

Exhibit No.:
Issue(s): *Rate Design; Data Accuracy; Class Cost of Service Study; Miscellaneous Service Charges; Propane Revenues; Spire Income Eligible Rate*
Witness: *Keri Roth*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Rebuttal Testimony*
Case No.: *GR-2025-0107*
Date Testimony Prepared: *May 30, 2025*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

WATER, SEWER, GAS, AND STEAM DEPARTMENT

REBUTTAL TESTIMONY

OF

KERI ROTH

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

CASE NO. GR-2025-0107

*Jefferson City, Missouri
May 2025*

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REBUTTAL TESTIMONY OF
KERI ROTH
SPIRE MISSOURI INC.,
d/b/a Spire
CASE NO. GR-2025-0107**

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OF

KERI ROTH

SPIRE MISSOURI INC.,
d/b/a Spire

CASE NO. GR-2025-0107

Q. Please state your name and business address.

A. My name is Keri Roth and my business address is 200 Madison Street,
P.O. Box 360, Jefferson City, Missouri 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission (“Commission”) as a Lead Senior Utility Regulatory Auditor in the Water, Sewer, Gas, and Steam Department, Industry Analysis Division.

Q. Are you the same Keri Roth who filed Class Cost of Service and Rate Design direct testimony filed May 7, 2025, in this case?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of this rebuttal testimony is to respond to Spire Missouri, Inc., d/b/a Spire (“Spire Missouri”) Witnesses Timothy S. Lyons, regarding Spire Missouri’s rate design proposal, Julie Johnson, regarding Spire Missouri’s proposed changes to miscellaneous service charges, and David A. Yonce, regarding Spire Missouri’s proposal to remove revenues associated with propane from its cost of service calculation. I will also address known calculation errors in Staff’s Class Cost of Service filed with direct testimony on May 7, 2025.

1 Additionally, I will respond to Office of the Public Counsel's ("OPC") Witness Geoff Marke
2 regarding his proposal for a Spire Income Eligible Rate.

3 **RATE DESIGN**

4 Q. Has Spire Missouri proposed any changes to its current rate design structure?

5 A. Yes. Spire Missouri has proposed to remove the inclining block rate structure
6 for the Residential class summer rates.¹ Additionally, Spire Missouri has proposed to
7 consolidate its rate structures so that it will have customer classes and associated rate structures
8 consistent between both Spire East and Spire West territories.²

9 Q. Has Staff proposed any changes to Spire Missouri's current rate
10 design structure?

11 A. No. As shown in Staff's Class Cost of Service and Rate Design direct testimony,
12 Staff has not recommended any changes to the current design structure of Spire Missouri's gas
13 rates. Staff continues to recommend a set Residential monthly Customer Charge with a flat
14 volumetric Delivery Charge. Additionally, Staff has not recommended any changes to
15 Spire Missouri's rate territories (i.e., Spire East and Spire West).

16 Q. Is Staff supportive of Spire Missouri's proposal to remove the inclining block
17 rate structure for the Residential class summer rate?

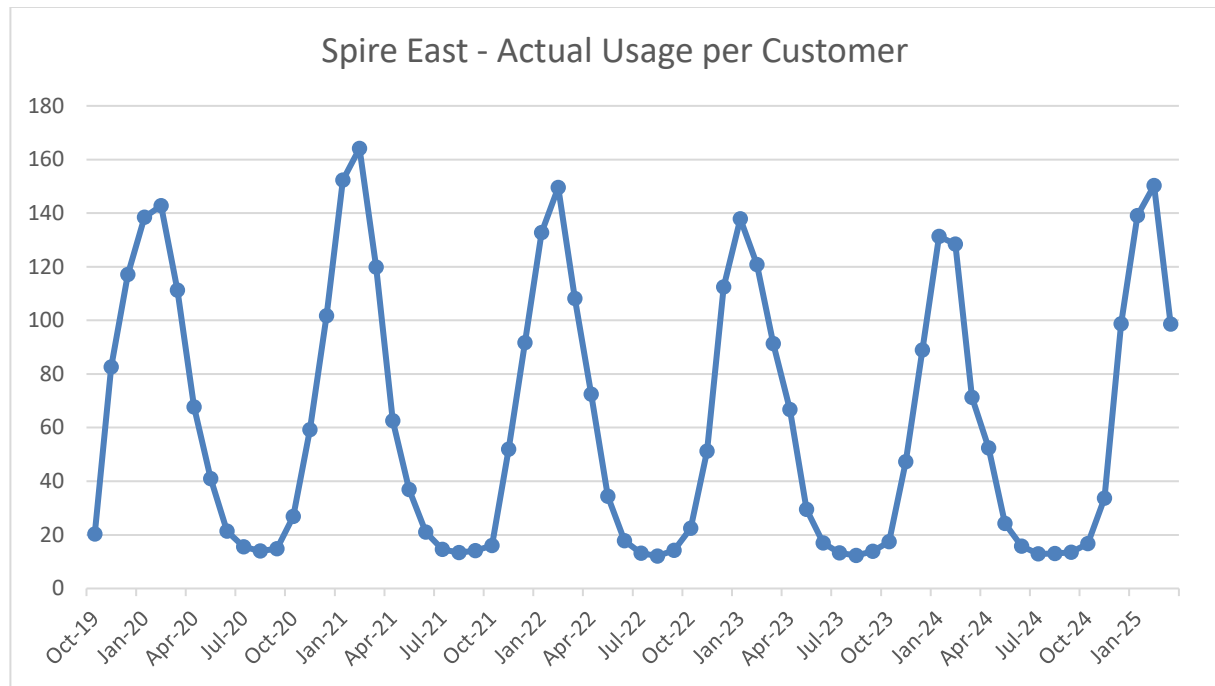
18 A. Staff does not object to Spire Missouri's proposal to remove the inclining
19 block rate.

20 Q. Has the summer block rate had an effect on customer usage?

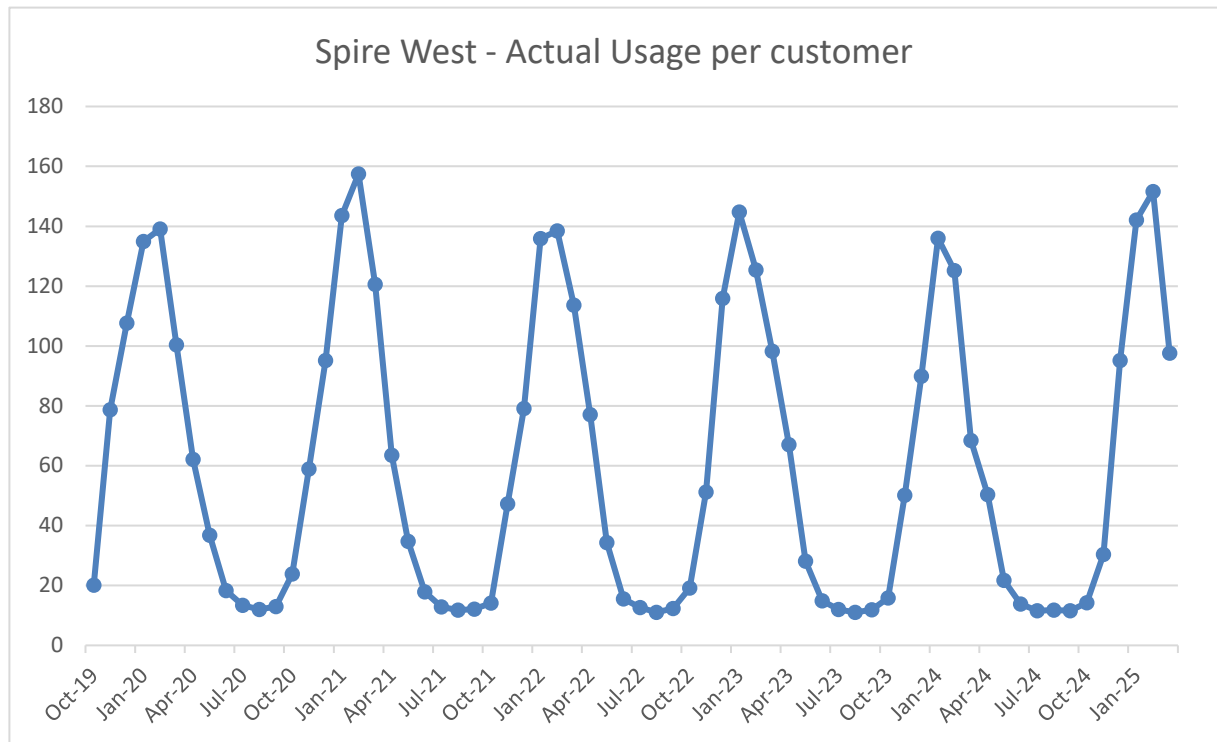
¹ Spire Missouri Witness Timothy S. Lyons, Rate Design direct testimony, page 28, lines 3 – 6.

² Spire Missouri Witness Julie Johnson, direct testimony, page 3, lines 8 – 12.

A. No, customer usage has been relatively stable before and after the inclining block rate was implemented as shown in the charts below.³ Staff does not feel changing this portion of the rate design will have a negative effect on customers or Spire Missouri.



³ Schedules KR-r1 and KR-r2, attached to this rebuttal testimony.



2

3 Q. Is Staff supportive of Spire Missouri's proposal to consolidate its rate structures

4 so that it will have customer classes and associated rate structures consistent between both

5 Spire East and Spire West territories?

6 A. No. Staff opposes Spire Missouri's proposal to move rates to full consolidation.

7 Having Spire East and Spire West separated into two different territories allows rates to be

8 developed to more closely align with the actual cost to provide service to those territories.

9 Currently, Staff does not find any benefit to customers to propose a full consolidation of rates

10 between the two territories. By moving to full consolidation of rates, this would move further

11 from cost causation being the driver for customer rates.

12 **DATA ACCURACY**

13 Q. Does Staff have concerns regarding the billing data provided by Spire Missouri?

1 A. Yes. Staff Witness Melissa J. Reynolds provided direct testimony, filed on
2 April 23, 2025, explaining several concerns that Staff has regarding the billing data provided
3 by Spire Missouri. For example, Staff requested that the “raw data” provided by Spire Missouri
4 be separated by rate class. Currently, data is only separated by Residential, Commercial, and
5 Industrial. Spire Missouri indicated they do not pull data in such a way and a new database
6 query would need to be developed.⁴ Additionally, Spire Missouri has indicated during meetings
7 with Staff that customer counts during the test year are “artificially inflated” due to back billing.
8 Some customers were billed for up to 12 months of usage in a single month starting around
9 March 2024.⁵

10 Q. How do these concerns affect Staff’s Class Cost of Service (“CCOS”) and rate
11 design proposal?

12 A. Staff’s CCOS and rate design are only as accurate as the data provided by
13 Spire Missouri. Accurate customer counts and usage data are needed to calculate normalized
14 revenues which are a portion of the CCOS. Additionally, this data is used to calculate accurate
15 billing determinants to calculate Staff’s proposed rate design.

16 Q. Has Spire Missouri provided additional data regarding back billing since the
17 filing of direct testimony?

18 A. Spire Missouri has not provided additional data as of the filing date of this
19 testimony. Staff Witness Melissa J. Reynolds further discusses Spire Missouri’s proposed
20 Customer Variance Adjustment and Staff’s opposition and reasoning in her rebuttal testimony.

⁴ Staff Witness Melissa J. Reynolds, direct testimony, page 4, lines 16 – 19.

⁵ Staff Witness Melissa J. Reynolds, direct testimony, page 5, lines 3 – 8.

CLASS COST OF SERVICE STUDY

Q. Is Staff aware of calculation errors in workpapers provided to other parties in this case as supporting documentation to its CCOS?

A. Yes.

Q. Can you please briefly describe the errors that Staff is aware of?

A. Yes. First, in Staff's allocation factors used in its CCOS, the usage was inaccurately summed for Large Volume Service, Unmetered Gas Light Service, and Transportation Service classes.

Second, incorrect allocation factors for 'Max HDD usage' and 'Max HDD less transport' were included in the CCOS.

Lastly, Staff has a few errors relating to its Distribution Mains allocator. Staff attempted to utilize the Average and Excess method to calculate the Distribution Mains allocator as Staff has used in prior cases. During this process, Staff erroneously utilized incorrect data for coincident peak ("CP") and non-coincident peak demand ("NCP"). However, when attempting to correct errors, Staff discovered that Spire Missouri did not fully provide data for each rate class as requested.⁶

Q. Should Spire Missouri have been able to provide this data in full?

A. Yes. This has been an ongoing issue in past rate cases. For example, in case number GR-2021-0108, Staff Witness Robin Kliethermes wrote in surrebuttal testimony on page 7:

Q. What is the concern with the allocation of distribution mains?

A. Since daily demand data per rate schedule is limited in this case, allocators used by the Company and Staff to allocate cost related to distribution mains disproportionately weights the number of

⁶ Staff Data Request 0186.

customers per rate class and does not appropriately weight class usage.

Q. What alternative to the Company's mains allocation did Staff review?

A. Consistent with the Ameren Gas rate case, File No GR-2019-0077, Staff reviewed the use of an Average and Excess ("A&E") allocator for mains. While this is generally a more reasonable allocator than Spire's mains allocation, it depends on accurate coincident and non-coincident demand data. Staff developed an allocator for study purposes based on imputed demand data, as actual daily demand data is unavailable at this time for Spire. However, Spire indicated that possibly by the time of its next rate case, daily demand data could be available..."

Q. Did the lack of demand data continue to the following Spire Missouri rate case?

A. Yes. As indicated in the CCOS Direct Testimony of Staff Witness

Sarah L.K. Lange, case number GR-2022-0179, on page 5:

Q. Has Spire provided the daily demand data in this case?

A. No. The daily demand data would have been an input into Spire's CCOS, had Spire performed and provided a CCOS.⁷

Q. Did Staff submit a similar data request in the current rate case for peak demand data?

A. Yes. Staff submitted Data Request ("DR") number 0186 requesting the same information as requested in the previous rate case. However, it does not appear that data was provided for each individual rate class and does not detail which rate classes were provided. Staff recommends that the Commission order Spire Missouri to present sufficient information on peak usage with their next rate case. Similar to some of the data transparency issues mentioned by other witnesses, Staff is simply requesting Spire Missouri be able to provide its

⁷ In response to Staff DR 0243, Spire Missouri stated that it did not track the data to respond to Staff's request, which was: "Separately for Spire East and Spire West, for each calendar month, please identify the top three days of gas consumption. For each specified date, please indicate the usage, by rate schedule that occurred on that date. If this information is not available, please explain what additional information or process is needed to provide the information requested."

own data. Since this data is used to generate bills, it is a reasonable assumption that Spire Missouri can determine their peak usage for calculating a CCOS.

Q. In the absence of this data, what are Staff's intentions?

A. As with previous cases, Staff will attempt to provide an updated allocation based on Staff's review of the data provided thus far by Spire Missouri. Since this data is affected by excessive re-billing and uncertain usage distribution, the accuracy of Staff's analysis will be impacted.

MISCELLANEOUS SERVICE CHARGES

Q. Is Spire Missouri proposing any changes to its miscellaneous service charges in the effective tariff?

A. Yes. Spire Missouri is proposing the following changes to its miscellaneous service charges:

- Increase the Residential Class reconnection charge from \$65.00 to \$70.00;
- Remove the meter reading non-access charge – Spire Missouri will continue to adhere to the guidelines in its current tariff sheet number R-6.1 if unable to obtain an actual meter reading.⁸ Staff is supportive of this change so long as Spire continues to adhere to the guidelines currently set out in its tariff if unable to obtain an actual meter read.
- Remove the collection trip charge – Spire Missouri is proposing to remove this charge, because payments are no longer accepted at a customer's premises.⁹ Staff has no objection to the Company no longer accepting payments at the customer's premises and, therefore, no longer needs to charge a collection trip charge.

⁸ Spire Missouri Witness Julie Johnson, direct testimony, page 8, lines 19 – 23, and page 9, lines 1 – 13.

⁹ *Id.*

- 1 • Remove the charge related to relocating a meter from an inside to outside
2 location-Spire Missouri is proposing to remove this charge to encourage customers to
3 request, on their own, to move their meter outside without incurring a fee.¹⁰ Staff is
4 supportive of efforts to encourage meters to be moved to an outside location which
5 would be more accessible for actual meter reading data collection.
- 6 • Remove the charge related to relocating a meter from an inside location to another inside
7 location – Spire Missouri is proposing to remove this charge to encourage customers to
8 request, on their own, to move their meter outside without incurring a fee.¹¹ Again,
9 Staff is supportive of efforts to encourage meters to be moved to an outside location
10 which would be more accessible for actual meter reading data collection.
- 11 • Remove the charge related to temporarily disconnecting a service line – Spire Missouri
12 is proposing this change to align Spire West’s process to Spire East’s current process.¹²
13 Staff is supportive of Spire Missouri’s efforts to better align processes between both
14 Spire East and Spire West service territories. Change the currently set charge for
15 relocating an outside meter assembly to actual cost of time and materials;
- 16 • Change the currently set charge for adjusting the height of a meter assembly due to a
17 grade change to actual cost of time and materials;
- 18 • Change the currently set charge for relocating or expending a service line (0 – 10 feet)
19 to actual cost of time and materials;
- 20 • Remove all charges currently described in tariff P.S.C. MO. No. 9, Sheet No. 19.3; and,

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

- Align all miscellaneous service charges to be the same between both Spire East and Spire West service territories.¹³

Q. What is Staff's response to Spire Missouri's proposal?

A. Staff does not have any concerns with Spire Missouri's proposal to remove the charges from its tariff sheets as described previously, or to align all miscellaneous service charges to be the same between both Spire East and Spire West service territories. Additionally, the changes in fees proposed by Spire Missouri for meter and service relocations reasonably cover the costs associated with the services listed. Changing the currently set fees to actual cost of time and materials, as described above, appears to result in a decrease in rates for those specific miscellaneous service charges.¹⁴

PROPANE REVENUES

Q. Does Spire Missouri currently have propane as part of its gas supply portfolio?

A. Spire Missouri has taken steps to remove propane peaking facilities from its portfolio. The facilities are no longer used to serve customers; therefore, Spire Missouri is proposing to remove all propane assets, inventories, revenues and expenses from its cost of service calculation.¹⁵

Q. Did Spire Missouri actually remove all revenues from its cost of service calculation?

¹³ Spire Missouri response to Staff Data Request 0192.

¹⁴ Spire Missouri response to Staff Data Request 0188.

¹⁵ Spire Missouri Witness David A. Yonce, page 18, lines 7 – 8.

1 A. No. Spire Missouri has shifted a large majority of usage revenues from its liquid
2 propane customer class to its residential class. This is further discussed in Staff Witness
3 Melissa J. Reynolds rebuttal testimony.

4 Q. If Spire Missouri has shifted propane usage from one class to another, how does
5 this affect billing determinants for rate design?

6 A. Billing determinants for residential usage would be inaccurately inflated by
7 including propane usage, which would cause inaccurate rates to be calculated.

8 Q. Has Staff proposed to remove all propane assets, inventories, revenues and
9 expenses from its cost of service calculation?

10 A. No. As indicated in Staff Witness Keith Majors' direct testimony, Staff's
11 position was and still is that the propane cavern and related equipment have the potential to
12 provide revenue opportunities to the benefit of Spire East ratepayers.¹⁶

13 Q. Has Staff continued to propose a customer charge and usage per gallon charge
14 for liquid propane customers?

15 A. Yes. This was included in my rate design proposal filed in direct testimony
16 on May 7, 2025.

17 **SPIRE INCOME ELIGIBLE RATE PROGRAM**

18 Q. What is the Spire Income Eligible Rate program proposed by OPC
19 Witness Geoff Marke?

20 A. Dr. Marke is recommending that costs related to the residential customer
21 charged be waived for income-eligible residential customers, which includes those whose

¹⁶ Staff Witness Keith Majors, direct testimony, page 19, lines 13 – 15.

1 incomes are at or below 150% of the federal poverty line (or 60% of the State's Median Income
2 depending on which metric the Missouri Department of Social Services adopts).¹⁷

3 Q. Does Staff agree with this proposal?

4 A. At this time, Staff does not support this proposal. Staff does not believe that a
5 complete waiver of the customer charge is appropriate and it would cause other ratepayers who
6 do not choose to participate in this program to subsidize those who do, even though they may
7 be in the same economic situation.

8 Furthermore, with the recent passage of Senate Bill 4, all low-income programs are
9 going to be reviewed and it is anticipated that more uniform programs may come out of that
10 review. It is Staff's position that it is better to wait for this review to start any new
11 low-income programs.

12 Q. If the Commission is interested in a program similar to the one proposed by
13 OPC, does Staff have an alternative?

14 A. Yes. Staff would propose that instead of a 100% waiver of the customer charge
15 as proposed by OPC, that the customer charge be reduced by 75%.

16 Q. If the Spire Income Eligible Rate or an alternative as proposed by Staff is
17 approved by the Commission, does Staff have an additional proposal related to revenue loss?

18 A. Yes. Staff would propose that the revenue loss be allocated amongst all
19 customer classes, rather than only the residential class, and especially not isolated to the
20 residential customer charge.

21 Q. Does this conclude your rebuttal testimony?

22 A. Yes, it does.

¹⁷ OPC Witness Geoff Marke, direct testimony, page 11, lines 8 – 12.

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)
Rate Increase for Natural Gas Service Provided)
in the Company's Missouri Service Areas)

Case No. GR-2025-0107

AFFIDAVIT OF KERI ROTH

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW KERI ROTH and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Rebuttal Testimony of Keri Roth*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.



KERI ROTH

JURAT

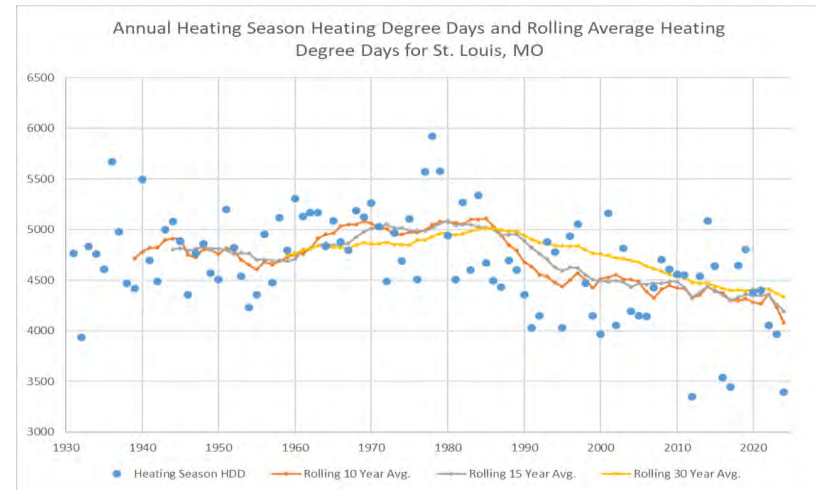
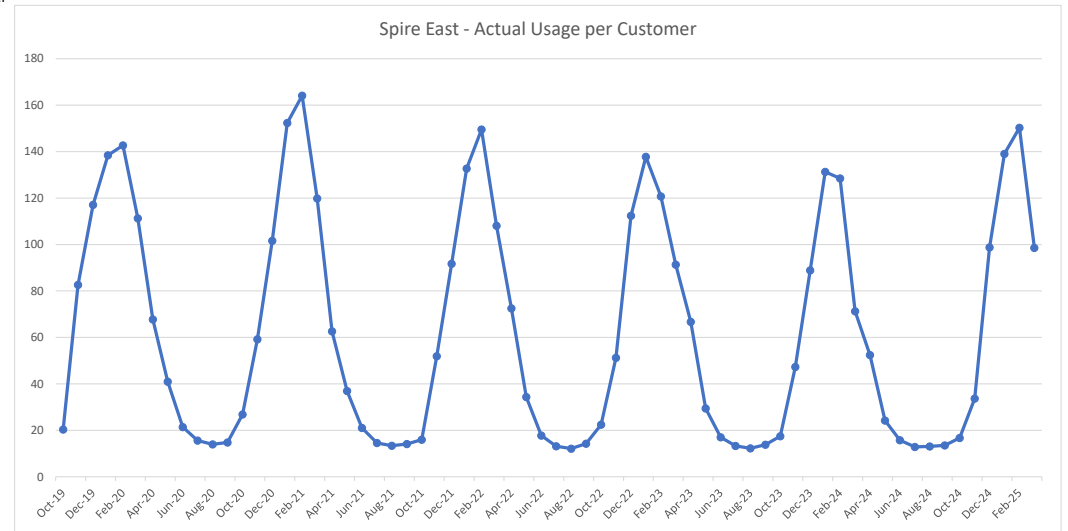
Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27th day of May 2025.





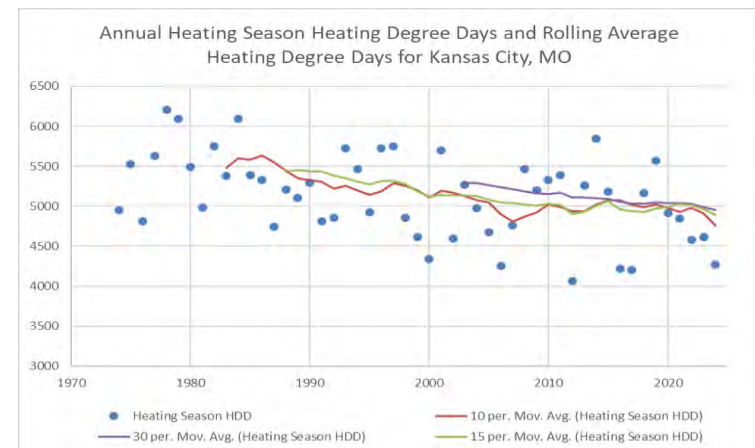
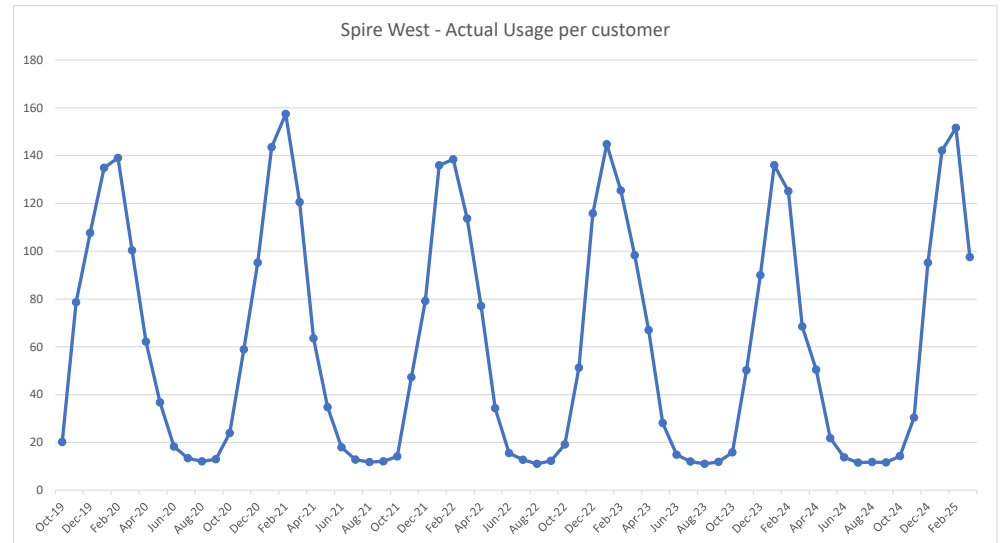
Notary Public

	Customer	Block 1 Winter	Block 1 Summer	Block 2 Winter	Block 2 Summer	Total usage	Actual Usage per Customer
Oct-19	600296.8	104.3	11216818.7	-884.1	987424.1	12203463	20.32904822
Nov-19	604028.1	48846003.1	934058.1	7784.2	112006.1	49899851.5	82.61181029
Dec-19	612552.5	71713874.5	6978.8	3321.6	5737.3	71729912.2	117.1000159
Jan-20	616659	85378386.3	13088.9	670.9	-9253.9	85382892.2	138.46047
Feb-20	616035.8	87911507.6	6932.6	1231.4	-3008.6	87916663	142.7135568
Mar-20	616124.4	68550836	6455.7	1746.3	-1743.1	68557294.9	111.2718388
Apr-20	616589.1	41758099.2	6037.9	1408.4	587.6	41766133.1	67.73738146
May-20	617285.7	1574377.8	19489435.7	16964.6	4187504	25268282.1	40.93450298
Jun-20	617043.1	22176.9	12036372.7	4323.8	1144292.6	13207166	21.40396027
Jul-20	617556.5	21849.5	9171494.8	-57.4	420219.8	9613506.7	15.56700781
Aug-20	613327.9	12315.5	8108133.7	1234.3	455925.5	8577609	13.98535573
Sep-20	611815.5	4977.3	8271724.5	339.8	764589.4	9041631	14.77836114
Oct-20	612187.4	14265	14253153	-885.1	2154440.6	16420973.5	26.82344465
Nov-20	613259.8	36121101	165402	-449.7	13862.2	36299915.5	59.19174045
Dec-20	617925.3	62811654.9	4171.3	945.8	-6236.5	62810535.5	101.6474605
Jan-21	620393.3	94506090	6764.9	1334.4	-5628.3	94508561	152.3365201
Feb-21	620623.6	101852664.3	8024.4	3540.5	260	101864489.2	164.1324777
Mar-21	622813.4	74614547.7	5989.1	-695.3	312.7	74620154.2	119.8114218
Apr-21	622603.1	38969020.1	4986.4	-127.4	2800.4	38976679.5	62.60277234
May-21	620028.1	407729.4	19245881.2	0	3254103.9	22907714.5	36.94625211
Jun-21	617673.6	35074.90196	11754209.22	161.0784314	1194971.569	12984416.76	21.02148743
Jul-21	615457.9	4656.176471	8477278.725	120.1960784	481880	8963935.098	14.56466101
Aug-21	614634.7	15023.72549	7820432.745	0	380102.6471	8215559.118	13.3665718
Sep-21	617077.9	13498.72549	7945644.902	0	748247.451	8707391.078	14.11068304
Oct-21	611746.4	27676.66667	8910058.725	0	848402.8431	9786138.235	15.99705053
Nov-21	612381.9	31205806.86	557817.2549	242.3529412	13896.07843	31777762.55	51.89206779
Dec-21	619063.7	56799247.34	1349.935098	440.1960784	-12884.30392	56788153.17	91.7323216
Jan-22	622025.7	82573468.49	5109.63	2810.05	-5261.32	82576126.85	132.7535676
Feb-22	624263	93365232.01	4175.58	0	1790.25	93371197.84	149.570297
Mar-22	624891.9	67534391.1	8126.86	3189.51	17218.01	67562925.48	108.1193759
Apr-22	623941.8	45237564.47	1790.5	1198.54	-10837.38	45229716.13	72.49028636
May-22	622708	12646866.46	7694940.98	695.11	1063852.64	21406355.19	34.37623393
Jun-22	619913.2	3183.4	9995450.5	150.92	1024261.5	11023046.32	17.78159639
Jul-22	617086.2	-12058.8	7823611.24	5061.21	289776.38	8106390.03	13.13656086
Aug-22	616141.9	-2479.54	7149412.68	2746.06	325805.63	7475484.83	12.13273285
Sep-22	614218.8	-16978.41	7932600.65	-431.2	834680.9	8749871.94	14.24552958
Oct-22	613126.9	2571.46	12287655.4	428.75	1457634.34	13748289.95	22.42323799
Nov-22	615029.1	16945251.28	11606587.99	1790.56	2978735.11	31532364.94	51.26970885
Dec-22	620031.7	69620485.53	68098.69	485.69	26671.55	69715741.46	112.4389918
Jan-23	622844.4	85838643.81	748509.72	820.06	-753129.65	85834843.94	137.811064
Feb-23	623500.3	75286216.92	3850.45	0	-5081.25	75284986.12	120.7457173
Mar-23	624307.4	57040939.3	2934.01	1159.63	-1218.36	57043814.58	91.37135595
Apr-23	624155.1	41662184.33	878.71	0	-1422.77	41661640.27	66.74886356
May-23	638319	10531317.33	7800020.73	0	464112.22	18795450.28	29.44523126
Jun-23	606642.8	46309.34	9185256.32	0	1089465.99	10321031.65	17.01335885
Jul-23	618456.2	4723.19	7769862.6	149.74	458496.93	8233232.46	13.31255524
Aug-23	618330.4	14978.6	7174692.7	0	392426.04	7582097.34	12.262211
Sep-23	617432.8	3873.24	7790457.04	0	745914.62	8540244.9	13.83186227
Oct-23	616191	6017.66	9937222.49	0	836946.48	10780186.63	17.49487842
Nov-23	617673.8	15527464.3	13016265.18	0	688071.74	29231801.22	47.32562843
Dec-23	621516.8	55178035.51	71441.45	0	-6146.37	55243330.59	88.8846983
Jan-24	625891.1	82200064.78	11051.41	0	-11883.42	82199232.77	131.3315336
Feb-24	625761.8	80398526.44	3240.93	0	-4276.2	80397491.17	128.4793808
Mar-24	627249.1	44671108.16	9590.61	0	-2875.49	44677823.28	71.2281949
Apr-24	624432.3	32739430.36	5336.04	0	-1568.97	32743197.43	52.43674943
May-24	623513.5	8967441.44	5755697.52	1634.84	378414.34	15103188.14	24.22271349
Jun-24	624246.2	71200.2	8865206.12	0	876785.74	9813192.06	15.72006695
Jul-24	623705.5	48115.18	7620154.95	0	362712.61	8030982.74	12.87624207
Aug-24	622429.7	30317.3	7629853.05	-356.62	460581.88	8120395.61	13.04628535
Sep-24	621197.1	95119.33	7603096.37	0	681408.26	8379623.96	13.48947782
Oct-24	622025	136338.02	9427460.29	0	846450.98	10410249.29	16.73606171
Nov-24	621361.7	11047140.67	9535872.78	0	330344.21	20913357.66	33.65730299
Dec-24	625650.2	61692411.78	83738.97	1175.22	9424.63	61786750.6	98.75606147
Jan-25	629494.2	87541378.17	4423.63	0	-776.83	87545024.97	139.0720165
Feb-25	629001.7	94546336.66	3110.24	0	-5780.85	94543666.05	150.3074937
Mar-25	627516.2	61846981.72	3469.43	0	-1689.94	61848761.21	98.56121836



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	Customer	Block 1 Winter	Block 1 Summer	Block 2 Winter	Block 2 Summer	Total Usage	Actual Usage per customer
Oct-19	476521.16	-5295.1	8916871.2	0	684905.9	9596482	20.13862721
Nov-19	474923.89	37282027.4	76518.2	0	5494.5	37364040.1	78.67374307
Dec-19	495404.74	53332516.4	-401	0	-2501.7	53329613.7	107.6485738
Jan-20	493558.36	66586876.4	7097.9	0	-995.9	66592978.4	134.9242233
Feb-20	492569.03	68496799.9	699	0	-874.9	68496624	139.0599486
Mar-20	493591.15	49551425.6	3442.6	0	371.5	49555239.7	100.3973424
Apr-20	493176.44	30660687.4	-1501.7	0	433.9	30659619.6	62.16764856
May-20	492394.85	174391.4	15289276.6	0	2636307.1	18099975.1	36.75906663
Jun-20	491974.12	-8271.5	8420381.9	0	580706.5	8992816.9	18.27904464
Jul-20	492459.92	-9721.2	6277650.8	0	325523.5	6593453.1	13.38881162
Aug-20	488966.15	1992	5573603.3	0	313088.7	5888684	12.04313223
Sep-20	487835.12	-1106.1	5941632.8	0	396004.3	6336531	12.98908328
Oct-20	485143.94	872.9	10448207.8	0	1142442.9	11591523.6	23.89295762
Nov-20	485994.73	28373542.7	194367.8	0	46450.1	28614360.6	58.87792364
Dec-20	501792.05	47776289.1	-341.2	0	-5656	47770291.9	95.1993797
Jan-21	496648.49	71291862.6	-539.5	0	-1141.7	71290181.4	143.5425313
Feb-21	497238.13	78293903.7	807.6	0	-3167	78291544.3	157.452817
Mar-21	499554.63	60233793.2	-2145.5	0	-5533.1	60226114.6	120.5596165
Apr-21	499576.14	31735308.49	1328.33	0	13.55	31736650.37	63.52715398
May-21	496947.85	231298.9	14732234.53	0	2306506.72	17270040.15	34.75221827
Jun-21	494864.47	2230.54	8243658.38	0	629518.1022	8875407.022	17.93502577
Jul-21	492972.2	-4592.32	5960272.65	0	365893.0128	6321573.343	12.8238709
Aug-21	491480.5	2051.26	5465584.5	0	327897.2784	5795533.038	11.79198979
Sep-21	490207.32	1849	5542014.46	0	389568.651	5933432.111	12.10392393
Oct-21	489264.81	1653.24	6477426.19	0	450332.75	6929412.18	14.16290736
Nov-21	491095.61	23164589.76	56490.4	0	-8496.71	23212583.45	47.26693332
Dec-21	496459.98	39299613.42	-902.45	0	-2518.02	39296192.95	79.15279083
Jan-22	499771.67	67940333.23	-0.94	0	-2241	67938091.29	135.9382601
Feb-22	501205.02	69387861.33	415	0	-3052	69385224.33	138.4368104
Mar-22	501789.16	57053760.15	471.47	0	-945.5	57053286.12	113.6997183
Apr-22	503009.38	38775571.33	11502.88	0	-218.72	38786855.49	77.10960676
May-22	501462.22	3032914.71	12734021.24	0	1454196.17	17221132.12	34.34183361
Jun-22	499057	-153360.02	7394443.32	0	526649.89	7767733.19	15.56482163
Jul-22	496587.15	237942.48	5757323.78	0	310218.42	6305484.68	12.69763964
Aug-22	495446.08	33657.59	5172970.03	0	261208.35	5467835.97	11.03618777
Sep-22	493794	7969.35	5683278.15	0	395912.84	6087160.34	12.32732747
Oct-22	492401.05	-874.67	8718057.72	0	708322.04	9425505.09	19.14192728
Nov-22	496397.74	14637096.06	10227933.87	0	565009.2	25430039.13	51.22915977
Dec-22	502016.84	58160196.01	41738.75	0	-43250.61	58158684.15	115.8500662
Jan-23	505330.54	73143665.39	2597.3	0	-596.49	73145666.2	144.7481607
Feb-23	505879.75	63464300.16	-1969.77	0	-8636.33	63453694.06	125.4323662
Mar-23	507795.78	49918273.45	858.54	0	-11544.18	49907587.81	98.28279355
Apr-23	505864.74	33914043.14	1703.45	0	-2477.73	33913268.86	67.04019114
May-23	502141.12	7843356.55	6068184.08	0	220626.71	14132167.34	28.1438161
Jun-23	498520.56	15313.9	6876943.73	0	508972.81	7401230.44	14.84638957
Jul-23	495073.95	-274.1	5605548.38	0	324940.44	5930214.72	11.97844225
Aug-23	494702.37	6120.08	5175024.71	0	265879.61	5447024.4	11.01071014
Sep-23	493342.32	-316.56	5509594.62	0	343104.2	5852382.26	11.86272092
Oct-23	493211.18	-5951.44	7375306.76	0	444357.93	7813713.25	15.84253068
Nov-23	498395.77	13850350	10456001.88	0	721780.82	25028132.7	50.21738587
Dec-23	502646.88	45196459.58	10365.33	0	20329.87	45227154.78	89.97798769
Jan-24	505956.88	68807292.52	-793.17	0	-334.69	68806164.66	135.9921515
Feb-24	505344.22	63238640.96	1727.22	0	1850.89	63242219.07	125.1468139
Mar-24	507967.45	34768706.15	3487.08	0	39.47	34772232.7	68.45366312
Apr-24	505747.02	25493783.83	1093.75	0	1705.68	25496583.26	50.41370933
May-24	505825.66	6302999.32	4536724.81	0	176728.69	11016452.82	21.7791498
Jun-24	506318.69	98605.1	6420271.4	0	465862.16	6984738.66	13.79514286
Jul-24	505726.56	102927.31	5433453.56	0	299184.65	5835565.52	11.53897379
Aug-24	502881.64	35999.38	5563623.61	0	330268.18	5929891.17	11.79182276
Sep-24	503472.36	84587.86	5393337.24	0	368781.57	5846706.67	11.61276593
Oct-24	503476.21	111165.18	6651015.7	0	412250.31	7174431.19	14.24979184
Nov-24	504336.79	8521158.03	6586447.08	0	222357.77	15329962.88	30.39628118
Dec-24	507949.76	48307868.45	41734.84	0	3118.87	48352722.16	95.19193819
Jan-25	511663.5	72715064.77	10900.67	0	1619.71	72727585.15	142.1394826
Feb-25	512119.19	77634160.28	3698.9	0	-189.13	77637670.05	151.6007827
Mar-25	511467.35	49912927.89	1898.37	0	-260.56	49914565.7	97.59091309



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