BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

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**

PUBLIC DIRECT TESTIMONY

PREPARED BY

LANA J. ELLIS, PhD.

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

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****Confidential Testimony REDACTED****

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I. INTRODUCTION

A. Qualifications

Q. What is your name?

A. Lana J. Ellis.

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

A. I am employed by the Kansas Corporation Commission (KCC or Commission) as Deputy Chief of the Economics and Rates Section within the Utilities Division.

Q. What is your business address?

A. 1500 S.W. Arrowhead Road, Topeka, Kansas, 66604-4027.

Q. What is your educational background and professional experience?

A. I have a B.S.B.A with a major in Honors Economics from Missouri Western State University, an M.A. in economics and an Interdisciplinary Ph.D. in economics and political science from the University of Missouri-Kansas City, an M.B.A. from Rockhurst University, and a J.D. from Seattle University. Before I began my employment with the Commission, I worked for Sprint Corporation and The Baltimore Sun, serving primarily in strategic planning and market research positions. In addition, I have taught graduate-level business and economics courses as an adjunct instructor at several universities, a list of which is available upon request.

Q. Have you previously submitted testimony before this Commission?

A. Yes, I filed testimony in Docket Nos. 14-KCPE-272-RTS, 14-BHCG-502-RTS, 15-WSEE-181-TAR, 16-KCPE-446-TAR, 17-WSEE-147-RTS, 18-WSEE-328-RTS, 18-KCPE-480-RTS, 18-KGSG-560-RTS, 19-EPDE-223-RTS, 20-SPEE-169-

RTS, 21-BHCG-418-RTS, 22-EKME-254-TAR, 23-ATMG-359-RTS, 23-EKCE-775-RTS, 24-SPEE-415-TAR, and 24-KGSG-610-RTS. I have also participated, as a member of Commission Staff (Staff), in numerous other dockets, a list of which is available upon request.

B. Purpose of Testimony

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to sponsor Staff's recommendations regarding Evergy's proposed Residential Managed Charging Pilot (RMC Pilot) and Fleet Advisory Services Program (FAS Program).

II. EXECUTIVE SUMMARY

Q. How is your testimony organized?

A. My testimony is organized in three major sections. First, I will discuss the background of Evergy's Kansas Transportation Electrification portfolio. Then, I will discuss Evergy's proposed expansion of its portfolio by its introduction of the Residential Managed Charging Pilot and Fleet Advisory Services Program and analyze each of these proposals in sequence. Finally, I will conclude by recommending the Commission approve the Application with modifications as follows.

With regards to the Residential Managed Charging Pilot, Evergy should be required to:

(1) Increase the number of charging days to five days each month as a condition of receiving the monthly incentive to address Staff's program design concerns discussed below.

(2) Develop a detailed Communications Plan to address Staff's program design concerns discussed below.

(3) File a detailed EM&V methodology plan in this docket, give stakeholders sufficient time to review the plan, then, work collaboratively to develop an implementation plan for the methodology to addresses Staff's reporting concerns discussed below.

(4) Collaborate with stakeholders to create a more detailed research methodology plan and instrumentation. to address Staff's reporting concerns discussed below.

With regards to the Fleet Advisory Services Program, Evergy should be required to:

(1) Offer the Program as a pilot with detailed EM&V to address Staff's modeling concerns discussed below.

(2) Provide stand-alone program levels with clear on-ramps and off-ramps to address Staff's program design concerns discussed below.

(3) Develop a detailed EM&V plan to address Staff's reporting concerns discussed below.

(4) Limit its rightsizing of charging advice to small private and public entities to address Staff's policy concerns discussed below.

(5) Provide grid-friendly advice to all fleet customers to address Staff's policy concerns discussed below.

(6) Provide a list of third-party advisors to all fleet customers to address Staff's policy concerns discussed below.

III. BACKGROUND

Q. Was there a precursor to the current docket?

A. Yes, Docket No. 21-EKME-320-TAR (21-320 Docket) was Evergy's initial Transportation Electrification docket.[1] In that docket, the Commercial EV Charger Rebate program was approved, providing rebates to non-residential customers seeking to install charging stations for public or workplace use.[2] In addition, the Residential Customer EV Outlet Rebate program was approved, providing eligible residential customers a rebate towards the cost of installing a dedicated 240-volt circuit (Level 2) for EV charging.[3] Level 2 charging speed reduces the amount of time required for charging such that a typical EV only needs to charge for a few hours each night, which provides an opportunity to move charging session timing to a time of the day with lower wholesale power prices and which does not contribute to the system peak demand.

The 21-320 Docket also included voluntary time-of use (TOU) rates designed to financially incentivize customers to reduce grid utilization by charging during off-peak periods. With respect to non-residential customers, the docket resulted in an Electric Transit Service rate and a Business EV Charging Service rate for separately metered non-residential EV charging services. Additionally, potential

[1] In the mid-2010s, Evergy developed a system of charging stations in KCPL territory and requested to have them incorporated into their regulatory business. The Commission rejected the request. See Docket No. 16-KCPE-160-MIS.
[2] A budget of $10 million was approved by the KCC, with $1.6 million of that amount to be targeted to areas that were underserved with respect to EV charging access. During the 5-year program period ending in early 2027, the budget can be increased to $15.4 million if certain conditions are met, most notably full subscription of the underserved budget allocation.
[3] The rebate is $500 for customers enrolled in a TOU rate; otherwise, it is $250.

benefits of managed charging and other potential means to shift EV charging activity to off-peak periods were identified in that docket.

Q. Why is Evergy proposing to expand its Transportation Electrification portfolio now?

A. While the 21-320 Docket identified potential benefits of managed charging and other ways to shift EV charging activity to off-peak periods, Evergy deferred pursuing these grid management opportunities pending further information availability and the development of enabling technologies.[4] Evergy now believes the information gained from its Transportation Electrification portfolio implementation and the broader utility industry enables it to properly assess and effectively pursue the benefits of managing the system impacts of transportation electrification.

Q. What has Evergy learned from its Transportation Electrification portfolio implementation?

A. Evergy's interactions with fleet customers in its commercial charging program have brought to light a growing interest in EV adoption but limited understanding of how to create charging plans that minimize charging infrastructure and operating costs. Similarly, Evergy's residential Transportation Electrification offerings have only encouraged about half of the EV residential customers with L2 home charging stations to adopt TOU rates and to charge off-peak.[5] Evergy believes the remaining

[4] With few EVs in the market and limited industry experience with managed charging, only limited educational efforts were planned at the time and the benefits of managed charging were not included in the associated benefit-cost analysis.

[5] Cadmus, 2023 Evaluation of Evergy's Kansas Central and Kansas Metro Transportation Electrification Portfolio attached to Evergy's Informational Filing of Report, filed in Docket No. 21-EKME-320-TAR, December 29, 2023. p. 11.

residential EV charging customers who have not adopted TOU rates require additional guidance and support to encourage more efficient charging. In response, Evergy is proposing a three-year Residential Managed Charging Pilot to incentivize residential customers to charge their EVs at home during off-peak periods.[6] In addition, Evergy is proposing a five-year Fleet Advisory Services Program to provide technical assistance to fleet customers aimed at shaping future charging loads and grid friendly location for charging facilities.[7]

IV. ANALYSIS

A. Evergy's Proposed Residential Managed Charging Pilot

Q. What was the impetus for the Residential Managed Charging Pilot?

A. As discussed above, the proposed Residential Managed Charging Pilot aims to build on Evergy's past efforts to optimize customer and grid benefits from growing EV adoption in Evergy's jurisdictional territories.[8] While promotion of the TOU rate and other customer education activities have resulted in enrolling nearly half of the rebate program participants in TOU rates, the proposed Pilot is expected to further promote off-peak charging for customers on time-varying rates and encourage off-peak charging by customers on standard rates.

[6] Evergy proposes to administer the Pilot over a three-year period beginning in 2025 and ending in 2028. The Pilot will require a ramp-up period to establish key processes, strategies, and operating protocols prior to launch, which is expected to be six months.

[7] Evergy proposes to administer the FAS Program over a five-year period beginning in 2025. The FAS Program will require a ramp-up period to establish key processes, strategies, and operating protocols prior to launch, which is expected to be three months.

[8] The Residential Customer EV Outlet Program has encouraged adoption of L2 charging, which increases charging schedule flexibility and TOU rates have laid the initial groundwork for influencing charging behavior.

1. Description of the Proposed Pilot (Program Parameters)

Managed Charging Approaches

Q. What are the proposed Residential Managed Charging approaches?

A. Evergy has proposed the Pilot include both a Passive Managed Charging Approach (Passive Approach) and an Active Managed Charging Approach (Active Approach). As explained below, Passive Approach customers would retain control of all their home charging decisions while Active Approach customers would turn over partial control of their EV charging to Evergy—customers set the charging parameters and can opt-out from Evergy controlling their charging twice a month.

Passive Managed Charging Approach

Q. Please explain the Passive Managed Charging Approach.

A. The Passive Managed Charging Approach is designed to provide participants with personalized educational and motivational communications to change their charging behavior. While the Passive Approach provides participants with communications to shape their charging behavior, all charging decisions remain with the participants.

Active Managed Charging Approach

Q. Please explain the Active Managed Charging Approach.

A. For the Active Managed Charging Approach, Evergy proposes to manage EV charging through an authorized connection between the Active Managed Charging platform and the participant's networked Electric Vehicle Supply Equipment

(EVSE)[9] or EV telematics.[10] Evergy would initiate EV charging at times of its choosing, subject to customer-defined requirements for the state of charge desired at the beginning of each day.

Eligibility and Enrollment

Q. Who is eligible to participate in the Residential Managed Charging Pilot?

A. The Residential Managed Charging Pilot is open to residential customers who own or lease an EV and charge at home utilizing Level 2 charging. To participate in the Active Approach, customers must have a qualifying EV or EVSE and charge at home at least once per month. Only one EV or EVSE per household may enroll in the Active Approach. In Staff Data Request (Staff DR or DR) KCC-14, Evergy explained that it proposed this limitation to reduce the complexity of the pilot program and the eventual EM&V that would result.[11]

Q. How will eligible customers be identified?

A. Eligible customers will be identified using a combination of mechanisms including participation in Evergy's existing Residential Charging Rebate Program; advanced metering infrastructure (AMI) data disaggregation analysis; and self-identification opportunities provided by Evergy's other education and awareness initiatives.

[9] Internet-connected EVSE devices that can communicate with the system that manages the charging network, and other systems such as an Active Platform.

[10] Communication of data between a data center (or cloud) and an EV, including sending control commands and retrieving charging session data

[11] *See* Exhibit A, Staff DR KCC-14 [reprinted below for convenience]:

> For the pilot, Evergy wanted to minimize complexity by restricting the household to one incentive, i.e. one vehicle. The limitation of one vehicle per household is an effort to normalize the AMC impact to one vehicle. This will help provide an easy-to-interpret result from measurement and verification activities, allowing Evergy and stakeholders to understand how costs and benefits are likely to scale with the number of EVs in operation.
>
> Mixing of managed devices (i.e. vehicle and EVSE) is not currently supported by the AMC platform. Otherwise, there are no technical limitations limiting RMC viability for multiple vehicles at the premise.

Q. Please describe the process for enrollment.

A. By default, most identified customers will be automatically enrolled in the Passive Managed Charging Approach. Passive Approach Customers may opt-out at any time if they do not wish to continue participating. Some of these identified customers will be randomly encouraged to participate in the Active Managed Charging Approach. Unlike the Passive Approach, customers must opt-in to the Active Approach (i.e., participation requires customers to self-enroll). During the enrollment process, participants will formally authorize Evergy to manage the scheduling of their EV charging at home.

Participation Incentives

Q. What are the incentives for customer participation in the Pilot?

A. Customers enrolled in the Passive Managed Charging Approach will not receive any direct financial incentives, but Passive Approach customers on time-varying rate schedules will presumably benefit from bill savings due to their modified charging. Conversely, customers who enroll in the Active Managed Charging Approach will receive an up-front incentive of $50 and will be eligible for an ongoing monthly incentive of $10 on the condition they charge at home at least once per month and do not override Evergy's prescribed charging schedule more than twice per month.

Program Size

Q. How did Evergy size the Residential Managed Charging Pilot?

A. Evergy sized the Pilot based on participation targets that anticipate continued EV adoption throughout the Pilot period[12] and provide sufficient data for a rigorous evaluation of costs, benefits, and efficacy. Table 1 below presents Evergy's Pilot participation forecast.

Table 1: RMC PILOT PARTICIPATION FORECAST (CUMULATIVE)

Pilot Approach	PY1	PY2	PY3
Passive Managed Charging	10,888	15,453	21,555
Active Managed Charging	412	1,216	2,000

2. Proposed Budget and Cost Recovery Mechanism

Q. How does Evergy propose to recover the program costs for the Pilot?

A. Evergy proposes to record the program costs for the Pilot to the regulatory asset created in the 21-320 Docket for recovery through amortization over a five-year period in subsequent general rate cases. The Pilot budgets to be recorded for future cost recovery are shown for each territory in Table 2 below.

Table 2: PROPOSED RMC PILOT BUDGET

Territory	PY1	PY2	PY3	Total
Kansas Central	$ 635,000	$ 554,000	$488,000	$1,677,000
Kansas Metro	$1,198,000	$1,044,000	$921,000	$3,163,000

[12] Consistent with the 2021 Filing and historical adoption trends, Evergy has scaled the Pilot based on EPRI's most recent medium growth projection for light duty, passenger vehicles.

3. Proposed Reporting Structure

Q. What reporting structure does Evergy propose for the Pilot?

A. Evergy proposes to follow a reporting structure in accordance with the reporting standards prescribed in the 21-320 Docket 2021 Settlement Agreement.[13] Accordingly, Evergy proposes submitting an Annual Report for the previous calendar year for each jurisdiction to the Commission on April 30 each year. In addition, Evergy proposes evaluation be completed and filed with the Commission within six months of the Pilot's conclusion.

Annual Reports

Q. What information does Evergy propose including in its Annual Reports?

A. Evergy's proposed Annual Reports will include: (1) Summary of marketing and outreach activities completed; (2) Number of customers participating; (3) Estimated EV charging load demand (kW) of participants;[14] and (4) Budget expenditures.

EM&V

Q. How does Evergy plan to evaluate the Pilot's effectiveness?

A. Evergy proposes to hire a third-party consultant to complete a rigorous evaluation of the Pilot. More specifically, Evergy anticipates "[t]his evaluation will provide the foundation necessary to identify, design, and scale future managed charging approaches to maximize customer and grid benefits as EV adoption increases."[15]

[13] Evergy (2021), Motion to Approve Non-Unanimous Partial Settlement Agreement, filed in Docket No. 21-EKME-320-TAR, July 29, 2021.
[14] Actual load of participants at the time of reporting.
[15] Evergy Transportation Electrification Portfolio Filing attached to Evergy's Application, p. 28 (Sep. 30, 2024) (2024 Report).

As explained further below, Evergy's proposed EM&V includes a standard Randomized Controlled Trial design for the Passive Approach, and a non-standard Randomized Encouragement Design for the Active Approach. In addition, Evergy proposes its consultant will use three online surveys to gauge customer reactions to the Pilot.

Surveys & Interviews

Q. How does Evergy propose to collect Pilot customer experience feedback?

A. Additional learning objectives of the proposed Pilot focus on customer experience.[16] Accordingly, Evergy proposes its evaluator will collect participant feedback through three online surveys conducted over the course of the Pilot—one at the outset, another at the midpoint, and a final survey at the end of the Pilot. Distinct survey instruments will be developed for the Passive Managed Group and Active Managed Group participants. These instruments will include questions common to both interventions and unique questions corresponding to the different attributes of each intervention.

Another survey will be deployed to non-participants in order to understand the potential applicability of Pilot findings to future EV owners.[17] The evaluator will also conduct final interviews with a sample of participants at the conclusion of the Pilot in order to gain deeper insights on their experiences. Survey and interview results will be coded and analyzed to produce quantitative results where feasible. In addition, qualitative findings will also be reported.

[16] 2024 Report, pp. 29-30.
[17] *Id*.

4. Evergy's Support for the RMC Pilot

Q. What benefits does Evergy expect from the Residential Managed Charging Pilot?

A. Evergy anticipates the Pilot will optimize the charging patterns of EV drivers charging at home. Additionally, the Pilot is intended to gather information about customer preferences related to managed charging and to quantify the load shaping impacts of the two different managed charging approaches (passive vs. active) on different customer groups. Lessons learned from the Pilot will help determine whether to offer future residential-focused managed charging programs and, if so, how best to design those programs.

Benefit-Cost Analysis

Q. Did Evergy perform a benefit-cost analysis of the proposed Pilot?

A. No. On page 7 of the 2024 Report, Evergy explains, a benefit-cost analysis was not performed for the Pilot because this program is proposed as a pilot to test the efficacy and costs of alternative residential managed charging approaches. In DR KCC-5, Staff pointed out that the preliminary EM&V provided in the 21-320 docket seemed to contain a large amount of hourly data by TOU customers that might be used to perform a benefit-cost analysis for the Pilot. However, Evergy responded explaining, the 21-320 "EM&V report does not offer data needed to estimate the impact of the proposed interventions, and the range of impacts available from other industry sources is too broad to serve as a substitute."

After reviewing the data in the 21-320 EM&V analysis, Staff concluded that Evergy is correct—heroic assumptions and complex, intricate modeling would have been necessary for a benefit-cost analysis to be performed with the data. And

heroic assumptions combined with complex, intricate modeling do not a convincing benefit-cost analysis make.[18]

5. Staff's Modeling Concerns with the RMC Pilot

Forecast Uncertainty

Q. Is Staff concerned about residential EV forecast uncertainty?

A. Yes. The forecast for EV demand is described by Evergy as policy driven, but the recent change of administration in Washington D.C. calls into question the assumptions underlying continued policy-driven EV growth.[19] The possibility of eliminating the EV tax credit, subsidies, and other favorable EV policies could alter the projection of EVs.[20] If there are less participants in the program as a result, then the fixed costs of the program would be spread among fewer participants reducing the benefit-cost ratios.

Q. Does Evergy share Staff's concerns about the residential EV forecast uncertainty?

A. No. In response to Staff DR KCC-6, Evergy maintains that at least 70% of the EVs expected to participate in the Pilot will have already been purchased by the start of the new administration.[21] Given this expectation and the 11% difference between

[18] A 2022 meta-analysis provided a range of benefits from $15 to $360 per EV-year. Anwar et al (2022), "Assessing the value of electric vehicle managed charging: a review of methodologies and results," *Energy and Environmental Science*, 15, 466.
[19] On pages 14 of the 2024 Report, Evergy states the federal policy-driven growth for EVs is attributed, in part, to the Bipartisan Infrastructure Law, the Inflation Reduction Act, and the U.S. Environmental Protection Agency EV favorable policies. On pages 15 of the 2024 Report, is a graph (Figure 3) illustrating the expected exponential growth in passenger EVs.
[20] On January 20, 2025, President Trump signed an executive order eliminating EV subsidies that EV activists insist they will challenge in court.
[21] *See* Staff Exhibit A, DR KCC-6.2.

EPRI's pre-IRA and post-IRA forecasts,[22] Evergy expects any impact on the Pilot to be small and not affect Evergy's ability to achieve the Pilot's objectives.

Q. Does Evergy's explanation alleviate Staff's concerns about residential EV forecast uncertainty?

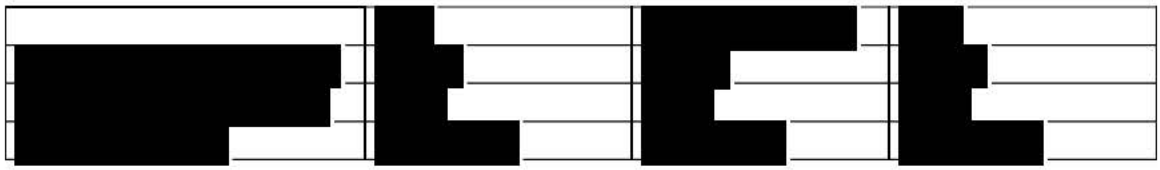
A. Evergy's response partially alleviates Staff's concerns about the uncertainty of the EV forecast impacting the Pilot's viability. However, as discussed below, Staff's ultimate concern is whether Pilot benefits will outweigh the costs if actual participation levels are substantially less than anticipated.

Budget Scalability

Q. From a budget perspective, how would the Pilot be affected if the growth of residential EVs is less than expected?

A. The budget line items assumed to scale with participation are Customer Incentives, EV Charging Reports for the Passive Approach, and half of the Active Managed Charging Platform. The following table provides Evergy's estimates of how the program budgets scale with participation.[23]

****Table 3: RMC PILOT BUDGET SCENARIOS****



[22] *See* Exhibit A, Evergy's response to Staff's Data Request KCC-6.1, in relevant part:
EPRI provided passenger vehicle adoption scenarios in December of 2021, nine months prior to the Inflation Reduction Act (IRA) becoming law in August of 2022. For the present filing, Evergy used EPRI vehicle adoption scenarios received in February of 2024. It is informative to compare the medium EV adoption scenario provided by EPRI in December of 2021 (pre-IRA) to the scenario provided in February of 2024 (post-IRA). The former shows 86,846 vehicles in Evergy's KS service area at the end of the decade (i.e. YE2029) while the latter shows 96,631 vehicles (+11%).

[23] *See* Exhibit A, Evergy's response to Staff Data Request KCC-10.1, in relevant part: These estimates are approximate, as Evergy does not have complete knowledge of vendors' underlying pricing structures.

Robustness of the Benefit-Cost Results

Q. Did Evergy include a break-even analysis showing the participation level necessary for Pilot benefits to begin to outweigh the costs?

A. No. In response to KCC-10.2, Evergy states it is not possible to provide a break-even analysis because an ex-ante benefit-cost analysis was not completed for the Residential Managed Charging Pilot.

Q. Does this alleviate Staff's concerns about forecast uncertainty?

A. As mentioned above, Staff's ultimate concern is whether Pilot benefits will outweigh program costs if actual participation levels are less than anticipated. While the Pilot is intended to optimize residential charging patterns, it is also intended to gather information about customer preferences related to managed charging and to quantify the load shaping impacts of the two different managed charging approaches. The lessons learned from the Pilot will help determine whether to offer future residential-focused managed charging programs and, if so, how to best design those programs. Staff is still concerned whether sufficient enrollment levels will be reached to achieve these objectives.

Staff's Recommendation to Mitigate Staff's Modeling Concerns

Q. What are your Recommendations to mitigate Staff's modeling concerns?

A. To mitigate Staff's modeling concerns, Staff recommends steps be taken to ensure sufficient data is collected as discussed in the Program Design Section and a rigorous EM&V be performed as discussed in the Reporting Section further below.

6. Staff's Concerns with the RMC Pilot Design

Participation Incentives

Q. Please explain how the Residential Managed Charging incentive values were determined.

A. In response to DR KCC-7, Evergy explains, consistent with other opt-out behavioral programs, customers enrolled in the Passive Approach will not receive program incentives. In determining the Active Approach incentives, Evergy reviewed incentive ranges used in similar managed charging programs across utilities nationwide[24] and selected an amount it judged adequate to secure the participation level needed to achieve the Pilot's learning objectives.[25]

Q. Does Staff agree the proposed incentives levels are reasonable?

A. Because several hundred participants are needed for meaningful EM&V, Staff agrees it is reasonable for customers who enroll in the Active Approach to receive a $50 up-front incentive to participate in the program. However, Staff is concerned that requiring only one day of charging per month is not enough to ensure sufficient

[24] See Exhibit A, Evergy's response to Staff's Data Request KCC-7, in relevant part: Several of the utility programs considered are SRP EV Flex Charge: $50 for enrollment and $25 per year for participation; Portland General Electric: $50 for enrollment and $50 per year for participation; Xcel Energy Charging Perks: $50 for enrollment and $150 per year for participation; Eversource Connecticut Electric Vehicle Charging Program: $100 for enrollment and $200 per year for participation; CPS Energy FlexEV Smart Rewards: $250 for enrollment and $60 per year for participation

[25] *See id*., in relevant part:

> In terms of securing the target participation level, there was little available data on the effectiveness of the incentives (i.e. percent enrollment of eligible EV customer population as a result of differing incentive levels). Evergy's target cumulative Active Managed Charging participation level amounts to nearly 10% of the expected eligible EV population, which is a high level of participation by DSM program standards. Eversource reported enrollment of approximately 10% of EV customers after slightly more than two years of launch. However, considering the significantly lower electricity costs in Evergy territory, Evergy judged that an incentive level closer to that of Xcel Energy's (Colorado) would still be very likely to generate target participation while also representing costs more likely to be sustainable if the pilot were to become a program. These judgements are necessarily approximations based on the limited available data, to be refined based on the pilot learnings and subsequent cost effectiveness analysis.

charging data is collected to achieve the Pilot's objectives. Accordingly, below I will recommend a modification of the program parameters to require five days of at-home charging per month in order for a customer to be eligible to participate in the program.

Communications Plan

Q. Is Evergy's plan for customer communications detailed enough to provide adequate analysis of Evergy's stated goals?

A. Evergy's proposed RMC Pilot has three main goals: 1) encourage residential customers to charge their EV during off-peak hours, 2) gather customer preferences related to managed charging and 3) quantify the load shaping impacts and costs of active vs passive programs on different customer groups. The success of these three goals relies, in part, on effective promotional/educational materials to increase participation. While the goals are relatively straight-forward, the plan provided for customer communications is vague. Success also requires a rigorous research methodology to evaluate customer preferences and help shape decisions on future EV-related programs, which is discussed in detail in the Reporting Section below.

Q. How can Evergy better ensure educational and promotional messaging will be effective?

A. In Section 2, the "Residential Managed Charging Pilot" subsection of the proposal, Evergy proposes providing participants in the RMC Pilot "educational and motivational communications to shape their charging behaviors." A portion of participants automatically enrolled in the passive program will receive education and awareness information to encourage them to switch to the active program. Participants in the passive program will also receive information encouraging them

to charge during non-peak times. However, there are no details about the frequency, messaging, or design of these materials, beyond a short discussion about the use of email, word-of-mouth, and secondary marketing channels in section 4.1.1. Creating a more detailed plan of the educational and motivational messaging at the outset of the pilot program will allow for message testing and measures of effectiveness that can be used to design an even stronger program following the Pilot.

Staff's Recommendation to Mitigate Staff's Concerns with the Pilot Design

Staff's Recommendation Regarding Participation Incentives

Q. What does Staff recommend to mitigate Staff's concerns regarding the Pilot Design?

A. To address Staff's concern that requiring only one day of charging per month is not enough to ensure sufficient charging data is collected, Staff recommends increasing the number of required charging days to five days per month to be eligible for an ongoing monthly incentive of $10.

Staff's Recommendation Regarding the Communications Plan

Q. What are Staff's recommendations for improving the communication plan?

A. A communication plan should include details on the messaging, design, delivery channel, and frequency of communication directed at participants in each group (except those in the control groups). The plan should be designed with specific key performance indicators and benchmarking with similar external EV programs (when applicable) to measure progress/effectiveness and to be able to adjust communication/educational materials over the life of the pilot.

7. Staff's Concerns with the RMC Pilot Reporting Structure

Q. What are Staff's concerns regarding the proposed reporting structure?

A. As discussed below, Staff has concerns with the proposed EM&V and Survey.

EM&V

Q. What are Staff's concerns regarding the proposed EM&V?

A. Staff's concerns regarding the proposed EM&V reflect findings from Staff's analysis of the Passive Approach Impact Estimation and Passive Approach Impact Estimation methodologies discussed in detail below.

Passive Approach Impact Estimation

Randomized Control Trial

Q. What is the Randomized Control Trial design?

A. The randomized control trial methodology was initially developed to evaluate the effectiveness of medical treatments after World War II.[26] The statistical problem was to design experiments so that causality could be established for medical treatments.[27] Because correlation does not necessarily imply causation, the experiments had to be designed so that only one element in the treatment was changed at a time so that the treatment result necessarily had to imply causation if successful.

The design of a randomized controlled trial starts by creating two samples: (1) the treatment group receives the treatment, and (2) the control group receives a placebo. Statistical analysis is run on the two groups and, if the treatment group

[26] A famous successful antecedent of the randomized control trail was a survey of British sailors in the 18th century to determine the effectiveness of adding fruits to sailor's diet to prevent scurvy.
[27] This also explains why the intervention is referred to as the treatment effect.

performs statistically better, then causation is recognized for the treatment. Because statistical analysis alone is not sufficient to establish causation, the randomized controlled trial design is considered the "gold standard" for medical research. The Randomized Control Trial design has also been successfully applied outside of the hard sciences.[28]

Q. What are the key elements of Randomized Controlled Trial Design that must be followed to effectively establish causation?

A. The two key elements that must be established when transferring the design outside of experimental science are the randomization of the split between treatment and control groups and the limitation of only one change in treatment effect allowed at a time. If self-selection or some other selection process is used instead of randomization then a potential confounding element is added to the treatment effect. For example, self-selection could mean that the treatment group is more motivated than the control group. If the treatment effect is a bundle of treatments, such as a bundle of educational material, then it is not clear which part of the bundle is effective, or if the whole bundle is needed to effectively change behavior.

Q. How will a Randomized Control Trial Design be implemented in this instance?

A. Evergy proposes its EM&V consultant will use regression analysis of AMI data to estimate the impact of the passive program on charging. A Passive Managed Group

[28] Several economists have received Nobel Prizes for using randomized controlled trial design. In 2019, Abhijit Banerjee, Esther Duflo, and Michael Kremer received the Nobel Prize in Economics and were specifically cited for using randomized controlled trial design in development economics. As non-economists like to point out, the economics prize was added in 1969 and is officially called The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.

and, as explained below, a Passive Control Group will be selected using a randomization protocol for the statistical analysis.

Sample Size

Q. How will the sample size be determined?

A. Within the group of Evergy customers that have L2 charging at home, a subset, about 20% will be chosen as the Passive Control Group. These customers will continue getting current educational efforts aimed at off-peak charging but will not get the enhanced level of education and communication that comes with being in the Passive Managed Group. The remaining eligible customers, about 80%, will be automatically enrolled in the Passive Managed Group and receive passive managed charging education.[29]

Q. How will Evergy's EM&V consultant determine the effect of the Passive Management approach?

A. There are multiple techniques that can be used, but the simplest is to split the statistical analysis into two parts—estimating the effect on energy usage using daily usage data and the effect on customer demand using hourly usage data. The estimation uses usage from before and after the implementation of the program, along with weather variables and demographic variables. Then, statistical analysis can be used along with a binary variable to measure the treatment effect.[30]

[29] Two thirds of the Passive Managed Group will be selected for the Active Managed Group. However, many of those selected are expected to reject joining the Active Managed Group.

[30] A binary variable takes a value of either 0 or 1. For example, 1 for the treatment and 0 for the placebo or 1 for a participant in a program and 0 for a non-participant. In econometric slang, a binary variable is referred to as a dummy variable.

The binary variable can be used to estimate the fixed effects by using it by itself and then to estimate the random effects by creating interactive variables with the binary variable multiplied by the weather variables. Also, separate statistical analysis can be used for different seasons or when rates change from summer to winter.

Q. Does Staff have any concerns regarding the methodology described above?

A. No. If the randomization protocol is followed and the appropriate statistical techniques are used, Evergy's EM&V consultant should produce an estimate of the effect of the Passive Managed Approach that is valid. Nonetheless, Staff would like regular, frequent updates from Evergy to monitor the implementation of the EM&V process, including the results of the sampling and the statistical techniques to be used.

Active Approach Impact Estimation

Randomized Encouragement Design

Q. Will Evergy's EM&V consultant be able to use the Randomized Control Trial Design to estimate the effectiveness of the Active Managed Charging Approach?

A. The Randomized Control Trial Design cannot be used to estimate the effectiveness of the Active Managed Charging Approach. Instead, Evergy has proposed that a Randomized Encouragement Design be used to evaluate the effect of the Active Approach.

Q. Why won't a Randomized Control Trial Design work for the Active Approach?

A. Because it would be inappropriate for Evergy to randomly assign restricted charging to some customers and not assign that same restriction to other eligible

customers. Evergy proposes the Active Approach to be voluntarily assigned to customers, which eliminates random assignment. Instead, Evergy proposes an opt-in program, where customers choose to participate in the program rather than Evergy assigning some customers to the program and others to a control group.

Q. What is a Randomized Encouragement Design?

A. Randomized Encouragement Design is used to estimate a treatment's causal effect when participants are not forced to take the treatment but are randomly encouraged to participate in the treatment instead. This design allows the estimation of encouragement on treatment uptake, and then with some statistical manipulation,[31] the estimation of the treatment effect on the outcome variable. The key point is the Randomized Encouragement Design can be used to study treatment effects when the population can choose to either receive or reject the treatment offered.

Q. How does the introduction of customer choice to take the treatment or not undermine the casual structure of the Randomized Control Trial Design?

A. The elimination of the randomized assignment of customers to the treatment or control group introduces the possibility that the decision to receive the treatment may be caused by factors other than just the treatment—other external factors that are not variables included in the estimation of the treatment effect. With electric vehicles, a major concern is the well-known higher income bias of EV owners. Since income data is not available for individual consumers, the effect of income on treatment is subsumed in the error term.[32] This makes the treatment an

[31] The statistics involves the introduction of an instrumental variable and strong assumptions about the covariance among the instrumental variable, treatment variable, and the regression error term.
[32] Individual income is only available through IRS data. What is available is mean and medium income by zip code and by census track which in the case of individual consumer decisions is inadequate.

endogenous variable rather than an exogenous variable, which violates a major assumption of regression analysis.[33]

Q. Are there any potential difficulties in the use of Randomized Encouragement Design?

A. Yes. The correlation between the encouragement and the treatment needs to be strong. If the correlation is weak, then the results are biased and unreliable even when the number of observations is large. Also, the validity of causal inferences relies on the assumption that encouragement only affects managed charging and no other confounding factors. For example, suppose Evergy's encouragement causes a participant to opt-in to the Active Managed Charging Approach and switch to a TOU rate. The treatment effect would be confounding of two customer changes (opting in to the Active Approach and switching to a TOU rate), resulting in a biased estimate. In addition, for a reliable estimate the number of observations used needs to be large—something that cannot be guaranteed because of the voluntary nature of the program.

Finally, as noted by Evergy's response to DR KCC-13, "The RED [Randomized Encouragement Design] will yield a point estimate and confidence interval for the impact of being in the passive group and being encouraged to join the Active Group."[34] In other words, the Randomized Encouragement Design will not provide an answer to the question, "what is the impact of the managed

[33] The endogeneity of the treatment effect results from the treatment effect's correlation with income or other variables subsumed in the error term. The treatment effect's endogeneity is the specific reason that an instrumental variable is necessary as discussed in the footnote 30.
[34] *See* Exhibit A, DR KCC-13.1.

charging." For a quantitative estimate of the impact of the managed charging compared to no managed charging, a different methodology is needed.

Sample Sizes for the Randomized Encouragement Design

Q. Is Evergy concerned that it will not have enough observations to get a qualitative evaluation of the Active Managed Charging Approach?

A. No. Evergy "believes the timing for the Pilot is ideal, as the current population plus expected expansion over the Pilot term is expected to deliver the required participation levels."[35] Staff hopes Evergy is correct, but as noted above, the estimated demand for EV's is subject to changes in federal policies. Evergy contends that enough electric vehicles have already been purchased to make the Pilot successful.[36]

Q. How large are the encouragement group and the Active Managed Group in Evergy's Randomized Encouragement Design?

A. Evergy's description of how the two groups are chosen: Within the Passive Managed Group, Evergy will encourage a subset (about 67%) to enroll in the Active Approach (Encouraged Group). A portion of encouraged customers will choose to enroll in the Active Managed Group; those who do not enroll will remain in the Passive Managed Group (Encouraged Control Group). Passive Approach participants not encouraged to join the Active Approach (i.e. continue receiving passive charging intervention) will serve as an Active Control Group.[37]

[35] 2024 Report, p. 28.
[36] *See* Exhibit A, Staff's DR KCC-6.
[37] 2024 Report, p. 29.

Q. Does Staff see any potential problems with the samples chosen?

A. As mentioned above, there is the question of whether there will be enough observations to provide a reliable estimate of the effect of Active Managed Charging. The Passive Managed Group used for the creation of the Encouraged Group and the Encouraged Control Group contains both TOU and non-TOU customers. Less than 50% of L2 home charging customers in Evergy's Central Service Territory are on TOU rates. If a customer chooses to participate in the Active Approach, then it makes sense they would also want to be on a TOU rate. If they are not currently on a TOU rate, then moving to one creates a confounding effect creating a biased and unreliable estimate of the treatment effect of scheduled charging.

Estimating the Quantitative Effect of AMC (Baseline Method)

Q. You mentioned a different methodology is needed for a quantitative estimate of the managed charging effect. How does Evergy propose to provide a quantitative estimate of the effect of active managed charging approach?

A. Evergy proposes to use a baseline to compare the usage by the Active Approach customers after controlled charging has begun. The baseline will be the charging data for the Active Approach customers before the scheduled charging. The pre-scheduled usage compared to the post-scheduled usage should give some idea of the effect of scheduled charging. Evergy notes that "this approach is not as definitive as the other methods [such as the Randomized Control Trial Design] in determining causality, it is consistent with best practices to determine causality and

elicit a characterization of the benefits and future opportunities of Active Managed Charging."[38]

Surveys & Interviews

Q. Is Evergy's plan for research on customer opinions detailed enough to provide adequate analysis of Evergy's stated goals?

A. As discussed above, Evergy's proposed RMC Pilot has three main goals: 1) encourage residential customers to charge their EV during off-peak hours, 2) gather customer preferences related to managed charging and 3) quantify the load shaping impacts and costs of active vs passive programs on different customer groups. The success of these three goals relies, in part, on a rigorous research methodology to evaluate customer preferences and help shape decisions on future EV-related programs. Like the communications plan discussed above, the plan provided for research on customer opinions is vague.

Q. How can Evergy better ensure that their learning objectives will be met?

A. In Appendix A, Evergy lists four learning objectives for the RMC pilot:

- Gauge customer interest in the passive and active approaches
- Understand how the effectiveness of each approach is influenced by customer rates
- Assess the incremental costs and benefits of these RMC approaches, relative to a baseline, business-as-usual scenario
- Gather feedback from participants regarding their experience with managed charging to understand their attitudes, preferences, and satisfaction levels related to RMC.

[38] 2024 Report, p. 29. In Evergy's response DR KCC 9.5, Evergy elaborated on the limitations of the baseline methodology. "The pre/post method we propose to add for the Active Group does not use a control group, and the effect of participating is not randomly assigned. Therefore, coincidental changes or confounding influences may substantially contribute to the estimated impact." *See* Exhibit A, DR KCC-9.5.

To successfully meet these objectives, a thorough and rigorous research plan should be designed prior to implementation of the pilot. The research outlined in this proposal, however, is vague and lacks detail necessary to ensure the data collected will be sufficient to evaluate the effectiveness of the pilot. This pilot proposal, however, provides few details beyond the following:

- Evergy plans to assign participants in this pilot to four groups (Passive Managed Charging, Passive Control Group, Active Managed Charging, and Active Control Group).
- Evergy also plans to collect participant feedback with three online surveys at the beginning, middle, and end of the pilot.
- Evergy's evaluator will use different survey instruments for the passive and active groups, but with some questions common to both groups and unique questions related to the different attributes of each intervention.
- Evergy proposes a survey be given to non-participants and to do interviews with a sample of participants at the conclusion of the pilot.

Creating a more detailed plan of the educational and motivational messaging at the outset of the pilot program that builds on information learned through focus groups with eligible EV owners before the pilot begins will make it possible for survey questions of participants to align with key performance indicators and give feedback on what appeals/messaging is/is not working and why.

Staff's Recommendation to Mitigate Staff's Concerns with the Pilot Reporting Structure

Q. What are Staff's recommendations to mitigate Staff's concerns regarding the Pilot reporting structure?

A. Staff's recommendations regarding the Pilot reporting structure address the EM&V and customer research plan as outlined below.

EM&V

Staff's Recommendation Regarding Passive Approach Estimation Methodology

Q. What is your recommendation regarding the Passive Approach estimation methodology?

A. As discussed above, Evergy's consultant should produce an estimate of the effect of the Passive Managed Program that is valid if the randomization protocol is followed and if the appropriate statistical techniques are used. Therefore, Staff requests regular, frequent updates from Evergy to monitor the implementation of the EM&V process, including the results of the sampling and the statistical techniques to be used. An example where this has worked well recently has been the collaborative process undertaken in Docket No. 22-EKME-254-TAR. Our understanding is that Evergy will not oppose this recommendation.

Staff's Recommendation Regarding Active Approach Estimation Methodology

Q. What is your recommendation regarding the Active Approach estimation methodology?

A. The EM&V for the active charging is the most important EM&V for the Residential Managed Charging Pilot and is going to be the hardest to get reasonable results that can be trusted. Because Evergy does not have an EM&V Plan and has not considered the statistical problems they are likely to encounter, I recommend Evergy file an EM&V Methodology Plan within six months in this docket and give Staff at least two months to review the plan and work collaborative on developing a detailed implementation plan.

Surveys & Interview

Staff's Recommendation Regarding Customer Research Plan

Q. What are Staff's recommendations for improving the customer research plan?

A. Evergy should collaborate with stakeholders to create a more detailed research methodology plan and instrumentation. Ideally, the research plan should include focus groups of eligible participants before the pilot implementation to determine interest in the passive and active programs, what appeals in messaging would be most persuasive to EV owners, and level of interest in incentives to then be able to design a pilot that would be the most effective. Insights from the focus group should then be used to create survey questions.

The research plan should also include a series of online surveys with three groups: 1) Active Managed Charging group, 2) Passive Managed Charging group, and 3) those who received information about joining the Active Managed Charging group, but did not join. Surveys at the beginning, middle, and end of the pilot as proposed by Evergy would give valuable data over time. Questions should be carefully crafted to not only give depth of understanding to what and why participants liked and disliked about the pilot, but they should be written in a way to make the resulting data actionable. Rigorous evaluation is important, but it is only as good as the data collected. These comments are meant to strengthen the quality of the data available at the end of the pilot.

Q How should the research plan be created?

A. Evergy should collaborate with stakeholders to create the plan. Evergy should create a more detailed research plan within six months that includes pre-pilot focus

groups, and three surveys of participants (beginning, middle, and end) as discussed above. Each instrument should include information on who will be recruited to participate, the number of participants, a timeline of the project, the focus group script, and the survey questions. This research plan would then be given to stakeholders for evaluation and feedback. Once the review is completed, stakeholders and Evergy should work collaboratively until agreement is met. If Evergy and stakeholders cannot reach agreement, the plan should be put for the Commission for final approval.

B. Evergy's Proposed Fleet Advisory Services Program

Q. What was the impetus for the Fleet Advisory Services Program?

A. In addition to learning from the implementation of its own Commercial EV Charging Rebate Program as discussed in the background section above, Evergy investigated how other utilities address fleet services and conducted its own survey to better understand which advisory services fleets require most.[39] Evergy's research identified the following key barriers to a successful fleet transition in Kansas: (1) Many customers lack the internal expertise required for effectively implementing grid-friendly electrification;[40] (2) Customers are challenged to understand charging and electrical capacity needs;[41] and (3) Fleet operators and

[39] Survey respondents included both public and private sector fleets ranging from fewer than 20 vehicles to more than 200 vehicles of all size classes.
[40] Resource Expertise: Fleet electrification is intricate and demands multiple layers of cross-stakeholder collaboration to address operational, infrastructure, and procurement considerations.
[41] Charging and Capacity Requirements: Data collection and analysis is required to appropriately forecast energy and demand, and then to develop charging plans tailored to the customer's unique operational demands.

equipment providers are inclined to oversize charging infrastructure.[42] Evergy's research found these barriers are most acute among small, medium, and public sector fleets.

1. Description of the Proposed Program (Program Parameters)

Service Levels

Q. How did Evergy determine the Program's service offerings?

A. As discussed above, Evergy states it has learned through its research and implementation of its Commercial EV Charging Rebate Program that a growing number of customers intend to electrify their fleets, but few of them are prepared for a transition that minimizes customer and utility costs by right-sizing infrastructure, optimizing charging schedules, and avoiding costly grid upgrades. Because customer fleets are at different levels of development, the proposed FAS Program is structured in three levels as outlined below.

Level 1: Introductory Fleet Assessment

Q. What is the first level of fleet advisory services proposed?

A. According to Evergy's Application, the first level of fleet advisory services is directed toward customers new to fleet electrification who require a basic understanding of the eletrification process. Utilizing Evergy's existing online fleet calculator, Evergy proposes to provide these customers a high-level analysis of their fleets, including an assessment of which vehicles are suited for electrification, potential cost savings, the environmental benefits of electrification, and rate

[42] Infrastructure Design Assistance: Absent an understanding of alternatives and long-term cost implications, this can lead to unnecessary costs on both the customer and utility side of the meter.

education. First-level participants will also receive basic education about how charging session timing and charging speed impact operating costs. These insights are expected to enable customers to evaluate the feasibility of fleet electrification and determine whether they would benefit from the more comprehensive support offered in Program Levels 2 and 3.

Level 2: Enhanced Fleet Electrification Planning

Q. What is the second level of fleet advisory services proposed?

A. According to Evergy, the second level is builds on the foundational support provided in Level 1 by providing a customized total-cost-of-ownership and high-level site assessment, which includes vehicle usage patterns, initial purchase prices, energy, maintenance and repair costs, resale value, operating costs, and infrastructure requirements. Evergy's advisors are expected to work closely with participants to develop personalized charging and implementation plans that meet customers'specific needs and requirements while ensuring a grid-friendly electrification transition that minimizes both participant- and utility-cost impacts over time.[43]

Level 3: Comprehensive Fleet Electrification Assessment

Q. What is the third level of fleet advisory services proposed?

A. For customers who require even more comprehensive advisory services, Evergy proposes to offer a third service level providing participants a more comprehensive

[43] Higher upfront cost may be offset with lower energy and demand cost over time.

level of planning and design with a specific focus on design solutions that minimize the need for grid infrastructure upgrades.[44]

Eligibility

Q. Who is eligible to participate in the Program?

A. Any Evergy customer who leases or owns fleet vehicles will be allowed to participate in the program. Although Evergy intends the Program to be open to all fleets within its Kansas territories, Evergy proposes to focus its outreach to schools, transit agencies, and small to medium sized business fleets, especially ones in disadvantaged communities.

Participation Incentives

Q. What are the incentives for participation in the Program?

A. Customers enrolled in the FAS program will not receive any direct financial incentives, but the education and technical assistance provided at no cost to participants are expected to result in costs savings participants would not otherwise experience.

Program Size

Q. How has Evergy sized the Fleet Advisory Services Program?

A. Evergy has sized the Fleet Advisory Services Program based on EPRI's low growth projections for commercial vehicles. Accordingly, Evergy expects to serve 60 fleets over the Program's five-year term. Table 4 below presents the FAS Program participation forecast for each territory.

[44] Incorporating conceptual infrastructure site designs and associated preliminary construction cost estimates, Level 3 is designed to support a holistic integrated and collaborative approach with specific focus given to solutions that minimize the need for grid infrastructure upgrades.

Table 4: FAS PROGRAM PARTICIPATION FORECAST

Territory	PY1	PY2	PY3	PY4	PY5	Total
Kansas Central	2	6	11	12	2	33
Kansas Metro	1	5	9	10	2	27

2. Proposed Budget and Cost Recovery Mechanism

Q. How does Evergy propose to recover the program costs for the Program?

A. Evergy proposes to record the Fleet Advisory Services Program costs to the regulatory asset created in the 21-320 Docket for recovery in subsequent general rate cases through amortization over a five-year period. The proposed Program budgets to be recorded to the regulatory asset are shown for each territory in Table 5 below.

Table 5: PROPOSED FAS PROGRAM BUDGET

Territory	PY1	PY2	PY3	PY4	PY5	Total
Kansas Central	$ 98,000	$ 137,000	$ 240,000	$ 226,000	$ 71,000	$ 772,000
Kansas Metro	$ 163,000	$ 154,000	$ 263,000	$ 230,000	$ 108,000	$ 918,000

3. Proposed Reporting Structure

Q. What reporting structure does Evergy propose?

A. Evergy proposes to follow a reporting structure adopting the reporting standards prescribed in the 21-320 Docket Partial Settlement Agreement.[45] Accordingly, Evergy proposes submitting an Annual Report for each jurisdiction to the Commission on April 30 of each year for the previous calendar year. In addition, Evergy proposes that Evaluation activities will be completed and filed with the Commission within six months of the end of the program.

[45] *See* Motion to Approve Non-Unanimous Partial Settlement Agreement, Docket No. 21-EKME-320-TAR (Jul. 29, 2021).

Annual Report

Q. What information does Evergy propose including in its Annual Reports?

A. The proposed annual report would include: (1) Summary of marketing and outreach activities completed; (2) Number of customers participating; (3) Estimated EV charging load demand (kW) of participants'[46] future fleet EV charging; and (4) Budget expenditures.

EM&V

Q. How does Evergy plan to evaluate the FAS Program's effectiveness?

A. Due to the limited scale of the Program (60 fleets over five years), Evergy proposes not performing a full impact and process evaluation. Instead, Evergy proposes its evaluator focus on collecting and analyzing participant feedback, including information on the degree to which the FAS Program influences each participant's charge management plans.

4. Evergy's Support for the FAS Program

Q. What are the expected benefits of the Fleet Advisory Services Program?

A. At a high level, the Fleet Advisory Services Program provides education and technical assistance aimed toward shaping future charging load, which is expected to reduce site demand for participating fleets and shift charging to off-peak hours.[47] Weighing the resulting infrastructure and operating costs savings against the expected Program costs, the cost effectiveness test results are forecasted to be positive. Additionally, Evergy anticipates supplemental benefits that are not

[46] Will be the projected load influenced by the program.
[47] *See* Application p. 5; *see also* 2024 Report, Appendix B.

included in the benefit-cost analysis such as the detailed information about the scale and timing of planned fleet electrification Evergy expects to capture and incorporate in its system planning.

5. Staff's Modeling Concerns with the FAS Program

Q. What are Staff's Modeling Concerns with the proposed Fleet Advisory Program

A. As explained below, Staff's primary modeling concerns are (1) that the benefit-cost results are uncertain due to uncertainty regarding assumptions underlying the analysis and (2) that there is no EM&V planned at the end of the program.

Benefit-Cost Analysis Results are Uncertain

Q. Why are the benefit-cost analysis results uncertain?

A. Staff is concerned the benefit-cost results are uncertain due to uncertainty regarding the following assumptions underlying the analysis: (1) the forecast for EV fleet demand is uncertain—potentially overestimating participation; (2) the projected benefits erroneously include rightsizing benefits that could be provided by third-party advisors—potentially overstating benefits; and (3) the projected benefits erroneously exclude system planning benefits—potentially understating benefits, which counteract some of the potential overstated benefits identified above.

Forecast Uncertainty

Q. Why is Staff concerned about forecast certainty?

A. The forecast for EV fleet demand is described by Evergy as policy driven, and with the change of administration in Washington, policy can quickly shift.[48] The

[48] On page 15 of the 2024 Report, Evergy states the federal policy-driven growth for EVs is attributed, in part, to the Bipartisan Infrastructure Law, the Inflation Reduction Act, and the U.S. Environmental Protection

possibility of the elimination of the EV tax credit, subsidies, and other favorable policies could alter the trajectory of transportation electrification. If there is less participation in the program, then the Program's fixed costs would be spread among fewer participants reducing the Program's benefit-cost ratios.

Q. Does Evergy share Staff's concerns about EV forecast uncertainty?

A. No. In response to DR KCC-6, Evergy states it does not expect the FAS Program to be impacted by a significant reduction in commercial EV growth because the Program is built around a participation forecast that adopted EPRI's low growth projections, which reflect uncertainties inherent in fleet electrification forecasts, including the absence of meaningful policy support.[49]

Q. Does Evergy's explanation alleviate Staff's concerns about EV forecast uncertainty?

A. Evergy's explanation partially alleviates Staff's concerns about the immediate uncertainty of the commercial EV forecast. As discussed above, the exponential EV growth was initially explained in terms of federal legislation and policy. EPRI's low forecast scenario still has substantial EV commercial growth.[50] It is unclear why there would be substantial growth in the low scenario without substantive government policy stimulation. While Staff still has concerns about the forecast uncertainly, as discussed further below, Staff's ultimate concern is

Agency EV favorable policies. On page 16 of the 2024 Report, graph (Figure 3) illustrating the expected exponential growth in passenger EVs is presented. The November election results call into question the assumptions underlying the policy-driven EV growth.

[49] See Exhibit A, DR KCC-6, especially Evergy's response to 6.1 and 6.3.

[50] See Figure 4, p. 16 of Evergy's Report; see also Exhibit A, Evergy's Confidential response to DR KCC-1 where participating fleets and vehicles grow substantially from 2025 to 2027.

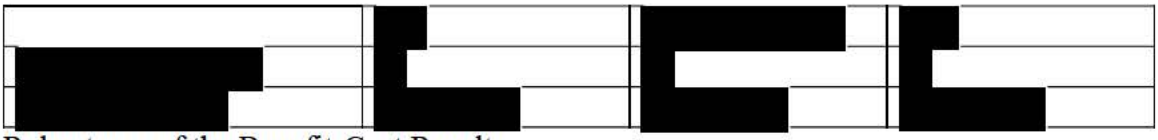
whether Program benefits will outweigh the costs if actual participation levels are less than anticipated.

Budget Scalability

Q. From Evergy's perspective, how would the benefit-cost analysis be affected if the commercial growth of EVs is less than the forecast projects?

A. Evergy expects benefits and costs of the FAS Program would be reduced almost proportionally if fewer fleets are served because most program costs are incurred as advisory services.[51] The following table provides Evergy's estimates of how the program budgets scale with participation.[52]

****Table 6: FAS BUDGET SCENARIOS****



Robustness of the Benefit-Cost Results

Q. Did Evergy include a break-even analysis showing the participation level necessary for benefits to begin to outweigh the costs?

A. Yes, Evergy presented a break-even analysis in response to KCC 10-2, which indicates that the Program continues to achieve a benefit-cost ratio greater than 1.0 for all tests at half of the planned participation.[53]

Q. Does Staff agree with Evergy's analysis?

A. Yes. The only benefit-cost test that is close to one is the Ratepayer Impact Measure Test (RIM). The dominant benefit is avoided capital costs (over 95% of total

[51] *See* Exhibit A, KCC 6.4.
[52] *See* Exhibit A, KCC-10.1. Evergy acknowledges these estimates are approximations, as Evergy does not have complete knowledge of vendors' underlying pricing structures.
[53] This sensitivity analysis consists of reducing the following costs and impacts in Evergy's Benefit Cost analysis by 50%: (1) Technical assistance costs; (2) Avoided costs of electricity supply; (3) Avoided capital costs to Evergy; and (4) Revenue lost from reduced sales.

benefit) and the dominant cost is revenue lost from reduced sales (over 80% of total costs).[54] Both avoided capital costs and lost revenue are per unit measures that would change proportionally with the scale of the program consistent with Evergy's statement indicating the program would continue to achieve a benefit cost ratio greater of 1.0 at half of the planned participation.[55]

Q. Does this alleviate Staff's concerns about forecast uncertainty?

A. Yes. Staff's concerns regarding forecast uncertainty are alleviated by the fact the Program participation forecast already conservatively adopted EPRI's low growth projections and because the Program's RIM benefits and costs scale such that Program benefits outweigh the costs at a 50% participation level. Even if the EPRI forecast for commercial EVs is twice as high as what actually occurs, the benefit-cost tests would still be above one.

While Evergy's sensitivity analysis alleviates any concerns of the EPRI forecast uncertainty causing benefit-cost test failure, Staff has other concerns regarding the uncertainty of the benefit-costs results as explained below.

Projected Benefits Include Rightsizing Benefits that Could be Provided by Third-Party Advisors

Q. How are the benefits from the Fleet Advisory Service Program determined?

A. As discussed above, the Program's economic benefits stem from the development and implementation of optimized transition plans that meet fleet customers' needs while avoiding unnecessary capacity upgrades and minimizing energy supply

[54] 2024 Report, pp. 48-49, Tables 14 and 15. Table 14 is for Kansas Central and Table 15 is for Kansas Metro.
[55] *See* Exhibit A, Data Request KCC-10.2.

costs.[56] These estimated benefits are compared to a baseline where, in the absence of the Program, customers are assumed to electrify their fleets with limited awareness of the associated infrastructure and operating costs, which leads to installing oversized charging infrastructure and charging at suboptimal times. Because the baseline assumes no fleet advisory services exist, the projected benefits encompass the entire difference between the Program and the baseline.[57]

Q. Could benefits Evergy assigned to the program be provided by third-party consultants with no cost to non-participating ratepayers?

A. Staff suspects that third-party providers of EV fleet advice could provide much of the benefit that Evergy's benefit-cost model attributes to the FAS program. Evergy's benefit-cost analysis assumes there are no alternative fleet advisory services.[58] But third-party advisors do exist and will presumably advocate for a least cost approach and provide similar advice as Evergy for right sizing charging infrastructure, which would result in the implementation of minimum sized

[56] *See* Exhibit A, Data Request KCC-10.2.
[57] 2024 Report, p. 33.
[58] In KCC-9, Evergy explains that fleet advisory services with comparable objectives of right-sizing infrastructure and planned charging for off-peak periods are not assumed to occur in the targeted fleets without the program intervention.

> KCC-9.1: Fleet advisory service with comparable objectives of right-sizing infrastructure and planning charging for off-peak periods is not assumed to occur in the targeted fleets absent the program intervention. Evergy plans to target and prioritize outreach to segments with limited resources to obtain third-party fleet advisory services, such as schools, transit agencies, and small to medium business fleets.
> KCC-9.2: The treatment is the development of optimized Charge Management Plans that meet fleet customer needs while minimizing capacity upgrades and energy supply costs. This means that charging infrastructure is right-sized to meet charging requirements during vehicle non-use hours, while also being capable of meeting those needs in off-peak periods.
> KCC-9.3: The participating fleets are not assumed to have fleet advisory services with comparable treatment effects absent the program. This is not to say that the baseline charging patterns Evergy's team modeled represent a worst possible case. They are intended to represent typical charging patterns that result absent a utility-guided fleet advisory service based on available information from the referenced sources.

charging infrastructure without Evergy's involvement. Any third-party consulting that creates right sizing action on the part of customers, cuts into the FAS Program's effect and its beneficial result. Thus, some of the benefits that Evergy has attributed to the Program could be provided by third-party consultants with no cost to non-participating ratepayers.

Q. Are there other benefits Evergy is uniquely suited to provide that third-party advisors aren't able to provide?

A. Evergy has made the argument that its focus will be different than the focus of any third-party entity. In contrast to third-party advisors, their focus will be utility distribution system focused—minimization of distribution upgrades, optimization of existing distribution system locations, etc. As Evergy explained in response to DR KCC-9.3, "[t]he treatment effect is both the rightsizing of charging equipment for participating fleets and the development of Charge Management Plans that meet customer needs while helping Evergy minimize the need for capacity upgrades and/or additional energy supply. A third-party fleet advisory service could likely accomplish the first objective, but not the second, as this requires data and input from utility planning and grid operations teams." Moreover, Evergy contends there are instances in which third-party fleet advisory services firms make recommendations to customers that are not grid friendly.[59]

[59] *See* Exhibit A, Staff DR KCC 12. Evergy states:

> While specific case studies detailing third-party fleet assessments missing the mark with grid-friendly implementation are not widely published, there are general insights that highlight common issues:
> Oversized Charger Recommendations: Third-party fleet advisory services sometimes recommend chargers that are larger than necessary, leading to increased costs and unnecessary strain on the grid. For instance, a fleet might be advised to install high-capacity chargers that exceed the actual needs of the vehicles, resulting in higher installation and operational costs without corresponding benefits. An experiential example involved a recommendation for electric school buses to install 60 kW

Q. Is it appropriate to attribute both rightsizing and value-added grid benefits to the Program?

A. Staff agrees it is appropriate for Evergy to attribute the value-added grid benefits a utility-sponsored program provides to the Program, but Evergy appears to also be claiming all the rightsizing benefits in its benefit-cost model as well. These rightsizing benefits can be divided amongst three separate customer groups: (1) Customers who would use third-party advisors because they believe the third-party providers would better serve their interests; (2) Free Riders who would have either right-sized their charging infrastructure themselves or would have gone with third-party providers in the absence of the FAS program; and (3) Customers who would not have attempted to right-size their infrastructure at all. As discussed below, the

chargers, while 19.6 kW chargers would have sufficed based on the fleet's usage patterns. Oversizing leads to increased costs and additional strain on the local grid.
Suboptimal Grid Locations: Recommendations for charger placements that do not consider the optimal grid locations can lead to inefficiencies. Chargers placed far from the electrical source can incur higher installation costs and potential delays due to the need for extensive electrical work. For example, a fleet manager may request a third party to plan for placing chargers at a site at an existing fueling location to minimize operational changes. However, this requires significant trenching and electrical upgrades, which could have been avoided by selecting a location closer to existing electrical infrastructure. The Evergy FAS program evaluates potential site locations and walks through justifications for considering alternate options with the customer.
Lack of Integrated Planning: Third-party assessments may focus solely on the installation of chargers without considering the broader implications for the grid. This can result in missed opportunities for managed charging strategies that align with off-peak hours, leading to higher electricity costs and increased grid demand during peak times. One experiential example is if a charger is added to the building load and the building is not on a time-based rate. This choice can result in charging occurring during peak hours, leading to increased demand costs and grid congestion. The Evergy FAS program recommendations will always include separately metered service, time-of-use rate education, and a managed charging plan to shift charging to off-peak hours, resulting in cost savings and reduced grid impact.
Inadequate Stakeholder Involvement: Effective fleet electrification requires the involvement of various stakeholders, including utility companies, fleet operators, and technical advisors. Third-party assessments that do not engage all necessary parties may overlook critical factors such as grid capacity, future expansion plans, and technical feasibility. The Evergy FAS program ensures all utility stakeholders are engaged to ensure grid compatibility and future scalability. (Numbering omitted and emphasis added for consistency).

rightsizing benefits erroneously included from the first two groups should be subtracted out of the model's projected benefits.

Projected Benefits Erroneously Include Rightsizing Benefits Third-Party Advisors Will Provide

Q. Why does Staff contend the projected benefits erroneously include third-party rightsizing benefits that should be excluded from the benefit-cost analysis?

A. Some participants Evergy assumes in its benefit cost model will, instead, choose a third-party advisor as its agent because they believe their interests are better aligned. The projected benefits for these customers are erroneously counted as Program benefits and should be subtracted from the model's claimed benefits.

Projected Benefits Erroneously Include Free Rider Rightsizing Benefits

Q. Why does Staff contend the projected benefits erroneously include free-rider rightsizing benefits that should be excluded from the benefit-cost analysis?

A. Staff contends that some of the fleet customers who will use Evergy's program would have used their own internal resources or used a third-party party advisor to assist them with their transportation electrification transition without the existence of the free FAS Program. In other words, without the Program, at least some fleet customers would either right-size their charging infrastructure themselves or hire their own consultants to improve the efficiency of their electrification transition. Thus, they are free riding on the Program and the benefits assigned to Evergy's program for these customers are erroneously counted as Evergy's benefits and should be subtracted from the model's projected benefits.

Projected Benefits Appropriately Include But-for-Evergy Rightsizing Benefits

Q. Why does Staff contend the projected benefits appropriately include but-for-Evergy rightsizing benefits?

A. Benefits of customers who would not have attempted to right-size their infrastructure at all but for the FAS Program should be included in the projected benefits. As discussed above, Evergy intends for the Program to be open to all fleets within its Kansas territories but plans to target and prioritize outreach to customer segments with limited resources to obtain third-party fleet advisory services, such as schools, transit agencies, and small to medium business fleets, especially those in disadvantaged communities.[60] This erroneously assumes there is no alternative funding for fleet advisory services. Benefits from customers who would not have sufficient resources to hire third-party advisors should be included but, like other customers who have the resources and choose a third-party advisor, the benefits of customers with sufficient resources should be subtracted from the model's projected benefits.

[60] *See* Exhibit A, DR KCC 8.1, Evergy explains that not every business that electrifies its fleets has the resources, capabilities, or motivation to invest in a comprehensive fleet assessment. Some common scenarios include:

> Funding-Dependent Businesses who need to secure funding first to hire an advising firm. Once funding is awarded, their goal is to implement the project on time and within a specific budget; Manufacturer or Supplier-Dependent Businesses who rely on their electric vehicle manufacturer or charger supplier to implement their project within a specific budget, often seeking turnkey solutions; and Resource-Limited Entities like school districts often do not have the funds to invest in fleet assessments, leaving the responsibility to individuals like the superintendent or fleet manager.

Projected Benefits Erroneously Exclude System Planning Benefits

Q. Why does Staff contend the projected benefits erroneously exclude system planning benefits that should be included in the benefit-cost analysis?

A. Staff contends there could be system benefits from this program beyond right sizing of the chargers like selecting optimal locations on the grid for transportation electrification to occur. In KCC-9.4, Evergy states "[t]he main additional benefit that is not directly represented in the model is the enhanced planning capability that the visibility to fleet electrification plans will provide Evergy. Evergy will construct a database of the electrification plans of all participants, as well as any shared by non-participants engaged through outreach activities. This database will be shared with Evergy supply and infrastructure planning teams to help plan the right investments at the right times, to optimally meet Evergy customers' growing electric demands."[61] That these system planning benefits are erroneously excluded from the projected benefits, indicates that the benefit cost analysis is conservative with respect to grid-benefit estimations. To correct for this, the system planning benefits should be added to the projected benefits used in the benefit cost analysis.

Q. What is the net effect?

A. Erroneously including rightsizing benefits that could be provided by third-party advisors potentially overstates the benefits but excluding system planning benefits potentially understates the benefits, which counteract some of the potential overstated benefits identified above. While the direction of these errors is known,

[61] *See* Exhibit A, Staff DR KCC-9.4.

the net effect depends on the relative magnitude of the errors, which have not been quantified.

It is tempting to think that the overestimation of benefits caused by ignoring the third-party EV fleet advisory services and the additional benefits of system planning cancel each other. But benefits from right-sizing were large and obvious enough that Evergy estimated their value while the benefits from system planning were not quantified. The benefits from the third-party advisory services appear more certain than the system planning benefits. Probably the third-party advisory service benefits subtracted from Evergy's benefits are larger than the grid-location planning benefits that should be added to Evergy's FAS benefits. The intuition that Evergy's FAS benefits are probably bias upwards, but exactly how much is unknowable.

Staff's Recommendation to Mitigate Staff's Modeling Concerns

Q. What is your recommendation to mitigate these modeling concerns?

A. As explained above, Staff is concerned the benefit-cost results are uncertain due to the uncertainty regarding the assumptions underlying the benefit projections. To mitigate these concerns, Staff recommends the program be offered as a pilot offering basic education and value-added grid-friendly advice to all fleet customers while limiting right-sizing advice to entities without access to third-party advisors. In addition, as discussed below, Staff recommends an EM&V analysis be performed at the end of the program to evaluate its cost effectiveness.

6. Staff's Concerns with the FAS Program Design

Level Structures

Q. Please discuss the need for a modular structure with clear on-ramps and off-ramps.

A. As discussed above, to mitigate Staff's modeling concerns, Staff recommended the program be offered as a pilot offering basic education and value-added grid-friendly advice to all fleet customers while limiting right-sizing advice to entities without access to third-party advisors. However, it is unclear how this recommendation could be implemented given the current program structure. The three different levels of the Fleet Advisory Services program should be structured as independent modules with stand-alone value. There should be clear on ramps and off ramps. Participants shouldn't have to funnel through the entire process to gain value.

Q. How can Evergy better ensure educational and promotional messaging will effectively funnel participants into the program?

A. There are no details about the frequency, messaging, or design of the materials to be used to attract participants into each of the tiered service approaches. Creating a more detailed plan of the messaging for the program will allow for message testing and measures of effectiveness that can be tied to eligible participant preferences and opinions found with the depth interviews already conducted.

Staff's Recommendation to Mitigate Staff's Concerns with the FAS Program Design

Q. What do you recommend to mitigate Staff's Concerns with the FAS Program Design?

A. To mitigate Staff's design concerns, I recommend the three different levels of the Fleet Advisory Services program be structured as independent modules that align with Staff's recommendation to offer the program as a pilot offering basic

education and value-add grid-friendly advice to all fleet customers, while limiting right-sizing advice to entities without access to third-party advisors. In addition, I recommend a detailed communications plan be created.

Q. What should the communication plan include?

A. A communication plan should include details on the messaging, design, delivery channel, and frequency of communication directed at participants for each of the three-tiered services. The plan should be designed with specific key performance indicators and benchmarking with similar external fleet EV programs (when applicable) to measure progress/effectiveness and to be able to adjust communication/educational materials over the life of the program.

7. Staff's Concerns with the FAS Program Reporting Structure

No EM&V planned at the end of the program

Q. Why is Staff concerned there is no EM&V planned at the end of the FAS program?

A. The fact that there is no EM&V planned at the end of the program is concerning to Staff because the assumptions underlying initial benefit-cost analysis are uncertain and it appears that the evaluator will have benefit and cost estimates necessary to complete an EM&V if they do what is described for the proposed annual reports. Additionally, the surveys that will be used to evaluate the program could easily include a few questions to determine the likelihood the customer would have gone ahead and transitioned to an EV fleet if there had not been an FAS Program. In addition, a process evaluation should be possible from the customer feedback in the surveys.

Surveys & Interviews

Q. Is Evergy's plan for collecting and analyzing participant feedback enough to provide adequate analysis of Evergy's stated goals for the FAS program?

A. Evergy's FAS Program has three stated goals: 1) Enable informed fleet management choices, 2) Facilitate grid-friendly EV transition planning for fleet operators, and 3) Serve as a trusted energy advisor for TE. The success of these three goals relies, in part, on a rigorous research methodology to evaluate participant feedback and determine impact of the program. While the goals are relatively straight-forward, the research plan on participant opinions is vague.

Q. How can Evergy best ensure that the collection and analysis of participant feedback is valuable for FAS Program evaluation?

A. The research outlined in this proposal consists mainly of the following: "Given the limited scale of the FAS Program, Evergy does not plan to complete a full impact and process evaluation. Instead, Evergy's evaluator will focus on collecting and analyzing participant feedback, including but not limited to information on the degree to which the FAS Program influences each participant's charge management plan."[62] To successfully be used for program evaluation, a thorough and rigorous research plan should be designed prior to program implementation.

Q. How can the research plan be improved for the FAS Program?

A. Evergy should collaborate with KCC staff to create a more detailed research methodology plan and instrumentation. Ideally, the research plan should build on the findings from the initial in-depth interviews to determine if the service provided matches the stated interests and needs of participants. A series of three surveys

[62] 2024 Report, p. 35.

implemented at the beginning, middle, and end of the project should give insight on what participant needs were, how/if they were met, and impact the programs had in their charge management plan. Questions should be carefully crafted to not only give depth of understanding to what and why participants liked and disliked about the program, but they should be written in a way to make the resulting data actionable. Rigorous evaluation is important, but it is only as good as the data collected. These comments are meant to strengthen the quality of the data available and be used in a feedback loop to make the program as effective as possible.

Q. How should the research plan be created for the FAS Program?

A. Evergy should collaborate with KCC staff to create the plan. Evergy should create a more detailed research plan within six months that includes three surveys of participants (launch, middle, and end) as discussed above. Each instrument should include information on who will be recruited to participate, the number of program participants and the number of survey participants, a timeline of the project, and the survey questions. This research plan would then be given to staff for evaluation and feedback. At this point KCC staff and Evergy should work collaboratively until agreement is met. If Evergy and KCC staff cannot reach agreement, the plan should be put before the Commission for final approval.

Staff's Recommendation to Mitigate Staff's Concerns with the Pilot Reporting Structure

Q. What is Staff's recommendation with regards to the Fleet Advisory Services EM&V?

A Staff suspects Evergy could perform a post-program benefit-cost analysis with additional questions in the survey of Fleet customers they are planning to be conducted by the third-party evaluator. Staff suggests a couple of additional

questions such as, "If Evergy had not provided this service, what would your firm have done?" This should give an idea of the amount of free riding on the part of customers.

If the third-party evaluator analyzes the results of the customer surveys, they should have the beginning of a process evaluation. At a minimum the process evaluation should answer the questions "What was done right?" and "What could be done better?" with recommendations for improvements to follow.

8. Staff's Policy Concerns with the FAS Program

Q. Does Staff have any additional concerns about the proposed Fleet Advisory Services Program?

A. Yes. In addition to the uncertainty of the benefit-cost analysis results, program design, and lack of EM&V planned at the end of the program discussed above, Staff has identified two potential policy issues with the FAS Program: (1) Potential Principal-Agent Conflicts of Interests; and (2) Potential Market Distortion—Staff has previously advocated for letting the market provide EV services when firms are there to provide the services.

Potential Principal-Agent Conflicts of Interest (Participant-Utility Interest Alignment)

Q. What is the potential principal-agent conflict of interests?

A. The potential principal-agent conflict is that the entity considering transitioning to an electric fleet (principal) aims to minimize the cost of its transition while Evergy (agent) aims to minimize the cost to the grid. If minimizing the cost of the transition results in the same plan as minimizing the cost to the grid, their interests are aligned and there is no conflict of interest—win-win. But if minimizing the cost of the

transition would result in a different plan than the one that minimizes the cost to the grid—a conflict of interest exists between the entity and its agent, Evergy.

Q. How does this potential conflict impact the Program?

A. The problem results from Evergy acting as an advisor to the entity and at the same time acting as its own agent, aiming to minimize the cost to the grid. In the end, the customer ultimately makes the decision, but Evergy has an expertise advantage creating information asymmetry. Theoretically, the entity would be better off if it were represented by an expert of its own rather than relying on an expert with a potential conflict of interest. While a potential conflict with Evergy's interest would still exist (the third-party consultant, representing its client, would still want to minimize the cost to the entity of the transition and Evergy would still want to minimize the cost to the grid), Evergy would not be acting as the customer's agent.

Q. Is there a similar potential conflict of interests between transportation electrification customers and third-party advisors?

A. Staff sees some risk in there being a similar conflict of interest between the third-party advisor and the interests of Evergy and Program participants. If the third-party advisor's interests are rooted in selling chargers, or speed to market, or likelihood of project completion, etc., then any of those interests could be contrary to the customer's interest in minimizing costs and Evergy's interests of managing the impact transportation electrification has on the grid.

Experiential Examples Where Evergy's Grid-Friendly Recommendations Have Been Cost-Effective for Customers

Q. Has Evergy had any firsthand experience where the interests of transportation electrification customers has been aligned with Evergy's interests?

A. Yes. In KCC-11.1, Evergy presented three examples, based on firsthand experience with utility-focused fleet assessments for three Evergy school districts, where minimizing the cost to the customer and minimizing the cost to the grid resulted in the same implementation plans.[63]

[63] *See* Exhibit A, DR KCC-11.1. Specifically:
School District A
Battery and Charger Sizes: Recommended 210-kWh Electric School Buses (ESBs) with 19.2-kW chargers.
Load Profiles: Created load profiles indicating a daily peak load of 115 kW (200 kVA transformer) under unmanaged conditions and 50 kW (100 kVA transformer) under managed conditions.
Cost-Effectiveness: The recommendation of Level 2 chargers reduces upfront capital and infrastructure upgrade costs. Recommended separately metered service to qualify for time of use rates. Provided rate education that included time of use rates, additionally, overnight charging minimizes electricity costs associated with daytime rates.
School District B
Battery and Charger Sizes: Evaluated bus routes and worst-case scenario temperatures to determine the minimum bus battery size.
Load Profiles: Calculated total demand to recommend charger size and requirements, ensuring compatibility with utility infrastructure.
Cost-Effectiveness: Ensured optimal placement of chargers to reduce installation costs. Recommended separately meted service to qualify for time of use rates. Provided rate education that included time of use rates, additionally, overnight charging minimizes electricity costs associated with daytime rates.
School District C
Battery and Charger Sizes: Identified specific battery sizes needed for different buses (e.g., 155-kWh for Bus #1, 385-kWh for Bus #2).
Load Profiles: Generated daily energy loads and transformer requirements for different locations (e.g., 676 kWh daily load requiring a 200 kVA transformer at one of two locations).
Cost-Effectiveness: Recommended separately metered service to qualify for time of use rates. Provided rate education that included time of use rates, additionally, overnight charging minimizes electricity costs associated with daytime rates. Projected significant savings and breakeven within seven years, emphasizing the importance of aligning charging schedules with off-peak hours to maximize savings.

Experiential Examples Where Evergy's Grid-Friendly Recommendations Have Not Been Cost-Effective for Customers

Q. Has Evergy had any experience where the interests of transportation electrification customers has not been aligned with Evergy's interest?

A. In response to DR KCC-11, Evergy states it has not had any firsthand experience where a conflict of interest existed[64] but explains that, if the scope and placement of an electric fleet project were least cost for a customer but sub-optimal for Evergy's grid, Evergy's Fleet Advisory Team would take the following steps to resolve the conflict:[65]

> **Assessment and Communication**: Conduct a thorough assessment to understand the implications of the proposed project on the grid. Communicate the potential long-term impacts and costs associated with a sub-optimal placement to the customer.
>
> **Alternative Solutions**: Propose alternative solutions that balance cost-effectiveness for the customer with grid optimization. This might include managed charging strategies, optimal placement of chargers, and right-sizing transformers.
>
> **Stakeholder Collaboration**: Engage with all relevant stakeholders, including the customer, utility designers, and technical advisors, to find a mutually beneficial solution.
>
> **Education and Support**: Provide education on rate structures and managed charging practices to help the customer understand the benefits of a grid-friendly approach.
>
> **Incentives and Programs**: Explore available incentives and programs that can offset the initial costs of a grid-friendly solution, making it more attractive and feasible for the customer.

[64] *See* Exhibit A, KCC-11.2:

> Evergy's advisory recommendations are generally expected to be cost-effective. However, there could be instances where initial costs may appear higher due to the need for infrastructure upgrades (e.g., costs to install separate utility meters for the chargers) or managed charging systems. These recommendations are designed to provide long-term savings and benefits, both for the customer and the grid. Evergy's approach aims to balance immediate costs with long-term efficiency and savings.

[65] *See* Exhibit A, KCC-11.3.

Experiential Examples Where Third-Party Recommendations Have Not Been Grid Friendly or Cost-Effective for Customers

Q. Has Evergy provided any specific details of how third-party fleet advisory services consultants have given transportation electrification customers' advice that was contrary to the interests of Evergy or its customers?

A. Evergy has not provided any specific case studies detailing third-party fleet assessments falling short with grid-friendly implementation, but Evergy does provide general insights it gleaned from the literature highlighting some common issues in its response to DR KCC-8.1:

> Offering a utility-run fleet advisory program ensures that all stakeholders are involved from the very beginning (early planning/decision-making stage) and that recommendations are based on detailed technical assessments and long-term planning. This integrated approach prevents the kind of piecemeal, less effective solutions that might be seen with third-party services, ensuring that all investments are purposeful and beneficial for both the customer and the grid.
>
> Additionally, what customers receive from third-party services is not duplicative of what they receive from a utility-run program. Third-party services often focus on immediate project needs and charger installations, while utility-run programs provide a more holistic approach that includes grid optimization, stakeholder engagement, and long-term planning. This differentiation ensures that utility-run programs add unique value, benefiting other ratepayers by promoting grid stability and efficiency, which can lead to lower overall costs and improved service reliability. (Bullet points eliminate for consistency)

Q. Does this alleviate Staff's concerns regarding potential principal-agent conflicts of interest?

A. If what is good for the grid is also good for participants' bottom line, then there is no conflict. While there is still a potential conflict of interest, Evergy's explanation of the steps it would take to resolve the conflict are reassuring. Nonetheless, Staff has other policy concerns such as the potential market distortions (potential

crowding out and subsidization issues that impacts downstream markets) discussed below.

Potential Market Distortions

Q. Could Evergy leverage its monopoly power in the regulated market to provide a competitive advantage in competitive markets?

A. Yes. Evergy could provide an advisory service that has costs, but not charge participants for the service. Instead, the costs of the service would be socialized and paid for by Evergy's captive customers. This is a prime example of a regulated monopoly leveraging captive customers to enter a new market with a cost advantage created by having its captive customers pay the costs of providing a service in a new competitive market.

Q. What are staff's concerns regarding potential market distortions?

A. Staff is not so much concerned that Evergy will abuse its monopoly power to capture the fleet advisory services market for future profit, but that (1) third-party advisors could be crowded out of the developing fleet services market and (2) subsidized participants could have a cost advantage over customers who pay third-party advisors for those same services. In other words, the program could distort both the fleet advisory services market and other product/services markets downstream.

Potential Crowding Out

Q. Has Staff taken a position on this issue before?

A. Yes. In Docket 16-KCPE-160-MIS, Staff advocated for letting the market provide the charging services where a competitive market exists. In the 21-320 docket,

Staff further refined its position to if there is not a market developing, if there are no firms willing to provide the service, then Staff agreed Evergy could step in.

Q. If that was Staff's position concerning charging stations and basic EV fleet consulting, why does Staff have a different position with respect to allowing Evergy to consult fleets on what is best for the grid?

A. Staff's difference of position largely lies in the difference between the services that Evergy will provide (focused on the most efficient use of the grid and advocating for least cost charging for Evergy's system) and the services that the third parties provide.[66] The distinction is that Evergy has the information (that third parties do

[66] *See* Exhibit A, KCC-8.2: According to Evergy, the key differentiators of Evergy's fleet advisory services are:

Holistic Stakeholder Engagement: Evergy's Approach: Emphasizes the identification and involvement of all necessary stakeholders from the outset, including utility designers, fleet managers, technical advisors, and other key parties to ensure a comprehensive and coordinated approach. Third-Party Services: Often lack this level of stakeholder integration, focusing primarily on the installation of chargers without fully considering the broader implications for the grid and other stakeholders.

Effective Communication: Evergy's Approach: Maintains clear and consistent communication among all stakeholders to facilitate smooth project execution and ensure alignment throughout the project lifecycle. Third-Party Services: Communication can be fragmented, leading to potential misunderstandings and misalignments that can delay or complicate project execution.

Comprehensive Technical Assessments: Evergy's Approach: Conducts thorough evaluations to understand the entire fleet's needs, informing both near-term and future implementations. This includes evaluating route energy requirements, right-sizing equipment, and creating detailed load profiles. Third-Party Services: Often less comprehensive, focusing on short-term solutions rather than long-term fleet requirements and grid impacts.

Optimal Charger Placement: Evergy's Approach: Engages utility designers to determine the best placement of charging infrastructure, ensuring proximity to the electrical source, reducing installation costs, and improving efficiency. Third-Party Services: Recommendations may not always consider optimal grid locations, potentially leading to higher costs and inefficiencies.

Aligned Installation Timelines: Evergy's Approach: Coordinates the timeline for utility upgrades and charger installations with the delivery schedule of the buses, ensuring infrastructure readiness. Third-Party Services: May not align installation timelines as closely with vehicle delivery, risking delays and operational disruptions.

Supply Shortage Considerations: Evergy's Approach: Factors in potential supply shortages and their impact on project timelines, ensuring realistic planning and execution. Third-Party Services: May not adequately account for supply chain issues, leading to unexpected delays and increased costs.

Rate and Managed Charging Education: Evergy's Approach: Educates stakeholders on rate structures and managed charging practices to optimize costs and grid impact, promoting more sustainable and economical fleet operations. Third-Party Services: Often lacks this educational component, missing opportunities to optimize charging practices and reduce costs.

Right-Sizing Transformers: Evergy's Approach: Ensures that transformers and other utility-side infrastructure are right-sized based on detailed load profiles and energy needs assessments,

not have) about where/how to charge that best benefits the grid such as least stressed areas of the distribution system, physical capabilities of existing utility infrastructure, levels of existing load in the area etc. Thus, third-party advisors are not in direct competition with what Evergy aims to do in the FAS Program concerning grid benefits specifically.

Cross Subsidization

Q. Does Staff have concerns about cross-subsidization?

A. Yes, Staff is concerned subsidized participants would have a cost advantage over customers who pay third-party advisors, distorting product/services markets downstream, which could competitively disadvantage early adopters as explained below.

Q. Why is it difficult to ensure both participants and non-participants benefit from Evergy providing fleet advisory services?

A. Because the programs are voluntary, participants benefit from their participation in the Fleet Advisory Services Program, or else we can assume they would not participate in the program. Non-participants benefit from the reduction in demand if that reduction results in a postponement of the construction of new distribution and generation facilities. Whether that benefit will exceed the cost of the program depends on the cost of the new generation facility (or purchased capacity costs in the short-term) and the actual amount of demand saved. Any benefit to non-participants is spread among all ratepayers (i.e. diluted), while participants benefit

preventing inefficiencies and increased costs. Third-Party Services: May not provide the same level of detail in right-sizing transformers, potentially leading to suboptimal infrastructure. (Reformatted for consistency).

directly from their program participation. Thus, participants are subsidized by non-participants.

This phenomenon is particularly troubling for business programs where early adopting businesses end up subsidizing late adopters. For example, when a firm has already converted its fleets before the initiation of the utility sponsored program, the program causes early adopters to subsidize firms who are late to the game, which penalizes early adopters. Cross subsidization can also create a competitive disadvantage for firms competing in down-stream markets. For example, a delivery service market where one competitive firm is subsidizing its competitor.

Staff's Recommendations to Mitigate Staff's Policy Concerns

Q. What are your recommendations to mitigate Staff's policy concerns?

A. To mitigate these concerns Staff recommends the following:

(1) Provide Non-Rightsizing Grid-Friendly Advice to All Customers: Evergy makes the point that it knows and understand its part of the grid better than anyone else. Thus, providing grid-friendly advice to all customers makes sense. Evergy personnel have stated in discussions with Staff that they have worked with customers' third-party advisory firms before.

(2) Limit the Rightsizing of Charging to Small Private and Public Entities: Evergy already plans to prioritize segments with limited resources to obtain third-party fleet advisory services, such as schools, transit agencies, and small to medium business fleets. Staff agrees customers with limited resources should be targeted and

believes explicitly limiting the FAS Program to small private and public entities makes sense from an existing market perspective.

(3) Provide List of Third-Party Advisors: Staff recommends that Evergy provide a list of potential third-party consultants that it has previously worked with to customers that contact them.

V. CONCLUSION

Q. Please provide a summary of Staff's recommendations in this Docket.

A. Staff recommends the Commission approve the Application with modifications to the Residential Managed Charging Pilot and Fleet Advisory Services Program as follows below.

A. Summary of Recommendations Regarding the RMC Pilot

Q. Please summarize your recommendations regarding the Residential Managed Charging Pilot?

A. With regard to the Residential Managed Charging Pilot, Staff recommends the program parameters and reporting structure be modified as summarized below.

1. Suggested Modifications of the RMC Pilot Parameters

Q. What is Staff's recommendation with regard to the Residential Managed Charging Pilot program parameters?

A. With regard to the Residential Managed Charging Pilot program parameters, Staff recommends that the Commission require Evergy to:

(1) Increase the number of charging days to five days each month as a condition of receiving the monthly incentive to address Staff's program design concerns discussed above.

(2) Develop a detailed Communications Plan to address Staff's program design concerns discussed above.

2. Suggested Modifications of the RMC Pilot Reporting Structure

EM&V (Addresses EM&V concerns)

Q. What is your recommendation with regard to the Residential Managed Charging Pilot Reporting Structure?

A. With regard to the Pilot reporting structure, Staff recommends that the Commission require Evergy to:

(1) File a detailed EM&V methodology in this docket, give Stakeholders sufficient time to review the methodology, then, work collaboratively to develop an implementation plan for the methodology to address Staff's reporting concerns discussed above.

(2) Collaborate with KCC staff to create a more detailed research methodology plan and instrumentation. to addresses Staff's reporting concerns discussed above.

B. <u>Summary of Recommendations Regarding the FAS Program</u>

Q. Please summarize your recommendations regarding the Fleet Advisory Services Program.

A. As discussed above, Staff recommends the Fleet Advisory Services program parameters and reporting structure be modified as summarized below.

1. Suggested Modifications of the FAS Program Parameters

Q. What are Staff's recommendations with regards to the Fleet Advisory Services program parameters?

A. With regards to the Fleet Advisory Services Program parameters, Staff recommends that the Commission require Evergy to:

(1) Limit its Rightsizing of Charging Advice to Small Private and Public Entities to address Staff's policy concerns discussed above.

(2) Provide Grid-Friendly Advice to all Fleet Customers to address to address Staff's policy concerns discussed above.

(3) Provide a List of Third-Party Advisors to all Fleet Customers to address Staff's policy concerns discussed above.

(4) Provide Stand-Alone Program Levels with Clear On-Ramps and Off-Ramps to address Staff's Program Design Concerns discussed above.

(5) Offer the Program as Pilot with Detailed EM&V to address Staff's modeling concerns discussed above.

2. Suggested Modifications of the FAS Program Reporting Structure

Q. What is your recommendation with regards to the Fleet Advisory Services Program Reporting Structure?

A. With regard to the Program Reporting Structure, Staff recommends that the Commission require Evergy to develop a Detailed EM&V plan to address Staff's reporting concerns discussed above.

Q. Does this conclude your testimony?

A. Yes. Thank you.

STAFF EXHIBIT A

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided November 15, 2024

Question:KCC-1
Regarding: Attachment 1, "Evergy Transportation Electrification Portfolio Filing Report,"

1. Footnote 4 on page 5 of Attachment 1, "Evergy Transportation Electrification Portfolio Filing Report (Attachment 1)," references an Excel file with Vehicles in Operation Actuals. Please provide the Excel file.

2. Footnote 12 on page 6 of Attachment 1 references two excel workbooks: Projections EVERGY_KSC 02-2024.xlsx and Projections EVERGY_KSM 02-2024.xlsx. Please provide both workbooks.

3. At the top of page 7 is the statement: "By aligning customers' EV charging with wholesale electricity costs, we can maximize the amount of energy from emission-free sources."

a. Does this mean that today Evergy is unable to "maximize the amount of energy from emission-free sources?"

b. Specifically, please describe the mechanism that will cause EV charging to "maximize the amount of energy from emission-free sources."

c. At the end of the statement is footnote 11 which references the SPP "State of the Market" report for Winter 2024. We have been unable to find "EV charging," "electric vehicle," or "EVs" in the text. Where in the reports 84 pages is a reference to "aligning customers' EV charging" and "maximizing the amount of energy from emission-free sources?"

d. If your reference refers to data in the report. Please explain how the data confirms the statement. Also include and workpapers or workbooks with formulas intact that demonstrate the argument in the statement.

4. Appendix B to Attachment 1 provides the FAS Program Cost Effectiveness Evaluation. Please provide all workpapers and workbooks with formulas intact that are used in the demonstration of the cost effectiveness of the FAS Program.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL
Statement: (4) Reports, work papers or other documentation related to work produced by internal or external auditors or consultants

Response:

[redacted]

This information is considered **CONFIDENTIAL** as it is proprietary work produced by EPRI.

[redacted]

This information is considered **CONFIDENTIAL** as it is proprietary work produced by EPRI.

[redacted]

[redacted]

.

This information is considered **CONFIDENTIAL** as it as it is proprietary work produced CLEARESULT.

Information provided by:
Wendy Marine, Lead Product Manager - Electrification
Julie Dietrich, Lead Product Manager - Electrification

Attachment(s):
QKCC-1_CONF_EPRI 2024 Vehicles in Operation.xlsx
QKCC-1_CONF_Medium Scenario Projections EVERGY_KSC 02-2024.xlsx
QKCC-1_CONF_Medium Scenario Projections EVERGY_KSM 02-2024.xlsx
QKCC-1_CONF_Evergy Hourly Emission Rate Estimates.xlsx
QKCC-1_CONF_Evergy FAS BCA Model – KSC 20240926 Final.xlsx
QKCC-1_CONF_Evergy FAS BCA Model – KSM 20240926 Final.xlsx

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my

knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 02, 2024

Question:KCC-5
Regarding: Benefit/Cost Analysis for Evergy's Residential Rebate Program

This data request refers to the "Evergy Transportation Electrification Portfolio Filing Report." On page 7, the report states that "a benefit-cost assessment is not provided for the RMC Pilot because Evergy has proposed this program as a pilot to test the efficacy and costs of alternative RMC approaches (i.e., passive and active)."

(1) Evergy does have the data from the EM&V report which was based on data from the Residential programs. Why cannot this data be used to estimate the benefits and costs of the RMC Pilot?

(2) In contrast, the EM&V report (referred to in Staff Data Request 04) was unable to perform a benefit/cost analysis of the Business Fleet Programs because of a lack of data, but in this docket, Evergy can provide a benefit/cost analysis of the proposed Fleet advisory program. What has changed that makes the benefit/cost analysis possible with Business programs and not with Residential programs?

(3) Is there any other reason for not performing the benefits/cost analysis on the RMC Pilot than the lack of data?

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:

1. The EM&V report does not offer data needed to estimate the impact of the proposed interventions, and the range of impacts available from other industry sources is too broad to serve as a substitute. A 2022 meta-analysis provided a range of benefits from $15 to $360 per EV-year.[1]

[1] Anwar et al (2022), Assessing the value of electric vehicle managed charging: a review of methodologies and results, Energy Environ. Sci., 15, 466.

Moreover, Evergy has proposed a novel passive intervention for which there is no clear industry precedent. Given the uncertainty of benefits, Evergy considers it most appropriate to consider this program as a pilot for which a cost-benefit analysis will be performed *ex-post*.

2. Evergy's approach to the cost effectiveness treatment for each program/pilot reflects consideration of the very different program audiences, approaches, and data needs.

   The Business Fleet Program is an ongoing program that—to date—has not generated sufficient data to support a meaningful *ex-post* cost/benefit analysis.

   Regarding the proposed Fleet Advisory Services (FAS) Program, industry references provide ample evidence that the fleet audience to be served by this program often requires technical assistance to optimize their charging plans. In fact, a large-scale evaluation of transportation electrification released since the filing estimated average potential for several types of fleets to reduce their own EV charging-related electric bills in the range of 17-32 percent if the charging infrastructure was properly sized and its use managed.[2] Yet, each fleet has unique operations, and the impacts are determined on a fleet-by-fleet basis. With the general need clear and no path to generate data that would meaningfully improve the cost/effectiveness analysis, Evergy constructed the FAS program's *ex-ante* cost/benefit analysis using the best available industry information.

3. Evergy has proposed a modestly sized pilot that recognizes ongoing technological innovation in this space, is sensitive to overall costs, and is designed to gather essential data. The primary purpose of this pilot is developmental, as data from this pilot will inform a future full-scale program that could significantly differ from this initial effort. While Evergy agrees that an *ex-ante* cost/benefit analysis should accompany any future full-scale proposal, Evergy does not believe an *ex-ante* cost/benefit analysis is beneficial at this initial stage.

Information provided by:
Wendy Marine, Lead Product Manager

Attachment(s):

[2] Cadmus Group and Energetics Incorporated (2024), Standard Review Projects and AB 1082/1083 Pilots, Evaluation Year 2023 (Year 3), Third-Party Evaluation Report.

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 13, 2024

Question:KCC-6
Regarding: Forecast of EV interest and ownership

This data request refers to the Evergy Transportation Electrification Portfolio Filing Report.

On pages 14 and 15 in section 3.1 of the report, the federal policy-driven growth for EVs is attributed, in part, to the Bipartisan Infrastructure Law, the Inflation Reduction Act, and the U.S. Environmental Protection Agency EV favorable policies. On pages 15 and 16, are graphs illustrating the expected growth in passenger EVs (Figure 3) and commercial EVs (Figure 4). Both graphs show exponential growth. The November election results call into question the assumptions underlying the policy-driven EV growth.

(1) Has Evergy considered how the election results will affect the EV passenger and EV business forecasts?

(2) How would the Residential Managed Charging Pilot be affected by a significant reduction in EV growth?

(3) How would the Fleet Advisory Services Program be affected by a significant reduction in commercial EV growth?

(4) How would the benefit/cost analysis of the Fleet Advisory Services Program be affected is the commercial growth of EVs was reduced to one-third of the current forecast?

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: Choose an item.

Response:

1. Evergy has considered how the election results may affect the EV passenger and EV business projections.

Fleet Advisory Services (FAS) - All aspects of the FAS Program, including the cost/benefit evaluation, were built around EPRI's low scenario projection. Evergy's decision to use the low scenario reflects the many uncertainties inherent in fleet electrification forecasts, including the absence of meaningful policy support.

Residential Managed Charging (RMC) Pilot - EPRI provided passenger vehicle adoption scenarios in December of 2021, nine months prior to the Inflation Reduction Act (IRA) becoming law in August of 2022. For the present filing, Evergy used EPRI vehicle adoption scenarios received in February of 2024.

It is informative to compare the medium EV adoption scenario provided by EPRI in 12/2021 (pre-IRA) to the scenario provided in 2/2024 (post-IRA). The former shows 86,846 vehicles in Evergy's KS service area at the end of the decade (i.e. YE2029) while the latter shows 96,631 vehicles (+11%).

2. A least 70% of the vehicles expected to participate in the RMC Pilot will have already been purchased by the start of the new administration. Given this and the mild to moderate impact to EV adoption, the impact on the pilot will be small and will not impact the ability to achieve the learnings Evergy expects.

3. The FAS Program participation forecast already conservatively adopted EPRI's low growth projections indicative of no meaningful policy support and would not be impacted by a significant reduction in commercial EV growth.

4. The majority of the FAS program costs are incurred as advisory services are delivered to fleets. Thus, if fewer fleets are served, both benefits and costs will be reduced. See KCC-10 for additional details.

Information provided by:
Wendy Marine, Lead Product Manager

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 13, 2024

Question:KCC-7
Regarding: Residential Managed Charging Incentives
Please explain how the Residential Managed Charging incentive values were determined. In addition, please provide documentation supporting the derivation of those values.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: Choose an item.

Response:
Customers enrolled in the Passive Managed Charging will not receive program incentives. This is consistent with other opt-out behavioral programs.

Customers enrolled in Active Managed Charging will receive an up-front incentive of $50 and will be eligible for an ongoing participation incentive of $10 monthly. Evergy determined the Active Managed Charging incentives by: 1) Reviewing the range of incentives used in similar utility managed charging programs across the country, and 2) Selecting a value judged adequate to secure the participation level needed for pilot learnings.

Several of the utility programs considered are:

- SRP EV Flex Charge: $50 for enrollment and $25 per year for participation
- Portland General Electric: $50 for enrollment and $50 per year for participation
- Xcel Energy Charging Perks: $50 for enrollment and $150 per year for participation
- Eversource Connecticut Electric Vehicle Charging Program: $100 for enrollment and $200 per year for participation
- CPS Energy FlexEV Smart Rewards: $250 for enrollment and $60 per year for participation

In terms of securing the target participation level, there was little available data on the effectiveness of the incentives (i.e. percent enrollment of eligible EV customer population as a

result of differing incentive levels). Evergy's target cumulative Active Managed Charging participation level amounts to nearly 10% of the expected eligible EV population, which is a high level of participation by DSM program standards. Eversource reported enrollment of approximately 10% of EV customers after slightly more than two years of launch. However, considering the significantly lower electricity costs in Evergy territory, Evergy judged that an incentive level closer to that of Xcel Energy's (Colorado) would still be very likely to generate target participation while also representing costs more likely to be sustainable if the pilot were to become a program.

These judgements are necessarily approximations based on the limited available data, to be refined based on the pilot learnings and subsequent cost effectiveness analysis.

Information provided by:
Wendy Marine, Lead Product Manager

Attachment(s):

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 13, 2024

Question:KCC-8
Regarding: FAS Program Differentiation
Please explain how Evergy's proposed Fleet Advisory Services program services differs from third-party fleet advisory services currently available within Evergy's Kansas territories.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:

Businesses that electrify their fleets have varied resources and capabilities to bring electric vehicles into their operations. Not every business has the funding and/or motivation to invest in a comprehensive fleet assessment. Here are some common scenarios:

- **Funding-Dependent Businesses**: Need to secure funding first to hire an advising firm. Once funding is awarded, their goal is to implement the project on time and within a specific budget.
- **Manufacturer or Supplier-Dependent Businesses**: Rely on their electric vehicle manufacturer or charger supplier to implement their project within a specific budget, often seeking turnkey solutions.
- **Resource-Limited Entities**: Entities like school districts often do not have the funds to invest in fleet assessments, leaving the responsibility to individuals like the superintendent or fleet manager.

Offering a utility-run fleet advisory program ensures that all stakeholders are involved from the very beginning (early planning/decision-making stage) and that recommendations are based on detailed technical assessments and long-term planning. This integrated approach prevents the kind of piecemeal, less effective solutions that might be seen with third-party services, ensuring that all investments are purposeful and beneficial for both the customer and the grid.

Additionally, what customers receive from third-party services is not duplicative of what they receive from a utility-run program. Third-party services often focus on immediate project needs and charger installations, while utility-run programs provide a more holistic approach that includes grid optimization, stakeholder engagement, and long-term planning. This differentiation ensures that utility-run programs add unique value, benefiting other ratepayers by promoting grid stability and efficiency, which can lead to lower overall costs and improved service reliability.

Key Differentiators of Evergy's Fleet Advisory Services:

Holistic Stakeholder Engagement
Evergy's Approach: Emphasizes the identification and involvement of all necessary stakeholders from the outset, including utility designers, fleet managers, technical advisors, and other key parties to ensure a comprehensive and coordinated approach. **Third-Party Services**: Often lack this level of stakeholder integration, focusing primarily on the installation of chargers without fully considering the broader implications for the grid and other stakeholders.

Effective Communication
Evergy's Approach: Maintains clear and consistent communication among all stakeholders to facilitate smooth project execution and ensure alignment throughout the project lifecycle. **Third-Party Services**: Communication can be fragmented, leading to potential misunderstandings and misalignments that can delay or complicate project execution.

Comprehensive Technical Assessments
Evergy's Approach: Conducts thorough evaluations to understand the entire fleet's needs, informing both near-term and future implementations. This includes evaluating route energy requirements, right-sizing equipment, and creating detailed load profiles. **Third-Party Services**: Often less comprehensive, focusing on short-term solutions rather than long-term fleet requirements and grid impacts.

Optimal Charger Placement
Evergy's Approach: Engages utility designers to determine the best placement of charging infrastructure, ensuring proximity to the electrical source, reducing installation costs, and improving efficiency. **Third-Party Services**: Recommendations may not always consider optimal grid locations, potentially leading to higher costs and inefficiencies.

Aligned Installation Timelines
Evergy's Approach: Coordinates the timeline for utility upgrades and charger installations with the delivery schedule of the buses, ensuring infrastructure readiness. **Third-Party Services**: May not align installation timelines as closely with vehicle delivery, risking delays and operational disruptions.

Supply Shortage Considerations
Evergy's Approach: Factors in potential supply shortages and their impact on project timelines,

ensuring realistic planning and execution. **Third-Party Services**: May not adequately account for supply chain issues, leading to unexpected delays and increased costs.

Rate and Managed Charging Education
Evergy's Approach: Educates stakeholders on rate structures and managed charging practices to optimize costs and grid impact, promoting more sustainable and economical fleet operations. **Third-Party Services**: Often lacks this educational component, missing opportunities to optimize charging practices and reduce costs.

Right-Sizing Transformers
Evergy's Approach: Ensures that transformers and other utility-side infrastructure are right-sized based on detailed load profiles and energy needs assessments, preventing inefficiencies and increased costs. **Third-Party Services**: May not provide the same level of detail in right-sizing transformers, potentially leading to suboptimal infrastructure.

Information provided by: Julie Dietrich

Attachment(s):

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 16, 2024

Question:KCC-9
Regarding: Benefit Cost Analysis Objectives and Assumptions

1. Please provide the third-party fleet advisory service penetration levels assumed in the model's baseline.
2. Please describe the treatment effect being measured in Evergy's benefit cost analysis.
3. If the treatment effect is the "rightsizing" of fleets and charging equipment, please explain how free-ridership (rightsizing that would occur through third party fleet advisory services) is accounted for in the model.
4. In addition, please provide estimates of any additional grid impact benefits that are not accounted for in the model.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:

Regarding: Benefit Cost Analysis Objectives and Assumptions

1. Please provide the third-party fleet advisory service penetration levels assumed in the model's baseline.

Fleet advisory service with comparable objectives of right-sizing infrastructure and planning charging for off-peak periods is not assumed to occur in the targeted fleets absent the program intervention. Evergy plans to target and prioritize outreach to segments with limited resources to obtain third-party fleet advisory services, such as schools, transit agencies, and small to medium business fleets.

2. Please describe the treatment effect being measured in Evergy's benefit cost analysis.

The treatment is the development of optimized Charge Management Plans that meet fleet customer needs while minimizing capacity upgrades and energy supply costs. This means that

charging infrastructure is right-sized to meet charging requirements during vehicle non-use hours, while also being capable of meeting those needs in off-peak periods.

3. If the treatment effect is the "rightsizing" of fleets and charging equipment, please explain how free-ridership (rightsizing that would occur through third party fleet advisory services) is accounted for in the model.

The treatment effect is both the right-sizing of charging equipment for participating fleets, and the development of Charge Management Plans that meet customer needs while helping Evergy minimize the need for capacity upgrades and/or additional energy supply. A third-party fleet advisory service could likely accomplish the first objective, but not the second, as this requires data and input from utility planning and grid operations teams. Further, as noted in the response to question 1, the participating fleets are not assumed to have fleet advisory services with comparable treatment effects absent the program. This is not to say that the baseline charging patterns Evergy's team modeled represent a worst possible case. They are intended to represent typical charging patterns that result absent a utility-guided fleet advisory service based on available information from the referenced sources:

- International Energy Agency. (n.d.). Electric Vehicle Charging and Grid Integration Tool. Retrieved from: https://www.iea.org/data-and-statistics/data-tools/electric-vehicle-charging-and-grid-integration-tool
- Borlaug, B., Muratori, M., Gilleran, M., Woody, D., Muston, W., Canada, T., ... & McQueen, C. (2021). Heavy-duty truck electrification and the impacts of depot charging on electricity distribution systems. Nature Energy, 6(6), 673-682. Data retrieved from: https://data.nrel.gov/submissions/162
- Farley, R., Vervair, M., & Czerniak, J. (2019). Electric vehicle supply equipment pilot final report. Washington Utilities Transp. Commission (UTC), Tech. Rep. Data retrieved from: https://www.nwcouncil.org/2021powerplan_plug-electric-load-profiles/#_ftn1

4. In addition, please provide estimates of any additional grid impact benefits that are not accounted for in the model.

The main additional benefit that could not be directly represented in the model is the enhanced planning capability that the visibility to fleet electrification plans will provide Evergy. Evergy will construct a database of the electrification plans of all participants, as well as any shared by non-participants engaged through outreach activities. This database will be shared with Evergy supply and infrastructure planning teams to help plan the right investments at the right times, to optimally meet Evergy customers' growing electric demands.

Information provided by: Tim Nelson

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 13, 2024

Question:KCC-10
Regarding: Budget Scalabibilty

1. Please provide detailed budgets of both proposed programs. Please use these budgets to illustrate how each of the program's costs would scale with participation.
2. Please include a break-even analysis showing the participation level necessary for benefits to begin to outweigh the costs?

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL
Statement: (3) Market analyses or other market-specific information relating to services offered in competition with others.

Response:

[redacted]

[redacted]

Information provided by:
Wendy Marine, Lead Product Manager
Julie Dietrich, Lead Product Manager

Attachment(s):
QKCC-10_CONF_Evergy FAS Program Budget Final.xlsx
QKCC-10_CONF_Evergy RMC Budget and Participation.xlsx

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently

discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 16, 2024

Question:KCC-11
Regarding: Utility-Customer-Interest Alignment

1. Please provide experiential examples where grid-friendly recommendations have been cost-effective for customers.
2. Please provide any experiential examples where grid-friendly recommendations have not been cost-effective for customers.
3. If the scope and placement of a EV fleet project were least cost for a customer but sub-optimal for the Evergy grid, how would Evergy's Fleet Advisory Team respond?

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:

1. Experiential Examples Where Grid-Friendly Recommendations Have Been Cost-Effective for Customers

This response is based on firsthand experience with utility-focused fleet assessments for three Evergy school districts.

School District A:

- Battery and Charger Sizes: Recommended 210-kWh Electric School Buses (ESBs) with 19.2-kW chargers.
- Load Profiles: Created load profiles indicating a daily peak load of 115 kW (200 kVA transformer) under unmanaged conditions and 50 kW (100 kVA transformer) under managed conditions.
- Cost-Effectiveness: The recommendation of Level 2 chargers reduces upfront capital and infrastructure upgrade costs. Recommended separately metered service to qualify for time of use rates. Provided rate education that included time of use rates, additionally, overnight charging minimizes electricity costs associated with daytime rates.

School District B:

- Battery and Charger Sizes: Evaluated bus routes and worst-case scenario temperatures to determine the minimum bus battery size.
- Load Profiles: Calculated total demand to recommend charger size and requirements, ensuring compatibility with utility infrastructure.
- Cost-Effectiveness: Ensured optimal placement of chargers to reduce installation costs. Recommended separately meted service to qualify for time of use rates. Provided rate education that included time of use rates, additionally, overnight charging minimizes electricity costs associated with daytime rates.

School District C:

- Battery and Charger Sizes: Identified specific battery sizes needed for different buses (e.g., 155-kWh for Bus #1, 385-kWh for Bus #2).
- Load Profiles: Generated daily energy loads and transformer requirements for different locations (e.g., 676 kWh daily load requiring a 200 kVA transformer at one of two locations).
- Cost-Effectiveness: Recommended separately metered service to qualify for time of use rates. Provided rate education that included time of use rates, additionally, overnight charging minimizes electricity costs associated with daytime rates. Projected significant savings and breakeven within seven years, emphasizing the importance of aligning charging schedules with off-peak hours to maximize savings.

2. Experiential Examples Where Grid-Friendly Recommendations Have Not Been Cost-Effective for Customers

It is important to note that Evergy has not experienced firsthand instances where grid-friendly recommendations have not been cost-effective. The addition of the Fleet Advisory Services program would enable these discussions and provide more comprehensive insights into the cost-effectiveness of grid-friendly solutions.

Evergy's advisory recommendations are generally expected to be cost-effective. However, there could be instances where initial costs may appear higher due to the need for infrastructure upgrades (e.g., costs to install separate utility meters for the chargers) or managed charging systems. These recommendations are designed to provide long-term savings and benefits, both for the customer and the grid. Evergy's approach aims to balance immediate costs with long-term efficiency and savings.

3. Response to Least Cost Projects That Are Sub-Optimal for the Evergy Grid
If the scope and placement of an EV fleet project were least cost for a customer but sub-optimal for the Evergy grid, Evergy's Fleet Advisory Team would take the following steps:

- **Assessment and Communication**: Conduct a thorough assessment to understand the implications of the proposed project on the grid. Communicate the potential long-term impacts and costs associated with a sub-optimal placement to the customer.
- **Alternative Solutions**: Propose alternative solutions that balance cost-effectiveness for the customer with grid optimization. This might include managed charging strategies, optimal placement of chargers, and right-sizing transformers.
- **Stakeholder Collaboration**: Engage with all relevant stakeholders, including the customer, utility designers, and technical advisors, to find a mutually beneficial solution.
- **Education and Support**: Provide education on rate structures and managed charging practices to help the customer understand the benefits of a grid-friendly approach.
- **Incentives and Programs**: Explore available incentives and programs that can offset the initial costs of a grid-friendly solution, making it more attractive and feasible for the customer.

Information provided by: Julie Dietrich

Attachment(s):

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided December 13, 2024

Question:KCC-12
Regarding: Examples of Oversized Charger Recommendations

In the technical conference conducted on December 4, 2024, Evergy personnel shared examples of instances in which third-party fleet advisory services firms had made TE recommendations to customers that would not have been grid-friendly. Examples were oversized charger recommendations, suboptimal grid locations, and others. Please provide as many examples as possible and as many details as possible from these examples, including but not limited to: the fleet advisory services firm(s) that made these recommendations, the Evergy customer for whom the recommendations were made, whether the less-grid-friendly recommendations were more cost effective for the customer. whether Evergy was able to intervene to prevent the harms from occurring, and what the ultimate outcome was of each example.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:

While specific case studies detailing third-party fleet assessments missing the mark with grid-friendly implementation are not widely published, there are general insights that highlight common issues:

1. Oversized Charger Recommendations: Third-party fleet advisory services sometimes recommend chargers that are larger than necessary, leading to increased costs and unnecessary strain on the grid. For instance, a fleet might be advised to install high-capacity chargers that exceed the actual needs of the vehicles, resulting in higher installation and operational costs without corresponding benefits. An experiential example involved a recommendation for electric school buses to install 60 kW chargers, while 19.6 kW chargers would have sufficed based on the fleet's usage patterns. Oversizing leads to increased costs and additional strain on the local grid.

2. Suboptimal Grid Locations: Recommendations for charger placements that do not consider the optimal grid locations can lead to inefficiencies. Chargers placed far from the electrical source can incur higher installation costs and potential delays due to the need for extensive electrical work. For example, a fleet manager may request a third party to plan for placing chargers at a site at an existing fueling location to minimize operational changes. However, this requires significant trenching and electrical upgrades, which could have been avoided by selecting a location closer to existing electrical infrastructure. The Evergy FAS program evaluates potential site locations and walks through justifications for considering alternate options with the customer.
3. Lack of Integrated Planning: Third-party assessments may focus solely on the installation of chargers without considering the broader implications for the grid. This can result in missed opportunities for managed charging strategies that align with off-peak hours, leading to higher electricity costs and increased grid demand during peak times. One experiential example is if a charger is added to the building load and the building is not on a time-based rate. This choice can result in charging occurring during peak hours, leading to increased demand costs and grid congestion. The Evergy FAS program recommendations will always include separately metered service, time-of-use rate education, and a managed charging plan to shift charging to off-peak hours, resulting in cost savings and reduced grid impact.
4. Inadequate Stakeholder Involvement: Effective fleet electrification requires the involvement of various stakeholders, including utility companies, fleet operators, and technical advisors. Third-party assessments that do not engage all necessary parties may overlook critical factors such as grid capacity, future expansion plans, and technical feasibility. The Evergy FAS program ensures all utility stakeholders are engaged to ensure grid compatibility and future scalability.

Information provided by: Julie Dietrich

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Lana Ellis -
Response Provided January 06, 2025

Question:KCC-13
Regarding: Measuring Active Program's Impact on Participant Charging Behaviors
On page 29 of the report, Evergy states "(1) Although the RCT and RED approaches are the most rigorous methods available for measuring impact of the proposed RMC Pilot design, they do not yield a specific estimate of the active program's impact on participant charging behaviors. (2) To understand the active program's impact, the RMC Pilot will collect baseline charging data for Active Group participants before scheduled charging is implemented. (3) This will allow Evergy's evaluator to also compare post-intervention (actively managed) charging data to the baseline to determine the average increase/decrease in different time periods. (4) While this approach is not as definitive as the other methods in determining causality, it is consistent with best practices to determine causality and elicit a characterization of the benefits and future opportunities of AMC."
We have a series of questions about this paragraph. We will begin with the first sentence.

(1) Why won't the RCT and RED approaches yield a point estimate and a confidence interval for the impact of the programs? An RCT approach was used in the 21-EKME-320-TAR EM&V and a point estimate was determined for both TOU customers and non-TOU customers. Although the point estimates were not statistically significantly different from each other, there were still point estimates. RCT approaches are also being planned for the Energy Efficiency EM&V.

(2) Since there is a self-selection bias in the RED approach, are you concerned that the estimate will be biased?

(3) How are you intending to mitigate the self-selection bias in the RED approach?

(4) An RCT approach assumes a before and after test of impact. However, your second and third sentences in the paragraph above indicate that this will not be done for the RCT and RED evaluations. Why run and RCT without before treatment effect data?

(5) Regarding the fourth sentence, why does using a before and after a treatment effect data not provide estimates of causality?

(6) Please provide a detailed methodological explanation of what you intend the RCT approach to be used for.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: Choose an item.

Response:
(1) The RCT will yield a point estimate and confidence interval for the impact of the Passive Group. The RED will yield a point estimate and confidence interval for the impact of being in the passive group and being encouraged to join the Active Group.

What the cited paragraph was attempting to explain was that neither the RCT nor the RED will measure the impact of only active managed charging versus no intervention. As we believe that measurement will also be of interest, we additionally propose to perform a pre/post analysis of the Active Group participants.

(2) There would be self-selection bias if the RED only measured those who opt in to the Active Group. However, the RED will measure the entire group that is encouraged, including those that do and do not opt in to the Active Group. This produces an unbiased estimate of the effect of offering active managed charging.

In exchange for this unbiased estimate, the RED approach accepts the limitation of not measuring the impact of only active managed charging versus no intervention. That is why we propose the additional pre/post analysis.

(3) Mitigation of self-selection bias in the RED approach is addressed in the previous response to (2).

(4) Before treatment data will be used for the RCT and RED. The second and third sentences are intended to explain an additional pre/post measurement method, as discussed in our response to (1) and (2) above.

(5) The pre/post method we propose to add for the Active Group does not use a control group, and the effect of participating is not randomly assigned. Therefore, coincidental changes or confounding influences may substantially contribute to the estimated impact.

(6) The RCT will measure the effect of treatment with the passive managed charging intervention through the following methodology:

1. Separate customers eligible for passive managed charging into treatment and control groups.

2. Collect baseline, whole home, 15-minute or hourly energy use for treatment and control groups
3. Deliver the passive managed charging intervention to the treatment group
4. Collect whole home, 15-minute or hourly energy use for treatment and control groups over at least one year of intervention
5. Perform a regression analysis to estimate the impact of the intervention on electricity use, while controlling for environmental factors (e.g., season, weather, day type) and rate type.
6. Arrive at a point estimate of the effect of the treatment in shifting energy use from peak to off-peak periods, with results segmented by rate type.

Information provided by:
Tim Nelson, Sr. Manager Analytics
Wendy Marine, Lead Product Manager

Attachment(s):
n/a

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2024 Evergy KS Central Transportation Electrification
Case Number: 25-EKCE-169-TAR

Requestor Ellis Lana -
Response Provided January 16, 2025

Question:KCC-14
Regarding: RMC Vehicle Participation Restrictions
Why is the RMC pilot restricted to just one vehicle? Is it that the incentives are limited to one per household to limit costs or are there measurement concerns or other technical limitations that restrict managed charging viability for multiple vehicles at the premises? Or some other reason?

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: Choose an item.

Response:

For the pilot, Evergy wanted to minimize complexity by restricting the household to one incentive, i.e. one vehicle. The limitation of one vehicle per household is an effort to normalize the AMC impact to one vehicle. This will help provide an easy-to-interpret result from measurement and verification activities, allowing Evergy and stakeholders to understand how costs and benefits are likely to scale with the number of EVs in operation.

Mixing of managed devices (i.e. vehicle and EVSE) is not currently supported by the AMC platform. Otherwise, there are no technical limitations limiting RMC viability for multiple vehicles at the premise.

Information provided by: Wendy Marine, Lead Product Manager - Electrification

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

STATE OF KANSAS)
) ss.
COUNTY OF SHAWNEE)

VERIFICATION

Lana Ellis, being duly sworn upon her oath deposes and states that she is the Deputy Chief of Economics and Rates for the Utilities Division of the State Corporation Commission of the State of Kansas; that she has read and is familiar with the foregoing Direct Testimony, and that the statements contained therein are true and correct to the best of her knowledge, information, and belief.

Lana Ellis
Deputy Chief of Economics and Rates
Kansas Corporation Commission of the
State of Kansas

SUBSCRIBED AND SWORN to/before me on this 23rd day of January, 2024.

CHERYL N RIDLEN
NOTARY PUBLIC
STATE OF KANSAS
MY COMM. EXPIRES
3-21-27

Notary Public

My Appointment Expires: 3-21-27

CERTIFICATE OF SERVICE

25-EKCE-169-TAR

I, the undersigned, certify that a true copy of the attached Testimony has been served to the following by means of electronic service on January 23, 2025.

* JOSEPH R. ASTRAB, CONSUMER COUNSEL
CITIZENS' UTILITY RATEPAYER BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
joseph.astrab@ks.gov

GLENDA CAFER, ATTORNEY
MORRIS LAING EVANS BROCK & KENNEDY
800 SW JACKSON
SUITE 1310
TOPEKA, KS 66612-1216
gcafer@morrislaing.com

CATHRYN J. DINGES, SR DIRECTOR & REGULATORY AFFAIRS COUNSEL
EVERGY KANSAS CENTRAL, INC
818 S KANSAS AVE
PO BOX 889
TOPEKA, KS 66601-0889
cathy.dinges@evergy.com

BRIAN G. FEDOTIN, GENERAL COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
brian.fedotin@ks.gov

DARRIN IVES, VP - REGULATORY AFFAIRS
EVERGY METRO, INC
D/B/A EVERGY KANSAS METRO
One Kansas City Place
1200 Main St., 19th Floor
Kansas City, MO 64105
darrin.ives@evergy.com

* TODD E. LOVE, ATTORNEY
CITIZENS' UTILITY RATEPAYER BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
todd.love@ks.gov

CARLY MASENTHIN, LITIGATION COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
carly.masenthin@ks.gov

* SHONDA RABB
CITIZENS' UTILITY RATEPAYER BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
shonda.rabb@ks.gov

* DELLA SMITH
CITIZENS' UTILITY RATEPAYER BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
della.smith@ks.gov

LESLIE R WINES, SR EXECUTIVE ADMIN ASSISTANT
EVERGY METRO, INC
D/B/A EVERGY KANSAS METRO
One Kansas City Place
1200 Main St., 19th Floor
Kansas City, MO 64105
leslie.wines@evergy.com

CERTIFICATE OF SERVICE

25-EKCE-169-TAR

/S/ Kiley McManaman
Kiley McManaman

* Denotes those receiving the Confidential version