

# Exhibit No. 105

*Exhibit No.:*  
*Issue(s):* *Report on Class  
Cost of Service,  
Overview of  
Staff's Filing*  
*Witness:* *Robin Kliethermes*  
*Sponsoring Party:* *MoPSC Staff*  
*Type of Exhibit:* *Corrected Direct  
Testimony*  
*Case No.:* *GR-2021-0108*  
*Date Testimony Prepared:* *June 9, 2021*

**MISSOURI PUBLIC SERVICE COMMISSION**

**INDUSTRY ANALYSIS DIVISION**

**TARIFF/RATE DESIGN DEPARTMENT**

**CORRECTED DIRECT TESTIMONY**

**OF**

**ROBIN KLIETHERMES**

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

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

**CASE NO. GR-2021-0108**

*Jefferson City, Missouri  
June 2021*



1 Q. What is the magnitude of the net impact of these errors to the Spire West  
2 rate district?

3 A. The Spire West Transportation class, which was reconfigured within the CCOS  
4 to include Large General Service and Large Volume Service customers who are transportation  
5 customers, was allocated fewer costs for distribution mains and a lower level of rate revenue  
6 than it otherwise should have been allocated in Staff's direct filed CCOS. The overall change  
7 resulted in an increase in the total cost of service for the transportation class of approximately  
8 \$4.6 million and an increase in the transportation class revenues of approximately \$1.5 million.

9 Q. What is the magnitude of net impact of these errors to the Spire East rate district?

10 A. De minimus. The magnitude of the net impact of the errors was a reallocation of  
11 around \$1.2 million in revenue responsibility, which did not change Staff's overall  
12 recommendation process for Spire East rate district.

13 Q. Could you provide the results of the revised study and provide Staff's revised  
14 class revenue responsibility recommendation?

15 A. Staff's Spire East interclass revenue responsibility recommendation process  
16 remains the same as filed on page 21 of its CCOS, reproduced here for convenience, with the  
17 corrected relevant values and resulting dollar and percent recommendations provided in the  
18 table that follows:

19 Step 1a: Preserve the revenue responsibility of any class providing revenues in  
20 excess of its cost of service.

21 Step 1b: For any class providing revenues within 5% of its cost of service,  
22 increase that class's revenue responsibility by the amount indicated to exactly  
23 match its cost of service at an equal rate of return.

CORRECTED Direct Testimony of  
Robin Kliethermes

Step 2: For remaining classes, increase revenue responsibility proportionate to its contribution to revenues, except that it should not exceed the amount indicated to exactly match its cost of service at an equal rate of return.

Step 3: For remaining classes, increase revenue responsibility proportionate to its contribution to revenues.

The results of these adjustments as applied to Staff’s direct case are provided below:

Spire East	Residential	Small General Service	Large General Service	Large Volume	LV Transport
Net Expenses	\$180,527,784	\$28,008,856	\$18,278,001	\$550,025	\$4,227,489
Return on Ratebase	\$81,965,045	\$14,204,286	\$9,336,237	\$236,842	\$2,908,177
Income Tax	\$15,641,127	-\$173,166	\$1,351,718	\$78,319	\$1,927,786
Total Cost of Service	\$278,133,956	\$42,039,976	\$28,965,956	\$865,186	\$9,063,452
Current Rate Revenue	\$274,919,487	\$28,712,915	\$26,527,299	\$996,002	\$14,847,435
\$ Change to Match Exactly	\$3,214,469	\$13,327,061	\$2,438,657	-\$130,816	-\$5,783,983
% Change to Match Exactly	1.17%	46.41%	9.19%	-13.13%	-38.96%
Equal Percentage Increase	\$10,268,253	\$1,072,428	\$990,796	\$37,201	\$554,552
Rate Revenue with Equal Increase	\$285,187,740	\$29,785,343	\$27,518,095	\$1,033,203	\$15,401,987
\$ Change to Match Exactly, after Equal In	-\$7,053,784	\$12,254,633	\$1,447,861	-\$168,017	-\$6,338,536
% Change to Match Exactly, after Equal In	-2.57%	42.68%	5.46%	-16.87%	-42.69%
\$ Change Recommended Step 1	\$3,214,469			\$0	\$0
\$ Change Recommended Step 2		\$5,053,582	\$2,438,657		
\$ Change Recommended Step 3		\$2,229,332			
Recommended Class Revenue Responsibility	\$278,133,956	\$35,995,828	\$28,965,956	\$996,002	\$14,847,435
% Change Recommended	1.17%	25.36%	9.19%	0.00%	0.00%

Spire East - Continued	Interruptible Sales	General L.P. Gas	Unmetered Gas Light	Vehicular Fuel
Net Expenses	\$250,863	\$17,106	\$30,336	\$5,775
Return on Ratebase	\$106,288	\$10,074	\$19,250	\$4,592
Income Tax	\$51,760	-\$1,205	\$1,638	\$3,446
Total Cost of Service	\$408,911	\$25,975	\$51,224	\$13,813
Current Rate Revenue	\$540,860	\$11,803	\$41,566	\$24,746
\$ Change to Match Exactly	-\$131,949	\$14,172	\$9,658	-\$10,933
% Change to Match Exactly	-24.40%	120.07%	23.24%	-44.18%
Equal Percentage Increase	\$20,201	\$441	\$1,552	\$924
Rate Revenue with Equal Increase	\$561,061	\$12,244	\$43,118	\$25,670
\$ Change to Match Exactly, after Equal In	-\$152,150	\$13,731	\$8,106	-\$11,857
% Change to Match Exactly, after Equal In	-28.13%	116.34%	19.50%	-47.92%
\$ Change Recommended Step 1	\$0			\$0
\$ Change Recommended Step 2		\$2,077	\$7,316	
\$ Change Recommended Step 3		\$916		
Recommended Class Revenue Responsibility	\$540,860	\$14,797	\$48,882	\$24,746
% Change Recommended	0.00%	25.36%	17.60%	0.00%

Staff’s Spire West interclass revenue responsibility recommendation requires the addition of “Step 3,” and modified wording of Step 1b to the process filed on page 22 of its CCOS, provided below:

Step 1a: Consolidate the General Service classes and Large Volume class for study purposes to establish rate continuity.

Step 1b: Preserve the revenue responsibility of the Transportation class.

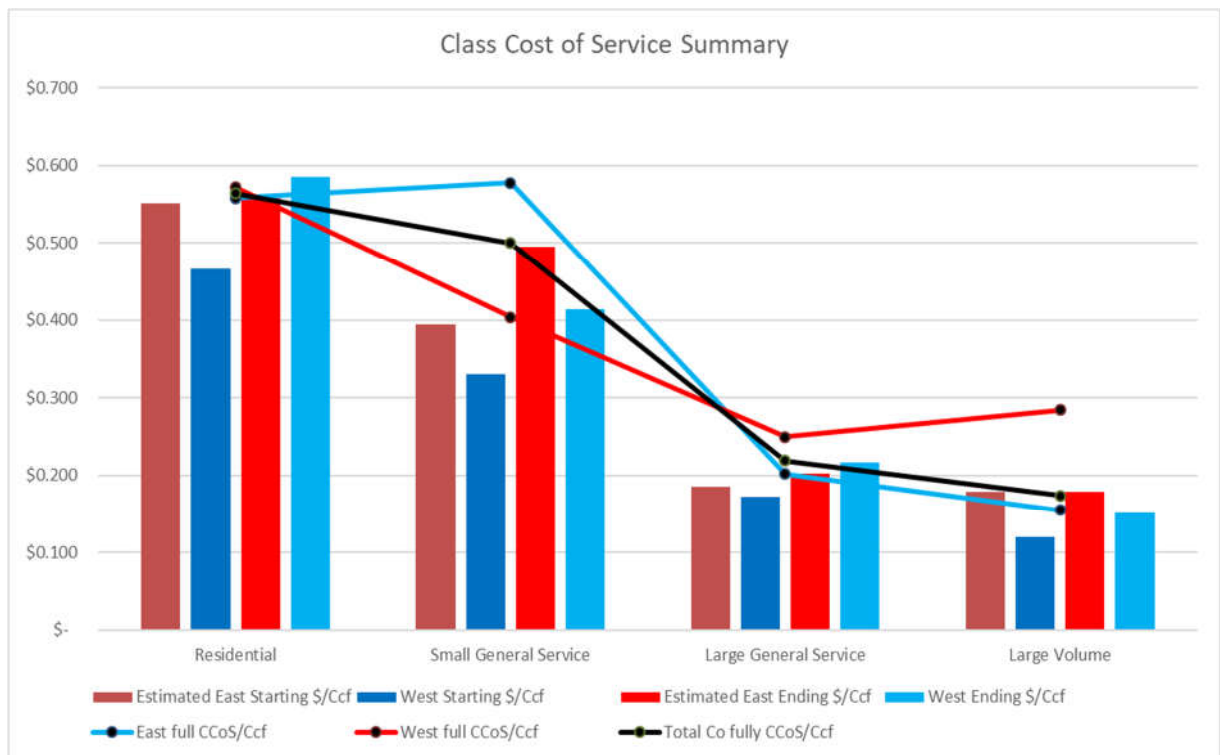
Step 2: For remaining classes, increase revenue responsibility proportionate to its contribution to revenues.

Step 3: Apply a shift of revenue responsibility from the Residential Class to the Transportation Class to roughly equalize the percentage level by which each class is over-contributing.

The results of these adjustments as applied to Staff's direct case are provide below:

Spire West	Residential	General Services & LV	Transportation	Unmetered Gas Light
Net Expenses	\$135,897,957	\$28,105,732	\$8,052,926	\$3,400
Return on Ratebase	\$60,813,188	\$14,705,945	\$5,892,286	\$2,341
Income Tax	\$15,554,723	\$838,596	\$4,805,043	-\$1,109
Total Cost of Service	\$212,265,868	\$43,650,273	\$18,750,255	\$4,632
Current Rate Revenue	\$173,149,407	\$30,763,299	\$18,655,231	\$1,145
\$ Change to Match Exactly	\$39,116,461	\$12,886,974	\$95,024	\$3,487
% Change to Match Exactly	22.59%	41.89%	0.51%	304.51%
Equal Percentage Increase	\$40,533,135	\$7,201,486	\$4,367,067	\$268
Rate Revenue with Equal Increase	\$213,682,542	\$37,964,785	\$23,022,298	\$1,413
\$ Change to Match Exactly, after Equal Incre	-\$1,416,674	\$5,685,489	-\$4,272,043	\$3,219
% Change to Match Exactly, after Equal Incre	-0.82%	18.48%	-22.90%	281.10%
\$ Change Recommended Step 1			\$0	
\$ Change Recommended Step 2	\$44,241,343	\$7,860,320		\$293
\$ Change Recommended Step 3	-\$500,000		\$500,000	
Recommended Class Revenue Responsibility	\$216,890,750	\$38,623,619	\$19,155,231	\$1,438
% Change Recommended	25.26%	25.55%	2.68%	25.55%

The graph below corrects the table on page 20 of Staff's CCOS study with Staff's updated class revenue requirement ("ending") for Spire West.



1 Q. Could you explain what caused the error in Staff's direct Distribution  
2 Mains allocator?

3 A. The class demand values that were used in Staff's direct filed testimony  
4 Distribution Mains allocator were disproportionately skewed towards rate schedules that were  
5 weather normalized.

6 Q. Which rate classes were weather normalized?

7 A. Staff weather normalized the Residential, Small General Service and Large  
8 General Service rate schedules. The Interruptible, Transportation and Large Volume Service  
9 rate classes were not weather normalized because Staff did not find these classes to be weather  
10 sensitive as explained in more detail by Staff witness Michael Stahlman in Staff's Cost of  
11 Service (COS) report

12 Q. How was the value of class demands calculated in Staff's direct filed  
13 CCOS report?

14 A. Class demands are produced as part of Staff's weather normalization  
15 worksheets and are calculated based on the output of the weather regression analysis. The  
16 output is essentially a usage per day value based on the number of heating degree days (HDD)  
17 in the month. For rate classes that were not weather normalized; including the Transportation,  
18 Interruptible, and Large Volume rate schedules, Staff calculated the actual average usage per  
19 day for each class. The actual average usage per day was then used as the rate class' monthly  
20 demand value for the Transportation, Interruptible and Large Volume rate schedules.

21 Q. What is wrong with the Staff's direct filed class demand values?

22 A. While preparing for rebuttal testimony, Staff found that the class usage per day  
23 from the weather regression results assumed each customer in the class had the same level of

1 base usage, which resulted in a higher level of total annual usage than was actually billed and  
2 created an inaccurate comparison to the class demands calculated from the Transportation,  
3 Interruptible and Large Volume rate schedules which were not weather normalized. If all the  
4 rate schedules were weather normalized, then the class demand comparison would not have  
5 been skewed. However, since some rate schedules were weather normalized and some were not  
6 the comparison of class demands was skewed disproportionately towards the rate classes that  
7 were weather normalized.

8 Q. How did Staff correct the class demand calculation?

9 A. Staff recalculated the class demands for each weather normalized rate class by  
10 applying the weather adjustment to usage per day per billing cycle and then summing usage per  
11 day per billing cycle for each month. Except for the weather adjustment, the calculation is  
12 consistent with the calculation of class demands for the non-weather normalized rate classes.

13 Q. Could you explain the error to total revenue?

14 A. The allocation of revenue to each individual rate class had an error that resulted  
15 in some studied rate classes not receiving recognition of the actual revenues contributed by the  
16 customers served within that rate class. The overall impact of this error was small as compared  
17 to the correction to Staff's distribution mains allocator. As mentioned above, the Spire West  
18 revenue error involved the misplacement by class of approximately \$1.5 million of revenues,  
19 and the Spire East error involved approximately \$1.2 million of revenues.

20 Q. Does this conclude your testimony?

21 A. Yes.



**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 ROBIN KLIETHERMES**

STATE OF MISSOURI )  
 ) ss.  
COUNTY OF COLE )

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

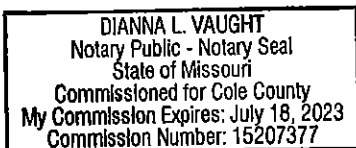
Further the Affiant sayeth not.

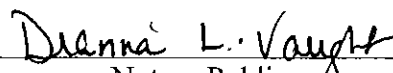


**ROBIN KLIETHERMES**

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 9th day of May 2021.



  
Notary Public

**MISSOURI PUBLIC SERVICE COMMISSION**

**STAFF REPORT**  
**CLASS 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 26, 2021*

**APPENDIX 1**  
**STAFF CREDENTIALS**  
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## **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 16<sup>th</sup>, 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**

<b>Case No.</b>	<b>Company</b>	<b>Type of Filing</b>	<b>Issue</b>
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**

<b>Case No.</b>	<b>Company</b>	<b>Type of Filing</b>	<b>Issue</b>
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**

<b>Case No.</b>	<b>Company</b>	<b>Type of Filing</b>	<b>Issue</b>
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

**Sarah L.K. Lange**

I received my J.D. from the University of Missouri, Columbia, in 2007, and am licensed to practice law in the State of Missouri. I received my B.S. in Historic Preservation from Southeast Missouri State University, and took courses in architecture and literature at Drury University. Since beginning my employment with the MoPSC I have taken courses in economics through Columbia College and courses in energy transmission through Bismarck State College, and have attended various trainings and seminars, indicated below.

I began my employment with the Commission in May 2006 as an intern in what was then known as the General Counsel's Office. I was hired as a Legal Counsel in September 2007, and was promoted to Associate Counsel in 2009, and Senior Counsel in 2011. During that time my duties consisted of leading major rate case litigation and settlement, and presenting Staff's position to the Commission, and providing legal advice and assistance primarily in the areas of depreciation, cost of service, class cost of service, rate design, tariff issues, resource planning, accounting authority orders, construction audits, rulemakings and workshops, fuel adjustment clauses, document management and retention, and customer complaints.

In July 2013 I was hired as a Regulatory Economist III in what is now known as the Tariff/ Rate Design Department. In this position my duties include providing analysis and recommendations in the areas of RTO and ISO transmission, rate design, class cost of service, tariff compliance and design, and regulatory adjustment mechanisms and tariff design. I also continue to provide legal advice and assistance regarding generating station and environmental control construction audits and electric utility regulatory depreciation. I have also participated before the Commission under the name Sarah L. Kliethermes.

**Presentations**

*Midwest Energy Policy Series – Impact of ToU Rates on Energy Efficiency* (August 14, 2020)

*Billing Determinants Lunch and Learn* (March 27, 2019)

*Support for Low Income and Income Eligible Customers, Cost-Reflective Tariff Training, in cooperation with U.S.A.I.D. and NARUC, Addis Ababa, Ethiopia* (February 23-26, 2016)

*Fundamentals of Ratemaking at the MoPSC* (October 8, 2014)

*Ratemaking Basics* (Sept. 14, 2012)

Participant in Missouri's Comprehensive Statewide Energy Plan working group on Energy Pricing and Rate Setting Processes.



**Relevant Trainings and Seminars**

*Regional Training on Integrated Distribution System Planning for Midwest/MISO Region*  
(October 13-15, 2020)

*“Fundamentals of Utility Law”* Scott Hempling lecture series (January – April, 2019)

*Today’s U.S. Electric Power Industry, the Smart Grid, ISO Markets & Wholesale Power Transactions* (July 29-30, 2014)

*MISO Markets & Settlements* training for OMS and ERSC Commissioners & Staff (January 27–28, 2014)

*Validating Settlement Charges in New SPP Integrated Marketplace* (July 22, 2013)

PSC Transmission Training (May 14 – 16, 2013)

Grid School (March 4–7, 2013)

Specialized Technical Training - Electric Transmission (April 18–19, 2012)

*The New Energy Markets: Technologies, Differentials and Dependencies* (June 16, 2011)

Mid-American Regulatory Conference Annual Meeting (June 5–8, 2011)

*Renewable Energy Finance Forum* (Sept. 29–Oct 3, 2010)

*Utility Basics* (Oct. 14–19, 2007)

**Testimony and Staff Memoranda**

<u>Company</u>	<u>Case No.</u>
Union Electric Company d/b/a Ameren Missouri In the Matter of the Request of Union Electric Company d/b/a Ameren for Approval of its Surge Protection Program	ET-2021-0082
Union Electric Company d/b/a Ameren Missouri In the Matter of the Request of Union Electric Company d/b/a Ameren Missouri to Implement the Delivery Charge Adjustment for the 1st Accumulation Period beginning September 1, 2019 and ending August 31, 2020	GT-2021-0055
The Empire District Electric Company In the Matter of The Empire District Electric Company's Tariffs Approval of a Transportation Electrification Portfolio for Electric Customers in its Missouri Service Area	ET-2020-0390

<u>Company</u>	<u>Case No.</u>
The Empire District Electric Company In the Matter of The Empire District Electric Company's Tariffs to Increase Its Revenues for Electric Service	ER-2019-0374
Union Electric Company d/b/a Ameren Missouri In the Matter of of Union Electric Company d/b/a Ameren Missouri's Tariffs to Decrease Its Revenues for Electric Service	ER-2019-0335
KCP&L Greater Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company Request for Authority to Implement Rate Adjustments Required by 4 CSR 240-20.090(8) And the Company's Approved Fuel and Purchased Power Cost Recovery Mechanism	ER-2019-0413
Union Electric Company d/b/a Ameren Missouri In the Matter of of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Natural Gas Service	GR-2019-0077
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri Revised Tariff Sheets	ET-2019-0149
The Empire District Electric Company In the Matter of The Empire District Electric Company's Revised Economic Development Rider Tariff Sheets	ET-2019-0029
The Empire District Electric Company In the Matter of a Proceeding Under Section 393.137 (SB 564) to Adjust the Electric Rates of The Empire District Electric Company	ER-2018-0366
Union Electric Company d/b/a Ameren Missouri 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 Authorizing it to Construct a Wind Generation Facility	EA-2018-0202
Kansas City Power & Light Company KCP&L Greater Missouri Operations Company In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2018-0145 ER-2018-0146
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of Efficient Electrification Program	ET-2018-0132

<u>Company</u>	<u>Case No.</u>
Union Electric Company d/b/a Ameren Missouri In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of 2017 Green Tariff	ET-2018-0063
Laclede Gas Company Laclede Gas Company d/b/a Missouri Gas Energy In the Matter of Laclede Gas Company's Request to Increase Its Revenue for Gas Service, In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase Its Revenue for Gas Service.	GR-2017-0215 GR-2017-0216
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Demand Side Investment Rider Rate Adjustment And True-Up Required by 4 CSR 240-3.163(8)	ER-2017-0316
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Demand Side Investment Rider Rate Adjustment And True-Up Required by 4 CSR 240-3.163(8)	ER-2017-0167
KCP&L Great Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company's Annual RESRAM Tariff Filing	ET-2017-0097
Grain Belt Express Clean Line, LLC 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	EA-2016-0358
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Demand Side Investment Rider Rate Adjustment And True-Up Required by 4 CSR 240-3.163(8)	ER-2016-0325
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Request for Authority to Implement A General Rate Increase for Electric Service	ER-2016-0285
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and a Certificate of Public Convenience and Necessity Authorizing it to Offer a Pilot Subscriber Solar Program and File Associated Tariff	EA-2016-0207

<u>Company</u>	<u>Case No.</u>
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service	ER-2016-0179
KCP&L Great Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2016-0156
Empire District Electric Company In the Matter of The Empire District Electric Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2016-0023
Ameren Transmission Company of Illinois 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	EA-2015-0146
Ameren Transmission Company of Illinois 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 in Marion County, Missouri and an Associated Switching Station Near Palmyra, Missouri	EA-2015-0145
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA	EO-2015-0055
Kansas City Power & Light Company In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service	ER-2014-0370
Empire District Electric Company 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	ER-2014-0351
Union Electric Company d/b/a Ameren Missouri City of O'Fallon, Missouri, and City of Ballwin, Missouri, Complainants v. Union Electric Company d/b/a Ameren Missouri, Respondent	EC-2014-0316

<u>Company</u>	<u>Case No.</u>
Union Electric Company d/b/a Ameren Missouri In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase Its Revenues for Electric Service	ER-2014-0258
Union Electric Company d/b/a Ameren Missouri Noranda Aluminum, Inc., et al., Complainants, v. Union Electric Company d/b/a Ameren Missouri, Respondent	EC-2014-0224
Grain Belt Express Clean Line, LLC 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	EA-2014-0207
KCP&L Great Missouri Operations Company In the Matter of KCP&L Greater Missouri Operations Company's Application for Authority to Establish a Renewable Energy Standard Rate Adjustment Mechanism	EO-2014-0151
Kansas City Power & Light Company 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	EO-2014-0095
Veolia Energy Kansas City, Inc. In the Matter of Veolia Energy Kansas City, Inc. for Authority to File Tariffs to Increase Rates	HR-2014-0066

**Charles T. Poston, P.E.**

**Current Position**

I am currently employed as a Senior Professional Engineer in the Engineering Analysis Department of the Missouri Public Service Commission.

**Education and Prior Work Experience**

I received a Bachelor of Science degree in Civil Engineering from the University of Missouri-Columbia in 2006 and a Master of Science degree in Nuclear Engineering from the same institution in 2008.

From May 2008 through August 2013 I was employed by Ameren Missouri as an engineer in the Safety Analysis and Reactor Engineering Departments at the Callaway Energy Center. My duties consisted of post-accident thermo-hydraulic analyses, radiation dose calculations, atmospheric dispersion estimates for radiological and chemical hazards, and root cause determinations.

From September 2013 to March 2015, I worked in the Safety Engineering Unit of the Missouri Public Service Commission. In that capacity I conducted comprehensive gas safety inspections and participated in incident investigations following natural gas explosions. After March 2015 I was employed by the Commission in the Engineering Analysis Department where I was assigned to cases for both electric and natural gas utilities. I have provided testimony before the Commission on topics including natural gas incident investigations, power plant cost allocations, ISRS cost recovery, and production cost modeling.

I have been a licensed professional engineer in the State of Missouri since January 2015.

Charles T. Poston Case History:

<b>Case Number</b>	<b>Utility</b>	<b>Testimony</b>	<b>Issue</b>
GS-2014-0226	Laclede Gas Company	Staff Report	Staff investigation following natural gas explosion
EO-2015-0320	Union Electric Company d/b/a Ameren Missouri	Staff Recommendation	SO <sub>2</sub> and NO <sub>x</sub> emission allowance trading and reporting
ER-2016-0023	Empire District Electric Company	Staff Report	Heat Rate Testing
EC-2016-0230	KCP&L Greater Missouri Operations Company	Staff Report	Consumer Complaint in reference to “Smart Meter” installation
		Staff Investigation	
ER-2016-0156	KCP&L Greater Missouri Operations Company	Staff Report	Variable Fuel Costs, Lake Road Allocations, Heat Rate Testing
		Rebuttal	Lake Road Allocations
		Surrebuttal	Lake Road Allocations
ER-2016-0285	Kansas City Power & Light Company	Staff Report	Variable Fuel Costs
		Rebuttal	
		True-Up Direct	
		True-Up Rebuttal	
ER-2018-0146	KCP&L Greater Missouri Operations Company	Staff Report	Variable Fuel Cost Lake Road Allocations
		Rebuttal	Lake Road Allocations
		Surrebuttal	Greenwood Solar Allocation, Lake Road Allocations, Variable Fuel Costs
		True-Up Direct	
GO-2019-0115 GO-2019-0116	Spire Missouri, Inc.	Staff Recommendation Staff Direct Report	Avoided Cost Studies
GO-2019-0356 GO-2019-0357	Spire Missouri, Inc.	Staff Recommendation	Engineering Review
AO-2021-0264 <sup>1</sup> EO-2021-0359 EO-2021-0360	Evergy Missouri West, Inc., Evergy Missouri Metro, Inc.	Staff Report(s)	February 2021 Cold Weather Event

<sup>1</sup> This case contained a Staff report concerning the response of numerous Missouri utilities to the cold weather event of February 2021. I was a contributor only to the sections concerning Evergy Missouri West and Evergy Missouri Metro.

## 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**

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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**

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- 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**

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- 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 5<sup>th</sup>  
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.

**MISSOURI PUBLIC SERVICE COMMISSION**

**STAFF REPORT**  
**CLASS COST OF SERVICE**

**APPENDIX 2**

**Other Staff Schedules**

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

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

**CASE NO. GR-2021-0108**

*Jefferson City, Missouri  
May 26, 2021*

## RATE NORMALIZATION ADJUSTMENT (RNA)

### A. APPLICABILITY

The Rate Normalization Adjustment (RNA) is applicable to all customers taking service under the Residential or Small General Service rate schedules. This adjustment will be applied as a separate line item on a customer's bill to all ccfs of gas usage.

### B. FILING

The RNA rider

(1) Adjustment Period (AP): The RNA AP will begin on the ninth billing month of a given year, and continue through the eighth billing month of the subsequent year. The initial AP under this rider shall begin on September 1, 2021. Actual Block Usage (ABU) for the final billing month of an AP may be projected for purposes of a RNA rate calculation included in a filing under this Rider if necessary. Prior to the end of the subsequent twelve (12) month AP, the difference between the ABU previously projected and the observed ABU for that month, multiplied by the Rate that was in effect during that month, will be added to or subtracted from the calculation of the over- or under-billing of the RNA during the RP as appropriate.

(2) Recovery Period (RP): An annual period during which a RNA rate is in effect, beginning with the eleventh calendar month of a given year, and continuing through the tenth calendar month of the subsequent year. The RP shall be calculated based on nine (9) months actual sales, including estimated unbilled sales for the ninth month, and three (3) months projected sales. The 3 months projected sales associated with each RP shall be trued up with actuals upon calculation of the subsequent RA.

(3) After November 1, 2021, the Company shall file its RNA revisions with the Commission each calendar year at least sixty (60) days prior to the first day of the eleventh calendar month unless otherwise provided for by the Commission.

### C. CALCULATIONS

The RNA applicable to each rate schedule subject to this Rider and calculated separately for Residential customers and Small General Service customers, shall be revised annually to reflect (1) the difference between the normalized annual natural gas usage in Block 2 for Residential customers and Block 2 for Small General Service customers authorized in the Company's last general rate case and the actual usage billed in those blocks for the applicable AP; (2) to reconcile the over- or under-recovery from the previous RNA rate adjustment; and (3) any adjustments ordered by the Commission.

$$RNA = \left[ \frac{(RCBU - ABU) * Rate}{RCU} + \frac{(OA + RA)}{RCU} \right]$$

Where:

RNA = "Revenue Normalization Adjustment Rate" to be calculated independently for each of the Company's applicable service classes and applied to all ccf of the applicable service class during the RP.

RCBU = Rate Case Block Usage will be the normalized annual natural gas usage in Block 2 for Residential customers and Block 2 for Small General Service customers established in the most recent general rate case.

RCU = Rate Case Usage will be the estimated total usage in ccf for the applicable class established in the most recent general rate case.

ABU = Actual Block Usage is the usage which occurred in Block 2 during the Adjustment Period (AP) for the class's adjustable ccf usage range

Rate = The currently effective class rate for usage in Block 2 for Residential customers and Block 2 for Small General Service customers

OA = Ordered Adjustment is the amount of any adjustment to the RNA ordered by the Commission as a result of corrections under this Rider. Such amounts shall include monthly interest equal to the reconciliation adjustment interest rate

RA = Reconciliation Adjustment is the amount due to the Company (+RA) or Customers (-RA) arising from adjustments under this Rider that were under- or over-billed in the prior 12 month RP

In the event that there is more than one set of non-gas base rates in effect during the AP the rates and rate case block usage will be prorated accordingly.

#### D. RECONCILIATION ADJUSTMENT INTEREST RATE

Each month, carrying costs, at a simple rate of interest equal to the utility's short-term borrowing rate (as published in The Wall Street Journal on the first business day of such month), minus two percentage points, shall be applied to the Company's ending monthly RNA balance. In no event shall the carrying cost rate be less than 0%. Corresponding interest income and expense amounts shall be recorded on a net cumulative basis for the RNA deferral period.

#### E. Rate Case Information

From GR-2021-0108, the normalized annual natural gas usage in Block 2 (greater than 50 ccf) for Residential customers is **XX,XXX,XXX** ccf and Block 2 (greater than 50 ccf) for Small General Service customers is **XX,XXX,XXX** ccf.

The Block 2 rate for the Residential Class is **\$0.XXXX** and the rate for Block 2 for the Small General Service Class is **\$0.XXXX**.

RCU: Total Residential Usage is **X**, total General Service Usage **X**.

**SCHEDULE SLKL-d1**

**HAS BEEN DEEMED**

**CONFIDENTIAL**

**IN ITS ENTIRETY**