Exhibit No.: Issue(s): Report on Revenue Requirement Cost of Service, Overview of Staff's Filing Karen Lyons Witness: Sponsoring Party: MoPSC Staff *Type of Exhibit:* Direct Testimony Case No.: GR-2021-0108 Date Testimony Prepared: May 12, 2021

## MISSOURI PUBLIC SERVICE COMMISSION

### FINANCIAL & BUSINESS ANALYSIS DIVISION

## AUDITING DEPARTMENT

### **DIRECT TESTIMONY**

OF

### **KAREN LYONS**

## 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

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1		DIRECT TESTIMONY
2		OF
3		KAREN LYONS
4		SPIRE MISSOURI, INC. d/b/a SPIRE
5		CASE NO. GR-2021-0108
6	Q.	Please state you name and business address.
7	А.	My name is Karen Lyons. My business address is 615 E 13th Street,
8	Kansas City,	MO. 64106.
9	Q.	By whom are you employed and in what capacity?
10	А.	I am employed by the Missouri Public Service (Commission) as a Utility
11	Regulatory S	upervisor.
12	Q.	Please describe your education and relevant work experience.
13	А.	I received a Bachelor's of Science degree in Accounting and a Master's of
14	Business Ad	ministration from Park University. I have assisted, conducted, and supervised
15	audits and ex	amined the books and records of electric, industrial steam, natural gas, water and
16	sewer compa	nies operating in the state of Missouri. I have participated in cases concerning
17	proposed rate	e increases, merger and acquisitions of small water and sewer utilities, certificate
18	cases, and Int	frastructure System Replacement Surcharge ("ISRS") applications.
19	Q.	Have you previously testified before this Commission?
20	А.	Yes. Schedule KL-d1 attached to this testimony contains a list of cases and the
21	issues that I h	nave addressed in testimony.
	1	

Q. What knowledge, skill, experience, training and education do you have with
 regard to Spire Missouri's general rate increase tariff filing that is subject of this case,
 Case No. GR-2021-0108?

A. I have been employed with the Commission for 14 years and have submitted
testimony on numerous topics. I have acquired knowledge of these topics through review of
case testimony and workpapers. Specific to gas utilities, I have participated in or supervised
several gas utility applications that include general rate cases, certificates of convenience and
necessity ("CCN"), and ISRS cases.

#### 9

#### **EXECUTIVE SUMMARY**

Q.

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#### Please summarize your direct testimony in this proceeding

11 I am sponsoring Staff's Cost of Service Report ("Report") and Staff's Direct A. 12 Accounting Schedules that are being filed concurrently with this direct testimony. Staff's 13 Report supports Staff's recommendation of the amount of the rate revenue increase for 14 Spire East and Spire West operations based on actual historical information through the update 15 period ending December 31, 2020. In order to reflect what Staff currently expects the revenue 16 requirement will be once the true-up is complete. Staff has included a true-up allowance. The 17 allowance is an estimate of the projected rate revenue increase for true-up items. Staff will 18 revise its recommendation of the amount of the revenue requirement increase for Spire East and 19 Spire West based on actual results for the true-up period ending May 31, 2021, when that 20 Although Staff is recommending a separate revenue information becomes available. 21 requirement for Spire East and Spire West, Staff also calculated a Spire Missouri revenue 22 requirement in the event the Commission determines consolidation is appropriate.

1	I also present an overview of the results of Staff's recommended revenue requirement
2	for Spire East and Spire West. Several members of Staff participated in Staff's examination of
3	Spire's books and records for all the relevant and material components that make up the revenue
4	requirement calculation. These components can be broadly defined as (1) capital structure and
5	return on investment, (2) rate base investment and (3) income statement results, including
6	revenues, operating and maintenance expenses, depreciation and amortization expense, and the
7	taxes related to revenues and expenses.
8	Short Forms
9	Q. What short forms are used in the Staff's Revenue Requirement Report and
10	Class Cost of Service Report?
11	A. Staff will use the following short forms
12	"Commission" for the Missouri Public Service Commission
13	• "Staff" for the Staff of the Missouri Public Service Commission
14	• "Public Counsel" for the Office of Public Counsel
15	• "Spire, Inc" for Spire Inc.
16	• "Spire" for Spire Missouri Inc.
17	• "Spire East" for Spire eastern territory, formerly Laclede Gas
18	• "Spire West" for Spire western territory, formerly Missouri Gas Energy
19	• "EMS" for Staff's revenue requirement model referred to as Exhibit Modeling
20	System
21	<b>REVENUE REQUIREMENT COST OF SERVICE REPORT</b>
22	Q. Please explain the organizational format of the Staff's Cost of Service Report.
23	A. Staff's Report has been organized by topic as follows:
24	I. Executive Summary
25	II. Background

1	III.	Test Year/True-Up Period
2	IV.	Surveillance, General Ledger and CC&B Report
3	V.	Rate of Return (ROE, Cost of Capital, Capital Structure
4	VI.	Rate Base
5	VII.	Corporate Allocations
6	VIII.	Income Statement-Revenues
7	IX.	Income Statement-Expenses
8	Х.	Income Taxes
9	XI.	Depreciation
10	XII.	Other Miscellaneous Issues
11	XIII.	Appendices
12	The Rate Bas	se and Income Statement sections of Staff's Cost of Service Report have
13	numerous subsection	s which explain each specific area and/or adjustment Staff made to the test
14	year ending Septemb	per 30, 2020. The individual Staff member responsible for each area of
15	Staff's direct case and	d or adjustment is identified in the Report following the written discussion
16	he or she authored, ar	nd is the expert/witness with respect to that section of Staff's Report. Staff
17	may have a different	or additional expert/witness for rebuttal or surrebuttal testimony in a given
18	area if this case proce	eeds to evidentiary hearings. Signed affidavits are attached to the Report.
19	The qualifications for	r all Staff members are contained in Appendix 1.
20	OVERVIEW OF ST	<u> TAFF'S RECOMMENDED REVENUE REQUIREMENT</u>
21	Q. How i	s the revenue requirement for a regulated utility determined?
22	A. The fi	rst step is to calculate the utility's cost of service. The cost of service for
23	a regulated, investor-	owned public utility can be defined by the following formula:

1	Cost of Service =Cost of Providing Utility Service
2	Or
3	COS = O + (V-D)R where,
4	COS = Cost of Service
5	O = Adjusted Operating Costs (Payroll, Maintenance, etc.), Depreciation Expense
6	and Taxes
7	V = Gross Valuation of Property Required for Providing Service
8	D = Accumulated Depreciation Representing Recovery of Gross Property
9	Investment
10	R = Allowed Rate of Return
11	V–D = Rate Base (Gross Property Investment less Accumulated Depreciation = Net
12	Property Investment)
13	(V-D)R = Return Allowed on Net Property Investment
14	In the past, the terms "cost of service" and "revenue requirement" have sometimes been
15	used interchangeably. However, in this rate case, Staff will use the term "revenue requirement"
16	to only refer to the utility's necessary incremental change in revenues based on measurement
17	of the utility's current total cost of service compared to its current revenue levels under
18	existing rates.
19	Q. What is the objective of an audit of a regulated, investor-owned public utility for
20	ratemaking purposes?
21	A. The objective of an audit is to determine the appropriate level of investment,
22	return on investment, revenue, and operating cost components to calculate the revenue
23	requirement for a regulated utility. All relevant factors are examined to maintain a proper
24	relationship between a utility's investment, revenue, and expense. The process for making the
25	revenue requirement determination can be summarized as follows:
26	(1) <u>Selection of a test year</u> . The test year income statement represents the starting
27	point for determining a utility's existing annual revenues, operating costs and net operating

income. Net operating income represents the return on investment based upon existing rates.
In this case Spire is using a test year of the twelve months ending September 30, 2020.
Regulatory concepts that include annualizations, normalizations, and disallowances are used to
adjust the test year when the unadjusted test year amounts do not fairly represent the utility's
most current, ongoing and appropriate annual level of revenues and operating costs.
An annualization, normalization and disallowance is defined later in this testimony,

7 (2)Selection of a "test year update period." A proper determination of revenue 8 requirement is dependent upon matching the rate base, return on investment, revenues, and 9 operating cost components at the same point in time. This ratemaking principle is commonly 10 referred to as the "matching" principle. It is a standard practice in ratemaking in Missouri to 11 utilize a period beyond the established test year in which to match the major components of a utility's revenue requirement. By updating test year financial results to reflect information 12 13 beyond the established test year, rates can be set based upon more current information. Due to 14 the length of time between the end of the test year, September 30, 2020 and the true-up cutoff, 15 May 31, 2021, Staff recommended and the parties agreed that an update of December 31, 2020 16 would be established in this case.

17 (3) <u>Selection of a "true-up date" or "true-up period."</u> A true-up date generally is
18 established when a significant change in a utility's cost of service occurs after the end of the
19 test year update period, but prior to the operation-of-law date, and the significant change in cost
20 of service is one the parties and/or Commission has decided should be considered for
21 cost-of-service recognition in the current case. In its *Order Establishing Test Year* filed on
22 January 22, 2021, the Commission established a true up period of May 31, 2021.

(4) <u>Determination of Rate of Return.</u> A cost-of-capital analysis must be performed
 to allow Spire the opportunity to earn a fair rate of return on its net investment ("rate base")
 used in the provision of utility service. Staff witness Seoung Joun Won, PhD, of the
 Commission's Financial Analysis Department, has performed a cost-of-capital analysis and is
 sponsoring a section of Staff's Cost of Service Report to explain and provide the results of
 his analysis.

7 (5) Determination of Rate Base. Rate base represents the utility's net investment 8 used in providing utility service, on which the utility is permitted the opportunity to earn a 9 return. For its direct filing, Staff has determined Spire's rate base as of December 31, 2020, 10 consistent with the end of the test year update period established for this case. Rate base includes 11 plant-in-service (plant fully operational and used for service), cash working capital, materials 12 and supplies, prepayments, fuel inventories, accumulated reserve for depreciation, accumulated 13 deferred income tax, etc. Staff's rate base will be replaced with updated amounts following the 14 true-up.

15 (6) Net Operating Income from Existing Rates. The starting point for determining 16 net income from existing rates is the unadjusted operating revenues, expenses, depreciation, 17 and taxes for the test year which is the twelve-month period ending September 30, 2020, for 18 this case. All of the utility's specific revenue and expense categories are examined to determine 19 whether the unadjusted test year results require adjustments in order to fairly represent the 20 utility's most current level of operating revenues and expenses. Numerous changes occur during 21 the course of any year that will impact a utility's annual level of operating revenues and 22 expenses. The September 30, 2020, test year has been adjusted to reflect Staff's determination of the appropriate ongoing levels of revenues and expenses. These items will be re-examined
 based on actual data as part of the true-up process through May 31, 2021.

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(7) <u>Determination of Net Operating Income Required.</u> The net income required for Spire East and Spire West is calculated by multiplying Staff's recommended rate of return by the rate base. Net income required is then compared to net income available from existing rates discussed in Item 6 above. The difference, when factored-up for income taxes, represents the incremental change in the utility's rate revenues required to cover its operating costs and to provide a fair return on investment used in providing natural gas service.

If a utility's current rates are insufficient to cover its operating costs and provide a fair return on investment, the comparison of net operating income required (Rate Base x Recommended Rate of Return) to net income available from existing rates (Operating Revenue less Operating Costs, Depreciation and Income Taxes) will result in a positive amount which would indicate that the utility requires a rate increase. If the comparison results in a negative amount, this indicates that the utility's current rates may be excessive.

15 16 Q. Please identify the types of adjustment which are made to unadjusted test year results in order to reflect a utility's current annual level of operating revenues and expenses.

A. The types of adjustments made to reflect a utility's current annual operating
revenues and expenses are:

19 (1) <u>Normalization adjustments.</u> Utility rates are intended to reflect normal
20 ongoing operations. A normalization adjustment is required when the test year reflects the
21 impact of an abnormal event. One example of this type of adjustment is overtime expense; Staff
22 may normalize overtime expense to remove the effects an unusual weather event that required
23 higher than usual overtime expense to be incurred.

1 (2) <u>Annualization adjustments.</u> Annualization adjustments are required 2 when changes have occurred during the test year, update and/or true-up period, which are not 3 fully reflected in the unadjusted test year results. For example, changes in Spire's employee 4 levels and salaries that occurred after the test year will be annualized to reflect the current 5 employee levels and salaries during the 12 month update and true up period.

6 (3) Disallowance adjustments. Disallowance adjustments are made to 7 eliminate costs in the test year results that are not considered prudent, reasonable, appropriate, 8 and/or not of benefit to Missouri ratepayers, and thus not appropriate for recovery from 9 ratepayers. An example in this case is certain executive incentive compensation costs. In 10 Staff's view, these costs are incurred to primarily benefit shareholder interests and it is not 11 appropriate policy to pass these costs on to customers in rates, since these costs do not benefit 12 ratepayers. Therefore, these costs should be eliminated from the cost of service borne by 13 ratepayers and Staff has proposed to disallow these costs from recovery in rates.

14 (4) Pro forma adjustments. Pro forma adjustments reflect the impact of items and 15 events that occur subsequent to the test year. These items or events significantly impact the 16 investment, revenue, and expense relationship and should be recognized to address the 17 forward-looking objective of the test year. Caution must be exercised when including pro forma 18 adjustments in a recommended cost of service to ensure that all items and events subsequent to 19 the test year are also examined and any appropriate offsetting adjustments are included as well. 20 In addition, some post-test year items and event may not have occurred yet and/or may not be 21 capable of adequate quantification at the time of the case filing. As a result, quantification of 22 pro forma adjustments may be more difficult than the quantification of other adjustments. As 23 a consequence, use of a true-up audit that considers a full range of auditable items and events

that occur subsequent to the test year, and also attempts to address the maintenance of the proper
 relationship amount investment, revenues, and expenses at a consistent point in time is
 generally a superior approach than considering stand-alone pro forma adjustments for inclusion
 in the cost of service

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Q. What rate increase amount, based on what return on equity ("ROE") percentage did Spire request from the Commission in this case for each of itsrate districts?

7 In its application to implement a general rate increase, filed on December 11, A. 2020, Spire requested its annual revenues be increased by approximately \$111.5<sup>1</sup> million based 8 9 on an ROE of 9.5%. This increase represents an increase of approximately 18% for Spire East 10 and Spire West combined. Spire did not calculate a separate revenue requirement for 11 Spire East and Spire West when it filed its application. On January 29, 2021, Staff received a 12 revised revenue requirement from Spire correcting errors and omissions. In the corrected 13 revenue requirement model, Spire calculated an increase to annual revenues of approximately \$114.3<sup>2</sup> million based on a ROE of 9.5%. This represents an increase of 14 15 approximately 18.5%

16

Q.

Please describe Staff's direct revenue requirement filing in this proceeding.

A. The results of Staff's audit of Spire East and Spire West rate case request can be
found in Staff's filed Accounting Schedules and is summarized on Accounting Schedule 1,
Revenue Requirement for an overall increase of \$6,646,349 for Spire East and \$47,301,955 for
Spire West. Including the true-up allowance, Staff's recommendation is comprised of a revenue

<sup>&</sup>lt;sup>1</sup> This includes revenue of approximately \$47.3 million that is currently collected through the Infrastructure System Replacement Surcharge (ISRS)

<sup>&</sup>lt;sup>2</sup> This includes revenue of approximately \$47.3 million that is currently collected through the Infrastructure System Replacement Surcharge (ISRS)

requirement increase for Spire East and Spire West of \$12,946,349 and \$52,101,955 1 2 respectively. Both recommendations are based upon a mid-point ROE of 9.37% with a range 3 of 9.12% to 9.62% as calculated by Staff witness Seoung Joun Won, PhD. Staff's revenue 4 requirement increase at the low and high points of the ROE range is \$3,836,547 to \$9,435,489 5 for Spire East and \$45,199,236 to \$49,389,212 for Spire West. Including the true-up allowance, 6 low and high points of the ROE range is \$10,136,547 to \$15,735,489 for Spire East 7 and \$49,999,236 to \$54,189,212 for Spire West. 8 Did Staff calculate a revenue requirement for Spire East and

8 Q. Did Staff calculate a revenue requirement for Spire East and
9 Spire West combined?

A. Yes. Staff is recommending a separate revenue requirement for Spire East and
 Spire West. Staff also calculated a combined revenue requirement should the Commission
 determine that consolidating Spire East and Spire West is appropriate.

Q. What items are included in Staff's recommended rate base inthis case?

15 A. All rate base items were determined as of the update period ending date of 16 December 31, 2020, either through a balance on Spire East's and Spire West's books as of that date or a 13-month average balance ending on December 31, 17 18 2020. Items in Staff's rate base include: Plant-in-Service, Accumulated Depreciation Reserve, 19 Prepayments, Materials and Supplies, Fuel Inventories, Insulation Financing/Energy 20 Wise Programs, Pension and Other Post-Employment Benefits ("OPEBs"), Energy Efficiency 21 Program, Energy Affordability Program, Accumulated Deferred Income Tax ("ADIT"), 22 Customer Advances for Construction, Customer Deposits, and Cash Working Capital.

1	Spire East's and Spire West's rate base will be updated through May 31, 2021, as part of the
2	true-up audit in this case.
3	Q. What are the significant income statement adjustments Staff made in
4	determining Spire East's and Spire West's revenue requirement for this case?
5	A. A summary of Staff's significant income statement adjustments follows:
6	<ul> <li>Operating Revenues</li> </ul>
7	• Payroll, Payroll Taxes, and employee Benefit Costs
8	<ul> <li>Missouri property tax amortization</li> </ul>
9	Q. What reliance did you place on the work or conclusions of other Staff members
10	working on Staff's behalf?
11	A. Staff auditors, including myself, relied on the work from numerous other Staff
12	members in calculating a revenue requirement for Spire East and Spire West in this case.
13	Normalized sales, the recommended rate of return, and depreciation rates are some examples
14	of data and analysis supplied to the Auditing Unit as inputs into Staff's revenue requirement
15	cost-of-service calculation.
16	Q. What are the biggest difference between the rate increase request filed by
17	Spire Missouri and Staff's revenue requirement recommendations?
18	A. The following revenue requirement components have the largest difference
19	between Staff and Spire Missouri:

1	• Return on Equity			
2	<ul> <li>Operating Revenues</li> </ul>			
3	o Payroll, Payroll Taxes, an	d employee Benefit Costs		
4	• Missouri property tax amo	ortization		
5	Q. Is it possible that significant	differences exist between Staff	's revenue	
6	requirement positions and those of other parties	besides Spire Missouri in this proc	eeding?	
7	A. Yes. However, the other parties a	re filing their prepared direct testim	ony, if they	
8	have any, concurrently with Staff's direct filing.	Until Staff has a chance to examin	e the direct	
9	testimony of the other parties, it is impossible fo	r Staff to determine what difference	es exist and	
10	how material they may be.			
11		tnesses responsible for addressing	g each area	
12	where there is a known and significant difference	1 2		
13	above in this direct testimony.			
13 14	above in this direct testimony. A. The Staff experts/witnesses for early and the staff experts and the staff expected and the staff experts and the staff expected	ach listed issue are as follows:		
14	above in this direct testimony. A. The Staff experts/witnesses for early and the staff experts and the staff expected and the staff experts and the staff expected and the staff expecte	ach listed issue are as follows:		
	A. The Staff experts/witnesses for each of the	ach listed issue are as follows: Staff Witness		
14 15 16	A. The Staff experts/witnesses for each of the	Staff Witness		
14 15	A. The Staff experts/witnesses for each of the	Staff Witness Dr. Seoungjoun Won Kim Cox, Joseph Roling,	0	
14 15 16 17	A. The Staff experts/witnesses for each of the staff experiment of the staff experiment experiment of the staff experiment expe	Staff WitnessDr. Seoungjoun WonKim Cox, Joseph Roling, Keith Majors	Ο	
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14 15 16 17 19 20 21 22	A. The Staff experts/witnesses for each A. The Staff experts/witnesses for each A. The Staff experts/witnesses for each A. The Staff expension of the Staff expe	Staff WitnessDr. Seoungjoun WonKim Cox, Joseph Roling, Keith MajorsJared GiaconeJared GiaconeJeremy Juliette	's proposed	
<ol> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> </ol>	A. The Staff experts/witnesses for each A. The Staff experts/witnesses for each A. The Staff experts/witnesses for each A. The Staff expension of the Staff expe	Staff WitnessDr. Seoungjoun WonKim Cox, Joseph Roling, Keith MajorsJared GiaconeJared GiaconeJeremy Julietteifferences between Spire Missouri as of December 31, 2020?te 2017 Rate Case, the Commission	's proposed determined	

1	reduced by prior recorded amounts from 1990 through 1994 of \$19.8 million and 1994 through
2	1996 of \$9 million. The Missouri Supreme Court found in favor of Spire East concerning the
3	\$9 million portion of the prepaid pension asset and remanded the case to the Commission for
4	further proceedings in February 2021 <sup>3</sup> . Staff recommends inclusion of the \$9 million portion
5	of prepaid pension asset at issue in the pension tracker mechanism, which is the same
6	ratemaking treatment this asset would have received if it were not a disputed issue in
7	the 2017 Rate Case.



Q. Does this conclude your prepared direct testimony in this proceeding?

9

Yes, it does.

A.

<sup>&</sup>lt;sup>3</sup> Supreme Court of Missouri, Opinion No. SC97834.

#### **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 KAREN LYONS**

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

**COMES NOW KAREN LYONS** and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Direct Testimony;* and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

<u>/s/ Karen Lyons</u> Karen Lyons

# 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.

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

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

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
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 <b>Direct</b> : Income Taxes
2020	GO-2020-0229 (Stipulated)	Spire East-Infrastructure System Replacement Surcharge (ISRS)	Staff Memorandum <b>Direct</b> : 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

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2018	ER-2018-0145 (Stipulated)	Kansas City Power & Light Company (Electric Rate Case)	<b>Direct</b> : 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 <b>Rebuttal</b> : Injuries and Damages, Sibley and Montrose O&M <b>Surrebuttal</b> : Greenwood Solar, Injuries and Damages, Kansas City Earnings Tax, Income Taxes
2018	ER-2018-0146 (Stipulated)	KCP&L Greater Missouri Operations 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 <b>Rebuttal</b> : Injuries and Damages, Sibley and Montrose O&M <b>Surrebuttal</b> : Greenwood Solar, Injuries and Damages, Kansas City Earnings Tax, Income Taxes

2017-0216-Contested Energy (Gas Rate Case) 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 <b>Rebutta</b> l: Cyber-Security, Environmental and Kansas Property Tax Trackers, St Peters Lateral Pipeline <b>Surrebutta</b> l: Kansas Property Tax, Cash Working Capital, Energy Efficiency, JJ's related	Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
Red Tag Program, St Peters pipeline lateral and MGE's		GR-2017-0215 and GR-	Laclede Gas and Missouri Gas	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 Rebuttal: Cyber-Security, Environmental and Kansas Property Tax Trackers, St Peters Lateral Pipeline 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 Litigated: Kansas Property

### cont'd Karen Lyons

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2016-2017	ER-2016-0285-Contested	Kansas City Power & Light Company (Electric Rate Case)	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 <b>Rebuttal</b> : Transmission expense/revenue and Property tax Forecasts/Trackers, Wholesale Transmission expense/revenue and Property tax Forecasts/Trackers, Wholesale Transmission Revenue <b>Surrebuttal</b> Transmission expense/revenue and Property tax Forecasts/Trackers, Wholesale Transmission Revenue, Transmission Revenue, Transmission Revenue, Transmission Revenue, Transmission Revenue, Transmission Kholesale Revenue, Greenwood Solar True-up Direct: Transmission Expense and Revenue, Transmission Congestion Rights <b>True-up Rebuttal</b> : Transmission Expense <b>Litigated</b> : Transmission Expense

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2016	ER-2016-0156-Stipulated	KCP&L Greater Missouri Operations Company (Electric Rate Case)	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 <b>Rebuttal</b> : Cyber-Security and Transmission expense/revenue Forecasts/Trackers, Wholesale Transmission expense/revenue Forecasts/Trackers, Crossroad Transmission expense, Wholesale Transmission Revenue, Greenwood Solar, Amortizations
2016	EA-2015-0256-Contested	KCP&L Greater Missouri Operations Company (Solar CCN)	Deposition Direct and Rebuttal Testimony: No pre-filed testimony. Live testimony during hearing
2015	WO-2016-0098	Missouri American Water Company- Infrastructure Service Replacement Surcharge (ISRS Reconciliation)	Staff Memorandum

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
2015	ER-2014-0370-Contested	Kansas City Power & Light Company (Electric Rate Case)	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, <b>Rebuttal</b> : Property Tax, Vegetation Management and Cyber Security Trackers, SPP Region-Wide Transmission, Transmission Wholesale Revenue <b>Surrebuttal</b> : Property Tax, Vegetation Management and Cyber Security and Transmission Trackers, SPP Region-Wide Transmission, Transmission Trackers, SPP Region-Wide Transmission, Transmission Wholesale Revenue, Transmission Expense <b>True-up Rebuttal</b> : Independence Power & Light Transmission expense, Property Tax expense, CIP/Cyber Security expense, Independence Power & Light Transmission Expense
2014	HR-2014-0066-Stipulated	Veolia Energy Kansas City, Inc. (Steam Rate Case)	<b>Direct</b> : Fuel Inventories, Prepayments, Material Supplies, Customer Deposits, Fuel Expense, Purchased Power, Environmental Fees, Miscellaneous Non-Recurring Expenses
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

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
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 <b>Rebuttal</b> : Bad Debt, Property tax tracker, Renewable Energy Costs <b>Surrebuttal</b> : 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 <b>Rebuttal</b> : Bad Debt, Property tax tracker, Renewable Energy Costs <b>Surrebuttal</b> : 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)	<b>Direct</b> : 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 <b>Rebuttal</b> : Property Tax, CWC-Gross Receipts Tax, Maintenance <b>Surrebuttal</b> : 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)	<b>Direct</b> : 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)	<b>Direct</b> : 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)	<b>Direct</b> : 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

Year	Case/Tracking Number	Company Name	Type of Testimony/Issue
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)	<b>Direct:</b> 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 <b>Rebuttal</b> : Property Tax, CWC-Gross Receipts Tax <b>Surrebuttal</b> : Property Tax, CWC Gross Receipts Tax, Maintenance, Injuries and Damages
2008	HR-2008-0300-Stipulated	Trigen Kansas City Energy Corporation (Steam Rate Case)	<b>Direct</b> : 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