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Issue(s): *Weather Normalization*
Witness: *Melissa J. Reynolds*
Sponsoring Party: *MoPSC Staff*
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MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

WATER, SEWER, GAS, AND STEAM DEPARTMENT

DIRECT TESTIMONY

OF

MELISSA J. REYNOLDS

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

CASE NO. GR-2025-0107

Jefferson City, Missouri
April 2025

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DIRECT TESTIMONY OF
MELISSA J. REYNOLDS
SPIRE MISSOURI INC.,
d/b/a Spire
CASE NO. GR-2025-0107

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NON-GAS OPERATING REVENUES

Q. What are Non-gas Operating Rate Revenues?

A. Non-gas Operating Rate Revenues are the revenues derived from Spire East and Spire West's authorized Commission approved rates for providing natural gas service to their retail customers, comprised of a variable charge and a customer charge. Spire East and Spire West's variable charges are determined by the amount of each customer's usage and the (per unit) rates that are applied to that usage. Each customer also pays a flat monthly customer charge dependent upon each customer's rate class. The Spire East rate classes include residential ("RGS"), small general ("SGS"), large general ("LGS"), large volume ("LV"), unmetered gaslight ("UG"), liquid propane ("LP"), and large general transportation ("LG TS") customer classifications. The Spire West rate classes include residential ("RGS"), small general ("SGS"), large general ("LGS"), large volume ("LV"), unmetered gaslight ("UG"), large general transportation ("LG TS") and large volume transportation ("LV TS") customer classifications. Tables 1 and 2 below are Spire East and Spire West's ending rate revenue by class.

Total Normalized Revenue for Spire East and Spire West

EAST	
Rate Class	Total MO Normalized Revenue
Residential Service	\$ 295,891,074
Small General Service	\$ 36,443,306
Large General Service	\$ 26,513,766
Large Volume Service	\$ 817,884
Unmetered Gaslight	\$ 47,616
General LP	\$ 11,612
Large General Transportation	\$ 13,868,908
Total	\$ 373,594,166

WEST	
Rate Class	Total MO Normalized Revenue
Residential Service	\$ 251,387,602
Small General Service	\$ 27,732,526
Large General Service	\$ 16,930,115
Large Volume Service	\$ 735,836
Unmetered Gaslight	\$ 772
Large General Transport	\$ 2,229,084
Large Volume Transportation	\$ 16,402,043
Total	\$ 315,417,978

Q. Please briefly describe the normalized rate revenue development in this case.

A. Staff began by determining the level of revenue that Spire East and Spire West would collect on an annual basis under normal weather conditions, natural gas usage, and number of customers. Staff's analyses are based on information that is "known and measurable" such as billing determinants and the rates as stated in the tariff, which were established in Spire Missouri's most recent rate case, Case No. GR-2022-0179. Revenue was calculated by rate class with adjustment considerations such as weather normalization, customer annualization, and rate switcher analyses.

Q. What are billing determinants?

A. Billing determinants are used to create rate charges by applying a mathematical operator to interval data within a time-of-use period. Generally, billing determinants include such information as the number of customers and usage. Spire East and Spire West variable charges are determined by the amount of each customer's usage and the (per unit) rates that are applied to that usage. Each customer also pays a flat monthly customer charge dependent upon each customer's rate class. Some classes may also have additional set fees such as an Electronic Gas Meter ("EGM") charge for the equipment monitoring use or a Demand charge based on

1 the maximum amount of usage that a customer uses in any interval, typically 15 minutes, during
2 the billing cycle.

3 Q. Are new billing determinants being established in this rate case?

4 A. Yes. New billing determinants are established for each rate class based on
5 normalized revenue (Schedule MJR-d2). Billing determinants must be determined in every rate
6 case.

7 Q. How and in what form were customer data, including energy use, provided
8 by Spire?

9 A. Staff requested data such as customer usage and number of customers via Data
10 Requests (“DR”).¹ These datasets were provided to Staff as monthly summaries of customer
11 use and bill count including summaries of billing cycles separately for Spire East and Spire
12 West. In addition to the typical 18 billing cycles, non-billing and weekend billing cycle
13 summaries were also present each month. Staff requested individual customer data by
14 month/billing cycle and separated by class, and Staff was directed to the monthly summary
15 sheets supplied that only contain composite billing numbers and usage separated by
16 Residential, Commercial, and Industrial customer totals. In a meeting with Spire Missouri on
17 February 19, 2025, Staff asked if the “raw data” that is consolidated to the summary sheets
18 could be provided separated by rate class. Staff was told that Spire does not pull data in that
19 way, so it would take a new query to be set up and a lot of time to manage such an ask.

20 Q. Why is the dataset format important?

21 A. Staff must rely on the accuracy of the monthly summary sheets for customer
22 numbers and usage and does not include all billed charges that would show up on a customer’s

¹ Staff DR 0109, DR 0169, and DR 0168.

1 bill such as EGM charges. Therefore, normalized revenue calculations are only as accurate as
2 the summarized data provided by Spire Missouri.

3 Q. Was information shared suggesting data supplied may be inaccurate for revenue
4 and adjustments?

5 A. Yes. During meetings with Spire Missouri on April 1 and April 3, 2025,
6 Spire Missouri brought to Staff's attention that customer counts for the test year are "artificially
7 inflated" due to back billing for up to 12 months of usage in a single month to customers during
8 the test year starting around March 2024.

9 Q. Why was Spire Missouri back billing customers for up to 12 months of usage in
10 a single month?

11 A. Spire Missouri stated they began looking at meters that were not physically
12 disconnected when a customer closed their account due to moving and gas service continued
13 with a new resident without an account attached to the gas usage. The new accounts that were
14 then connected to these meters to keep service were back-billed, meaning billed for gas usage
15 in prior months during which the same resident occupied the residence but did not have a Spire
16 Missouri account, for gas usage for up to one year. This meant that a significant amount of gas
17 usage is inaccurately distributed among months, and some back-billed gas usage may not have
18 occurred during the test year. Customer bill numbers and potentially customer charges may
19 also be inflated during months of back-billing.

20 Q. Has Spire Missouri provided account data for the customers involved in this
21 back-billing?

22 A. No. Spire is gathering this data to provide to Staff.

23 Q. Could this impact Revenue and Adjustment calculations?

1 A. Potentially, yes. Staff will not know until customer data related to back billing
2 has been received and analyzed. For now, Staff has calculated revenues with the data provided
3 to Staff from Spire Missouri. Staff will re-evaluate for the update period ending May 31, 2025.

4 **WEATHER NORMALIZATION ADJUSTMENT**

5 Q. How is weather related to gas usage?

6 A. Although natural gas can be used by multiple home appliances, such as ovens,
7 clothes dryers, and water heaters, the primary use for natural gas in Missouri is space heating.
8 Space heating use is heavily dependent on weather conditions. Abnormal weather conditions,
9 such as winter storms or periods of warmer-than-usual temperatures, have predictable and
10 sometimes profound impacts on natural gas usage. Therefore, test year gas usage and revenue
11 need to be adjusted to “normal” weather so that rates will be designed on the basis of normal
12 weather rather than any anomalous weather that occurred during the test year.

13 Q. What weather data is needed to calculate this adjustment?

14 A. Weather data consists of actual and normal weather, including heating degree
15 days (“HDD”)² that coincide with Spire Missouri’s test year and update period. Staff’s weather
16 normalization adjustment relied on actual and 30-year normal weather data provided by witness
17 Michael L. Stahlman.

18 Q. Are different weather data sets provided for different regions of Missouri?

19 A. Yes. Weather data from St. Louis Lambert International Airport (“STL”) and
20 Kansas City International Airport (“MCI”) were analyzed by Staff. These different regional

² HDDs are based on the difference of the mean daily temperature (“MDT”) from a comfort level of 65°F. HDDs are calculated as the difference between 65°F and the MDT when the MDT is below 65°F and equal to zero when the MDT is above 65°F.

1 weather data sets were utilized due to their approximate location to Spire Missouri's gas
2 customer base. Weather data from STL was used for the service territories of Spire East, and
3 MCI was used for the service territories of Spire West.

4 Q. What is weather normalization?

5 A. Weather normalization is the process of adjusting energy consumption to
6 account for the impact of weather during the test year. This process reduces the influence of
7 abnormal weather from the test year in order to provide a more accurate representation of
8 "normal" energy usage, by evaluating weather over a period of many years. Since the primary
9 use of natural gas is for space heating, the level of natural gas sales is dependent upon weather
10 conditions. It is important to remove the influence of abnormal weather from the test year in
11 order to provide a more accurate representation of "normal" natural gas usage. For example, if
12 anticipated natural gas sales are overstated because the weather in the test period was colder
13 than normal, then Spire Missouri may under-recover its revenue requirement. On the flip side,
14 if anticipated natural gas sales are understated because the weather in the test period was warmer
15 than normal, then Spire Missouri may over-recover its revenue requirement.

16 Q. How did Staff calculate weather normalized sales?

17 A. Staff's weather normalized adjustments of natural gas sales account for
18 deviations from what are considered normal weather conditions that occurred during the test
19 year. Normal weather conditions are at or near the average climatological value over a certain
20 period. Staff adjusted monthly natural gas volumes to normal by first consolidating non-billing
21 and weekend billing cycle data with the standard billing cycle³ data so that all energy use and

³ 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 are 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.

1 customer counts were accounted for in analyses. Then, Staff adjusted the annual number of
2 days for each billing cycle to 365, which adjusts for the Leap Day within this test year. Staff
3 then calculated the average use per customer per day for each of the twelve months ending
4 December 2024 based on the number of customers, usage, and HDDs per billing cycle per
5 month for Spire Missouri's RGS, SGS, and LGS rate classes; those classes traditionally
6 impacted by weather. Staff did not perform a weather normalization calculation for LV and
7 Transportation classes because energy use in these classes is not generally impacted by weather
8 due to being a small number of Industrial and Commercial customers with large usage. After
9 these adjustments, the difference between normal and actual HDDs were calculated for each
10 billing cycle, and those differences were multiplied by the estimate rendered from a regression
11 analysis to determine the change in usage for each billing cycle due to abnormal weather.

12 Q. Please describe the regression analysis.

13 A. The regression equation develops quantitative measures that describe the
14 relationship between daily usage per customer in gas per hundred cubic feet ("ccf") to the daily
15 HDDs. The regression equation estimates a change in the daily natural gas usage per customer
16 whenever the daily average weather changes by an HDD. These values can then be used to
17 adjust each class's monthly usage for normal weather conditions.

18 Q. Please describe the Weather Normalization Adjustment values for the three
19 customer classes- RGS, SGS, and LGS of Spire East.

20 A. Staff conducted analyses of weather normalization for RGS, SGS, and LGS for
21 the test year as updated through December 31, 2024, (Table 3). Staff's overall weather
22 normalization analyses determined that the weather during the test year was warmer than
23 normal. Therefore, actual sales were lower than normal. In order to account for the reduced

sales and warmer weather, Staff made an adjustment to increase natural gas sales to reflect sales for “normal” weather conditions. Staff’s analyses resulted in an approximate increase of 5.87% for the RGS class, an approximate increase of 4.44% for the SGS class, and an increase of approximately 3.32% 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.

Table 3, Spire East rate classes: Actual usage and weather adjustment

Spire East	RGS		SGS		LGS	
Billing Month	Actual Usage (Ccf)	Weather Adj. (Ccf)	Actual Usage (Ccf)	Weather Adj. (Ccf)	Actual Usage (Ccf)	Weather Adj. (Ccf)
January	82,199,233	210,169	14,593,149	(769,811)	18,920,552	(1,072,828)
February	80,397,491	113,814	15,822,226	(198,869)	21,520,342	(563,691)
March	44,677,823	10,622,135	9,180,012	2,026,007	19,139,315	3,077,538
April	32,743,197	1,902,277	5,866,578	360,161	10,921,148	519,784
May	15,103,188	1,502,366	2,832,571	266,617	7,288,465	321,217
June	9,813,192	1,735,573	1,980,691	323,775	4,682,461	397,259
July	8,030,983	84,314	1,524,217	17,460	4,143,622	25,785
August	8,120,396	(232,786)	1,720,995	(38,173)	4,287,580	(54,515)
September	8,379,624	620,087	1,665,967	99,508	4,366,693	100,065
October	10,410,249	2,202,091	1,883,252	375,002	5,069,768	401,183
November	20,913,358	3,313,170	3,307,960	589,258	6,998,650	761,714
December	61,786,751	393,525	10,359,201	87,910	14,864,448	143,423
Total	382,575,485	22,466,736	70,736,819	3,138,846	122,203,044	4,056,932
Percent Change		5.87%		4.44%		3.32%

Q. Please describe the Weather Normalization Adjustment values for the three customer classes- RGS, SGS, and LGS of Spire West.

A. Staff conducted analyses of weather normalization for RGS, SGS, and LGS for the test year as updated through December 31, 2024 (Table 4). Staff’s weather normalization analyses of Spire West gas sales resulted in an increase in natural gas sales because the weather during the test year was warmer than normal. Analyses resulted in an approximate increase of 15.87% for the RGS class, an approximate increase of 15.68% for the SGS class, and an increase of approximately 12.35% for the LGS class (Table 4). These adjustments account for changes in sales due to abnormal weather and the annual number of days in the billing cycle.

Table 4, Spire West rate classes: Actual usage and weather adjustment

Spire West	RGS		SGS		LGS	
Billing Month	Actual Usage (Ccf)	Weather Adj. (Ccf)	Actual Usage (Ccf)	Weather Adj. (Ccf)	Actual Usage (Ccf)	Weather Adj. (Ccf)
January	68,806,165	(89,579)	12,686,811	(66,914)	10,082,985	(297,048)
February	63,242,219	5,482,477	12,390,503	916,395	10,863,139	841,997
March	34,772,233	12,310,082	6,240,113	2,340,393	9,295,073	2,142,544
April	25,496,583	7,043,353	4,505,238	1,301,976	5,219,633	1,080,786
May	11,016,453	4,902,553	2,016,341	892,895	2,872,467	760,741
June	6,984,739	1,319,642	1,400,572	263,851	1,941,917	214,327
July	5,835,566	117,736	1,204,373	25,337	1,738,037	21,250
August	5,929,891	(165,684)	1,214,809	(28,548)	1,659,773	(35,628)
September	5,846,719	898,209	1,169,055	159,319	1,869,719	141,498
October	7,174,431	4,633,481	1,338,888	824,291	2,085,376	694,084
November	15,329,963	6,454,437	2,516,695	1,179,636	3,708,867	995,380
December	48,352,722	4,512,304	8,514,543	844,753	7,327,720	682,624
Total	298,787,684	47,419,012	55,197,940	8,653,383	58,664,706	7,242,554
Percent Change		15.87%		15.68%		12.35%

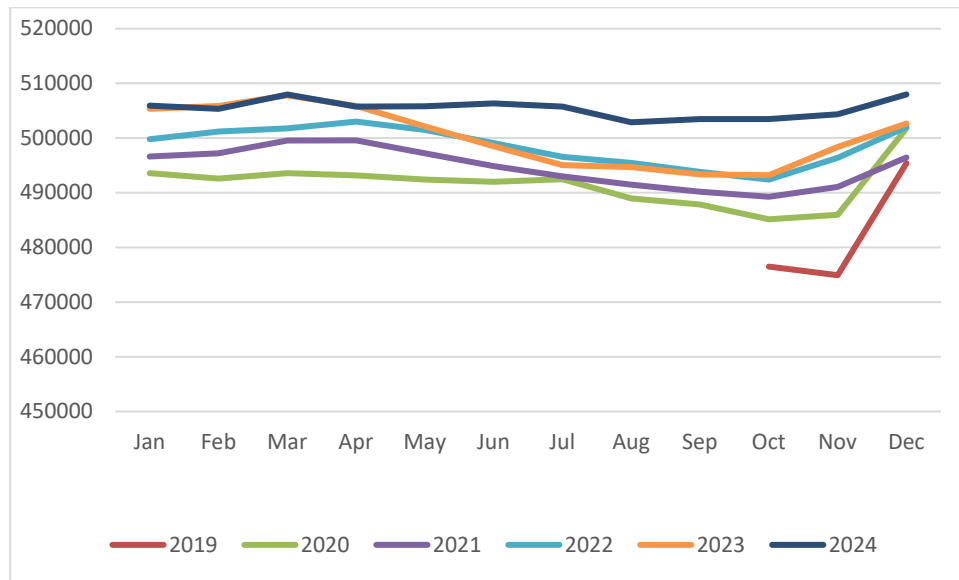
ANNUALIZED CUSTOMER ADJUSTMENT

Q. How does Staff calculate annualized customer numbers?

A. Customer growth or loss is analyzed to determine if revenue adjustments are necessary to reflect the ongoing level of revenue based on customer count analyses after weather normalization, if weather normalization is conducted. Natural gas customers tend to fluctuate seasonally over a 12-month period, with some customers leaving the system during the spring and summer months and then rejoining the system during the fall and winter months. Staff has analyzed customer numbers and usage for all rate classes for Spire East and Spire West to determine seasonality and annualization. In order to annualize gas revenues for customer growth or loss, Staff utilizes at least three consecutive years of customer counts. Three methods utilized for this adjustment include: 1) end of period customer levels due to constant customer growth, 2) end of period customer levels factored for the effects of seasonality, and 3) test year or update levels of customers. Customer counts are first graphed for each month for multiple 12-month periods to determine change from month to month and year to year. Consistent change or curves for summer versus winter months each year suggests

seasonality. For example, the RGS class customer counts for both Spire East and Spire West (see Graph 1 below for Spire West) have historically portrayed over the past four years a consistent seasonality curve. However, for the 12-months ending December 2024, RGS customer counts for both Spire East and Spire West did not have a profound seasonality curve.

Graph 1, Spire West RGS Customer Counts: Comparing 12-month Periods



Q. What do you think has caused a lack of seasonality in the RGS class in 2024?

A. The “artificial inflation” of back billing referenced above or a substantial decline of typical disconnects and reconnects are the most likely cause of this lack of seasonality.

Q. Can this impact the Customer Annualization Adjustment?

A. Yes. The Customer Annualization Adjustment may need to be re-evaluated for the True-up period through May 31, 2025, once updated data is provided by Spire Missouri.

RATE SWITCHERS

Q. What are rate switchers?

1 A. Rate switching is when customers switch which rate schedule they will be served
2 or are moved from one rate class to another during the test year or update period. Customers
3 continually switch rate classes. There are many reasons for this change, but it is based on
4 customer usage being reviewed each year by Spire Missouri placing them in a different class
5 or the customer has examined current operations and performed the necessary reviews to
6 determine that a rate switch at this time would save them money on their utility bills.
7 The reasons that might trigger this switch could range from a change in operations of a customer
8 by just becoming more knowledgeable about their energy consumptions and the savings that
9 can be achieved by switching to physical operation changes as customer needs change.
10 Rate switching also often occurs after rate increases. Customers switching classes must be
11 analyzed in order to determine if it is warranted to ensure an accurate portrayal of revenues
12 under existing rates.

13 Q. How does Staff account for rate switchers?

14 A. If a customer was in a rate class at the beginning of the test year, then transferred
15 to a different rate class during the test year, the customer's billing determinants and associated
16 revenues in the original class were removed from that class' total and then added to the new
17 rate class. The customer's billing determinants were then "priced out" using the tariffs of the
18 class to which the customer switched, and those determinants and revenues were added to the
19 totals in the new class.

20 Q. Did Staff make any rate switcher adjustments?

21 A. Yes. According to customer information provided in DR 0169, several
22 customers switched between SGS and LGS and between LGS and Transportation classes for

1 Spire East, and several customers switched between SGS and LGS, LGS and LV, LGS and
2 Transportation classes, and LV and Transportation classes for Spire West during the test year.

3 Q. Were there issues with the rate switching customer data provided by
4 Spire Missouri?

5 A. Yes. Customer data for rate switchers during the test year were provided
6 separately for Spire East and Spire West. Discussions made with Spire Missouri in a meeting
7 on April 1, 2025, and a follow-up email received after the meeting determined that the files
8 were not accurately separating Spire East and Spire West customers and had other potential
9 errors. Spire Missouri agreed to run another query to provide more accurate rate switcher
10 customer data.

11 Q. Was new rate switcher customer data provided prior to testimony?

12 A. No. New rate switcher data was not provided prior to this testimony. Therefore,
13 rate switcher adjustments have been completed with original data provided, but will need to be
14 re-evaluated for the True-up period ending May 31, 2025.

15 **CONCLUSION**

16 Q. Can you summarize Staff's position regarding revenues?

17 A. Given the data available at this time, it is Staff's position that the correct
18 normalized revenues with the adjustments shown in Tables 5 and 6 are \$373,594,166 for
19 Spire East, and \$315,417,979 for Spire West, as shown in the attached schedule (Schedule
20 MJR-d3). Staff also recommends that the Commission order the use of Staff's billing
21 determinants for each rate class based on normalized revenues, also shown in the attached
22 schedules to establish rates.

Table 5, Spire East Adjustments

EAST			
<u>Rate Class</u>	<u>Rate Switching</u>	<u>Weather, Days & Rate</u> <u>Adj.</u>	<u>Customer</u> <u>Annualization</u>
Residential Service		\$ 8,033,253	\$ 264,008
Small General Service	\$ 610,511	\$ 753,982	\$ 71,290
Large General Service	\$ (908,497)	\$ 636,492	\$ (235,115)
Large Volume Service			\$ -
Unmetered Gaslight			
General LP			
Large General Transportation	\$ 12,454		\$ -
Total	\$ (285,532)	\$ 9,423,727	\$ 100,183

Table 6, Spire West Adjustments

WEST			
<u>Rate Class</u>	<u>Rate</u> <u>Switching</u>	<u>Weather, Days & Rate</u> <u>Adj.</u>	<u>Customer</u> <u>Annualization</u>
Residential Service		\$ 17,309,809	\$ 2,446,373
Small General Service	\$ (64,485)	\$ 1,610,906	\$ (132,117)
Large General Service	\$ (759,356)	\$ 1,145,989	\$ 7,710
Large Volume Service	\$ (326,586)		
Unmetered Gaslight			
Large General Transport	\$ 153,056		
Large Volume Transportation	\$ 344,872		
Total	\$ (652,499)	\$ 20,066,704	\$ 2,321,966

Q. Will Staff adjust these calculations when more accurate data is made available by Spire Missouri?

A. Staff may make adjustments depending on the quality of the data presented.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc. d/b/a Spire's)
Request for Authority to Implement a General) Case No. GR-2025-0107
Rate Increase for Natural Gas Service Provided)
in the Company's Missouri Service Areas)

AFFIDAVIT OF MELISSA J. REYNOLDS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.



MELISSA J. REYNOLDS

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 18th day of April 2025.





Notary Public

Melissa J. Reynolds

I serve as a Senior Research/Data Analyst for the Water, Sewer, Gas, & Steam Department, in the Industry Analysis Division of the Missouri Public Service Commission. I have been employed by the State of Missouri since 2011, and have been with the Commission since October 1, 2024. My duties as Senior Utility Regulatory Specialist involve multiple aspects of the Commission's regulation of water, sewer, gas, and steam industries including case management, customer complaints, drafting and reviewing testimony, and working with the utilities to promote best practices in their provision of safe and adequate service at just and reasonable rates.

Educational Background and Work Experience

I have Master of Science degree in Biology from Missouri State University in Springfield, Missouri. Prior to joining the Public Service Commission, I was employed by the Missouri Department of Health and Senior Services (DHSS) – Bureau of Environmental Epidemiology (BEE) from 2015 to 2024 as an Environmental Specialist, Senior Epidemiologist, and Program Manager over the Wastewater Surveillance Program, as well as being a member of the Radiological Emergency Response team. I started my state employment at the State Public Health Laboratory (SPHL) in 2011 as a Scientist where I continue to work part-time in the Newborn Screening Unit. I also teach Human Anatomy and Physiology courses at State Fair Community College in Sedalia, MO. I have competence in environmental testing of drinking water, environmental inspections, and installation of on-site wastewater systems. I also have vast experience with grant writing and management.

Previous Testimony Before the Public Service Commission

Case Number	Company	Type of Testimony	Issue
GR-2024-0369	Ameren Missouri	Rebuttal	Weather Normalization, Revenue

Recommendation/Memorandum

Case Number	Company	Issue
HT-2024-0296	Evergy Missouri West	Quarterly Cost Adjustment (QCA) 4 th quarter

SPIRE EAST**Residential (RGS)**

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	7,492,161	\$ 20.00	\$ 149,843,223
Summer Ccf			
First 50	62,578,186	0.32877	\$ 20,573,830
Over 50	5,338,650	0.39835	\$ 2,126,651
Winter Ccf			
First 50	337,580,891	0.36538	\$ 123,345,306
Over 50	5,648	0.36538	\$ 2,064
Total	405,503,375		\$ 295,891,074

Small General Service (SGS)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	443,513	\$ 40.72	\$ 18,059,866
Ccf	73,989,132	0.24021	\$ 17,772,929
Total			\$ 35,832,795

Large General Service (LGS)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	53,967	\$ 145.43	\$ 7,848,450
Ccf	124,761,380	0.15689	\$ 19,573,813
Total			\$ 27,422,263

Large Volume (LV)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	343	\$ 1,063.73	\$ 364,859.39
Demand	299,928	\$ 1.12	\$ 335,919.02
Block 1 Ccf	3,846,021	0.03008	\$ 115,688.31
Block 2 Ccf	160,705	0.00882	1417.4181
Total			\$ 817,884

Liquid Propane (LP)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	399.5	\$ 20.87	\$ 8,337.57
Gallons	12592.26	0.26	\$ 3,273.99
Total			\$ 11,612

Unmetered Gas (UG)

Final Billing Determinants	Determinants	Rates	Revenue
Customer Charge	782.73	\$ 6.99	\$ 5,471
each additional	7,048	\$ 5.98	\$ 42,145
Total			\$ 47,616

Transporation (LG TS)

Final Billing Determinants	Determinants	Rates	Revenue
Customer Charge	1,737	\$ 2,211.60	\$ 3,841,549
Special Contract Customer Charge	12	\$ 750.00	\$ 9,000
Block 1	54,461,257	0.02559	\$ 1,393,664
Block 2	124,415,798	0.01071	\$ 1,332,493
Demand	11,818,099	0.612	\$ 7,232,676
Special Contract through Feb 2020	276,370	0.0039	\$ 1,078
Special Contract starting Mar 2020	1,004,840	0.0032	\$ 3,215
Special Contract Demand	69,900	0.612	\$ 42,779
Total			\$ 13,856,454

SPIRE WEST**Residential (RGS)**

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	6,114,739	\$ 20.00	\$ 122,294,779
Summer Ccf			
First 50	50,388,177	0.3366	\$ 16,960,660
Over 50	2,382,046	0.41527	\$ 989,192
Winter Ccf			
First 50	297,141,937	0.37404	\$ 111,142,970
Over 50	-	0.37404	
Total			\$ 251,387,602

Small General Service (SGS)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	367,840	\$ 43.70	\$ 16,074,629
Block 1 First 5,000 Ccf	62,522,309	0.18592	\$ 11,624,148
Block 2 Over 5,000 Ccf	422,676	0.23241	\$ 98,234
Total			\$ 27,797,011

Large General Service (LGS)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	38,254	\$ 189.61	\$ 7,253,256
Ccf	65,955,984	0.15823	\$ 10,436,215
Total			\$ 17,689,471

Large Volume (LV)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	381	\$ 1,595.40	\$ 608,326
Fixed monthly meter charge if	36	\$ 293.38	\$ 10,562
Summer			
Block 1 First 36,000 Ccf	1,229,130	0.05129	\$ 63,042
Block 2 Over 36,000 Ccf	1,550,092	0.03399	\$ 52,688
Winter			
Block 1 First 36,000 Ccf	1,941,630	0.08217	\$ 159,544
Block 2 Over 36,000 Ccf	2,624,987	0.0641	\$ 168,262
Total			\$ 1,062,423

Unmetered Gas (UG)

Final Billing Determinants	Determinants	Rates	Revenue
Customer Charge per Light unit	24 5	\$ 6.43	\$ 154
Total			\$ 772

Transporation (LG TS)

Final Billing Determinants	Determinants	Rates	Revenue
Customer charge	2,751	\$ 195.39	\$ 537,518
EGM	2,825	\$ 25.00	\$ 70,625
Nov-March ccf	8,357,479	\$0.13268	\$ 1,108,870
Apr-Oct ccf	4,695,460	\$0.07646	\$ 359,015
Total			\$ 2,076,028

Large Volume Transporation (LV TS)

Final Billing Determinants	Determinants	Rates	Revenue
Customer Charge	4,807	\$ 1,238.36	\$ 5,952,797
Fixed monthly meter charge if	992	\$ 393.38	\$ 390,233
EGM Charge	5,381	\$ 25.00	\$ 134,531
Winter (Nov-March) ccf Block	\$ 38,208,940	\$ 0.05512	\$ 2,106,077
Winter Block 2	\$ 85,496,750	\$ 0.04300	\$ 3,676,360
Summer (Apr-Oct) ccf Block 1	\$ 40,575,210	\$ 0.03441	\$ 1,396,193
Summer Block 2	\$ 102,632,790	\$ 0.02280	\$ 2,340,028
Special Contract Ccf	\$ 7,619,110	\$ 0.00800	\$ 60,953
Total			\$ 16,057,171

WEST

Rate Class	Revenue	12 Month	12 Month			Customer	Total MO		
	ordered GR-	Ending Sep.	Ending Dec			Annualization	Normalized	Summer usage	Winter usage
	2022-0179	2024 Revenue	2024 Revenue	Adj	Rate Switching	& Rate Adj.	Revenue		
Residential Service	\$ 258,173,012	\$ 233,750,582	\$ (2,119,162)			\$ 17,309,809	\$ 2,446,373	\$ 251,387,602	\$ 17,949,853 \$ 111,142,970
Small General Service	\$ 27,566,558	\$ 26,346,655	\$ (28,433)	\$ (64,485)		\$ 1,610,906	\$ (132,117)	\$ 27,732,526	
Large General Service	\$ 19,144,211	\$ 16,752,972	\$ (217,199)	\$ (759,356)		\$ 1,145,989	\$ 7,710	\$ 16,930,115	
Large Volume Service	\$ 1,320,522	\$ 1,053,975	\$ 8,447	\$ (326,586)				\$ 735,836	\$ - \$ -
Unmetered Gaslight	\$ 1,852	\$ 772						\$ 772	
Large General Transport	\$ 2,072,736	\$ 2,028,745	\$ 47,284	\$ 153,056				\$ 2,229,084	
Large Volume Transportation	\$ 16,054,710	\$ 16,032,628	\$ 24,544	\$ 344,872				\$ 16,402,043	
Total	\$ 324,333,601	\$ 295,966,327	\$ (24,150,394)	\$ (652,499)	\$ 41,932,579	\$ 2,321,966	\$ 315,417,979		

Spire Missouri Calculations	Rate Class	Test Year	Rate Switching	Weather, Days		Customer	Spire MOW G-1		
				& Rate	Adj.	Variance Adjustment		Rev	
	Residential Service	\$ 210,948,501		\$ 26,904,763		\$ (4,281,254)	\$ 233,572,010		-7.63%
	Small General Service	\$ 23,126,936	\$ (136,952)	\$ 3,192,620			\$ 26,319,556		-5.37%
	Large General Service	\$ 14,248,539	\$ (413,934)	\$ 2,515,890			\$ 16,764,429		-0.99%
	Large Volume Service	\$ 1,076,550					\$ 1,076,550	LV, SL, LP, VF	31.58%
	Unmetered Gaslight								
	Large General Transport	\$ 17,779,131					\$ 17,779,131	Transporation	-4.79%
	Large Volume Transportation								
		\$ 267,179,657	\$ (550,885)	\$ 32,613,273	\$ (4,281,254)	\$ 295,511,676			

EAST

<u>Rate Class</u>	<u>12 Month Ending Sep</u>	<u>12 Month Ending Dec</u>		<u>Weather, Days &</u>	<u>Customer</u>	<u>Total MO</u>
	<u>2024 Revenue</u>	<u>2024 Revenue Adj</u>	<u>Rate Switching</u>	<u>Rate Adj.</u>	<u>Annualization</u>	<u>Normalized</u>
						<u>Revenue</u>
Residential Service	\$ 287,969,771	\$ (375,958)		\$ 8,033,253	\$ 264,008	\$ 295,891,074
Small General Service	\$ 34,688,373	\$ 319,151	\$ 610,511	\$ 753,982	\$ 71,290	\$ 36,443,306
Large General Service	\$ 26,631,547	\$ 389,339	\$ (908,497)	\$ 636,492	\$ (235,115)	\$ 26,513,766
Large Volume Service	\$ 801,355	\$ 16,529			\$ -	\$ 817,884
Unmetered Gaslight	\$ 47,870	\$ (254)				\$ 47,616
General LP	\$ 11,591	\$ 20				\$ 11,612
Large General Transportation	\$ 12,038,454	\$ 1,818,001	\$ 12,454		\$ -	\$ 13,868,908
Total	\$ 362,188,960	\$ 2,166,827	\$ (285,532)	\$ 9,423,727	\$ 100,183	\$ 373,594,166

<u>Rate Class</u>	<u>Test Year</u>	<u>Rate Switching</u>	<u>Weather, Days &</u>	<u>Customer</u>	<u>Spire MOE G-1</u>
			<u>Rate Adj.</u>	<u>Variance</u>	<u>Rev</u>
				<u>Adjustment</u>	
Residential Service	\$ 265,323,691		\$ 26,904,763	\$ (4,281,254)	\$ 287,947,200
Small General Service	\$ 31,633,977	\$ (136,952)	\$ 3,192,620		\$ 34,689,645
Large General Service	\$ 24,563,134	\$ (413,934)	\$ 2,515,890		\$ 26,665,090
Large Volume Service	\$ 861,492				\$ 861,492
Unmetered Gaslight					
General LP					
Large General Transportation	\$ 13,814,997				\$ 13,814,997
Total	\$ 336,197,290	\$ (550,885)	\$ 32,613,273	\$ (4,281,254)	\$ 363,978,423

Spire Missouri Calculations

LV, SL, LP, VF