

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

**REBUTTAL TESTIMONY
OF
TIMOTHY M. NELSON**

**ON BEHALF OF
EVERGY METRO, INC., EVERGY KANSAS CENTRAL, INC.
AND EVERGY KANSAS SOUTH, INC.**

**IN THE MATTER OF THE APPLICATION OF EVERGY METRO, INC., EVERGY KANSAS
CENTRAL, INC., AND EVERGY KANSAS SOUTH, INC. FOR APPROVAL OF ITS PHASE
2 TRANSPORTATION ELECTRIFICATION PORTFOLIO.**

DOCKET NO. 25-EKCE-169-TAR

FEBRUARY 20, 2024

1 **Q: Please state your name and business address.**

2 A: My name is Timothy M. Nelson. My business address is 1200 Main, Kansas City, Missouri
3 64105.

4 **Q: By whom and in what capacity are you employed?**

5 A: I am employed by Evergy Metro, Inc. I serve as Senior Manager Analytics, Energy
6 Solutions for Evergy, Inc., Evergy Metro, Inc. d/b/a Evergy Missouri Metro (“Evergy
7 Missouri Metro”) and Evergy Kansas Metro (“Evergy Kansas Metro”); Evergy Missouri
8 West, Inc. d/b/a Evergy Missouri West (“Evergy Missouri West”); and Evergy Kansas
9 Central, Inc. d/b/a/ Evergy Kansas Central (“Evergy Kansas Central”).

10 **Q: On whose behalf are you testifying?**

11 A: I am testifying on behalf of Evergy Kansas Metro and Evergy Kansas Central (collectively,
12 “Evergy” or “Company”).

13 **Q: What are your responsibilities?**

14 A: I oversee the design and filing of customer programs, performing cost effectiveness
15 calculations, program reporting and other program support. These include electrification,
16 distributed energy resources and demand-side programs. I also supervise the preparation
17 of the demand-side energy and demand forecasts used for load forecasting, corporate
18 budgeting, and Integrated Resource Planning.

19 **Q: Please describe your education, experience and employment history.**

20 A: I graduated from Iowa State University with a Bachelor of Science in Mechanical
21 Engineering. I completed a Master of Science in Finance from the University of Missouri
22 – Kansas City. I have worked for Evergy since 1994 through multiple mergers and company
23 names. I have held positions as a Production Engineer at the Lake Road Power Plant,

1 Resource Planning Analyst responsible for production cost modeling, Operations Analyst
2 responsible for analyzing market data for the Southwest Power Pool, until moving to my
3 current position in 2014.

4 **Q: Have you previously testified in a proceeding at the Kansas Corporation Commission**
5 **(“KCC”) or before any other utility regulatory agency?**

6 A: Yes, I have testified before the Missouri Public Service Commission and Kansas
7 Corporation Commission.

8 **Q: What is the purpose of your rebuttal testimony?**

9 A: The purpose of my testimony is to respond to Staff’s recommendations regarding
10 Evaluation Measurement & Verification (“EM&V”) for Evergy’s proposed programs.

11 **FLEET ADVISORY SERVICE (“FAS”) PROGRAM**

12 **Q: Have Staff accurately grouped the expected Fleet Advisory Services (“FAS”)**
13 **customers who perform right-sizing as: 1) Those who will do so with third-party**
14 **advisors even in the presence of a program, 2) Free riders who will do so with the**
15 **program, but would have chosen a third-party advisor in the absence of a program,**
16 **and 3) Those who will only do so if supported by the program?**

17 A: Yes. This is an accurate characterization of the expected participant and non-participant
18 groups.

19 **Q: Has Staff accurately characterized the impact of these groups on Evergy’s benefit-**
20 **cost analysis (“BCA”)?**

21 A: Not entirely. Staff appear to believe that Evergy’s BCA assumes that customers outside of
22 Evergy’s program are not right-sizing at all, stating on page 45 that these “are erroneously
23 counted as Evergy’s benefits.” However, the baseline of Evergy’s BCA is not the complete

1 absence of any right-sizing; it is the right-sizing that would occur by customers and their
2 third-party advisors but for the program. So, while Evergy acknowledges that some free
3 ridership may occur, it will not be as impactful to the BCA result as Staff contends. Staff
4 states that “the benefits of customers with sufficient resources” to hire a third-party advisor
5 should be subtracted. However, having sufficient resources is not an adequate test to
6 confirm that the customer is right-sizing. Other criteria must be true for customers to
7 benefit from right-sizing. Customers must also have the knowledge of the potential benefits
8 of right-sizing and make internal decisions to prioritize those resources toward hiring a
9 third-party advisor with the appropriate knowledge and experience.

10 **Q: Is Staff’s recommendation to treat Evergy’s proposed FAS program as a pilot**
11 **reasonable in light of the uncertainty that Evergy and Staff have identified in certain**
12 **program benefits?**

13 A: Yes. Evergy agrees that the FAS program could reasonably be recharacterized as a pilot,
14 with added objectives of reducing the uncertainty in the parties’ understanding of levels of
15 free-ridership and system planning benefits. The scale of this pilot should remain the same
16 (60 fleets) to provide an adequate basis for pilot findings.

17 **Q: Is Staff correct that no EM&V is planned at the end of the program?**

18 A: Not entirely. Evergy’s program design includes limited budget for reporting program
19 impacts and participation. However, as discussed below, Evergy is agreeable to
20 collaborating with Staff to determine the appropriate scope and create an appropriate
21 EM&V within the proposed budget.

22 **Q: What about Staff’s suggestion to expand the scope and create a more detailed EM&V**
23 **plan?**

1 A: Evergy’s filing addresses the level of measurement and reporting that can be achieved
2 within the FAS program cycle, accommodating the outlined scope of up to 60 fleet
3 assessments. In addition to requiring additional budget, expanding the scope of EM&V to
4 accommodate Staff’s suggestion would be complicated if not precluded by the lengthy
5 nature of fleet electrification projects. Several steps must be completed before an
6 appropriate EM&V can be implemented and performed, including project design,
7 construction, vehicle fleet acquisition, and fleet operation. Additionally, evaluating how
8 fleets executed the plan—such as replacing vehicles with EVs, following the charging plan,
9 and managing the added load—would be challenging. This is because implementing the
10 first phase of vehicles takes multiple years, and completing the entire fleet's replacement
11 cycle could span a decade or more, most of which will occur beyond the five-year program.

12 RESIDENTIAL MANAGED CHARGING

13 **Q: In light of Staff’s expressed concerns about the use of a Randomized Encouragement**
14 **Design (“RED”) to estimate the impact of Active Managed Charging (“AMC”), is this**
15 **an appropriate methodology?**

16 A: RED is the only suitable methodology for understanding the causal impact of AMC
17 participation. As Staff notes, “Randomized Encouragement Design can be used to study
18 treatment effects when the population can choose to either receive or reject the treatment
19 offered.”

20 **Q: What is Staff’s concern with respect to this methodology?**

21 A: Staff’s concerns about use of the methodology include potential confounding and the
22 inability to guarantee an adequate sample size. These are risks that can be further
23 characterized and mitigated in an EM&V plan and communication plan. For example, it

1 may be possible to limit rate switching during the duration of the pilot or to remove those
2 that do engage in rate switching from the analysis. Evergy has already proposed one
3 mitigation, that the selected EM&V vendor also conduct a pre/post analysis of the AMC
4 participant energy use and compare the results to those of the RED. If a large impact is
5 determined by the pre/post analysis that is not detected by the RED, then this will be cause
6 for further examination. Through the collaborative development of the EM&V plan Evergy
7 and the stakeholders can determine whether a constraint on rate switching needs to be
8 implemented for pilot participation during the measurement period.

9 **Q: On page 25 her Direct Testimony, Staff Witness Ellis asserts that a weak correlation**
10 **will lead to biased and unreliable results. Is this accurate?**

11 A: No. A weak correlation does not yield a biased estimate. Bias is not the same as a weak
12 association – while it may prove difficult to identify an effect due to low statistical power,
13 the RED was selected specifically because it avoids the bias introduced by simply
14 comparing the energy consumption patterns of those who opt-in to participation with those
15 who do not. It is true though, that a strong correlation between encouragement and
16 treatment aids in estimating the outcome of interest. It is also possible that this pilot will
17 result in a weak correlation between the encouragement and participants opting for
18 treatment. An outcome of interest is how effective these encouragement nudges are for
19 pushing EV owners into an active managed charging program.

20 **Q: What about Staff’s concern about a possible confounding effect of TOU rates?**

21 A: Evergy is aware of the possibility of a confounding effect of the TOU rate which has been
22 addressed in the proposed design. The proposed design includes separate test cells for
23 households who start on a TOU rate and those who are not on a TOU rate at the start of the

1 test. For the population of households that are already on a TOU rate, measurement is not
2 confounded by the presence of this rate since it impacts both the treatment and control cells
3 of the test. It is a constraint of this program that households who are not already on a TOU
4 rate will not be denied the option to select into a TOU rate over the period of the test. We
5 do not expect households already on a TOU rate to remove themselves from the TOU rate.

6 **Q: What plan(s) need to be created to achieve the targeted pilot learnings?**

7 A: One pilot EM&V Plan should be created to achieve the pilot learnings. That plan must
8 include the impact measurement methodology and approach to customer preferences
9 research that will be used to achieve the pilot learnings. Staff’s testimony mentions several
10 “Plans” (i.e., Communications Plan, EM&V Methodology Plan, [EM&V Methodology]
11 Implementation Plan, and Detailed [Customer] Research Methodology Plan), implying
12 separate documents. It’s unclear how all of these documents would differ and ultimately
13 add value to Kansas customers, while they would most certainly add cost. Evergy
14 encourages Staff and stakeholder collaboration in the development of a single, clear and
15 robust EM&V Plan.

16 **Q: Should focus groups be used in the development of the EM&V Plan?**

17 A: No. Evergy invested considerable time and resources in developing a Residential Managed
18 Charging pilot design that incorporates findings from interactions with EV customers
19 through the programs that other state commissions have authorized to date, as well as
20 industry findings from similar pilots. This body of knowledge, comprised of real-world
21 data and findings from similar programs in other jurisdictions, in Evergy’s opinion, is
22 preferred to data gathered in focus groups, which may incorporate biases due to well-
23 known issues that include small sample size, self-interest in responses, social influences,

1 and the limited ability of focus group participants to accurately predict their own behaviors.
2 In addition, Evergy believes the added expense of focus groups is unnecessary given the
3 available information from other jurisdictions' programs.

4 **EM&V PLAN DEVELOPMENT**

5 **Q: Is the process and timeline for development, stakeholder review and approval of**
6 **EM&V Plans appropriate for the pilots?**

7 A: Staff's proposed approach allows Evergy six months to develop a plan, followed by two
8 months for staff to review and collaborate on the plan. Presumably this would be followed
9 by some additional process for resolving disagreements, as was proposed elsewhere in the
10 testimony. While Evergy appreciates the thoughtful approach, the anticipation of a positive
11 benefit-cost ratio implies there is a cost of delaying the start of the pilot. An extended
12 stakeholder process would also increase the cost of developing the plan. Evergy believes
13 an accelerated timeline of collaboration with Staff is the appropriate approach, and
14 specifically recommends:

- 15 • Evergy will develop a draft EM&V Plan within three months of a Commission decision
16 authorizing the pilots.
- 17 • Evergy will work collaboratively with Staff and interested stakeholders over the
18 following month to refine the EM&V Plan.
- 19 • Evergy, Staff, and interested stakeholder will then jointly file the EM&V plan

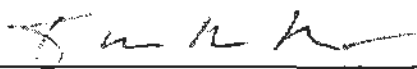
20 **Q: Does this conclude your rebuttal testimony?**

21 A: Yes.

STATE OF KANSAS)
) ss:
COUNTY OF SHAWNEE)


VERIFICATION

Tim Nelson, being duly sworn upon his oath deposes and states that he is the Sr Manager, Analytics, for Evergy, Inc., that he has read and is familiar with the foregoing Testimony, and attests that the statements contained therein are true and correct to the best of his knowledge, information and belief.



Tim Nelson

Subscribed and sworn to before me this 20th day of February, 2025.



Notary Public

My Appointment Expires:
May 30, 2026



CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing document has been emailed, this 20th day of February 2025, to all parties of record as listed below:

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