

Exhibit No.:
Issue(s): Customer Growth
Witness: Kim Cox
Sponsoring Party: MoPSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2024-0261
Date Testimony Prepared: August 18, 2025

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

REBUTTAL TESTIMONY

OF

KIM COX

**THE EMPIRE DISTRICT ELECTRIC COMPANY,
d/b/a Liberty**

CASE NO. ER-2024-0261

*Jefferson City, Missouri
August 2025*

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1 **REBUTTAL TESTIMONY**

2 **OF**

3 **KIM COX**

4 **THE EMPIRE DISTRICT ELECTRIC COMPANY,**
5 **d/b/a Liberty**

6 **CASE NO. ER-2024-0261**

7 Q. Please state your name and business address.

8 A. My name is Kim Cox, 200 Madison Street, Jefferson City, Missouri 65101.

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

10 A. I am employed by the Missouri Public Service Commission (“Commission”) as
11 a Senior Research/Data Analyst for the Tariff/Rate Design Department, in the Industry
12 Analysis Division.

13 Q. Have you previously filed testimony in this case?

14 A. Yes. I provided direct testimony as part of the revenue requirement filed on
15 July 2, 2025.

16 Q. What is the purpose of your rebuttal testimony?

17 A. The purpose of my rebuttal testimony is to respond to The Empire District
18 Electric Company, d/b/a Liberty (“Empire”) witness Tim Lyon’s direct testimony and the
19 update period workpapers¹ regarding Empire’s customer annualization adjustment.
20 Specifically, I will address:

¹ Workpaper: Update Period Billing Determinants_vUpdate and WP (Annualization) – Residential General_vUpdate (CONFIDENTIAL).

1. Manual adjustments to correct for billing issues.
2. Billed account (customer charge) versus active accounts.
3. Estimating usage with assumptions.
4. Adjust for active accounts as of September 2024.

Q. What direct testimony did Mr. Lyon's provide for the customer annualization adjustment?

A. Mr. Lyon's testifies that the approach to derive the customer annualization adjustment consisted of identifying new customers added during the test year and annualizing existing customers who switched rate classes during the test year and assigning their revenues to the new rate class based on each customer's revenue per month.²

In addition, Empire's response to Staff Data Request ("DR") 0109 provided the following description of the adjustment.

Customer Annualization Adjustment (REV ADJ 3) – The adjustment includes annualizing billing determinants based on active customers as of September 2024.

- The adjustment is done on a customer-level basis.
- The adjustment also includes addition of missing customer billing determinants, particularly for a few Small Primary and Large General customers.
- Lastly, the adjustment includes estimation of any missing customer billing determinants, particularly for Residential and General Service Classes.

² Empire witness, Tim Lyons direct testimony, page 9, lines 9-14.

MANUAL ADJUSTMENTS TO CORRECT FOR BILLING ISSUES

Q. As mentioned above, Empire provided update period workpapers. Are Staff and Empire’s update period billing determinants the same?

A. No. On February 12, 2025, and March 25, 2025, Empire provided Staff additional manual billing determinant adjustments to attempt to correct Empire’s ongoing billing issues.³ Staff applied those adjustments; however, Empire did not. Provided below are Staff and Empire’s total residential customer charge counts after the manual adjustments and before any other adjustments were made.

| | 2023 | 2023 | 2023 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Staff | 140,972 | 141,149 | 141,020 | 142,101 | 142,721 | 142,562 | 142,899 | 142,687 | 142,962 | 143,545 | 143,218 | 143,394 |
| Empire | 140,972 | 141,149 | 141,020 | 142,101 | 142,721 | 142,562 | 142,868 | 142,591 | 142,763 | 143,126 | 142,528 | 142,150 |

Instead of manually adjusting for the additional billing issues, Empire used active accounts to annualize usage during the update period. Empire counted an account as active if any of the 12 months of the update period had usage. The total residential customer charge count Empire used to isolate active customers was 141,323 with rate code specific below.

| Isolated Active Customers Only | | | | | | | | | | | | |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 1023 | 1123 | 1232 | 124 | 224 | 324 | 424 | 524 | 624 | 724 | 824 | 924 |
| NS RG | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 |
| TC RG | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 | 140,571 |
| TP RG | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Total | 141,323 | | | | | | | | | | | |

Q. Does Staff agree with using active accounts to develop starting billing determinants?

³ Described in my direct testimony and Staff witness Charles Tyrone Thomason.

1 A. No. The active accounts had missing usage and assumptions were made to fill
2 in the data. The manual adjustments should have been accounted for and the starting billing
3 determinants should be the same for Staff and Empire.

4 **BILLED ACCOUNT (CUSTOMER CHARGE) VERSUS ACTIVE ACCOUNT**

5 Q. Did Empire provide information to Staff about active accounts versus customer
6 charge counts?

7 A. Yes. On May 16, 2025, Staff emailed Empire and asked what the difference is
8 between a billed account and active account. Their response was that billed accounts are the
9 number of tariffed customer charges that were included on a customer's bill during the
10 respective time period and active accounts are the count of meters that are turned on and can
11 receive power from Empire's system. In the email Staff also asked in what scenario would an
12 active meter not receive a bill and Empire responded that all active meter should be receiving a
13 monthly bill and that the billing determinants provided have not been adjusted for
14 partial/final bills.

15 Empire provided Staff the following example of a final and partial bill. If a customer
16 moved out and another moved in on the 15th of the month, they both would have received a
17 bill with a prorated customer charge, and the customer charge count in the billing determinants
18 file would reflect a count of 2 for that installation number.

19 Q. Does Empire have tariff language about billed accounts and active accounts?

20 A. No. Staff recommends Empire add tariff language providing the definition
21 of both.

ESTIMATING USAGE WITH ASSUMPTIONS

Q. To better understand Empire’s annualization adjustment and making assumptions to usage, please provide the non-standard residential (“NS RG”) customer annualization adjustment.

A. Below is Empire’s NS RG actual billed, manually adjusted for billing issues, isolated active customer's, adjusted for zero usage, and active customers as of September 2024.

| Actual billed | | | | | | | | | | | | | |
|--|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Season | Category | 1023 | 1123 | 1232 | 124 | 224 | 324 | 424 | 524 | 624 | 724 | 824 | 924 |
| Annual | Customer Charge | 562 | 560 | 530 | 550 | 528 | 520 | 462 | 709 | 664 | 453 | 768 | 496 |
| Winter | kWh-1st Block | 156,580 | 284,774 | 278,206 | 299,930 | 290,812 | 266,379 | 193,159 | 323,515 | 175,582 | (752) | 1,220 | 136 |
| Summer | kWh-1st Block | 135,322 | 1,323 | - | 2,400 | - | - | - | - | 137,689 | 231,153 | 371,255 | 253,603 |
| Winter | kWh-2nd Block | 147,090 | 248,996 | 366,641 | 667,871 | 674,283 | 287,423 | 104,257 | 322,355 | 145,054 | (1,082) | 2,238 | 640 |
| Summer | kWh-2nd Block | 135,756 | 12 | - | 2,899 | - | - | - | - | 206,841 | 346,867 | 572,546 | 326,015 |
| Manually adjusted | | | | | | | | | | | | | |
| Season | Category | 1023 | 1123 | 1232 | 124 | 224 | 324 | 424 | 524 | 624 | 724 | 824 | 924 |
| Annual | Customer Charge | 562 | 560 | 530 | 550 | 528 | 520 | 664 | 612 | 618 | 625 | 631 | 631 |
| Winter | kWh-1st Block | 156,580 | 284,774 | 278,206 | 299,930 | 290,812 | 266,379 | 292,185 | 274,689 | 126,628 | - | - | (0) |
| Summer | kWh-1st Block | 135,322 | 1,323 | - | 2,400 | - | - | - | - | 164,416 | 315,842 | 314,253 | 306,822 |
| Winter | kWh-2nd Block | 147,090 | 248,996 | 366,641 | 667,871 | 674,283 | 287,423 | 252,204 | 199,277 | 121,897 | - | - | - |
| Summer | kWh-2nd Block | 135,756 | 12 | - | 2,899 | - | - | - | - | 224,759 | 493,924 | 498,537 | 408,529 |
| Isolated Active Customers Only | | | | | | | | | | | | | |
| Season | Category | 1023 | 1123 | 1232 | 124 | 224 | 324 | 424 | 524 | 624 | 724 | 824 | 924 |
| Annual | Customer Charge | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 |
| Winter | kWh-1st Block | 155,299 | 277,803 | 286,062 | 304,710 | 308,634 | 284,342 | 281,075 | 271,716 | 127,585 | - | - | - |
| Summer | kWh-1st Block | 130,216 | (661) | - | - | - | - | - | - | 165,824 | 310,861 | 313,863 | 306,434 |
| Winter | kWh-2nd Block | 138,553 | 239,022 | 350,637 | 662,371 | 689,674 | 291,400 | 259,581 | 206,487 | 122,728 | - | - | - |
| Summer | kWh-2nd Block | 127,436 | 478 | - | - | - | - | - | - | 225,248 | 499,430 | 497,775 | 412,482 |
| Annualized - Filled in Zero Usage based on Available Usage Data | | | | | | | | | | | | | |
| Season | Category | 1023 | 1123 | 1232 | 124 | 224 | 324 | 424 | 524 | 624 | 724 | 824 | 924 |
| Annual | Customer Charge | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 | 678 |
| Winter | kWh-1st Block | 176,524 | 308,504 | 325,275 | 341,884 | 346,594 | 313,872 | 303,052 | 288,289 | 147,754 | - | - | - |
| Summer | kWh-1st Block | 152,162 | (704) | (0) | (1) | - | - | - | - | 190,559 | 338,905 | 341,889 | 336,661 |
| Winter | kWh-2nd Block | 140,048 | 247,179 | 377,458 | 688,483 | 720,657 | 303,088 | 268,308 | 208,843 | 129,600 | - | - | - |
| Summer | kWh-2nd Block | 128,573 | 478 | - | - | - | - | - | - | 250,585 | 557,129 | 580,106 | 480,529 |
| Annualized - Reconciled with Active Customers | | | | | | | | | | | | | |
| Season | Category | 1023 | 1123 | 1232 | 124 | 224 | 324 | 424 | 524 | 624 | 724 | 824 | 924 |
| Annual | Customer Charge | 705 | 705 | 705 | 705 | 705 | 705 | 705 | 705 | 705 | 705 | 705 | 705 |
| Winter | kWh-1st Block | 183,554 | 320,789 | 338,228 | 355,498 | 360,396 | 326,372 | 315,120 | 299,770 | 153,638 | - | - | - |
| Summer | kWh-1st Block | 158,221 | (732) | (0) | (1) | - | - | - | - | 198,148 | 352,401 | 355,504 | 350,068 |
| Winter | kWh-2nd Block | 145,625 | 257,023 | 392,490 | 715,901 | 749,356 | 315,158 | 278,993 | 217,160 | 134,761 | - | - | - |
| Summer | kWh-2nd Block | 133,693 | 497 | - | - | - | - | - | - | 260,564 | 579,316 | 603,207 | 499,665 |

As displayed above, the isolated active customer charge counts increased over the manual customer charges every month, however, several months’ kilowatt hour (“kWh”) decreased.

Rebuttal Testimony of
Kim Cox

1 Q. Why would an active customer have zero kWh?

2 A. Staff asked Empire in an email on July 24, 2025, “If a token (customer) has a
3 customer charge, how does it have zero usage?” and Empire responded “The customer had 12
4 months with zero usage. Usage was not estimated, as the customer is expected to continue
5 having zero usage.” Unfortunately, the response did not answer the question and therefore Staff
6 does not know.

7 Q. How does an increase to the customer charge count result in a decrease in kWh?

8 A. Some active accounts had zero usage in some months. Empire filled in the zero
9 usage with assumptions. In an email on July 24, 2025, Empire provided the below rules that
10 were applied for the residential annualization analysis.

11 If a customer has zero usage in a month, usage is estimated based on available usage
12 from other months.

- 13 – **Exception #1:** If a customer had zero usage and was a net metering customer, then
14 zero usage is considered.
 - 15 ○ This reflects the assumption that net metering customers may continue to have
16 zero usage.
- 17 – **Exception #2:** If a customer had zero usage in all 12 months, zero usage is considered.
 - 18 ○ This reflects the assumption that customers with historically zero usage (e.g.,
19 vacant properties) will continue to have zero usage.
 - 20 ○ The Company evaluated a sample of such customers and found either vacant
21 properties or special cases (e.g., barn, cattle well, garage, old church,
22 fireworks stand).

23 Q. What available usage from other months did Empire use to estimate a
24 customer’s usage?

25 A. Empire used the total class active customers kWh and the total class active
26 customers monthly block kWh. The residential class active percent kWh in each month is
27 as follows:

28

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|----------------|------|------|------|-------|-------|------|------|------|------|------|------|------|
| 29 Total Class | 6.6% | 6.1% | 7.7% | 11.0% | 12.7% | 7.1% | 6.7% | 5.7% | 8.0% | 9.7% | 9.9% | 8.9% |

Rebuttal Testimony of
Kim Cox

The residential class percent of usage in each block and off-peak credit in each month is as follows:

| Percentages utilized for Annualization (Customers with 12 Bills Only) | | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|-----------------|-------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|
| Winter | Total kWh Usage | 5.19% | 9.57% | 12.01% | 17.33% | 19.88% | 11.06% | 10.58% | 8.90% | 5.47% | 0.00% | 0.00% | 0.00% |
| Summer | Total kWh Usage | 9.01% | -0.02% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 12.39% | 26.71% | 27.40% | 24.51% |
| Annual | Off Peak Credit | 5.64% | 6.23% | 8.70% | 12.57% | 14.83% | 7.96% | 7.16% | 5.23% | 6.84% | 8.49% | 8.66% | 7.68% |

Q. Does Staff agree using the above for the assumptions?

A. No. If an active customer only had usage in the summer months the winter months were not adjusted. In the example below taken from Empire’s workpaper,⁴ Customer A only had active kWh in July, August, and September. After Empire annualized Customer A, they have no winter usage in October, November, March, April, and May and one (1) kWh December through February.⁵ During the months of November through April there is off-peak credit usage.⁶ A customer cannot have credit for usage when there was no usage.

| Customer A | | October | November | December | January | February | March | April | May | June | July | August | September |
|-------------------|-----------------|---------|----------|----------|---------|----------|-------|-------|------|------|------|--------|-----------|
| Season | Category | 2023 | 2023 | 2023 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 | 2024 |
| Winter | Total kWh Usage | - | - | - | - | - | - | - | 0 | 0 | - | - | - |
| Summer | Total kWh Usage | - | - | - | - | - | - | - | - | - | 102 | 463 | 861 |
| Annual | Off Peak Credit | - | - | - | - | - | - | - | 0 | 0 | 10 | 95 | 162 |
| Empire annualized | | | | | | | | | | | | | |
| Winter | Total kWh Usage | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | - | - | - |
| Summer | Total kWh Usage | 141 | (0) | (0) | (0) | - | - | - | - | - | 102 | 463 | 861 |
| Annual | Off Peak Credit | 41 | 45 | 63 | 91 | 107 | 58 | 52 | 0 | 0 | 10 | 95 | 162 |

In addition, Empire assumed if a net metering customer had zero usage in a month then they would continue to have zero usage in that month. Empire assumed that non-net metering

⁴ Workpaper, WP (Annualization) – Residential General_vUpdate (CONFIDENTIAL)

⁵ Empire’s summer season is the first four monthly billing periods billed on and after June 16, and the winter season is the remaining eight monthly billing periods of the calendar.

⁶ Off-Peak kWh includes all kWh consumed between 10 PM and 6 AM daily.

Rebuttal Testimony of
Kim Cox

customers usage was missing and estimated it but didn't make the same assumption for net metering customers. There is no way to know if a net metering customer's, or any customer's, usage was missing or was actually zero.

ADJUST FOR ACTIVE ACCOUNTS AS OF SEPTEMBER 2024

Q. After Empire made the assumptions described did they make any other calculations for the annualization adjustment?

A. Yes. The last step performed was to adjust for active customers as of September 2024. Empire calculated an annualized residential customer charge count of 141,758; however, in its response to DR 410, Empire provided the following customer charge counts.

| | 1023 | 1123 | 1232 | 124 | 224 | 324 | 424 | 524 | 624 | 724 | 824 | 924 |
|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| NS RG-Residential | 562 | 560 | 530 | 550 | 528 | 520 | 663 | 611 | 631 | 655 | 669 | 668 |
| TC RG-Residential | 140,333 | 140,513 | 140,414 | 141,476 | 142,119 | 141,968 | 142,163 | 142,011 | 142,279 | 142,862 | 142,560 | 142,808 |
| TP RG-Residential | 77 | 76 | 76 | 75 | 74 | 74 | 75 | 75 | 74 | 76 | 74 | 74 |
| Total | 140,972 | 141,149 | 141,020 | 142,101 | 142,721 | 142,562 | 142,901 | 142,697 | 142,984 | 143,593 | 143,303 | 143,550 |

With additional counts through the true-up cut off.

| | 1024 | 1124 | 1224 | 125 | 225 | 325 |
|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| NS RG-Residential | 714 | 680 | 715 | 735 | 721 | 691 |
| TC RG-Residential | 142,986 | 142,434 | 143,119 | 143,459 | 143,364 | 142,755 |
| TP RG-Residential | 75 | 76 | 74 | 74 | 73 | 73 |
| Total | 143,775 | 143,190 | 143,908 | 144,268 | 144,158 | 143,519 |

Empire's reconciled with active customers counts of 705 for NS-RG, 140,979 for time choice residential ("TC-RG"), and 74 for time choice plus residential ("TP-RG") is the starting point that Empire used to adjust for weather normalization, load growth, and 365-day adjustments. Based on the information in the tables above, using these customer counts may result in artificially low billing determinants for this case.

Rebuttal Testimony of
Kim Cox

1 Q. Does Staff agree with using the September 2024 active customers counts
2 for growth?

3 A. No. Staff recommends that February 2025 counts be utilized to determine the
4 customer growth adjustment unless Empire can provide a more accurate count outside of the
5 billing issues it has experienced.

6 Q. What impact does the growth factor have on the rates that will result from
7 this case?

8 A. If the growth factor is artificially low, the calculated rates that result from this
9 rate case will be artificially high.

10 Q. How did Staff develop its growth factors?

11 A. Staff used the billing determinants and manual adjustments that Empire
12 provided. Staff developed a monthly growth factor for each rate code by calculating the
13 monthly use per customer and applying the February 2025 bill counts provided by Empire.
14 Empire and Staff developed the growth factor by using the same formula.⁷ Staff is not opposed
15 to using active counts for developing the growth factor.

16 Staff assumes Empire will update its growth adjustment to match Staff's time period.
17 However, Staff does not know if Empire will use active accounts or billed accounts. Staff is
18 not opposed to having discussion with Empire about applying active accounts to calculate the
19 growth factor in future rate cases. Staff will review Empire's true-up testimony and workpapers
20 and will respond at the time of true-up rebuttal.

⁷ The growth factor is developed by dividing the "new" customer charge count by the "old" customer charge count. The factor is then applied to kWh and kW.

1 **CONCLUSION**

2 Q. What is Staff's recommendation?

3 A. Staff recommends that the Commission accept Staff's manual adjustment and
4 growth adjustment that reflects the impact in change of customer levels through February 2025.

5 Q. Does this conclude your rebuttal testimony?

6 A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

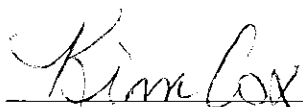
In the Matter of the Request of The Empire)
District Electric Company d/b/a Liberty for) Case No. ER-2024-0261
Authority to File Tariffs Increasing Rates)
for Electric Service Provided to Customers)
in Its Missouri Service Area)

AFFIDAVIT OF KIM COX

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW KIM COX and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Rebuttal Testimony of Kim Cox*; and that the same is true and correct according to her best knowledge and belief.

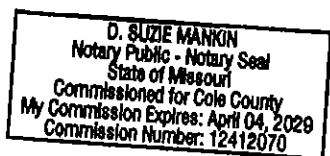
Further the Affiant sayeth not.

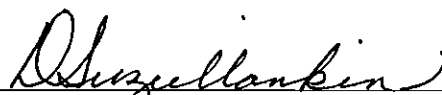


KIM COX

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 13th day of August 2025.





Notary Public