric comparable to dividend yield. If all other things are equal, at higher PE ratio, earnings yield (dividend yield) is lower, which translates into lower COE estimate. The net results of Staff’s DCF models indicate that COE declined by 52 basis points since the time of Spire’s last rate case.

D. Corporate Analysis

1. Business Profile

Spire Missouri is Missouri’s largest natural gas distribution utility. Spire Missouri was founded in 1857. It was formerly known as Laclede Gas Company and changed its name to Spire Missouri Inc. in 2018. Spire Missouri is a subsidiary of Spire. The following summary based on Spire’s Form 10-K filing with the United States Securities and Exchange Commission (“SEC”) in

²⁸ Fundamentals of Financial Management, Eugene F. Brigham and Joel F. Houston, (8th Edition), pg. 82

²⁹ S&P Global Market Intelligence, retrieved in March 19, 2021.

1 November 2020 provides a good description of Spire Missouri and Spire’s current business
2 operations and current organizational structure.

3 Spire Missouri operates as a public utility that engages in the purchase, retail distribution and
4 sale of natural gas, with primary offices located in St. Louis, Missouri. Spire Missouri operates as
5 a major natural gas distribution utility system in Missouri that serves approximately 1.2 million
6 residential, commercial and industrial customers across two regions, Spire Missouri East
7 (serving St. Louis and eastern Missouri) and Spire Missouri West (serving Kansas City and
8 western Missouri). For the year ended September 30, 2020, total annual average number of
9 customers for the company was 1,186,523. Spire Missouri also transports gas through its
10 distribution system for certain larger customers who buy their own gas on the wholesale market.
11 The earnings of Spire Missouri are primarily generated by the sale of heating energy.

12 Spire Missouri focuses on its gas supply portfolio around various natural gas suppliers with
13 equity ownership or control of assets situated to complement its regionally diverse firm
14 transportation arrangements. For the year ended September 30, 2020, Spire Missouri purchased
15 natural gas from 27 different suppliers to meet its total service area gas sales and storage injection
16 requirements. The principal properties of Spire Missouri consist of its gas distribution system,
17 which includes approximately 31,100 miles of main and related service lines, odorization and
18 regulation facilities, and customer meters. The mains and service lines are located in municipal
19 streets or alleys, public streets or highways, or on lands of others for which Spire Missouri has
20 obtained the necessary legal rights to place and operate its facilities on such property. Spire
21 Missouri has an underground natural gas storage facility, various operating centers, and other
22 related properties. All of Spire Missouri’s utility plant is subject to the liens of its mortgage. Spire
23 Missouri entered into firm agreements with suppliers, including both major producers and
24 marketers providing flexibility to meet the temperature-sensitive needs of its customers.

25 Spire Missouri is not publicly-traded and is totally owned by Spire that was formerly known
26 as The Laclede Group, Inc. and changed its name to Spire Inc. in April 2016. The Laclede Group,
27 Inc. was founded in 1857 and is based in St. Louis, Missouri. Total annual average number
28 of customers for Spire Missouri and Spire Alabama for the year ended September 30, 2020 was
29 1,186,523 and 424,804, respectively. Spire Gulf and Spire Mississippi are utilities engaged in
30 the purchase, retail distribution and sale of natural gas to 0.1 million customers in the Mobile,
31 Alabama area and south-central Mississippi. Spire, through its subsidiaries, engages in the

1 purchase, retail distribution, and sale of natural gas to residential, commercial, industrial, and other
2 end-users of natural gas in the United States. Spire operates in two segments, Gas Utility and Gas
3 Marketing. The first segment includes the regulated operations of Spire Missouri, Spire Alabama
4 Inc., Spire Gulf Inc., and Spire Mississippi Inc. (collectively, the “Spire Utilities”). The business
5 of the Spire Utilities is subject to seasonal fluctuations with the peak period occurring in the winter
6 heating season, November through April of each year. It is also involved in the marketing of
7 natural gas; and provision of energy services on non-regulated basis to on-system utility
8 transportation customers, as well as to retail and wholesale customers. In addition, Spire engages
9 in the transportation of propane through its propane pipeline; compression of natural gas; risk
10 management; and other activities. Further, it provides physical natural gas storage services

11 **2. Credit Ratings**

12 Spire Missouri receive an individual credit rating as a stand-alone entity. Spire Missouri are
13 currently rated by Moody’s and Standard & Poor’s (“S&P”). The corporate credit ratings assigned
14 to Spire Missouri by Moody’s and S&P are ‘A1’ and ‘A–’, respectively.³⁰ These ratings are higher
15 than or equal to natural gas utilities’ average bond ratings A3 and A– characterized by Moody’s
16 and S&P, respectively.³¹ The corporate credit ratings assigned to Spire by Moody’s and S&P are
17 ‘Baa2’ and ‘A–’, respectively.³²

18 **E. Rate of Return Analysis**

19 In order to arrive at Staff’s recommended ROR, Staff specifically examined and evaluated:
20 (1) the estimated COEs in the current and recent Spire Missouri rate cases; (2) the just and
21 reasonable range of authorized ROE agreed in the most recent Spire Missouri rate case; (3) the
22 appropriate ratemaking capital structure; and (4) the current embedded cost of debt.

23 **1. Cost of Common Equity**

24 Staff estimated Spire Missouri’s COE through a comparable company cost-of-equity analysis
25 using a proxy group of gas utility companies, applying the DCF model and CAPM analysis and
26 testing the reasonableness of the result with other methods. Staff compared the DCF and CAPM

³⁰ S&P Global Market Intelligence, retrieved March 19, 2021 (<https://platform.marketintelligence.spglobal.com>).

³¹ Ibid.

³² Ibid.

1 COE estimates from the current and the last Spire Missouri rate cases. Combining these COE
2 estimates and applying them proportionately allowed Staff to estimate a sensible range of
3 recommended authorized ROEs. Additionally, Staff used a survey of other indicators and
4 compared its recommendation to recently authorized ROEs in other Commission jurisdictions as
5 a check of the reasonableness of its recommendation.

6 **a. The Proxy Group**

7 Staff used a proxy group consisting of U.S. utilities that Value Line classifies as Gas Utilities.
8 Staff screened seven companies (see App. 2, Schedule SJW-9) by ensuring that companies:

- 9 • are publicly traded;
- 10 • have more than five years of financial data available;
- 11 • have investment grade credit ratings from major U.S. credit rating agencies;
- 12 • have long-term growth coverage from at least two analysts;
- 13 • have no pending merger or acquisitions;
- 14 • have not reduced dividends since 2015;
- 15 • have at least 65% of income from regulated operations; and
- 16 • have at least 65% of assets in gas distribution operations.

17 The seven gas utilities met these criteria are presented in Table 1:

18 Table 1. Gas Utility Proxy Group

Gas Utility Companies	Ticker
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
Northwest Natural Holding Company	NWN
ONE Gas, Inc.	OGS
South Jersey Industries, Inc.	SJI
Southwest Gas Holdings, Inc.	SWX
Spire Inc.	SR

19
20 **b. DCF**

21 Staff started its evaluation of the gas utility industry's COE by applying values derived from
22 the proxy group to the constant growth rate DCF model. The DCF model is widely used by

1 investors to evaluate stable-growth investment opportunities, such as regulated utility companies.
2 The premise of the DCF model is that an investment of common stock is worth the present values
3 of the infinite streams of dividends discounted at a market rate commensurate with the
4 investment's risk. Using the following formula of the DCF model, the investors determine
5 common stock price:

$$P = D / (k - g),$$

7 where P is the common stock price,

8 D is the current dividend,

9 k is investors' required return from the stock, and

10 g is the expected growth rate in dividends.

11 In rate cases, the investors' required return from the stock could be considered to be the
12 expected market COE of utility stock investors. Staff uses an adjusted dividend yield $(1 + .5g)D$
13 to account for the fact that the dividends are paid on quarterly basis. For growth rate, Staff uses
14 analysts' short-term projected dividends per share ("DPS") growth estimates and long-term GDP
15 growth estimates, combined together into a single growth rate, at two-third (2/3) Value Line's
16 projected growth rates of DPS and one-third (1/3) long-term projected GDP growth estimates
17 weights (see App. 2, Schedule SJW-11). It is important that the growth rate used in Staff's
18 constant-growth DCF model reflects the long-term investment horizon assumption implied in the
19 constant-growth DCF model. The Federal Energy Regulatory Commission ("FERC") also agreed
20 as much when it ruled, in Opinion 569, that exclusive use of short-term analysts' growth rates in
21 the constant-growth DCF was inappropriate.³³ The COE estimate using the above formulation of
22 the constant growth rate DCF can be expressed as follows:

$$k = (1 + .5g)D / P + g.$$

24 For the current rate case, the proxy group DCF analysis resulted in a DCF COE estimate
25 range of 7.60% to 9.01% with a proxy group average COE point estimate of 8.10% (see App. 2,
26 Schedule SJW-13). For the last Spire Missouri rate case, Staff recalculated the proxy group's COE

³³ *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019).

1 using the constant growth rate DCF analysis. Staff recalculated the last Spire Missouri’s DCF
2 COE in the view of Commission’s rejection of Staff’s recommended growth rate assumption as
3 being unclear. Staff’s recalculated DCF also reflects the Commission’s higher authorized ROE of
4 9.80% compared to Staff’s lower recommended authorized ROE in Spire Missouri’s last rate cases
5 of 9.25%.³⁴ The recalculation resulted in a DCF COE range of 6.20% to 9.54% with a proxy
6 group average COE point estimate of 8.61% (see App. 2, Schedule SJW-13). Based on a
7 comparative DCF analysis, the COE estimate has decreased by 52 basis points from the last Spire
8 Missouri rate cases.

9 **c. CAPM**

10 In addition to the DCF, Staff used the CAPM to estimate Spire Missouri’s COE. The CAPM
11 is built on the premise that the variance in returns over time is the appropriate measure of risk, but
12 only the non-diversifiable variance (systematic risk) is rewarded. Systematic risks, also called
13 market risks, are unanticipated events that affect almost all assets to some degree because the
14 effects are economy wide. Systematic risk in an asset, relative to the average, is measured by the
15 beta of that asset.³⁵ Unsystematic risks, also called asset-specific risks, are unanticipated events
16 that affect single assets or small groups of assets. Because unsystematic risks can be freely
17 eliminated by diversification, the appropriate reward for bearing risk depends on the level of
18 systematic risk.

19 The CAPM shows that the expected return for a particular asset depends on pure time value
20 of money (measured by the risk free rate), the amount of the reward for bearing systematic risk
21 (measured by the market risk premium (“MRP”)), and the amount of systematic risk incurred by
22 the asset (measured by beta). Specifically, the CAPM methodology estimates the cost of equity
23 by taking the risk-free rate and adding to it the MRP multiplied by beta.³⁶ The MRP is calculated
24 by subtracting the risk-free rate from the expected market return. The general form of the CAPM
25 is as follows:

³⁴ On page 29 and page 33, Amended Report and Order issued March 7, 2018, in Case Nos. GR-2017-0215 and GR-2017-0216.

³⁵ Beta is a measure of the volatility—or systematic risk—of a security or portfolio compared to the market as a whole. (Investopedia, retrieved November 5, 2020).

³⁶ Roger A. Morin, *New Regulatory Finance* (Public Utilities Reports, Inc. 2006).

1
$$k = R_f + \beta(R_m - R_f)$$

2 where, k is the expected return on equity for a security,

3 R_f is the risk-free rate,

4 R_m is the expected market return,

5 β is beta, and

6 $R_m - R_f$ is the MRP.

7 For the risk-free rate, Staff used the average yield on 30-year U.S. Treasury bonds for the
8 three-month period ending March 31, 2021; that figure was 2.07% for this case but it was 2.90%
9 for Spire Missouri’s 2017 rate case. For beta, Staff relied on estimates directly calculated through
10 an Excel spreadsheet designed specifically to be used with the SNL database of market and
11 financial information.³⁷ MRP can vary widely depending on estimating methodology. For the
12 MRP estimate, Staff relied on three sets of data sources. First data set is the long-term geometric
13 mean of historical return differences between large company stocks and long-term government
14 bonds from 1926-2016 and 1926-2019, and those MRP estimates are 4.5% and 4.7%,
15 respectively.³⁸ The second data set is the long-term arithmetic mean of historical return differences
16 between large company stocks and long-term government bonds from 1926-2016 and 1926-2019,
17 and those MRP estimates are 6.0 % and 6.1%, respectively.³⁹ The third data set is the long-term
18 geometric mean of historical return differences between S&P 500 and long-term government
19 bonds from 1928-2017 and 2028-2020, and those MRP estimates are 4.83% and 4.84%,
20 respectively⁴⁰ The fourth data set is the long-term arithmetic mean of historical return differences
21 between S&P 500 and long-term government bonds from 1928-2017 and 2028-2020, and those
22 MRP estimates are 6.38% and 6.43%, respectively.⁴¹

³⁷ Staff still believes Value Line’s beta calculation methodology is proper to use a CAPM analysis. Staff’s beta is consistent with Value Line’s beta calculation methodology. Consistent with Value Line’s approach to calculating beta, Staff used 5-years of historical weekly returns of the subject company and the New York Stock Exchange (“NYSE”) index. The covariance of the weekly returns on the NYSE index and the weekly returns on the subject company is divided by the variance of the weekly returns on the NYSE index to determine raw beta (unadjusted beta). Staff then adjusted the raw beta using the Blume adjustment formula as used by Value Line: Adjusted Beta = (1/3) + (2/3)(Unadjusted Beta) (*see* Pinto, J. E., Henry, E., Robinson, T. R., Stowe, J. D., & Cohen, A. (2010). *Equity Asset Valuation*, CFA Investment Series.).

³⁸ Duff & Phelps 2020 Valuation Handbook: Guide to Cost of Capital.

³⁹ *Ibid.*

⁴⁰ Risk Premium, Damodaran Online, Stern School of Business, NYU.

⁴¹ *Ibid.*

1 For the current rate case, the proxy group CAPM analysis resulted in a CAPM COE estimate
2 range of 5.87% to 6.85% with a proxy group average COE point estimate of 6.40% (see App. 2,
3 Schedule SJW-14). For the last Spire Missouri rate case, the recalculated proxy group’s CAPM
4 analysis resulted in a CAPM COE range of 6.07% to 7.13% with a proxy group average COE point
5 estimate of 6.74% (see App. 2, Schedule SJW-14).⁴² Based on a comparative CAPM analysis, the
6 COE estimate has decreased by 34 basis points from the last Spire Missouri rate cases.

7 **d. Tests of Reasonableness**

8 A “rule of thumb” risk premium method allows an objective test of individual analysts’ COE
9 estimates.⁴³ The COE is estimated by simply adding an equity risk premium to the
10 yield-to-maturity (“YTM”) of the subject company’s long-term debt. Based on general
11 U.S. capital-market experience and regulated utilities, the typical equity risk premium is in the
12 3% to 5% range.⁴⁴ This is especially true considering that regulated utility stocks behave like
13 bonds. For the three months ended through March 31, 2021, “A” rated and “Baa” rated long-term
14 utility bonds had average yields of 3.15% and 3.42% respectively.⁴⁵ Adding a 3% risk premium,
15 the “rule of thumb” indicates a cost of common equity between 6.15% and 6.42%. Adding a
16 5% risk premium, the “rule of thumb” indicates a cost of common equity between 8.15%
17 and 8.42%. Overall, the “rule of thumb” indicates that a range of COE estimates of 6.40% to
18 8.10% is reasonable.

19 In addition, U.S. Treasury yields and utility bond yields are quite low (at levels last
20 experienced in the early 1960s) and the spread between them is presently below their long-term
21 average (see App. 2, Schedule SJW-4-4). Lower U.S. Treasury yields, and a narrower spread
22 between U.S. Treasury yields (risk-free rate) and utility yields (see App. 2, Schedule SJW-4-2)
23 mean that investors are requiring lower risk premiums, which consequently means that investors
24 are requiring lower returns.⁴⁶ Therefore, it is common sense in today’s capital market environment
25 that investors are only requiring lower returns, in the 6 to 9 percent range, on their utility common

⁴² This recalculation using the same methodology allows Staff apples to apples comparison.

⁴³ Stowe, J. D., Robinson, T. R., Pinto, J. E., & McLeavey, D. W. (2002) Analysis of Equity Investment: Valuation. Association for Investment Management and Research.

⁴⁴ CFA Institute, retrieved on March 18, 2021, (<https://www.cfainstitute.org/en/programs/cfa/policies>), and Roger A. Morin, New Regulatory Finance (Public Utilities Reports, Inc. 2006).

⁴⁵ Mergent Bond Record, January 2021.

⁴⁶ Morin, R. A. (2006) New Regulatory Finance. Public Utilities Reports.

1 equity investments rather than the historical average returns. As Staff explained in its discussion
2 of other tests of reasonableness, these COE estimates are consistent with common sense tests.
3 Therefore, Staff’s DCF and CAPM calculations resulting in a COE estimate of 6.40% to 8.10%
4 are reasonable.

5 **2. Return on Equity**

6 **a. Authorized ROE**

7 In Spire Missouri’s most recent rate cases, the Commission determined, that for the purpose
8 of calculating the revenue requirement, an authorized ROE of 9.80% was reasonable.⁴⁷ Based on
9 an average of the results of Staff’s DCF and CAPM analysis, the point COE estimate of the Spire
10 Missouri’s last rate case was 7.68%.⁴⁸ With the same proxy group, Staff’s DCF and CAPM analysis
11 in the current Spire Missouri case results in a COE point estimate of 7.25%. The difference
12 between the two COEs is 43 basis points, meaning that COE has declined by 43 basis points since
13 the last Spire Missouri case. If there is no significant change of the Commission’s perspectives on
14 the relationship between the COE estimate and the authorized ROE, it is reasonable to conclude
15 that the current authorized ROE should be set approximately 43 basis points lower than the
16 authorized ROE of 9.80% in the last Spire Missouri case. Considering all of the above information
17 that Staff has reviewed, Staff recommends the Commission authorize an ROE of 9.37% for Spire
18 Missouri in this proceeding.

19 **b. Comparison of Authorized ROEs**

20 Staff recognizes that the Commission may also be interested in recent authorized ROEs for
21 other gas utility companies throughout the country. Table 2 presents information compiled and
22 published by Regulatory Research Associates (“RRA”) which details the average authorized
23 ROE’s from Commissions around the U.S. in the years 2010 - 2021, along with the number of
24 cases considered:

⁴⁷ Amended Report and Order issued March 7, 2018, in Case Nos. GR-2017-0215 and GR-2017-0216.

⁴⁸ Staff recalculated this COE using the same methodology for the proper comparison analysis.

Table 2. Authorized ROEs of Utility Rate Cases (2010-2021)⁴⁹

Year	<u>Natural Gas</u>				<u>Electric</u>			
	<u>Fully Litigated</u>		<u>Settled</u>		<u>Fully Litigated</u>		<u>Settled</u>	
	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>
2010	10.08	27	10.30	12	10.35	27	10.39	34
2011	9.76	8	10.08	8	10.39	26	10.12	16
2012	9.92	21	9.99	14	10.28	29	10.06	29
2013	9.59	12	9.80	9	9.85	17	10.12	32
2014	9.98	15	9.51	11	10.05	21	9.73	17
2015	9.58	5	9.60	11	9.66	16	10.04	15
2016	9.61	10	9.50	16	9.74	25	9.80	17
2017	9.82	7	9.68	17	9.73	24	9.75	29
2018	9.59	17	9.59	23	9.63	22	9.57	26
2019	9.74	12	9.70	20	9.58	27	9.76	20
2020	9.44	12	9.47	22	9.43	32	9.46	23

In 2017, gas utility fully litigated authorized ROEs averaged 9.82%, compared to the 9.44% average ROE in gas utility rate cases completed in 2020.⁵⁰ The average settled ROE authorized for natural gas utilities was 9.68% in 2017 and 9.47% in cases decided during 2020.⁵¹ The average overall ROE authorized for natural gas utilities was 9.72% in 2017 and 9.46% in 2020.⁵² Staff’s recommended authorized ROE of 9.37% is in line with the current level of authorized ROEs.

Staff issued Data Request No. 0119 to Spire Missouri to request authorized returns for each of Spire’s subsidiaries. Spire Alabama Inc., Spire Gulf, and Spire Mississippi utilize formula rate structures to adjust their cost of service in rates. Spire Alabama currently has a 10.4% authorized ROE, Spire Gulf currently has a 10.7% authorized ROE, and Spire Mississippi currently has a 10.03% authorized ROE. Since these sister utilities have operated under “formula rate plans” for decades and their rates are not set through a traditional rate case process, those higher authorized ROEs are not directly comparable to Spire Missouri’s authorized ROE. These alternative ratemaking approaches vary significantly from the State of Missouri’s approach. The cost of debt under each state’s regulatory framework is utilized for interest expense

⁴⁹ Regulated Research Associates, S&P Global Market Intelligence, Retrieved September 22, 2020.

⁵⁰ S&P Global Market Intelligence.

⁵¹ Ibid.

⁵² Ibid.

1 purposes and not to calculate rate of return; accordingly, these utilities do not have a traditional
2 weighted average cost of capital (“WACC”).⁵³

3 **3. Capital Structure**

4 In the last general rate cases, the Commission ordered that Spire Missouri’s standalone capital
5 structure be used for ratemaking purpose. There has not been any discernible change to Spire
6 Missouri’s or Spire’s capital structure policies since the last rate cases to cause Staff not to be
7 consistent with the Commission’s last decision. As discussed below, the following reasons relied
8 upon by the Commission in determining the appropriate ratemaking capital structure for Spire
9 Missouri still apply in the current case.

10 First, Spire Missouri operate as an independent entity, when considering Spire
11 Missouri’s procurement of financing and the cost of that financing. Spire is not the primary source
12 of long-term and short-term debt financing for Spire Missouri and this appears to continue to be
13 the case. Since January 2018, Spire Missouri has not received long-term financing from Spire, Inc.
14 or other Spire subsidiaries.⁵⁴

15 Second, Spire Missouri’s stand-alone capital structure support its own credit rating.⁵⁵ The
16 debt is rated by credit rating agencies based on the stand-alone credit quality of Spire Missouri.
17 Therefore, the cost of any debt that Spire Missouri will be based on the Spire Missouri’s
18 creditworthiness. Actually, some rating agencies rated Spire Missouri’s credit rating higher
19 than Spire’s. For example, the corporate credit ratings assigned to Spire Missouri by Moody’s is
20 ‘A1’ while Spire is rated ‘Baa2’ that is two notches lower.

21 Third, Spire is primarily a regulated gas distribution utility, meaning that the business risks of
22 Spire are similar to those of Spire Missouri in terms of sector risk. If the business risks of the
23 parent company are similar to those of the subsidiary, then each entity should be able to incur
24 similar amounts of financial risk. Presumably, this should cause their capital structures to be fairly
25 similar. As of September 30, 2019, Spire’s SEC Form 10-K filings indicate that both Spire and
26 Spire Missouri have around 44 percentage of long-term debt percentage in its capital structure.
27 According to Spire Missouri’s response to Staff Data Request No. 0119, Spire Alabama and Spire
28 Gulf currently have equity capital limit of 55.5 percent, and Spire Mississippi utilizes a

⁵³ Staff’s Data Request No. 0119.

⁵⁴ Staff’s Data Request No. 0112.

⁵⁵ Staff’s Data Request No. 0058.

1 hypothetical capital structure of 50 percent of common equity and 50 percent of long-term debt.
2 In other words, Staff does not find any reasons that Spire Missouri's stand-alone capital structure
3 should not be used for ratemaking purposes.

4 For these reasons, Staff recommends the Commission to set Spire Missouri's rate of return
5 based on Spire Missouri's capital structure. The capital structure Staff used for this case is Spire
6 Missouri's stand-alone capital structure composed of 54.25 percent common equity and 45.75
7 percent long-term debt that is based on Spire Missouri's pro forma capital structure after the
8 expected placement of approximately \$225-250 million in long term debt that will be funded prior
9 to May 31, 2021.⁵⁶ Schedules SJW-5-1 and SJW-5-2, attached as Appendix 2 to this Report and
10 incorporated by reference herein, presents Spire and Spire Missouri's historical capital structures
11 and the associated capital ratios. Staff will keep monitoring Spire and Spire Missouri's updated
12 capital structure through the end of the true-up period and will update its final recommendation to
13 actual values at that time.

14 **4. Embedded Costs**

15 For purposes of setting Spire Missouri's ROR, Staff recommends at this time the use of Spire
16 Missouri's projected embedded cost of debt in its direct testimonies, which is 4.00% instead of
17 Spire Missouri's embedded cost of debt, which is 4.02% as of December 31, 2010.⁵⁷ Again, Staff
18 will update its recommended cost of debt later in this case to reflect Spire Missouri's actual
19 embedded cost of debt as of the end of the true-up period.

20 **F. Conclusion**

21 Considering all of the above financial and economic information Staff has reviewed, and
22 taking into account the evidence that supports the conclusion that the cost of common equity for
23 gas utility companies has declined by 43 basis points since the last Spire Missouri rate case, Staff
24 concludes that an authorized ROE of 9.37% is just and reasonable with a range of reasonableness
25 of 9.12% to 9.62%. However, Staff will keep monitoring the financial market condition. Because
26 of the currently rapidly changing economic outlook, Staff's recommended authorized ROE will be
27 updated when the proper data is available.

⁵⁶ Staff's Data Request No. 0109.1.

⁵⁷ Selinger and D'ascendis' Direct Testimonies and Staff's Data Request No. 0111.

1 Using an authorized ROE of 9.37% results in an authorized ROR of 6.92%
2 (see App. 2, Schedule SJW-16) combined with embedded costs of debt of 4.00, applied to a capital
3 structure consisting of 45.75 percent long-term debt and 54.25 percent common equity.

4 *Staff Expert/Witness: Seoung Joun Won, PhD*

5 **VI. Rate Base**

6 **A. Plant in Service and Depreciation Reserve**

7 Staff recommends plant-in-service (“Plant”) and accumulated depreciation reserve
8 balances be based on actual booked amounts as of the end of the update period,
9 December 31, 2020, and on May 31, 2021, booked amounts for the true-up in this case. These
10 booked amounts include plant additions that have occurred since the test year ending
11 September 30, 2020, and the related depreciation reserve balances. At the time of the true-up
12 audit, adjustments to the plant and reserve balances used by Staff for its direct filing will be
13 updated to include amounts for plant additions that have become fully operational and used
14 for service as of May 31, 2021, the ending point of the true-up. Staff will also include depreciation
15 reserve balances related to all plant, including those additions and retirements. Plant must be
16 “fully operational and used for service” before it is appropriate to reflect that plant and its
17 associated reserve in rates.

18 Plant and Depreciation Reserve are two of the largest components of Rate Base. Plant
19 represents the structures and equipment used by the utility to provide service to ratepayers. In the
20 balance sheet, plant is often referred to as “fixed assets.” The depreciation reserve represents the
21 sum of all depreciation accruals, net of cost of removal and salvage charges, which have been
22 recorded in the Depreciation Reserve, representing the amount of plant investment that has
23 already been recovered in rates from customers. Depreciation Reserve is an offset to Plant and
24 is a subtraction from plant in the determination of rate base; the resulting balance is known as
25 “net plant.”

26 The Spire East and Spire West plant identified on the Plant In Service, Staff’s
27 Accounting Schedule 3, and the accumulated depreciation reserve, identified on Depreciation
28 Reserve, Staff’s Accounting Schedule 6, respectively, reflect Spire East’s and Spire West’s
29 balances by account for these items as of December 31, 2020, the end of the test year update period
30 in this proceeding. These schedules include plant additions that have occurred since the end of the

1 September 30, 2020, test year and all depreciation reserve accruals that have been booked by
2 Spire East and Spire West through December 31, 2020. The information in Accounting Schedules
3 3 and 6 for plant and reserve is shown by Federal Energy Regulatory Commission (“FERC”)
4 Uniform Systems of Accounts for each plant category, broken out by distribution, production,
5 underground gas storage, other storage, transmission, and general plant.

6 Staff requested the plant and reserve amounts by FERC account and plant and reserve
7 information that came directly from the Power Plant record system for both Spire East and Spire
8 West. Spire uses an accounting package for plant records called Power Plant, commonly used by
9 most of the major utilities operating in Missouri. As such, the plant and reserve information
10 contained in Staff’s Accounting Schedules 3 and 6 by individual plant categories and FERC
11 accounts are those that directly tie back to the books and records of Spire East and Spire West.

12 It is necessary for both Spire and Staff to make adjustments to the plant reserve balances
13 to account for retirement work in progress (“RWIP”). RWIP is retired plant that has not yet been
14 classified for certain components of depreciation, namely cost of removal and salvage. While the
15 actual plant is retired and removed from plant balance and the related reserve, the plant has not
16 been physically disassembled, so the cost of removal and salvage components of depreciation are
17 still included in the reserve. As a result, Spire East’s and Spire West’s books overstate the reserve
18 for this retired plant that is no longer serving utility customers. Because a plant that is no longer
19 being used for utility service is removed from rate base, it is also necessary to make a
20 corresponding adjustment to remove from the reserve balances the cost of removal and salvage
21 amounts for the retired plant. Staff included a line item in the Accumulated Depreciation schedule,
22 identifying the RWIP amount relating to this retired plant.

23 Depreciation expense is based on Staff witness David T. Buttig’s recommended
24 depreciation rates that were applied to the plant balances as of December 31, 2020. This will be
25 further discussed under the heading of Depreciation Expense, in the Income Statement section of
26 Staff’s Cost of Service Report.

27 *Staff Expert/Witness: Jeremy Juliette*

28 **B. Advanced Metering Technology**

29 Spire Witness Scott Weitzel’s direct testimony states that “Spire is installing advanced
30 metering technology to improve metering quality and provide enhanced safety. These investments

1 in new technology allow Spire to provide smarter, safer, and more efficient service to our
2 customers.” (Page 9. Lines 5-7).

3 The Company included \$4,419,631 in Account 381.100 Smart Meters and \$919,416 in
4 Account 382.100 Smart Meter Installations for Spire Missouri West and \$0 in Account 381.100
5 Smart Meters and \$0 in Account 382.100 Smart Meter Installations for Spire Missouri East through
6 December 31, 2020.

7 Staff has not been provided sufficient evidence that the amount recorded is associated with
8 plant that is “used and useful.” The proposed additions to rate base have been excluded as Staff
9 continues its investigation of the decision to install the meters and justification of the costs.

10 *Staff Expert/Witness: J. Luebbert*

11 **C. Excess Forest Park Relocation Funds**

12 In Spire’s last general rate case, Case No. GR-2017-0215, Staff’s investigation revealed
13 that Spire East sold property that contained one of its service centers (referred to as the Forest Park
14 property) and partially replaced it with another service center (referred to as the Manchester
15 facility) while also relocating its corporate headquarters. As part of the sale of the Forest Park
16 property, Spire East received funds from the buyer to relocate its employees and equipment to
17 other facilities.

18 To account for the ratemaking impacts of the transaction, the Commission ordered Spire
19 in GR-2017-0215 to adjust its depreciation reserve so that ratepayers would not continue to pay
20 for the sold assets. Staff’s investigation in this case confirmed that Spire increased its depreciation
21 reserve by \$1.8 million to comply with the Commission’s order.

22 Regarding the funds Spire received to relocate, the Commission ordered:

23 The Commission adopts the Staff’s proposal that Spire Missouri shall create
24 a regulatory liability to record the rate base offset of the relocation expense
25 which shall be amortized over five years beginning with the date the rates
26 set in this case become effective.⁵⁸

27 In reviewing the documents from Spire’s last case, GR-2017-0215, particularly the
28 accounting schedules supporting the ordered revenue requirement, Staff notes that a rate base

⁵⁸ Page 25 of Case No. GR-2017-0215 Amended Report and Order.

1 offset was included in the final accounting schedule for Spire East⁵⁹ but it was not properly
2 amortized to expense. Furthermore, Spire's books and records show that it did not create a
3 regulatory liability and Spire did not amortize the liability over five years as ordered by
4 the Commission. As a result of these oversights, Spire is still in possession of approximately
5 \$3.6 million of funds that were ordered to be returned to ratepayers. Accordingly, Staff has
6 included the \$3.6 million as a rate base deduction in the current case to recognize the amount of
7 cost-free funds retained by Spire at December 31, 2020. Staff recommends implementing the
8 Commission's guidance ordered in GR-2017-0215 as a part of this case and has accordingly
9 included an appropriate amount of amortization expense.

10 *Staff Expert/Witness: Matthew R. Young*

11 **D. Propane Investment**

12 Spire East maintains a Natural Gas Liquids (NGL) pipeline that supports shipment of liquid
13 propane from the underground propane cavern located at the Underground Storage (UGS) property
14 in Florissant, Missouri to vaporization facilities at UGS and in South St. Louis at the Catalan Plant.
15 Spire East also receives revenues in the form of storage fees from Conoco Phillips. The contract
16 for these revenues was recently renewed effective April 1, 2021.

17 Historically, Spire East proposed to treat the propane assets and the related revenues and
18 expenses below the line (not included in regulated cost of service calculation). As part of the
19 resolution of Case No. GR-2013-0171, section 14 of the *Stipulation and Agreement*, approved by
20 the Commission on June 26, 2013⁶⁰, addressed the propane related issues as follows:

21 The Parties agree that Laclede's propane cavern and associated
22 equipment and any associated revenues, expenses and investment shall be
23 accounted for "above the line" (meaning that it shall be included in the
24 regulated cost of service calculation) for ratemaking purposes. Revenues
25 shall include, but not be limited to; funds received for use of the propane
26 cavern and associated equipment in any manner whatsoever and also all
27 funds received from the sale of propane inventory. Such accounting
28 treatment shall be without prejudice to the rights of any Party to assert in
29 subsequent rate case proceedings whatever position they believe is
30 appropriate regarding the proper regulatory treatment of propane
31 related issues. As part of the settlement of this rate case proceeding, if
32 Laclede seeks different regulatory treatment than as set forth above for

⁵⁹ Filed in EFIS in Case No. GR-2017-0215/0216 on March 21, 2018.

⁶⁰ GR-2013-0171, Order Approving Unanimous Stipulation and Agreement, June 26, 2013.

1 Laclede’s propane cavern and associated equipment, including all
2 associated revenues, expense and investment prior to its next rate case it
3 agrees to file a request before the MPSC for approval of its proposed
4 treatment, provided that as part of its request for approval Laclede may also
5 seek a Commission determination that its intended treatment may be
6 implemented without further action by the Commission. At the time it
7 makes its filing for different regulatory treatment, Laclede Gas Company
8 will provide a study and all financial and operation justification for the
9 determination and proposed change to the regulatory treatment compared to
10 other alternatives it considered (e.g. reduction of other capacity and peaking
11 supply contracts). Such study shall include related impacts on Laclede Gas
12 Company’s cost of service (including gas costs for its customers). All
13 parties agree that this agreement does not have any precedential value in
14 any current or future case or to any other instance where Laclede may seek
15 to dispose of utility assets that it believes are no longer used and useful for
16 the provision of utility service.

17 ** [REDACTED]

18 [REDACTED] ⁶¹. ** As part of the resolution of Case No.
19 GR-2017-0215, section 12 of the *Partial Stipulation and Agreement*, approved by the Commission
20 on March 7, 2018⁶², addressed the propane related issues as follows:

21 The Parties agree that Paragraph 14 of the Stipulation and Agreement
22 approved by the Commission in LAC’s last rate case proceeding, Case No.
23 GR-2013- 0171, pertaining to “Propane-Related Issues”, as set forth in
24 Attachment 3 to this Partial Stipulation and Agreement shall remain in full
25 force and effect.

26 Consistent with Staff’s treatment of these assets historically, Staff continues to maintain
27 that the propane assets can still serve Spire East customers and has included the investment and
28 reserve balances associated with this investment and the propane inventory balance through
29 December 31, 2020, which represents the update cutoff period established as part of this rate
30 proceeding. Accordingly, Staff also included in the Spire East cost of service calculation liquid
31 propane-related operating expenses and propane related revenues that occurred during the test year
32 ending September 30, 2020.

33 *Staff Expert/Witness: Karen Lyons*

61 ** [REDACTED] **

62 Case No. GR-2017-0215, Commission Amended Report and Order, filed on March 7, 2018.

1 **E. Lambert Airport Compressed Natural (“CNG”) Fuel Station**

2 Spire CNG, Inc., a subsidiary of Spire Inc. constructed and owned two CNG stations for public
3 use starting in 2014. The stations are located in St. Louis County, Missouri, near St. Louis Lambert
4 International Airport, and Greer, South Carolina. In the quarter ending June 30, 2020, Spire Inc.
5 recorded impairment charges totaling \$7.8 million related to these stations as a result of revised
6 projections reflecting lower diesel prices and slower conversions of Class 8 vehicles. The fair
7 values used in measuring the impairment charges were determined with an expected present value
8 technique using a discounted cash flow method under an income approach. Both stations
9 remain fully operational as designed. Spire Missouri purchased the Lambert CNG station from
10 Spire CNG, Inc. for the reduced value after the impairment charge in December 2020.
11 The purchase price was ** [REDACTED] **, reduced from the net book value as non-utility property
12 of ** [REDACTED] **.

13 This transaction is subject to the Commission’s Affiliate Transaction Rules as set forth in
14 20 CSR 4240-40.015. Subject to those rules, asset transfers from an affiliate to a utility are to be
15 recorded at the lower of fair market value or fully distributed cost. Prior to the purchase, Spire
16 Missouri sought to expand CNG fueling capacity at its Berkeley service center which is in the
17 vicinity of the Lambert CNG station. The affiliate-owned Lambert CNG station was a unique
18 asset that has value to Spire Missouri. Spire CNG, Inc. examined various factors to determine the
19 fair value of the station in calculation of the impairment charge including comparable
20 transactions and scrap value. In examination of the calculations, Staff does not take issue with
21 either the reduced value or the reliance on that value for an approximate fair market value. In
22 reviewing the transaction and the reduced valuation, Staff finds the transaction is consistent with
23 20 CSR 4240-40.015 and recommends inclusion of the Lambert CNG assets in rate base.

24 *Staff Expert/Witness: Keith Majors*

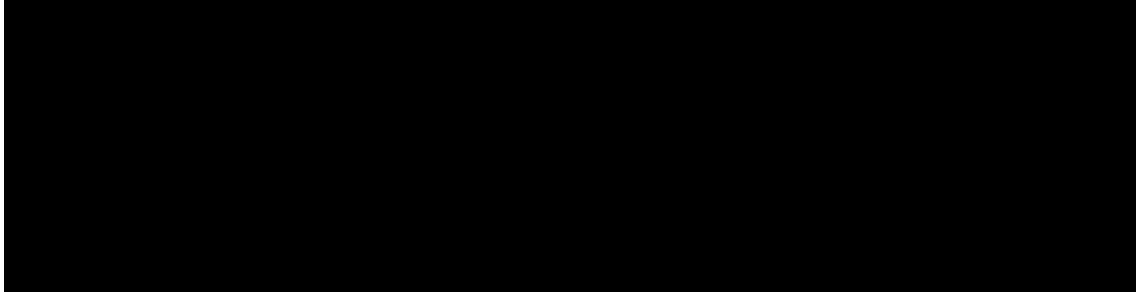
25 **F. Certificates of Convenience and Necessity (Spire West)**

26 Since Spire’s last rate case the Commission has approved a total of seven⁶³ Certificates of
27 Convenience and Necessity (CCNs) for Spire Missouri West. The revenue requirement associated
28 with each approved CCN was subject to review in the Company’s next general rate proceeding.

⁶³ GA-2019-0210, GA-2019-0214, GA-2019-0226, GA-2020-0105, GA-2020-0235, GA-2020-0236, GA-2021-0010.

1 During the test period in this case, Spire had completed four of the seven CCN extensions.⁶⁴ Staff
2 reviewed the actual costs of the four completed extensions. The table below shows a summary of
3 the four completed extensions.

4 **



5
6 **

7 The line extension for Case No. GA-2019-0210 is the only line extension where the Company
8 intends to only serve one customer. As shown in the table above, the level of capacity installed for
9 line extensions in Case Nos. GA-2020-0235, GA-2020-0105 and GA-2019-0226 far exceeds the
10 level of capacity currently utilized by the customer(s) served on the extension, due to the
11 Company's future expectations for growth on the line. However, the Company's plans for
12 additional customers to take service from the new main extensions have not materialized to date.
13 Staff will review new customer growth from the line extensions through the true-up period ending
14 May 31, 2021.

15 Without the expected customer growth, three of the Company's four completed line
16 extensions are not cost effective at this time. Staff recommends an "excess capacity" adjustment
17 based on the percentage of capacity utilized at this time. The adjustment will result in a reduction
18 to the plant and depreciation reserve balances. As part of Staff's recommendation, the amount
19 of the Company's current plant and depreciation reserve balances that are deemed to be excess
20 capacity should be moved into the "plant held for future use" account (Account No. 105) for
21 possible recovery in a future case.

22 *Staff Expert/Witness: Robin Kliethermes*

⁶⁴ The costs associated with a project are not recoverable in the Company's revenue requirement until the project is completed and in service.

1 **G. Capitalization Policy**

2 As a subsidiary of a publicly traded corporation, Spire follows accounting methods
3 proscribed by Generally Accepted Accounting Principles (“GAAP”) and as a gas utility regulated
4 by Missouri, Spire must also follow the accounting methods proscribed by the FERC Uniform
5 System of Accounts (“USOA”). Both forms of authoritative guidance include a basis for assigning
6 costs to expense (i.e. include in the income statement) or assigning the cost to capital expenditures
7 (i.e. include in the balance sheet). Over the course of normal business operations, Spire incurs
8 costs that are clearly capital in nature and costs that are clearly expenses. However, Spire has the
9 discretion under current accounting guidance to assign many costs to capital or expense.

10 The impact of reflecting these discretionary decisions for ratemaking purposes is a
11 trade-off from the ratepayer’s perspective. In the ratemaking process, choosing to charge
12 customers for a cost through rate base instead of the income statement will generally cause three
13 changes to the revenue requirement; 1) overall expenses will be reduced, 2) depreciation expense
14 will increase and, 3) the calculated rate of return will increase. In this circumstance, the net impact
15 would likely be an immediate reduction to the revenue requirement, which would appear to be a
16 ratepayer benefit. However, if the cost is continued to be capitalized into rate base, the increase
17 to depreciation expense and the required rate of return accumulates year after year while the rate
18 reduction from decreased expense remains constant, if all else is held equal. Over time, the
19 incremental increases to the revenue requirement will exceed the decrease in expense, which may
20 not be in the interest of ratepayers.

21 A majority of the authoritative ratemaking guidance for capitalizing costs is addressed
22 in the USOA’s Gas Plant Instruction 3 – Components of Construction Cost. In this instruction,
23 the USOA presents a thorough list of items that can be directly or indirectly related to
24 construction costs, therefore eligible for capitalization. The USOA also includes Gas Plant
25 Instruction 4 – Overhead Construction Costs. While Instruction (3) provides guidance for the
26 capitalization of several categories of direct and overhead costs, Instruction (4) generally limits
27 such capitalization to reasonable amounts.⁶⁵

⁶⁵ Additional accounting guidance for certain costs can be found in the descriptions of specific plant and expense accounts.

1 To gain an understanding regarding the overhead costs Spire Missouri capitalizes, Staff
2 analyzed the data provided in the ISRS rate cases Spire has filed since its last rate case. The
3 information available to Staff shows that the overhead capitalized in Spire East's ISRS rate base
4 exceeds 50% of the total capital costs, while Spire West's overhead constituted 20% of the total
5 construction cost. The disparity between the two jurisdictions is driven in part by Spire's different
6 construction approaches. Spire East primarily uses in-house personnel for construction projects
7 and payroll costs are a driver of many of Spire's allocation factors so Spire East's projects tend to
8 draw more overhead costs during the allocation process than Spire West, which relies more heavily
9 on 3rd party contractors for construction projects.

10 Regardless of the use of contractors vs. in-house employees, it is not a reasonable
11 expectation for half of Spire East's construction projects to be comprised of costs that are not
12 directly related to any particular construction project. To discover if Spire's overhead construction
13 costs are equitably assigned to each capital job or unit as required by the USOA, Staff submitted
14 a series of data requests regarding Spire's capitalization practices. To account for construction
15 costs, employees direct-charge charge costs to a capital project when possible and charge costs to
16 a clearing account or shared services project when not possible. The indirect (overhead) costs
17 booked to clearing or shared service projects are distributed at a later date, using allocation
18 methods created by Spire.

19 In response to a data request asking for test year overhead employee costs and the related
20 benefits that are capitalized, Spire notes that it does not maintain records of such information.
21 Furthermore, Spire states that the allocation of costs to capital orders has dozens of steps and is a
22 complex systematic process. As such, Staff cannot accurately discern the origin of overhead costs
23 that Spire is booking to its capital projects and including in its rate base. For example, the
24 information regarding overheads provided to Staff does not, or cannot, differentiate between
25 supervisory labor from a Spire Missouri employee, unrelated overhead labor from a Spire Alabama
26 employee, an employee of Spire Inc.'s unregulated businesses, an executive employee, and so on.
27 Staff is concerned that the complexity of Spire's processes obfuscate the nature and amount of
28 overheads Spire Missouri has booked to rate base.

29 For this reason, Staff is unable to affirm that Spire is in compliance with USOA
30 requirements found in Gas Plant Instructions 3 and 4 that limits a project's assigned overhead to
31 an equitable proportion, since Spire cannot show where the overhead originated. Additionally,

1 there are costs currently capitalized by Spire that appear to conflict with the guidance set forth in
2 the USOA. Staff recommends the Commission order Spire to cease capitalizing non-operational
3 overhead costs, or as an alternative order Spire to cease capitalizing costs received from Spire
4 Inc.'s Shared Services entity, until such a time Spire can demonstrate the nature and quantity of
5 capitalized overhead costs and show the relationship between indirect costs and construction
6 projects of Spire East and Spire West in order to justify that the capitalized portion of overheads
7 is equitable. To align Staff's calculated revenue requirement with a Commission Order on this
8 matter, Staff further recommends the Commission order Staff's accounting adjustments to reflect
9 the Commission's order on Spire's capitalization policy. For clarity, Staff recommends that should
10 the Commission adopt Staff's recommendation, Spire should implement changes in overhead
11 capitalization prospectively from the effective date of tariffs from this rate case.

12 *Staff Expert/Witness: Matthew R. Young*

13 **H. Cash Working Capital (CWC)**

14 Cash Working Capital ("CWC") is the amount of funding necessary for a utility to pay
15 day-to-day expenses incurred in providing the utility services to its customers. Cash inflows from
16 payments received by the Company and cash outflows for expenses paid by the Company are
17 analyzed using a lead/lag study.

18 When a utility expends funds in order to pay an expense necessary for the provision of
19 service before its customers provide any corresponding payment, the utility's shareholders are the
20 source of the funds. This shareholder funding represents a portion of each shareholders' total
21 investment in the utility, for which the shareholders are compensated by the inclusion of these
22 funds in rate base. By including these funds in rate base, the shareholders earn a return on the
23 CWC-related funding they have invested.

24 Customers supply funds when they pay for gas services received before the utility pays
25 expenses incurred in providing that service. Utility customers are compensated for the funds they
26 provide by a reduction to the utility's rate base. By removing these funds from rate base, the utility
27 earns no return on that funding which was supplied by customers.

28 A positive CWC requirement indicates that, in the aggregate, the shareholders provide the
29 CWC for the test year. This means that, on average, the utility paid the expenses incurred to
30 provide the gas services to its customers before those customers had to pay the utility for the
31 provision of these utility services. A negative CWC requirement indicates that, in the aggregate,

1 the utility's customers provide the CWC for the test year. This means that, on average, the
2 customers paid for the utility's gas services before the utility paid the expenses that the utility
3 incurred to provide those services.

4 A major component of the lead/lag study is the determination of the revenue lag. The
5 revenue lag is the amount of time between the day the company provides the utility service, and
6 the day it receives payment from the ratepayers for that service. Staff's overall revenue lag in this
7 case is the sum of three (3) subcomponents. They are as follows:

- 8 1) Usage Lag: The midpoint of the period of time elapsed from the
9 beginning of the first day of a service period to the end of the last day
10 of a service period;
- 11 2) Billing Lag: The period of time between the last day of the service
12 period and the day the bill for that service period is placed in the mail
13 by the Company; and
- 14 3) Collection Lag: The period of time between the day the bill is placed in
15 the mail by the Company and the day the Company receives payment
16 from the ratepayer for the services provided.

17 Spire performed a lead-lag study specific to costs incurred during the 12-month test year ended
18 September 30, 2020, for Spire Missouri only. Staff did not perform a complete CWC analysis in
19 this case, and instead largely adopted the calculations made by Spire East and Spire West in this
20 case and Staff's calculations in previous cases. However, upon review of the Company's CWC
21 schedule and work papers, Staff determined that a current analysis was needed with respect to the
22 Pension Expense lag, the Annual Performance Bonus lag, and Missouri PSC Assessment lag.

23 As will be discussed below, the results of Staff's analysis resulted in a positive CWC
24 requirement for Spire East and Spire West. This means that, in the aggregate, Spire East and Spire
25 West's shareholders provided the CWC to the company during the test year. The components of
26 Staff's CWC calculation found on Accounting Schedule 8 on the EMS run are as follows:

- 27 1) Column A (Account Description): lists the types of cash expenses that
28 Spire East and Spire West pay on a day-to-day basis.
- 29 2) Column B (Test Year Expenses): provides the amount of annualized
30 expense included in Spire East's and Spire West's cost of service.
31 Column B bases the dollars associated with those items on an adjusted
32 jurisdictional basis in Column A.

- 1 3) Column C (Revenue Lag): indicates the number of days between the
2 midpoint of the provision of service by Spire East and Spire West and
3 the payment by the ratepayer for such service. Further explanation of
4 the Revenue Lag can be found later in this section of the Report.
- 5 4) Column D (Expense Lag): indicates the number of days between the
6 receipt of and payment for the goods and services (i.e., cash
7 expenditures) used to provide the service to the ratepayer. Further
8 explanation of the Expense Lag can be found later in this section of the
9 Report.
- 10 5) Column E (Net Lag): results from the subtraction of the Expense Lag
11 (Column D) from the Revenue Lag (Column C).
- 12 6) Column F (Factor): expresses the CWC lag in days as a fraction of the
13 total days in the test year. This is accomplished by dividing the Net
14 Lags in Column E by 365.
- 15 7) Column G is the CWC requirement needed for each expense listed. The
16 amounts in this Column are calculated by multiplying the test
17 year/annualized balances in Column B with the CWC Factor
18 (Column F).

19 The result of Staff's CWC analysis is reflected on the Cash Working Capital Accounting
20 Schedule 8. Staff's CWC analysis result is also reflected on the Rate Base Accounting Schedule 2
21 in the section entitled "Add to Net Plant-In-Service." Other aspects of Staff's CWC analysis and
22 results are also listed in the Rate Base Schedule in the section entitled "Subtract From Net Plant"
23 that includes the Federal Tax Offset, State Tax Offset, City Tax Offset and Interest Expense Offset.

24 Staff has reviewed the revenue and expense lag calculations made by Spire East and Spire
25 West and reviewed Staff's calculations in previous cases. In this case, for Spire East and Spire
26 West, Staff used the revenue, payroll expense and employee tax, and gross receipts tax lags
27 calculated by Staff in Case No. GR-2017-0215 and GR-2017-0216, respectively. Staff accepted
28 the following CWC expense lags proposed by Spire as reasonable: vacation pay, employee
29 benefits, cash vouchers, uncollectible expense, property taxes, Gas Purchases, Federal and State
30 unemployment taxes, use and sales tax, and interest expense. Staff performed a lead/lag study on
31 the expense lags for the pensions, the annual performance bonus, and Missouri PSC Assessment.
32 Staff also reflected a shortened revenue and expense lag for gross receipts, use and sales tax.

33 Spire East and Spire West are required to collect taxes for municipalities in which they
34 operate. These taxes include gross receipts tax, use tax, and sales tax, and are included as separate
35 line items on the ratepayer's bill. However, when the funds are received, the Company remits

1 payments to the taxing authority based on the arrangement established with the taxing authority.
2 Since the Company collects the taxes for the taxing authority and a service is not provided to the
3 ratepayer by the Company, measurement of the revenue and expense lags calculations start with
4 the beginning point of the collection lag for these taxes. The collection lag was defined earlier in
5 this report as the period of time between the day the bill is placed in the mail by the Company and
6 the day the Company receives payment from the ratepayer for the services provided. As a result
7 of using this methodology, the gross receipts tax, sales tax and use tax CWC line items have a
8 shortened revenue and expense lag.

9 Spire East and Spire West included an expense lag for the PSC Assessment. In addition,
10 Spire East and Spire West included the PSC Assessment in prepayments. Prepayment balances
11 and CWC, for Spire East and Spire West, are additions to rate base that allow Spire East and
12 Spire West to earn a return on the balances. Staff included the PSC Assessment in CWC consistent
13 with Spire East and Spire West, but excluded the PSC Assessment from prepayments.

14 The expense lag for pensions, annual performance plans, and the PSC assessment is
15 determined based on the time elapsed between the midpoint of the period of service and the date
16 on which payments were made. Staff calculated the pension expense lag based on payments made
17 by Spire East and Spire West during the test year and calculated the PSC assessment based on the
18 period of July 1, 2019 through June 30, 2020. Staff recommends a pension lag of 91.44 days for
19 Spire East and 69.38 days for Spire West. Staff's recommended expense lag for the PSC
20 assessment and the annual performance plan is 32.75 and 258.5, respectively.

21 In conclusion, the results of the study performed by Staff resulted in a positive
22 CWC requirement. This means that in the aggregate, the shareholders have provided the CWC to
23 the Company during the year. Therefore, the shareholders should be compensated for the CWC
24 that they provide, through an increase to rate base.

25 *Staff Expert/Witness: Antonija Nieto*

26 **E. Natural Gas Inventories**

27 For both Spire East and Spire West, Staff has reviewed all gas inventories for the period of
28 September 2017 through December 31, 2020, and has included a 13-month average ending
29 December 31, 2020, as the proper amount of natural gas inventory to include in rate base.

30 Natural gas is purchased and injected into storage facilities during the summer
31 months where it is held until the winter months when that gas is withdrawn and delivered to

1 Spire East’s and Spire West’s distribution system for customer use. Propane gas is also
2 purchased and stored to meet peak demand during the winter months. Spire East owns propane
3 facilities, but Spire West does not. Propane inventories are discussed in further detail in the
4 Propane Investment-Revenue-Expense Section of this report

5 Spire East owns the Lange natural gas underground storage field located north of St. Louis.
6 Spire East generally fills this storage field in the summer and uses gas from this storage to serve
7 its customers on cold days during the heating season. The storage field and natural gas in the
8 storage field are Spire East investments. The natural gas in the storage field is recorded in one of
9 three accounts as required by the Federal Energy Regulatory Commission (“FERC”) Uniform
10 System of Accounts (“USOA”), 117, 352 and 164. The balance of inventory contained in FERC
11 account 117.10 Gas Stored - base gas, also referred to as “cushion gas,” represents the volume of
12 gas that must remain in the storage facility to provide the required pressurization to extract the
13 current gas from the storage facility. The balance reflected in FERC account 352.30 is
14 non-recoverable natural gas that is permanently embedded in the storage field and may never be
15 extracted. The natural gas that is included in FERC account 164.10 Gas Stored - Current represents
16 attainable natural gas that is used to meet seasonal demand increases.⁶⁶ Spire East also injects and
17 withdraws gas from the Mississippi River Transmission (“MRT”) pipeline as a supplemental
18 source of natural gas to the Lange storage field and is recorded in FERC account 164.11.

19 Prior to Case No. GR-2017-0215, the gas inventory balances for Spire East was recorded
20 in account 164.10 and 164.11 and was addressed as part of the PGA/ACA process and therefore
21 was not included in rate base. In its Amended Report and Order in Case No. GR-2017-0215, The
22 Commission stated,⁶⁷

23 The Commission has considered the effects on the ratepayers of removing these
24 costs from the PGA and putting them back in rate base. The Commission has
25 also considered the benefits of doing so and that PGA costs will be reduced
26 potentially offsetting the rate base increases. In balancing the interests of the
27 ratepayers and of the company, the Commission determines that it is just and
28 reasonable to move LAC’s gas storage costs out of the PGA tariff and back into
29 base rates. By doing so, the Commission brings LAC back in line with MGE
30 and every other natural gas local distribution company in Missouri.

⁶⁶ Some of the gas in the storage field is unrecoverable. Attainable natural gas is that which is able to be recovered and used. It is also referred to as current gas.

⁶⁷ Case No. GR-2017-0215, *Amended Report and Order*, page 65-68, filed on March 7, 2018.

1 Staff included Spire East's gas inventories in rate base to be consistent with the
2 Commission Order in Case No. GR-2017-0215 and the ratemaking treatment for Spire West gas
3 inventories. Staff also included Spire West's firm capacity⁶⁸ for the Southern Star Central Gas
4 Pipeline and the Panhandle Eastern Pipeline.

5 *Staff Expert/Witness: Karen Lyons*

6 **F. Prepayments; Materials and Supplies**

7 **1. Prepayments**

8 Prepayments are the costs a company incurs and pays in advance for various items needed
9 to operate the utility system. Staff's recommended treatment of prepayments is to examine each
10 prepayment account individually in order to determine an appropriate measure that most accurately
11 reflects the ongoing future investment costs of a particular account, and then include that amount
12 in Spire East's and Spire West's rate bases. Spire East and Spire West have utilized their own
13 funds for prepaid items such as insurance premiums and rents. Staff examined Spire East's and
14 Spire West's prepayment account balances on a month-by-month basis. Staff removed costs
15 recorded in prepayments that do not benefit ratepayers and are not necessary in the provision of
16 safe and adequate service. The costs that Staff excluded from prepayments is consistent with
17 Staff's recommended disallowances discussed in the Cost of Service sections Dues and Donations
18 and Miscellaneous Expense and Officer Expense. After excluding these costs, Staff determined
19 the prepayment levels to include in Spire East's and Spire West's rate bases (Rate Base,
20 Accounting Schedule 2) by calculating the 13-month average ending December 31, 2020, the
21 update period. A 13-month average of month-ending balances is used to capture the beginning
22 balance and ending balance of the 12-month period ending December 31, 2020. Staff recommends
23 this approach because there was no discernible upward or downward trend in the monthly balances.

24 *Staff Expert/Witness: Jeremy Juliette*

25 **2. Materials and Supplies**

26 Materials and supplies consist of natural gas piping, connections for service, main repairs,
27 gas regulators, and spare parts necessary to operate the local distribution natural gas system.

⁶⁸ Firm capacity is the amount of gas available for production or transmission which can be, and in many cases must be, guaranteed to be available at a given time.

1 Staff's recommended treatment of materials and supplies is to examine each account individually
2 in order to determine an appropriate measure that most accurately reflects the ongoing future
3 investment costs of a particular account, and this amount should be included in Spire East's and
4 Spire West's rate base. For Spire East and Spire West, Staff reviewed the monthly balances for
5 materials and supplies over the last several years and, because the monthly account balances
6 fluctuated with no distinguishable trend, Staff determined that a 13-month average as of
7 December 31, 2020, was appropriate for materials and supplies. Materials and supplies are
8 included in the Spire East's and Spire West's rate base (Accounting Schedule 2).

9 *Staff Expert/Witness: Jeremy Juliette*

10 **G. Pensions Asset Liability**

11 **1. Pension Tracker and Expense**

12 Staff recommends that the ratemaking methodology for Spire East and Spire West's
13 pension expense continue in a manner similar to that agreed to in the Stipulation and Agreement
14 (the "2014 Spire West Stipulation") from Spire West's recent rate case, Case No. GR-2014-0007.
15 In that case, Spire West and Staff agreed to several ratemaking methodologies governing the
16 recognition of pension expense in Spire West's cost of service and the use of a tracking
17 mechanism. In Spire East's recent rate case, Case No. GR-2013-0171, a Stipulation and
18 Agreement ("2013 Spire East Stipulation") was filed, outlining a ratemaking methodology similar
19 to the MGE Stipulation. In this case, Staff recommends the baseline funding scenario (80%) for
20 cash contributions as calculated by Spire Missouri's actuary Willis Towers Watson in their Cash
21 Forecast report dated October 30, 2020 provided in response to Staff Data Request number 0359.
22 Staff also addresses the recent Missouri Supreme Court decision regarding the 1996 prepaid
23 pension asset issue in prior cases.

24 Spire offers a defined benefit pension plan identified as the Spire Missouri Employees'
25 Retirement Plan ("Spire East") to all of its current employees.

26 A legacy Spire pension plan also exists, identified as the Spire Missouri West Retirement
27 Income Plan ("Spire West"). This legacy plan was a former Missouri Gas Energy ("MGE")
28 pension plan that covered union and non-union MGE employees. Active employees covered under
29 the legacy MGE plan were transitioned to the Spire Missouri Employee's Retirement plan on
30 January 1, 2021. However, the legacy plan still covers all Spire (legacy MGE) employees who

1 retired prior to January 1, 2021, and will continue until all of the benefit obligations owed to those
2 retired employees has been met.

3 A tracker mechanism is a unique regulatory tool used to ensure that rate recovery over time
4 is made equal to the actual expenditures for a particular cost of service item. A tracker mechanism
5 compares the ongoing amount of a cash expense actually incurred by a utility to the amount of the
6 same expense reflected in the utility's rates, and provides rate recovery over time of the difference
7 between the two totals. Generally, tracker mechanisms should only be used for certain cost items
8 incurred by utilities that show unusual characteristics or are incurred under extraordinary
9 circumstances. Trackers are used for pensions and other post-employment benefits ("OPEBS") as
10 an exception to the normal ratemaking adjustments because of the significant possible cash flow
11 implications to utilities if their pension funding requirements are materially different from their
12 pension expense recovery levels in rates. Spire East and Spire West are required to fund pensions
13 at a certain level pursuant to the Employment Income Security Act ("ERISA") of 1974 and the
14 Pension Protection Act ("PPA") of 2006. Ongoing tracker mechanisms capture both under and
15 over recovery of an expense for recovery from or return to ratepayers.

16 The overall goal of a tracker mechanism, when properly exercised, is to provide the utility
17 with dollar for dollar recovery of reasonable and prudently incurred cash expenses, but no more
18 and no less than dollar for dollar recovery. For ratemaking purposes, Staff tracks the difference
19 between cash paid by the company for pension contributions and cash received from customers
20 through rates. However, Spire reports pension expense under the Accounting Standard
21 Codification 715, which has historically been referred to as FAS 87 and FAS 88. The Federal
22 Accounting Standards Board (FASB) issued FAS 87 to give publicly traded companies guidance
23 on accounting for pension expense and to increase comparability between companies' reported
24 costs. The pension expense reported by companies under the FAS 87 guidance is based on the
25 estimated pension obligation a company incurs during the service of its employees. Furthermore,
26 the FAS 87 expense calculation is not directly affected by the company's cash flow. Since a tracker
27 mechanism has been agreed to, cash flow is fundamental in tracking the actual cash outlay incurred
28 by the Company in order to provide the utility recovery of the difference in their actual cash outlay
29 and the amounts that have been included in rates. Since the FAS 87 expense calculated by
30 Spire's actuary, Towers Watson, does not capture the cash flow implications, FAS 87 expense is
31 not an appropriate methodology for ratemaking purposes.

1 **2. Spire West Pension Tracker**

2 The Spire West pension tracker follows the methodology ordered by the
3 Commission pursuant to the 2014 Spire West Stipulation, as implemented by Staff in the
4 2017 Rate Case, and updated through December 31, 2020. Staff recommends continuation of the
5 tracking mechanism. Staff has included the cumulative difference between the amount in rates
6 resulting from the 2017 Rate Case and the amounts contributed to the pension trusts, reduced by
7 amortizations in rates. Staff recommends amortization of the cumulative tracker balance,
8 \$(19,017,238) at December 31, 2020 over a period of 8 (eight) years, inclusion of \$(19,017,238)
9 of the cumulative tracker balance as a net rate base reduction, and \$4.4 million of current
10 contributions in the cost of service.

11 **3. Spire East Pension Tracker**

12 The Spire East pension tracker follows the methodology ordered by the Commission
13 pursuant to the 2013 Spire East Stipulation, as implemented by Staff in the 2017 Rate Case, and
14 updated through December 31, 2020. Staff recommends continuation of the tracking mechanism.
15 Staff has included the cumulative difference between the amount in rates resulting from the
16 2017 Rate Case and the amounts contributed to the pension trusts, reduced by amortizations in
17 rates. Staff recommends amortization of the cumulative tracker balance, \$92,034,851
18 at December 31, 2020 over a period of 8 (eight) years, inclusion of \$92,034,851 of the
19 cumulative tracker balance as a net rate base addition, and \$32.4 million of current contributions
20 in the cost of service.

21 **4. Pension Asset Remand to the Commission of the 2017 Rate Case**

22 In the Amended Report and Order in the 2017 Rate Case, the Commission determined that
23 Spire East should recover \$131.4 million of prepaid pension asset in customer rates over an
24 eight-year amortization period. This amount had been reduced by prior recorded amounts from
25 1990 through 1994 of \$19.8 million and 1994 through 1996 of \$9 million. The Missouri Supreme
26 Court found in favor of Spire East concerning the \$9 million portion of the prepaid pension asset
27 and remanded the case to the Commission for further proceedings ⁶⁹ in February 2021.

⁶⁹ Supreme Court of Missouri, Opinion No. SC97834.

1 Based on the court decision, Staff recommends inclusion of the \$9 million portion of
2 prepaid pension asset at issue in the pension tracker mechanism for Spire East, which is the same
3 ratemaking treatment this asset would have received if it were not a disputed issue in the 2017 Rate
4 Case. Staff included the \$9 million in the Spire East cumulative tracker balance of \$92,034,851.

5 *Staff Expert/Witness: Jared Giacone*

6 **H. Other Post-Employment Benefits (“OPEBS”) and Tracker**

7 Other Post Employment Benefit Costs (“OPEBS” or “postretirement benefits”) are costs
8 Spire East and Spire West incur to provide certain benefits to retired employees. The primary
9 benefit is medical insurance, but these costs also include life, dental, and vision insurance benefits.
10 OPEBs are actuarially calculated under the terms of Financial Account Standard 106 (“FAS 106”).
11 FAS 106 is the FASB approved accrual accounting method used for financial statement
12 recognition of the annual amount of OPEBs. The accounting of the cost of post-retirement benefits
13 is not based on the actual dollars Spire pays for OPEBs to its retirees currently. Instead, under FAS
14 106, this measurement is accrual-based, in that it attempts to recognize financial effects of noncash
15 transactions and events affecting future OPEB obligations as they occur. These noncash
16 transactions and events are primarily current benefits earned by employees before retirement, but
17 not paid until after retirement, as well as the interest cost arising from the passage of time until
18 those benefits are paid. Staff’s OPEB adjustment to Account 926, Employee Benefits, annualizes
19 the level of Spire East’s and Spire West’s forecasted cash contributions.

20 The 2013 Spire East Stipulation and 2014 Spire West Stipulation describe the continuing
21 use of trackers for OPEBs. The amounts tracked are the differences between the current ongoing
22 level of cash contributions made to fund the OPEB trust accounts and the dollar amount of
23 OPEB expense reflected in rates between each case. The OPEB tracking mechanisms are
24 functionally the same as the pension tracking mechanisms.

25 **1. Spire West OPEB Tracker**

26 The Spire West OPEB tracker follows the methodology ordered by the Commission
27 pursuant to the 2014 Spire West Stipulation, as implemented by Staff in the 2017 Rate Case,
28 and updated through December 31, 2020. Staff recommends continuation of the tracking
29 mechanism. Staff has included the cumulative difference between the amount in rates resulting
30 from the 2017 Rate Case and the amounts contributed to the OPEB trusts, reduced by

1 amortizations in rates. Staff recommends amortization of the cumulative tracker balance,
2 \$(298,110) at December 31, 2020 over a period of 8 (eight) years, inclusion of \$(298,110) of the
3 cumulative tracker balance as a net rate base reduction, and zero dollars for current contributions
4 in the cost of service since current funding is sufficient to meet the OPEB obligations. Only the
5 amortization of the OPEB liability balance will be included in the cost of service.

6 **2. Spire East OPEB Tracker**

7 The Spire East OPEB tracker follows the methodology ordered by the Commission
8 pursuant to the 2013 Spire East Stipulation, as implemented by Staff in the 2017 Rate Case, and
9 updated through December 31, 2020. Staff recommends continuation of the tracking mechanism.
10 Staff has included the cumulative difference between the amount in rates resulting from the
11 2017 Rate Case and the amounts contributed to the pension trusts, reduced by amortizations in
12 rates. Staff recommends amortization of the cumulative tracker balance, \$8,580,496 at
13 December 31, 2020 over a period of 8 (eight) years, inclusion of \$8,580,496 of the cumulative
14 tracker balance as a net rate base addition, and zero dollars for current contributions in the cost of
15 service since current funding is sufficient to meet the OPEB obligations. Only the amortization of
16 the OPEB asset balance will be included in the cost of service.

17 *Staff Expert/Witness: Jared Giacone*

18 **I. Customer Deposits and Interest**

19 Customer deposits represent funds received from a utility company's customers as security
20 against potential loss arising from failure to pay for utility service. These deposits are available to
21 the utility for general use. Staff's recommended treatment of customer deposits is to deduct the
22 most current customer deposit balance from Spire East's and Spire West's rate bases. Since the
23 deposits are supplied by the customers, a representative level is included as an offset to the rate
24 base investment in order to ensure that the utility does not earn a return on the value of these
25 deposits. In addition, since these funds were provided by the ratepayers and not the shareholders,
26 the ratepayers should be allowed to earn a reasonable return on these funds.

27 For Spire East and Spire West, Staff reviewed monthly balances of customer deposits and
28 determined that using the last known balance as of December 31, 2020, was appropriate to include
29 in rate base which is shown on Staff's Accounting Schedule 2, Rate Base.

1 Interest is accrued on these customer deposits based on the rate specified in Spire East's
2 and Spire West's tariffs. These rates are the federal prime interest rate of 3.25 percent plus 100
3 basis points for both residential and commercial customers. When a customer becomes eligible for
4 a return of his or her deposit, the amount refunded includes the accumulated interest. The annual
5 accrual of interest on customer deposits is included in the cost of service as an expense. The amount
6 of interest calculated on customer deposits is reflected on Staff Accounting Schedule 10.

7 *Staff Expert/Witness: Jeremy Juliette*

8 **J. Customer Advances**

9 Customer advances are funds provided by individual customers of the utility to assist in
10 the costs of the provision of gas service to those customers. Like customer deposits, customer
11 advances are available to the utility for general use. Staff's recommended treatment of customer
12 advances is to deduct the most current customer advance balance from Spire West's and Spire
13 East's rate base. Since the advances obtained are essentially interest-free to the utility, a
14 representative level is included as an offset to the rate base investment in order to ensure that the
15 utility does not earn a return on the value of the level of advances.

16 Because customers that pay an advance are unlikely to receive a refund of any portion of
17 the customer advance, no interest is paid to those customers for the use of their money, unlike the
18 interest paid on customer deposits. For Spire East, Staff used the last known balance as of
19 December 31, 2020. Staff used this balance because Spire indicated that the balance will increase
20 in February 2021.⁷⁰ Due to a steady increase in the balance for Spire West, Staff also used the last
21 known balance as of December 31, 2020. Staff will true-up these adjustments as of May 31, 2021
22 at the appropriate time. These adjustments are shown on Staff's Accounting Schedule 2, Rate Base.

23 *Staff Expert/Witness: Jeremy Juliette*

24 **K. Accumulated Deferred Income Taxes (ADIT)**

25 Each year that Spire Missouri has a temporary tax timing difference that causes a deferred
26 income tax expense, a liability is created. The liability recognizes that the tax savings received in
27 the current period are temporary, and will be reversed in future periods. The federal government
28 intended to create these timing differences so that a company could have an effective cost-free

⁷⁰ Response to Staff Data Request No. 133.1

1 loan from the federal government so that the firm could reinvest in its company. Over time, the
2 tax liability related to temporary timing differences are accumulated in Spire Missouri's liability
3 accounts as Accumulated Deferred Income Taxes ("ADIT"). As discussed in the Income Tax
4 section of this report, ratepayers are charged deferred income tax expense related to normalized
5 tax timing differences protected by the Internal Revenue Service's ("IRS") Internal Revenue Code
6 ("IRC"). Because ratepayers do not immediately receive the benefits of the normalized tax
7 deductions, customers have effectively paid income tax expense that Spire Missouri has not yet
8 incurred. As such, Spire Missouri's ADIT represents cash collected from customers for an expense
9 that will be realized in future periods and is considered an interest-free loan from ratepayers. Since
10 the amount of ADIT customers have provided is available for Spire Missouri's use, rate base is
11 reduced by that amount to avoid charging customers a rate of return on funds they have made
12 available to Spire Missouri.

13 *Staff Expert/Witness: Matthew R. Young*

14 **L. Rate Base Offset GM-2013-0254 – MGE's ADIT**

15 Pursuant to the Unanimous Stipulation and Agreement approved by the Commission
16 authorizing Laclede Gas Company to purchase MGE in Case No. GM-2013-0254, Spire West is
17 required to recognize a rate base offset of \$125 million:

18 Laclede Gas shall include a rate base offset for its MGE Division in the
19 amount of \$125 million. Laclede Gas' MGE Division shall amortize this
20 rate base offset over a period of ten years commencing on the effective date
21 of close. For clarification, the outstanding balance of such rate base offset
22 shall serve to reduce rate base for rate making purposes in the context of all
23 future rate proceedings during the amortization period, which will
24 effectively prevent customers from paying a return on such rate base offset.
25 This shall result in lower rates and charges in future periods.

26 Spire Missouri Inc., then known as Laclede Gas Company, at that time included a rate
27 base offset for its MGE Division in the amount of \$125 million as of the effective date of rates in
28 Case No. GR-2014-0007. MGE began amortizing this rate base offset over a period of ten years
29 commencing on the effective date of close of the sale of MGE to Spire Missouri, Inc., then known
30 as Laclede Gas Company. Staff has included the unamortized portion of the rate base offset at
31 December 31, 2020, for the direct filing as a reduction to rate base. This balance will be updated
32 as of May 31, 2021 for true-up purposes.

33 *Staff Expert/Witness: Matthew R. Young*

1 **M. Insulation Financing and Energy Wise Loan Balances**

2 Spire East and Spire West offers an Insulation Financing Program that permits qualifying
3 residential customers to borrow funds for the purpose of insulating their homes and adding storm
4 windows and storm doors.

5 In addition, Spire East and Spire West offers the EnergyWise program, which is similar to
6 the insulation financing program except that its focus is offering financing for high-efficiency
7 natural gas furnaces, high-efficiency gas air conditioners, and certain energy efficient appliances.
8 This program is available to credit-qualified residential and commercial customers.

9 Due to a definitive upward trend in the loan balances of both programs, Staff has included
10 the loan balances at December 31, 2020, as an appropriate level to be included in the Spire East
11 and Spire West rate base. Staff will continue to analyze data associated with these programs and
12 will update the loan balances through the true-up, May 31, 2021.

13 **Interest Income Energy Wise/Insulation Financing**

14 The loan balances associated with the Insulation Financing Program and EnergyWise
15 program are currently included in rate base. Spire East and Spire West receives interest income
16 that is collected in relation to both of these programs. Interest is calculated on these loan balances
17 using three different interest rates, as stated in the Spire Missouri tariff, depending on the type of
18 loan held by each customer.

19 Staff has included interest income related to these programs as part of Spire East and Spire
20 West cost of service based on data from actual use of the program.

21 *Staff Expert/Witness: Karen Lyons*

22 **N. Transition Costs-Purchase of MGE by The Laclede Group**

23 Pursuant to the *Partial Non-Unanimous Stipulation and Agreement* in Case Nos. GR-2017-
24 0215 and GR-2017-0216 as approved by the Commission, Spire East and Spire West were allowed
25 to recover \$5.3 and \$4.2 million, respectively, of acquisition transition costs over four (4) years.
26 This amortization began with the effective date of rates on April 19, 2018 and will have a
27 remaining balance at the time of the effective date of rates in this case. Staff recommends including
28 an amortization over three years of the projected remaining balance at the approximate effective
29 date of rates in this case at November 2021 to best match recovery of this cost with the effective
30 rates. The remaining balances will be \$554,167 and \$435,417 at that time. These unamortized

1 balances are included in rate base pursuant to the *Partial Non-Unanimous Stipulation and*
2 *Agreement*.

3 Spire East and Spire West were allowed to amortize two other regulatory assets related to
4 the acquisition and referenced in the *Partial Non-Unanimous Stipulation and Agreement* in Case
5 Nos. GR-2017-0215 and GR-2017-0216 as approved by the Commission. Staff has removed the
6 test year amortization for these regulatory assets, the 720 Olive Leasehold Improvements and the
7 MGE Software Assets. These regulatory assets were to be amortized but not included in Staff's
8 accounting schedules pursuant to that stipulation and agreement.

9 *Staff Expert/Witness: Keith Majors*

10 **VII. Corporate Allocations**

11 Spire Inc., the parent company of Spire, owns subsidiary companies across the United
12 States that include regulated and non-regulated operations. In addition to owning Spire in
13 Missouri, Spire Inc. also has gas utility operations regulated by Alabama and Mississippi and
14 wholesale operations regulated by the Federal Energy Regulatory Commission ("FERC").
15 Furthermore, Spire Inc. has entities that conduct non-regulated operations based in Missouri, South
16 Carolina, Wyoming, and Texas. While some of these entities have employees and facilities
17 dedicated to each business segment, there are instances where costs are incurred by one business
18 segment that benefits a different, or multiple, business segment(s). For example, the time spent
19 by the executive leadership is properly attributable to all business segments of Spire Inc. since
20 executives are charged with leading the company as a whole.

21 To account for the costs that are common across multiple business units, Spire Inc.
22 implemented a shared service model. Under this model, costs that are incurred on behalf of a
23 different, or more than one, business unit are charged to the shared services entity so that the costs
24 can accumulate in shared cost pools. At the end of each period, the cost pools are distributed back
25 to the business segments based on the various cost drivers. Types of costs accounted for under
26 this methodology include the labor and non-labor costs of executive and corporate, finance, human
27 resources, information technology, legal, insurance, supply chain, facilities, marketing, project
28 management, external affairs, customer experience, business development, and other costs.

29 Costs are distributed to the appropriate business segments by the use of several types of
30 allocation factors. These allocation factors are updated annually and include allocators to spread

1 costs corporate-wide (all business units), utility only (regulated operations), Missouri only
2 (Spire Missouri and non-regulated operations), and Missouri utility only (Spire Missouri).
3 Furthermore, these allocation factors can be derived from various cost drivers including employee
4 headcount, customer count, square footage used, fixed assets, and many others. When a cost pool
5 has no identifiable cost driver, the shared services model allocates costs based on a three factor
6 allocator that is a blend of fixed assets, revenue, and wages.

7 While calculating the cost of service for Spire East and Spire West, Staff recommends
8 utilizing annualized fixed asset, 3-factor, and information technology allocation factors currently
9 in effect for fiscal year 2021 due to Spire's current and ongoing activity in implementing and
10 upgrading its website and incorporating its southern operations into its new software platforms.
11 For the remaining factors, Staff recommends utilizing normalized allocation factors due to the
12 year-to-year fluctuating nature of Spire Missouri's share of the total cost.

13 *Staff Expert/Witness: Matthew R. Young*

14 **VIII. Income Statement-Revenues**

15 **A. Retail Revenues**

16 **1. Introduction**

17 The following section describes how Staff determined the amount of Spire East and Spire
18 West adjusted non-gas operating revenues.⁷¹ Since the largest component of non-gas operating
19 revenues is a result of rates charged to Spire East and Spire West retail customers, a comparison
20 of non-gas operating revenues with the cost of service is fundamentally a test of the adequacy of
21 the currently effective retail natural gas rates to meet Spire East and Spire West current costs of
22 providing utility service.

23 One of the major tasks in a rate case is to determine the magnitude of any deficiency (or
24 excess) between a company's cost of service and its operating revenues. Test year revenues need
25 to be appropriately normalized and annualized in order to accurately measure the amount of any
26 deficiency (or excess) in the current level of operating revenues. Once determined, the deficiency
27 (or excess) can only be made up (or otherwise addressed) by adjusting retail rates (i.e., rate
28 revenue) prospectively.

⁷¹ The cost of gas is recovered from customers in the Company's Purchased Gas Adjustment (PGA) and removed from Spire East's and Spire West's revenue requirement for purposes of establishing non-gas rates.

1 **2. Definitions**

2 Non-gas operating Revenues are composed of two components: (1) Rate Revenue and
 3 (2) Other Operating Revenue. The definitions of these components are as follows:

4 Rate Revenue: Test year rate revenues consist solely of the revenues derived from Spire
 5 East and Spire West authorized Commission approved rates for providing natural gas service to
 6 their retail customers. Spire East and Spire West variable charges are determined by the amount
 7 of each customer’s usage and the (per unit) rates that are applied to that usage. Each customer also
 8 pays a flat monthly customer charge dependent upon each customer’s rate class. The Spire East
 9 rate classes include residential, small general, large general, large volume, unmetered gaslight,
 10 interruptible, general l.p., vehicular fuel rate, and transportation customer classifications. The Spire
 11 West rates classes include residential, small general, large general, large volume, unmetered
 12 gaslight, and transportation customer classifications. The tables below are Spire East and Spire
 13 West ending rate revenue by class.

14

Spire East		Spire West	
Rate Class	Total MO Normalized Revenue	Rate Class	Total MO Normalized Revenue
Residential Service	\$ 275,083,737	Residential Service	\$ 175,409,043
Small General Service	\$ 29,185,361	Small General Service	\$ 17,367,161
Large General Service	\$ 26,954,133	Large General Service	\$ 15,604,508
Large Volume Service	\$ 1,005,526	Large Volume Service	\$ 230,764
Unmetered Gaslight	\$ 42,763	Unmetered Gaslight	\$ 1,270
Interruptible	\$ 544,840	Intrastate Transportation	\$ 17,081,050
General LP	\$ 12,417	Total	\$ 225,693,795
Vehicular	\$ 24,746		
Large Volume Transportation	\$ 14,902,508		
Total	\$ 347,756,032		

15

16 Other Operating Revenue: Other operating revenue includes late payment charges, collection trip
 17 charges, special meter reading charges and disconnection/reconnection of service charges. Each
 18 of these charges is also established by the Commission, and all of these revenue items are taken
 19 into account in setting retail rates for Spire East and Spire West gas service to customers.

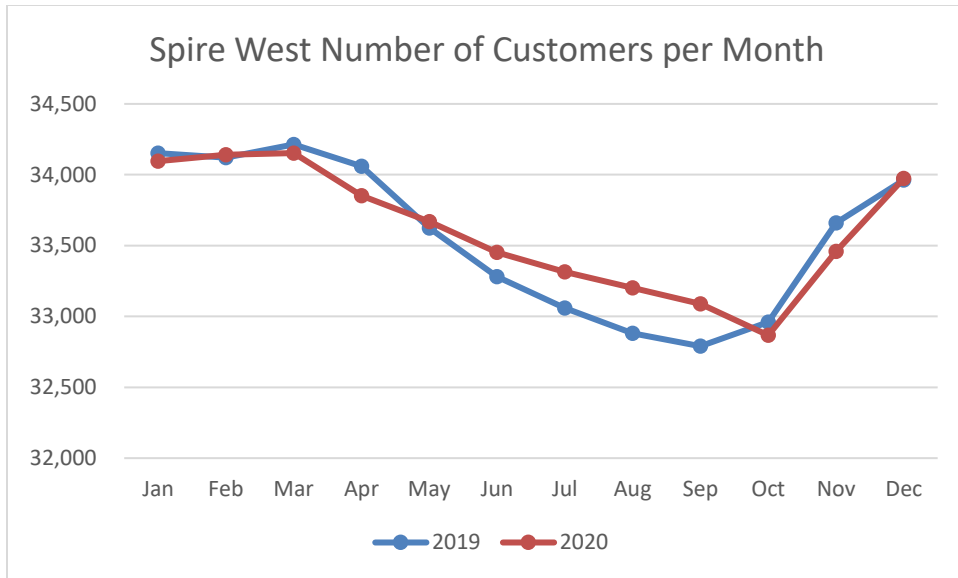
1 the Residential, SGS, and LGS classes for Spire East and Spire West. Adjustments for the large
2 volume customers are discussed in Section VII.3. of this Report.

3 The annualization of customer revenues contains two components, the base charge and the
4 commodity charge. The base charge is the minimum monthly charge that Spire East and
5 Spire West assess to a customer for supplying gas service. The monthly base charge revenue is
6 calculated by multiplying the base charge by Staff's annualized level of customers on a monthly
7 basis.

8 Natural gas customers tend to fluctuate seasonally over a 12-month period, with some
9 customers leaving the system during the spring and summer months and then rejoining the system
10 during the fall and winter months. This seasonal sensitivity in customer numbers makes it
11 impractical to base a customer growth adjustment on one period-ending customer number value
12 as is normally done for electric utilities. The test year ending September 2020 and updated through
13 December 2020 includes impacts of COVID 19. For this reason, Staff applied actual residential
14 customer charge counts for January 2020 through December 2020 for Spire East and Spire West.
15 The residential adjustment for January 2020 through December 2020 is reflected as the growth
16 adjustment. Staff will review residential customer growth through May 2021 and will make any
17 necessary adjustments in the true up filing on August 6, 2021.

18 Staff reviewed the monthly number of customers for Spire East's and Spire West' SGS and
19 LGS rate classes and determined that a growth adjustment is not necessary. Staff found that
20 throughout the test period customers switched between the SGS and LGS rate classes; however,
21 when combined the monthly number of billed customers from month to month generally remained
22 consistent as compared to the prior 12 month period.

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Staff also notes that during the update period of October 2020 through December 2020 that several Large Volume customers switched to the LGS class. Staff did not make a growth adjustment for the LGS class. Staff will review LGS growth through May 2021 and will make any necessary adjustments in the true up filing on August 6, 2021.

Staff Experts/Witnesses: Kim Cox and Robin Kliethermes

3. Large Customer Adjustments

Spire East provided monthly billing units and information for every customer who took service on the Large Volume Service (“LV”) and Interruptible Service (“IN”) rate schedules during the test year and updated through December 2020. Spire West provided monthly billing units and information for every customer who took service on the LV rate schedule. Staff used these units as the basis of its analyses and adjustments. The following adjustments were made:

4. Large Customer Rate Switching

The general intent of an annualization is to re-state the test year usage as if conditions known at the end of the update period had existed throughout the entire year. Rate switching⁷² and annualization adjustments include adjustments for new customers, the exit of existing customers, and load growth or decline of specific existing customers.

⁷² Rate switching is when customers switch which rate schedule they will be served on during the test year or update period.

1 If a customer was in a rate class at the beginning of the test year, then transferred to a
2 different rate class during the test year, the customer's billing determinants and associated
3 revenues in the original class were removed from that class' total. The customer's billing
4 determinants were then "priced out" using the tariffs of the class to which the customer switched,
5 and those determinants and revenues were added to the totals in the new class. This resulted in a
6 full year of history for the customer in the rate class they were in at the end of the year. For new
7 customers having no prior usage, an estimated level of usage was used in order to have 12 months
8 of data.

9 Spire East Large Customer Rate Class Changes: During the test year three customers left
10 the large volume class. One customer left the IN class and one customer came on the IN class.
11 Spire West Large Customer Rate Class Changes: During the test year, two customers left the
12 LVclass.

13 **5. Large Customer 365-Day Adjustment**

14 The 18 bill cycles representative of the 12 months ending December 31, 2020, may or may
15 not include 365 days. Staff made adjustments to customers' monthly usage for customers whose
16 test year does not include 365 days, either by adding the appropriate number of days of average
17 usage when there were fewer than 365 days of usage, or by subtracting the appropriate number of
18 days of average usage when there were more than 365 days of usage.

19 **6. Weather Normalization Adjustment**

20 Staff did not apply a weather normalization factor to Spire East or Spire West customer's
21 monthly usage. Staff witness, Michael L. Stahlman explains this further in the next section
22 below.

23 *Staff Expert/Witness: Kim Cox*

24 **B. Other Revenue Adjustments**

25 **1. Revenue - Weather Variables Used for Weather Normalization**

26 Natural gas usage and revenue vary from year to year based on weather conditions. The
27 temperature pattern in the test year is the primary determinant for weather-sensitive customers'
28 gas usage and the Company's revenue in the test year. Each year's weather is unique, so rates for
29 weather-sensitive customer classes must be based on test year usage and revenue adjusted to a
30 level commensurate with "normal" weather conditions, rather than actual test year usages and

1 revenue.

2 **Weather Variables** - Staff obtained weather data from the Midwest Regional Climate
3 Center (MRCC).⁷³ Weather data of St Louis Lambert International Airport (“STL”) and
4 Kansas City International Airport (“MCI”) was used for the service territories of Spire East and
5 Spire West, respectively. The weather data sets consist of actual daily maximum temperature
6 (“T_{max}”) and daily minimum temperature (“T_{min}”) observations. Staff used these daily
7 temperatures to develop a set of mean daily temperature (“MDT”)⁷⁴ values.

8 Natural gas sales are predominantly influenced by “ambient air temperature,”⁷⁵ so MDT
9 and the derivative measure, heating degree days (“HDD”),⁷⁶ are the measures of weather used in
10 adjusting test year natural gas sales. HDDs were originally developed as a weather measure that
11 could be used to determine the relationship between temperature and gas usage. HDDs are based
12 on the difference of MDT from a comfort level of 65°F. HDDs are calculated as the
13 difference between 65°F and MDT when MDT is below 65°F, and are equal to zero when MDT
14 is above 65°F.

15 **Normal Weather** - According to the National Oceanic and Atmospheric Administration
16 (“NOAA”), a climate “normal” is defined as the arithmetic mean of a climatological element
17 computed over three consecutive decades.⁷⁷ In developing climate normal temperatures, the
18 NOAA focuses on the monthly maximum and minimum temperature time series to produce the
19 serially-complete monthly temperature (“SCMT”) data series.⁷⁸

20 Staff utilized the SCMT published in July 2011 by the National Climatic Data Center
21 (“NCDC”) of the NOAA. To Staff’s knowledge, NOAA is the only entity that provides reasonably
22 reliable weather data for 30 year historical period and test year period for the Kansas City and St.
23 Louis regions. For the purposes of normalizing the test year gas usage and revenues, Staff used
24 the adjusted T_{max} and T_{min} daily temperature series for the 30-year period of January 1, 1989,

⁷³ <http://mrcc.isws.illinois.edu/CLIMATE/>

⁷⁴ By National Climatic Data Center convention, MDT is the average of daily maximum temperature (T_{max}) and daily minimum temperature (T_{min}) e.g. $MDT = (T_{max} + T_{min}) / 2$

⁷⁵ Ambient air temperature is the outside temperature of the surrounding air without taking into account the humidity or wind in the air.

⁷⁶ Where $MDT < 65^{\circ}F$, $HDD = 65 - MDT$; otherwise, $HDD = 0$.

⁷⁷ Retrieved on October 17, 2013, <https://www.ncdc.noaa.gov/data-access/land-based-station-data/land-based-datasets/climate-normals>

⁷⁸ Retrieved on October 17, 2013, <http://www1.ncdc.noaa.gov/pub/data/normals/1981-2010/source-datasets/>. The SCMT, computed by the NOAA, includes adjustments to make the time series of daily temperatures homogeneous.

1 through December 31, 2018, at STL and MCI. The series are consistent with NOAA’s SCMT
2 during the most recent NOAA 30-year normal period ending 2010.

3 There may be circumstances under which inconsistencies and biases in the 30-year time
4 series of daily temperature observations occur, (e.g. such as the relocation, replacement, or
5 recalibration of the weather instruments). Changes in observation procedures or in an instrument’s
6 environment may also occur during the 30-year period. The NOAA accounted for documented
7 and undocumented anomalies in calculating its SCMT.⁷⁹ The meteorological and statistical
8 procedures used in the NOAA’s homogenization for removing documented and undocumented
9 anomalies from the T_{\max} and T_{\min} monthly temperature series is explained in a peer-reviewed
10 publication.⁸⁰

11 Subsequent to determining the homogenized monthly temperature time series described
12 above, the NOAA also calculates monthly normal temperature variables based on a 30-year normal
13 period, e.g. maximum, minimum, average temperatures, and HDDs. These monthly normals are
14 not directly usable for Staff’s purposes because the NOAA daily normal temperatures and
15 HDD values are derived by statistically “fitting” smooth curves through these monthly values. As
16 a result, the NOAA daily normal HDD values reflect smooth transitions between seasons and do
17 not directly relate to the 30-year time series of MDT as used by Staff. However, in order for Staff
18 to develop adjustments to normal HDD for gas usage, Staff must calculate a set of normal daily
19 HDD values that reflect the actual daily and seasonal variability.

20 Staff used a ranking method to calculate normal weather estimates of daily normal
21 temperature values, ranging from the temperature that is “normally” the hottest to the temperature
22 that is “normally” the coldest, thus estimating “normal extremes.” Staff ranked MDTs for each
23 month of the 30-year history from hottest to coldest and then calculated the normal daily
24 temperature values by averaging the ranked MDTs for each rank, irrespective of the calendar date.
25 The ranking process results in the normal extreme being the average of the most extreme
26 temperatures in each month of the 30-year normals period. The second most extreme temperature
27 is based on the average of the second most extreme day of each month, and so forth. Staff’s

⁷⁹ Arguez, A., I. Durre, S. Applequist, R. S. Vose, M. F. Squires, X. Yin, R. R. Heim, Jr., and T. W. Owen, 2012: NOAA’s 1981-2010 U.S. Climate Normals: An Overview. *Bulletin of the American Meteorological Society*, 93, 1687-1697,

⁸⁰ Menne, M.J., and C.N. Williams, Jr., (2009) Homogenization of temperature series via pairwise comparisons. *J. Climate*, 22, 1700-1717.

1 calculation of daily normal temperatures is not the same as NOAA’s calculation of smoothed daily
2 normal temperatures because Staff calculated its normal daily temperatures based on the rankings
3 of the actual temperatures of the test year, and the test year temperatures do not follow smooth
4 patterns from day to day. More details of a ranking method that Staff uses for normal weather are
5 explained in a peer-reviewed publication.⁸¹ Using these normal daily temperatures, Staff
6 calculated normal HDD for each day of the test year. This information was made available to Staff
7 witness Kim Cox to calculate the weather normalization adjustments.

8 *Staff Expert/Witness: Michael L. Stahlman.*

9 **2. Revenue – Weather Normalization**

10 **Introduction and Summary**

11 Since the primary use of natural gas for residential customers in Missouri is for the purpose
12 of space heating, the level of natural gas sales are dependent upon weather conditions. As natural
13 gas rates are derived from the level of usage and the Company’s revenue requirement, it is
14 important to remove abnormal weather influences from the test year in order to provide a more
15 accurate representation of “normal” natural gas usage. For example, if natural gas sales are
16 overstated because the weather in the test period was colder than normal then the Company may
17 under recover its revenue requirement and if natural gas sales are understated because the weather
18 in the test period is warmer than normal then the Company may over recover its revenue
19 requirement. This analysis addresses Staff’s weather-normalization of natural gas sales for Spire
20 East and Spire West customers.

21 **Spire East Weather Normalization Adjustment**

22 Staff conducted an analysis of weather normalization for the Residential General Service
23 (RES), Small General Service (SGS), and Large General Service (LGS) for the test year ending
24 September 30, 2020. Staff did not perform a weather normalization calculation for Large Volume
25 Service (LV), and Transportation classes as explained in more detail later in this report by Staff
26 witness Michael L. Stahlman. Staff’s overall weather normalization analyses determined that the
27 weather during the test year was warmer than normal, so actual sales were also lower than normal.

⁸¹ Won, S. J., Wang, X. H., & Warren, H. E. (2016). Climate normals and weather normalization for utility regulation. *Energy Economics*, 54, 405-416.

In order to account for the reduced sales and warmer weather, Staff performed an adjustment to increase natural gas sales to reflect usage and sales for “normal” weather conditions. Staff’s analysis resulted in an approximate increase of 0.81% for the RES class, an approximate increase of 0.82% for the SGS class, and an increase of approximately of 0.45% for the LGS class. These adjustments account for changes in sales to reflect normal weather and the annual number of days in a billing cycle.

Spire EAST	Residential		SGS		LGS	
Billing Month	Actual Usage	Weather Adj.	Actual Usage	Weather Adj.	Actual Usage	Weather Adj.
<i>October</i>	12,203,463	486,548	1,857,040	15,182	5,405,984	203,727
<i>November</i>	49,899,852	-8,798,905	6,204,925	-1,297,491	12,660,042	-2,122,601
<i>December</i>	71,729,912	-2,492,586	10,658,163	-526,839	19,243,827	-1,292,140
<i>January</i>	85,382,892	8,630,040	12,952,697	1,371,876	22,247,537	2,176,748
<i>February</i>	87,916,663	5,631,710	13,864,356	897,597	23,438,755	1,484,201
<i>March</i>	68,557,295	5,686,302	10,978,430	819,431	20,265,066	1,121,658
<i>April</i>	41,766,133	2,150,610	5,609,466	459,367	12,226,286	1,005,172
<i>May</i>	25,268,282	-6,150,827	2,914,214	-939,920	7,538,753	-1,494,823
<i>June</i>	13,207,166	-1,439,332	1,683,768	-259,287	4,908,875	-487,733
<i>July</i>	9,613,507	112,271	1,402,326	24,928	3,971,187	27,088
<i>August</i>	8,577,609	-66,568	1,322,649	-7,307	3,837,246	-25,518
<i>September</i>	9,041,631	186,947	1,325,170	26,194	4,009,029	33,763

Spire West Weather Normalization Adjustment

Staff conducted an analysis of weather normalization for the Residential (RES), Small General Service (SGS), Large General Service (LGS) for the test year ending September 30, 2020. Staff did not perform a weather normalization calculation for Large Volume (LV), and Transportation classes as explained in more detail later in this report by Staff witness Michael L. Stahlman. Similar to the weather normalization analysis for Spire East, Staff’s weather normalization analysis of Spire West gas sales resulted in an increase to natural gas sales because the weather during the test year was warmer than normal. The analyses resulted in an approximate increase of 2.33% for the RES class, an approximate increase of 2.45% for the SGS class, an increase of approximately 2.0% for the LGS class. These adjustments account for changes in sales due to abnormal weather and the annual number of days in the billing cycles.

<i>Spire West</i>	Residential		SGS		LGS	
Billing Month	Actual Usage	Weather Adj.	Actual Usage	Weather Adj.	Actual Usage	Weather Adj.
<i>October</i>	9,596,482	-1,226,192	1,447,954	-178,268	3,079,448	-359,300
<i>November</i>	37,364,040	-8,426,471	5,690,773	-1,418,825	7,231,186	-1,542,623
<i>December</i>	53,329,614	1,558,210	9,107,011	214,546	10,176,497	215,471
<i>January</i>	66,592,978	7,706,969	10,761,389	1,294,962	12,945,314	1,409,969
<i>February</i>	68,496,624	5,139,849	11,405,125	845,618	13,428,401	901,496
<i>March</i>	49,555,240	5,632,387	8,139,555	928,209	10,411,119	1,256,224
<i>April</i>	30,659,620	2,185,550	4,397,002	414,949	6,681,564	437,926
<i>May</i>	18,099,975	-3,512,039	2,366,821	-575,568	3,930,666	-660,059
<i>June</i>	8,992,817	-565,626	1,274,451	-109,681	2,069,175	-138,728
<i>July</i>	6,593,453	78,531	985,892	19,833	2,212,658	36,612
<i>August</i>	5,888,684	-33,440	997,714	-3,722	2,196,535	-195
<i>September</i>	6,336,531	-102,111	1,042,868	-17,654	2,318,112	-20,960

Process Used to Weather Normalize Sales

Staff's weather normalized adjustments of natural gas sales account for deviations from what are considered normal weather conditions that occurred during the test year. Staff adjusted monthly natural gas volumes to normal by first adjusting the annual number of days for each billing cycle⁸² to 365. If the annual number of days in a billing cycle is below or above 365, Staff added or subtracted the difference to the non-heating season⁸³. This adjustment is performed so that each billing cycle is set to the same total number of days. Since natural gas utilities are winter peaking, any heating degree days (HDD) that are removed based on the 365 day adjustment are added back to October, since it is a shoulder month⁸⁴ to the heating season. Using the non-heating months minimizes the impact on the heating season. After each billing cycle is adjusted so that it contains the proper number of calendar days, the next step is to calculate the difference between normal

⁸² Customers are divided up over 18 separate billing cycles within a billing month. For example, a percentage of the Company's customers are billed on the 1st of the month, which is the 1st billing cycle and another percentage of customers is billed on another day of the month. Billing cycles are used to spread out the number of meters read and bills issued on any specific day of the month.

⁸³ The non-heating season is generally referred to as the month of May, June, July, August and September.

⁸⁴ A shoulder month is generally referred to as a month directly before or after a peak winter or summer month, such as the months of April, May and October.

⁴ The definition of billing cycle heating degree days is the sum of heating degree days (HDD) in the given billing cycle, where mean daily temperature (MDT) < 65°F, HDD = 65 – MDT; otherwise, HDD = 0. By National Climatic Data Center convention, MDT is the average of daily maximum temperature (T_{max}) and daily minimum temperature (T_{min}) e.g. MDT = (T_{max} + T_{min}) / 2.

1 and actual HDDs for each billing cycle. Then, Staff multiplied these differences by the estimate
2 rendered from the regression analysis described below under “Application of Weather
3 Normalization Process” to determine the changes in sales volumes in each billing cycle due to
4 abnormal weather. The next step is to sum each of the changes in sales volumes per month due to
5 abnormal weather. Lastly, Staff adds the monthly adjustments in sales volumes to the total monthly
6 natural gas sales to calculate the normalized volumes.

7 **Application of Weather Normalization Process**

8 Staff witness Michael L. Stahlman provides the daily actual and daily normal HDDs for
9 Spire East and Spire West. Mr. Stahlman addresses the calculation of HDDs in the “Normal
10 Weather” section of this Cost of Service Report. Spire East and Spire West both have established
11 billing cycles for groups of natural gas accounts where each billing cycle corresponds to different
12 days of the month. Customers’ accounts are usually grouped into one of approximately eighteen
13 (18) billing cycles. Staggering the billing of customers’ accounts throughout the billing month
14 allows the Company to distribute the work required in order to bill Spire East and Spire West
15 customers.

16 In its first step, Staff used a regression analysis to estimate the relationship between the
17 average usage per customer per day and the average HDD per day for each billing cycle month.
18 Second, Staff calculated the difference between normal and actual HDDs for each billing cycle.
19 Third, Staff multiplied the differences from the second step by the estimate rendered from the
20 regression analysis in the first step. The fourth step was to sum the billing cycles’ adjusted volumes
21 by billing month. Fifth, Staff added the monthly adjustments in either therms or ccfs to the total
22 monthly natural gas sales to calculate normalized volumes. The billing month averages are
23 calculated from the data provided by the utility on the numbers of customers, natural gas usage,
24 and summed HDD from the billing cycles for each billing month by customer class. The daily
25 average HDD in each billing month and billing cycle is weighted by the percentage of customers
26 in that billing cycle. Thus, the billing cycles with the most customers are given more weight when
27 computing the daily average HDD for the billing month. Staff uses the twelve monthly
28 average-usage-per-customer amounts across the billing cycles to calculate the daily average usage
29 for one month. The usage and weather billing month averages are used to study the relationship
30 between space-heating natural gas usage and cold weather, which is used to estimate the change
31 in usage related to a change in HDD. Staff uses regression analyses to estimate the relationship

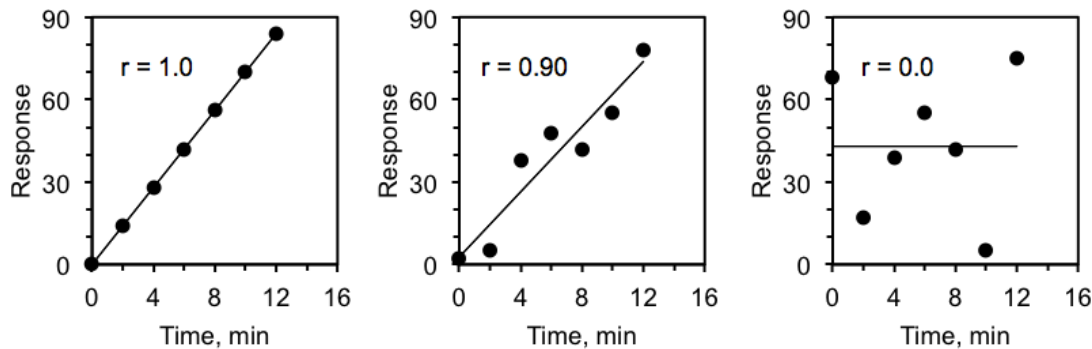
1 for each class of customers. The output of the regression analyses develops quantitative measures
2 that describe the relationship between daily space-heating sales per customer in therms or ccf to
3 the actual daily HDD. The regression equation estimates a change in the daily natural gas usage
4 per customer whenever the actual daily average weather changes by HDD. Staff recommends that
5 the Commission utilize Staff's weather normalization adjustments that are outlined above and in
6 Appendix 3.

7 *Staff Expert/Witness: Joel McNutt*

8 **3. Weather Sensitivity of Large Customer Classes**

9 Staff did not make a weather adjustment to Spire's large customer classes. Staff reviewed
10 the relationship between weather and gas usage for the Large Volume and Interruptible classes
11 using correlation analysis.⁸⁵ The results indicated a weak correlation⁸⁶ between billing cycle
12 heating degree days⁸⁷ and each set of customers' gas usage. Further, Staff found that these

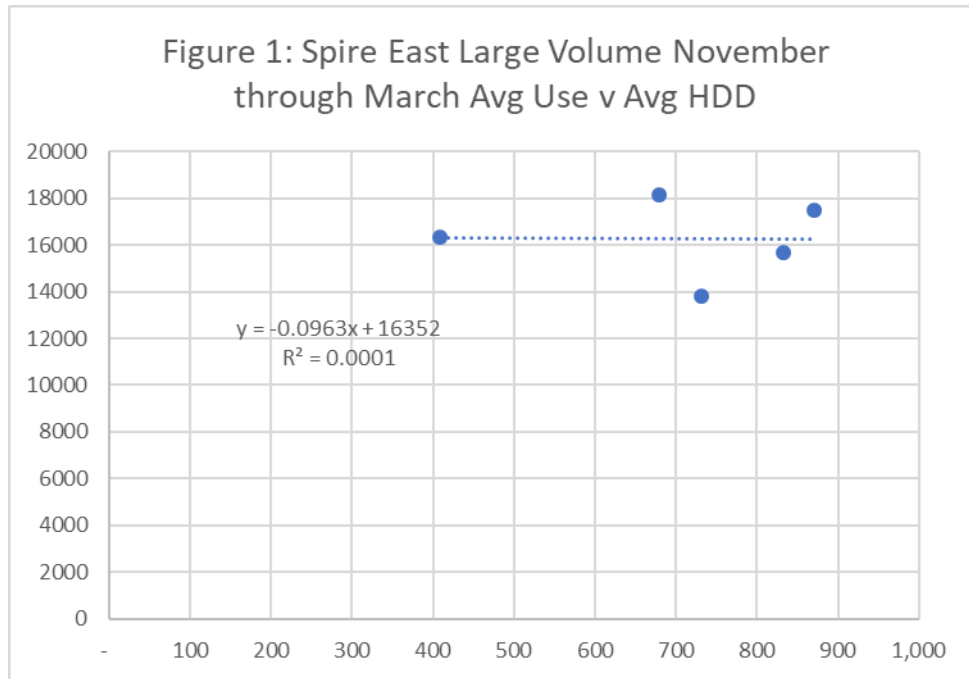
⁸⁵ Correlation is a measure of how the variations in one dataset are consistent with the variations in another. A correlation coefficient is a number between -1 and +1 calculated so as to represent the linear dependence of two variables or sets of data. Generally speaking, the closer a correlation coefficient is to 1, the more the datasets vary consistently with each other. If the correlation is negative, the variation in one dataset gets more positive as the variation in the other dataset gets more negative. Conventionally, if a correlation coefficient is greater than 0.7 then it is interpreted that there is a strong positive relationship.



⁸⁶ Correlation is a measure of how the variations in one dataset are consistent with the variations in another. A correlation coefficient is a number between -1 and +1 calculated so as to represent the linear dependence of two variables or sets of data. Generally speaking, the closer a correlation coefficient is to 1, the more the datasets vary consistently with each other. If the correlation is negative, the variation in one dataset gets more positive as the variation in the other dataset gets more negative. Conventionally, if a correlation coefficient is greater than 0.7 then it is interpreted that there is a strong positive relationship.

⁸⁷ The definition of billing cycle heating degree days is the sum of heating degree days (HDD) in the given billing cycle, where mean daily temperature (MDT) < 65°F, HDD = 65 - MDT; otherwise, HDD = 0. By National Climatic Data Center convention, MDT is the average of daily maximum temperature (T_{max}) and daily minimum temperature (T_{min}) e.g. $MDT = (T_{max} + T_{min}) / 2$.

1 customers appeared to be seasonal; the usage was higher in winter but usage largely independent
2 of the weather. For example, Figure 1 reviewed the winter months of Spire East Large Volume
3 customers and found virtually no correlation whatsoever.



4
5 These customers also had different responses to weather in the spring season compared to
6 the fall, making an adjustment on the assumption of a linear relationship inappropriate.

7 *Staff Expert/Witness: Michael L. Stahlman*

8 **4. Large Volume Transport Customer Annualization**

9 Staff received monthly revenue reports as well as data from Spire’s Data Warehouse that
10 provide monthly billing data for each individual Large Volume Transportation customer. Staff
11 used the test year ending September 30, 2020 and updated for customer changes through December
12 2020 to calculate test year revenue for transportation customers.⁸⁸

13 For Spire West, customers served on the Company’s Large Volume Sales (“LV”) and
14 Large General Service Sales (“LGS”) rate schedules can elect to transport gas instead of purchase

⁸⁸ Transportation customers purchase gas from an entity other than Spire, but use Spire’s distribution system to transport the gas to the customer’s location. Transportation customers generally do not pay Spire’s PGA rate unless the customer has to purchase gas directly from Spire.

1 the gas from Spire. Staff calculated the revenues of the LV transportation customers on an
2 individual customer basis. The non-gas revenues related to the LGS transportation customers are
3 included in the class revenues for the LGS class and were not computed on an individual customer
4 basis. For Spire East, customers who elect to transport gas are served on a specific transportation
5 service tariff, Large Volume Transportation Service tariff (“LVTSS”)

6 Staff made adjustments to billing units and revenues based on the test year for the
7 12 months ending September 30, 2020, to be adjusted for known and measureable changes through
8 the update period December 31, 2020. Adjustments include: Interclass Rate Switching,
9 Annualization, and 365-day Adjustment.

10 **5. Transportation Customer Rate Switching**

11 The general intent of an annualization is to re-state the test year usage as if conditions
12 known at the end of the update period had existed throughout the entire year. Rate switching and
13 annualization adjustments include adjustments for new customers, the exit of existing customers,
14 and load growth or decline of specific existing customers.

15 If a customer was in the rate class at the beginning of the test year, then transferred to a
16 different rate class during the test year, the customer’s billing determinants and associated
17 revenues in the original class were removed from that class total. The customer’s billing
18 determinants were then “priced out” using the tariffs of the class to which the customer switched,
19 and those determinants and revenues were added to the totals in the new class. This resulted in a
20 full year of history for the customer in the rate class they were in at the end of the year.

21 For new customers having no prior usage, an estimated level of usage was used in order to
22 have 12 months of data.

23 **Spire East Large Customer Rate Class Changes**

24 During the test period, three Transportation accounts closed, five customers switched
25 into the Transportation class from LGS, one customer switched into the Transportation class from
26 VF (Vehicular Fuel). Staff will be reviewing usage for all transportation customers through the
27 true-up period ending June 30, 2021. Staff’s review could result in additional usage and revenue
28 adjustments in the true-up period.

1 **Spire West Large Customer Rate Class Changes**

2 During the test period, six Transportation accounts closed and seven accounts entered the
3 Transportation class. Staff will be reviewing usage for all transportation customers through the
4 true-up period ending June 30, 2021. Staff’s review could result in additional usage and revenue
5 adjustments in the true-up period.

6 **6. Large Customer 365-Day Adjustment**

7 The 18 bill cycles representative of the 12 months ending September 30, 2020, may or may
8 not include 365 days. All of the customers taking service on the Transportation rate schedule were
9 billed based on the same bill cycle that resulted in 365 days, so no adjustment was made.

10 *Staff Expert/Witness: Joseph P. Roling*

11 **C. Other Miscellaneous Revenue Adjustments**

12 All revenue adjustments in Staff’s cost of service will be priced on the margin rate (the total
13 rate excluding gas cost) included in Spire East and Spire West tariffs. Therefore, revenues and
14 expenses related to gas costs are removed from Staff’s revenue requirement calculations. The cost
15 of gas will be addressed as part of Staff’s review of the Companies’ Purchase Gas Adjustment
16 (“PGA”) and Actual Cost Adjustment (“ACA”) filings.

17 The amounts received from customer payments and recorded as revenues during the test
18 year include Gross Receipts Tax (“GRT”). GRTs are imposed by a taxing authority for which
19 Spire East and Spire West are obligated to charge customers on their utility bills. After Spire East
20 and Spire West collect these taxes from their customers, these amounts are periodically remitted
21 to the appropriate taxing authority. In this regard, to accurately account for Spire East and Spire
22 Wests actual test year retail revenues, it is necessary to remove GRT from the amounts recorded
23 as revenues during the test year while at the same time removing the corresponding remittances to
24 the taxing authority as a charge to expense. Staff made adjustments to remove GRT from revenue
25 and expense. In addition, Staff adjusted Spire East and Spire West level of uncollectible expense
26 to account for GRT taxes not paid by those customers whose bill amounts are written off.

27 ISRS revenues are collected as a result of Commission approved surcharge rates that are
28 determined between rate cases. ISRS surcharge rates are set back to “zero” in the rate case. Staff
29 made adjustments to remove ISRS revenue not included in base rates from the cost of service to
30 derive the appropriate test year margin revenues.

1 Currently, as an incentive to maximize off-system sales (“OSS”) and capacity release
2 revenue, Spire East and Spire West are authorized to keep a percentage, or share, of the profit from
3 OSS and capacity release transactions. Spire East and Spire West customers receive the remaining
4 profit through the PGA/ACA mechanism as a reduction to gas costs. Staff made adjustments to
5 remove the OSS and Capacity revenue not included in base rates from the cost of service to derive
6 the appropriate test year margin revenues and related expenses.

7 The recording of unbilled revenue on the books of Spire East and Spire West is an attempt
8 to recognize the sales of gas that have occurred, but have not yet been billed to the customer. Since
9 Staff has adjusted revenue to assure that it includes only 365 days of revenue and because revenue
10 has been restated to a billed basis, it is unnecessary to recognize unbilled revenue. Staff eliminated
11 unbilled revenue from its determination of Spire East and Spire West revenue requirements.

12 As a result of the COVID-19 pandemic, Spire Missouri waived a portion of
13 disconnection and reconnection fees and late payment fees during the test year. Consequently, the
14 test year does not represent an ongoing level of these revenues. Staff recommends a two year
15 average of fiscal year 2018 and 2019 disconnection and reconnection fees and late payment fees
16 to include in the cost of service. The AAO related to this event is discussed in detail by
17 Staff Expert/Witness Kim Bolin in the “COVID AAO Cost Recovery” section of this report.

18 *Staff Expert/Witness: Keith Majors*

19 ***IX. Income Statement-Expenses***

20 **A. Payroll and Benefits**

21 **1. Payroll, Payroll Taxes, 401(k), and Other Employee Benefits**

22 Staff reviewed all wages and salaries of Spire employees and the allocation of payroll costs
23 to each Spire entity and rate district. An allocation of costs is necessary to assign a proper amount
24 of payroll costs to each of the Spire entities and rate districts. Staff reviewed the allocation of
25 actual assigned payroll costs for each of these entities. Staff calculated base payroll by multiplying
26 the actual employee levels by the wage rate or salary as of the update period of December 31, 2020
27 for annualizing payroll costs. Staff’s payroll adjustment takes into consideration overtime. Staff
28 accepted the Company’s 12.61% of total payroll as the amount for overtime. Staff applied the
29 percentage to Staff’s annualized payroll as of the update period ending December 31, 2020 to
30 calculate the overtime amount to be included in Staff’s payroll adjustment. Staff also annualized

1 payroll taxes, employee benefits and 401k match expenses. The same process will be utilized for
2 the true-up period, May 31, 2021.

3 Total annualized payroll must be separated between amounts charged to expense and
4 amounts charged to capital and below the line accounts. The ratio between these two amounts is
5 referred to as an Operations and Maintenance (“O&M”) factor. For the test year ending
6 September 30, 2020, O&M expense factor was 45.38 percent for Spire East and 53.09 percent for
7 Spire West based on the response to Staff Data Request number 044. The establishment of an
8 appropriate O&M factor is important as this ratio directly affects the amount of payroll charged to
9 expense and as well as determining the expense level for payroll related benefits. Staff
10 recommends the use of an O&M factor based on the response to Staff Data Request number 044,
11 which is 45.38 percent for Spire East and 53.09 percent for Spire West. Staff distributed its payroll
12 adjustment to the FERC Uniform System of Accounts (“USOA”) based on the test year
13 distribution Staff calculated. Staff calculated the distribution by separating test year account
14 balances between labor and non-labor using payroll general ledger cost element codes and
15 excluded incentive comp/employee bonus general ledger cost element codes from the test year
16 payroll account balances. The total sum of the payroll amounts (excluding incentive
17 compensation/employee bonus) for each account was then used to calculate a percentage of payroll
18 contained in each account. The percentage for each account was calculated by taking each payroll
19 account balance and dividing it by the total sum of the payroll amounts for all accounts. Staff
20 reviewed the incentive comp/employee bonus amounts independently from payroll and that review
21 is contained in this report under the heading Incentive Compensation. The resulting percentage
22 for each account was then applied to Staff’s total payroll adjustment in order to distribute
23 Staff’s adjustment to each account proportionately.

24 Spire anticipates a change from a third party call center to an internal employee call center
25 beginning in May 2021, which will likely impact the test-year payroll adjustment in the true-up to
26 account for the additional internal employees. Any addition of internal employees during the
27 true-up will also impact the payroll tax and employee benefit expenses and would reduce a portion
28 of the third-party call center expense.

29 Payroll taxes were annualized by applying the current payroll tax rates to each employee’s
30 annual level of payroll. An aggregate tax rate was used to calculate payroll taxes for overtime.
31 Staff calculated payroll taxes based on the wage levels and current tax rates through the update

1 period ending December 30, 2020. This includes amounts pursuant to the Federal Unemployment
2 Taxes Act (“FUTA”), State Unemployment Taxes Act (“SUTA”), and Federal Insurance
3 Contributions Act (“FICA”) taxes. Staff’s annualized payroll and most current tax rates were used
4 to calculate the level of payroll tax proposed in this case.

5 Spire East and Spire West had 401(k) match expenses and expenses for employee life,
6 accidental death and dismemberment (“AD&D”) and long term disability insurance, and these
7 were calculated based upon actual employee wage and salary levels as of the update period of
8 December 30, 2020.

9 *Staff Expert/Witness: Jared Giacone*

10 **2. Incentive Compensation**

11 **Short-Term Incentive Compensation**

12 Staff reviewed Spire’s short-term incentive compensation plan and long-term incentive
13 compensation plan. Staff also reviewed the two new metrics Spire has incorporated in their short-
14 term plan. Staff is recommending removal of all the long-term incentive compensation expense as
15 it is earnings based. Staff is also recommending removing the expense associated with the
16 corporate performance component in Spire’s short-term plan as it is also earnings based. Staff is
17 recommending recovery of Spire’s two new metrics.

18 Employees of Spire East and Spire West are eligible for annual bonuses under Spire
19 Missouri’s Annual Incentive Plans (“AIP”). This incentive compensation plan provides an annual
20 cash payout to eligible union and non-union participants based on four components: corporate
21 performance, business unit performance, individual performance, and team unit performance.
22 Measurement goals and a target incentive pool are established for each plan year and terms of the
23 AIP are communicated to all employees within 90 days of the beginning of the plan year.

24 The first component of AIP, corporate performance, is measured with the financial metric
25 of Net Economic Earnings Per Share (“NEEPS”). NEEPS differs from the traditional Earnings
26 per Share (“EPS”) calculation in that NEEPS ignores the effect on net income of certain
27 extraordinary items (e.g. unrealized losses, acquisition losses). This AIP component is applicable
28 to payouts made to all employees. The Commission in general, and specifically in the case of
29 Spire West, has disallowed incentive compensation based on financial metrics that tie payouts to
30 the level of shareholder’s interest achieved. The Commission expressed this position in its Report
31 and Order in Spire West’s 2004 Rate Case, Case No. GR-2004-0209:

1 The Commission agrees with Staff and Public Counsel that the
2 financial incentive portions of the incentive compensation plan
3 should not be recovered in rates. Those financial incentives seek to
4 reward the company's employees for making their best efforts to
5 improve the company's bottom line. Improvements to the
6 company's bottom line chiefly benefit the company's shareholders,
7 not its ratepayers. Indeed, some actions that might benefit a
8 company's bottom line, such as a large rate increase, or the
9 elimination of customer service personnel, might have an adverse
10 effect on ratepayers.

11 If the company wants to have an incentive compensation plan that
12 rewards its employees for achieving financial goals that chiefly
13 benefit shareholders, it is welcome to do so. However, the
14 shareholders that benefit from that plan should pay the costs of that
15 plan. The portion of the incentive compensation plan relating to the
16 company's financial goals will be excluded from the company's cost
17 of service revenue requirement. (p. 43)

18 Consistent with past Commission orders,⁸⁹ Staff has not included costs related to earnings-based
19 metrics in Spire East's or Spire West's revenue requirements.

20 The second component of incentive compensation is the business unit performance. This
21 component is applicable to all employees. In direct testimony,⁹⁰ Spire indicated that
22 management had conducted a detailed review of the company's AIP design in the fall of 2018.
23 During this review, Spire made the decision to replace the previous business unit objective,
24 Utility Operating Income, with two new objectives, Utility Contribution Margin and Utility
25 Adjusted O&M per Customer. Utility Contribution Margin is calculated as Utility Gross
26 Revenues – Gas Costs – Gross Receipts Tax, and is also referred to as Net Operating Revenue.
27 Utility Adjusted O&M per Customer is calculated as (Utility Operating & Maintenance
28 Expenses + Property Taxes)/12 Month Average Number of Customers. Staff reviewed these new
29 metrics and determined they both benefit customers and have included the cash payouts from these
30 two metrics in rates.

31 The third component of incentive compensation, individual performance, is applicable only
32 to non-union employees. Each non-union employee collaborates with his or her supervisor to
33 establish goals for the upcoming year. At the end of the plan year, the supervisor awards a

⁸⁹ For similar findings, see the Report and Orders in Case Nos. GR-96-285; ER-2006-0314; and ER-2007-0291.

⁹⁰ Case No. GR-2021-0108, Scott Weitzel Direct Testimony, page 23, lines 1-7.

1 composite rating of actual performance based on the rating of the employee’s various personal
2 goals. The employee’s performance directly affects the amount of payout the employee can receive
3 from the individual component of the AIP, but does not affect their corporate or business unit
4 component award. Staff included this component in rates.

5 The fourth component of AIP is team unit performance, and is applicable only to union
6 employees. Unlike non-union employees that establish goals for each individual, union employees
7 earn AIP payouts based upon the performance of their respective union (e.g. call center employees
8 or field operation employees). A majority of the metrics embedded in the team unit AIP
9 component are customer-oriented goals such as: average call handle time, call abandonment rate,
10 OSHA recordable incident rate, leak response time, etc. Generally, Staff supports such metrics as
11 successful achievement of these goals can lead to lower costs incurred by the utility, which lead to
12 a lower cost of service.

13 **Long-Term Incentive Compensation**

14 In addition to AIP, Spire offers compensation under the Equity Incentive Plan (“EIP”).
15 Unlike AIP, which pays cash compensation, EIP pays employee awards with shares of Spire stock.
16 Because EIP does not have cash consequences for Spire East or Spire West, Staff made
17 adjustments to remove the expensed EIP payments from the cost of service.

18 *Staff Expert/Witness: Jeremy Juliette*

19 **3. SERP**

20 Supplemental Executive Retirement Plan (SERP) is an employee benefit fund for certain
21 highly-compensated employees that allows for an annuity or lump sum payment upon retirement.
22 Actual SERP payouts were analyzed to determine an appropriate amount of SERP expense to
23 include in this case.

24 Included in Staff’s revenue requirement recommendations are normalized levels of
25 recurring SERP payments (annuities) and a normalization of any large lump-sum SERP payments
26 Spire has made to its former executives and other highly-compensated former employees. SERP
27 payments are non-qualified retirement plans for officers and executives, which provide the pension
28 benefits these highly-compensated individuals would have received under other company
29 retirement plans but for compensation and benefit limits imposed by the Internal Revenue Service
30 (“IRS”). The Commission has traditionally included a reasonable amount of SERP expenses in

1 customer rates. Staff is recommending a three-year average for SERP which is consistent with
2 Staff's position in the previous rate case.

3 *Staff Expert/Witness: Jared Giacone*

4 **4. Severance Expense**

5 Staff recommends removal of employee severance payments incurred during the test year.
6 Severance payments are cash payments granted to certain employees upon termination of
7 employment. Severance agreements typically include commitments from the former employee to
8 not pursue litigation against the company and its officers.

9 Severance payments are non-recurring in regards to the specific employee. Because of the
10 unique nature of cost of service ratemaking, utilities are able to recover severance payments
11 through regulatory lag. Between the time the employee is terminated and the time rates are
12 changed in the next rate case, Spire East and Spire West collect both the salary and payroll benefits
13 of the terminated employee. These savings can accumulate to more than the severance paid.

14 The amounts of severance expense removed from the cost of service are \$396,088 and
15 \$68,400 for Spire East and Spire West, respectively. The adjustments are reflected in Staff
16 Accounting Schedule 10.

17 *Staff Expert/Witness: Antonija Nieto*

18 **B. Other Expenses**

19 **1. Advertising Expense**

20 Advertising expenses are incurred by both Spire East and Spire West. In developing its
21 recommendation of the allowable level of advertising expense for Spire East and Spire West,
22 Staff relied upon the principles the Commission set forth in *Re: Kansas City Power and*
23 *Light Company*, 28 MO P.S.C. (N.S.) 228 (1986). In that proceeding, the Commission adopted
24 an approach that classifies advertisements into five categories and provides separate rate treatment
25 for each category. While that proceeding specifically addressed an electric utility, the categories of
26 advertisements described are applicable to all utilities regulated by the Commission. The
27 five categories of advertisements recognized by the Commission are:

- 28 1. General: advertising that is useful in the provision of adequate
29 service;
- 30 2. Safety: advertising which conveys how to safely use electricity and
31 to avoid accidents;

- 1 3. Promotional: advertising used to encourage or promote the use of
- 2 electricity;
- 3 4. Institutional: advertising used to improve the company's public
- 4 image; and
- 5 5. Political: advertising associated with political issues.

6 The Commission adopted these categories of advertisements because it believed that a
7 utility's revenue requirement should: "1) always include the reasonable and necessary cost of
8 general and safety advertisements; 2) never include the cost of institutional or political
9 advertisements; and 3) include the cost of promotional advertisements only to the extent that the
10 utility can provide cost-justification for the advertisement." (Report and Order in KCPL Case No.
11 EO-85-185, 28 MO P.S.C. (N.S.) 228, 269 271 (April 23, 1986)).

12 In response to Staff data requests, Spire East and Spire West provided supporting
13 documentation for its advertising costs and copies of the actual advertisements. Staff examined
14 each advertisement, classifying them into the individual categories listed above to determine the
15 types of advertisements that should be either included or excluded from Spire East and
16 Spire West's cost of service. Staff reviewed these advertisements to ensure that only advertising
17 costs for programs necessary for the provision of safe and adequate utility service are included in
18 Spire East and Spire West's cost of service. For example, all advertising costs related to the safe
19 use of natural gas were included in expenses as well as costs necessary for Spire East and
20 Spire West to communicate with their customers on such matters as notifications relating to
21 operation of the cold-weather rule and the availability of low-income assistance programs.

22 In the KCPL case referenced above, the Commission stated that the utility must not include
23 the cost of institutional advertisements. Staff determined that some of the test year advertising
24 costs are related to institutional advertisements, which are those advertisements designed to
25 enhance the public image of Spire East and Spire West. Staff recommends adjustments to remove
26 the cost of advertisements classified as institutional because these costs are incurred in order to
27 develop a favorable image of Spire East and Spire West; they are not required to provide
28 utility service to customers, nor do they provide any direct benefit to these customers. Total
29 disallowed advertising expense is \$15,503 for Spire East and \$213 for Spire West.
30 Staff's adjustments are located in Schedule 10 of Staff's accounting schedules.

31 *Staff Expert/Witness: Antonija Nieto*

1 **2. Rate Case Expenses**

2 Staff recommends including a 50% share of the average incremental external rate case
3 expense from the most recent two Spire Missouri rate cases and normalizing that cost level over a
4 three year period. The annual amount of rate case expense included in Staff’s recommended
5 revenue requirement is \$196,465 combined for Spire East and Spire West. This amount would not
6 be subject to true-up for actual expense incurred, or any over or under-recovery recognized.
7 Staff also recommends removal of all expenses incurred in Spire Missouri’s appeals of the
8 2017 Rate Cases.

9 Rate case expense is the sum of the costs a utility incurs in preparing and filing a rate case.
10 In the instant case, Spire Missouri has incurred expenses in conjunction with legal counsel and
11 outside consultants. Staff recommends full recovery of the depreciation study expense and all
12 internal payroll expenses incurred in processing the rate case. Staff recommends assigning Spire
13 Missouri’s remaining discretionary rate case expense to both ratepayers and shareholders based
14 upon a 50/50 split of incremental external rate case expenses. This allocation is consistent with
15 the Commission’s most recent guidance concerning rate case expense in the Spire Missouri Case
16 Nos. GR-2017-0215 and GR-2017-0216. The Commission’s decision was recently upheld by the
17 Missouri Supreme Court⁹¹. The total amount of rate case expense is based on a two case average
18 of the two prior Spire Missouri rate cases.

19 Staff’s recommended cost sharing methodology in this case is based on the
20 following rationale:

- 21 1) Rate case expense sharing of incremental external expenses creates
22 an incentive and mitigates a disincentive on the utility’s part to
23 control rate case expenses to reasonable levels;
- 24 2) Generally, both ratepayers and shareholders benefit from the rate
25 case process. The ratepayer is receiving safe and adequate service
26 at a just and reasonable rate and the shareholder is receiving an
27 opportunity to receive an adequate return on investment;
- 28 3) Ratepayers will continue to pay for the majority of the rate case and
29 regulatory process expenses under any form of sharing mechanism
30 when including internal payroll costs; it is fair and equitable to
31 expect shareholders to carry a reasonable portion of the rate case
32 cost burden; and

⁹¹ *Spire Mo., Inc. v. Pub. Serv. Comm’n*, --- S.W.3d ---, No. SC97834, Slip Op. at 13-14 (Mo. banc Feb. 9, 2021).
Case No. SC97834

- 1 4) There is a high probability that some recommendations advocated
2 by utilities through the rate case process will ultimately be found by
3 the Commission to not be in the public interest.

4 Rate case expense is defined as all incremental costs incurred by a utility directly related
5 to an application to change its general rate levels. These applications are usually initiated by the
6 utility but rate case expenses may also be incurred as a result of the filing of an earnings complaint
7 case by another party. The largest amounts of rate case expense usually consist of costs associated
8 with use of outside witnesses, consultants, and external attorneys hired by the utility to participate
9 in the rate case process.

10 Generally, utility management has a high degree of control over rate case expense.
11 Attorneys, consultants, and other services can either be provided by in-house personnel or can be
12 acquired from an outside party. Some Missouri utilities employ in-house counsel and primarily
13 utilize internal labor to process rate filings; therefore, the use of outside attorneys and consultants
14 in rate proceedings is not always necessary. Rate case expenses subject to a sharing mechanism
15 do not include internal labor costs as those are included in the cost of service through the payroll
16 annualization and are not incremental expenses resulting from the rate case process. These costs
17 are fully paid for by ratepayers.

18 During rate case proceedings and generally in the utility regulatory process, there are four
19 broad categories of costs involved:

- 20 1) The cost incurred by the Commission for itself and Staff,
21 2) The cost incurred by the Office of Public Counsel,
22 3) The cost incurred by intervenors in Commission proceedings, and
23 4) The cost incurred by the utility in the regulatory process.

24 Category 1 is the cost incurred by the Commission. This includes all operating expenses,
25 salaries, wages, and benefits of the Commission and Staff. The Commission's operating expenses
26 are limited to the amount the Missouri General Assembly appropriates for that purpose. An annual
27 amount of operating expenses is assessed by the Commission and paid by the utilities it regulates,
28 and subsequently passed on to ratepayers through rates. The utility is not charged the direct cost
29 of processing its filings or regulating company-specific activities. Spire Missouri is charged based
30 on an assignment of the Commission's budget to regulation of the gas industry with this amount
31 allocated to Spire Missouri based on the percentage of its regulated revenues compared to the total

1 gas regulated revenues in Missouri. The utility, in turn, passes this expense to its ratepayers through
2 rate case process. Ultimately customers pay these expenses through rates for utility services.

3 Category 2 is the cost incurred by the Office of the Public Counsel. Public Counsel
4 represents the public and the interests of utility customers in proceedings before the Commission.
5 An amount for Public Counsel's annual operating expenses is appropriated by the Missouri
6 General Assembly, which is sourced from general revenue paid by Missouri taxpayers.

7 Category 3 is the cost incurred by intervenors in Commission proceedings. Intervenors may
8 be involved in Commission proceedings for a variety of reasons, but most frequently for reasons
9 related to revenue requirement and rate design issues raised in general proceedings. Some
10 intervening parties represent a large individual utility customer or group of customers. There are
11 several intervenors in this case, some of whom have retained their own counsel and experts to
12 review Spire Missouri's rate increases/decreases. Each intervenor is responsible for its own rate
13 case expenses.

14 Category 4 is the cost incurred by the utility in the regulatory and rate setting process. In
15 prior rate cases, the Commission allowed utilities to pass through to ratepayers the full amount of
16 normalized and prudently incurred rate case and regulatory expenses in the rate-setting process.
17 When utilities are allowed to pass full rate case costs on to ratepayers, the utilities are the only rate
18 case participants that do not face practical limit in the amount of rate case expense they chose to
19 incur. All of the other participants in the rate case process are limited in the amounts of rate case
20 expense they can incur by the budgetary decisions of General Assembly or by the willingness of
21 the intervening parties to fund rate case activities. With full rate case expense recovery, utilities
22 are free to plan their rate case activities with knowledge that the associated cost of those activities
23 will be passed on to customers.

24 The practice of allowing utility to recover all, or almost all, of its rate case expense from
25 customers creates an inherent disincentive for the utility to control rate case expense. For all other
26 parties to the rate case process, the funds spent are ultimately limited by a budget and financial
27 restraints. Having significant financial resources to fund rate case activities combined with the
28 ability to pass through the entire amount of the expenses creates what can be perceived as an unfair
29 advantage over all other parties in the rate case process.

1 Some of a utility’s other discretionary expenses are not recovered by the utility in the rate
2 making process. For example, charitable contributions, which are discretionary amounts paid to
3 individuals or organizations for charitable reasons with no direct business benefit, have historically
4 not been included as an expense in the cost of service. While the utility may believe it has a
5 responsibility to be a “good corporate citizen,” including charitable contributions in the cost of
6 service would equate to an involuntary contribution by the ratepayer. Cost associated with political
7 activities (“lobbying”) are another type of cost routinely disallowed from inclusion in customer
8 rates. These are examples of costs that are not necessary for the provision of safe and adequate
9 utility service in Missouri. While both charitable contributions and lobbying expenses are not
10 recovered by utilities in the cost of service, this fact does not and has not discouraged utilities from
11 participating in such activities. Similarly, while any form of sharing of rate case expense may act
12 as an incentive to control these costs, Staff has not identified substantial curtailing of incremental
13 rate case expenses by the utilities affected by sharing.

14 In 2011, the Commission established Case No. AW-2011-0330 to investigate current rules
15 and practices regarding recovery of rate case expense by Missouri utility companies. Both sharing
16 rate case expenses 50/50 and sharing based on ordered rate increase versus requested rate increase
17 were discussed in that report.

18 The Commission ordered a sharing of KCPL’s rate case expenses in its *Report and Order*
19 in Case No. ER-2014-0370:

20 The Commission finds that in order to set just and reasonable rates under
21 the facts of this case, the Commission will require KCPL shareholders to
22 cover a portion of KCPL’s rate case expense. One method to encourage
23 KCPL to limit its rate case expenditures would be to link KCPL’s
24 percentage recovery of rate case expense to the percentage of its rate
25 increase request the Commission finds just and reasonable. The
26 Commission determines that this approach would directly link KCPL’s
27 recovery of rate case expense to both the reasonableness of its issue
28 positions and the dollar value sought from customers in this rate case.

29 The Commission concludes that KCPL should receive rate recovery of its
30 rate case expenses in proportion to the amount of revenue requirement it is
31 granted as a result of this Report and Order, compared to the amount of its
32 revenue requirement rate increase originally requested. This amount should
33 be normalized over three years. The Commission also finds that it is
34 appropriate to require a full allocation to ratepayers of the expenses for
35 KCPL’s depreciation study, recovered over five years, because this study is

1 required under Commission rules to be conducted every five years.
2 [Footnotes omitted]⁹²

3 The footnote omitted in the above reference further clarifies the Commission's conclusions
4 concerning recovery of rate case expenses:

5 It is understood that some of the issues litigated in this case do not directly
6 affect the overall revenue requirement granted by the Commission; but it is
7 also clear that the vast majority of litigated issues do have a direct or indirect
8 impact on the revenue requirement. Accordingly, percentage sharing is a
9 reasonable approach to correlating recovery of rate case expense to the
10 relationship between the amount of litigation that benefited both ratepayers
11 and shareholders and that which benefited only shareholders⁹³.

12 More recently, in the Spire Missouri rate cases, the Commission ordered a 50/50 split of
13 rate case expenses:

14 Therefore, it is just and reasonable that the shareholders and the ratepayers,
15 who both benefited from the rate case, share in the rate case expense. The
16 Commission finds that in order to set just and reasonable rates under the
17 specific facts in this case, the Commission will require Spire Missouri
18 shareholders to cover half of the rate case expense and the ratepayers to
19 cover half with the exception of the cost of customer notices and the
20 depreciation study⁹⁴.

21 Staff examined the facts and circumstances in Spire Missouri's filing and recommends the
22 Commission order a 50/50 sharing of rate case expense.

23 Staff divides rate case expense over the period of time it estimates will pass before the
24 utility's next rate case and includes an annual amount in the utility's revenue requirement.
25 Typically, this cost is not "amortized" for ratemaking purposes, and the utility's recovery of this
26 expense in rates is not tracked against its actual rate case expense for consideration of over or
27 under recovery. Staff recommends this cost should be "normalized" by including a normal level
28 in the cost of service. In the current case, Staff recommends a three year normalization of rate case
29 expenses because of the historical frequency of Spire Missouri rate cases. Staff has also included
30 depreciation study expenses over five years with no sharing, which is the required time interval
31 for Spire Missouri to conduct depreciation study.

⁹² *Report and Order*, Case No. ER-2014-0370 page 72.

⁹³ *Report and Order*, Case No. ER-2014-0370 page 72, Footnote 251.

⁹⁴ *Report and Order*, Case Nos. GR-2017-0215 and GR-2017-0216, page 52.

Staff recommends including a 50% share of a two case average of Spire Missouri's incurred rate case expense over its previous two general rate cases. Spire Missouri's actual rate case expense incurred over the last several rate cases is summarized in the following tables:

Spire East Rate Case Expense	Total Expense
GR-2007-0208	251,278
GR-2010-0171	206,582
GR-2013-0171	80,180
GR-2017-0215	1,129,301
Two Case Average	604,740
50% Shared Amount	302,370
Three Year Normalized Amount	\$100,790

Spire West Rate Case Expense	Total Expense
GR-2004-0209	937,906
GR-2006-0422	967,378
GR-2009-0355	1,035,745
GR-2014-0004	167,743
GR-2017-0215	980,359
Two Case Average	574,051
50% Shared Amount	287,026
Three Year Normalized Amount	\$95,675

Staff recommends including a 50% share of the average incremental external rate case expense from the most recent two Spire Missouri rate cases and normalizing that cost level over a three year period. The annual amount of rate case expense included in Staff's recommended revenue requirement is \$196,465. This amount would not be subject to true-up for actual expense incurred, or any over or under-recovery recognized.

Staff also recommends an adjustment for the cost recovery of Spire Missouri's depreciation study which the Company is required to provide every five years. Staff used the most recent cost of the depreciation study from the 2017 Rate Cases. Staff used an amortization period of five years to determine the revenue requirement impact. This results in an annual amount of \$11,034.

Finally, Staff recommends removal from the cost of service of all incremental expenses incurred to appeal the Commission's *Report and Order* in the 2017 Rate Cases. These expenses were incurred strictly for the benefit of Spire Missouri's shareholders and should not be included

1 in the cost of service. Staff has identified \$237,824 of these expenses in the test year. To the extent
2 any additional incremental expenses were incurred the adjustment should so reflect.

3 *Staff Expert/Witness: Keith Majors*

4 **3. Lease Expense**

5 During the test year, Spire East and Spire West incurred costs for the leasing of property
6 and equipment that was used in day-to-day operations. Staff has reviewed the lease expenses and
7 associated lease documentation for the test year, and annualized it to reflect the most current
8 expense levels.

9 *Staff Expert/Witness: Antonija Nieto*

10 **4. Spire, Inc. Corporate Office Lease**

11 Spire Inc. is currently leasing its corporate headquarters located at 700 and 800 Market
12 Street in St. Louis, MO. The cost of this lease is allocated between the various regulated and
13 non-regulated subsidiaries of Spire Inc. Staff made adjustments to the portions of the lease expense
14 allocated to Spire East and Spire West based on overall allocation factors recommended by
15 Staff witness Matthew R. Young.

16 *Staff Expert/Witness: Antonija Nieto*

17 **5. Lobbying and MEDA Activities**

18 As part of its analysis of lobbying expense, Staff analyzed the organizations to which Spire
19 paid dues. If an organization was found to provide legislative activities in part or in whole, Staff
20 made an adjustment to eliminate those lobbying costs. These types of costs primarily benefit Spire
21 shareholders and should therefore be absorbed by the shareholders of Spire. Staff believes that
22 any costs related to the Missouri Energy Development Association (“MEDA”) should be treated
23 below-the-line for ratemaking purposes and absorbed by shareholders. MEDA is engaged in
24 governmental affairs and lobbying activities on behalf of Missouri regulated utilities on an ongoing
25 basis. Staff made an adjustment to the test year account balance to remove the MEDA invoice
26 amounts of \$135,835 listed in Staff Data Request number 40.

1 The Company stated in Staff Data Request number 56 that they had identified \$237,000 in
2 contract lobbyist expense. Staff made an adjustment to the test year account balance to remove
3 this amount for contract lobbying.

4 In addition to MEDA and contract lobbying, the Company's response to Staff Data Request
5 number 79 identified costs related to legislative activities for the American Gas Association
6 ("AGA"). The Company identified 6.2% of AGA dues that they treated below-the-line for
7 ratemaking purposes. Staff did not make an adjustment for AGA because the Company already
8 booked lobbying costs associated with AGA below the line.

9 *Staff Expert/Witness: Jared Giacone*

10 **6. Insurance Expense**

11 Insurance expense is the cost of attaining protection obtained from third parties by utilities
12 against the risk of financial loss associated with unanticipated events or occurrences. Utilities, like
13 non-regulated entities, routinely incur insurance expense in order to minimize their liability
14 (and, potentially, that of their customers) associated with unanticipated losses. Insurance
15 traditionally consists of the following types of coverage:

- 16 • Directors and Officers Liability Insurance
- 17 • Workers' Compensation - covers all employees
- 18 • General and Excess Liability – all liability claims against the company
- 19 • Property – covers tangible property
- 20 • Fiduciary Liability – general coverage including theft, forgery, fraud,
21 terrorism, etc.

22 Premiums for insurance are normally pre-paid by utilities (i.e., payment is made by the
23 utility to the insurance vendor in advance of the policy going into effect). Most insurance policies
24 cover an annual (twelve month) period. Therefore, insurance payments are normally treated as
25 prepayments, with the amount of the premium being booked as an asset and amortized to expense
26 over the life of the policy. Spire East's and Spire West's prepayments have been analyzed
27 separately and are discussed in the prepayments section of this Cost of Service Report.

28 Staff's adjustment to FERC Account 924 reflects the ongoing and normal expense for
29 property insurance premiums. Staff's adjustment for FERC Account 924 is \$43,738 for Spire East
30 and \$73,765 for Spire West. Staff's adjustment to FERC Account 925 reflects the ongoing
31 and normal expense for all other insurance premiums and amounts to \$(134,611) for Spire East

1 and \$2,996,559 for Spire West. Staff’s adjustments are reflected in Schedule 10 of Staff’s
2 Accounting Schedule.

3 *Staff Expert/Witness: Antonija Nieto*

4 **7. Injuries and Damages**

5 Injuries and damages expense represents the portion of legal claims against a utility that is
6 not subject to reimbursement under the utility’s insurance policies. Injuries and damages expense
7 normally consists of the following components:

- 8 • General Liability
- 9 • Auto Liability
- 10 • Workers Compensation

11 Generally Accepted Accounting Principles normally require companies to book injury
12 and damages claims on an accrual basis. This means the expense is based on estimated
13 future claims payout amounts, rather than the actual cash payments made. However, for
14 ratemaking purposes, Staff’s position is that injuries and damages expense should be measured on
15 a “cash” basis; i.e., be based upon actual cash payouts by the utility for claims made against it.
16 This approach results in the actual cash payments forming the basis for the amount allowed in
17 utility rates for recovery instead of the accrued book expense.

18 For injuries and damages expense, Staff calculated a three-year average of actual cash
19 payouts net of insurance recoveries in Account 925 and used that average to represent a normalized
20 level of actual claims paid. Staff then subtracted the normalized level of actual claims paid from
21 the test year to calculate its adjustment. Staff’s adjustment of \$410,823 for Spire East and
22 \$1,003,607 for Spire West is shown on Staff’s Accounting Schedule 10. This calculation has been
23 endorsed by the Commission in prior Spire East and Spire West cases.⁹⁵

24 *Staff Expert/Witness: Jeremy Juliette*

25 **8. Hydro-Static Testing Expense**

26 In GR-2017-0215 & 0216, the Commission approved a *Non-Unanimous Stipulation and*
27 *Agreement* in its *Amended Report and Order* filed on March 7, 2018. The *Non-Unanimous*
28 *Stipulation and Agreement* states the following:

⁹⁵ GR-2017-2016, GR-2017-0215, GR-2014-0007, GR-2013-0171.

1 “The Signatories agree that effective on the date of this agreement, LAC
2 and MGE will expense all future hydrostatic testing costs. For the purposes
3 of this rate case, MGE’s rates will include an annual amount of hydrostatic
4 testing expense of \$413,177. No further action will be taken with respect to
5 hydrostatic testing performed.”⁹⁶

6 In this case, Staff reviewed the costs associated with hydro-static testing and verified that both
7 Spire East and Spire West have been expensing all costs associated with hydrostatic testing.⁹⁷ Staff
8 reviewed the amount of hydro-static testing expense incurred since the last rate case for Spire East and
9 Spire West. Staff discovered Spire West has not incurred any hydro-static testing expense since the
10 last case, therefore, Staff made no adjustment to the test year. For Spire East, an annual amount of
11 hydrostatic testing was not included in the Non-unanimous Stipulation and Agreement in Case No.
12 GR-2017-0215. Staff analyzed hydrostatic testing expense for Spire East for the period of 2018-2020
13 and determined a three year normalization is representative of an ongoing level of hydro-static expense
14 for Spire East. Staff’s adjustment of (\$525,729) is reflected in Staff Accounting Schedule 10.

15 *Staff Expert/Witness: Jeremy Juliette*

16 **9. Fuel Expense for Equipment and Vehicles**

17 Staff reviewed Spire’s fuel costs for equipment and vehicles that are used in the day to day
18 operations during fiscal year 2018, 2019, and 2020. Staff determined that costs currently included
19 in test year best represents fuel expense for equipment and vehicles going forward. Staff’s
20 treatment of fuel expense is consistent with Spire.

21 *Staff Expert/Witness: Antonija Nieto*

22 **10. Credit Card Processing Fees**

23 Spire East and Spire West incur costs from various credit card companies and/or third party
24 vendors that charge to process credit card payments that customers make to pay their utility bill.
25 In the Partial Stipulation and Agreement filed in GR-2009-0355, the Commission allowed
26 Spire West (formerly Missouri Gas Energy (MGE)) to recover in rates the per-transaction expense
27 associated with processing customer credit card payments. Prior to the settlement in that case, the
28 customer was responsible for the transaction fees associated with using a credit card to make
29 payments. In the last general rate case, GR-2017-0215, Spire East sought similar treatment to that

⁹⁶ *Partial Non-Unanimous Stipulation and Agreement* in GR-2017-0215 & 2016, paragraph 7, filed on December 20, 2017.

⁹⁷ Response to Staff Data Request No. 135 in GR-2021-0108.

1 approved by the commission for MGE for credit card processing fees. The Commission approved
2 the same treatment for Spire East in case No. GR-2017-0215⁹⁸.

3 The Company did not propose an adjustment for credit card processing fees in this
4 case. However, Staff reviewed the costs associated with credit card processing fees during the test
5 year and determined the appropriate amount of fees to include in rates in this case. Staff
6 determined the cost based on the amount of expense recorded in general ledger for those costs for
7 the 12 months ending December 31, 2020 and made adjustments in amount of \$169,014 for Spire
8 East and \$20,331 for Spire West. Staff's adjustments are reflected in Schedule 10 of Staff's
9 Accounting Schedule.

10 *Staff Expert/Witness: Antonija Nieto*

11 **11. Dues and Donations**

12 Staff reviewed the list of membership dues paid and donations made to various
13 organizations that Spire charged to their utility accounts during the year. Dues and donations are
14 expenditures made by utilities to organizations, clubs, charitable funds and other groups. Dues
15 can be defined as the amount paid to an organization by the utility which allow the utility or
16 individuals employed by the utility company to participate in and benefit from the organization's
17 activities. Donations are defined as discretionary amounts paid to individuals or organizations for
18 charitable reasons with no direct business benefit.

19 Staff used the four criteria first used in Case No. EO-85-185 to establish when dues and
20 donations should not be included in customer rates. These criteria have been applied in utility rate
21 cases since 1985. The criteria for excluding the costs are:

- 22 1) The expenses are involuntary ratepayer contributions of a charitable
23 nature;
- 24 2) The expenses are supportive of activities which are duplicative of those
25 performed by other organizations to which the Company belongs or
26 pays dues;
- 27 3) The expenses are associated with active lobbying activities which have
28 not been demonstrated to provide any direct benefit to the ratepayers; or
- 29 4) The expenses represent costs of other activities that provide no benefit
30 or increased service quality to the ratepayer

⁹⁸ GR-2017-0215, Amended Report and Order, March 7, 2018, page 72.

1 Spire participates in several social and civic organizations. Staff reviewed the
2 contributions made to these organizations to determine if the costs should be recovered in rates
3 based on the benefit derived from these costs to the Company's customers.

4 Based on Commission criteria detailed in Case No. EO-85-185, Staff recommends removal
5 of chamber of commerce dues if they are in the following categories:

- 6 1) Chamber of commerce dues that serve areas outside of the Spire service
7 territory;
- 8 2) Chamber of commerce dues for statewide chambers of commerce; and
- 9 3) Chamber of commerce dues that are duplicative of other chamber dues
10 in the same area

11 Staff recommends and made an adjustment to remove \$353,857 of dues that met the exclusion
12 criteria listed above. Some examples of dues removed were for organizations in a duplicative local
13 region, some were national or Statewide, and some were charitable in nature or otherwise provided
14 no benefit or increased service quality to ratepayers. Staff allowed local chambers of commerce
15 and/or local economic development dues so long as they were not in a duplicative local region.
16 Staff also allowed numerous employee trade/professional memberships dues.

17 *Staff Expert/Witness: Jared Giacone*

18 **12. Miscellaneous Expense and Officer Expense Accounts**

19 Spire East and Spire West make use of corporate suites and season tickets to sporting and
20 entertainment events to entertain large customers, government employees, and Spire's own
21 employees and families. Spire made an adjustment to remove the cost of the tickets and alcohol
22 in their direct filing⁹⁹. In addition to the costs removed by Spire East and Spire West, Staff has
23 removed additional expenses that Staff views as non-beneficial to ratepayers.

24 The officers of Spire Missouri submit expense reports for items such as travel costs,
25 membership dues, and other miscellaneous charges. Staff has reviewed the expense reports for
26 the officers of Spire Missouri and removed charges for items that provide no benefit to ratepayers
27 and are not necessary in the provision of safe and adequate service.

28 In total, Staff has removed \$510,991 for Spire East and \$266,067 for Spire West regarding
29 these disallowed costs.

30 *Staff Expert/Witness: Jeremy Juliette*

⁹⁹ Case No. GR-2021-0108, *Wesley Selinger Direct Testimony*, p. 14, lines 20-23.

1 **13. Board of Directors Expense**

2 As a publicly traded Company, Spire is required by the Security Exchange Commission to
3 have an independent board of directors. Staff has reviewed the expense incurred in the test year
4 related to the board of directors and made adjustments to remove those expenses found to be
5 imprudent, unreasonable, or of no benefit to the ratepayers. Total amount of Board of Directors
6 expense removed from cost of service is \$1,100 for Spire East and \$660 for Spire West.

7 *Staff Expert/Witness: Antonija Nieto*

8 **14. Property Tax Expense and Tracker**

9 Staff recommends an annualized level of property taxes using a ratio of plant-in-service as
10 of January 1 2020 and property taxes paid in 2020. The ratio is then applied to plant-in-service as
11 of January 1, 2021. Staff also recommends a five year amortization of deferred property taxes
12 based on a property tax tracker approved by the Commission in Case Nos. GR-2017-0215 and
13 Case No GR-2017-0216 and recommends discontinuing the tracker.

14 Property taxes are those taxes assessed by state and local county taxing authorities on a
15 utility’s “real” property. Property taxes are computed using the assessed property values and
16 property tax rates. The taxing authorities, either state or local, use an assessment date of January
17 1 of each year. This date is critical because it forms the basis for the property tax bill, which is
18 generally paid at the end of that same year, no later than December 31. A utility is required to file
19 with the taxing authorities a valuation of its utility property based on the January 1 assessment
20 date. The taxing authorities will then provide the utilities with what they refer to as “assessed
21 values” for each category of property owned. Typically in late summer or fall, the appropriate
22 taxing authorities give the utilities the property tax rate. Property tax bills are then issued with
23 “due dates” before December 31 based on property tax rates applied to the utilities’
24 assessed values.

25 Staff annualizes property taxes by using a ratio of plant-in-service as of January 1 to
26 property taxes paid in the same year. Staff uses this ratio to evaluate the property taxes paid by
27 Spire East and Spire West and develop an annualized level of property taxes to include in Spire
28 East’s and Spire West’s cost of service.

29 Since the update period in this case is December 31, 2020, Staff determined the annualized
30 property taxes based on the property Spire East and Spire West had in-service on January 1, 2021.

1 Staff applied a property tax ratio based on actual 2020 property tax payments to January 1, 2021,
2 plant. The property tax rate is calculated by dividing the total amount of property tax paid by Spire
3 East and Spire West in 2020 by the total cost of the taxable property owned on January 1, 2020.
4 This ratio when applied to the January 1, 2021, plant provides the amount of property taxes
5 expected to be paid for 2021. Staff recommends that this is the appropriate method for developing
6 an annualized level of property taxes, because this method relies upon the actual January 1, 2021,
7 balance of Spire East's and Spire West's property, and uses the most recent known tax rate (2020),
8 without attempting to estimate any change in the rate of taxation for 2021 that is not known as of
9 the update period.

10 Staff's approach is consistent with previous Staff recommendations and with the Orders by
11 the Commission in the following litigated rate cases:

- 12 • Missouri Gas Energy, Case No. GR-96-285
- 13 • St Louis County Water Company, Case No. WR-2000-844
- 14 • The Empire District Electric Company, Case No. ER-2001-0299
- 15 • Kansas City Power & Light, Case No. ER-2006-0314

16 In the most recent case listed above, Case No. ER-2006-0314, the Commission ordered
17 the following:¹⁰⁰

18 Staff recommends that the Commission calculate property tax expense by
19 multiplying the January 1, 2006 plant-in-service balance by the ratio of the
20 January 1, 2005 plant-in-service balance to the amount of property taxes
21 paid in 2005. KCPL wants the property tax cost of service updated to
22 include 2006 assessments and levies. The Commission finds that the
23 competent and substantial evidence supports Staff's position, and finds this
24 issue in favor of Staff.

25 Staff's recommended level of property taxes for Spire East and Spire West is reflected in
26 Staff's Accounting Schedule 10.

27 **Property Tax Tracker**

28 In Case Nos. GR-2017-0215 and GR-2017-0216, the Commission ordered the
29 establishment of a tracker for Spire's property tax expenses. Beginning on page 117 of its
30 Amended Report and Order, the Commission states:

31 Finally, one of Spire Missouri's arguments against including the effects of
32 the TCJA in the present case was that it was unfair to the company to not

¹⁰⁰ Case No. ER-2006-0314, Commission Report and Order, page 68.

1 also include certain property taxes that also fall outside of the test year.
2 Having considered these arguments the Commission agrees that actual
3 property tax expense paid in 2017 is now known and measurable even
4 though it falls outside the test year. And, coupled with the extraordinary
5 event of decreased income tax expense it would not be just to exclude
6 these known and measurable taxes (estimated at hearing as approximately
7 \$1.4 million) from increasing property tax expense. Therefore, as an offset
8 to the reduction in current income tax expense, the Commission will include
9 the actual 2017 property taxes as an expense for the new rates. However, as
10 2018 property taxes are still not known and measurable, the Commission
11 will also establish a tracker to account for any amounts of property tax
12 expense over or under the amounts set out in rates for possible inclusion in
13 Spire Missouri's next rate proceeding.¹⁰¹

14 In this case, Staff reviewed the regulatory asset established by Spire in accordance with the
15 previous Commission order. Staff calculated the amounts collected in rates from the effective date
16 of rates in the last case through the update period in the current case. Staff also included the amount
17 of property taxes included in Spire East's and Spire West's ISRS surcharges and any refunds the
18 company received during the time the tracker was in effect. Staff compared the amount collected
19 to the actual property taxes paid by both Spire East and Spire West. Staff determined the balance
20 of the regulatory asset as of December 31, 2020 to be \$5,818,098 for Spire East and \$3,410,141
21 for Spire West, meaning that Spire has under-collected property tax expense in rates compared to
22 the amounts it has paid to taxing authorities since its last rate case. Staff recommends this balance
23 be amortized over a period of five years. The annualized amortization amount is reflected in Staff's
24 Accounting Schedule 10 for Spire East and Spire West. At this time, Staff also recommends
25 discontinuation of the property tax tracker for both Spire East and Spire West.

26 **Property Tax Appeals**

27 Staff also reviewed any appeals that Spire East and Spire West filed since the effective date
28 of rates in the last case. Spire East filed appeals in St. Francois and St. Genevieve counties for the
29 years of 2018, 2019, and 2020. These appeals are still open and an evidentiary hearing is scheduled
30 for June 23, 2021 according to the Missouri Tax Commission. Spire East also filed an appeal in
31 Franklin county in 2018 in which Spire East successfully reduced the amount of property tax paid
32 that year. This amount was deducted from the regulatory asset. Spire West filed appeals in Clay
33 and Platte counties for the years of 2018, 2019, 2020. Like Spire East, these appeals are still open

¹⁰¹ Case Nos. GR-2017-0215 & GR-2017-0216, Commission Amended Report and Order, pages 117-118.

1 and an evidentiary hearing is scheduled for June 23, 2021. Since the evidentiary hearings occur
2 after the true-up in this case, Staff recommends these appeals and any future appeals be reviewed
3 in the next rate case to determine if any amounts recovered by Spire should be used as a reduction
4 to the property tax regulatory asset established in Spire’s last rate cases.

5 *Staff Expert/Witness: Jeremy Juliette*

6 **15. Kansas Property Taxes – Spire West Specific**

7 Staff reviewed the regulatory asset, approved by the Commission in Case No.
8 GR-2009-0355, to determine the unamortized balance as of the update period, December 31, 2020.
9 Staff recommends amortizing the unamortized balance over a 4 year period. Staff also
10 recommends a normalized level of Kansas property taxes based on a 4 year period (2017-2020)
11 and discontinuing the property tax tracker.

12 In 2009, the Kansas Legislature passed a law, Kansas House Substitute for Senate Bill
13 No. 98, to allow for assessment of all gas being stored and held for resale in Kansas. Similar to its
14 position in Case No. GR-2004-0209, Spire West, formerly Missouri Gas Energy (“MGE”)
15 requested recovery of Kansas property tax it had not yet paid in Case No. GR-2009-0355. As part
16 of the Stipulation and Agreement filed on November 5, 2009, in the 2009 rate case, and approved
17 by the Commission on February 10, 2010, Spire West was granted an AAO for the expenses
18 associated with property tax to be paid to the state of Kansas. According to the Stipulation and
19 Agreement on page 4:

20 MGE shall be granted the following accounting authority order (AAO):
21 That Missouri Gas Energy, a division of Southern Union Company,
22 (“MGE”) is granted an Accounting Authority Order whereby the company
23 is authorized to record on its books a regulatory asset, which represents the
24 expenses associated with the property tax to be paid to the state of Kansas
25 in relation to natural gas in storage pursuant to House Substitute for Senate
26 Bill No. 98 for 2009 and subsequent years based on assessments from
27 Kansas taxing authorities. Missouri Gas Energy may maintain this
28 regulatory asset on its books until the beginning of the month after the final
29 judicial resolution of the legality of that tax. Thereafter, Missouri Gas
30 Energy shall commence amortization of the deferred amounts, with the
31 amortization to be completed over a five-year period. If MGE files a
32 general rate case prior to that final resolution, ratemaking treatment of the
33 deferral may be considered within that case. If MGE is allowed ratemaking
34 treatment providing a return of any AAO funds for Kansas Property Tax,
35 there shall be no return on the Kansas Property Tax AAO funds included in
36 rates. The Commission shall include language in its Order stating that the

1 grant of this AAO does not in any way control how the Commission will
2 treat this deferral for ratemaking purposes in subsequent rate cases, except
3 there shall be no rate base treatment of deferred amounts as provided above.

4 In both the 2004 and 2009 rate cases, the Commission made it clear that if the courts
5 concluded that Spire West had to pay the Kansas taxes, the deferral treatment would end and the
6 five-year amortization was to commence the following month. No rate base treatment was to occur
7 related to any unamortized balance for this deferral treatment.

8 In addition to the cases discussed above, as part of the Stipulation and Agreement in Case
9 No. GM-2013-0254 (concerning the merger of Laclede Gas Company and MGE), approved by the
10 Commission on July 17, 2013, “pre-acquisition regulatory assets of Laclede Gas and MGE will
11 continue in accordance with the Commission approved terms and conditions that created or
12 continued the asset.”¹⁰²

13 On December 6, 2013, the courts issued an order holding Spire West responsible for
14 Kansas property taxes. Spire West and other litigants appealed the Kansas Supreme Court’s
15 decision to the United States Supreme Court. On October 6, 2014, The United States Supreme
16 Court denied the Petition for a writ of certiorari.

17 As part of the Stipulation and Agreement filed on April 11, 2014, in the general rate case
18 denoted as Case No. GR-2014-0007, and approved by the Commission on April 23, 2014,
19 Spire West was allowed to defer a portion of Kansas property taxes and allowed to recover a
20 portion in base rates. According to the Stipulation and Agreement on page 14:

21 The Parties agree that the rates recommended herein include an allowance
22 of One Million Six Hundred Thousand (\$1,600,000) for the amortization of
23 MGE’s current regulatory asset relating to the assessment of Kansas Ad
24 Valorem Taxes and One Million Four Hundred Thousand (\$1,400,000) to
25 reflect an annual ongoing level of Kansas Ad Valorem Taxes. MGE shall
26 be authorized to record as a regulatory asset/liability, as appropriate, the
27 difference between any Kansas Ad Valorem taxes paid by the Company and
28 the allowances included in rates, and such difference shall be recovered
29 from or returned to customers in future rates through a five year
30 amortization of such difference, provided that if the Company prevails in
31 its current appeal challenging the lawfulness of such tax assessments, the
32 Company shall apply interest to any amounts recovered in rates at the
33 Company’s short term debt rate but shall seek approval as soon as
34 reasonably practical to flow through any difference to customers through a

¹⁰² Case No. GM-2013-0254 *Stipulation and Agreement* pages 12-13.

1 separate tariff mechanism. In the event the amortization of the asset or
2 liability becomes fully amortized between rate cases, the amount included
3 in rates between the date it became fully amortized and the effective date of
4 rates in the next rate case shall be returned to shareholders or ratepayers, as
5 appropriate, over a time period not to exceed five years.

6 The annual amortizations approved by the Commission in the 2014 rate case, \$1.6 million
7 for historical deferred property taxes (2009-2013) and \$1.4 million for an ongoing level, were
8 based on estimates. Estimates were used because the final decision from the Supreme Court was
9 not known. As part of the GR-2017-0216 case, Staff reviewed invoices, inventory levels, gas
10 prices, and tax rates for 2009 through 2013 to verify the deferred balances recorded in the
11 regulatory asset approved in Case No. GR-2014-0007, were correct. Staff determined after
12 reviewing the actual property tax invoices that the regulatory asset created in the 2014 rate case
13 using estimates was overstated. In GR-2017-0216, the Commission ordered¹⁰³ the regulatory asset
14 created in the 2014 rate case to reflect actual property tax paid by Spire West be revised to
15 \$7,802,197. The Commission also ordered a normalized level of Kansas property tax expense of
16 \$1,454,069 be included in Spire West's revenue requirement. Along with the normalized level of
17 expense, the Commission ordered an annual amortization expense of \$276,510 to be included in
18 regards to the unamortized balance of the revised regulatory asset.

19 In this case, Staff reviewed the regulatory asset to determine the unamortized balance as of
20 the update period, December 31, 2020. While analyzing the regulatory asset, Staff also reviewed
21 invoices for Kansas property taxes paid for 2018-2020. Staff compared the amounts collected
22 through rates and the amount of actual taxes paid for each year. Any over or under collection was
23 then incorporated into the regulatory asset. Staff calculated the unamortized balance as of
24 December 31, 2020 to be \$1,243,642. Staff recommends amortizing this remaining balance over
25 four years for an annual amortization expense of \$310,910. Staff's adjustment to increase the
26 annual amortization is reflected in Staff Accounting Schedule 10.

27 Staff also completed a historical analysis regarding Kansas property taxes paid by
28 Spire West. The table below represents the amounts paid for 2009-2020:

¹⁰³ Case Nos. GR-2017-0215 & GR-2017-0216, Commission Amended Report and Order, pages 25-26.

Spire West Historical Actual Kansas Property Taxes 2009-2020	
Year	Tax Amount
2009	\$1,449,247
2010	\$2,017,164
2011	\$1,509,395
2012	\$1,304,449
2013	\$1,521,942
2014	\$1,391,599
2015	\$1,316,239
2016	\$1,122,514
2017	\$1,674,298
2018	\$1,743,549
2019	\$1,777,419
2020	\$955,932

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Staff used this analysis to normalize the amount of Kansas property tax expense to include in Spire West’s revenue requirement. Staff recommends an annual amount of \$1,537,800 of expense to be included based on a four year average (2017-2020).

At the time a tracker was approved by the Commission, there was a level of uncertainty about the amount of Kansas property taxes that Spire West would pay. As reflected in the table above, there is now several years of costs incurred by Spire West. Consequently, Staff can now determine a normalized level and treat these costs as a normal recurring operating expense. Therefore, Staff recommends discontinuing the Kansas property tax tracker.

Staff Expert/Witness: Jeremy Juliette

16. Uncollectibles

Uncollectible expense is the portion of retail revenues Spire East and Spire West are unable to collect from retail customers because of bill non-payment. After a certain amount of time has passed, delinquent customer accounts are written off. If Spire East and Spire West subsequently collect some portion of previously written off delinquent amounts owed, then those amounts

1 collected reduce the actual write-offs. This results in the net write-off, which is used to
2 determine the normalized level of bad debt expense. Staff examined all levels of net write-offs
3 for the last four years for both Spire East and Spire West. Staff recommends a three-year average
4 (2018-2020) of Spire East's and Spire West's net write-offs. Bad debt expense that has
5 been deferred in Spire's COVID-19 AAO is not included in Staff's three-year average. Staff's
6 adjustments are reflected in Staff's Accounting Schedule 10; (\$1,950,113) for Spire East and
7 \$1,206,894 for Spire West.

8 *Staff Expert/Witness: Antonija Nieto*

9 **17. Amortization of Non-Depreciated Accounts**

10 Certain items such as leasehold improvements, franchises and consents, land and land
11 rights, intangible plant and easements/right of way costs, and software accounts are items that
12 Spire East and Spire West include in their rate base but are not assets that have a depreciation rate
13 assigned to them. In place of this, Spire East and Spire West amortize and recover the cost of the
14 asset over the life of that asset. Staff has included the annualized plant amortization expense in
15 Staff Accounting Schedule 10.

16 *Staff Expert/Witness: Jeremy Juliette*

17 **18. PSC Assessment**

18 The Missouri Public Service Commission assessment ("PSC Assessment") is an amount
19 billed to all regulated utilities operating under the jurisdiction of the Commission as an allocation
20 of the Commission's operating costs for regulating those utilities. The expense of the PSC
21 Assessment is then included by these regulated utilities in the rates charged to customers.

22 Spire's PSC Assessment was adjusted to the latest assessment available for the
23 current fiscal year for the State of Missouri (FY-2021) based upon information obtained from the
24 Commission's Budget and Fiscal Services Department. Spire is assessed as one company,
25 therefore Staff allocated a percentage of the total assessment to Spire East and Spire West based
26 on the 2019 Statement of Revenues provided by Spire to Budget and Fiscal Services for Spire East
27 and Spire West. Staff's adjustment for the PSC Assessment is located on Schedule 10 of Staff's
28 Accounting Schedules.

29 *Staff Expert/Witness: Jared Giacone*

1 **19. Information Technology Expense**

2 Staff reviewed information technology expenses charged to Spire East and Spire West during
3 the last three fiscal years and found that the annual expense showed an upward trend at Spire East
4 and a downward trend at Spire West. However, combining the costs from Spire East and West
5 results in a fluctuating yearly amounts for Spire Missouri. In its direct case, Staff has included a
6 normalized expense based on a three-year average for Spire East and Spire West.

7 *Staff Expert/Witness: Matthew R. Young*

8 **20. Non-Wage Maintenance**

9 Maintenance expense is the cost of maintenance charged to the various operating
10 expense and clearing accounts. It includes labor, materials, overheads, and any other expenses
11 incurred in maintaining a utility’s assets. Maintenance expense normally consists of the costs of
12 the following activities:

- 13 • Direct field supervision of maintenance;
- 14 • Inspecting, testing and reporting on condition of plant, specifically to
15 determine the need for repairs and replacements;
- 16 • Work performed with the intent to prevent failure, restore serviceability,
17 or maintain the expected life of the plant;
- 18 • Installing, maintaining, and removing temporary facilities to prevent
19 interruptions; and
- 20 • Replacing or adding minor items of plant, which do not constitute a
21 retirement unit.

22 Staff analyzed maintenance costs by FERC account for each month for the calendar years
23 ending December 31, 2018, 2019 and 2020. Staff analyzed through the update period ending
24 December 31, 2020, which was the most recent data available to determine if there were any recent
25 trends for the non-labor expenses that had occurred beyond the test year. The test year was the
26 twelve month period ending September 30, 2020, and the test year period data was included within
27 Staff’s analysis. Staff separated maintenance expense between labor and non-labor costs in order
28 to perform the review of non-labor maintenance. Staff specifically addresses labor costs under the
29 heading *Payroll, Payroll Related Benefits* in this cost of service report.

30 Staff’s review included a comparison of annual non-labor maintenance
31 account year-ending balances from 2018, 2019 and 2020 to identify any trends or fluctuations
32 from one year to another. Staff also calculated a two (2) and a three (3) year average to
33 determine any trends or fluctuations. The yearly totals and the averages were compared to the test

1 year (12 month period ending September 30, 2020).

2 Staff found the 12-month test year, ending September 30, 2020, account balances to be
3 reasonable and representative of a normalized level of non-labor maintenance costs for Spire East
4 and Spire West.

5 *Staff Expert/Witness: Jared Giacone*

6 **21. Line Locate Costs**

7 Spire East and Spire West contract underground line locating through a third party,
8 currently United States Infrastructure Corporation (USIC). During the period of April 2018
9 through January 2020, Spire East used Heath Consultants for these services. Staff reviewed the
10 contract that was in place for Spire East during the period of April 2018 through January 2020
11 since the contract was in place during a portion of the test year established in the current case.
12 Staff also reviewed the current contract and invoices from USIC and determined the test year level
13 of these costs are reasonable and representative of future line locate costs. Additionally, Staff
14 adjusted ** [REDACTED]

15 [REDACTED] **.

16 *Staff Expert/Witness: Antonija Nieto*

17 **22. St. Peters Lateral Costs – LAC Specific**

18 On March 1, 2017, Spire East, formerly known as Laclede Gas (“LAC”), entered into a
19 contract for approximately 13 years with MoGas Pipeline LLC (“MoGas”) to supply pipeline
20 services to Spire East’s system at a reduced price per volume of natural gas flow. As part of the
21 agreement with MoGas, Spire East agreed not to complete the St. Peters Pipeline lateral that was
22 started prior to negotiations with MoGas. Spire East invested approximately \$2 million on the St.
23 Peters Pipeline before the MoGas contract was completed.

24 The amended contract with MoGas results in an annual savings of \$4.5 million for the
25 period of 2019-2030; savings of approximately \$54 million over the life of the contract. The
26 \$2 million in expense incurred by Spire East prior to reaching an agreement with MoGas primarily
27 consisted of typical preliminary construction costs such as the use of engineering consultants,
28 procurement of easements, and legal costs. In Case No. GR-2017-0215 the parties agreed to a
29 four year amortization of these costs. The *Partial Stipulation and Agreement* was approved by the
30 Commission on March 7, 2018. The *Partial Stipulation and Agreement* states:

1 The Parties agree that the development costs incurred by LAC in connection
2 with the St. Peters Lateral project, which project enabled LAC to secure
3 discounts from one of its pipeline supplies of a value substantially in excess
4 of such costs, shall be amortized in rates over a four-year period at an annual
5 amount of \$529,501. Such costs shall not be included in rate base.

6 The effective date of rates for Case No. GR-2017-0215 was April 19, 2018. The costs
7 described above will be fully amortized on April 19, 2022. To avoid a significant over-recovery
8 of these cost by Spire East, Staff recommends adjusting the annual amortization amount to
9 \$121,344 and recommends a four year amortization. Staff's calculation is based on May 31, 2021,
10 the true up period in this case.

11 *Staff Expert/Witness: Karen Lyons*

12 **23. Energy Efficiency and Low Income Programs**

13 The current energy efficiency portfolio for Spire East and Spire West territories was
14 agreed to in Case No. GR-2017-0215 in the Partial Stipulation and Agreement filed on
15 December 17, 2017, and approved by the Commission in the Report and Order filed on
16 February 18, 2018¹⁰⁴. The parties agreed to changes in the terms and conditions that
17 govern the provision of the energy efficiency programs by LAC (Spire Missouri East) and
18 MGE (Spire Missouri West) in the Partial Stipulation and Agreement¹⁰⁵ filed on
19 December 13, 2017, and approved in Commission's Report and Order¹⁰⁶ effective March 3, 2018.

20 Of the agreed change in terms and conditions a few of the changes are:

- 21 • The Energy Efficiency Collaborative ("EEC") for LAC and MGE shall now function as an
22 advisory group. The Company shall be responsible for all final decisions regarding its
23 natural gas energy efficiency programs;
- 24 • Program Funding: Except as otherwise provided in the Stipulation and Agreement, the
25 Parties agree there will be no increase in the Company's overall budget funding for

¹⁰⁴ File No. GR-2017-0215, *In the Matter of Laclede Gas Company's Request to Increase its Revenues for Gas Services*/File No. GR-2017-0216, *In the Matter of Laclede's Gas Company d/b/a Missouri Gas Energy's Request to Increase Its Revenues for Gas Service*

¹⁰⁵ File No. GR-2017-0215, *In the Matter of Laclede Gas Company's Request to Its Revenues for Gas Service* and File No. GR-2017-0216, *In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase Its Revenues for Gas Service, Partial Stipulation and Agreement*, paragraph 15, pages 7-12.

¹⁰⁶ File No. GR-2017-0215, *In the Matter of Laclede Gas Company's Request to Its Revenues for Gas Service* and File No. GR-2017-0216, *In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase Its Revenues for Gas Service*, Report and Order, page 9.

1 Program Year 2018. Beginning October 1, 2018, the Company shall fund energy efficiency
2 programs, on an annual basis, toward the goal of 0.75% of the rolling average of the
3 Company's gross operating revenues for the previous three years, provided that such target
4 levels may be exceeded by up to 20%, but may not exceed the 20% buffer without
5 Commission approval;

- 6 • The 2018 annual budget for the Multi-Family Low-Income programs shall be \$900,000,
7 subject to a potential upward adjustment within the 20% budget variance allowance;
8 however, any unspent funds from this sub-budget will be made available for other
9 programs in the following year.

10 Staff recommends the Commission approve continuation of all current programs at their currently
11 approved funding level. The Company has proposed program structure changes within the
12 residential and commercial energy efficiency programs and to the Low-Income Energy
13 Affordability Program and Red-Tag Repair program. These proposed changes are in addition to
14 the two new program tariffs filed for approval by Company witness Shaylyn Dean.

15 Staff continues to review the proposed changes and will address them further in rebuttal.

16 In Case No. GR-2007-0208 the Laclede Gas Energy Efficiency Collaborative (EEC) was
17 approved by the Commission Order Approving Unanimous Stipulation and Agreement and
18 Authorizing Tariff Filing, which became effective on July 29, 2007¹⁰⁷. The EEC was charged
19 with the task to develop, implement and evaluate energy efficiency and conservation programs.

20 When rates became effective pursuant to the Commission's Report and Order in Case No.
21 GR-2006-0422 on March 30, 2007, funding for Missouri Gas Energy's (MGE) energy efficiency
22 programs also began. On August 7, 2007, the MGE Energy Efficiency Collaborative was approved
23 as a result of the Commission's Order Approving Unanimous Stipulation and Agreement in Case
24 No. GT-2008-0005.

25 In Case No. GM-2013-0254, when merger of Laclede Gas Company (now Spire Missouri
26 East) and Missouri Gas Energy (now Spire Missouri West) was effectuated, the EEC's began
27 meeting as one, and in person, on a quarterly basis to better facilitate discussions for both utility
28 energy efficiency portfolios. Each utility provided programs best suited to its individual service

¹⁰⁷ File No. GR-2007-0208, *In the Matter of Laclede Gas Company's Tariff to Revise Natural Gas Rate Schedules, Laclede Gas Company's Quarterly Status Report on Energy Efficiency Collaborative*

1 territory, programs that leverage co-delivery opportunities with the local electric utility, and that
2 fit individual budgets as set forth in approved Stipulation and Agreements. Since that time, the
3 Company feels the two “flagship” programs, the Residential High Efficiency Rebate Program and
4 the Commercial/Industrial Rebate Program, have served to encourage Spire customers of both
5 sectors to invest in energy saving and environmentally-friendly natural gas equipment and
6 measures.

7 Staff continues reviewing the overall portfolio performance and impacts and performance
8 of each program as well as the administration of funds, and reserves the right to comment and/or
9 make recommendations in future testimony.

10 **Residential High Efficiency Rebate Program**

11 The Residential High Efficiency Rebate Program provides residential owners and
12 customer’s rebates for the installation of high efficiency heating systems, water heating systems
13 and thermostats. This program is available for owners of, or customer living in, individually
14 metered dwelling units. All eligible customers must apply through the Company or
15 through participating heating, ventilating and air conditioning and plumbing contractors.
16 Individual dwelling units, as determined by account number, whether owner-occupied or rental
17 property, are eligible for a maximum of two heating system rebates, two water heater rebates, or
18 two combination unit rebates, and two thermostat rebates. Owners of multiple individually metered
19 dwelling units may receive rebates for all qualifying natural gas energy efficiency equipment,
20 subject to program funding availability.

21 **Commercial and Industrial (C/I) Rebate Program**

22 The C/I Rebate program was established to provide commercial and industrial
23 customers incentives through prescriptive (standard) rebates and customer rebates for the
24 implementation of natural gas energy efficiency measures, including part or all of the cost of an
25 energy audit that identifies a measure that subsequently results in a rebate through this program.

26 Customers implementing certain measure as described below will receive
27 prescriptive rebates. All other rebates under this program will receive financial incentives which
28 are customized or individually determined using the Total Resource Cost Test (“TRC”) latest
29 edition of the California Standard Practice Manual for Economic Analysis of Demand-Side
30 Programs and Projects.

1 **Custom Rebates (C/I)**

2 The C/I Rebate program will provide customer rebates to C/I customers for the installation
3 of any natural gas related energy efficiency improvement that does not qualify for a prescriptive
4 rebate. All customer rebates will be individually determined and analyzed to ensure that they pass
5 the Total Resource Cost Test. Any measure that is pre-qualified (evaluated prior to being
6 installed), must produce a Total Resource Cost test result of 1.0 or higher. During a program
7 year, a commercial or industrial customer’s total rebate is limited to \$100,000 or the remaining
8 uncommitted budget for the current program year, whichever is lower. Remaining uncommitted
9 program budgets may be reallocated to other programs if they are not part of unexpired rebate
10 pre-approvals committed for proposed customer projects.

11 The following is a summary of current programs:

12 **Spire Missouri East Specific Programs**

13 **Residential Single Family Low-Income Program**

14 The purpose of the Residential Single Family Low-Income Program is to deliver long-term
15 natural gas savings and bill reductions to low income customers who occupy single family
16 dwelling units within the Spire Missouri East service territory. This program is available to
17 income-qualifying single family low-income customers receiving service under the Spire
18 Residential Rate and residing in single family detached housing, duplexes, and mobile homes.
19 Customers must have service with Spire Missouri East and Ameren Missouri to participate.

20 The Company will co-deliver the program with Ameren Missouri to achieve synergies and
21 to help eligible customers receive energy savings and bill reductions from other energy sources.
22 Participants in selected low-income neighborhoods are limited to the one-time receipt of energy
23 efficiency measures under this program.

24 **Multi-Family Low Income Program**

25 The Multi-Family Low Income Program is a program that will deliver long-term natural
26 gas savings and bill reductions to low income customers who occupy multifamily dwelling units
27 within the Spire Missouri East service territory. This is achieved through direct-install water
28 consumption reduction and heat retention measures at no cost to participating customers. The
29 program will also provide residents of the dwelling units with education on the use of the natural
30 gas conservation measures. The program will have an annual budget of \$500,000. The program

1 is available to income-qualified multifamily properties that contain natural gas space-heating
2 and/or water-heating equipment and receive gas service from Spire Missouri East and electric
3 service from Ameren Missouri.

4 The direct-install measures will include smart thermostats, programmable setback
5 thermostats, low-flow faucet aerators, low-flow showerheads, insulating water-heater pipe wrap,
6 and furnace clean & checks. The Company entered into an agreement with Ameren Missouri and
7 a program administrator to develop, implement, and maintain all services associated with the
8 Program.

9 **Energy Efficiency Kits Program**

10 The purpose of the Energy Efficiency Kits Program is to raise customer awareness of the
11 benefits of “high efficiency” products and to educate residential customers about energy use in
12 their homes by offering information, products, and services to residential customers to save energy
13 cost effectively.

14 The Company has partnered with Ameren Missouri and a program administrator to
15 implement this Program. The program administrator provides the necessary services to effectively
16 implement the Program and to strive to attain the energy savings targets. The Program incorporates
17 various program partners, products, incentive mechanisms and program delivery strategies.

18 The Company, in partnership with the electric utility and program administrator, follows a
19 multi-faceted approach to educate participants and effectuate installation of energy efficiency
20 products and actions addressed in the Energy Efficiency Kits. The kits may include low flow
21 faucet aerators, low flow showerheads, pipe wrap and dirty filter alarms.

22 **Spire Missouri West Specific Programs**

23 **Independence Power & Light (IPL) Pilot Weatherization Program**

24 The IPL Pilot Weatherization Program is an experimental co-delivery Program between
25 IPL and Spire West designed to provide weatherization improvement measures to create long-term
26 (natural gas) bill reduction savings to low-income single-family Spire West natural gas customers
27 within the IPL service territory. The program is administered by Truman Heritage/Habitat for
28 Humanity (“THHFH”). Weatherization costs for services provided to any single household cannot
29 exceed \$7,500 with the total allocated 50% - IPL and 50% - Spire West.

30 The program is funded with a maximum of \$100,000 from Spire West’s Conservation and
31 Energy Efficiency Program funding, which is applied to this program for Spire West’s share of the

1 funding. The Company conducts an internal billing analysis of the pilot program every 24 months
2 to make a determination regarding the cost-effectiveness by comparing the energy savings of
3 participants with a non-participant comparison group. The cost-effectiveness metrics and test will
4 be added but shall not be used to exclude or diminish low-income programs, but instead shall be
5 used to improve program delivery and effectiveness.

6 **Income Eligible Multi-Family Program Direct Install Program**

7 The Income Eligible Multi-Family Program is designed to deliver long-term energy
8 savings and bill reductions to income-eligible customers in multi-family home units and shared
9 common areas within the Spire Missouri West service area. Multi-family dwelling units are
10 defined as structures of three (3) or more attached unit complexes.

11 The Company co-delivers the program with Evergy Missouri West and Evergy Missouri
12 Metro so that eligible customers utilizing both services may receive energy savings and bill
13 reductions from both energy sources. The cost-effectiveness metrics and test will be added but
14 shall not be used to exclude or diminish the low-income program, but instead shall be used to
15 improve program delivery and effectiveness.

16 **Home Comfort Efficiency Program**

17 The Home Comfort Efficiency Program is designed to encourage residential customers to
18 implement whole house improvements by promoting home energy assessments, comprehensive
19 retrofit services and high efficiency furnaces and water heating equipment. The Company
20 co-delivers the program with Evergy Missouri West and Evergy Missouri Metro so that eligible
21 customers utilizing both services may receive energy savings and bill reductions from both energy
22 sources. The program is available to single family property owners and individually-metered
23 multifamily units in buildings with 4 or less units and also renters that receive written approval
24 from the homeowner/landlord to participate. Qualifying customers are eligible to receive the
25 following:

26 Option 1 – Insulation & Air Sealing: Customers that have completed a comprehensive
27 energy audit by a program authorized energy auditor are eligible to receive the installation of a
28 free energy savings items and rebates.

29 Option 2 – Energy Savings Kits or Kit Components: Energy Efficient direct install
30 measures provided to residential customers by the Company to include discretionary energy
31 assessments to targeted low income residents.

1 Option 3 – High Efficiency Furnaces and Water Heating Equipment: Spire Missouri West
2 also offer incentives for qualifying high efficiency natural gas furnaces and water heating
3 equipment measures. These measures are not jointly delivered with Evergy Missouri West and,
4 Evergy Missouri Metro.

5 The total budget for each year of the program shall be calculated and filed annually by the
6 Company as part of its annual budget filing for all energy efficiency program expenditures. This
7 amount provides for incentive payments, marketing costs, and Company administrative costs.

8 **Weatherization Program**

9 This Program is designed to provide energy education and weatherization assistance to
10 low-income residential customers to assist customers in reducing their energy consumption and
11 thus reducing their natural gas utility bill. The annual program funds were approved to remain the
12 same for the Spire Missouri East territory at \$950,000 and \$750,000 annually in assistance for the
13 benefit of eligible low-income customers Spire Missouri West territory.

14 In paragraph 17 on page 12 of the *Partial Stipulation and Agreement* in Case No.
15 GR-2017-0215, it was agreed:

16 *“17. The Parties agree that the low-income weatherization programs and*
17 *arrearage reduction programs of LAC and MGE shall be continued at*
18 *current funding levels. DE agrees to continue administering the LAC*
19 *program for a reasonable period of time to allow time for the Company to*
20 *conduct a Request for Proposal to obtain bids for providing administrative*
21 *services for the LAC and MGE low-income weatherization programs or for*
22 *the Company to assume administration of the LAC low-income*
23 *weatherization program. DE will not participate in selection of an*
24 *administrator under an RFP process if DE participated as a bidder for*
25 *administration of the LAC or MGE programs. If a third party is selected to*
26 *provide such administrative services, it may receive compensation for such*
27 *services at a level no greater than 5% of program funds, which amount shall*
28 *be deferred for future recovery in rates.”*

29 Staff will address changes to the administration of the program in both territories in
30 rebuttal in addition to the program changes proposed by the Company in rebuttal.

31 **Low-Income Energy Affordability Program**

32 The Low-Income Energy Affordability Program continues to be provided to eligible
33 customers in the service territories of Spire Missouri East and Spire Missouri West under new

1 terms approved by the Commission in Case Nos. GR-2017-0215 and GR-2017-0216. The program
2 is jointly administered by Spire Missouri East and Spire Missouri West and select Community
3 Action Agencies (“CAA”) and other similar social service agencies in the joint territories.

4 To be eligible for the program, the customer is required to register with a community action
5 agency, have a household income below 185% of the federal poverty level (“FPL”), apply with
6 the CAA for any energy assistance funds for which they might be eligible, and review and agree
7 to implement cost-free self–help energy conservation measures identified by the CAA. In addition,
8 all applicants are provided with basic budgeting information, as well as information about other
9 potential sources of income such as the Earned Income Tax Credit. The CAA may use household
10 registration from other assistance programs to determine eligibility for the program. The CAA
11 shall also make an effort to identify eligible participants who, because of their payment history or
12 other factors, has a greater opportunity to succeed in the program.

13 The program shall be funded at a total annual level not to exceed \$900,000 for Spire
14 Missouri East and \$750,000 for Spire Missouri West and shall consist of the Fixed Charge
15 Assistance Program (“FCAP”) and the Arrearage Repayment Program (“ARP”). The FCAP
16 eligible customers receive a monthly bill credit of \$20 year round. During the billing months of
17 November through April, eligible customers with household incomes ranging from 0% to 135%
18 receive an additional credit of \$30. The ARP customers may enroll in the ARP in the calendar
19 months of October through December or April through June, with specific guidelines during each
20 enrollment period which the customer must meet to qualify for help. The Company is proposing
21 several changes to this program, which Staff will address in rebuttal.

22 **Red Tag Repair Program**

23 The Red Tag Repair Program is an experimental program in which customers receive
24 funding towards minor repairs or replacement of their gas appliances and piping in order to obtain
25 or retain gas service. The program has two components: (1) Heating Only for Lower Income, and
26 (2) Avoid Red Tags.

27 1. The Heating Only for Lower Income provides payment assistance to eligible residential
28 customers of the Company, with a household income equal to or less than 185% of the Federal
29 Poverty Level, who require repairs or replacement of natural-gas appliances and/or piping that
30 have been red-tagged. Appliances are red-tagged when they are not safe to function without repair
31 or replacement. If the customer is renting the premises, the approval of the landlord is required.

1 The Company provides up to \$100,000 annually for its Spire Missouri East operating unit and
2 \$100,000 annually for its Spire West operating unit to credit customers or reimburse qualified
3 social service agencies within its service territory that can provide, or arrange to provide, and pay
4 for such emergency service work consistent with the terms set forth herein and at an administrative
5 cost not to exceed 10% of the funds provided. No customer shall receive assistance greater than
6 \$1,000 under this program, with no more than \$700 going towards a PSHE and no more than \$450
7 going toward each other gas appliance or piping. Energy efficient appliances being preferred,
8 when a furnace qualifies for replacement under the health and safety provisions of the federal
9 Low-Income Weatherization Assistance Program, the furnace will be replaced with a 90% or
10 higher efficiency unit, when feasible. In cases where a PSHE is being replaced at cost to the
11 customer prior to installation, the customer shall be offered an opportunity to use red tag funding
12 toward the purchase and installation of a 90% or higher energy efficient furnace. If the customer
13 declines, then the customer shall be informed that they may use any licensed or qualified repair
14 service provider or appliance seller that is willing to accept payment according to the terms of the
15 program. The Spire East and Spire West Energy Efficiency Collaborative determines what data
16 shall be gathered and reported to evaluate this Program.

17 2. The Avoid Red Tags program permits Spire East and Spire West field service
18 representatives who are already on-site to spend a nominal amount of time to perform minor repairs
19 of the customer's gas appliances and piping when doing so would result in the customer gaining
20 or keeping use of service rather than having the piping or appliance "red-tagged" as unsafe. If the
21 field service representative believes the problem can be repaired in no more than 15 minutes using
22 parts that cost \$20 or less, the field service representative may, with the customer's consent attempt
23 to affect such repairs in conjunction with utility service at no cost to the customer. If the field
24 service representative determines the repair will fall outside of these parameters, the repair effort
25 is stopped and the service representative proceeds in accordance with the Company's safety
26 practices and the Utility Promotional Practices.

27 The Company proposes a few changes to this Program, which Staff will address in rebuttal.

28 *Staff Expert/Witness: Kory J. Boustead*

29 **a. Accounting Treatment for Energy Efficiency Programs**

30 Spire East and Spire West have energy efficiency programs that allow them to defer energy
31 efficiency costs that include administrative, marketing and customer incentives, and rebates. Staff

1 Witness Kory J. Boustead explains the history of the programs and addresses the proposed changes
2 to the programs in her testimony.

3 Staff evaluated the regulatory asset balance for these programs and included the
4 unamortized balance in rate base and an annual amortization in expense based on a ten year
5 period¹⁰⁸.

6 *Staff Expert/Witness: Antonija Nieto*

7 **b. Accounting Treatment for Low Income Affordability Programs**

8 In Case No. GR-2017-0215, the Commission approved the *Partial Stipulation and*
9 *Agreement regarding Low Income Energy Affordability Program* in its Amended Report and Order
10 filed on March 7, 2018. The program was continued for Spire East, formerly Laclede Gas (LAC)
11 and extended to Spire West, formerly Missouri Gas Energy (MGE)¹⁰⁹. The Company is proposing
12 to change the name of the program, expand eligibility for the program, make the program more
13 understandable for the customers, unify the program across the state, and eliminate the two
14 enrollment periods and resulting billing differences. Staff Witness Kory J. Boustead addresses the
15 proposed changes to the program in her testimony.

16 Staff filed a data request regarding the actual costs of the Low Income Energy Affordability
17 Program. For direct filing purposes, Staff adopted the Company's Low Income Energy
18 Affordability Program proposed rate base balance and annual amortization based on a 10 year
19 period. Staff will review the deferral balance for both Spire East and Spire West and include the
20 unamortized balance in rate base and annual amortization for this program as part of its true-up
21 audit in this rate case.

22 *Staff Witness/Expert: Antonija Nieto*

23 **c. Accounting Treatment for One Time Energy Affordability Program**
24 **(Spire West Only)**

25 In Case No. GR-2014-0007, the parties agreed to the following in a Stipulation and
26 Agreement,

27 The Company shall also be permitted to defer and recover in future rates up
28 to Four Hundred Thousand Dollars (\$400,000) to fund the one-time energy
29 affordability programs set forth in specimen Tariff Sheet No. R-93.

¹⁰⁸ Tariff Sheet R-30-12.

¹⁰⁹ Case No. GR-2017-0215, *Partial Stipulation and Agreement regarding Low Income Energy Affordability Program, paragraph 1*

1 This was a temporary low-income energy affordability program established because of the
2 unusually cold winter of 2013-14 and the corresponding hardship for the Spire West, formerly
3 MGE, low-income customers. MGE customers could enroll in this program from May 1, 2014
4 through August 31, 2014 pursuant to the terms set forth in the tariff. The tariff also states the
5 following:

6 Any Company funds used in the Program, plus administrative funds, shall
7 be deferred into a low-income asset account for recovery over a five-year
8 period in the Company's next rate case. The Company shall not charge or
9 recover fees for its own work administering the program.

10 Staff reviewed the deferral balance to insure accuracy, included the unamortized balance
11 in rate base, and recommends a 4 year amortization of the remaining balance.

12 *Staff Expert/Witness: Antonija Nieto*

13 **d. Accounting Treatment Low Income Weatherization**

14 Both Spire East and Spire West have a Low Income Weatherization programs. Auditing
15 did not address these programs other than insuring the appropriate amount is included in Spire's
16 Cost of Service. Currently Spire East collects \$750,000 in base rates and Spire West collects
17 \$950,000 in base rates.

18 *Staff Expert/Witness: Antonija Nieto*

19 **e. Accounting Treatment for Red Tag Program Costs**

20 In Case No. GR-2013-0171, the Commission approved a Stipulation and Agreement
21 allowing Laclede, now Spire East, to establish an experimental Low Income "Red Tag" Repair
22 Program. As part of that agreement, Spire East was allowed to defer costs up to \$25,000 annually
23 in relation to this program. The program allows customers to receive funding toward minor repairs
24 or replacements of their gas appliances and piping in order to obtain or retain gas service.¹¹⁰

25 In Case No. GR-2014-0007, the program was extended to Spire West, formerly MGE. The
26 Commission approved the following in a Stipulation and Agreement for Spire West,

- 27 - establish, subject to a tracking mechanism similar to that approved for
28 Laclede, a new experimental "Red Tag" program for low income customers
29 under which financial assistance is provided so that customers can make
30 needed repairs to their equipment or piping where necessary to restore or
31 avoid an interruption of service and, in the process, enhance safety;

¹¹⁰ Tariff sheet R-29.

- establish a new experimental “Red Tag” program for all customers under which the Company may make minimal repairs to customer piping or equipment while already at the customer’s premises for another reason in order to avoid service interruptions and enhance customer safety;
- The Parties recommend that the Company be permitted to defer and recover in future rates an amount up to One Hundred Thousand Dollars (\$100,000) to fund the Company’s experimental Low Income “Red Tag” Repair Program (See specimen Tariff Sheet No. R-89).

Staff reviewed Spire East’s and Spire West’s actual costs incurred for the Red Tag program and its regulatory asset balances for the deferred costs. Staff recommends an annual amortization based on the four-year period with no rate base treatment.

Staff Expert/Witness: Antonija Nieto

24. Capitalized Depreciation Expense

Staff recommends adjustments to remove a portion of the annualized depreciation expense calculated on transportation and power-operated equipment. This equipment is used by Spire East and Spire West to perform both operation and maintenance (“O&M”) activities, which are expensed costs, and construction-related activities, which are capitalized. Therefore, a portion of the annualized depreciation calculated on both transportation and power-related equipment is capitalized and charged to construction projects that ultimately are recorded in plant-in-service. As a result, a portion of depreciation relating to construction must be removed from the annualized depreciation expense included in the calculation of net operating income to prevent a double recovery. Staff’s adjustments are reflected in Staff’s Accounting Schedule 10.

Staff Expert/Witness: Jeremy Juliette

25. COVID AAO Cost Recovery

In the Amended Unanimous Stipulation and Agreement filed in Case No. GU-2020-0376, which the Commission approved on October 21, 2020, the parties agreed to an accounting authority order (AAO) allowing Spire to track and defer into a regulatory asset the following costs associated with the COVID-19 pandemic beginning March 1, 2020 until March 31, 2021:

1. New or incremental operating and maintenance expense related to protecting employees and customer - eligible costs are the following:
 - a. Additional cleaning of facilities and vehicles;
 - b. Personal protective equipment (i.e. masks, gloves, sanitizing sprays);

- 1 c. Technology upgrades and equipment directly related to enabling employees to
2 work from home;
- 3 2. Increased bad debt expense due to COVID-19 to the extent total bad debt expense exceeds
4 \$8,328,097 for Spire Missouri East and \$4,356,922 for Spire Missouri West on an annual
5 basis;
- 6 3. Costs related to any new-assistance programs implemented to aid customers with payment
7 of natural gas bills during the pandemic;
- 8 4. Increased field employee overtime specifically attributable to changes in Spire field
9 operation procedures cause by the COVID-19 pandemic, but only up to an amount by
10 which the total overtime expense during the deferral period exceeds total overtime expense
11 included in the cost of service in the amounts of \$15,555,600 for Spire Missouri East and
12 \$4,249,213 for Spire Missouri West;
- 13 5. Late Payment fees up to \$4,749,544 for Spire Missouri East and up to \$1,381,236 Spire
14 Missouri West; and
- 15 6. Reconnection charges and disconnection charges waived during the moratorium period up
16 to \$1,050,436 for Spire Missouri East and up to \$1,575,654 for Spire Missouri West.

17 Spire was also to track and record operating cost reductions in a separate regulatory liability.
18 Operating and maintenance costs reductions to be deferred were the reductions to the following:

- 19 1. Travel expense (hotels, airfare, meals, entertainment);
- 20 2. Training expense;
- 21 3. Office Supplies;
- 22 4. Utility service provided to facilities leased or owned by Spire;
- 23 5. Staffing reductions;
- 24 6. Reduced employee compensation and benefits;
- 25 7. Any taxable net operating loss that is carried back to previous tax years
26 per the CARES Act; and,
- 27 8. Any direct federal or state assistance Spire or Spire Inc. receives related
28 to COVID-19 relief.

29 The COVID-19 pandemic is an extraordinary event that has affected daily life in the U.S. to a
30 degree not previously seen from a disease outbreak within living memory. In addition the costs
31 Spire has incurred as of December 31, 2020 exceeds 5% of its net income and thus meet the
32 materiality standard applicable for AAO deferrals established by the Commission in the past. Staff

1 used the net income amounts from Staff's Accounting Schedules Reflecting the Commission's
2 Amended Report and Order filed on March 21, 2018 in Spire's last rate cases, Case Nos.
3 GR-2017-0215 and GR-2017-0216, to determine the materiality of the deferral.

4 Staff examined the following revenues, expenses and savings for the period of March 1, 2020
5 through December 31, 2020 for purposes of its direct filing:

6 Bad Debt Expense –Spire does not write off a customer account until approximately 360 days after
7 the final bill is issued. Normally Staff uses net bad debt write-offs to determine a normalized level
8 of bad debt expense to include in the cost of service. In Case No. GU-2020-0376, the parties agreed
9 to use the bad debt expense level established in Case Nos. GR-2017-0215 and GR-2017-0216 as
10 a baseline for bad debt deferrals. This level was a five-year average of net bad debt write-offs for
11 Spire East and Spire West. However, due to Spire's bad debt write-off policy, it would not be
12 accurate for purposes of this deferral to use net write-offs that have occurred from March 2020
13 through December 2020 to calculate the deferrals. Staff instead used the bad debt provision
14 expense recognized monthly (estimated accrual amount) by Spire as a substitute to actual net bad
15 debt write-offs for purposes of tracking bad debt expense in this AAO. In order to prevent over or
16 under recovery of the bad debt expense in this deferral, Staff recommends that Spire track the
17 actual net bad debt write-offs against the bad debt provision expense recognized
18 (monthly estimated accrued amounts) that is currently being used as an estimate in this AAO to
19 determine a deferral amount. The difference between the actual amounts and the estimated accrued
20 amounts will either offset or be included as an additional amount to the unamortized balance of
21 this AAO in Spire's next rate case.

22 The amount of bad debt expense to include in the deferral for Spire West is \$1,776,346. For the
23 period of March 2020 through December 2020, Spire East did not exceed the bad debt expense
24 level required for deferral, thus Staff has not included any bad debt expense in the deferral in its
25 direct filing. By the end of the AAO deferral period, March 2021, Spire East may have an
26 expense amount that would exceed the bad debt expense required for deferral and this amount
27 would then be included in the deferral. Staff will review all of the deferred costs in its true-up audit
28 in this case.

29 Additional Cleaning Costs and Personal Protective Equipment - Staff included O&M costs related
30 to additional cleaning costs and personal protective equipment. The amount of additional cleaning

1 and personal protective equipment that should be deferred for Spire East is \$** [REDACTED] ** and
2 for Spire West the amount is \$** [REDACTED] **.

3 Savings Related to Travel and Office Supplies - The amount of savings that should be included as
4 an offset to the expenses in this AAO for Spire East is \$** [REDACTED] **, and for Spire West it is
5 \$** [REDACTED] **.

6 Late Payment Fees and Reconnect/Disconnect Fees – Per Spire, Accounting Standards
7 Codification (ACS) 980 does not allow Spire to record the deferral of foregone late payment fees
8 and reconnect/disconnect. Spire has proposed to track the late payment fees, and
9 reconnect/disconnect fees and recover these amounts over a five-year period. Staff is not opposed
10 to this proposal. Staff would propose allowing recovery of \$2,427,197 (\$1,792,085 for Spire East
11 and \$635,112 for Spire West) for late payment fees and \$771,367 (\$546,570 for Spire East and
12 \$771,367 for Spire West) for reconnect/disconnect fees. Staff has included a five-year amortization
13 of these items in Staff's cost of service.

14 Spire did not incur any of the following costs or savings, thus Staff did not review these items:

- 15 Costs related to any new-assistance programs implemented to aid
- 16 customers with payment of natural gas bills during the pandemic;
- 17 Increased field employee overtime specifically attributable to changes in
- 18 Spire field operation procedures cause by the COVID-19 pandemic;
- 19 Training expense;
- 20 Utility service provided to facilities leased or owned by Spire;
- 21 Staffing reductions;
- 22 Reduced employee compensation and benefits;
- 23 Any taxable net operating loss that is carried back to previous tax years
- 24 per the CARES Act; and,
- 25 Any direct federal or state assistance Spire or Spire Inc. receives related to
- 26 COVID-19 relief.

27 Staff reviewed the data provided by Spire for the period of March 1, 2020 through
28 December 31, 2020 in regard to deferred COVID costs. The amount Staff has included in the
29 deferral (excluding the late payment fees and reconnect/disconnect fees) as of December 31, 2020
30 for Spire East is \$148,390 and for Spire West it is \$1,932,494. Staff recommends a five-year

1 amortization of the deferral, which would result in an annual amortization for Spire East in the
2 amount of \$29,678 and for Spire West the annual amortization would be \$386,499. Consistent
3 with similar AAOs in other cases, Staff recommends the Commission not include the unamortized
4 balance of the AAO in rate base. Staff will review all expenses and savings that have incurred
5 during the full deferral period through March 31, 2021 in its true-up audit.

6 *Staff Witness/Expert: Kimberly K. Bolin*

7 **X. Income Taxes**

8 **1. Current and Deferred Income Taxes**

9 Staff's methodology for calculating income tax expense begins by taking the adjusted net
10 operating income from the income statement, then adding or subtracting certain tax timing
11 differences in order to obtain a ratemaking taxable income amount. These "add back" and/or
12 subtraction adjustments are necessary to recognize the differences between expenses that lower
13 net income for book purposes and tax deductions that lower taxable income for tax purposes. The
14 mismatch in reported expenses and deductions causes tax timing differences to occur. The current
15 income tax calculations for Spire Missouri reflect timing differences consistent with the timing
16 required and/or allowed by the IRC in that ratepayers are charged for the income tax liability
17 generated by Spire Missouri's taxable income plus the deferred tax expense caused by the tax
18 timing differences protected by the IRC.

19 The ratemaking calculation of income taxes for regulated utilities may reflect either the
20 "normalization" treatment or the "flow through" treatment to recognize the effect of tax timing
21 differences on income tax expense. The tax normalization method does not immediately pass the
22 benefits to ratepayers of certain temporary tax timing differences. The intended effect of
23 normalizing tax timing differences is to allow utilities the benefit of certain tax deductions for a
24 period of time before those benefits are passed on to the utility's customers in rates. Normalizing
25 tax timing differences related to Spire Missouri's plant in service for ratemaking purposes is
26 effectively required by the IRC, with severe tax consequences for utilities that have normalization
27 violations. Staff utilized a normalization approach in calculating income taxes for this case for
28 timing differences caused by depreciation method or asset life, most notably depreciation expense.

29 For tax timing differences not protected by the IRC, the flow-through method is available
30 for ratemaking purposes. The flow-through method essentially provides ratepayers the same

1 benefit the utility enjoys for certain tax timing differences. After calculating Spire Missouri's
2 taxable income that results from timing adjustments, the annualized income tax expense is
3 calculated by applying the current federal, state, and city tax rates. A federal income tax rate of
4 21 percent and a state income tax rate of 4 percent were used in calculating Spire Missouri's current
5 income tax liability. The difference between the calculated current income tax provision and the
6 per book income tax provision is the current income tax adjustment.

7 Spire East is subject to earnings tax from the City of St. Louis, MO, and Spire West is
8 subject to earnings tax from the City of Kansas City, MO. Both cities assess an earnings tax of
9 one percent (1%) on the taxable income Spire Missouri reported in both jurisdictions. Staff has
10 reviewed the earnings tax information for both Spire East and Spire West and found that neither
11 utility has been required to pay earnings taxes since 2013. As such, Staff has not included an
12 amount for city earnings tax in Spire Missouri's cost of service.

13 Due to the IRC's normalization requirements described above, Staff has included an
14 amount of deferred tax expense in total income tax expense. The deferred tax expense is
15 calculated by applying the current effective tax rate to the difference in tax depreciation and
16 book depreciation. The effects of deferred income tax expense in ratemaking is also discussed
17 ADIT section of this report. Staff will review income tax expense as part of its true-up audit and
18 make any necessary adjustments.

19 *Staff Expert/Witness: Matthew R. Young*

20 **2. Tax Cut and Jobs Act**

21 The federal Tax Cuts and Jobs Act ("TCJA"), which was signed into law on December 22, 2017
22 and took effect on January 1, 2018, significantly reduced Spire's income tax expense and ADIT
23 liability. The passage of the law was concurrent with Spire's 2017 rate cases before the
24 Commission, Case Nos. GR-2017-0215 and GR-2017-0216. Due to the timing of the rate cases
25 and the legislation, the Commission decided to include the impacts of the TCJA in Spire's rates.
26 However, all of the effects of the TCJA were not known as the IRS and the Securities and
27 Exchange Commission had not yet issued guidance or promulgated rules on the implementation
28 of the TCJA. Also, the calculations regarding the total effect on ADIT and the calculations of
29 what is known as "protected" and "unprotected" ADIT were not completed at the date of the
30 Commission's Order.

1 Due to the uncertainties surrounding the calculations for implementing the effects of the
2 TCJA, the Commission ordered a tracker mechanism to ensure that any over or under
3 amortizations stemming from the TCJA were identified and eligible for consideration in Spire's
4 next rate case. In the current case, Spire provided calculations of the TCJA's impact to ADIT,
5 classified into protected and unprotected amounts, and amounts of over and under amortizations.
6 Staff recommends discontinuing the TCJA tracker as the uncertainties that existing in Spire's 2017
7 cases no longer exist in this case and including current balances of ADIT and related amortizations
8 in its accounting schedules as normalized amounts not subject to future tracking. Staff recognizes
9 that regardless of the continuation of the TCJA tracker there will be a period between May 31, 2021
10 and the operation of law date from the current case that a tracker will be in effect but not recognized
11 in rates. Staff will include this "stub period" in its audit during Spire's next general rate case.

12 When the TCJA reduced corporate tax rates from 35 percent to 21 percent, a portion of
13 Spire's ADIT liability was no longer a liability. Since the IRS enables book/tax timing differences
14 to provide corporations with interest free loans from the federal government, the reduced tax rate
15 effectively "forgave" a portion of Spire's outstanding interest free loan. The amount of reduction
16 to Spire's ADIT liability due to the TCJA is referred to as "Excess ADIT", and is eligible for return
17 to the ratepayers and as previously explained, the return of Spire's Excess ADIT to ratepayers
18 began in the 2017 rate cases.

19 Ratepayers are eligible to receive Spire's Excess ADIT because the IRS normalization
20 requirements effectively prohibit regulators from passing certain plant-related tax deductions to
21 customers in order for utilities to retain the intended tax benefit. Essentially, ratepayers are
22 charged income tax expense as if the IRS's tax benefits did not exist. The difference between what
23 ratepayers are charged for income taxes and what income tax liabilities are actually incurred by
24 Spire is intended to be a temporary difference that will theoretically reverse itself over the life of
25 the underlying assets. However, the TCJA caused the theoretically temporary difference to
26 become a permanent difference, so the benefit that ratepayers would have received over the life of
27 the assets will never materialize. As such, the Commission provided the ratepayers with the benefit
28 that would otherwise have been lost through an amortization of the Excess ADIT.

29 Part of the federal government's guidance on how utilities should flow the Excess ADIT
30 to customers included definitions of "protected" and "unprotected" ADIT. Protected ADIT is
31 essentially plant-related ADIT caused by book/tax timing differences. This type of ADIT falls

1 under the IRS normalization requirements and the returning protected excess ADIT to customers
2 at a rate faster than it would have been returned absent the TCJA is effectively prohibited by the
3 federal government. To return protected excess ADIT, Spire utilizes the Average Rate Assumption
4 Method (“ARAM”) as required by the IRS. In addition to protected Excess ADIT, a significant
5 amount of Spire’s Excess ADIT was not protected by IRS normalization requirements as it was
6 caused by temporary book/tax differences of non-plant related deductions. To return the
7 unprotected Excess ADIT, the Commission ordered an amortization period of 10 years to be
8 applied to the balance of unprotected.

9 In the current rate case, all balances of protected and unprotected Excess ADIT is known
10 and measurable, as well as the amortization amount produced by the ARAM methodology.
11 Comparing the amounts that were used to set rates in the 2017 rate cases with the known and
12 measurable amounts that are available in the current rate case, Staff finds that Spire East’s and
13 Spire West’s amortization of the protected Excess ADIT has over-refunded customers and the
14 amortizations of the unprotected Excess ADIT has under-refunded customers. The main concern
15 with these findings is that in order to avoid consequences from the IRS for normalization
16 violations, the over-refund of the protected Excess ADIT must be addressed by the Commission.

17 Staff recommends that the Commission order a transfer of the amounts refunded to
18 customers from the protected balance to the unprotected balance of Excess ADIT for return to
19 customers. This transfer will immediately restore the balance of protected ADIT to the amount
20 required by the IRS-sponsored ARAM methodology, which should be sufficient to address any
21 concerns about potential normalization violations. Additionally, Staff recommends that the
22 amortization of the unprotected Excess ADIT should be offset to capture the reclassification of the
23 over-refunded amounts to flow back to customers as well as allowing Spire to recover the shortfall
24 in collection of unprotected EADIT from customers. The adjusted amortization of unprotected
25 Excess ADIT should be reset to expire 10 years from the effective date of rates from the
26 2017 cases.

27 *Staff Expert/Witness: Matthew R. Young*

28 **3. Excess ADIT from Missouri Tax Reform**

29 Following the TCJA legislation described in the “TCJA Tracker” section of this report,
30 the state of Missouri passed legislation reducing Missouri’s corporate tax rate from 6.25 percent
31 to 4 percent. The change in tax rates impacted Spire beginning on October 1, 2020, the start of

1 its 2021 fiscal year. Mechanically, the reduction to the Missouri tax rate had the same effect on
2 Spire’s ADIT liability as the TCJA and lead to a balance of Excess ADIT, both protected and
3 unprotected. Also similar to the treatment afforded to implementing TCJA impacts, Staff
4 recommends returning Excess ADIT driven by Missouri’s tax reform to customers beginning with
5 the effective dates of rates from this case, using guidance provided by the federal government and
6 the Commission.

7 Staff has included an Excess ADIT balance at May 31, 2021 in rate base and annualized
8 amounts of amortizations in its income tax schedule. The amortizations are based on the ARAM
9 methodology for protected Excess ADIT and a 10 year period for unprotected Excess ADIT.

10 *Staff Expert/Witness: Matthew R. Young*

11 ***XI. Depreciation***

12 “Depreciation,” as applied to depreciable utility plant means:

- 13 • the loss in service value not restored by current maintenance,
- 14 • incurred in connection with the consumption or prospective retirement of utility
15 plant in the course of service,
- 16 • from causes which are known to be in current operation, and
- 17 • against which the utility is not protected by insurance.

18 Among the causes to be given consideration are: wear and tear, decay, action of the
19 elements, inadequacy, obsolescence, changes in the art, changes in demand, and changes to the
20 requirements of public authorities.

21 Spire Missouri is required to submit a depreciation study under rule 20 CSR 4240-40.090.
22 The company submitted a report prepared by Gannet Fleming. Spire witness Mr. Wesley Selinger
23 stated in his testimony that since the current rates the company is operating under were established
24 in 2012, that it is appropriate to update the depreciation rates in this case. In addition, Spire wants
25 to establish one set of depreciation rates for their assets statewide.

26 Staff conducted its own depreciation study for the assets of Spire using the straight-line
27 method, broad group-averaging life procedure, and whole life technique for its depreciation study.

28 Staff used the following formula to calculate the depreciation rates for each plant account:

$$29 \text{ Depreciation Rate} = (100\% - \text{Net Salvage } \%) \div (\text{Average Service Life})$$

1 In this equation, average service life is the expected period, in years, that depreciable plant
2 will be in service. Net salvage is the difference between gross salvage, the amount received from
3 the retirement of property, and the cost of removal.

4 For each account, Staff estimated the average service life and net salvage rate. Where there
5 was adequate data to support it, Staff's recommendation is informed by statistical analysis of plant
6 retirements as described below. For accounts that did not have adequate data to produce a
7 reasonable result using statistical analysis, Staff relied on its engineering experience, informed
8 judgement, and previous cases to prepare recommended rates.

9 Staff used available data to prepare estimates of service life and net salvage for each
10 account. These sources include the depreciation study submitted by Spire that was prepared by
11 Gannet Fleming, spreadsheets submitted along with the study, Spire's responses to data requests,
12 and previous Commission orders.

13 Staff conducted statistical analysis of retirements when data supported its use, and used
14 Gannet Fleming Depreciation Analysis Software to prepare stub survival curves for plant accounts.
15 Survivor curves describe the amount of plant in an account, expressed as a percent that is still in
16 service at various ages. For an account in which all plant is retired, the average service life can be
17 calculated as the area under the curve. Because there is surviving plant in these accounts, the
18 curves produced are partial and called stub curves.

19 In order to estimate average service life, Staff fitted an Iowa curve to the stub curve for
20 each account. Iowa curves are widely used models of the life characteristics of utility plant.¹¹¹
21 Staff also used the Gannet Fleming software to assist in mathematical and visual fitting of the stub
22 curves to Iowa curves. Average service lives for these accounts were drawn from the fitted Iowa
23 curves.

24 In addition, where data supported it, Staff calculated the net salvage rates. This is the net
25 salvage cost, including gross salvage and cost of removal, of retired plant for an account divided
26 by the book cost of that plant.

27 These estimates of average life and net salvage were used in the equation noted above to
28 calculate depreciation rates. In addition to the analysis of statistics, Staff's recommended rates are
29 informed by judgment and relevant previous orders of the Commission.

¹¹¹ Wolf, F. K., Fitch W. C., (1994). *Depreciation Fundamentals*. Iowa State University Press.

1 Staff recommends that the commission order Spire to use the rates in Appendix 3, Schedule
2 DTB-d1.

3 *Staff Expert/Witness: David T. Buttig, PE*

4 ***XII. Other Miscellaneous Issues***

5 **4. Call Center Staffing**

6 In Case GR-2021-0108, Spire has indicated it desires to increase its overall internal Call
7 Center staffing and eventually decrease its current utilization of third party contractors for this
8 function. Staff believes it is important that Spire maintain data on this transition and its effect
9 upon customer service levels for its own monitoring purposes and for provision to Staff. Staff
10 presently receives specific metrics from Spire on customer service and staffing levels as ordered
11 by the Commission in GM-2013-0254. Spire and Staff will continue to discuss how to revise these
12 reports to more effectively monitor this transition to increased insourcing.

13 A Call Center provides the customer a central location to contact regarding a wide range
14 of services pertaining to their utility service. Customers are directed to a phone number to contact
15 the utility regarding questions or assistance. Interactive Voice Response systems (IVR) offer a
16 customer the ability to select the particular option they need such as emergency, start/stop service
17 or making a payment. The customer will also be given the opportunity to be transferred if they
18 wish to speak with a Customer Service Representative.

19 After the merger of Missouri Gas Energy (MGE, now known as Spire West) with
20 Laclede Gas Company (Laclede, now known as Spire East) in Case No. GM-2013-0254, Call
21 Center operations for the West side of the state were transferred to a third party contractor in 2014.
22 Laclede continued to operate its Call Center in St. Louis, Missouri with its own employees,
23 primarily serving customers on the East side of the state. In 2015, the third-party contractor also
24 began taking some calls that previously were being handled by the Laclede Call Center.

25 Spire indicated that over time it began to struggle with various quality issues associated
26 with the utilization of a third party contractor for call center operations.¹¹² The quality scores
27 associated with the contractors were lower than what Spire wished to see. Third party agents tend
28 to have a much shorter average tenure of employment. Accuracy of information issues frequently

¹¹² Spire Missouri response to Staff Data Request No. 232.

1 occurred. The distance of the location of the third party provider from Spire created difficulties
2 with training and management. Technology differences also created some challenges. Finally, the
3 third party agents were not part of the Spire culture and, as a result, did not reflect the same level
4 of engagement as that of Spire’s own employees.

5 During the course of the Staff’s Investigation of certain customer service issues in Case
6 No. GO-2020-0182, Spire informed the Staff that it had initiated a project in 2018 to evaluate how
7 it could improve its customer experience. ** [REDACTED]

8 [REDACTED]
9 [REDACTED] ¹¹³ [REDACTED]
10 [REDACTED]
11 [REDACTED] **

12 The implementation of this transition plan was delayed due to the ongoing Pandemic. Spire
13 has indicated that, for its initial steps, it anticipates adding 37 contact center agent positions and
14 two customer experience coaches as employees in its St. Louis, Missouri facility and filling these
15 positions by May 31, 2021.¹¹⁴ The Company has planned to conduct a series of training classes to
16 be held in April through June 2021 for new hires for the Call Center.¹¹⁵ As employees complete
17 training and are able to handle calls, there will be reductions in contractor work forces.

18 At this time, Spire serves its customers who call in at four different contact center locations.
19 The Spire Call Center in St. Louis is staffed by Spire agents. Spire also utilizes two different
20 contractors to provide customer service agents to take calls. Spire has utilized Alorica since 2015
21 and presently it has representatives in Endicott, New York and Sherman, Texas that handle Spire’s
22 customer calls. In addition, Spire is also utilizing GC Services in Knoxville, Tennessee to answer
23 calls. As Spire moves forward with its transition and staffing changes for its Call Centers, it is
24 important that data be maintained to track any effect of the changes upon customer service.

25 As a part of the Order in Case No. GM-2013-0254, Spire provides the Staff a monthly
26 report that includes a number of performance metrics, as well as information on staffing and
27 volume of calls. This information is presently being submitted segregated by Spire East and Spire
28 West operations. However, the information is submitted under different formats, making it difficult

¹¹³ Spire Branding Presentation, 06/03/2020, Confidential.
¹¹⁴ Spire Missouri response to Staff Data Request No. 340.
¹¹⁵ Spire Missouri response to Staff Data Request No. 341.

1 to directly compare the two operating areas.

2 Staff believes an ability to receive information under consistent formats from both the Spire
3 West and Spire East operating areas becomes even more important as Spire moves forward with
4 major changes to its Call Center operations. Staff will continue to discuss with Spire the
5 appropriate changes to the present Call Center reporting during the course of this case.

6 *Staff Witness/Expert: Deborah Ann Bernsen*

7 **5. Fresh Perspective Program**

8 Spire’s Fresh Perspective program (“Program”) is new to Spire (“Company”) and is a customer
9 engagement program consisting of four phases. The Company began this program in an effort to
10 better understand and serve its customers. Staff reviewed information provided by the Company
11 to determine if the program offers a benefit to Spire customers and how the program could, in the
12 future, change the way Spire does business. Staff also looked at the program goals as well as the
13 results of the initial phases of the program to determine the overall value. After thorough review,
14 Staff supports the continuation of the program and believes it can be valuable; however, Staff has
15 a few recommendations for the Company moving forward.

16 **Background**

17 ** [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
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17 [REDACTED]
18 [REDACTED]
19 [REDACTED] 119 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED] 120
23 [REDACTED]
24 [REDACTED] 121
25 [REDACTED]
26 [REDACTED] 122 . **

¹¹⁶ Data Request Response 209.
¹¹⁷ Data Request Response 209.
¹¹⁸ Data Request Response 210.1.
¹¹⁹ Data Request Response 209.
¹²⁰ Data Request Response 209.
¹²¹ Data Request Response 210.
¹²² Data Request Response 210.2.

1 **Staff Analysis**

2 Staff has reviewed all aspects of the program and looked closely at the results of the fourth
3 phase survey. It seems that Spire received a significant amount of information from its customers
4 over the course of implementing the Fresh Perspectives Program. This information will be helpful
5 to the Company in making decisions that will impact its customers and their experiences with the
6 company. As a result of the program, Spire gained insight on what is important to its customers,
7 the best way to communicate with them and how to bring more value to the customer. This type
8 of information opens the door for the Company to make adjustments to business practices,
9 customer service procedures and/or program offerings as a result of the information gleaned from
10 its customers.

11 **Staff Recommendation**

12 Staff recommends that this program continue; however, it has some recommendations for
13 the program moving forward. Staff recommends that Spire conduct this program in a way that
14 gives more areas within its service territories an opportunity to participate, if possible. Up to this
15 point, the program has occurred in Kansas City, St. Louis and Joplin. Staff would like to see varied
16 locations for these sessions to ensure convenience and coverage for urban, suburban and rural
17 customers throughout all of Spire’s service territory. Staff also recommends that Spire continue to
18 ensure diversity within the participants of the program in regard to age, race, ethnicity, sex,
19 education and socio-economic status. Finally, Staff recommends that Spire ensure that as the
20 program progresses, it continues to define specific performance and effectiveness measurements.
21 Staff should also be informed when the phases of the program are planned to occur, what the results
22 are and if any changes are made to customer offerings or business practices as a result of feedback
23 from the program.

24 *Staff Witness/Expert: Sarah Fontaine*

25 ***XIII. Appendices***

26 Appendix 1 - Staff Credentials

27 Appendix 2 - Support for Staff Cost of Capital Recommendation

28 Appendix 3 - Other Staff Schedules

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF DEBORAH ANN BERNSEN

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW DEBORAH ANN BERNSEN and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Deborah Ann Bernsen
DEBORAH ANN BERNSEN

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF KIMBERLY K. BOLIN

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW KIMBERLY K. BOLIN and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Kimberly K. Bolin
KIMBERLY K. BOLIN

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF KORY J. BOUSTEAD

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW KORY J. BOUSTEAD and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Kory J. Boustead
KORY J. BOUSTEAD

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF DAVID T. BUTTIG, PE

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW DAVID T. BUTTIG, PE and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ David T. Buttig, PE
DAVID T. BUTTIG, PE

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's Missouri)
Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF KIM COX

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW KIM COX and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Kim Cox
_____)
KIM COX

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's Missouri)
Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF SARAH FONTAINE

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW SARAH FONTAINE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Sarah Fontaine
SARAH FONTAINE

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's Missouri)
Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF JARED GIACONE

STATE OF MISSOURI)
)
COUNTY OF JACKSON) ss.

COMES NOW JARED GIACONE and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Jared Giacone
JARED GIACONE

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF JEREMY JULIETTE

STATE OF MISSOURI)	
	)	ss.
COUNTY OF JACKSON)	

COMES NOW JEREMY JULIETTE and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Jeremy Juliette
JEREMY JULIETTE

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's Missouri)
Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF ROBIN KLIETHERMES

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW ROBIN KLIETHERMES and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Robin Kliethermes
ROBIN KLIETHERMES

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF J LUEBBERT

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW J LUEBBERT and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ J Luebbert
J LUEBBERT

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF KAREN LYONS

STATE OF MISSOURI)	
	)	ss.
COUNTY OF JACKSON)	

COMES NOW KAREN LYONS and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Karen Lyons
KAREN LYONS

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's Missouri)
Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF KEITH MAJORS

STATE OF MISSOURI)
)
COUNTY OF JACKSON)

ss.

COMES NOW KEITH MAJORS and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Keith Majors
KEITH MAJORS

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF JOEL McNUTT

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW JOEL McNUTT and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Joel McNutt
JOEL McNUTT

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's Missouri)
Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF ANTONIJA NIETO

STATE OF MISSOURI)
)
COUNTY OF JACKSON) ss.

COMES NOW ANTONIJA NIETO and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

/s/ Antonija Nieto
ANTONIJA NIETO

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF JOSEPH P. ROLING

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW JOSEPH P. ROLING and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Joseph P. Roling
JOSEPH P. ROLING

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF MICHAEL L. STAHLMAN

STATE OF MISSOURI)	
	)	ss.
COUNTY OF COLE)	

COMES NOW MICHAEL L. STAHLMAN and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Michael L. Stahlman
MICHAEL L. STAHLMAN

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's Missouri)
Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF SEOUNG JOUN WON, PhD

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW **SEOUNG JOUN WON, PhD** and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Seoung Joun Won
SEOUNG JOUN WON, PhD

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)	
Spire Request for Authority to Implement a	)	Case No. GR-2021-0108
General Rate Increase for Natural Gas)	
Service Provided in the Company's Missouri)	
Service Areas)	

AFFIDAVIT OF MATTHEW R. YOUNG

STATE OF MISSOURI)	
	)	ss.
COUNTY OF JACKSON)	

COMES NOW MATTHEW R. YOUNG and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Cost of Service Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

/s/ Matthew R. Young
MATTHEW R. YOUNG

MISSOURI PUBLIC SERVICE COMMISSION

**STAFF REPORT
COST OF SERVICE**

APPENDIX 1

Staff Credentials

SPIRE MISSOURI, INC., d/b/a SPIRE

**SPIRE EAST and SPIRE WEST
GENERAL RATE CASE**

CASE NO. GR-2021-0108

*Jefferson City, Missouri
May 12, 2021*

APPENDIX 1
STAFF CREDENTIALS
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Deborah Ann Bernsen

Education and Employment Credentials

I am currently employed as a Senior Research/Data Analyst in the Customer Experience Department of the Missouri Public Service Commission (Commission or PSC).

I graduated from the University of Missouri-Columbia in 1975 with a Bachelor of Science degree in Business Administration. I completed a Masters degree in Public Administration in 1990 from the same university. I have passed all four parts of the Certified Internal Auditor (CIA) examination and received the CIA designation in November 2004 and am a member of the Institute of Internal Auditors.

I have been employed by the Commission since 1976 when I began a graduate internship with the agency. I subsequently entered the Consumer Services Department of the PSC as a Consumer Services Specialist responding to consumer complaints and inquiries. I entered the Management Services Department in 1978 as a Management Analyst and have had responsibility for conducting and directing management audits and reviews of management operating and control systems at utility companies under the Commission's jurisdiction. These reviews have included electric, natural gas, telecommunications, water and sewer companies operating within the state of Missouri. I have led project teams, as well as provided oversight for the use of outside consultants providing services for the Commission Staff. I have also filed testimony on a number of areas that included analysis of service quality, performance measurement, customer surveys and customer service practices and procedures.

At the direction of the Commission during 2001, the Engineering and Management Services Department began reviewing the customer service practices of small water and sewer utilities when they request rate increases or file for a Certificate of Convenience and Necessity (CCN). The name of the Management Services Department was changed to the Engineering and Management Services Department (EMSD) in February 2000 and was renamed the Consumer and Management Analysis Unit in October 2015. I have been a member of the Customer Experience Department since its creation in November 2017.

I was the Staff's representative and a member of the Consumer Interest Working Group within the Missouri Public Service Commission's Retail Electric Competition Task Force in 1999.

cont'd Deborah Ann Bernsen
Education and Employment Credentials

I was also a member and then Chair for six years of the National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Competition and Performance Analysis (SSCPA). I have been an instructor for the Michigan State University Regulatory Studies Program and developed and administered training programs for management and operational auditors.

CASE PARTICIPATION

DEBORAH ANN BERNSEN

ISSUES	CASE NUMBER	FILING TYPE	COMPANY NAME
Cold Weather Event	AO-2021-0264	Staff Report	All Energy utilities
Quality of Service	SA-2021-0120	Staff Rec	Missouri-American Water-Taos
Quality of Service	GO-2020-0182	Investigation	Spire Missouri
Quality of Service	WM-2020-0403	Staff Rec	Terre du Lac, Branson, Confluence
Customer Service	WA-2018-0370	Staff Rec	Carl Mills Water
Customer Service/ Quality of Service	WR-2017-0042	Live Testimony	Ridge Creek Water Company
Quality of Service	WR-2015-0301	Staff Report	Missouri-American Water Company
Quality of Service	GR-2014-0152	Testimony	Liberty
Quality of Service	WO-2014-0362	Staff Report	Missouri-American Water Company
Quality of Service	WR-2013-0334	Testimony	Algonquin-Liberty
Quality of Service	GM-2013-0254	Staff Rec	Laclede Gas
Quality of Service	GM-2011-0412	Stipulation & Agreement	Missouri Gas Energy
Quality of Service	ER-2010-0355	Testimony	Kansas City Power and Light
Management Audit	EO-2006-0356	Management Audit Report	Aquila
Performance Measures	ER-2006-0314	Rebuttal	Kansas City Power and Light
Customer Service; Rate of Return Adjustment	GR-2004-0209	Direct & Rebuttal	Missouri Gas Energy
Customer Service	WR-2003-0500 & WC-2004-0168	Direct	Missouri-American Water Company
Quality of Service	GM-2003-0238	Rebuttal	Southern Union Company d/b/a Missouri Gas Energy
Alternative Regulation Plan - Quality of Service	EC-2002-1	Surrebuttal	Union Electric Company d/b/a AmerenUE
Call Center Reporting	ER-2001-672	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service

cont'd Deborah Ann Bernsen
Case Participation

ISSUES	CASE NUMBER	FILING TYPE	COMPANY NAME
Customer Service Call Center Reporting	EC-2002-265	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
Customer Service	WM-2001-0309	Rebuttal	Missouri-American Water Company, et al
Customer Service	EM-2000-292	Rebuttal	Utilicorp United Inc./St. Joseph Light and Power
Affiliated Transactions	WR92207 & SR92208	Surrebuttal	Missouri Cities Water Company
Capital Deployment	TR89196	Rebuttal	Contel of Missouri, Inc.
Management Efficiency; Rate of Return Adjustment	ER85128 & EO85185	Direct	Kansas City Power & Light
Customer Service	GR83225	Direct	Gas Service Company
Management Efficiency	TR83253	Rebuttal	Southwestern Bell Telephone Company

At the direction of the Commission in 2001, the Staff began reviewing the customer service practices of small water and sewer utilities when they file for a rate increase request or a Certificate of Convenience and Necessity (CCN). Staff also performs follow-up on the company's progress. There are a large number of these and they are not listed individually here.

In addition, there are a large number of tariff, formal complaint and other types of cases that were participated in although not listed as a primary responsibility or SME classification.

Kimberly Bolin

Present Position:

I am a Utility Regulatory Manager for the Missouri Public Service Commission. As a Utility Regulatory Manager in this proceeding, I am responsible for the supervision of other Commission employees.

Educational Credentials and Work Experience:

I graduated from Central Missouri State University in Warrensburg, Missouri, with a Bachelor of Science in Business Administration, major emphasis in Accounting, in May 1993. Prior to working at the Commission, I was employed by the Missouri Office of the Public Counsel (OPC) as a Public Utility Accountant from September 1994 to April 2005. OPC represents residential and small commercial customers before the Commission. I have been employed by this Commission or by OPC as a Regulatory Auditor for over 25 years, and have submitted testimony on ratemaking matters numerous times before the Commission.

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Spire Missouri, Inc.	GU-2020-0376	<u>Rebuttal</u> – Accounting Authority Order, Lost Revenues	Settled
Evergy Metro, Inc., d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West	EU-2020-0350	<u>Rebuttal</u> – Accounting Authority Order, Lost Revenue, Carrying Costs	Contested
Missouri-American Water Company	WR-2020-0344	<u>Cost of Service Report</u> – Future Test Year, Credit Card Fee Expense, Amortization of Excess ADIT, COVID-19 AAO Recovery <u>Rebuttal</u> – Future Test Year, COVID-19 AAO Recovery, Amortization of Excess ADIT, Affiliate Transactions, AFUDC Rate <u>Surrebuttal</u> – Future Test Year, COVID-19 AAO, Tax Cut and Jobs Act of 2017, Outside Services, COVID Impacts on Revenue	Settled
Empire District Electric Company	ER-2020-0311	<u>Rebuttal</u> – Coal Inventory Adjustment <u>Surrebuttal</u> – Coal Inventory Adjustment	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Empire District Electric Company	ER-2019-0374	<p><u>Direct</u> – Overview of Staff’s Filing <u>Cost of Service Report</u> – Executive Overview, Test year/True-Up Period, Vegetation Management Tracker Regulatory Asset, Iatan and Plum Point Carrying Costs, Stub Period Tax Cut/Removal of Tax Impact, Tornado AAO, Rate Case Expense Sharing, Credit Card Fees, Clearing Accounts <u>Rebuttal</u> – Asset Retirement Obligations, AAO and Tracker Policy, Affiliate Transactions <u>Surrebuttal/True-Up</u> – Unamortized Balance of Joplin AAO, Credit Card Fees, Payroll Test year, Rate Case Expense Sharing, LED Lighting, Low-Income Pilot Program Amortization, Affiliate Transactions <u>Supplemental</u> – Jurisdictional Allocations, Rate Case Expense, Management Expense, Pension and OPEBs, Affiliate Transactions, Software Maintenance</p>	Contested
Confluence Rivers Utility Operating Co., Inc.	WA-2019-0299	<p><u>Surrebuttal</u> – Quality of Service <u>Direct</u> – Net Book Value of Plant</p>	Contested
Osage Utility Operating Co., Inc.	WA-2019-0185	<p><u>Surrebuttal</u> – Rate Base, Acquisition Incentive</p>	Contested
Spire Inc.	GO-2019-0115 and GO-2019-116	<p><u>Staff Direct Report</u> – Blanket Work Orders and Current Income Taxes</p>	Contested
Empire District Electric Company and Liberty Utilities	AO-2018-0179	<p><u>Direct</u> – Moneypool <u>Surrebuttal</u> - Moneypool</p>	Contested
Confluence Rivers Utility Operating Company, Inc.	WM-2018-0116 and SM-2018-0117	<p><u>Direct</u> – Rate Base, Roy L Utilities</p>	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Spire Missouri Inc.	GO-2016-0332, GO-2016-0333, GO-2017-0201, GO-2017-0202 GO-2018-0309 and GO-2018-0310	<u>Direct</u> – Removal of Plastic Main and Service Line Replacement Costs	Contested
Missouri-American Water Company	WO-2018-0059	<u>Direct</u> – ISRS Overview, Accumulated Deferred Income Taxes, Reconciliation	
Missouri-American Water Company	WR-2017-0285	<u>Cost of Service Report</u> – Pension/OPEB Tracker, FAS 87 Pension Costs, FAS 106 OPEBs Costs, Franchise Taxes <u>Rebuttal</u> – Defined Contribution Plan, Cloud Computing, Affiliate Transaction Rule (Water Utility) <u>Surrebuttal</u> – Rate Case Expense	Settled
Missouri Gas Energy and Laclede Gas Company	GO-2016-0332 and GO-2016-0333	<u>Rebuttal</u> – Inclusion of Plastic Main and Service Line Replacements	Contested
Empire District Electric Company/Liberty Utilities	EM-2016-0213	<u>Rebuttal</u> – Overview of Transaction, Ratemaking /Accounting Conditions, Access to Records <u>Surrebuttal</u> – OPC Recommended Conditions, SERP	Settled
Hillcrest Utility Operating Company, Inc.	WR-2016-0064	<u>Direct</u> – Partial Disposition Agreement	Contested
Empire District Electric Company	ER-2016-0023	<u>Requirement Report</u> – Riverton Conversion Project and Asbury Air Quality Control System <u>Direct</u> – Overview of Staff’s Revenue Requirement Report and Overview of Staff’s Rate Design Filing	Settled
Missouri-American Water Company	WR-2015-0301	<u>Report on Cost of Service</u> – Corporate Allocation, District Allocations <u>Rebuttal</u> – District Allocations, Business Transformation <u>Surrebuttal</u> – District Allocations, Business Transformation, Service Company Costs	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Empire District Electric Company	ER-2014-0351	<u>Direct</u> – Overview of Staff’s Filing <u>Rebuttal</u> - ITC Over-Collection, Cost of Removal Deferred Tax Amortization, State Flow-Through <u>Surrebuttal</u> – Unamortized Balance of Joplin Tornado, ITC Over-Collections, Cost of Removal Deferred Tax Amortization, State Flow-Through, Transmission Revenues and Expenses	Settled
Brandco Investments/Hillcrest Utility Operating Company, Inc.	WO-2014-0340	<u>Rebuttal</u> – Rate Base and Future Rates	Settled
Lake Region Water & Sewer	WR-2013-0461	<u>Direct</u> – Overview of Staff’s Filing <u>Report on Cost of Service</u> – True-Up, Availability Fees, Sewer Operating Expense, Sewer Equipment Maintenance Expense <u>Surrebuttal</u> – Availability Fees <u>True-Up Direct</u> – Overview of True-Up Audit <u>True-Up Rebuttal</u> – Corrections to True-Up	Contested
Empire District Electric Company	ER-2012-0345	<u>Direct</u> - Overview of Staff’s Filing <u>Report on Cost of Service</u> – SWPA Hydro Reimbursement, Joplin Tornado AAO Asset, SPP Revenues, SPP Expenses, Regulatory Plan Amortization Impacts, SWPA Amortization, Tornado AAO Amortization <u>Rebuttal</u> – Unamortized Balance of Joplin Tornado AAO, Rate Case Expense, True-Up and Uncontested Issues <u>Surrebuttal</u> – Unamortized Balance of Joplin Tornado AAO, SPP Transmission Expense, True-Up, Advanced Coal Investment Tax Credit	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Missouri-American Water Company	WR-2011-0337	<u>Direct</u> – Overview of Staff’s Filing <u>Report on Cost of Service</u> - True-Up Recommendation, Tank Painting Tracker, Tank Painting Expense <u>Rebuttal</u> - Tank Painting Expense, Business Transformation <u>Surrebuttal</u> – Tank Painting Tracker, Acquisition Adjustment	Settled
Missouri-American Water Company	WR-2010-0131	<u>Report on Cost of Service</u> - Pension/OPEB Tracker, Tank Painting Tracker, Deferred Income Taxes, FAS 87 Pension Costs, FAS 106 – Other Post-Employment Benefits, Incentive Compensation, Group Insurance and 401(k) Employer Costs, Tank Painting Expense, Dues and Donations, Advertising Expense, Promotional Items, Current and Deferred Income Tax Expense	Settled
Empire District Gas Company	GR-2009-0434	<u>Report on Cost of Service</u> – Prepaid Pension Asset, Pension Tracker Asset/Liability, Unamortized Accounting Authority Order Balances, Pension Expense, OPEBs, Amortization of Stock Issuance Costs, Amortization of Accounting Authority Orders <u>Direct</u> – Overview of Staff’s Filing	Settled
Laclede Gas Company	GT-2009-0056	<u>Surrebuttal Testimony</u> – Tariff	Contested
Missouri-American Water Company	WR-2008-0311 and SR-2008-0312	<u>Report on Cost of Service</u> – Tank Painting Tracker, Lobbying Costs, PSC Assessment <u>Direct</u> – Overview of Staff’s Filing <u>Rebuttal</u> – True-Up Items, Unamortized Balance of Security AAO, Tank Painting Expense, Fire Hydrant Painting Expense <u>Surrebuttal</u> – Unamortized Balance of Security AAO, Cedar Hill Waste Water Plant, Tank Painting Expense, Fire Hydrant Painting Expense	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Missouri Gas Utility, Inc.	GR-2008-0060	<u>Report on Cost of Service</u> – Plant-in Service/Capitalization Policy, Plant-in Service/Purchase Price Valuation, Depreciation Reserve, Revenues, Uncollectible Expense	Settled
Laclede Gas Company	GR-2007-0208	<u>Direct</u> - Test Year and True-Up, Environmental costs, AAOs, Revenue, Miscellaneous Revenue, Gross receipts Tax, Gas Costs, Uncollectibles, EWCR, AMR, Acquisition Adjustment	Settled
Kansas City Power and Light Company	ER-2006-0314	<u>Direct</u> - Gross Receipts Tax, Revenues, Weather Normalization, Customer Growth/Loss Annualization, Large Customer Annualization, Other Revenue, Uncollectible (Bad Debt) Expense, Payroll, A&G Salaries Capitalization Ratio, Payroll Taxes, Employer 401 (k) Match, Other Employee Benefits <u>Surrebuttal</u> - Uncollectible (Bad Debt) Expense, Payroll, A&G Salaries Capitalization Ratio, Other Employee Benefits	Contested
Missouri Gas Energy	GR-2006-0204	<u>Direct</u> - Payroll, Incentive Compensation, Payroll Taxes, Employee Benefits, Lobbying, Customer & Governmental Relations Department, Collections Contract	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

WHILE EMPLOYED WITH THE OFFICE OF THE PUBLIC COUNSEL

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Missouri Gas Energy	GU-2005-0095	<u>Rebuttal</u> - Accounting Authority Order <u>Surrebuttal</u> - Accounting Authority Order	Contested
The Empire District Electric Company	ER-2004-0570	<u>Direct</u> - Payroll	Settled
Missouri American Water Company & Cedar Hill Utility Company	SM-2004-0275	<u>Direct</u> - Acquisition Premium	Settled
Missouri Gas Energy	GR-2004-0209	<u>Direct</u> - Safety Line Replacement Program; Environmental Response Fund; Dues & Donations; Payroll; Customer & Governmental Relations Department Disallowance; Outside Lobbyist Costs <u>Rebuttal</u> - Customer Service; Incentive Compensation; Environmental Response Fund; Lobbying/Legislative Costs <u>True-Up</u> - Rate Case Expense	Contested
Osage Water Company	ST-2003-0562 and WT-2003-0563	<u>Direct</u> - Payroll <u>Rebuttal</u> - Payroll; Lease Payments to Affiliated Company; alleged Legal Requirement of a Reserve	Case Dismissed
Missouri American Water Company	WR-2003-0500	<u>Direct</u> - Acquisition Adjustment; Water Treatment Plant Excess Capacity; Retired Treatment Plan; Affiliated Transactions; Security AAO; Advertising Expense; Customer Correspondence	Settled
Empire District Electric	ER-2002-424	<u>Direct</u> - Dues & Donations; Memberships; Payroll; Security Costs <u>Rebuttal</u> - Energy Traders' Commission <u>Surrebuttal</u> - Energy Traders' Commission	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

WHILE EMPLOYED WITH THE OFFICE OF THE PUBLIC COUNSEL

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Laclede Gas Company	GR-2002-356	<u>Direct</u> - Advertising Expense; Safety Replacement Program and the Copper Service Replacement Program; Dues & Donations; Rate Case Expense <u>Rebuttal</u> - Gas Safety Replacement Program / Deferred Income Taxes for AAOs	Settled
Missouri-American Water Company	WO-2002-273	<u>Rebuttal</u> - Accounting Authority Order <u>Cross-Surrebuttal</u> - Accounting Authority Order	Contested
Environmental Utilities	WA-2002-65	<u>Direct</u> - Water Supply Agreement <u>Rebuttal</u> - Certificate of Convenience & Necessity	Contested
Warren County Water & Sewer	WC-2002-160 and SC-2002-155	<u>Direct</u> - Clean Water Act Violations; DNR Violations; Customer Service; Water Storage Tank; Financial Ability; Management Issues <u>Surrebuttal</u> - Customer Complaints; Poor Management Decisions; Commingling of Regulated & Non-Related Business	Contested
Laclede Gas Company	GR-2001-629	<u>Direct</u> - Advertising Expense; Safety Replacement Program; Dues & Donations; Customer Correspondence	Settled
Gateway Pipeline Company	GM-2001-585	<u>Rebuttal</u> - Acquisition Adjustment; Affiliated Transactions; Company's Strategic Plan	Contested
Empire District Electric	ER-2001-299	<u>Direct</u> - Payroll; Merger Expense <u>Rebuttal</u> - Payroll <u>Surrebuttal</u> - Payroll	Settled
Osage Water Company	SR-2000-556 and WR-2000-557	<u>Direct</u> - Customer Service	Contested

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

WHILE EMPLOYED WITH THE OFFICE OF THE PUBLIC COUNSEL

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
St. Louis County Water Company	WR-2000-844	<u>Direct</u> - Main Incident Expense	Settled
Missouri American Water Company	WR-2000-281 and SR-2000-282	<u>Direct</u> - Water Plant Premature Retirement; Rate Case Expense <u>Rebuttal</u> - Water Plant Premature Retirement <u>Surrebuttal</u> - Water Plant Premature Retirement	Contested
Laclede Gas Company	GR-99-315	<u>Direct</u> - Advertising Expense; Dues & Donations; Miscellaneous Expense; Items to be Trued-up	Contested
St. Joseph Light & Power	HR-99-245	<u>Direct</u> - Advertising Expense; Dues & Donations; Miscellaneous Expense; Items to be Trued-up <u>Rebuttal</u> - Advertising Expense <u>Surrebuttal</u> - Advertising Expense	Settled
St. Joseph Light & Power	ER-99-247	<u>Direct</u> - Merger Expense; Rate Case Expense; Deferral of the Automatic Mapping/Facility Management Costs <u>Rebuttal</u> - Merger Expense; Rate Case Expense; Deferral of the Automatic Mapping/Facility Management Costs <u>Surrebuttal</u> - Merger Expense; Rate Case Expense; Deferral of the Automatic Mapping/Facility Management Costs	Settled
Laclede Gas Company	GR-98-374	<u>Direct</u> - Advertising Expense; Gas Safety Replacement AAO; Computer System Replacement Costs	Settled
Missouri Gas Energy	GR-98-140	<u>Direct</u> - Payroll; Advertising; Dues & Donations; Regulatory Commission Expense; Rate Case Expense	Contested

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

WHILE EMPLOYED WITH THE OFFICE OF THE PUBLIC COUNSEL

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Gascony Water Company, Inc.	WA-97-510	<u>Rebuttal</u> - Rate Base; Rate Case Expense; Cash Working Capital	Settled
Union Electric Company	GR-97-393	<u>Direct</u> - Interest Rates for Customer Deposits	Settled
St. Louis County Water Company	WR-97-382	<u>Direct</u> - Interest Rates for Customer Deposits, Main Incident Expense	Settled
Associated Natural Gas Company	GR-97-272	<u>Direct</u> - Acquisition Adjustment; Interest Rates for Customer Deposits <u>Rebuttal</u> - Acquisition Adjustment; Interest Rates for Customer Deposits <u>Surrebuttal</u> - Interest Rates for Customer Deposits	Contested
Missouri-American Water Company	WA-97-45	<u>Rebuttal</u> - Waiver of Service Connection Charges	Contested
Imperial Utility Corporation	SC-96-427	<u>Direct</u> - Revenues, CIAC <u>Surrebuttal</u> - Payroll; Uncollectible Accounts Expense; Rate Case Expense, Revenues	Settled
St. Louis Water Company	WR-96-263	<u>Direct</u> -Main Incident Repairs <u>Rebuttal</u> - Main Incident Repairs <u>Surrebuttal</u> - Main Incident Repairs	Contested
Steelville Telephone Company	TR-96-123	<u>Direct</u> - Depreciation Reserve Deficiency	Settled

**CASE PARTICIPATION
OF
KIMBERLY K. BOLIN**

WHILE EMPLOYED WITH THE OFFICE OF THE PUBLIC COUNSEL

<u>Company Name</u>	<u>Case Number</u>	<u>Testimony/Issues</u>	<u>Contested or Settled</u>
Missouri-American Water Company	WR-95-205 and SR-95-206	<u>Direct</u> - Property Held for Future Use; Premature Retirement of Sewer Plant; Depreciation Study Expense; Deferred Maintenance <u>Rebuttal</u> - Property Held for Future Use; Premature Retirement of Sewer Plant; Deferred Maintenance <u>Surrebuttal</u> - Property Held for Future Use; Premature Retirement of Sewer Plant	Contested
St. Louis County Water Company	WR-95-145	<u>Rebuttal</u> - Tank Painting Reserve Account; Main Repair Reserve Account <u>Surrebuttal</u> - Main Repair Reserve Account	Contested

Kory J. Boustead

Education and Employment Background

I am a Research/Data Analyst in the Energy Resources Department, Industry Analysis Division of the Missouri Public Service Commission (Commission). I have been employed at the Missouri Public Service Commission as Rate & Tariff Examiner since July 2012.

In December 1998, I earned a Bachelor of Science degree in Business Administration with an emphasis in Marketing from Columbia College. I went on to earn a Master of Business Administration, in Business Administration and Management from William Woods University in 2001.

Prior to joining the Commission, beginning in 2002, I was employed with Ameren Missouri as a Customer Service Representative in the Jefferson City Call Center. In this role, I was responsible for answering customer inquiries and requests through the call center including establishment of new and transfer accounts. I effectively managed customer complaints, resolving billing issues, and handling trouble calls. I was responsible for establishing payment agreements, advising customers regarding collection procedures and responsible for maintaining personal telephone statistics and call volume in excess of company average. Prior to my employment with Ameren Missouri I worked for Sprint Telephone in customer service, KRCC-TV in advertising and was the retail store manager for Alamosa PCS (a Sprint PCS affiliate) in Jefferson City.

List of Previous Testimony Filed
Kory J. Boustead

Date Filed	Issue	Case Number	Case Name
05/30/2014	Direct - Staff Report - Low Income Weatherization Programs, Energy Efficiency, Service Line Extension	GR-2014-0086	Summit Natural Gas of Missouri, Inc.
06/06/2014	Direct - Staff Report - Low Income Weatherization Programs, Energy Efficiency, Main Line Extension	GR-2014-0152	Liberty Utilities
07/11/2014	Rebuttal - Energy Efficiency, Low Income Weatherization Program	GR-2014-0086	Summit Natural Gas of Missouri, Inc.
07/30/2014	Rebuttal - Low Income Weatherization Programs, Energy Efficiency, Main Line Extension	GR-2014-0152	Liberty Utilities
08/08/2014	Surrebuttal - Low Income Weatherization Program	GR-2014-0086	Summit Natural Gas of Missouri, Inc.
12/05/2014	Direct - Staff Report - Low Income Keeping Current Pilot Program	ER-2014-0258	Ameren Missouri
02/06/15	Surrebuttal - Low Income Keeping Current Pilot Program	ER-2014-0258	Ameren Missouri
04/03/2015	Direct - Staff Report - Economic Relief Pilot Program, Low Income Weatherization Program	ER-2014-0370	Kansas City Power & Light Company

cont'd Kory J. Boustead

Date Filed	Issue	Case Number	Case Name
03/25/2016	Direct - Staff Report - Low Income Programs, Low Income Weatherization Program	ER-2016-0023	The Empire District Electric Company
05/12/2016	Rebuttal - Low Income Weatherization Program	ER-2016-0023	The Empire District Electric Company
07/15/2016	Direct- Staff Report – Income-Eligible Weatherization, Economic Relief Pilot Program	ER-2016-0156	KCP&L Greater Missouri Operations Company
09/02/2016	Surrebuttal – Income-Eligible Weatherization, Economic Relief Pilot Program	ER-2016-0156	KCP&L Greater Missouri Operations Company
11/30/2016	Direct – Staff Report – Income-Eligible Weatherization, Economic Relief Pilot Program	ER-2016-0258	Kansas City Power & Light Company
12/09/2016	Direct – Staff Report - Low Income Keeping Current Pilot Program, Low Income Weatherization Assistance Program	ER-2016-0179	Ameren Missouri
01/20/2017	Rebuttal – Low Income Weatherization Program	ER-2016-0179	Ameren Missouri
02/28/2018	Staff Report - Emission Allowances and Interest	EO-2018-0067	Staff’s Sixth Fuel Adjustment Clause Prudence Review Report – Ameren Missouri
03/16/2018	Direct – Staff Report – Tariff Organization	GR-2018-0013	Liberty Utilities

Date Filed	Issue	Case Number	Case Name
06/19/2018	Direct – Staff Report – Income Eligible Weatherization	ER-2018-0245	Kansas City Power & Light Company
04/30/2018	Direct – Staff Report – Interest	EO-2018-0155	First Prudence Review for Cycle 2 of Costs Related to the Demand-Side Programs for the Electric Operations of Union Electric Company, d/b/a Ameren Missouri
06/19/2018	Direct – Staff Report - Income Eligible Weatherization	ER-2018-0246	KCP&L Greater Missouri Operations Company
08/30/2018	Rebuttal – Low-Income Programs and Tariff design	EO-2018-0122	Ameren Missouri’s 3 rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA
09/05/2018	Staff Report – Interest, Renewable Energy Credit Revenue and Plant Outages	EO-2018-0244	In the Matter of the Seventh Prudence Review of Costs Subject to the Commission Approved Fuel Adjustment Clause of The Empire District Electric Company
09/17/2018	Surrebuttal – Low-Income Programs and Tariff design	EO-2018-0122	Ameren Missouri’s 3 rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA
02/28/2019	Staff Report – Renewable Energy Credits	EO-2019-0067	In the Matter of the Eighth Prudence Review of Costs Subject to the Commission- Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company
02/28/2019	Staff Report – Renewable Energy Credits	EO-2019-0068	In the Matter of the Second Prudence Review of Costs Subject to the Commission- Approved Fuel Adjustment Clause of Kansas City Power and Light Company

Date Filed	Issue	Case Number	Case Name
4/19/2019	Staff Direct Cost of Service Report – Energy Efficiency, Low-Income Programs & Low-Income Weatherization	GR-2019-0077	In the Matter of Union Electric Company d/b/a Ameren Missouri’s Tariffs to Increase its Revenues for Natural Gas Service
6/6/2019	Rebuttal Testimony - Renewable Energy Credits	EO-2019-0067	In the Matter of the 8 th Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company
6/7/2019	Rebuttal Testimony – Energy Efficiency, Low-Income Programs and Low-Income Weatherization	GR-2019-0077	In the Matter of Union Electric Company d/b/a Ameren Missouri’s Tariffs to Increase its Revenues for Natural Gas Service
7/10/2019	Surrebuttal Testimony - Energy Efficiency, Low-Income Programs & Low-Income Weatherization	GR-2019-0077	In the Matter of Union Electric Company d/b/a Ameren Missouri’s Tariffs to Increase its Revenues for Natural Gas Service
7/22/2019	Cross-Rebuttal Testimony – Renewable Energy Credits	EO-2019-0067	In the Matter of the 8 th Prudence Review of Costs Subject to the Commission-Approved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company

Date Filed	Issue	Case Number	Case Name
12/04/2019	Staff Direct Cost of Service Report – Energy Efficiency, Low-Income Programs & Low-Income Weatherization	ER-2019-0335	In the Matter of Union Electric Company d/b/a Ameren Missouri’s Tariffs to Decrease Its Revenues for Electric Service
01/15/2020	Staff Direct Cost of Service Report – Low-Income Programs & Low-Income Weatherization	ER-2019-0374	In the Matter of The Empire District Electric Company’s Request for Authority To File Tariffs Increasing Rates for Electric Service Provided to Customers in its Missouri Service Area
01/21/2020	Rebuttal Testimony – Energy Efficiency, Low-Income Programs and Low-Income Weatherization	ER-2019-0335	In the Matter of Union Electric Company d/b/a Ameren Missouri’s Tariffs to Decrease Its Revenues for Electric Service

DAVID T. BUTTIG, PE

PRESENT POSITION:

I am a Professional Engineer in the Engineering Analysis Department, Industry Analysis Division, of the Missouri Public Service Commission.

EDUCATIONAL BACKGROUND AND WORK EXPERIENCE:

I received my Bachelor of Science Degree in Environmental Engineering from the Missouri University of Science & Technology in May of 2012. In February of 2013 I began employment with the Missouri Department of Natural Resources in the Air Pollution Control Program as an Environmental Engineer I. In February of 2014, I was promoted to an Environmental Engineer II within the Air Pollution Control Program. I began employment with the commission as an engineer in July of 2018. I am a licensed professional engineer in the State of Missouri.

SUMMARY OF CASE INVOLVEMENT:

Case Number	Utility	Type	Issue
EA-2019-0010	Empire District Electric Company	Staff Report	Certificate of Convenience and Necessity
GR-2019-0077	Ameren Missouri (Gas)	Staff Report Rebuttal Testimony	Depreciation
GE-2020-0009	Summit Natural Gas of Missouri	Memorandum	Waiver Request
WR-2020-0264	Raytown Water Company	Staff Memorandum	Depreciation
WA-2021-0116	Missouri American Water Company	Staff Memorandum	Depreciation

KIM COX

Education and Employment Background and Credentials

I attended Central Missouri State University at Warrensburg, Missouri. In May 1996, I received a Bachelor of Science degree.

I am currently employed as a Senior Research/Data Analyst with the Tariff/Rate Design Department within the Industry Analysis Division of the Missouri Public Service Commission (Commission). I have been employed by the Commission since July, 2009. From July 2009 to June 2013, I worked in the Tariffs/Rate Design Section of the Energy Unit as a Rate and Tariff Examiner III, where my duties consisted of analyzing applications, reviewing tariffs and making recommendations based upon those evaluations. On June 16, 2013, I assumed the position of a Utility Policy Analyst II (which is now reclassified as a Senior Research/Data Analyst) within the same Section, where my duties consist of coordinating highly complex activities, analyzing applications, reviewing tariffs, and making recommendations based upon my evaluations. I currently serve on the NARUC Staff Subcommittee on Rate Design. Prior to joining the Commission, I held the position of a Quality Assurance Analyst in the regulatory field for ten years.

KIM COX

Summary of Case Involvement

	Company	Issue	Type of Filing
GR-2009-0434	The Empire District Gas Company	Weather Normalized Sales and Coincident-Peak Day Demand	Staff Report
GR-2010-0171	Laclede Gas Company	Weather Normalized Sales, Blocks and Coincident-Peak Day Demand	Staff Report
GR-2010-0171	Laclede Gas Company	Weather Normalized Sales	Rebuttal
GR-2010-0363	Union Electric d/b/a AmerenUE	Weather Normalized Sales, Blocks and Coincident-Peak Day Demand	Staff Report
GR-2010-0347	Southern Missouri Natural Gas	Weather Normalized Sales	Staff Report
GR-2010-0192	Atmos	Weather Normalized Sales and Coincident-Peak Day Demand	Staff Report
HR-2011-0241	Veolia	Weather Normalized Sales	Staff Report
ER-2012-0175	KCP&L and GMO	L&P Normalization and Annualization	Staff Report
GR-2014-0007 Coordinated	Missouri Gas Energy	Direct COS sponsor of Weather, Weather Normalization and Large Volume Customer Revenue Adjustment	Direct Testimony
GR-2014-0007 Coordinated	Missouri Gas Energy	Direct CCOS sponsor of Rate Design, Miscellaneous Tariff Issues, School Transportation Capacity, Gas Supply Incentive Plan and Staff's CCOS	Direct Testimony
GR-2014-0086	Summit Natural Gas	Lake Ozark Transportation	Staff Report
GR-2014-0152	Liberty Utilities	Special Contract, Large and Industrial Customers	Staff Report, Rebuttal and Surrebuttal
ER-2016-0023	Empire	Large Power Feed Mill Annualization	Staff Report
GR-2017-0215 and GR-2017-0216	Spire Missouri Inc.	Executive Summary, Background, Test Year/True-Up Period and Staff's Revenue Requirement Recommendation	Staff Report

	Company	Issue	Type of Filing
ER-2018-0145 and ER-2018-0146	Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company	Rate Revenues Introduction, The Development of Rate Revenue, Regulatory Adjustments to Test Year Sales and Rate Revenue, Customer Growth, and Adjustment for Non-Missouri classes	Staff Report
GR-2019-0077	Union Electric Company, d/b/a Ameren Missouri	Class Cost of Service, Rate Design and Bill Format Recommendation	Staff Report
ER-2019-0335	Union Electric Company, d/b/a Ameren Missouri	Cost of Service, Update Period Adjustments, Large Customer Annualization, MEEIA Revenue Adjustment, Weather Normalization of Revenue and 365 Day Adjustment	Staff Report

Sarah Fontaine

Educational and Employment Background and Credentials

I am currently employed as a Research/Data Analyst for the Missouri Public Service Commission (“Commission”). I began my current employment with the Commission in June 2020. I also worked for the Commission from 2004-2008 as an Administrative Support Assistant in the General Counsel’s Office. I earned a Bachelor of Science degree in Human Services from Columbia College in May 2013.

Prior to my current position at the Commission, I worked for the State of Missouri at the Secretary of State’s Office and the Department of Revenue. I have also worked in regulatory affairs for a natural gas company and in the real estate field.

The following is a list of cases before the Commission in which I have provided testimony, Staff recommendation or significant analysis:

Case Number	Company Name/Type of Case	Contribution
AW-2020-0356	Working Case to Consider Best Practices for Recovery of Past-Due Utility Customer Payments After the Covid-19 Pandemic Emergency	Staff Report
GO-2020-0182	Spire - Investigation - Customer Service, Billing/Recordkeeping practices	Analysis
AO-2021-0264	Cause of the February 2021 Cold Weather Event and its Impact on Investor Owned Utilities	Staff Report
EC-2021-0079	Coleman Russ v. Evergy Metro, Inc. – Formal Complaint	Analysis
EC-2021-0317	Vivian Houston v. Ameren Missouri – Formal Complaint	Analysis
GC-2021-0209	Tom O’Sullivan v. Spire – Formal Complaint	Analysis

cont'd Sarah Fontaine

Case Number	Company Name/Type of Case	Contribution
GR-2021-0108	Rate Case – Spire Missouri, Inc.	Direct Testimony
WC-2021-0075	Louis DeFeo v. Missouri-American Water Company – Formal Complaint	Staff Report
WC-2021-0251	William B. Rilenge v. Missouri-American Water Company – Formal Complaint	Staff Report

Jared Giacone

Present Position:

I am a Utility Regulatory Auditor with the Missouri Public Service Commission. I have been employed by the Missouri Public Service Commission Since April 2019.

Educational Background and Work Experience:

I earned a Bachelor of Science degree in Business Administration with an emphasis in Accounting in 2007 from DeVry University in Kansas City, MO. I was previously employed in sales and finance operations for semi-truck dealerships. Prior to that, I was a Compliance Auditor with the Missouri Gaming Commission for 6 years.

Case Participation:

<u>Company Name</u>	<u>Case Number</u>	<u>Type</u>
Missouri-American Water Company	SA-2021-0074	Certificate of Convenience and Necessity (CCN)
Spire	GO-2021-0030	Infrastructure System Replacement Surcharge (ISRS)
Raytown Water Company	WR-2020-0264	Rate case (increase)
Spire	GO-2020-0230	Infrastructure System Replacement Surcharge (ISRS)
Spire	GO-2020-0229	Infrastructure System Replacement Surcharge (ISRS)
Empire	ER-2019-0374	Rate case (increase)
Spire	GO-2019-0357	Infrastructure System Replacement Surcharge (ISRS)
Spire	GO-2019-0356	Infrastructure System Replacement Surcharge (ISRS)
Missouri-American Water Company	SA-2019-0367 ***Dismissed by company***	Certificate of Convenience and Necessity (CCN)
Missouri-American Water Company	WA-2019-0366 ***Dismissed by company***	Certificate of Convenience and Necessity (CCN)

Jeremy Juliette

Educational and Employment Background and Credentials

I am currently employed as a Senior Utility Regulatory Auditor for the Missouri Public Service Commission (“Commission”). I began my employment with the Commission in April 2019. I earned a Bachelor of Science in Accounting from Western Governors University in July 2019. I earned a Master of Science in Accounting from Western Governors University in May 2020.

As a Utility Regulatory Auditor, I perform rate audits and prepare miscellaneous filings as ordered by the Commission. In addition, I review all exhibits and testimony on assigned issues, develop accounting adjustments and issue positions which are supported by work papers and written testimony. For cases that do not require prepared testimony, I prepare Staff Recommendation Memorandums.

Cases I have been assigned are shown in the following table:

Company Name	Case Number	Case Type/Issue
Spire Missouri, Inc. d/b/a/ Spire	GR-2021-0108	Pending
Spire Missouri, Inc. d/b/a Spire	GO-2021-0030 & GO-2021-0031	Infrastructure System Replacement Surcharge (ISRS) – Staff Memorandum
Spire Missouri, Inc. d/b/a Spire	GO-2018-0309 & GO-2018-0310 (Remand Cases)	Infrastructure System Replacement Surcharge (ISRS) – Direct & Rebuttal
Raytown Water Company	WR-2020-0264	Water Rate Case – Staff Memorandum (Advertising, Revenues, Bad Debts, Dues and Donations, Payroll, Employee Benefits, PSC Assessment)
Spire Missouri, Inc., d/b/a Spire	GO-2020-0230	Infrastructure System Replacement Surcharge (ISRS) – Staff Memorandum
Spire Missouri, Inc., d/b/a Spire	GO-2020-0229	Infrastructure System Replacement Surcharge (ISRS) – Staff Memorandum
Elm Hills Utility Operating Company, Inc.	SA-2020-0152	Certificate of Convenience and Necessity (CCN) – Staff Memorandum

Company Name	Case Number	Case Type/Issue
Elm Hills Utility Operating Company, Inc.	SM-2020-0146	Certificate of Convenience and Necessity (CCN) – Staff Memorandum
Spire Missouri, Inc., d/b/a Spire	GA-2020-0105	Certificate of Convenience and Necessity (CCN) – Staff Memorandum
Union Electric Company, d/b/a Ameren Missouri	ER-2019-0335	Electric Rate Case – Filed Direct and Rebuttal (Cash Working Capital & Rate Case Expense Adjustment)
Spire Missouri, Inc., d/b/a Spire	GO-2019-0357	Infrastructure System Replacement Surcharge (ISRS) – Staff Memorandum
Spire Missouri, Inc., d/b/a Spire	GO-2019-0356	Infrastructure System Replacement Surcharge (ISRS) – Staff Memorandum
Missouri American Water Company	WA-2019-0364 & SA-2019-0365	Certificate of Convenience and Necessity (CCN)

Robin Kliethermes

Present Position:

I am the Regulatory Compliance Manager of the Tariff and Rate Design Department, Industry Analysis Division, of the Missouri Public Service Commission ("Commission"). I have held this position since July 16th, 2016. I have been employed by the Commission since March of 2012. In May of 2013, I presented on Class Cost of Service and Cost Allocation to the National Agency for Energy Regulation of Moldova ("ANRE") as part of the National Association of Regulatory Utility Commissioners ("NARUC") Energy Regulatory Partnership Program. I am also a member of the Electric Meter Variance Committee.

Educational Background and Work Experience:

I have a Bachelor of Science degree in Parks, Recreation and Tourism with a minor in Agricultural Economics from the University of Missouri – Columbia in 2008, and a Master of Science degree in Agricultural Economics from the same institution in 2010. Prior to joining the Commission, I was employed by the University of Missouri Extension as a 4-H Youth Development Specialist and County Program Director in Gasconade County.

Additionally, I completed two online classes through Bismarck State College: Energy Markets and Structures (ENRG 420) in December, 2014 and Energy Economics and Finance (ENRG 412) in May, 2015.

Previous Testimony of Robin Kliethermes

Case No.	Company	Type of Filing	Issue
ER-2012-0166	Ameren Missouri	Staff Report	Economic Considerations
ER-2012-0174	Kansas City Power & Light Company	Staff Report	Economic Considerations
ER-2012-0175	KCP&L Greater Missouri Operations Company	Staff Report	Economic Considerations & Large Power Revenues
ER-2012-0345	Empire District Electric Company	Staff Report	Economic Considerations, Non-Weather Sensitive Classes & Energy Efficiency
HR-2014-0066	Veolia Kansas City	Staff Report	Revenue by Class and Class Cost of Service
GR-2014-0086	Summit Natural Gas	Staff Report	Large Customer Revenues
GR-2014-0086	Summit Natural Gas	Rebuttal	Large Customer Revenues
EC-2014-0316	City of O'Fallon Missouri and City of Ballwin, Missouri v. Union Electric Company d/b/a Ameren Missouri	Staff Memorandum	Overview of Case
EO-2014-0151	KCP&L Greater Missouri Operations Company	Staff Recommendation	Renewable Energy Standard Rate Adjustment Mechanism (RESRAM)
ER-2014-0258	Ameren Missouri	Staff Report	Rate Revenue by Class, Class Cost of Service study, Residential Customer Charge
ER-2014-0258	Ameren Missouri	Rebuttal	Weather normalization adjustment to class billing units
ER-2014-0258	Ameren Missouri	Surrebuttal	Residential Customer Charge and Class allocations
ER-2014-0351	Empire District Electric Company	Staff Report	Rate Revenue by Class, Class Cost of Service study, Residential Customer Charge

cont'd Previous Testimony of
Robin Kliethermes

Case No.	Company	Type of Filing	Issue
ER-2014-0351	Empire District Electric Company	Rebuttal & Surrebuttal	Residential Customer, Interruptible Customers
ER-2014-0370	Kansas City Power & Light Company	Staff Report	Rate Revenue by Class, Class Cost of Service study, Residential Customer Charge
ER-2014-0370	Kansas City Power & Light Company	Rebuttal & Surrebuttal	Class Cost of Service, Rate Design, Residential Customer Charge
ER-2014-0370	Kansas City Power & Light Company	True-Up Direct & True-Up Rebuttal	Customer Growth & Rate Switching
EE-2015-0177	Kansas City Power & Light Company	Staff Recommendation	Electric Meter Variance Request
EE-2016-0090	Ameren Missouri	Staff Recommendation	Tariff Variance Request
EO-2016-0100	KCP&L Greater Missouri Operations Company	Staff Recommendation	RESRAM Annual Rate Adjustment Filing
ET-2016-0185	Kansas City Power & Light Company	Staff Recommendation	Solar Rebate Tariff Change
ER-2016-0023	Empire District Electric Company	Staff Report	Rate Revenue by Class, CCOS and Residential Customer Charge
ER-2016-0023	Empire District Electric Company	Rebuttal & Surrebuttal	Residential Customer Charge and CCOS
ER-2016-0156	KCP&L Greater Missouri Operations	Staff Report	Rate Revenue by Class, CCOS and Residential Customer Charge
ER-2016-0156	KCP&L Greater Missouri Operations	Rebuttal & Surrebuttal	Data Availability, Energy Efficiency Revenue Adj., Residential Customer Charge
ER-2016-0179	Ameren Missouri	Rebuttal	Blocked Usage
ER-2016-0285	Kansas City Power & Light Company	Rebuttal & Surrebuttal	Clean Charge Network Tariff, Rate Design
GR-2017-0215	Spire (Laclede Gas Company)	Staff Report, Rebuttal & Surrebuttal	Tariff Issues, Rate Design and Class Cost of Service

cont'd Previous Testimony of
Robin Kliethermes

Case No.	Company	Type of Filing	Issue
GR-2017-0216	Spire (Missouri Gas Energy)	Staff Report, Rebuttal & Surrebuttal	Tariff Issues, Rate Design and Class Cost of Service
EC-2018-0103	Kansas City Power & Light Company	Staff Report	Customer Complaint
EO-2015-0055	Ameren Missouri	Rebuttal	Flex-Pay Program
GR-2018-0013	Liberty	Staff Report	Class Cost of Service and Rate Design Report
ER-2018-0145	Kansas City Power & Light Company	Staff Report & Rebuttal & Surrebuttal	Tariff Issues, Rate Design, Revenue, Class Cost of Service
ER-2018-0146	KCP&L Greater Missouri Operations	Staff Report & Rebuttal & Surrebuttal	Tariff Issues, Rate Design, Revenue, Class Cost of Service
EO-2018-0211	Ameren Missouri	Staff Rebuttal Report	MEEIA Margin Rates
GO-2019-0059	Spire Missouri West	Staff Recommendation & Rebuttal	Weather Normalization Adjustment Rider (WNAR)
GO-2019-0058	Spire Missouri East	Staff Recommendation & Rebuttal	Weather Normalization Adjustment Rider (WNAR)
ET-2018-0132	Ameren Missouri	Surrebuttal	Risk Sharing Mechanism
ER-2019-0291	Ameren Missouri	Staff Recommendation	MEEIA EEIC rates
GR-2019-0077	Ameren Missouri	Staff Report, Rebuttal & Surrebuttal	Tariff Issues, Rate Design, Revenue, Class Cost of Service
EO-2019-0132	KCPL and GMO	Staff Rebuttal Report	MEEIA DSIM mechanism, Tariff Issues
ER-2019-0335	Ameren Missouri	Staff Report, Rebuttal and Surrebuttal	Cost of Service and Class Cost of Service
ER-2019-0374	Empire District Electric Company	Staff Report, Rebuttal and Surrebuttal	Class Cost of Service and Estimated Bills
ER-2019-0374	Empire District Electric Company	Supplemental and Surrebuttal Supplemental	Estimated Bills and Billing Determinants
EU-2020-0350	Evergy Missouri Metro and Evergy Missouri West	Rebuttal Testimony	Lost Revenue Recovery

Credentials and Background of J Luebbert

I have a Bachelor of Science degree in Biological Engineering from the University of Missouri. My work experience prior to becoming a member of the Missouri Public Service Commission Staff includes three years of regulatory work for the Missouri Department of Natural Resources.

I am currently employed as an Associate Engineer in the Engineering Analysis Department of the Industry Analysis Division of the Missouri Public Service Commission Staff. Prior to holding my current position, I was employed as Case Manager of the Commission Staff Division and as a Utility Engineering Specialist III in the Engineering Resources Department of the Commission Staff Division. I have been employed at the Missouri Public Service Commission since March 2016 and am responsible for preparing staff recommendations and ensuring that Staff presents recommendations in a neutral, independent manner to inform the Commission of Staff's position and possible alternatives.

Case Number	Company	Issues
EO-2015-0055	Ameren Missouri	Evaluation, Measurement, and Verification
EO-2016-0223	Empire District Electric Company	Supply-Side Resource Analysis, Transmission and Distribution Analysis, Demand-Side Resource Analysis, Integrated Resource Analysis
EO-2016-0228	Ameren Missouri	Utilization of Generation Capacity, Plant Outages, and Demand Response Program
ER-2016-0179	Ameren Missouri	Heat Rate Testing
ER-2016-0285	Kansas City Power & Light Company	Heat Rate Testing
EO-2017-0065	Empire District Electric Company	Utilization of Generation Capacity and Station Outages
EO-2017-0231	Kansas City Power & Light Company	Utilization of Generation Capacity, Heat Rates, and Plant Outages

Case Number	Company	Issues
EO-2017-0232	KCP&L Greater Missouri Operations Company	Utilization of Generation Capacity, Heat Rates, and Plant Outages
EO-2018-0038	Ameren Missouri	Supply-Side Resource Analysis, Transmission and Distribution Analysis, Demand-Side Resource Analysis, Integrated Resource Analysis
EO-2018-0067	Ameren Missouri	Utilization of Generation Capacity, Heat Rates, and Plant Outages
EO-2018-0211	Ameren Missouri	Avoided Costs and Demand Response Programs
EA-2019-0010	Empire District Electric Company	Market Protection Provision
EO-2018-0211	Ameren Missouri	Avoided Cost and Demand Response Programs
GO-2019-0115	Spire East	Policy
GO-2019-0116	Spire West	Policy
EO-2019-0132	Kansas City Power & Light Company	Avoided Cost, SPP resource adequacy requirements, and Demand Response Programs
ER-2019-0335	Ameren Missouri	Unregulated Competition Waivers and Class Cost Of Service
ER-2019-0374	Empire District Electric Company	SPP resource adequacy
EO-2020-0227	Evergy Missouri Metro	Demand Response programs
EO-2020-0228	Evergy Missouri West	Demand Response programs
EO-2020-0262	Evergy Missouri Metro	Demand Response programs
EO-2020-0263	Evergy Missouri West	Demand Response programs
EO-2020-0280	Evergy Missouri Metro	Integrated Resource Planning Requirements
EO-2020-0281	Evergy Missouri West	Integrated Resource Planning Requirements
EO-2021-0021	Ameren Missouri	Integrated Resource Planning Requirements

Educational and Employment Background and Credentials
of
Karen Lyons

I am currently employed as a Utility Regulatory Supervisor for the Missouri Public Service Commission (“Commission”). I was employed by the Commission in April 2007. Previously, I was employed by AT&T as a Regulatory Complaint Manager from December 1999 to February 2007. In that capacity I was responsible for addressing consumer and business complaints filed with various state and federal regulatory agencies. I earned a Bachelor of Science degree in Management Accounting and a Master’s in Business Administration from Park University.

As a Utility Regulatory Supervisor, I have assisted, conducted, and supervised audits of electric, natural gas, steam, and water and sewer utility companies operating within the state of Missouri. I have participated in numerous rate cases, merger cases, certificate cases, and ISRS cases and filed testimony on a variety of topics.

Cases I have participated in are shown in the following table:

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2020-2021	GR-2021-0108 (Pending)	Spire Missouri-General Rate Case	
2020	SA-2021-0074	Missouri American Water Company (Sewer) Certificate of Convenience and Necessity (CCN)	Staff Memorandum- Supervisory Oversight
2020	SA-2021-0017	Missouri American Water Company (Sewer) Certificate of Convenience and Necessity (CCN)	Staff Memorandum- Supervisory Oversight
2020	GO-2021-0031 (Stipulated)	Spire West-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum
2020	GO-2021-0030 (Stipulated)	Spire West-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum
2020	GA-2021-0010	Spire Missouri- Certificate of Convenience and Necessity (CCN)	Staff Memorandum- Supervisory Oversight
2020	WR-2020-0264 (Unanimous Disposition Agreement)	The Raytown Water Company (Water Rate Case)	Staff Memorandum- Supervisory Oversight
2020	WM-2020-0174	Liberty Utilities (Missouri Water) Acquisition	Staff Memorandum- Supervisory Oversight
2020	GO-2016-0332, GO-2016-0333 and GO-2017-0201, GO-2017-0202 (Remand Cases-Stipulated)	Spire Missouri-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum-Refund calculation
2020	GO-2018-0309 and GO-2018-0310 (Remand Cases-Stipulated)	Spire Missouri-Infrastructure System Replacement Surcharge (ISRS)	Staff Direct Report-Refund calculation
2020	GO-2020-0230 (Stipulated)	Spire West-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum Direct: Income Taxes

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2020	GO-2020-0229 (Stipulated)	Spire East-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum Direct: Income Taxes
2020	GA-2020-0251	Summit Natural Gas of Missouri (CCN)	Staff Memorandum- Supervisory Oversight
2020	SM-2020-0146	Elm Hills Utility Operating Company (Acquisition)	Staff Memorandum
2019	GA-2020-0105	Spire Missouri, Inc Certificate of Convenience and Necessity (CCN)	Staff Memorandum- Supervisory Oversight
2020	ER-2019-0374	Empire District Electric Company (Electric Rate Case)	CWC- Supervisory Oversight
2019-2020	ER-2019-0335 (Stipulated)	Union Electric Company, d/b/a Ameren Missouri (Electric Rate Case)	Direct: Cloud Computing, Electric Vehicle Employee Incentive, Charge Ahead Program Rebuttal: Cloud Computing, Paperless Bill Credit, Time of Use Pilot Tracker
2019	WA-2019-0364 & SA-2019-0365 (Proceedings Stayed)	Missouri American Water Company (CCN)	Supervisory Oversight
2019	WA-2019-0366 & SA-2019-0367 (Dismissed)	Missouri American Water Company (CCN)	Supervisory Oversight
2019	GO-2019-0357 (Contested)	Spire West-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum Direct: Income Taxes
2019	GO-2019-0356 (Contested)	Spire East-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum Direct: Income Taxes
2019	WO-2019-0184 (Contested)	Missouri American Water Company (ISRS)	Staff Memorandum Direct: Net Operating Loss Rebuttal: Net Operating Loss
2019	SA-2019-0161	United Services, Inc (CCN)	Staff Memorandum
2019	SA-2019-0183	Missouri American Water Company (CCN)	Staff Memorandum
2018	ER-2018-0145 (Stipulated)	Kansas City Power & Light Company (Electric Rate Case)	Direct: Greenwood Solar, Cash Working Capital, Transmission Revenue, Ancillary Services, Transmission Congestion Rights, Revenue Neutral Uplift charges, Off System Sales, Missouri Iowa Nebraska Transmission Line Losses, IT Software, Insurance, Injuries and Damages, Common Use Plant Billings, Income Taxes, Kansas City earning tax, ADIT, TCJA impacts Rebuttal: Injuries and Damages, Sibley and Montrose O&M Surrebuttal: Greenwood Solar, Injuries and Damages, Kansas City Earnings Tax, Income Taxes

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2018	ER-2018-0146 (Stipulated)	KCP&L Greater Missouri Operations Company (Electric Rate Case)	<p>Direct: Greenwood Solar, Cash Working Capital, Transmission Revenue, Ancillary Services, Transmission Congestion Rights, Revenue Neutral Uplift charges, Off System Sales, Missouri Iowa Nebraska Transmission Line Losses, IT Software, Insurance, Injuries and Damages, Common Use Plant Billings, Income Taxes, Kansas City earning tax, ADIT, TCJA impacts</p> <p>Rebuttal: Injuries and Damages, Sibley and Montrose O&M</p> <p>Surrebuttal: Greenwood Solar, Injuries and Damages, Kansas City Earnings Tax, Income Taxes</p>
2017	GR-2017-0215 and GR-2017-0216-Contested	Laclede Gas and Missouri Gas Energy (Gas Rate Case)	<p>Direct: Cash Working Capital, JJ's incident, Environmental costs, Property Taxes, Kansas Property Taxes, Cyber Security Costs, Energy Efficiency, Low Income Energy Assistance Program, One time Energy Affordability Program, Low Income Weatherization, Red Tag Program</p> <p>Rebuttal: Cyber-Security, Environmental and Kansas Property Tax Trackers, St Peters Lateral Pipeline</p> <p>Surrebuttal: Kansas Property Tax, Cash Working Capital, Energy Efficiency, JJ's related costs, Rate base treatment of Red Tag Program, St Peters pipeline lateral and MGE's one-time Energy Affordability Program</p> <p>Litigated: Kansas Property taxes and Trackers</p>
2016-2017	ER-2016-0285-Contested	Kansas City Power & Light Company (Electric Rate Case)	<p>Direct: Greenwood Solar, Fuel Inventories, Transmission Revenue, Ancillary Services, Transmission Congestion Rights, Market to Market Sales, Revenue Neutral Uplift charges, Fuel additives, Purchase Power, Fuel prices, Off System Sales IT Software, FERC Assessment, SPP Administrative fees, Transmission expense, CIP and Cyber Security, Depreciation Clearing, ERPP, Surface Transportation Board Reparation Amortization Amortization</p> <p>Rebuttal: Transmission expense/revenue and Property tax Forecasts/Trackers, Wholesale Transmission Revenue</p> <p>Surrebuttal Transmission expense/revenue and Property tax Forecasts/Trackers, Wholesale Transmission Revenue, Transmission Wholesale Revenue, Greenwood Solar True-up Direct: Transmission Expense and Revenue, Transmission Congestion Rights</p> <p>True-up Rebuttal: Transmission Expense</p> <p>Litigated: Transmission Expense</p>

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2016	ER-2016-0156-Stipulated	KCP&L Greater Missouri Operations Company (Electric Rate Case)	<p>Direct: Greenwood Solar, Fuel Inventories, Transmission Revenue, Ancillary Services, Transmission Congestion Rights, Market to Market Sales, Revenue Neutral Uplift charges, Fuel additives, Purchase Power, Fuel prices, Off System Sales IT Software Maintenance, FERC Assessment, SPP Administrative fees, Transmission expense, CIP and Cyber Security, Depreciation Clearing, Amortization of Regulatory Liabilities and Assets, Transource</p> <p>Rebuttal: Cyber-Security and Transmission expense/revenue Forecasts/Trackers, Wholesale Transmission Revenue</p> <p>Surrebuttal: Cyber-Security and Transmission expense/revenue Forecasts/Trackers, Crossroad Transmission expense, Wholesale Transmission Revenue, Greenwood Solar, Amortizations</p>
2016	EA-2015-0256-Contested	KCP&L Greater Missouri Operations Company (Solar CCN)	<p>Deposition</p> <p>Direct and Rebuttal Testimony: No pre-filed testimony. Live testimony during hearing</p>
2015	WO-2016-0098	Missouri American Water Company-Infrastructure Service Replacement Surcharge (ISRS Reconciliation)	Staff Memorandum
2015	ER-2014-0370-Contested	Kansas City Power & Light Company (Electric Rate Case)	<p>Direct: Fuel Inventories, Transmission Revenue, Ancillary Services, Transmission Congestion Rights, Market to Market Sales, Revenue Neutral Uplift charges, Fuel additives, Purchase Power, Fuel prices, IT Roadmap O&M, FERC Assessment, SPP Administrative fees, Transmission expense, Research and Development Tax Credit,</p> <p>Rebuttal: Property Tax, Vegetation Management and Cyber Security Trackers, SPP Region-Wide Transmission, Transmission Wholesale Revenue</p> <p>Surrebuttal: Property Tax, Vegetation Management and Cyber Security and Transmission Trackers, SPP Region-Wide Transmission, Transmission Wholesale Revenue, Transmission Expense</p> <p>True-up Rebuttal: Independence Power & Light Transmission Expense</p> <p>Litigated Issues: Transmission expense, Property Tax expense, CIP/Cyber Security expense, Independence Power & Light Transmission Expense</p>
2014	HR-2014-0066-Stipulated	Veolia Energy Kansas City, Inc. (Steam Rate Case)	<p>Direct: Fuel Inventories, Prepayments, Material Supplies, Customer Deposits, Fuel Expense, Purchased Power, Environmental Fees, Miscellaneous Non-Recurring Expenses</p>

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2014	GR-2014-0007-Stipulated	Missouri Gas Energy Company (Gas Rate Case)	Direct: Cash Working Capital, Revenues, Bad Debt, Outside Services, Environmental costs, Energy Efficiency, Regulatory Expenses, Amortization Expense, System Line Replacement costs, Property taxes, Kansas Property taxes Surrebuttal: Property taxes, Cash Working Capital, Manufactured Gas Plant costs
2013	GO-2013-0391	Missouri Gas Energy - Infrastructure Service Replacement Surcharge (ISRS)	Staff Memorandum
2013	WM-2013-0329	Bilyeu Ridge Water Company, LLC (Water Sale Case)	Staff Memorandum
2012	ER-2012-0175-Contested	KCP&L Greater Missouri Operations Company (Electric Rate Case)	Direct: Revenues, L&P Revenue Phase In, Maintenance, L&P Ice Storm AAO, Iatan 2 O&M, Bad Debt, Outsourced Meter reading, Credit Card fees, ERPP, Renewable Energy Costs Rebuttal: Bad Debt, Property tax tracker, Renewable Energy Costs Surrebuttal: Bad Debt, Renewable Energy Costs, Property tax tracker, Revenues, L&P Ice Storm AAO, L&P Revenue Phase In, Credit and Debit Card fees
2012	ER-2012-0174-Contested	Kansas City Power & Light Company (Electric Rate Case)	Direct: Revenues, Maintenance, Wolf Creek Refueling, Nuclear Decommissioning, Iatan 2 O&M, Hawthorn V SCR, Hawthorn V Transformer, Bad Debt, Credit Card fees, ERPP, Demand Side Management costs, Renewable Energy Costs Rebuttal: Bad Debt, Property tax tracker, Renewable Energy Costs Surrebuttal: Bad Debt, Hawthorn SCR and Transformer, Renewable Energy Costs, Property tax tracker, Revenues, Credit and Debit card fees.
2012	WM-2012-0288	Valley Woods Water Company, Inc. (Water Sale Case)	Staff Memorandum
2012	GO-2012-0144	Missouri Gas Energy - Infrastructure Service Replacement Surcharge (ISRS)	Staff Memorandum
2011	HR-2011-0241-Stipulated	Veolia Energy Kansas City, Inc. (Steam Rate Case)	Direct: Revenues, Allocations, Income Taxes, Miscellaneous Non-recurring expenses
2010-2011	ER-2010-0356-Contested	KCP&L Greater Missouri Operations Company (Electric Rate Case)	Direct: Plant/Reserve, Cash Working Capital, Maintenance, Ice Storm AAO, Iatan 2 O&M, Depreciation Clearing, Property Taxes, Outsourced Meter reading, Insurance, Injuries and Damages Rebuttal: Property Tax, Maintenance Surrebuttal: Property Tax,

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2010-2011	ER-2010-0355-Contested	Kansas City Power & Light Company (Electric Rate Case)	Direct: Plant/Reserve, Cash Working Capital, Maintenance, Wolf Creek Refueling, Nuclear Decommissioning, Maintenance, Iatan 2 O&M, Depreciation Clearing, Hawthorn V SCR Impairment, Property Taxes, Insurance, Injuries and Damages Rebuttal: Property Tax, CWC-Gross Receipts Tax, Maintenance Surrebuttal: Property Tax, CWC-Gross Receipts Tax, Maintenance, Injuries and Damages, Decommissioning Expense, Litigated: Hawthorn V SCR Settlement, Hawthorn V Transformer Settlement
2011	SA-2010-0219	Canyon Treatment Facility, LLC (Certificate Case)	Staff Memorandum
2010	WR-2010-0202	Stockton Water Company (Water Rate Case)	Staff Memorandum
2010	SR-2010-0140	Valley Woods Water Company (Water Rate Case)	Staff Memorandum
2010	WR-2010-0139	Valley Woods Water Company (Sewer Rate Case)	Staff Memorandum
2010	SR-2010-0110	Lake Region Water and Sewer (Sewer Rate Case)	Direct: Plant and Reserve, CIAC, PSC Assessment, Property Taxes, Insurance, Injuries and Damages, Rate Case Expense, Other Operating Expenses, Allocations
2010	WR-2010-0111	Lake Region Water and Sewer (Water Rate Case)	Direct: Plant and Reserve, CIAC, PSC Assessment, Property Taxes, Insurance, Injuries and Damages, Rate Case Expense, Other Operating Expenses, Allocations
2009	GR-2009-0355-Stipulated	Missouri Gas Energy (Gas Rate Case)	Direct: Cash Working Capital
2009	ER-2009-0090-Global Settlement	KCP&L Greater Missouri Operations Company (Electric Rate Case)	Direct: Plant/Reserve, Cash Working Capital, Maintenance, Depreciation Clearing, Property Taxes, Bank Fees, Insurance, Injuries and Damages, Ice Storm AAO Rebuttal: Property Tax, CWC-Gross Receipts Tax Surrebuttal: Property Tax, CWC Gross Receipts Tax, Maintenance, Injuries and Damages
2009	HR-2009-0092-Global Settlement	KCP&L Greater Missouri Operations Company (Steam Rate Case)	Direct: Plant/Reserve, Cash Working Capital, Maintenance, Property Taxes, Bank Fees, Insurance, Injuries and Damages Rebuttal: Property Tax
2009	ER-2009-0089-Global Settlement	Kansas City Power & Light Company (Electric Rate Case)	Direct: Plant/Reserve, Cash Working Capital, Maintenance, Depreciation Clearing, Hawthorn V Subrogation proceeds, Hawthorn V Transformer, DOE Refund, Property Taxes, Bank Fees, Insurance, Injuries and Damages, Ice Storm AAO Rebuttal: Property Tax, CWC-Gross Receipts Tax Surrebuttal: Property Tax, CWC Gross Receipts Tax, Maintenance, Injuries and Damages

cont'd Karen Lyons

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2008	HR-2008-0300-Stipulated	Trigen Kansas City Energy Corporation (Steam Rate Case)	Direct: Johnson Control Contract, Payroll, Payroll Taxes, and Benefits, Allocations, Insurance
2008	WR-2008-0314	Spokane Highlands Water Company (Water Rate Case)	Staff Memorandum
2007	GO-2008-0113	Missouri Gas Energy - Infrastructure Service Replacement Surcharge (ISRS)	Staff Memorandum

Keith Majors

Educational and Employment Background and Credentials

I am currently employed as a Utility Regulatory Auditor IV for the Missouri Public Service Commission (Commission). I was employed by the Commission in June 2007. I earned a Bachelor of Science degree in Accounting from Truman State University in May 2007.

As a Utility Regulatory Auditor, I perform rate audits and prepare miscellaneous filings as ordered by the Commission. In addition, I review all exhibits and testimony on assigned issues, develop accounting adjustments and issue positions which are supported by workpapers and written testimony. For cases that do not require prepared testimony, I prepare Staff Recommendation Memorandums.

Cases I have been assigned are shown in the following table:

Utility	Case Number	Issues	Exhibit
Spire Missouri	GR-2021-0108	Rate Case Expense, Transition Costs	Staff Report
Ameren Missouri - Electric	ER-2019-0335	Ameren Services Allocations and Affiliate Transaction	Staff Report
KCP&L & KCP&L GMO	ER-2018-0145 & ER-2018-0146	Synergy and Transition Costs Analysis, Transmission Revenue and Expense	Staff Report Rebuttal Surrebuttal
Laclede Gas and Missouri Gas Energy	GR-2017-0215 & GR-2017-0216	Synergy and Transition Costs Analysis, Corporate Allocations	Staff Report Rebuttal Surrebuttal
KCP&L & KCP&L GMO	ER-2016-0156	Income Taxes, Pension & OPEB	Staff Report Rebuttal Surrebuttal
KCP&L & KCP&L GMO	EC-2015-0309	Affiliate Transactions, Allocations	Surrebuttal Testimony
KCP&L	ER-2014-0370	Income Taxes, Pension & OPEB, Revenues	Staff Report Rebuttal Surrebuttal
KCP&L	EU-2015-0094	DOE Nuclear Waste Fund Fees	Direct Testimony
KCP&L	EU-2014-0255	Construction Accounting	Rebuttal Testimony
Veolia Kansas City	HR-2014-0066	Income Taxes, Revenues, Corporate Allocations	Staff Report
Missouri Gas Energy	GR-2014-0007	Corporate Allocations, Pension & OPEB, Incentive Compensation, Income Taxes	Staff Report Rebuttal Surrebuttal

continued Keith Majors

Utility	Case Number	Issues	Exhibit
Missouri Gas Energy ISRS	GO-2013-0391	ISRS	Staff Memorandum
KCP&L & KCP&L GMO	ER-2012-0174 & ER-2012-0175	Acquisition Transition Costs, Fuel, Legal and Rate Case Expense	Staff Report Rebuttal Surrebuttal
Missouri Gas Energy ISRS	GO-2011-0269	ISRS	Staff Memorandum
Noel Water Sale Case	WO-2011-0328	Sale Case Evaluation	Staff Recommendation
KCP&L & KCP&L GMO	ER-2010-0355 & ER-2010-0356	Acquisition Transition Costs, Rate Case Expense	Staff Report Rebuttal Surrebuttal
KCP&L Construction Audit & Prudence Review	EO-2010-0259	AFUDC, Property Taxes	Staff Report
KCP&L, KCP&L GMO, & KCP&L GMO – Steam	ER-2009-0089, ER-2009-0090, & HR-2009-0092	Payroll, Employee Benefits, Incentive Compensation	Staff Report Rebuttal Surrebuttal
Trigen Kansas City	HR-2008-0300	Fuel Inventories, Rate Base Items, Rate Case Expense, Maintenance	Staff Report
Spokane Highlands Water Company	WR-2008-0314	Plant, CIAC	Staff Recommendation
Missouri Gas Energy ISRS	GO-2008-0113	ISRS	Staff Memorandum

JOEL R. MCNUTT CREDENTIALS

PRESENT POSITION

I am currently employed as an Economics Analyst in the Tariff/Rate Design Department within the Industry Analysis Division of the Missouri Public Service Commission. I was previously employed with the Missouri Public Service Commission as a Regulatory Economist in 2013 and 2014. I have currently been employed with the Missouri Public Service Commission since 2020.

EDUCATION

I received my Bachelor of Science in Economics from Central Missouri State University in Warrensburg, MO in May 2002. I completed my Master of Business Administration from William Woods University in Jefferson City, MO in December 2007.

EMPLOYMENT BACKGROUND

Prior to joining the Commission, I worked in the fields of Procurement and Economic Development for the Missouri Department of Transportation and the Missouri Department of Economic Development. In my previous 10 years of experience working for the State of Missouri, I have administered several State run programs such as the Missouri Enhanced Enterprise Zone Program and the Missouri Certified Sites Program. I also have private sector experience in the fields of healthcare, banking, and nuclear security as well as previous experience in higher education.

PREVIOUS CASE EXPERIENCE

GR-2014-0007
GR-2014-0006
GR-2014-0086

Antonija Nieto

Educational and Employment Background and Credentials

I am currently employed as a Senior Utility Regulatory Auditor for the Missouri Public Service Commission (“Commission”). Previously I was employed by Lauterbach, Borschow and Company, P. C. in El Paso, TX as an auditor specializing in financial institutions audits from January 2008 to November 2009. I earned a Bachelor of Accounting from New Mexico State University in December 2006 and a Master of Accounting with minor in Management, also from New Mexico State University in December 2007. I have been employed by the Commission since October 2016.

As a Senior Utility Regulatory Auditor, I perform rate audits and prepare miscellaneous filings for consideration by the Commission. In addition, I review all exhibits and testimony on assigned issues, develop accounting adjustments and issue positions which are supported by workpapers and written testimony. For cases that do not require prepared testimony, I prepare Staff Recommendation Memorandums.

Cases in which I have participated and the scope of my contributions are listed below:

Case/Tracking Number	Company Name- Type of Case; Issues
GR-2021-0108	Spire, Inc. Advertising, Board of Directors, Cash Working Capital, Communication Equipment Lease, Credit Card Processing Fees, Energy Efficiency and Low Income Programs/Weatherization, Energy Efficiency Program Balances, Fuel Expense Equipment and Vehicles, Insurance, Line Locating, Rents and Leases, Severance, Uncollectible Expense
SA-2021-0017	Missouri-American Water Company Certificate of Convenience and Necessity
WR-2020-0264	Raytown Water Company Leased equipment, Outside Services, Purchased Water Bills, Education Expense, Lab Fees, Office Supplies, Primacy Fees, Printing and Postage Expense, Uniform Expense
WA-2019-0364	Missouri-American Water Company Certificate of Convenience and Necessity

cont'd Antonija Nieto

Case/Tracking Number	Company Name- Type of Case; Issues
GO-2019-0356	Spire Inc. Infrastructure System Replacement Surcharge (ISRS)
WO-2019-0184	Missouri American Water Company Infrastructure System Replacement Surcharge (ISRS) Work Order review, Reconciliation
SA-2019-0161	United Services, Inc. Certificate of Convenience and Necessity Plant buildout, Direct Expenses
ER-2018-0145	Kansas City Power & Light Company and Greater Missouri Energy Company Advertising, Bad Debt Expense, Revenues, Customer Advances, Customer Deposits, Customer Growth, Dues and Donations, Material and Supplies, Other Revenues, Prepayments, Forfeited Discounts annualization, Greater Missouri Energy Company EMS Run, Payroll expenses, Payroll Taxes, Employee Benefits
GR-2017-0215 GR-2017-0216	Laclede Gas and Missouri Gas Energy Payroll, Payroll Taxes, Employee Benefits, Non-Labor Maintenance, A&G and O&M Cost Analysis
WR-2017-0139	Stockton Hills Water Company Payroll, Other Expenses
ER-2016-0285	Kansas City Power & Light Company EMS Run, Insurance expense, Amortization, PSC Assessment, Lease expense

Joseph P. Roling

Present Position:

I am a Economics Analyst in the Tariff and Rate Design Department, Industry Analysis Division, of the Missouri Public Service Commission. I have been employed by the Missouri Public Service Commission since March of 2016.

Educational Background and Work Experience:

I have a Bachelor of Science degree in Business Administration, Finance & Banking with a minor in Economics from the University of Missouri – Columbia in 1991, and a Master of Business Administration from Lincoln University in 1995. Prior to joining the Commission, I was employed in the Financial Service Industry.

Additionally, I completed Financial Planning Certificate Program from Bryant University in October, 2015.

Regulatory Training while at PSC:

5/19/16 – Carbon Markets 101 – Keys to Effective Design & Management

6/27/16 – Evaluation, Measurement & Verification (EM&V) for Energy Efficiency

6/29/16 – Long Term Gas Hedging Why and How

7/2/16 – Setting Baselines for Planning & Evaluation of Efficiency Programs EMV

8/25/16 - Leveraging Power Markets to Achieve a Reliable, Least-Cost Transition to a Low-Carbon Power System Regulatory Assistance Project

9/21/16 – FRI Symposium Attendance - “Managing the Triple Threat to Public Utility Profitability: Safety, Reliability & Affordability.”

10/13/16 - Gas Efficiency Programs – What does it take to pass cost-effectiveness tests?

11/3/16 - More is Less - Environmentally Beneficial Electrification

cont'd Joeseph P. Roling

cont'd Regulatory Training while at PSC:

01-17-17 Harness the Momentum of Power Sector Transformation - Regulatory Assistance Project (RAP) Webinar

01-25-17 New Study on Demand Charge Savings from Residential Solar – Electric Markets & Policy Group, Lawrence Berkeley National Laboratory.

01-31-17 Energy Efficiency - Consistency and Coordination of Energy Efficiency EM&V and Reporting

02-21-17 Assessment of Benefits Derived from Improved Reliability & Resiliency in Utility-owned Microgrid

03-01-17 Flexible & Customizable – Designing Decoupling for your State Regulatory Assistance Project

03-23-17 Part 1 Lessons Learned from Energy Efficiency Programs

03-30-17 Part 2 Lessons Learned from Energy Efficiency Programs

11-17-17 MISO 101 Overview for MPSC

02-06-18 One Size Does Not Fit All – Complexities, Use Case, Trends in Energy Storage

02-13-18 Clean Energy States Alliance-State of the US Energy Storage Industry 2017 Year on Review

05-02-18 Income Trends of Residential Solar Adopters

Previous filed Testimony of Joseph P. Roling

Case No.	Company	Type of Filing	Issue
ER-2019-0375	Kansas City Power & Light Company	Staff Recommendation	MEEIA
ER-2019-0397	KCPL Greater Missouri Operations Company	Staff Recommendation	MEEIA
GR-2019-0077	Ameren Missouri	Cost of Service Report	Revenues
EC-2018-0066	Ameren Missouri	Tariff Investigation Report	Customer Complaint
EC-2018-0097	Ameren Missouri	Tariff Investigation Report	Customer Complaint
GR-2018-0013	Liberty Utilities	Cost of Service Report	Revenues
GC-2017-0348	Spire Missouri, Inc., d/b/a Spire (Laclede Gas Company and Missouri Gas Energy)	Tariff Investigation Report	Customer Complaint
GR-2017-0215 and GR-2017-0216	Spire Missouri, Inc., d/b/a Spire (Laclede Gas Company and Missouri Gas Energy)	Cost of Service Report	Revenues
ER-2016-0179	Ameren Missouri	Cost of Service / Revenue Requirement Report	Revenues
HO-2017-0211	Veolia Energy Kansas City, Inc.-(Steam/Heat)	Staff Recommendation	PACC Filing
ER-2019-0335	Ameren Missouri	Lighting Revenue	Revenues

cont'd Joeseeph P. Roling

Case No.	Company	Type of Filing	Issue
ER-2019-0374	Liberty (Empire)- Investor(Electric)	Low Income Pilot Information	Revenues
GA-2019-0210	Spire Missouri, Inc.- Investor(Gas) Spire-Investor(Gas)	Staff Recommendation	CCN Expansion
GA-2019-0214	Spire Missouri, Inc.- Investor(Gas) Spire-Investor(Gas)	Staff Recommendation	CCN Expansion
ER-2020-0154	Evergy Metro, Inc.- Investor(Electric) Evergy Missouri Metro- Investor(Electric)	Staff Recommendation	MEEIA
ER-2020-0388	Evergy Metro, Inc.- Investor(Electric) Evergy Missouri Metro- Investor(Electric)	Staff Recommendation	MEEIA
ET-2020-0133	Evergy Metro, Inc.- Investor(Electric) Evergy Missouri Metro- Investor(Electric) Evergy Missouri West, Inc.-Investor(Electric) Evergy Missouri West- Investor(Electric)	Staff Recommendation	Request for a variance from the Commission's billing and payment standards
GA-2020-0235	Spire Missouri, Inc.- Investor(Gas) Spire-Investor(Gas)	Staff Recommendation	CCN Expansion
GO-2020-1820	Spire Missouri, Inc.- Investor(Gas) Spire-Investor(Gas)	Staff Investigation	Investigation into the Customer Service and Billing Recordkeeping Practices of Spire Missouri, Inc. d/b/a Spire

cont'd Joeseeph P. Roling

Case No.	Company	Type of Filing	Issue
GA-2021-0010	Spire Missouri, Inc.- Investor(Gas) Spire-Investor(Gas)	Staff Recommendation	CCN Expansion

Michael L. Stahlman

Education

- 2009 M. S., Agricultural Economics, University of Missouri, Columbia.
2007 B.A., Economics, Summa Cum Laude, Westminster College, Fulton, MO.

Professional Experience

- 2010 - Regulatory Economist, Missouri Public Service Commission
2007 – 2009 Graduate Research Assistant, University of Missouri
2008 Graduate Teaching Assistant, University of Missouri
2007 American Institute for Economic Research (AIER) Summer Fellowship Program
2006 Price Analysis Intern, Food and Agricultural Policy Research Institute (FAPRI), Columbia, MO
2006 Legislative Intern for State Representative Munzlinger
2005 – 2006 Certified Tutor in Macroeconomics, Westminster College, Fulton, MO
1998 – 2004 Engineering Watch Supervisor, United States Navy

Expert Witness Testimony

- Union Electric Company d/b/a AmerenUE GR-2010-0363
In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Natural Gas Service Provided to Customers in the Company's Missouri Service Area
- Union Electric Company d/b/a Ameren Missouri GT-2011-0410
In the Matter of the Union Electric Company's (d/b/a Ameren Missouri) Gas Service Tariffs Removing Certain Provisions for Rebates from Its Missouri Energy Efficient Natural Gas Equipment and Building Shell Measure Rebate Program
- KCP&L Great Missouri Operations Company EO-2012-0009
In the Matter of KCP&L Greater Missouri Operations Company's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism
- Union Electric Company d/b/a Ameren Missouri EO-2012-0142
In the Matter of Union Electric Company d/b/a Ameren Missouri's Filing to Implement Regulatory Changes Furtherance of Energy Efficiency as Allowed by MEEIA
- Kansas City Power & Light Company EO-2012-0323
In the Matter of the Resource Plan of Kansas City Power & Light Company
- KCP&L Great Missouri Operations Company EO-2012-0324
In the Matter of the Resource Plan of KCP&L Greater Missouri Operations Company
- Kansas City Power & Light Company, KCP&L Great Missouri Operations Company, and Transource Missouri EA-2013-0098
EO-2012-0367
In the Matter of the Application of Transource Missouri, LLC for a Certificate of Convenience and Necessity Authorizing it to Construct, Finance, Own, Operate, and Maintain the Iatan-Nashua and Sibley-Nebraska City Electric Transmission Projects

cont'd Expert Witness Testimony
Michael L. Stahlman

Kansas City Power & Light Company	EO-2012-0135
KCP&L Great Missouri Operations Company	EO-2012-0136
In the Matter of the Application of Kansas City Power & Light Company [KCP&L Great Missouri Operations Company] for Authority to Extend the Transfer of Functional Control of Certain Transmission Assets to the Southwest Power Pool, Inc.	
Kansas City Power & Light Company	EU-2014-0077
KCP&L Great Missouri Operations Company	
In the Matter of the Application of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company for the Issuance of an Accounting Authority Order relating to their Electrical Operations and for a Contingent Waiver of the Notice Requirement of 4 CSR 240-4.020(2)	
Kansas City Power & Light Company	EO-2014-0095
In the Matter of Kansas City Power & Light Company's Notice of Intent to File an Application for Authority To Establish a Demand-Side Programs Investment Mechanism	
Veolia Energy Kansas City, Inc	HR-2014-0066
In the Matter of Veolia Energy Kansas City, Inc for Authority to File Tariffs to Increase Rates	
Grain Belt Express Clean Line, LLC	EA-2014-0207
In the Matter of the Application of Grain Belt Express Clean Line LLC for a Certificate of Convenience and Necessity Authorizing It to Construct, Own, Operate, Control, Manage, and Maintain a High Voltage, Direct Current Transmission Line and an Associated Converter Station Providing an Interconnection on the Maywood - Montgomery 345 kV Transmission Line	
Union Electric Company d/b/a Ameren Missouri	ER-2014-0258
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service	
Empire District Electric Company	ER-2014-0351
In the Matter of The Empire District Electric Company for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area	
Kansas City Power & Light Company	ER-2014-0370
In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service	
Kansas City Power & Light Company	EO-2014-0240
In the Matter of Kansas City Power & Light Company's Filing for Approval of Demand-Side Programs and for Authority to Establish a Demand-Side Programs Investment Mechanism	
KCP&L Great Missouri Operations Company	EO-2014-0241
In the Matter of KCP&L Greater Missouri Operations Company's Filing for Approval of Demand-Side Programs and for Authority to Establish a Demand-Side Programs Investment Mechanism	

cont'd Expert Witness Testimony
Michael L. Stahlman

- Ameren Transmission Company of Illinois EA-2015-0146
In the Matter of the Application of Ameren Transmission Company of Illinois for Other Relief or, in the Alternative, a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Maintain and Otherwise Control and Manage a 345,000-volt Electric Transmission Line from Palmyra, Missouri to the Iowa Border and an Associated Substation Near Kirksville, Missouri
- Empire District Electric Company ER-2016-0023
In the Matter of The Empire District Electric Company's Request for Authority to Implement a General Rate Increase for Electric Service
- KCP&L Great Missouri Operations Company ER-2016-0156
In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service
- Kansas City Power & Light Company ER-2016-0285
In the Matter of Kansas City Power & Light Company's Request for Authority to Implement A General Rate Increase for Electric Service
- Union Electric Company d/b/a Ameren Missouri ER-2016-0179
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service
- Grain Belt Express Clean Line, LLC EA-2016-0358
In the Matter of the Application of Grain Belt Express Clean Line LLC for a Certificate of Convenience and Necessity Authorizing it to Construct, Own, Operate, Control, Manage and Maintain a High Voltage, Direct Current Transmission Line and an Associated Converter Station Providing an Interconnection on the Maywood-Montgomery 345kV transmission line.
- Spire Missouri, Inc. GR-2017-0215 and GR-2017-0216
In the Matter of Spire Missouri, Inc.'s Request to Increase Its Revenues for Gas Service
- Liberty Utilities GR-2018-0013
In the Matter of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities' Tariff Revisions Designed to Implement a General Rate Increase for Natural Gas Service in the Missouri Service Areas of the Company
- Spire Missouri, Inc. GO-2019-0058 and GO-2019-0059
In the Matter of Spire Missouri, Inc. d/b/a Spire's Request to Decrease [Increase] WNAR
- Grain Belt Express Clean Line LLC EM-2019-0150
Invenergy Transmission LLC
Invenergy Investment Company LLC
In the Matter of the Joint Application of Invenergy Transmission LLC, Invenergy Investment Company LLC, Grain Belt Express Clean Line LLC and Grain Belt Express Holding LLC for an Order Approving the Acquisition by Invenergy Transmission LLC of Grain Belt Express Clean Line LLC

cont'd Expert Witness Testimony
Michael L. Stahlman

- Union Electric Company d/b/a Ameren Missouri GR-2019-0077
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to
Increase its Revenues for Natural Gas Service
- Union Electric Company d/b/a Ameren Missouri ER-2019-0335
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to
Decrease Its Revenues for Electric Service
- Empire District Electric Company ER-2019-0374
In the Matter of The Empire District Electric Company's Request for Authority to
File Tariffs Increasing Rates for Electric Service Provided to Customers in its
Missouri Service Area
- Union Electric Company d/b/a Ameren Missouri EA-2020-0371
In the Matter of the Application of Union Electric Company d/b/a Ameren
Missouri for Permission and Approval and a Certificate of Public Convenience
and Necessity Under 20 CSR 4240-3.105

Selected Manuscripts

- Stahlman, Michael and Laura M.J. McCann. "Technology Characteristics, Choice
Architecture and Farmer Knowledge: The Case of Phytase." *Agriculture and
Human Values* (2012) 29: 371-379.
- Stahlman, Michael. "The Amorality of Signals." Awarded in top 50 authors for SEVEN
Fund essay competition, "The Morality of Profit."

Selected Posters

- Stahlman, Michael, Laura M.J. McCann, and Haluk Gedikoglou. "Adoption of Phytase
by Livestock Farmers." Selected poster at the American Agricultural Economics
Association Annual Meeting, Orlando, FL, July 27-29, 2008. Also presented at
the USDA/CSREES Annual Meeting in St. Louis, MO in February 2009.
- McCann, Laura, Haluk Gedikoglu, Bob Broz, John Lory, Ray Massey, and Michael
Stahlman. "Farm Size and Adoption of BMPs by AFOs." Selected poster at the 5th
National Small Farm Conference in Springfield, IL in September 2009.

Non-Peer-Reviewed Works

- Poole-King, Contessa, Henry Warren, and Michael Stahlman. "Forecasters Predicting
Cold, Wet Winter For Most Of Midwest." *PSConnection* (Fall 2013) 3(7):3-4.
- Poole-King, Contessa, Henry Warren, and Michael Stahlman. "Low Income
Weatherization Programs Provides Services To Help Consumers." *PSConnection*
(Fall 2013) 3(7):5-6.

Credentials and Background of

Seoung Joun Won, PhD

I am currently employed as a Regulatory Compliance Manager in the Financial Analysis Department of the Financial and Business Analysis Division of the Missouri Public Service Commission. I have been employed at the Missouri Public Service Commission since May 2010.

I received my Bachelor of Arts, Master of Arts, and Doctor of Philosophy in Mathematics from Yonsei University and my Bachelor of Business Administration in Financial Accounting from Seoul Digital University in Seoul, South Korea, and earned my Doctor of Philosophy in Economics from the University of Missouri - Columbia. Also, I passed several certificate examinations for Finance Specialist in South Korea such as Accounting Management, Financial Risk Manager, Enterprise Resource Planning Accounting Consultant, Derivatives Investment Advisor, Securities Investment Advisor, and Financial Planner.

Prior to joining the Commission, I taught both undergraduate and graduate level mathematics at the Korean Air Force Academy and Yonsei University for 13 years. I served as the director of the Education and Technology Research Center in NeoEdu for 5 years. Before starting my current position at the Missouri Public Service Commission, I had served as a regulatory economist in Tariff/Rate Design Department.

My current duties at the Commission include financial analysis of rate of return and cost of equity, valuation analysis on merger and acquisition, due diligence review and supporting economic and statistical analysis.

List of Previous Testimony Filed

Seoung Joun Won, PhD

<u>Case Number</u>	<u>Company</u>	<u>Issue</u>
WF-2021-0131	Raytown Water Company	Financing Authority
EA-2020-0371	Union Electric Co., d/b/a Ameren Missouri	Financial Ability
SR-2020-0345	Missouri American Water Company	Rate of Return, Capital Structure
WR-2020-0344	Missouri American Water Company	Rate of Return, Capital Structure
WR-2020-0264	Raytown Water Company	Rate of Return, Capital Structure
EF-2020-0301	Evergy Missouri Metro	Financing Authority
WR-2020-0053	Confluence Rivers Utility Operating Company, Inc	Rate of Return, Capital Structure
HM-2020-0039	Veolia Energy Kansas City, Inc. AIP Project Franklin Bidco	Merger and Acquisition
EO-2019-0133	KCP&L Greater Missouri Operations Company, Evergy Metro	Business Process Efficiency
EO-2019-0132	Kansas City Power & Light Company, Evergy Metro	Business Process Efficiency
GO-2019-0059	Spire West, Spire Missouri, Inc.	Weather Variables
GO-2019-0058	Spire East., Spire Missouri, Inc.	Weather Variables
ER-2018-0146	KCP&L Greater Missouri Operations Co.	Weather & Normalization, Net System Input
ER-2018-0145	Kansas City Power & Light Co.	Weather & Normalization, Net System Input
GR-2018-0013	Liberty Utilities (Midstates Natural Gas) Corp.	Weather Variables

cont'd List of Previous Testimony Filed

Seoung Joun Won

GR-2017-0216	Missouri Gas Energy (Laclede), Spire Missouri, Inc.	Weather Variables
GR-2017-0215	Laclede Gas Co., Spire Missouri, Inc.	Weather Variables
ER-2016-0285	Kansas City Power & Light Co.	Weather & Normalization, Net System Input
ER-2016-0179	Union Electric Co., d/b/a Ameren Missouri	Weather & Normalization, Net System Input
ER-2016-0156	KCP&L Greater Missouri Operations Co.	Weather & Normalization, Net System Input
ER-2016-0023	Empire District Electric Co.	Weather & Normalization, Net System Input
ER-2014-0370	Kansas City Power & Light Co	Weather & Normalization, Net System Input
ER-2014-0351	Empire District Electric Co.	Weather & Normalization, Net System Input
ER-2014-0258	Union Electric Co., d/b/a Ameren Missouri	Weather & Normalization, Net System Input
EC-2014-0223	Noranda Aluminum, Inc., et al, Complaint v. Union Electric Co., d/b/a Ameren Missouri	Weather Variables
GR-2014-0152	Liberty Utilities (Midstates Natural Gas) Corp.	Weather Variables
GR-2014-0086	Summit Natural Gas of Missouri, Inc.	Weather Variables
HR-2014-0066	Veolia Energy Kansas City, Inc.	Weather Variables, Revenue
GR-2013-0171	Laclede Gas Co.	Weather Variables
ER-2012-0345	Empire District Electric Co.	Weather Variables, Revenue
ER-2012-0175	KCP&L Greater Missouri Operations Co.	Weather Variables
ER-2012-0174	Kansas City Power & Light Co.	Weather Variables

cont'd List of Previous Testimony Filed

Seoung Joun Won

ER-2012-0166	Union Electric Co., d/b/a Ameren Missouri	Weather Variables, Revenue
HR-2011-0241	Veolia Energy Kansas City, Inc.	Weather Variables
ER-2011-0004	Empire District Electric Co.	Weather Variables, Revenue
ER-2011-0028	Union Electric Co., d/b/a Ameren Missouri	Weather Variables, Revenue
GR-2010-0363	Union Electric Co., d/b/a Ameren Missouri	Weather Variables
ER-2010-0356	KCP&L Greater Missouri Operations Co.	Weather Variables
ER-2010-0355	Kansas City Power & Light Co.	Weather Variables, Revenue

Work Related Publication

Won, Seoung Joun, X. Henry Wang, and Henry E. Warren. "Climate normals and weather normalization for utility regulation." *Energy Economics* (2016).

Matthew R. Young

Educational and Employment Background and Credentials

I am employed as a Senior Utility Regulatory Auditor for the Missouri Public Service Commission (“Commission”). I earned a Bachelor of Liberal Arts Degree from The University of Missouri – Kansas City in May 2009 and a Master of Science in Accounting, also from The University of Missouri – Kansas City, in December 2011. I have been employed by the Commission as a Regulatory Auditor since July 2013.

As a Utility Regulatory Auditor, I perform rate audits and prepare miscellaneous filings for consideration by the Commission. In addition, I review exhibits and testimony on assigned issues, develop accounting adjustments and issue positions which are supported by workpapers and written testimony. For cases that do not require prepared testimony, I prepare Staff Recommendation Memorandums.

Cases in which I have participated and the scope of my contributions are listed below:

Case/Tracking Number	Company Name	Scope of Issues	Testified at Hearing
GO-2021-0030 GO-2021-0031	Spire – East and Spire – West	ISRS Rate Base	
SA-2021-0017	Missouri American Water Company	Sale of Assets	Yes
GA-2021-0010	Spire – West	Costs to Expand Distribution System	
WR-2020-0264	Raytown Water Company	Tank Painting and Tower Maintenance, Taxes, Leases, Capitalized Depreciation	
GO-2020-0229 GO-2020-0230	Spire – East and Spire – West	ISRS Rate Base	
GA-2020-0105	Spire – West	Costs to Expand Distribution System	
WA-2019-0366 SA-2019-0367	Missouri American Water Company	Sale of Assets, Rate Base	

cont'd Matthew R. Young

Case/Tracking Number	Company Name	Scope of Issues	Testified at Hearing
WA-2019-0364 SA-2019-0365	Missouri American Water Company	Sale of Assets, Rate Base	
GO-2019-0356 GO-2019-0357	Spire – East and Spire – West	Overhead Costs in Rate Base, Reconciliation	Yes
ER-2019-0335	Ameren Missouri	Incentive Compensation, Fuel Inventory	
WO-2019-0184	Missouri American Water Company	ISRS Rate Base	
SA-2019-0161	United Services Inc.	Application for Certificate, Rate Base	
ER-2018-0145 ER-2018-0146	Kansas City Power & Light & KCP&L Greater Missouri Operations	Fuel Prices & Inventories, Purchased Power Expense, Pensions, OPEBs, SERP, Outside Services	
WM-2018-0104	Missouri American Water Company	Rate Base	
WM-2018-0023	Liberty Utilities	Sale of Assets, Rate Base	
WR-2017-0343	Gascony Water Company	Rate Base	Yes
GR-2017-0215 GR-2017-0216	Laclede Gas Company & Missouri Gas Energy	Pensions, OPEBs, SERP, Incentive Compensation, Equity Compensation, Severance Costs	Yes
WR-2017-0139	Stockton Hills Water Company	Revenue, Expenses, Rate Base	

cont'd Matthew R. Young

Case/Tracking Number	Company Name	Scope of Issues	Testified at Hearing
ER-2016-0285	Kansas City Power & Light	Forfeited Discounts, Bad Debt Expense, Customer Growth, Cash Working Capital, Payroll and Payroll Related Costs, Incentive Compensation, Rate Case Expense, Renewable Energy Standards Cost Recovery, Property Taxes	Yes
SR-2016-0202	Raccoon Creek Utility Operating Company	Rate Base	
ER-2016-0156	KCP&L Greater Missouri Operations	Payroll, Payroll Benefits, Payroll Taxes, Incentive Compensation, Injuries and Damages, Insurance Expense, Property Tax Expense, Rate Case Expense	
SR-2016-0112	Cannon Home Association	Revenues and Expenses, Rate Base	
WR-2016-0109 SR-2016-0110	Roy-L Utilities	Revenues and Expenses, Rate Base	
WO-2016-0098	Missouri American Water Company	ISRS Revenues	
WR-2015-0246	Raytown Water Company	Revenues and Expenses, Rate Base	
SC-2015-0152	Central Rivers Wastewater Utility	Verification of amounts identified in Complaint	
WR-2015-0104	Spokane Highlands Water Company	Revenues and Expenses, Rate Base	
GR-2015-0026	Laclede Gas Company	Plant Additions and Retirements, Contributions in Aid of Construction	
GR-2015-0025	Missouri Gas Energy	Plant Additions and Retirements, Contributions in Aid of Construction	

cont'd Matthew R. Young

Case/Tracking Number	Company Name	Scope of Issues	Testified at Hearing
WR-2015-0020	Gascony Water Company	Revenues and Expenses, Rate Base	
SM-2015-0014	Raccoon Creek Utility Operating Company	Sale of Assets, Rate Base, Acquisition Premium	
ER-2014-0370	Kansas City Power & Light	Injuries & Damages, Insurance, Payroll, Payroll Benefits, Payroll Taxes, Property Taxes, Rate Case Expense	Yes
SR-2014-0247	Central Rivers Wastewater Utility	Revenues and Expenses, Rate Base, Affiliated Transactions	
HR-2014-0066	Veolia Energy Kansas City	Payroll, Payroll Benefits, Payroll Taxes, Bonus Compensation, Property Taxes, Insurance Expense, Injuries & Damages Expense, Outside Services, Rate Case Expense	
GO-2014-0179	Missouri Gas Energy	Plant Additions, Contributions in Aid of Construction	
GR-2014-0007	Missouri Gas Energy	Advertising & Promotional Items, Dues and Donations, Lobbying Expense, Miscellaneous Expenses, PSC Assessment, Plant in Service, Depreciation Expense, Depreciation Reserve, Prepayments, Materials & Supplies, Customer Advances, Customer Deposits, Interest on Customer Deposits	
SA-2014-0005	Central Rivers Wastewater Utility	Application for Certificate, Revenue and Expenses, Plant in Service, Depreciation Reserve. Other Rate Base Items	

MISSOURI PUBLIC SERVICE COMMISSION

**STAFF REPORT
COST OF SERVICE**

APPENDIX 2

**Support for Staff
Cost of
Capital Recommendations**

SPIRE MISSOURI, INC., d/b/a SPIRE

**SPIRE EAST and SPIRE WEST
GENERAL RATE CASE**

CASE NO. GR-2021-0108

*Jefferson City, Missouri
May 12, 2021*

AN ANALYSIS OF THE COST OF CAPITAL

FOR

SPIRE MISSOURI, INC.

CASE NO. GR-2021-0108

APPENDIX 2

SCHEDULES

BY

Seung Joun Won, PhD

Financial Analysis

MISSOURI PUBLIC SERVICE COMMISSION

May 12, 2021

Spire Missouri, Inc.
Case No. GR-2021-0108

List of Schedules

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2-2	Graph of Federal Reserve Discount Rates and Federal Funds Rates Changes
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3-2	Graph of Rate of Inflation
4-1	Average Yields on Moody's Public Utility Bonds
4-2	Average Yields on Thirty-Year U.S. Treasury Bonds
4-3	Graph of Average Yields on Mergent's Public Utility Bonds and Thirty-Year U.S. Treasury Bonds
4-4	Graph of Monthly Spreads Between Yields on Moody's Public Utility Bonds and 30-Year U.S. Treasury Bonds
4-5	Graph of Average Yields on A and BBB+ Utility Bonds
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14	CAPM Analysis of COE Estimate 2017 and 2020
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17	Authorized Return on Equity

Spire Missouri, Inc.
Case No. GR-2021-0108

Federal Reserve Discount Rates Changes and Federal Reserve Funds Rates Changes

Date	Federal Reserve Discount Rate	Federal Reserve Funds Rate	Date	Federal Reserve Discount Rate	Federal Reserve Funds Rate
01/01/83	8.50%		01/03/01	5.75%	6.00%
12/31/83	8.50%		01/04/01	5.50%	6.00%
04/09/84	9.00%		01/31/01	5.00%	5.50%
11/21/84	8.50%		03/20/01	4.50%	5.00%
12/24/84	8.00%		04/18/01	4.00%	4.50%
05/20/85	7.50%		05/15/01	3.50%	4.00%
03/07/86	7.00%		06/27/01	3.25%	3.75%
04/21/86	6.50%		08/21/01	3.00%	3.50%
07/11/86	6.00%		09/17/01	2.50%	3.00%
08/21/86	5.50%		10/02/01	2.00%	2.50%
09/04/87	6.00%		11/06/01	1.50%	2.00%
08/09/88	6.50%		12/11/01	1.25%	1.75%
02/24/89	7.00%		11/06/02	0.75%	1.25%
07/13/90		8.00% *	01/09/03	2.25%	** 1.25%
10/29/90		7.75%	06/25/03	2.00%	1.00%
11/13/90		7.50%	06/30/04	2.25%	1.25%
12/07/90		7.25%	08/10/04	2.50%	1.50%
12/18/90		7.00%	09/21/04	2.75%	1.75%
12/19/90	6.50%		11/10/04	3.00%	2.00%
01/09/91		6.75%	12/14/04	3.25%	2.25%
02/01/91	6.00%	6.25%	02/02/05	3.50%	2.50%
03/08/91		6.00%	03/22/05	3.75%	2.75%
04/30/91	5.50%	5.75%	05/03/05	4.00%	3.00%
08/06/91		5.50%	06/30/05	4.25%	3.25%
09/13/91	5.00%	5.25%	08/09/05	4.50%	3.50%
10/31/91		5.00%	09/20/05	4.75%	3.75%
11/06/91	4.50%	4.75%	11/01/05	5.00%	4.00%
12/06/91		4.50%	12/13/05	5.25%	4.25%
12/20/91	3.50%	4.00%	01/31/06	5.50%	4.50%
04/09/92		3.75%	03/28/06	5.75%	4.75%
07/02/92	3.00%	3.25%	05/10/06	6.00%	5.00%
09/04/92		3.00%	06/29/06	6.25%	5.25%
01/01/93			08/17/07	5.75%	5.25%
12/31/93	No Changes	No Changes	09/18/07	5.25%	4.75%
02/04/94		3.25%	10/31/07	5.00%	4.50%
03/22/94		3.50%	12/11/07	4.75%	4.25%
04/18/94		3.75%	01/22/08	4.00%	3.50%
05/17/94	3.50%	4.25%	01/30/08	3.50%	3.00%
08/16/94	4.00%	4.75%	03/16/08	3.25%	2.25%
11/15/94	4.75%	5.50%	03/18/08	2.50%	2.25%
02/01/95	5.25%	6.00%	04/30/08	2.25%	2.00%
07/06/95		5.75%	10/08/08	1.75%	1.50%
12/19/95		5.50%	10/28/08	1.25%	1.00%
01/31/96	5.00%	5.25%	12/30/08	0.50%	0% - .25%
03/25/97		5.50%	02/19/10	0.75%	0% - .25%
12/12/97	5.00%		12/17/15	1.00%	0.38%
01/09/98	5.00%		12/15/16	1.25%	0.54%
03/06/98	5.00%		03/16/17	1.50%	0.79%
09/29/98		5.25%	06/15/17	1.75%	1.04%
10/15/98	4.75%	5.00%	12/14/17	2.00%	1.30%
11/17/98	4.50%	4.75%	03/22/18	2.25%	1.51%
06/30/99	4.50%	5.00%	06/14/18	2.50%	1.82%
08/24/99	4.75%	5.25%	09/27/18	2.75%	1.95%
11/16/99	5.00%	5.50%	12/20/18	3.00%	2.27%
02/02/00	5.25%	5.75%	08/01/19	2.75%	2.13%
03/21/00	5.50%	6.00%	09/19/19	2.50%	2.04%
05/19/00	6.00%	6.50%	10/31/19	2.25%	1.83%
			03/04/20	1.75%	0.65%

* Staff began tracking the Federal Funds Rate.

**Revised discount window program begins. Reflects rate on primary credit. This revised discount window policy results in incomparability of the discount rates after January 9, 2003 to discount rates before January 9, 2003.

Source:

Federal Reserve Discount rate

<https://fred.stlouisfed.org/series/INTDSRUSM193N>

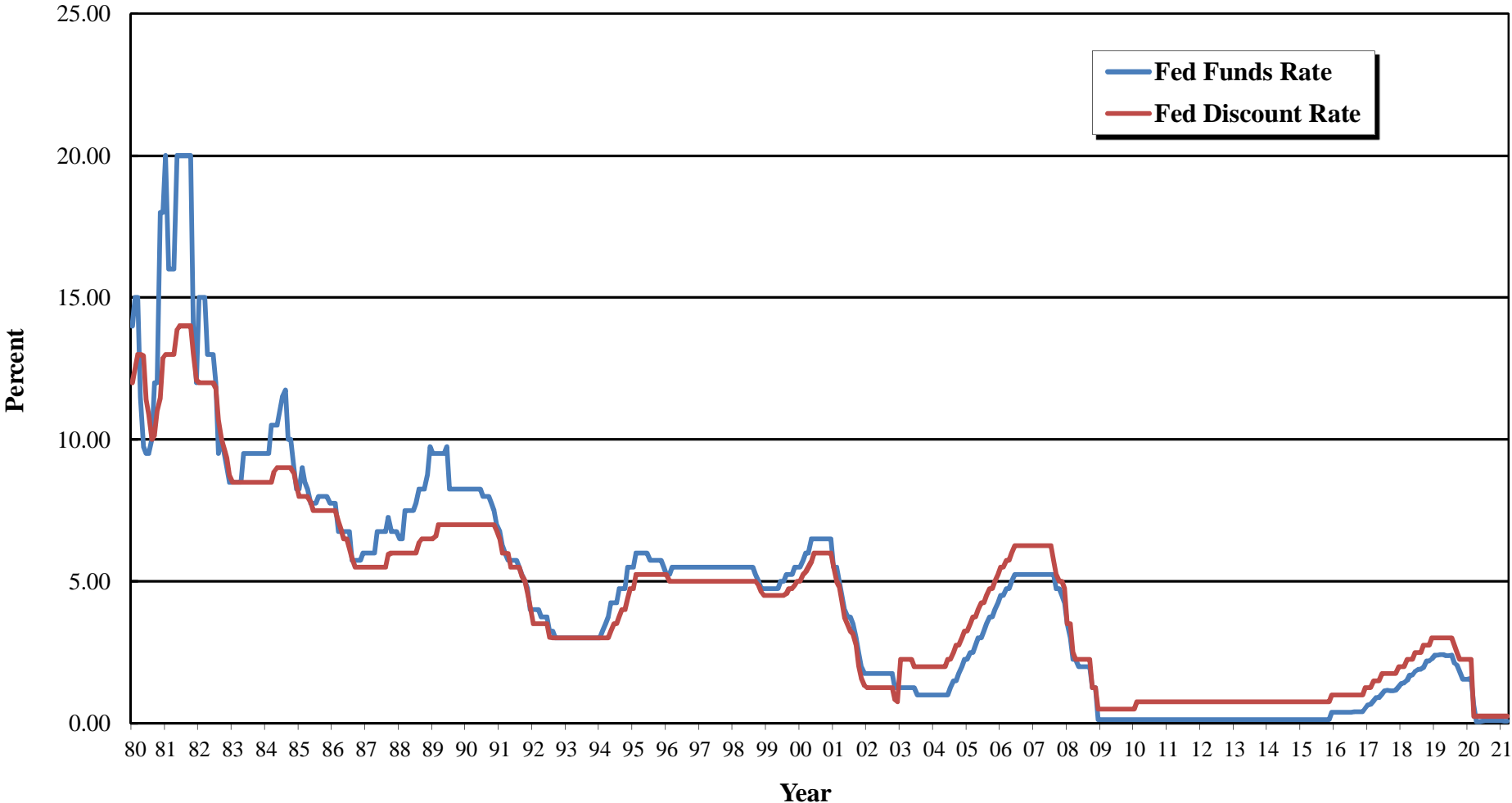
Federal Reserve Funds rate

<https://fred.stlouisfed.org/series/FEDFUNDS>

Note: Interest rates as of December 31 for each year are underlined.

Spire Missouri, Inc.
Case No. GR-2021-0108

Federal Reserve Discount Rates and Federal Funds Rates
1980 - 2021



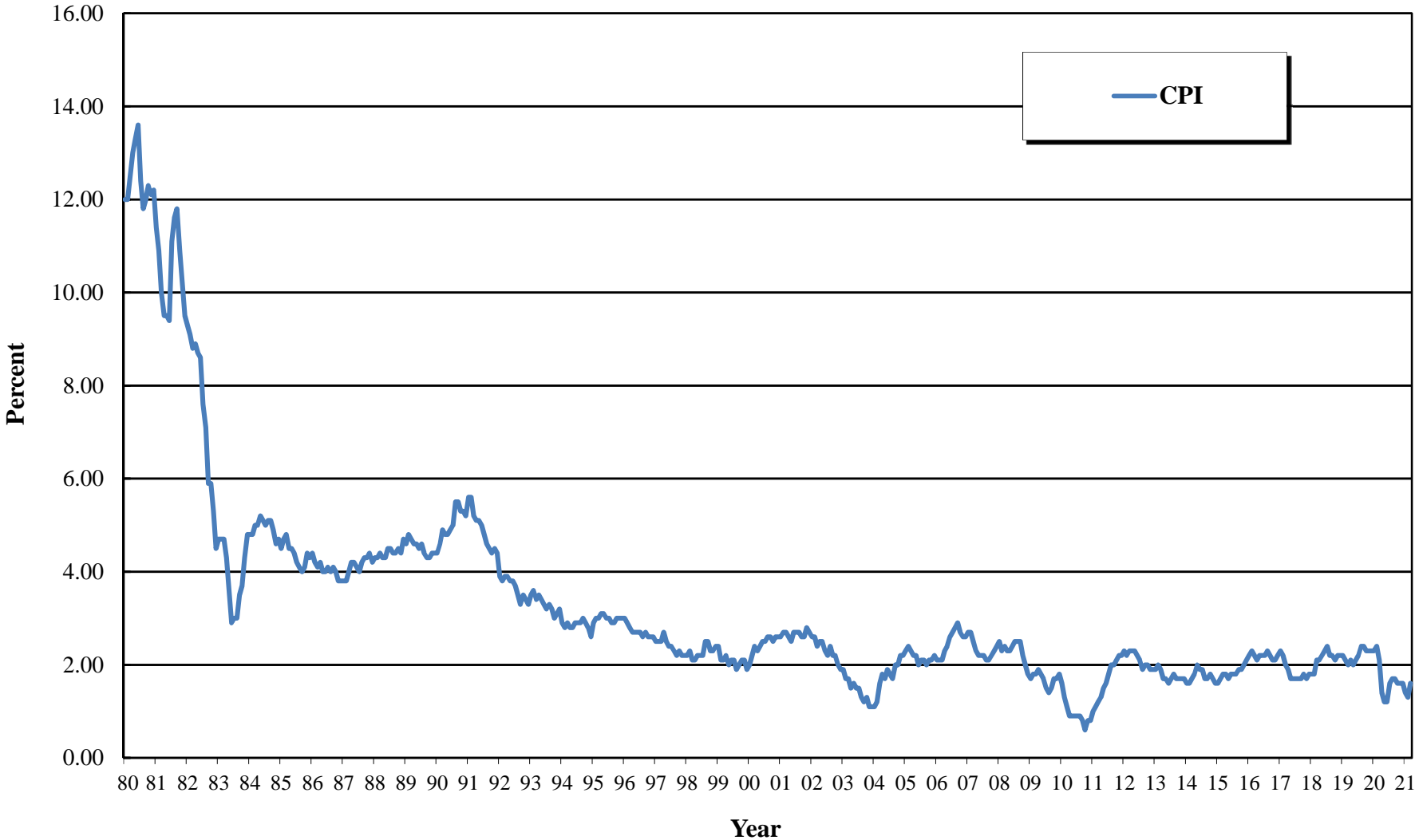
Spire Missouri, Inc.
Case No. GR-2021-0108

Rate of Inflation

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.00	Jan 1986	4.40	Jan 1992	3.90	Jan 1998	2.20	Jan 2004	1.10	Jan 2010	1.60	Jan 2016	2.20
Feb	12.00	Feb	4.20	Feb	3.80	Feb	2.30	Feb	1.20	Feb	1.30	Feb	2.30
Mar	12.50	Mar	4.10	Mar	3.90	Mar	2.10	Mar	1.60	Mar	1.10	Mar	2.20
Apr	13.00	Apr	4.20	Apr	3.90	Apr	2.10	Apr	1.80	Apr	0.90	Apr	2.10
May	13.30	May	4.00	May	3.80	May	2.20	May	1.70	May	0.90	May	2.20
Jun	13.60	Jun	4.00	Jun	3.80	Jun	2.20	Jun	1.90	Jun	0.90	Jun	2.20
Jul	12.40	Jul	4.10	Jul	3.70	Jul	2.20	Jul	1.80	Jul	0.90	Jul	2.20
Aug	11.80	Aug	4.00	Aug	3.50	Aug	2.50	Aug	1.70	Aug	0.90	Aug	2.30
Sep	12.00	Sep	4.10	Sep	3.30	Sep	2.50	Sep	2.00	Sep	0.80	Sep	2.20
Oct	12.30	Oct	4.00	Oct	3.50	Oct	2.30	Oct	2.00	Oct	0.60	Oct	2.10
Nov	12.10	Nov	3.80	Nov	3.40	Nov	2.30	Nov	2.20	Nov	0.80	Nov	2.10
Dec	12.20	Dec	3.80	Dec	3.30	Dec	2.40	Dec	2.20	Dec	0.80	Dec	2.20
Jan 1981	11.40	Jan 1987	3.80	Jan 1993	3.50	Jan 1999	2.40	Jan 2005	2.30	Jan 2011	1.00	Jan 2017	2.30
Feb	10.90	Feb	3.80	Feb	3.60	Feb	2.10	Feb	2.40	Feb	1.10	Feb	2.20
Mar	10.00	Mar	4.00	Mar	3.40	Mar	2.10	Mar	2.30	Mar	1.20	Mar	2.00
Apr	9.50	Apr	4.20	Apr	3.50	Apr	2.20	Apr	2.20	Apr	1.30	Apr	1.90
May	9.50	May	4.20	May	3.40	May	2.00	May	2.20	May	1.50	May	1.70
Jun	9.40	Jun	4.10	Jun	3.30	Jun	2.10	Jun	2.00	Jun	1.60	Jun	1.70
Jul	11.10	Jul	4.00	Jul	3.20	Jul	2.10	Jul	2.10	Jul	1.80	July	1.70
Aug	11.60	Aug	4.20	Aug	3.30	Aug	1.90	Aug	2.10	Aug	2.00	Aug	1.70
Sep	11.80	Sep	4.30	Sep	3.20	Sep	2.00	Sep	2.00	Sep	2.00	Sep	1.70
Oct	10.90	Oct	4.30	Oct	3.00	Oct	2.10	Oct	2.10	Oct	2.10	Oct	1.80
Nov	10.20	Nov	4.40	Nov	3.10	Nov	2.10	Nov	2.10	Nov	2.20	Nov	1.70
Dec	9.50	Dec	4.20	Dec	3.20	Dec	1.90	Dec	2.20	Dec	2.20	Dec	1.80
Jan 1982	9.30	Jan 1988	4.30	Jan 1994	2.90	Jan 2000	2.00	Jan 2006	2.10	Jan 2012	2.30	Jan 2018	1.80
Feb	9.10	Feb	4.30	Feb	2.80	Feb	2.20	Feb	2.10	Feb	2.20	Feb	1.80
Mar	8.80	Mar	4.40	Mar	2.90	Mar	2.40	Mar	2.10	Mar	2.30	Mar	2.10
Apr	8.90	Apr	4.30	Apr	2.80	Apr	2.30	Apr	2.30	Apr	2.30	Apr	2.10
May	8.70	May	4.30	May	2.80	May	2.40	May	2.40	May	2.30	May	2.20
Jun	8.60	Jun	4.50	Jun	2.90	Jun	2.50	June	2.60	Jun	2.20	Jun	2.30
Jul	7.60	Jul	4.50	Jul	2.90	Jul	2.50	July	2.70	Jul	2.10	Jul	2.40
Aug	7.10	Aug	4.40	Aug	2.90	Aug	2.60	Aug	2.80	Aug	1.90	Aug	2.20
Sep	5.90	Sep	4.40	Sep	3.00	Sep	2.60	Sep	2.90	Sep	2.00	Sep	2.20
Oct	5.90	Oct	4.50	Oct	2.90	Oct	2.50	Oct	2.70	Oct	2.00	Oct	2.10
Nov	5.30	Nov	4.40	Nov	2.80	Nov	2.60	Nov	2.60	Nov	1.90	Nov	2.20
Dec	4.50	Dec	4.70	Dec	2.60	Dec	2.60	Dec	2.60	Dec	1.90	Dec	2.20
Jan 1983	4.70	Jan 1989	4.60	Jan 1995	2.90	Jan 2001	2.60	Jan 2007	2.70	Jan 2013	1.90	Jan 2019	2.20
Feb	4.70	Feb	4.80	Feb	3.00	Feb	2.70	Feb	2.70	Feb	2.00	Feb	2.10
Mar	4.70	Mar	4.70	Mar	3.00	Mar	2.70	Mar	2.50	Mar	1.90	Mar	2.00
Apr	4.30	Apr	4.60	Apr	3.10	Apr	2.60	Apr	2.30	Apr	1.70	Apr	2.10
May	3.60	May	4.60	May	3.10	May	2.50	May	2.20	May	1.70	May	2.00
Jun	2.90	Jun	4.50	Jun	3.00	Jun	2.70	Jun	2.20	Jun	1.60	Jun	2.10
Jul	3.00	Jul	4.60	Jul	3.00	Jul	2.70	Jul	2.20	Jul	1.70	Jul	2.20
Aug	3.00	Aug	4.40	Aug	2.90	Aug	2.70	Aug	2.10	Aug	1.80	Aug	2.40
Sep	3.50	Sep	4.30	Sep	2.90	Sep	2.60	Sep	2.10	Sept	1.70	Sept	2.40
Oct	3.70	Oct	4.30	Oct	3.00	Oct	2.60	Oct	2.20	Oct	1.70	Oct	2.30
Nov	4.30	Nov	4.40	Nov	3.00	Nov	2.80	Nov	2.30	Nov	1.70	Nov	2.30
Dec	4.80	Dec	4.40	Dec	3.00	Dec	2.70	Dec	2.40	Dec	1.70	Dec	2.30
Jan 1984	4.80	Jan 1990	4.40	Jan 1996	3.00	Jan 2002	2.60	Jan 2008	2.50	Jan 2014	1.60	Jan 2020	2.30
Feb	4.80	Feb	4.60	Feb	2.90	Feb	2.60	Feb	2.30	Feb	1.60	Feb	2.40
Mar	5.00	Mar	4.90	Mar	2.80	Mar	2.40	Mar	2.40	Mar	1.70	Mar	2.10
Apr	5.00	Apr	4.80	Apr	2.70	Apr	2.50	Apr	2.30	Apr	1.80	Apr	1.40
May	5.20	May	4.80	May	2.70	May	2.50	May	2.30	May	2.00	May	1.20
Jun	5.10	Jun	4.90	Jun	2.70	Jun	2.30	Jun	2.40	Jun	1.90	Jun	1.20
Jul	5.00	Jul	5.00	Jul	2.70	Jul	2.20	Jul	2.50	Jul	1.90	Jul	1.60
Aug	5.10	Aug	5.50	Aug	2.60	Aug	2.40	Aug	2.50	Aug	1.70	Aug	1.70
Sep	5.10	Sep	5.50	Sep	2.70	Sep	2.20	Sep	2.50	Sep	1.70	Sep	1.70
Oct	4.90	Oct	5.30	Oct	2.60	Oct	2.20	Oct	2.20	Oct	1.80	Oct	1.60
Nov	4.60	Nov	5.30	Nov	2.60	Nov	2.00	Nov	2.00	Nov	1.70	Nov	1.60
Dec	4.70	Dec	5.20	Dec	2.60	Dec	1.90	Dec	1.80	Dec	1.60	Dec	1.60
Jan 1985	4.50	Jan 1991	5.60	Jan 1997	2.50	Jan 2003	1.90	Jan 2009	1.70	Jan 2015	1.60	Jan 2021	1.40
Feb	4.70	Feb	5.60	Feb	2.50	Feb	1.70	Feb	1.80	Feb	1.70	Feb	1.30
Mar	4.80	Mar	5.20	Mar	2.50	Mar	1.70	Mar	1.80	Mar	1.80	Mar	1.60
Apr	4.50	Apr	5.10	Apr	2.70	Apr	1.50	Apr	1.90	Apr	1.80	Apr	
May	4.50	May	5.10	May	2.50	May	1.60	May	1.80	May	1.70	May	
Jun	4.40	Jun	5.00	Jun	2.40	Jun	1.50	Jun	1.70	Jun	1.80	Jun	
Jul	4.20	Jul	4.80	Jul	2.40	Jul	1.50	Jul	1.50	Jul	1.80	Jul	
Aug	4.10	Aug	4.60	Aug	2.30	Aug	1.30	Aug	1.40	Aug	1.80	Aug	
Sep	4.00	Sep	4.50	Sep	2.20	Sep	1.20	Sep	1.50	Sep	1.90	Sep	
Oct	4.10	Oct	4.40	Oct	2.30	Oct	1.30	Oct	1.70	Oct	1.90	Oct	
Nov	4.40	Nov	4.50	Nov	2.20	Nov	1.10	Nov	1.70	Nov	2.00	Nov	
Dec	4.30	Dec	4.40	Dec	2.20	Dec	1.10	Dec	1.80	Dec	2.10	Dec	

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers less food and energy, Change for 12-Month Period, Bureau of Labor Statistics, <https://www.bls.gov/cpi/data.htm>

Rate of Inflation
1980 - 2021



Spire Missouri, Inc.
Case No. GR-2021-0108

Average Yields on Moody's Public Utility Bonds

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.12	Jan 1986	10.66	Jan 1992	8.67	Jan 1998	7.03	Jan 2004	6.23	Jan 2010	5.83	Jan 2016	4.62
Feb	13.48	Feb	10.16	Feb	8.77	Feb	7.09	Feb	6.17	Feb	5.94	Feb	4.44
Mar	14.33	Mar	9.33	Mar	8.84	Mar	7.13	Mar	6.01	Mar	5.90	Mar	4.40
Apr	13.50	Apr	9.02	Apr	8.79	Apr	7.12	Apr	6.38	Apr	5.87	Apr	4.16
May	12.17	May	9.52	May	8.72	May	7.11	May	6.68	May	5.59	May	4.06
Jun	11.87	Jun	9.51	Jun	8.64	Jun	6.99	Jun	6.53	Jun	5.62	Jun	3.93
Jul	12.12	Jul	9.19	Jul	8.46	Jul	6.99	Jul	6.34	Jul	5.41	Jul	3.70
Aug	12.82	Aug	9.15	Aug	8.34	Aug	6.96	Aug	6.18	Aug	5.10	Aug	3.73
Sep	13.29	Sep	9.42	Sep	8.32	Sep	6.88	Sep	6.01	Sep	5.10	Sep	3.80
Oct	13.53	Oct	9.39	Oct	8.44	Oct	6.88	Oct	5.95	Oct	5.20	Oct	3.90
Nov	14.07	Nov	9.15	Nov	8.53	Nov	6.96	Nov	5.97	Nov	5.45	Nov	4.21
Dec	14.48	Dec	8.96	Dec	8.36	Dec	6.84	Dec	5.93	Dec	5.64	Dec	4.39
Jan 1981	14.22	Jan 1987	8.77	Jan 1993	8.23	Jan 1999	6.87	Jan 2005	5.80	Jan 2011	5.64	Jan 2017	4.24
Feb	14.84	Feb	8.81	Feb	8.00	Feb	7.00	Feb	5.64	Feb	5.73	Feb	4.25
Mar	14.86	Mar	8.75	Mar	7.85	Mar	7.18	Mar	5.86	Mar	5.62	Mar	4.30
Apr	15.32	Apr	9.30	Apr	7.76	Apr	7.16	Apr	5.72	Apr	5.62	Apr	4.19
May	15.84	May	9.82	May	7.78	May	7.42	May	5.60	May	5.38	May	4.19
Jun	15.27	Jun	9.87	Jun	7.68	Jun	7.70	Jun	5.39	Jun	5.32	Jun	4.01
Jul	15.87	Jul	10.01	Jul	7.53	Jul	7.66	Jul	5.50	Jul	5.34	Jul	4.06
Aug	16.33	Aug	10.33	Aug	7.21	Aug	7.86	Aug	5.51	Aug	4.78	Aug	3.92
Sep	16.89	Sep	11.00	Sep	7.01	Sep	7.87	Sep	5.54	Sep	4.61	Sep	3.93
Oct	16.76	Oct	11.32	Oct	6.99	Oct	8.02	Oct	5.79	Oct	4.66	Oct	3.97
Nov	15.50	Nov	10.82	Nov	7.30	Nov	7.86	Nov	5.88	Nov	4.37	Nov	3.88
Dec	15.77	Dec	10.99	Dec	7.33	Dec	8.04	Dec	5.83	Dec	4.47	Dec	3.85
Jan 1982	16.73	Jan 1988	10.75	Jan 1994	7.31	Jan 2000	8.22	Jan 2006	5.77	Jan 2012	4.48	Jan 2018	3.91
Feb	16.72	Feb	10.11	Feb	7.44	Feb	8.10	Feb	5.83	Feb	4.47	Feb	4.15
Mar	16.07	Mar	10.11	Mar	7.83	Mar	8.14	Mar	5.98	Mar	4.59	Mar	4.21
Apr	15.82	Apr	10.53	Apr	8.20	Apr	8.14	Apr	6.28	Apr	4.54	Apr	4.24
May	15.60	May	10.75	May	8.32	May	8.56	May	6.39	May	4.36	May	4.36
Jun	16.18	Jun	10.71	Jun	8.31	Jun	8.22	June	6.39	Jun	4.26	Jun	4.37
Jul	16.04	Jul	10.96	Jul	8.47	Jul	8.17	July	6.37	Jul	4.12	Jul	4.35
Aug	15.22	Aug	11.09	Aug	8.41	Aug	8.06	Aug	6.20	Aug	4.18	Aug	4.33
Sep	14.56	Sep	10.56	Sep	8.65	Sep	8.15	Sep	6.03	Sep	4.17	Sep	4.41
Oct	13.88	Oct	9.92	Oct	8.88	Oct	8.08	Oct	6.01	Oct	4.04	Oct	4.56
Nov	13.58	Nov	9.89	Nov	9.00	Nov	8.03	Nov	5.82	Nov	3.95	Nov	4.65
Dec	13.55	Dec	10.02	Dec	8.79	Dec	7.79	Dec	5.83	Dec	4.10	Dec	4.51
Jan 1983	13.46	Jan 1989	10.02	Jan 1995	8.77	Jan 2001	7.76	Jan 2007	5.96	Jan 2013	4.24	Jan 2019	4.48
Feb	13.60	Feb	10.02	Feb	8.56	Feb	7.69	Feb	5.91	Feb	4.29	Feb	4.35
Mar	13.28	Mar	10.16	Mar	8.41	Mar	7.59	Mar	5.87	Mar	4.29	Mar	4.26
Apr	13.03	Apr	10.14	Apr	8.30	Apr	7.81	Apr	6.01	Apr	4.08	Apr	4.18
May	13.00	May	9.92	May	7.93	May	7.88	May	6.03	May	4.24	May	4.10
Jun	13.17	Jun	9.49	Jun	7.62	Jun	7.75	Jun	6.34	Jun	4.63	Jun	3.93
Jul	13.28	Jul	9.34	Jul	7.73	Jul	7.71	Jul	6.28	Jul	4.78	Jul	3.79
Aug	13.50	Aug	9.37	Aug	7.86	Aug	7.57	Aug	6.28	Aug	4.85	Aug	3.36
Sep	13.35	Sep	9.43	Sep	7.62	Sep	7.73	Sep	6.24	Sept	4.90	Sept	3.44
Oct	13.19	Oct	9.37	Oct	7.46	Oct	7.64	Oct	6.17	Oct	4.78	Oct	3.45
Nov	13.33	Nov	9.33	Nov	7.40	Nov	7.61	Nov	6.04	Nov	4.86	Nov	3.48
Dec	13.48	Dec	9.31	Dec	7.21	Dec	7.86	Dec	6.23	Dec	4.88	Dec	3.45
Jan 1984	13.40	Jan 1990	9.44	Jan 1996	7.20	Jan 2002	7.69	Jan 2008	6.08	Jan 2014	4.72	Jan 2020	3.34
Feb	13.50	Feb	9.66	Feb	7.37	Feb	7.62	Feb	6.28	Feb	4.64	Feb	3.16
Mar	14.03	Mar	9.75	Mar	7.72	Mar	7.83	Mar	6.29	Mar	4.64	Mar	3.59
Apr	14.30	Apr	9.87	Apr	7.88	Apr	7.74	Apr	6.36	Apr	4.52	Apr	3.31
May	14.95	May	9.89	May	7.99	May	7.76	May	6.38	May	4.37	May	3.22
Jun	15.16	Jun	9.69	Jun	8.07	Jun	7.67	Jun	6.50	Jun	4.42	Jun	3.10
Jul	14.92	Jul	9.66	Jul	8.02	Jul	7.54	Jul	6.50	Jul	4.35	Jul	2.77
Aug	14.29	Aug	9.84	Aug	7.84	Aug	7.34	Aug	6.48	Aug	4.28	Aug	2.76
Sep	14.04	Sep	10.01	Sep	8.01	Sep	7.23	Sep	6.59	Sep	4.40	Sep	2.88
Oct	13.68	Oct	9.94	Oct	7.76	Oct	7.43	Oct	7.70	Oct	4.24	Oct	2.98
Nov	13.15	Nov	9.76	Nov	7.48	Nov	7.31	Nov	7.80	Nov	4.29	Nov	2.89
Dec	12.96	Dec	9.57	Dec	7.58	Dec	7.20	Dec	6.87	Dec	4.18	Dec	2.80
Jan 1985	12.88	Jan 1991	9.56	Jan 1997	7.79	Jan 2003	7.13	Jan 2009	6.77	Jan 2015	3.83	Jan 2021	2.94
Feb	13.00	Feb	9.31	Feb	7.68	Feb	6.92	Feb	6.72	Feb	3.91	Feb	3.13
Mar	13.66	Mar	9.39	Mar	7.92	Mar	6.80	Mar	6.85	Mar	3.97	Mar	3.48
Apr	13.42	Apr	9.30	Apr	8.08	Apr	6.68	Apr	6.90	Apr	3.96	Apr	
May	12.89	May	9.29	May	7.94	May	6.35	May	6.83	May	4.38	May	
Jun	11.91	Jun	9.44	Jun	7.77	Jun	6.21	Jun	6.54	Jun	4.60	Jun	
Jul	11.88	Jul	9.40	Jul	7.52	Jul	6.54	Jul	6.15	Jul	4.63	Jul	
Aug	11.93	Aug	9.16	Aug	7.57	Aug	6.78	Aug	5.80	Aug	4.54	Aug	
Sep	11.95	Sep	9.03	Sep	7.50	Sep	6.58	Sep	5.60	Sep	4.68	Sep	
Oct	11.84	Oct	8.99	Oct	7.37	Oct	6.50	Oct	5.64	Oct	4.63	Oct	
Nov	11.33	Nov	8.93	Nov	7.24	Nov	6.44	Nov	5.71	Nov	4.73	Nov	
Dec	10.82	Dec	8.76	Dec	7.16	Dec	6.35	Dec	5.86	Dec	4.69	Dec	

Source:
<https://fred.stlouisfed.org/series/DBAA>

Spire Missouri, Inc.
Case No. GR-2021-0108

Average Yields on Thirty-Year U.S. Treasury Bonds

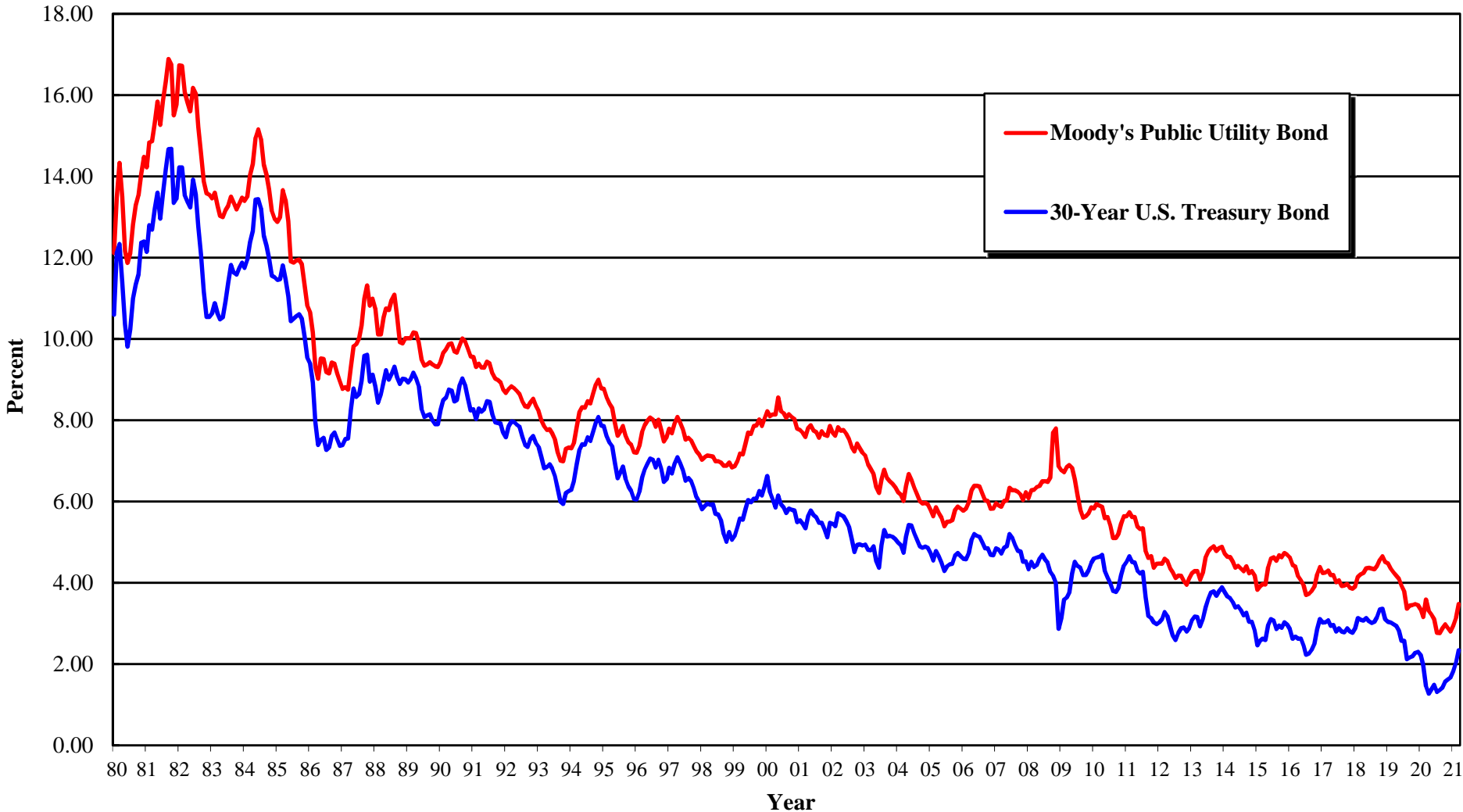
Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	10.60	Jan 1986	9.40	Jan 1992	7.58	Jan 1998	5.81	Jan 2004	4.99	Jan 2010	4.60	Jan 2016	2.86
Feb	12.13	Feb	8.93	Feb	7.85	Feb	5.89	Feb	4.93	Feb	4.62	Feb	2.62
Mar	12.34	Mar	7.96	Mar	7.97	Mar	5.95	Mar	4.74	Mar	4.64	Mar	2.68
Apr	11.40	Apr	7.39	Apr	7.96	Apr	5.92	Apr	5.14	Apr	4.69	Apr	2.62
May	10.36	May	7.52	May	7.89	May	5.93	May	5.42	May	4.29	May	2.63
Jun	9.81	Jun	7.57	Jun	7.84	Jun	5.70	Jun	5.41	Jun	4.13	Jun	2.45
Jul	10.24	Jul	7.27	Jul	7.60	Jul	5.68	Jul	5.22	Jul	3.99	Jul	2.23
Aug	11.00	Aug	7.33	Aug	7.39	Aug	5.54	Aug	5.06	Aug	3.80	Aug	2.26
Sep	11.34	Sep	7.62	Sep	7.34	Sep	5.20	Sep	4.90	Sep	3.77	Sep	2.35
Oct	11.59	Oct	7.70	Oct	7.53	Oct	5.01	Oct	4.86	Oct	3.87	Oct	2.50
Nov	12.37	Nov	7.52	Nov	7.61	Nov	5.25	Nov	4.89	Nov	4.19	Nov	2.86
Dec	12.40	Dec	7.37	Dec	7.44	Dec	5.06	Dec	4.86	Dec	4.42	Dec	3.11
Jan 1981	12.14	Jan 1987	7.39	Jan 1993	7.44	Jan 1999	5.16	Jan 2005	4.73	Jan 2011	4.52	Jan 2017	3.02
Feb	12.80	Feb	7.54	Feb	7.09	Feb	5.37	Feb	4.55	Feb	4.65	Feb	3.03
Mar	12.69	Mar	7.55	Mar	6.82	Mar	5.58	Mar	4.78	Mar	4.51	Mar	3.08
Apr	13.20	Apr	8.25	Apr	6.85	Apr	5.55	Apr	4.65	Apr	4.50	Apr	2.94
May	13.60	May	8.78	May	6.92	May	5.81	May	4.49	May	4.29	May	2.96
Jun	12.96	Jun	8.57	Jun	6.81	Jun	6.04	Jun	4.29	Jun	4.23	Jun	2.80
Jul	13.59	Jul	8.64	Jul	6.63	Jul	5.98	Jul	4.41	Jul	4.27	Jul	2.88
Aug	14.17	Aug	8.97	Aug	6.32	Aug	6.07	Aug	4.46	Aug	3.65	Aug	2.80
Sep	14.67	Sep	9.59	Sep	6.00	Sep	6.07	Sep	4.47	Sep	3.18	Sep	2.78
Oct	14.68	Oct	9.61	Oct	5.94	Oct	6.26	Oct	4.67	Oct	3.13	Oct	2.88
Nov	13.35	Nov	8.95	Nov	6.21	Nov	6.15	Nov	4.73	Nov	3.02	Nov	2.80
Dec	13.45	Dec	9.12	Dec	6.25	Dec	6.35	Dec	4.66	Dec	2.98	Dec	2.77
Jan 1982	14.22	Jan 1988	8.83	Jan 1994	6.29	Jan 2000	6.63	Jan 2006	4.59	Jan 2012	3.03	Jan 2018	2.88
Feb	14.22	Feb	8.43	Feb	6.49	Feb	6.23	Feb	4.58	Feb	3.11	Feb	3.13
Mar	13.53	Mar	8.63	Mar	6.91	Mar	6.05	Mar	4.73	Mar	3.28	Mar	3.09
Apr	13.37	Apr	8.95	Apr	7.27	Apr	5.85	Apr	5.06	Apr	3.18	Apr	3.07
May	13.24	May	9.23	May	7.41	May	6.15	May	5.20	May	2.93	May	3.13
Jun	13.92	Jun	9.00	Jun	7.40	Jun	5.93	June	5.16	Jun	2.70	Jun	3.05
Jul	13.55	Jul	9.14	Jul	7.58	Jul	5.85	July	5.13	Jul	2.59	Jul	3.01
Aug	12.77	Aug	9.32	Aug	7.49	Aug	5.72	Aug	5.00	Aug	2.77	Aug	3.04
Sep	12.07	Sep	9.06	Sep	7.71	Sep	5.83	Sep	4.85	Sep	2.88	Sep	3.15
Oct	11.17	Oct	8.89	Oct	7.94	Oct	5.80	Oct	4.85	Oct	2.90	Oct	3.34
Nov	10.54	Nov	9.02	Nov	8.08	Nov	5.78	Nov	4.69	Nov	2.80	Nov	3.36
Dec	10.54	Dec	9.01	Dec	7.87	Dec	5.49	Dec	4.68	Dec	2.88	Dec	3.10
Jan 1983	10.63	Jan 1989	8.93	Jan 1995	7.85	Jan 2001	5.54	Jan 2007	4.85	Jan 2013	3.08	Jan 2019	3.04
Feb	10.88	Feb	9.01	Feb	7.61	Feb	5.45	Feb	4.82	Feb	3.17	Feb	3.02
Mar	10.63	Mar	9.17	Mar	7.45	Mar	5.34	Mar	4.72	Mar	3.16	Mar	2.98
Apr	10.48	Apr	9.03	Apr	7.36	Apr	5.65	Apr	4.86	Apr	2.93	Apr	2.94
May	10.53	May	8.83	May	6.95	May	5.78	May	4.90	May	3.11	May	2.82
Jun	10.93	Jun	8.27	Jun	6.57	Jun	5.67	Jun	5.20	Jun	3.40	Jun	2.57
Jul	11.40	Jul	8.08	Jul	6.72	Jul	5.61	Jul	5.11	Jul	3.61	Jul	2.57
Aug	11.82	Aug	8.12	Aug	6.86	Aug	5.48	Aug	4.93	Aug	3.76	Aug	2.12
Sep	11.63	Sep	8.15	Sep	6.55	Sep	5.48	Sep	4.79	Sept	3.79	Sept	2.16
Oct	11.58	Oct	8.00	Oct	6.37	Oct	5.32	Oct	4.77	Oct	3.68	Oct	2.19
Nov	11.75	Nov	7.90	Nov	6.26	Nov	5.12	Nov	4.52	Nov	3.80	Nov	2.28
Dec	11.88	Dec	7.90	Dec	6.06	Dec	5.48	Dec	4.53	Dec	3.89	Dec	2.30
Jan 1984	11.75	Jan 1990	8.26	Jan 1996	6.05	Jan 2002	5.45	Jan 2008	4.33	Jan 2014	3.77	Jan 2020	2.22
Feb	11.95	Feb	8.50	Feb	6.24	Feb	5.39	Feb	4.52	Feb	3.66	Feb	1.97
Mar	12.38	Mar	8.56	Mar	6.60	Mar	5.71	Mar	4.39	Mar	3.62	Mar	1.46
Apr	12.65	Apr	8.76	Apr	6.79	Apr	5.67	Apr	4.44	Apr	3.52	Apr	1.27
May	13.43	May	8.73	May	6.93	May	5.64	May	4.60	May	3.39	May	1.38
Jun	13.44	Jun	8.46	Jun	7.06	Jun	5.52	Jun	4.69	Jun	3.42	Jun	1.49
Jul	13.21	Jul	8.50	Jul	7.03	Jul	5.38	Jul	4.57	Jul	3.33	Jul	1.31
Aug	12.54	Aug	8.86	Aug	6.84	Aug	5.08	Aug	4.50	Aug	3.20	Aug	1.36
Sep	12.29	Sep	9.03	Sep	7.03	Sep	4.76	Sep	4.27	Sep	3.26	Sep	1.42
Oct	11.98	Oct	8.86	Oct	6.81	Oct	4.93	Oct	4.17	Oct	3.04	Oct	1.57
Nov	11.56	Nov	8.54	Nov	6.48	Nov	4.95	Nov	4.00	Nov	3.04	Nov	1.62
Dec	11.52	Dec	8.24	Dec	6.55	Dec	4.92	Dec	2.87	Dec	2.83	Dec	1.67
Jan 1985	11.45	Jan 1991	8.27	Jan 1997	6.83	Jan 2003	4.94	Jan 2009	3.13	Jan 2015	2.46	Jan 2021	1.82
Feb	11.47	Feb	8.03	Feb	6.69	Feb	4.81	Feb	3.59	Feb	2.57	Feb	2.04
Mar	11.81	Mar	8.29	Mar	6.93	Mar	4.80	Mar	3.64	Mar	2.63	Mar	2.34
Apr	11.47	Apr	8.21	Apr	7.09	Apr	4.90	Apr	3.76	Apr	2.59	Apr	
May	11.05	May	8.27	May	6.94	May	4.53	May	4.23	May	2.96	May	
Jun	10.44	Jun	8.47	Jun	6.77	Jun	4.37	Jun	4.52	Jun	3.11	Jun	
Jul	10.50	Jul	8.45	Jul	6.51	Jul	4.93	Jul	4.41	Jul	3.07	Jul	
Aug	10.56	Aug	8.14	Aug	6.58	Aug	5.30	Aug	4.37	Aug	2.86	Aug	
Sep	10.61	Sep	7.95	Sep	6.50	Sep	5.14	Sep	4.19	Sep	2.95	Sep	
Oct	10.50	Oct	7.93	Oct	6.33	Oct	5.16	Oct	4.19	Oct	2.89	Oct	
Nov	10.06	Nov	7.92	Nov	6.11	Nov	5.13	Nov	4.31	Nov	3.03	Nov	
Dec	9.54	Dec	7.70	Dec	5.99	Dec	5.08	Dec	4.49	Dec	2.97	Dec	

Sources:

<http://research.stlouisfed.org/fred2/data/GS30.txt>

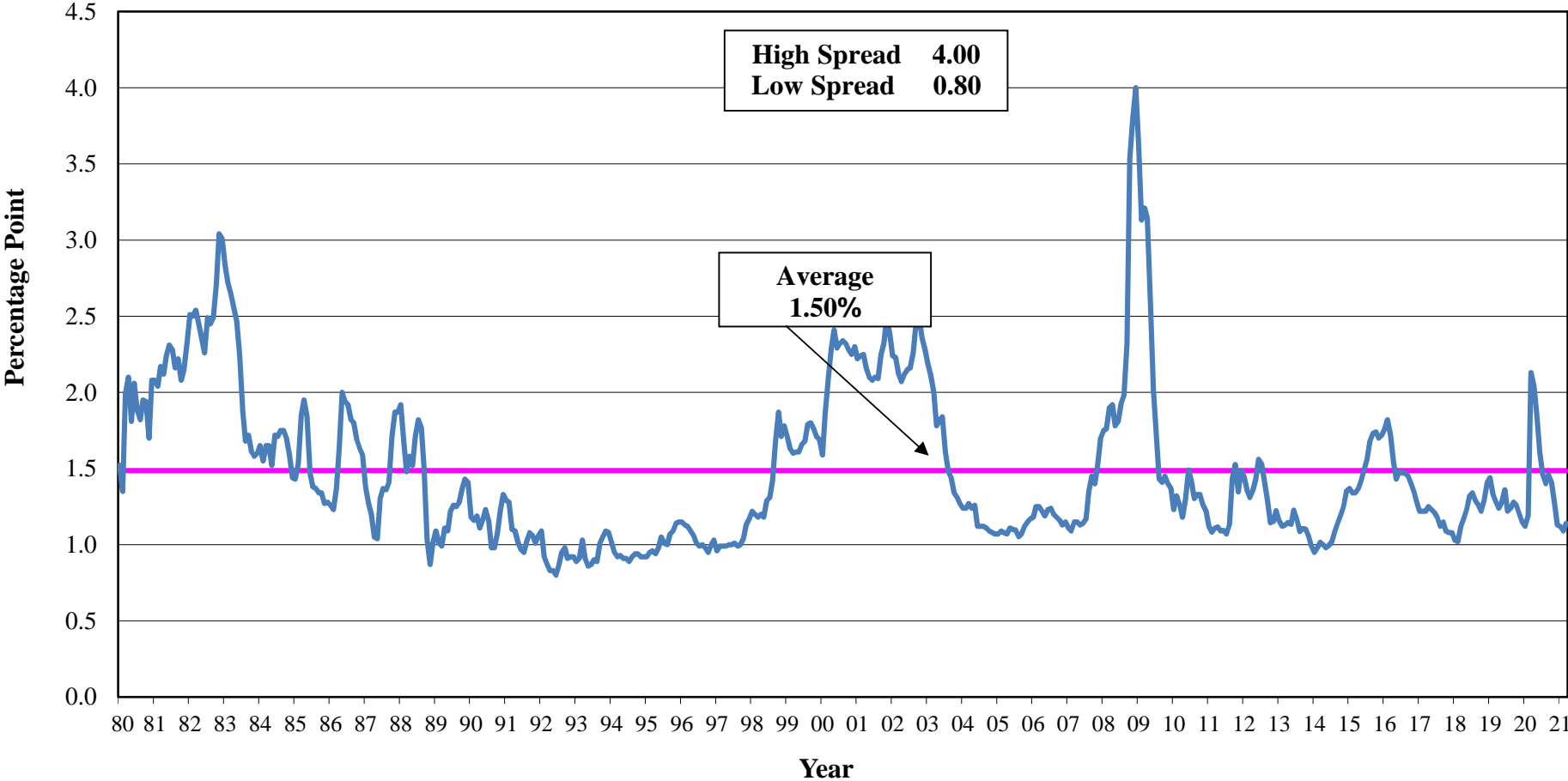
Spire Missouri, Inc.
Case No. GR-2021-0108

Average Yields on Mergent's Public Utility Bonds and
Thirty-Year U.S. Treasury Bonds (1980 - 2021)

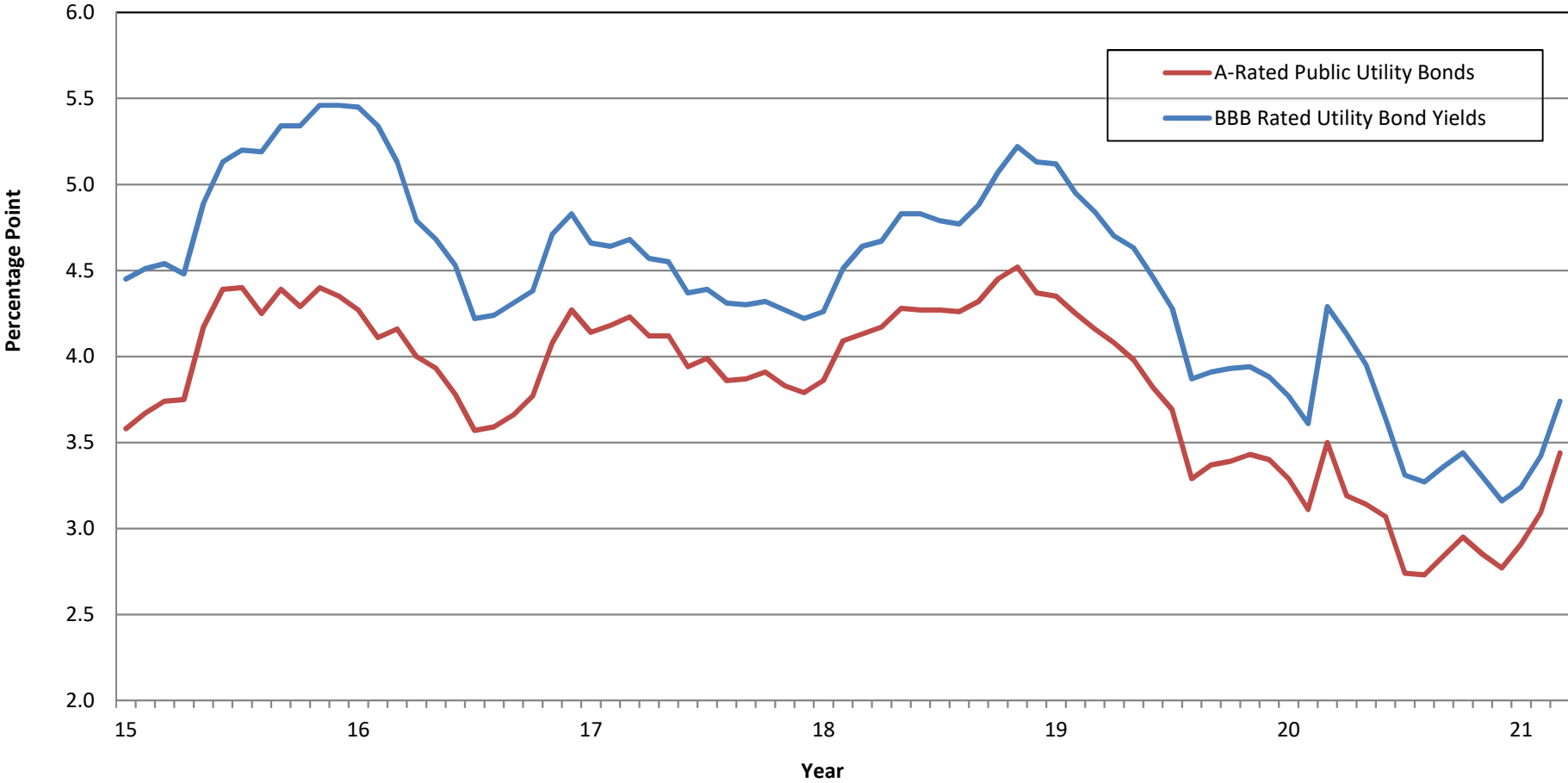


Spire Missouri, Inc.
Case No. GR-2021-0108

Monthly Spreads Between Yields on Moody's Public Utility Bonds and
30-Year U.S. Treasury Bonds (1980 - 2021)



**Average Yields on A-rated Utility Bonds and BBB-rated Utility Bonds
(2015- 2021)**



Spire Missouri, Inc.
Case No. GR-2021-0108

**Historical Consolidated Capital Structures for
Spire Inc.**

(Dollars in Millions)

<u>Capital Components</u>	<u>March 31, 2019</u>	<u>June 30, 2019</u>	<u>September 30, 2019</u>	<u>December 31, 2019</u>
Common Equity	\$2,406.0	\$2,616.6	\$2,543.0	\$2,586.0
Preferred Stock	\$0.0	\$242.0	\$242.0	\$242.0
Long-Term Debt	\$2,041.9	\$2,042.3	\$2,082.6	\$2,484.4
	<u>\$4,447.9</u>	<u>\$4,900.9</u>	<u>\$4,867.6</u>	<u>\$5,312.4</u>

<u>Capital Components</u>	<u>March 31, 2020</u>	<u>June 30, 2020</u>	<u>September 30, 2020</u>	<u>December 31, 2020</u>
Common Equity	\$2,665.6	\$2,558.4	\$2,522.3	\$2,586.8
Preferred Stock	\$242.0	\$242.0	\$242.0	\$242.0
Long-Term Debt	\$2,242.8	\$2,242.4	\$2,181.7	\$2,275.6
	<u>\$5,150.4</u>	<u>\$5,042.8</u>	<u>\$4,946.0</u>	<u>\$5,104.4</u>

**Historical Consolidated Capital Structures for
Spire Missouri**

(Dollars in Millions)

<u>Capital Components</u>	<u>March 31, 2019</u>	<u>June 30, 2019</u>	<u>September 30, 2019</u>	<u>December 31, 2019</u>
Common Equity	\$1,374.0	\$1,376.3	\$1,339.3	\$1,376.1
Preferred Stock	\$0.0	\$0.0	\$0.0	\$0.0
Long-Term Debt	\$2,298.7	\$2,301.1	\$925.0	\$1,098.6
Total	<u>\$3,672.7</u>	<u>\$3,677.4</u>	<u>\$2,264.3</u>	<u>\$2,474.7</u>

<u>Capital Components</u>	<u>March 31, 2020</u>	<u>June 30, 2020</u>	<u>September 30, 2020</u>	<u>December 31, 2020</u>
Common Equity	\$1,439.1	\$1,434.4	\$1,435.10	\$1,491.8
Preferred Stock	\$0.0	\$0.0	\$0.00	\$0.0
Long-Term Debt	\$1,098.7	\$1,091.9	\$1,098.60	\$1,092.2
Total	<u>\$2,537.8</u>	<u>\$2,526.3</u>	<u>\$2,533.7</u>	<u>\$2,584.0</u>

Sources:

SEC Form 10-Q

Spire Missouri, Inc.
Case No. GR-2021-0108

**Historical Consolidated Capital Structures for
Spire Inc.**
(Percentage)

<u>Capital Components</u>	<u>March 31, 2019</u>	<u>June 30, 2019</u>	<u>September 30, 2019</u>	<u>December 31, 2019</u>
Common Equity	54.09%	53.39%	52.24%	48.68%
Preferred Stock	0.00%	4.94%	4.97%	4.56%
Long-Term Debt	45.91%	41.67%	42.78%	46.77%
	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

<u>Capital Components</u>	<u>March 31, 2020</u>	<u>June 30, 2020</u>	<u>September 30, 2020</u>	<u>December 31, 2020</u>
Common Equity	51.76%	50.73%	51.00%	50.68%
Preferred Stock	4.70%	4.80%	4.89%	4.74%
Long-Term Debt	43.55%	44.47%	44.11%	44.58%
	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

**Historical Consolidated Capital Structures for
Spire Missouri**
(Percentage)

<u>Capital Components</u>	<u>March 31, 2019</u>	<u>June 30, 2019</u>	<u>September 30, 2019</u>	<u>December 31, 2019</u>
Common Equity	37.41%	37.43%	59.15%	55.61%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	62.59%	62.57%	40.85%	44.39%
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

<u>Capital Components</u>	<u>March 31, 2020</u>	<u>June 30, 2020</u>	<u>September 30, 2020</u>	<u>December 31, 2020</u>
Common Equity	56.71%	56.78%	56.64%	57.73%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	43.29%	43.22%	43.36%	42.27%
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

Sources:
Form 10-Q

Spire Missouri, Inc.
Case No. GR-2021-0108

Capital Structure as of December 31, 2020
for Spire
(Dollars in Millions)

Capital Component	Amount	Percentage of Capital
Common Stock Equity	\$2,587	50.68%
Preferred Stock	\$242	4.74%
Long-Term Debt	\$2,276	44.58%
Total Capitalization	<u><u>\$5,104</u></u>	<u><u>100.00%</u></u>

Sources:
Form 10-Q, December 2020

Capital Structure as of December 31, 2020
for Spire Missouri
(Dollars in Millions)

Capital Component	Amount	Percentage of Capital
Common Stock Equity	1,569	54.25%
Preferred Stock	0	0.00%
Long-Term Debt	1,323	45.75%
Total Capitalization	<u><u>2,892</u></u>	<u><u>100%</u></u>

Sources:
WES-1 SCH-F, Selinger's Direct Testimony
Staff's Data Request No. 0109

Spire Missouri, Inc.
Case No. GR-2021-0108

Embedded Cost of Long-Term Debt as of September 30, 2020
for Spire Inc. & Spire Missouri

Spire, Inc.

(In millions)

Total Annual Cost:	**	_____	**
Total Carrying Value:	**	_____	**
Embedded Cost = Total Annual Cost/Total Carrying Value	**	_____	**

Note:

Source: Spire Missouri objected to provide Spire's information of Staff's Data Request No. 0111, 10K

Spire Missouri

(In millions)

Total Annual Cost:	**	_____	**
Total Carrying Value:	**	_____	**
Embedded Cost = Total Annual Cost/Total Carrying Value	**	_____	**

Note:

Source: Spire Missouri's response of Staff's Data Request No. 0111.

Spire Missouri, Inc.
Case No. GR-2021-0108

Embedded Cost of Preferred Stock as of December 31, 2020
for Spire Inc. & Spire Missouri

Spire, Inc.

Total Annual Cost:	<u>\$14,750,000</u>
Total Carrying Value:	<u>\$242,343,925</u>
Embedded Cost = Total Annual Cost/Total Carrying Value	<u>6.09%</u>

Note

Source: Staff's Data Request No. 0111, 10K

Spire Missouri

Total Annual Cost:	N/A
Total Carrying Value:	\$0
Embedded Cost = Total Annual Cost/Total Carrying Value	N/A

Note

Source: 10K

SPIRE MISSOURI, INC.
CASE NO. GR-2021-0108
PROXY GROUP SCREENING DATA AND RESULTS

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]		
Gas Utility Companies	Ticker	Stock Publicly Traded	Information Provided by Value Line	Information Provided by Reuters	5-Year Data Available	Dividends	At Least Investment Grade Credit Rating	S&P Global Rating	Moody's	At least 65% of Regulated Income from Gas Utility Operations	At least 65% of Assets are Gas Distribution Operations	No Reduced Dividend Since 2015	Positive Growth Rates from at Least Two Sources	Covered by More Than 2 Analyst	Comparable Company Met All Criteria
Atmos Energy Corporation	ATO	Yes	Yes	Yes	Yes	Yes	Yes	A-	A1	Yes	Yes	Yes	Yes	Yes	Yes
New Jersey Resources Corporation	NJR	Yes	Yes	Yes	Yes	Yes	Yes	NR	A1	Yes	Yes	Yes	Yes	Yes	Yes
NiSource Inc.	NI	Yes	Yes	Yes	Yes	Yes	Yes	BBB+	Baa2	No	No	No	Yes	Yes	No
Northwest Natural Holding Company	NWN	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Baa1	Yes	Yes	Yes	Yes	Yes	Yes
ONE Gas, Inc.	OGS	Yes	Yes	Yes	Yes	Yes	Yes	BBB+	A3	Yes	Yes	Yes	Yes	Yes	Yes
South Jersey Industries, Inc.	SJI	Yes	Yes	Yes	Yes	Yes	Yes	BBB	N/A	Yes	Yes	Yes	Yes	Yes	No
Southwest Gas Holdings, Inc.	SWX	Yes	Yes	Yes	Yes	Yes	Yes	BBB+	Baa2	Yes	Yes	Yes	Yes	Yes	Yes
Spire Inc.	SR	Yes	Yes	Yes	Yes	Yes	Yes	A-	Baa2	Yes	Yes	Yes	Yes	Yes	Yes

Note:

- [1] Source: The Value Line Investment Survey: Ratings & Reports, July 10, 2020.
- [2] Source: The Value Line Investment Survey: Ratings & Reports, July 10, 2020.
- [3] Source: Reuters, <https://www.reuters.com/>
- [4] Source: The Value Line Investment Survey: Ratings & Reports, July 10, 2020.
- [5] Source: The Value Line Investment Survey: Ratings & Reports, July 10, 2020.
- [6] Source: S&P Global Market Intelligence
- [7] Source: S&P Global Market Intelligence
- [8] Source: S&P Global Market Intelligence
- [9] Source: SEC Form 10-K Filings
- [10] Source: SEC Form 10-K Filings
- [11] Source: The Value Line Investment Survey: Ratings & Reports, July 10, 2020.
- [12] Source: S&P Global Market Intelligence, Value Line Investment Survey, Yahoo! Finance, and Zacks
- [13] Source: S&P Global Market Intelligence, Value Line Investment Survey, Yahoo! Finance, and Zacks

SPIRE MISSOURI, INC.
CASE NO. GR-2021-0108
PROXY GROUP LIST

Gas Utility Companies		Ticker
1	Atmos Energy Corporation	ATO
2	New Jersey Resources Corporation	NJR
3	Northwest Natural Holding Company	NWN
4	ONE Gas, Inc.	OGS
5	South Jersey Industries, Inc.	SJI
6	Southwest Gas Holdings, Inc.	SWX
7	Spire Inc.	SR

SPIRE MISSOURI, INC.

CASE NO. GR-2021-0108

Growth Rate Estimates

**Based on Dividend per Share (DPS) and Earning per Share (EPS)
for the Comparable Natural Gas Utility Companies**

2020	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	
														Past 10-Years			Past 5-Year			Projected			Average		Projective
Water Utility Companies	Ticker	DPS	EPS	Average	DPS	EPS	Average	DPS	EPS	Average	DPS	EPS	Average	Real GDP
1 Atmos Energy Corporation	ATO	4.00%	7.50%	5.75%	6.50%	8.50%	7.50%	7.50%	7.00%	7.25%	6.00%	7.67%	6.83%	3.80%
2 New Jersey Resources Corporation	NJR	7.00%	7.00%	7.00%	6.50%	6.00%	6.25%	5.50%	1.50%	3.50%	6.33%	4.83%	5.58%	3.80%
3 Northwest Natural Holding Company	NWN	0.20%	-11.00%	-5.40%	0.50%	-17.00%	-8.25%	0.50%	5.50%	3.00%	0.40%	-7.50%	-3.55%	3.80%
4 ONE Gas, Inc.	OGS				17.00%	9.50%	13.25%	7.00%	6.50%	6.75%	12.00%	8.00%	10.00%	3.80%
5 South Jersey Industries, Inc.	SJI	7.50%	1.00%	4.25%	5.00%	-4.00%	0.50%	4.00%	10.50%	7.25%	5.50%	2.50%	4.00%	3.80%
6 Southwest Gas Holdings, Inc.	SWX	8.50%	8.00%	8.25%	9.50%	4.50%	7.00%	4.00%	8.00%	6.00%	7.33%	6.83%	7.08%	3.80%
7 Spire Inc.	SR	4.00%	3.50%	3.75%	5.50%	9.50%	7.50%	4.50%	9.00%	6.75%	4.67%	7.33%	6.00%	3.80%
Average		5.20%	2.67%	3.93%	7.21%	2.43%	4.82%	4.71%	6.86%	5.79%	6.03%	4.24%	5.14%	3.80%
NIsource Inc.	NI	-2.00%	-1.00%	-1.50%	-5.00%	-8.00%	-6.50%	7.50%	6.10%	6.80%	0.17%	-0.97%	-0.40%	3.80%

2017	Water Utility Companies	Ticker	Past 10-Years			Past 5-Year			Projected			Average		Projective	
			DPS	EPS	Average	DPS	EPS	Average	DPS	EPS	Average	DPS	EPS	Average	GDP
1	Atmos Energy Corporation	ATO	2.00%	5.50%	3.75%	2.50%	7.00%	4.75%	6.50%	6.50%	6.50%	3.67%	6.33%	5.00%	4.00%
2	New Jersey Resources Corporation	NJR	7.00%	7.50%	7.25%	7.00%	6.50%	6.75%	3.50%	3.00%	3.25%	5.83%	5.67%	5.75%	4.00%
3	Northwest Natural Holding Company	NWN	3.50%	1.00%	2.25%	3.00%	-5.00%	-1.00%	2.00%	7.00%	4.50%	2.83%	1.00%	1.92%	4.00%
4	ONE Gas, Inc.	OGS							17.00%	9.50%	13.25%	17.00%	9.50%	13.25%	4.00%
5	South Jersey Industries, Inc.	SJI	9.00%	7.00%	8.00%	9.50%	4.00%	6.75%	6.50%	3.00%	4.75%	8.33%	4.67%	6.50%	4.00%
6	Southwest Gas Holdings, Inc.	SWX	6.00%	8.50%	7.25%	9.00%	10.00%	9.50%	8.50%	7.00%	7.75%	7.83%	8.50%	8.17%	4.00%
7	Spire Inc.	SR	3.00%	3.50%	3.25%	3.50%	1.50%	2.50%	3.50%	9.00%	6.25%	3.33%	4.67%	4.00%	4.00%
	Average		5.08%	5.50%	5.29%	5.75%	4.00%	4.88%	6.79%	6.43%	6.61%	6.98%	5.76%	6.37%	4.00%

Note:

- [1] Source: The Value Line Investment Survey: Ratings & Reports, 2017 & 2021
- [2] Source: The Value Line Investment Survey: Ratings & Reports, 2017 & 2021
- [3] $=([1]+[2])/2$
- [4] Source: The Value Line Investment Survey: Ratings & Reports, 2017 & 2021
- [5] Source: The Value Line Investment Survey: Ratings & Reports, 2017 & 2021
- [6] $=([4]+[5])/2$
- [7] Source: The Value Line Investment Survey: Ratings & Reports, 2017 & 2021
- [8] Source: The Value Line Investment Survey: Ratings & Reports, 2017 & 2021
- [9] $=([7]+[8])/2$
- [10] $=([1]+[4]+[7])/3$
- [11] $=([2]+[5]+[8])/3$
- [12] $=([10]+[11])/2$
- [13] Source: Congress Budget Office (CBO), Budget Economic Outlook

SPIRE MISSOURI, INC.

CASE NO. GR-2021-0108

**Average High / Low Stock Price for June 2021 through August 2020
for the Comparable Natural Gas Utility Companies**

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	
		<u>January 2021</u>		<u>February 2021</u>		<u>March 2021</u>		Average	
		High	Low	High	Low	High	Low	High/Low	
<u>Company Name</u>	<u>Ticker</u>	Stock	Stock	Stock	Stock	Stock	Stock	Stock Price	
		Price	Price	Price	Price	Price	Price	(10/01/20 - 12/31/21)	
1	Atmos Energy Corporation	ATO	95.92	86.85	94.30	84.59	99.25	85.59	91.08
2	New Jersey Resources Corporation	NJR	38.39	33.32	40.40	34.61	42.57	39.01	38.05
3	Northwest Natural Holding Company	NWN	47.24	41.71	50.18	43.12	54.27	46.77	47.21
4	ONE Gas, Inc.	OGS	78.01	69.48	74.78	66.77	77.70	67.29	72.34
5	South Jersey Industries, Inc.	SJI	24.20	20.82	26.50	21.98	29.24	21.13	23.98
6	Southwest Gas Holdings, Inc.	SWX	61.29	57.00	66.64	58.91	71.35	61.77	62.83
7	Spire Inc.	SR	64.54	59.29	69.39	60.50	75.78	65.79	65.88

		<u>April 2017</u>		<u>May 2017</u>		<u>June 2017</u>		Average	
		High	Low	High	Low	High	Low	High/Low	
<u>Company Name</u>	<u>Ticker</u>	Stock	Stock	Stock	Stock	Stock	Stock	Stock Price	
		Price	Price	Price	Price	Price	Price	(4/01/17 - 06/30/17)	
1	Atmos Energy Corporation	ATO	82.07	78.42	83.62	78.55	85.61	82.14	81.74
2	New Jersey Resources Corporation	NJR	42.65	38.95	42.10	39.15	43.50	39.50	40.98
3	Northwest Natural Holding Company	NWN	61.25	58.00	61.60	57.65	63.40	59.35	60.21
4	ONE Gas, Inc.	OGS	70.64	67.27	70.92	67.31	72.97	68.85	69.66
5	South Jersey Industries, Inc.	SJI	38.40	35.17	37.70	34.46	37.55	33.93	36.20
6	Southwest Gas Holdings, Inc.	SWX	85.56	82.22	85.24	76.58	81.97	72.32	80.65
7	Spire Inc.	SR	69.95	66.75	71.05	63.84	72.83	68.85	68.88

Note:

[1] Source: Wall Street Journal, <https://www.wsj.com/market-data>

[2] Source: Wall Street Journal, <https://www.wsj.com/market-data>

[3] Source: Wall Street Journal, <https://www.wsj.com/market-data>

[4] Source: Wall Street Journal, <https://www.wsj.com/market-data>

[5] Source: Wall Street Journal, <https://www.wsj.com/market-data>

[6] Source: Wall Street Journal, <https://www.wsj.com/market-data>

[7] = (([1]+[2]+[3]+[4]+[5]+[6]) / 6

SPIRE MISSOURI, INC.
CASE NO. GR-2021-0108

Discounted Cash Flow (DCF) Costs of Common Equity (COE) Estimates
Based on Dividend per Share, Stock Price, and Growth Rate of 2021 and 2017 Data
for the Comparable Natural Gas Utility Companies

<u>2020 DCF Estimate</u>		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
Water Utility Companies	Ticker	Dividend per Share	Stock Price	Dividend Yield	Expected Dividend Yield	Projected Dividend Growth	Projected GDP Growth	Growth Rate	COE	
1	Atmos Energy Corporation	ATO	2.30	91.08	2.53%	2.60%	7.50%	3.80%	6.27%	8.87%
2	New Jersey Resources Corporation	NJR	1.27	38.05	3.34%	3.42%	5.50%	3.80%	4.93%	8.35%
3	Northwest Natural Holding Company	NWN	1.91	47.21	4.05%	4.08%	0.50%	3.80%	1.60%	5.68%
4	ONE Gas, Inc.	OGS	2.16	72.34	2.99%	3.07%	7.00%	3.80%	5.93%	9.01%
5	South Jersey Industries, Inc.	SJI	1.20	23.98	5.00%	5.10%	4.00%	3.80%	3.93%	9.04%
6	Southwest Gas Holdings, Inc.	SWX	2.26	62.83	3.60%	3.67%	4.00%	3.80%	3.93%	7.60%
7	Spire Inc.	SR	2.49	65.88	3.78%	3.86%	4.50%	3.80%	4.27%	8.13%
Average			1.94	57.34	3.61%	3.69%	4.71%	3.80%	4.41%	8.10%
								DCF Lower Bound		7.60%
								DCF Upper Bound		9.01%

<u>2017 DCF Estimate</u>		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
Water Utility Companies	Ticker	Dividend per Share	Stock Price	Dividend Yield	Expected Dividend Yield	Projected Dividend Growth	Projected GDP Growth	Growth Rate	COE	
1	Atmos Energy Corporation	ATO	1.80	81.74	2.20%	2.26%	6.50%	4.00%	5.67%	7.93%
2	New Jersey Resources Corporation	NJR	1.02	40.98	2.49%	2.53%	3.50%	4.00%	3.67%	6.20%
3	Northwest Natural Holding Company	NWN	1.88	60.21	3.12%	3.16%	2.00%	4.00%	2.67%	5.83%
4	ONE Gas, Inc.	OGS	1.68	69.66	2.41%	2.56%	17.00%	4.00%	12.67%	15.23%
5	South Jersey Industries, Inc.	SJI	1.10	36.20	3.04%	3.12%	6.50%	4.00%	5.67%	8.79%
6	Southwest Gas Holdings, Inc.	SWX	1.98	80.65	2.46%	2.54%	8.50%	4.00%	7.00%	9.54%
7	Spire Inc.	SR	2.10	68.88	3.05%	3.10%	3.50%	4.00%	3.67%	6.77%
Average			1.65	62.61	2.68%	2.76%	6.79%	4.00%	5.86%	8.61%
								DCF Lower Bound		6.20%
								DCF Upper Bound		9.54%

Comparison DCF Estimates

2017 DCF COE estimate	8.61%
2020 DCF COE estimate	8.10% ^a
Difference of Averages between 2017 and 2020	<u>-0.52%</u>

Note:

- [1] Source: The Value Line Investment Survey: Ratings & Reports, 2017 & 2020;
 [2] Source: The Wall Street Journal; Average Monthly Highest and Lowest of June, July, and August 2020
 [3] = [1] / [2]
 [4] = [3] x (1 + .5 x [7])
 [5] Source: [12] of Growth Rate SJW-11
 [6] Source: Congress Budget Office (CBO), Budget Economic Outlook
 [7] = (2 x [5] + [6]) / 3
 [8] = [4] + [7]
 a The Upper Bond of reasonable COE range

SPIRE MISSOURI, INC.
CASE NO. GR-2021-0108
Capital Asset Pricing Model (CAPM) Costs of Common Equity (COE) Estimates
Based on Historical Return Differences Between Common Stocks and Long-Term U.S. Treasuries
for the Comparable Natural Gas Utility Companies

2020 CAPM Estimate	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]
			Duff&Phillips (1926-2019)				NYU Stern (1928-2020)		Market Risk Premium		CAPM Cost of Common Equity							
			Large Company Stocks		Long-term G-Bonds		S&P 500		US Treasury Bond		Duff&Phillips		NYU Stern		Duff&Phillips		NYU Stern	
	Water Utility Companies	Risk-Free Rate	Beta	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return
1 Atmos Energy Corporation	2.07%	0.65	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	5.13%	6.04%	5.22%	6.25%
2 New Jersey Resources Corporation	2.07%	0.93	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	6.44%	7.74%	6.58%	8.05%
3 Northwest Natural Holding Company	2.07%	0.73	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	5.50%	6.52%	5.61%	6.76%
4 ONE Gas, Inc.	2.07%	0.75	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	5.60%	6.65%	5.70%	6.89%
5 South Jersey Industries, Inc.	2.07%	0.83	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	5.97%	7.13%	6.09%	7.41%
6 Southwest Gas Holdings, Inc.	2.07%	0.89	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	6.25%	7.50%	6.38%	7.79%
7 Spire Inc.	2.07%	0.71	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	5.41%	6.40%	5.51%	6.63%
Average	2.07%	0.78	10.20%	12.10%	5.50%	6.00%	9.79%	11.64%	4.95%	5.21%	4.70%	6.10%	4.84%	6.43%	5.76%	6.85%	5.87%	7.11%
																	Average	6.40%
																	CAPM Lower Bound	5.87%
																	CAPM Upper Bound	6.85%

2017 CAPM Estimate	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]
			Duff&Phillips (1926-2016)				NYU Stern (1928-2017)		Market Risk Premium		CAPM Cost of Common Equity							
			Large Company Stocks		Long-term G-Bonds		S&P 500		US Treasury Bond		Duff&Phillips		NYU Stern		Duff&Phillips		NYU Stern	
	Water Utility Companies	Risk-Free Rate	Beta	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return
1 Atmos Energy Corporation	2.90%	0.69	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	6.01%	7.04%	6.30%	7.30%
2 New Jersey Resources Corporation	2.90%	0.77	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	6.37%	7.52%	6.70%	7.81%
3 Northwest Natural Holding Company	2.90%	0.65	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	5.83%	6.80%	6.10%	7.04%
4 ONE Gas, Inc.	2.90%	0.77	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	6.37%	7.52%	6.70%	7.81%
5 South Jersey Industries, Inc.	2.90%	0.71	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	6.10%	7.16%	6.40%	7.43%
6 Southwest Gas Holdings, Inc.	2.90%	0.69	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	6.01%	7.04%	6.30%	7.30%
7 Spire Inc.	2.90%	0.65	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	5.83%	6.80%	6.10%	7.04%
Average	2.90%	0.70	10.00%	12.00%	5.50%	6.00%	9.65%	11.53%	4.72%	5.15%	4.50%	6.00%	4.93%	6.38%	6.07%	7.13%	6.37%	7.39%
																	Average	6.74%
																	CAPM Lower Bound	6.07%
																	CAPM Upper Bound	7.13%

Comparison CAPM Estimates

2017 CAPM COE estimate	6.74%
2020 CAPM COE estimate	6.40% ^a
Difference of Averages between 2017 and 2020	-0.34%

Note:

- [1] Source: Federal Reserve Bank of St. Louis; 6-month average of 30-year Treasury Bond Rate
- [2] Source: SNL Financial Beta Generator and Blume Adjustment
- [3] Source: Duff&Phillips, 2020 Valuation Handbook: Guide to Cost of Capital
- [4] Source: Duff&Phillips, 2020 Valuation Handbook: Guide to Cost of Capital
- [5] Source: Duff&Phillips, 2020 Valuation Handbook: Guide to Cost of Capital
- [6] Source: Duff&Phillips, 2020 Valuation Handbook: Guide to Cost of Capital
- [7] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.
- [8] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.
- [9] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.
- [10] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.
- [11] = [3] - [5]
- [12] = [4] - [6]
- [13] = [7] - [9]
- [14] = [8] - [10]
- [15] = [1] + [2] x [11]
- [16] = [1] + [2] x [12]
- [17] = [1] + [2] x [13]
- [18] = [1] + [2] x [14]
- ^a The Lower Bond of reasonable COE range

SPIRE MISSOURI, INC.
CASE NO. GR-2021-0108
AUTHORIZED RETURN ON EQUITY

2017 COE Estimate		<u>7.68%</u> ^A
	DCF	8.61% ^B
	CAPM	6.74% ^C
2021 COE Estimate		<u>7.25%</u> ^D
	DCF	8.10% ^E
	CAPM	6.40% ^F
ROE Adjustment		-0.43% ^G
Authorized ROE	2017	9.80% ^H
Recommended ROE	2021	<u><u>9.37%</u></u> ^I

Note:

- A Average of [B] and [C]
- B Schedule SJW-13
- C Schedule SJW-14
- D Average of [E] and [F]
- E Schedule SJW-13
- F Schedule SJW-14
- G = [F] - [C]
- H Amended Report and Order, Case Nos. GR-2017-0215 and GR-2017-0216.
- I = [G] + [H]

SPIRE MISSOURI, INC.
CASE NO. GR-2021-0108
ALLOWED RATE OF RETURN

Capital Component	Percentage of Capital	Embedded Cost	Lower	Allowed Rate of Return Common Equity Return of:	
				ROE	Upper
			9.12%	9.37% ²	9.62%
Common Stock Equity	54.25%	-	4.95%	5.08%	5.22%
Preferred Stock	0.00%	N/A	0.00%	0.00%	0.00%
Long-Term Debt	45.75%	4.00%	1.83%	1.83%	1.83%
Total	<u>100.00%</u>		<u>6.78%</u>	<u>6.92%</u>	<u>7.05%</u>

Note:

1 Source: D'ascendis' Direct Testimony, Schedule DWD-D1

2 Source: Schedule SJW-15

SPIRE MISSOURI, INC.
CASE NO. GR-2021-0108
Authorized ROE of the U.S Utility by Sector
2010-2020

<u>Year</u>	<u>Fully Litigated</u>		<u>Natural Gas Settled</u>		<u>Natural Gas Total</u>		<u>Fully Litigated</u>		<u>Electric Settled</u>		<u>Electric Total</u>	
	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>	<u>ROE (%)</u>	<u>Case (No.)</u>
2010	10.08	27	10.30	12	10.15	39	10.35	27	10.39	34	10.37	61
2011	9.76	8	10.08	8	9.92	16	10.39	26	10.12	16	10.29	42
2012	9.92	21	9.99	14	9.94	35	10.28	29	10.06	29	10.17	58
2013	9.59	12	9.80	9	9.68	21	9.85	17	10.12	32	10.03	49
2014	9.98	15	9.51	11	9.78	26	10.05	21	9.73	17	9.91	38
2015	9.58	5	9.60	11	9.60	16	9.66	16	10.04	15	9.84	31
2016	9.61	10	9.50	16	9.54	26	9.74	25	9.80	17	9.77	42
2017	9.82	7	9.68	17	9.72	24	9.73	24	9.75	29	9.74	53
2018	9.59	17	9.59	23	9.59	40	9.63	22	9.57	26	9.60	48
2019	9.74	12	9.70	20	9.71	32	9.58	27	9.76	20	9.66	47
2020	9.44	12	9.47	22	9.46	34	9.43	32	9.46	23	9.44	55

Note:

Source: S&P Global Market Intelligence, Retrieved in March 19, 2021

MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT
COST OF SERVICE

APPENDIX 3

Other Staff Schedule

SPIRE MISSOURI, INC., d/b/a SPIRE

**SPIRE EAST and SPIRE WEST
GENERAL RATE CASE**

CASE NO. GR-2021-0108

*Jefferson City, Missouri
May 12, 2021*

Spire Missouri, Inc.
GR-2021-0108

Depreciation Rates

Account Number	Account Description	Average Service Life	Net Salvage Percentage	Depreciation Rate
PRODUCTION PLANT				
305	STRUCTURES AND IMPROVEMENTS	65	-15	1.77
307	OTHER POWER EQUIPMENT	55	-5	1.91
311	LIQUEFIED PETROLEUM GAS EQUIPMENT	41	-5	2.56
311.1	LIQUEFIED PETROLEUM GAS STORAGE CAVERNS	75	-5	1.40
UNDERGROUND GAS STORAGE				
351.2	STRUCTURES & IMPROVEMENTS - COMPRESSOR STATION	55	-10	2.00
351.4	STRUCTURES & IMPROVEMENTS - OTHER STRUCTURES	55	-10	2.00
352	WELLS	90	-10	1.22
352.2	RESERVOIRS	90	0	1.11
352.3	NON-RECOVERABLE GAS	90	0	1.11
352.4	WELLS - OIL AND VENT GAS	65	-20	1.85
353	LINES	90	-25	1.39
354	COMPRESSOR STATION EQUIPMENT	70	-10	1.57
355	MEASURING AND REGULATING EQUIPMENT	55	-5	1.91
356	PURIFICATION EQUIPMENT	50	-10	2.20
357	OTHER EQUIPMENT	30	-5	3.50
TRANSMISSION PLANT				
371.7	OTHER EQUIPMENT	50	-5	2.10
DISTRIBUTION PLANT				
374.2	LAND RIGHTS	75	0	1.33
375	STRUCTURES AND IMPROVEMENTS	50	-20	2.40
376.1	MAINS - STEEL	82	-60	1.95
376.2	MAINS - CAST IRON	80	-150	3.12
376.3	MAINS - PLASTIC AND COPPER	60	-40	2.34
378	MEASURING & REGULATING STA EQUIP - GENERAL	49	-40	2.86
379	MEASURING & REGULATING STA EQUIP - CITY GATE	45	-20	2.66
380.1	SERVICES- STEEL	50	-110	4.20
380.2	SERVICES - PLASTIC AND COPPER	45	-70	3.77
381	METERS	34	3	2.85
381.1	SMART METERS	15	0	6.67
382	METERS INSTALLATIONS	55	-5	1.91
382.1	SMART METER INSTALLATIONS	15	0	6.67
383	HOUSE REGULATORS	50	0	2.00
385	INDUSTRIAL MEASURING & REGULATING STA EQUIP	50	-10	2.20
386	OTHER PROPERTY ON CUSTOMERS' PREMISES	15	0	2.73
387	OTHER EQUIPMENT	60	-10	1.84
GENERAL PLANT				
390.2	STRUCTURES AND IMPROVEMENTS	40	0	2.39
391	OFFICE FURNITURE AND EQUIPMENT	20	0	4.71
391.1	MECHANICAL OFFICE EQUIPMENT	15	0	5.47
391.2	DATA PROCESSING SOFTWARE/SYSTEMS	5	0	12.12
391.3	DATA PROCESSING EQUIPMENT	10	0	6.44
391.95	ENTERPRISE SOFTWARE	10	0	10.00
392.1	TRANSPORTATION EQUIPMENT - AUTOS	8	20	10.00
392.2	TRANSPORTATION EQUIPMENT - TRUCKS	11	15	7.69
393	STORES EQUIPMENT	30	0	2.16
394	TOOLS, SHOP AND GARAGE EQUIPMENT	25	0	3.62
395	LABORATORY EQUIPMENT	20	0	3.62
396	POWER OPERATED EQUIPMENT	14	15	6.07
397	COMMUNICATION EQUIPMENT	15	0	5.81
397.1	COMMUNICATION EQUIPMENT - ERT	15	0	5.67
397.2	COMMUNICATION EQUIPMENT - AMR	7.5	0	13.33
398	MISCELLANEOUS EQUIPMENT	20	0	4.58