# Exhibit No. 83

Evergy Missouri Metro – Exhibit 83
Kimberly H. Winslow
Rebuttal Testimony
File Nos. ER-2022-0129 & ER-2022-0130

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| Exhibit No.: | |
| Issue: | TOU Rates and Education, Business Transportation Electrification, Residential Battery Energy Storage Pilot, Low-Income Solar Subscription Pricing Pilot, Low-Income Weatherization, Market Based Demand Response, MEEIA Demand Annualization Adjustment |
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**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO.: ER-2022-0129 / 0130**

# REBUTTAL TESTIMONY

**OF**

**KIMBERLY H. WINSLOW**

**ON BEHALF OF**

**EVERGY MISSOURI METRO and EVERGY MISSOURI WEST**

**Kansas City, Missouri**
**July 2022**

**TABLE OF CONTENTS**

**REBUTTAL TESTIMONY**

**OF**

**KIMBERLY H. WINSLOW**

**Case No. ER-2022-0129 / 0130**

## I. INTRODUCTION AND PURPOSE

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

A: My name is Kimberly H. Winslow. My business address is 1200 Main Street, Kansas City, Missouri 64105.

**Q: Are you the same Kimberly H. Winslow who submitted direct testimony in these dockets on January 7, 2022?**

A: Yes.

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

A: I am testifying on behalf of Evergy Metro, Inc. d/b/a Evergy Missouri Metro ("Evergy Missouri Metro") and Evergy Missouri West, Inc. d/b/a Evergy Missouri West ("Evergy Missouri West") (collectively, the "Company" or "Evergy").

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

A: I will address several issues as it pertains to my Direct testimony. I provide Rebuttal testimony on the following:

- Staff's proposal of default and ultra-low peak to off-peak differential time-of-use rates
- OPC's submission of a report on time-of-use education for Arizona Public Service

- ChargePoint's testimony on Evergy's proposal of its separately metered electric vehicle rate and their proposal on Evergy's commercial rebate program for electric vehicles
- Intervenor's support for income-eligible weatherization level of funding and Evergy's recommendation to roll-over funds to its Dollar-Aide
- OPC's proposal to discontinue Evergy's Market Based Demand Response program tariff
- OPC's critique of Evergy's Residential Battery Energy Storage Pilot program and recommendation to re-design the pilot
- OPC's recommendation to increase Evergy's shareholder cost of its Low-Income Solar Subscription Pilot program
- Staff's lack of annualization adjustment for Missouri Energy Efficiency Investment Act ("MEEIA") demand savings

## II. TIME-OF-USE ("TOU") RATES

**Q: Can you comment on Staff's recommended residential TOU rate design proposal?**

A: Staff witness Sarah Lange recommends that Evergy's 3-period opt-in TOU rate be modified to a low-differential[1] default TOU rate. The Company finds Staff's proposal to be highly undesirable for any TOU rate, especially in comparison with the existing rate structure that is offered to Evergy's residential customers, launched in October 2019. The Company has embraced the TOU opt-in rate option and, through customer research and surveys, Evergy has concluded that the current design is a good option

[1] Ratios are presented to reflect the pricing relationship between the TOU periods. This is also referred to as a price differential. For example, 6:1 indicates that the on-peak price is six times the off-peak price or a 6X differential.

that residential customers, who choose to participate, enjoy[2] because it allows more control to manage their energy usage versus a standard block rate structure. Most TOU participants were highly successful in shifting behaviors to off-peak to lower their bill.[3] The Company has demonstrated success against all defined metrics with the TOU rate, which was designed with significant price differentials across three periods (on-peak, off-peak and super off-peak) and seasons (summer and winter). The Company's TOU on-peak to super off-peak price differential is the most notable with the on-peak price being approximately 6 times higher than the super off-peak in both seasons (6:1). The on-peak to off-peak price differential is also notable with the on-peak price being 3 (3:1) and 2.5 (2.5:1) higher in the summer and winter seasons, respectively. Ultimately, an "ultra-low" differential (essentially non-existent differential) TOU rate, as proposed by Staff, defeats the fundamental purpose of a TOU rate.

**Q: What is Staff's pricing differential for its proposed TOU rate?**

A: As near as I can calculate from information provided in Ms. Lange's Direct testimony, it is slightly above 1:1.

**Q: How do you describe the fundamental purpose of a TOU rate?**

A: I see the purpose of TOU rates (or time-variant rates, in general) as two-fold. First, a TOU rate provides a more representative price signal of actual costs to the customer and second (in relation to the first), a properly designed TOU rate is meant to create more elasticity of demand for various end uses to improve efficiency of resources.

[2] Evergy Missouri Residential Time-of-Use Rate Evaluation - Guidehouse December 23, 2021, Section 3.3.5.1
[3] Evergy Missouri Residential Time-of-Use Rate Evaluation - Guidehouse December 23, 2021, Section 3.3.5.2

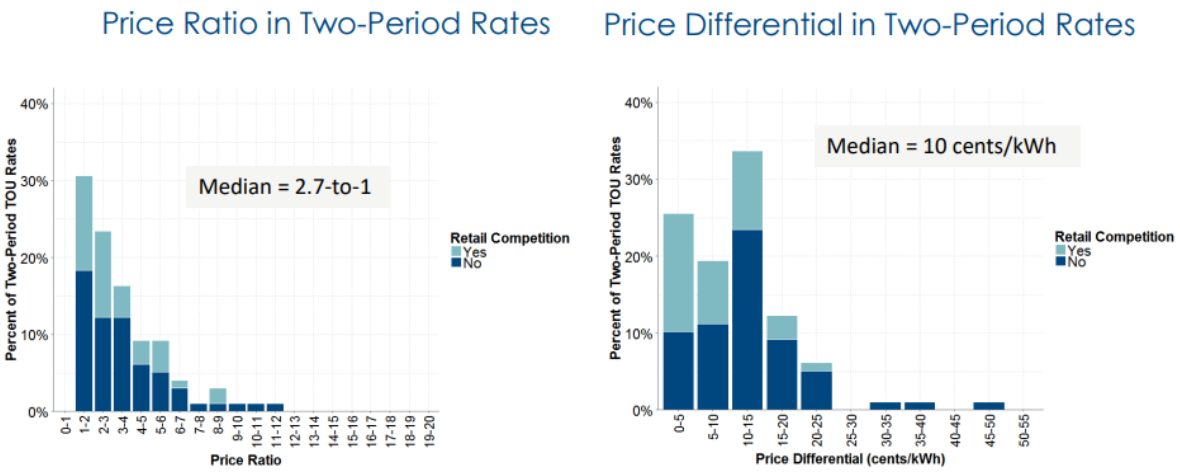
There can be other objectives of TOU rates as found in the industry[4], but the primary purposes remain the same.

**Q: Can you clarify why you believe Staff's "ultra-low" differential defeats the fundamental purposes of a TOU rate?**

A: A $0.01/kWh change would not send any meaningful price signal to a customer such that they would be motivated to affect their usage through behavioral change. A $0.01/kWh change is slightly greater than a 1:1 differential, as stated above. Staff's proposed ultra-low differential is contrary to industry TOU rate design, where the median differential for two- and three-period rates are 2.7:1[5]. Industry research shows that half of TOU rates have a price differential of at least 10 cents per kWh.[6] In fact, Evergy's research indicates that Missouri's ultra-low differentials is an extreme outlier to other utilities that have implemented TOU rates. Below is a graphic of Brattle's most recent research supporting this statement.

[4] "A Primer On Time-Variant Pricing"; Environmental Defense Fund, 2015, https://www.edf.org/sites/default/files/a_primer_on_time-variant_pricing.pdf
[5] A Survey of Residential Time-of-Use Rates, The Brattle Group, November 12, 2019. https://www.brattle.com/wp-content/uploads/2021/05/17904_a_survey_of_residential_time-of-use_tou_rates.pdf
[6] Ibid.

**A Survey of Residential Time-of-Use Rates, The Brattle Group**[7]




Sources and notes: Brattle analysis of OpenEI Utility Rates Database. Data shown for IOUs only.

- Among two-period TOU rates, 71% have a price ratio of at least 2-to-1
- Price ratios shown are for the volumetric charge only
- The strength of the price signal will be diluted to some degree by fixed charges and/or additional flat volumetric charges

Without an effective price signal, it has been proven to be harder to motivate customers to change behavior and create elasticity of demand for energy at different times of the day. Studies, such as EPRI's *Price Elasticity of Demand for Electricity: A Primer and Synthesis*[8], researches in depth a consumer's price response to electricity – how consumers adjust their behavior and level of energy consumption when the price changes. Results of TOU programs demonstrate that as the price differential increases, customers shift usage in greater amounts.

[7] Ibid.
[8] Price Elasticity of Demand for Electricity: A Primer and Synthesis, EPRI, January 2008.

**Q: What are the results of other Missouri utilities who have implemented a similar residential TOU structure with a low-price differential, as identified by Staff witness Lange in her Direct testimony?**

A: Ameren transitioned to a portfolio of TOU rates in Docket No. ER-2019-0335. Customers transition to a TOU rate schedule with a low differential as an AMI meter is installed at their home. Evergy understands that Ameren's AMI deployment will be completed in 2024 at which time all of their customers will fully be able to select service under its TOU rate portfolio. Evergy is not familiar with any publicly available results (e.g., EM&V, customer satisfaction, off-peak load shift) from Ameren's TOU rate offerings to this date. And Empire will launch its mere 2 cent per kWh off-peak discount rate in October 2022[9].

**Q: Are you aware of other successful TOU rate offerings similar to what Staff is proposing in this case and approved in Missouri?**

A: Evergy's research indicates that Missouri's ultra-low differentials is an outlier to other utilities that have implemented TOU rates. Staff fails to identify and share the success of other utilities that have implemented meaningful participation and/or load shifts in TOU rates with such a minimal differential. I am aware of at least one well-known default TOU rate that was offered by Puget Sound Energy in 2001, which had a slight peak to off-peak differential. Following a backlash related to limited customer bill savings because of this low differential, the result was an immediate opt out by 10% of its 300,000 customers and Puget terminated its program in 2002.

[9] Sarah L.K. Lange Direct Testimony, Page 17, Footnote 5.

The Commission should consider the risk of selling customers on the benefits of TOU rates when Staff's ultra-low differential TOU design provides virtually no opportunity for bill savings. Evergy has educated customers about the benefits of load shifting and ways that they can reduce their bills on the TOU rate. If customers take actions and they do not see that their bill changes, they will be dissatisfied and that can snowball very quickly into negative customer experiences and customer complaints. Evergy reinforces its TOU design with the tagline "Switch, Shift and Save" to easily engage the customer in a simple manner. While Ms. Lange states that her plan and time periods will leverage Evergy's Wait 'til 8 campaign[10], we have concerns over customers experiencing a bait and switch with Staff's ultra-low differential as they will not see the results that we have educated them on for the past several years.

I am also aware that some California utilities are rolling out TOU rates that have a diluted differential; however, my review indicates that at least with PG&E, this rollout is continuing with the majority of customers transitioning in 2022. In addition, I note that California has market and grid dynamics that are not comparable to Missouri such as differences in our RTOs, regulation or trends in customer BTM adoption, such as residential solar generation or EVs.

**Q: Would you recommend that the Commission approve Staff's proposed ultra-low TOU differential rate, even if it has already approved a similar rate for Ameren and Empire?**

A: While there may be some administrative value to the Commission having similar rate structures across the state, the underlying premise of the ultra-low differential is

[10] Sarah L.K. Lange Direct testimony, Page 16, Lines 9-10.

contrary to the point of developing customer friendly options that help drive behavior to lower bills and shift demand to off-peak. For example, I can't imagine that this ultra-low differential would incent an EV owner to charge off-peak if there were no financial advantage to doing so. And yet, Ms. Lange also wants to eliminate end-use rates so I am not clear how she expects to motivate customer behavior that has the potential to exacerbate impacts to the grid, such as EV charging, without either specialized rates or a significant off-peak differential TOU rate.

**Q: If the Commission were to approve Staff's proposed ultra-low TOU differential rate, do you have a sense of the level of difficulty in deploying the rate?**

A: Not precisely. However, I understand that Ameren and Empire were allowed to deploy the low-differential rate in conjunction with their AMI roll-out, making the deployment manageable. For Evergy, where our AMI systems are fully deployed, some additional time consideration would be in order to transition customers to the rate.

**Q: Does Staff witness Lange describe why such an ultra-low differential makes sense for customers?**

A: Witness Lange only provides that the proposed rate will "mitigate the TOU rates to customers with energy-intensive HVAC units"[11]. She also purports that it will simplify the customer experience and rely on the TOU education process Evergy began, as outlined in the 2018 Rate Design S&A.

**Q: What is your response to those benefits?**

A: There seems to be underlying assumptions to Ms. Lange's ascribed benefits. In Evergy's rate offerings today and in Evergy's proposed rates for this filing, the

[11] Sarah L.K. Lange Direct testimony, Page 41, Lines 16-17.

Company has rate options for customers to choose from. I am perplexed by the benefits of the ultra-low differential that Ms. Lange ascribes. It doesn't stand to logic why she has designed and proposed a rate that has a subtle price signal for customers that should rather be ***encouraged*** to replace their energy-intensive HVAC units through Evergy's MEEIA programs. For example, Evergy may encourage those customers to replace their energy-intensive units with an energy efficiency rebate and finance the higher efficient unit through Evergy's PAYS® program. Or, Evergy would encourage those customers to pre-cool and/or slightly increase the temperature of their HVAC system during on-peak periods – which can be achieved through Evergy's MEEIA rebated thermostat program. Thus, mitigating grid impact during peak times with customers through technology and behavior change. The purpose of a TOU rate is not to dissuade customers from running their HVAC system on a hot afternoon[12] as claimed by Ms. Lange. The purpose of the TOU rate is to provide a price signal to create behavior change to move certain activities off-peak. Ms. Lange is designing a default TOU rate that does not provide any price signal to effect behavioral change and that will not minimize grid impacts. I offer a report finding from a Guidehouse report for Ontario Energy Board to support this:

> *Increasing the differentials between On-Peak and Off-Peak periods will improve consumers' opportunity for bill savings and thus the motivation to respond to the (more aggressive) price signal in the late afternoon/early evening period when long-term system costs are highest. Although neither of the piloted Enhanced TOU price plans delivered any short-term behavioral energy savings, a set of more aggressive On-Peak and (summer) Mid-Peak prices could accelerate longer-term structural price response by increasing the incentive for consumers to acquire more efficient appliances, particularly more efficient space-cooling equipment.*[13]

[12] Sarah L.K. Lange Direct testimony, Page 18, Lines 15-17

[13] Guidehouse Report: Regulated Price Plan Pilot Meta-Analysis Final Report prepared for Ontario Energy Board December 22, 2020

Similarly, as stated above, her ultra-low TOU rate provides no incentive for an EV owner to charge off peak and minimize grid impact. In fact, I find it interesting that in File No. ET-2021-0151/0269, Staff argued that an EV customer should be required to enroll in Evergy's three-period TOU rate because "[i]f EV charging load is not managed it will likely occur during expensive peak hours."[14] It is not clear to Evergy why when Staff was concerned about the grid impact of unmanaged charging if Evergy's proposed EV outlet rebate was not paired with Evergy's TOU rate that Staff would now present in this case an ultra-low differential between off-peak and peak (or super off-peak) on the basis that while "there is a cost-based difference [between] a kWh consumed at 6:00 pm, and a kWh consumed at 2:00 am on a given day, but that difference is typically less than $0.05/kWh."[15] Her default TOU recommendation is based on an analysis that she determined there is essentially no difference in pricing throughout the day, day of week or season. Her analysis runs contrary to Staff's prior statement and concern in the TE case.

**Q: Staff Witness Lange proposes that the TOU rate should be a default rate. Do you agree?**

A: No, the Company obviously strongly disagrees based on our filed plans to continue with the existing three-period TOU rate as an opt-in, and we have proposed several rates and/or programs to expand customer choice. Witness Lange's brief reasoning for a default rate in her direct testimony is not supported enough to fully respond. It is implied in Ms. Lange's Direct testimony that she is disagreeable with the very well vetted third-party EM&V results, although the results demonstrate high satisfaction

[14] File No. ET-2021-0151/0269, Staff's Position Statement, Page 2.
[15] Lange Direct testimony, Page 19, Lines 7-8.

with the TOU rate, strong customer behavior changes resulting from the high-differential pricing structure and demonstrated customer bill savings as a result. It would be premature for me to provide testimony based on her inferences, and I will await further specifics if provided in her rebuttal.

## III. TOU EDUCATION

**Q: OPC Witness Kremer provided a report in her Direct testimony from the Arizona Corporation Commission ("ACC") on Arizona Public Service's ("APS") Customer Education Plan related to TOU rates. What is her stated reason for including the report in her Direct testimony?**

A: Her stated intention is "to offer educational tenets, ideas, and information that might serve to benefit Evergy customers in the Company's future customer educational efforts, including more expansive customer adoption of TOU offerings." [16]

**Q: Compared with Evergy's experience educating customers on new rates, what are some similarities, differences and opportunities you observed in Witness Kremer's testimony and/or the ACC report?**

A: An example of the similarities with the best practices suggested by the report's author include Evergy's completion of a thorough EM&V process. This process met many of the key benchmarks the author was concerned about, citing outlined customer experience journeys, satisfaction scores and ultimately quantitative usage and bill impacts of being on the new TOU rate. Another example the author includes as being a key component of a successful customer education plan is research, which Evergy

[16] Lisa Kremer Direct testimony, Page 9, Lines 12-15.

conducted in earnest in 2018 in preparation for how to message and offer its new TOU offer.

For an example of a difference, the author points out tracking call center metrics as a primary benchmark. In Evergy's case our clear focus was to drive customer self-service through online enrollment in the TOU rate, which Evergy has experienced well above 90% for the entire TOU period since launch.

For opportunities, the author highlights new and moving customers as an opportunity to educate and engage with rate choice at that time. Evergy currently has options to educate existing customers on their expected bills on a TOU rate but does not have a model for new customers to present potential bill comparison based on the different rates. Another opportunity might be a further evaluation on credit and collection activities related to TOU participants to contrast with standard rate customers.

**Q: What else would you offer related to the inclusion of the report by Ms. Kremer?**

A: As with most benchmarking across jurisdictions, some of the details matter to determine the appropriateness. In the Arizona case, the Commission ordered APS to deploy new rates and the file an education plan in advance. APS had a fixed budget for a short period of time and had some undefined goals. While Evergy's 2018 Rate Design S&A laid out specific parameters for Evergy to follow in its launch of the TOU opt-in program, including specified timing and stakeholder approval for an education and EM&V plan for the TOU rate, it did have specific, measurable, achievable, relevant and time-bound goals (enrollment of 3,500 customers by year-end 2020). Also, the report compares Arizona's experience to California's TOU rate rollout even though the

author does state there is not a 100% correlation to the widespread education of new rates due to scale and scope of the rates being rolled out and budgets/timing involved.

Overall, we appreciate the chance to learn from another electric utility's experience in deploying rates and look forward to continued success in Missouri with new and innovative rate offerings for our customers.

## IV. ELECTRIC VEHICLE RATES AND COMMERCIAL EV PROGRAM

**Q: Why is Evergy requiring a separate utility meter as an option for EV drivers under its proposed Schedule RTOU-EV[17]?**

A: Evergy included a separate utility requirement for Schedule RTOU-EV after completing an industry benchmarking analysis including some of the utilities referenced in ChargePoint's testimony as well as a survey of alternative methods. While it is true that some utilities utilize network-capable smart chargers for submetering, Evergy does not wish to introduce this complexity into either its operations or its customers, many of whom have charged for years without a networked smart charger.

While a second utility meter can more expensive than a networked charger, the meter provides a secure, singular, definitive means to execute an EV-specific time-of-use rate until charge management solutions that leverage vehicle telematics become more viable and standardized.

[17] The RTOU-EV schedule contains the same pricing rate structure as the High Differential TOU rate schedule; however, the rate requires the customer to install a separate meter for EV charging while providing the customer the option to choose from a different rate in Evergy's portfolio for its other home usage.

**Q: Does Evergy share ChargePoint's concern that a new EV owner would enroll in a residential TOU rate only to discover his/her car cannot be programmed to charge off-peak?**

A: No. Evergy is not aware of any new EV that cannot be programmed to charge off-peak.

**Q: Does Evergy share ChargePoint's concern that the proposed $3.25 monthly fee in Schedule RTOU-EV will likely discourage participation?**

A: No. A simple, unified approach to metering EV charging at home does not currently exist. Each approach includes characteristics that are more and less attractive to customers. For example, Evergy's research suggests the typical Tesla owner uses a non-networked charger at home. Given that Teslas represent two-thirds of historical battery-powered electric vehicles ("BEV") sales, these customers represent a significant portion of Evergy's EV customer base that would be inconvenienced by the requirement to purchase and operate a network-capable smart charger. Schedule RTOU-EV is yet another option for EV customers to consider and allows us, Evergy, to continue to evaluate consumer preference and charging patterns as EV adoption continues to grow.

Another point to be made here is that smart meter companies like ChargePoint typically charge utilities for access to customer data used for billing.

**Q: Does Evergy's proposed Commercial EV Charger Rebate Program ("CRP") consider the availability of funding from the Bipartisan Infrastructure Law?**

A: Yes. Evergy is actively supporting numerous stakeholders (e.g. Missouri Department of Transportation) to ensure federal funding achieves its stated goal of increasing access to public charging. In recognition of federal funding including the National EV

Infrastructure formula program referenced in OPC witness Geoff Marke's testimony, Evergy's proposed Commercial EV Charger Rebate Program ("CRP") does not include rebates for either the Highway Corridor or the Public Level 2 use cases. Notably, these use cases were included with Evergy's previous transportation electrification filings (File Nos. ET-2021-0151 and -0269). By decreasing the CRP program scope, Evergy has demonstrated our flexibility and commitment to customer-funded programs that complement alternative funding that did not exist when the previous cases were filed in February 2021.

**Q: Considering the Bipartisan Infrastructure Law, why has Evergy proposed a commercial charger rebate of any sort?**

A: Evergy's proposed CRP has been streamlined to focus on the Multifamily, Workplace/Fleet and the non-highway Public DC Fast Charge ("DCFC") use cases. These use cases represent eligibility gaps with respect to federal funding.

Importantly, the proposed rebate is not a "something for nothing" proposition for recipients. Eligibility requirements have been carefully selected to benefit Evergy as it continues to manage the grid through the transition to an electrified transportation sector, which is ultimately beneficial to all customers. For example:

- Recipients are required to install smart, network-capable chargers. These chargers are more expensive than non-networked chargers and some customers will decide Evergy's rebate is not worth the additional costs and obligations. Yet, this is a critical requirement because it facilitates data sharing and enables load management.

- Recipients are required to provide usage data to Evergy on a regular basis. Again, this requirement is facilitated by the use of smart, network-capable chargers.

From a more strategic perspective, this rebate "pulls" the customer into a relationship with Evergy as the customer pursues transportation electrification. In so doing, Evergy can:

- Encourage the customer to enroll in "grid friendly" time-of-use rates
- Ensure the customer installs only as much charging as is needed by the customer's use case(s), and
- Establish a utility/customer partnership that will be increasingly important as new grid management programs are developed

The importance of a solid utility/customer relationship bears repeating and has already been demonstrated during the past few years, particularly in Kansas where Evergy currently offers both a CRP and a business EV time-of-use rate. Willful participants maximize the benefits of "grid friendly" electrification programs.

**Q: What technical requirements will Evergy require from CRP recipients?**

A: To be eligible for the CRP rebate, recipients must install network-capable, ENERGY STAR certified (for Level 2) charging stations that are safety certified and capable of remote managed charging. These requirements are consistent with the recommendations provided in ChargePoint's testimony.

**Q: What about ChargePoint's comment that Evergy should not require CRP rebate recipients to agree to participate in demand response events?**

A: ChargePoint makes a good point here. Since EV drivers who charge at DC fast chargers are likely time-limited or time-sensitive, Evergy agrees that rebate eligibility should

require participants to agree to participate in future demand response events for Level 2 chargers only. In the near-term, Evergy does not anticipate regular demand response events to be called for rebate recipients but, when one is called, we envision load control by throttling back the charging speed by 50% versus shutting down the capability to charge completely, thus minimizing the impact on EV drivers' charging. Participation in demand response events will be clarified in the customer agreement developed for the CRP.

**Q: Will the future charging station demand response program include opt-out provisions?**

A: Yes.

**Q: Will Clean Charge Network stations be subject to the same demand response requirements as participants in the CRP?**

A: Yes.

**Q: Regarding the CRP, does Evergy agree with the monthly reporting requirements for charging data as suggested in ChargePoint's testimony?**

A: No. Evergy has fully defined a set of data reporting requirements for our ongoing commercial rebate program in Kansas and sees no reason to modify these requirements on ChargePoint's behalf.

## V. INCOME-ELIGIBLE WEATHERIZATION

**Q: What did Staff witness Koury Boustead and OPC witness Dr. Geoff Marke recommend with respect to Evergy's Income-Eligible Weatherization ("IEW") Program?**

A: Both Ms. Boustead and Dr. Marke recommend that the IEW Program budget amounts remain the same for each jurisdiction[18]. Evergy is agreeable to these recommendations.

**Q: Did Evergy recommend any changes to the IEW Program?**

A: Yes, Evergy recommended approval to transfer approximately $1 million of unspent IEW program funds ("roll-over funds" or "funds") to its Dollar-Aide program. Dollar-Aide helps eligible individuals and families by assisting with their utility bills to avoid loss of service. These donated funds are sent to the Mid-America Assistance Coalition, which administers the funds to local agencies. The local agencies work with those in need of funding for their utility bills.[19]

**Q: Were there any testimonies related to the Company proposal on roll-over funds?**

A: Neither Dr. Marke nor Ms. Boustead commented on this recommendation in their Direct testimonies. Staff Witness Nieto recommended decreasing the Company's rate base by the level of the roll-over funds liability. [20]. However, Evergy maintains that this change would be beneficial to low-income customers and recommends that the Commission approve this modification.

[18] Dr. Marke refers to this program as Low Income Weatherization Assistance Program ("LIWAP"), Page 24, Lines 13-24.
[19] Kimberly H. Winslow Direct testimony, Pages 65-68.
[20] Antonija Nieto Direct testimony, Page 17, Lines 1-2.

**Q: How has the Company proposed to handle this roll-over funds liability?**

A: Please see the rebuttal testimony of Company witness Linda Nunn for a discussion on the revenue requirement treatment.

## VI. MARKET BASED DEMAND RESPONSE

**Q: Do you agree with OPC Witness Seaver's recommendations for the Market Based Demand Response ("MBDR") tariff sheets?**

A: Simply stated, no. Mr. Seaver seems to have two primary arguments against keeping the tariff and both can easily be addressed. One of the arguments presented by Mr. Seaver for discontinuing the MBDR tariff is that no customers have participated in the tariff since enactment of the tariff. When the MBDR tariff was enacted in 2018, customers were required to have a minimum demand response potential of 1 MW. This threshold limits participation to larger commercial and industrial customers. Therefore, Evergy believes this threshold serves as a barrier to participation and has taken steps to address this concern by requesting to lower the threshold to 100 kW in this case. Lowering the threshold for participating will ensure that a greater number of customers are eligible to participate.

The second argument presented by Mr. Seaver is that the goals of the MBDR program can be achieved by "free-market" competition, in effect, allowing third-party aggregators to operate in Missouri. This notion is addressed in ***subpart i of*** my testimony below.

**Q: What about the fact that load reduction relief could be provided without the MBDR tariff?**

A: Load reduction relief is not the primary objective of MBDR. The primary benefit is to offer customers interested in creating value and reducing electricity costs a tariff to do

that by offering their demand response in wholesale (SPP) market. As participation in the wholesale market tends to be driven by wholesale market pricing, participation will not always overlap with load reduction relief.

**Q: Why should the Commission amend and allow the tariffs sheets to continue if no participation has occurred?**

A: In fact, the Commission was the major driver in creating this tariff in the 2018 rate case. A known concern when the tariff was being developed was whether the value available to customers under this tariff would be sufficient to entice participation. In other words, there were concerns that day ahead energy market revenues would not be sufficiently lucrative to entice participation, given that energy prices in SPP have historically been relatively low.

**Q: What makes you think there may be greater interest by customers in participating in the MBDR tariff today?**

A: There are two primary main reasons to believe that conditions have changed since 2018. First, we've seen a marked increase in wholesale market prices over the last 1-2 years. Price increases can be attributed to extreme weather events, a strong increase in global prices for natural gas, as well as a growing dependence in SPP on intermittent wind generation, which can create market volatility when wind patterns change. Second, we believe that inflationary and economic pressures will create greater interest by customers seeking to reduce electricity costs.

**Q: What is your response to the supplementary recommendations by Mr. Seaver which follows his testimony on the MBDR that relates to curtailment and related tariff sheets?**

A: I would like to address each subpart to the recommendation separately, as each requires a different response.

A. ***Seaver recommendation (i)*** *"that the Commission revisit the docket for EW-2021-0267 and consider lifting the ban on aggregators of load curtailment for retail customers, and potentially aggregators of load curtailment for residential customers;*

The recommendation to lift the ban on third-party aggregators, with no description or assessments provided, is extremely troublesome. Mr. Seaver asserts that the tariff should be abandoned and replaced by "free market competition" --implying that "unregulated programs" somehow create "more efficient and effective" and produce greater benefits to ratepayers. We do not find this notion on its own compelling as no supporting information, analysis, or description of program design has been presented by Mr. Seaver. In fact, such free-market programs, in which a customer's demand response is submitted as a bid in the wholesale market as an alternative form of supply, shifts the burden of system costs from participating to non-participating customers. Additionally, the recommendation completely overlooks the importance of having adequate consumer protections in place to govern activities by third-parties interfacing with retail customers. Finally, the logic overlooks the fundamental difference between demand-side management programs and supply

programs and the distinct benefits produced by each. Certain of these concerns have been fairly well documented in the open docket related to proceedings on FERC 2222[21].

B. ***Seaver recommendation (ii)*** *"that the Emergency Conservation Plan tariff sheets be amended to include demand response in load curtailment events during emergency conditions;"*

We disagree with this recommendation. The proposed Emergency Conservation Plan tariff already includes provisions to call demand response when SPP issues its load alerts. Therefore, this recommendation is not necessary.

C. ***Seaver recommendation (iii)*** *"that the Voluntary Load Reduction Rider ("Schedule VLR") tariff sheets, the Business Demand Response ("BDR") tariff sheets, and Business Thermostat tariff sheets be amended to include potential load curtailment events outside the specified period of May1-September 30;*

As a function of a recent Commission approved Stipulation and Agreement[22] that OPC was party to, Evergy amended the language in both the Business DR and Business Thermostat programs to include the potential to call demand response events outside of the historical season of June 1 – September 30. The Voluntary Load Reduction Rider for Missouri West already includes language to allow for calls during the entire calendar year[23] and Evergy would propose to modify the Missouri Metro to allow for the same.

[21] MPSC Docket. EW-2021-0267, In the Matter of the Establishment of a Working Case Regarding FERC Order 2222) Regarding Participation of Distributed Energy) File No. EW-2021-0267 Resource Aggregators in Markets Operated) By Regional Transmission Organizations and) Independent System Operators

[22] File No. EO-2019-0132, Evergy Missouri Metro and Evergy Missouri West Notice of Intent to File Applications for Authority to Establish a Demand-Side Programs Investment Mechanism

[23] Greater Missouri Operations Voluntary Load Reduction Rider, Sheets 96-98, February 22, 2017

D. ***Seaver recommendation (iv)*** *"that mention of Schedule MBDR be removed from all tariff sheets Evergy Missouri Metro P.S.C. MO. No. 2, Original Sheet No. 1.82A, Evergy Missouri Metro P.S.C. MO. No. 7, 16th Revised Sheet Nos. TOC-1 and TOC-2 and Evergy Missouri West P.S.C. MO. No. 1, Original Sheet Nos. 1.1, 2.1, R-63.10.1.*

We disagree with OPC's recommendation to discontinue the MBDR tariff and replace it with unregulated programs, which would negate the need to remove references to the tariff in other tariff sheets.

## VII. RESIDENTIAL BATTERY ENERGY STORAGE PROGRAMS

**Q: Do you agree with OPC witness Seaver's recommendations for a meta-study or literature review of all known behind-the-meter ("BTM") storage studies and projects in lieu of the Company's Residential Battery Energy Storage ("RBES") pilot program?**

A: No. The Company has conducted analysis supporting the proposed RBES pilot program design and outlined the grid and customer benefits for evaluation. In addition, the Company is conducting a technology market assessment of residential battery storage system manufacturers to further examine battery systems that will support the pilot's objectives. At the conclusion of the pilot, the Company has proposed to conduct a third-party post Evaluation, Measurement and Verification ("EM&V"). The EM&V study will consist of a process and impact study outlining the pilot's results.

**Q: Should there be concerns with the scale, duration and projected costs associated with the pilot?**

A: No. The Company intends to evaluate 50 batteries over the course of the three-year pilot program. As a greater number of batteries are deployed across Evergy's service territory, this pilot and the evaluation will be essential to understanding how Evergy can be better prepared for the benefit of all customers. We believe the proposed scale

strikes an appropriate balance between overall program cost and producing data that is suitable to evaluate benefits and to serve as guide for design of a future program, if so determined. The pilot will seek to identify and enroll target participants within the first six months and begin pilot implementation in the following two years with six months for the post pilot EM&V.

Pilot costs consider both the hardware (battery storage system, home energy management control system), software (cloud support, licensing fees), installation (concrete pad and battery install) and ongoing technical support.

Upon the conclusion of the pilot, participants will have the opportunity to purchase the battery for its remaining useful life value, continue in the program and pay the monthly service fee, or have the battery removed and redeployed elsewhere.

**Q: Why doesn't the Company utilize existing BTM storage systems installed by customers in the proposed pilot program?**

A: The pilot intends to utilize Company-owned battery storage systems from a single manufacturer to standardize battery sizing and design across all participants. The pilot will track and measure data in real time from the battery provider's demand response management system ("DRMS") and will collect data through an API integration back to the Company's distributed energy resource management system ("DERMS") for broader visibility and management. This approach will reduce uncertainty and ensure consistency in data used to determine results.

**Q: Why should Evergy have a customer prioritization or participant criteria for the pilot rather than allow customers with existing DERs to participate?**

A: The ultimate benefits of energy storage to customers may be influenced by several factors such as: customer's energy use profile, customer rate schedule, smart enabling

DER technology, location on the grid, customer behavior and user preferences. Prioritization of participants across these primary use cases will help inform the impacts that battery storage has on a broader base of customers. Mr. Seaver discounts the need for this valuable program on the unsubstantiated accusation that "participating customers to be all Company employees or board members". If the Commission is concerned that Evergy would select on that basis, Evergy will commit to ensuring that employees and Board members be excluded from this small pilot of 50 BTM systems.

**Q: What feedback can you provide on witness Seaver's System Advisor Model ("SAM") analysis regarding the pilot's financial benefits?**

**A:** Mr. Seaver presents a model that is not representative of the Company's proposal by any stretch of the imagination. It appears that Mr. Seaver has utilized the SAM to assess a project utilizing a 20-year power purchase agreement ("PPA") structure with the customer utilizing third-party project financing. It appears that his model is used to assess a project in which a customer would purchase a battery, finance the battery and sell all of the energy produced by the battery back to the Company using a PPA-type structure. We reach these conclusions by examining the metrics provided by Mr. Seaver as follows (where the letters provided correspond to the information provided in the table entitled 'Metrics' appearing on page 11 of Seaver's testimony).

<u>Model Assumptions Used</u>

- A residential customer would purchase and install a battery
- The customer would finance the purchase with a 20-year loan obtained from a third-party lender

- The customer would then execute a PPA with the Company, who would (theoretically) be willing to purchase energy from the customer over a period of 20-years *(a)*
- The first-year purchase price for energy purchased from the customer would be $55/kWh *(b)*, escalating at 1 percent per year *(c)*
- The total capital cost for a project financed under these terms would reach a total of $476,751 *(d)* (with closing costs owed to the lender of $450,000, as shown on pg. 11 in the table entitled "Project Term Debt.")

**Single Owner Inputs**

| SYSTEM DESIGN | |
|---|---|
| Nameplate capacity (kW) | 6.21 |

| SYSTEM COSTS | |
|---|---|
| Total installed cost ($) | 24,665 |

| OPERATION AND MAINTENANCE COSTS | |
|---|---|
| Fixed annual cost ($/yr) | 0.00 |
| Escalation (% above inflation) | 0.00 |
| Fixed cost by capacity ($/yr) | 0.00 |
| Escalation (% above inflation) | 0.00 |
| Variable cost by generation ($/MWh) | 0.00 |
| Escalation (% above inflation) | 0.00 |

'N/A' indicates O&M or land lease costs entered as annual values. See "ANNUAL VALUES" below.
Additional operation and maintenance and fuel costs are listed below under "ANNUAL VALUES."

| LAND LEASE | |
|---|---|
| Land area estimate (acres) | 0.00 |
| Annual land lease cost ($/acre) | 0.00 |
| Land lease escalation rate (% above inflation) | 0.00 |

| KEY |
|---|
| Calculated |
| Input from SAM |
| Annual values from SAM |
| Value depends on option in SAM |

| METRICS | | |
|---|---|---|
| PPA price, year 1 (¢/kWh) | 55.00 | (b) |
| PPA price escalation (%/yr) | 1.00 | (c) |
| Levelized PPA price nominal (¢/kWh) | 59.16 | |
| LCOE, nominal (¢/kWh) | 1,364.90 | |
| NPV ($) | -317,096 | |
| IRR (%) | NaN | |
| IRR Year | 20 | (a) |
| IRR at end of project (%) | NaN | |
| Total capital cost ($) | 476,751 | (d) |
| Equity ($) | 512,377 | |
| Size of debt ($) | -35,626 | |
| Minimum debt service coverage ratio | 1.30 | |
| Debt fraction (%) | -7.5 | |

This structure is in no way representative of the proposed terms of the pilot program set forth by the Company. The Company does not intend to execute 20-year PPA with residential customers nor is the Company planning to pay $55/kWh for all of the energy produced by the battery. Rather, the Company is proposing a 3-year pilot program for the purpose of using the RBES pilot to demonstrate the benefits of residential batteries to customers and to the Company. Under the terms of the proposed program, the energy produced by the battery is used to offset household loads with the Company utilizing the battery periodically in a demand response program to offset Evergy's peak load. Further, the Company does not intend to utilize an expensive 20-

year project finance structure as part of this pilot, which would increase the battery cost over the life of the project to nearly $500,000 per battery. Therefore, the analysis and conclusions as presented by OPC are not applicable to the Company's proposed RBES program but rather is an entirely different type of program design.

**Q: What is your response to Seaver's recommendation to leverage existing data from similar pilots in place of the proposed pilot program?**

A: The Company disagrees with witness Seaver's response to leverage existing data from similar pilots in place of its proposed pilot program. The Company sees a considerable opportunity to advance its operational knowledge of how battery energy storage systems can be utilized to achieve customer savings and grid benefits. Leveraging a pilot specific to the Company's customer base and grid will provide primary data that will support peak demand reduction for all Evergy customers. Second, there is no assurance that the results of "similar pilots" will provide meaningful insights due to the many regional differences which exist across the country in terms of grid design, regional consumption patterns, and regulatory programs which influence results. Lastly, this pilot is consistent with the objectives of Section 393.1610 RSMo. which provides for Commission approval of this type of pilot.[24] Evergy is proposing a well-thought-out pilot that is forward thinking and important to understanding BTM storage adoption and impact to grid. We continue to recommend that the Commission approve our pilot as proposed.

[24] Section 393.1610 states, The commission may approve investments by an electrical corporation in small scale or pilot innovative technology projects, including but not limited to renewable generation, micro grids, or energy storage, if the small scale or pilot project is designed to advance the electrical corporation's operational knowledge of deploying such technologies, including to gain operating efficiencies that result in customer savings and benefits as the technology is scaled across the grid or network.

## VIII. LOW-INCOME SOLAR ("LIS") SUBSCRIPTION PROGRAM

**Q: Do you agree with OPC Witness Seaver's recommendation that the proposed Schedule Low Income Solar ("LIS") Program schedule include a cost sharing mechanism similar to Evergy's existing "Solar Subscription Program" ("SSP") schedule?**

A: No.

**Q: What is Seaver's proposed cost sharing mechanism?**

A: Schedule SSP, which is the tariff for the Company's existing Solar Subscription Program, includes a provision where Evergy shareholders are responsible to cover 75% of the cost of the unsubscribed solar blocks for the program once that resource is operational. OPC witness Seaver proposed a similar cost sharing mechanism for the LIS program, except that the Company be responsible for 90% of the cost of the unsubscribed solar blocks for the program.

**Q: What are the Company's concerns with this recommendation?**

A: The LIS program does not have some of the same other parameters of Schedule SSP, which has an impact on the cost sharing mechanism.

**Q: Please explain.**

A: First, Schedule SSP tariff was designed with other provisions, such as the Company would establish a sign-up list and achieve a minimum of 90% prior to moving forward with constructing the resource. The Company has since reached that threshold and received a Certificate of Need and Necessity from the Commission to construct the Hawthorn solar generating facility. The Hawthorn solar facility was sized to also fulfill the Company's obligations under Section 393.1665 RSMo. The Company expects the Schedule SSP to be over 100% subscribed with a waiting list by the time the solar

resource is operational. In other words, the Company was not immediately at risk to fund the unsubscribed solar blocks until customer demand first demonstrated an ability to support the size of the resource needed to serve the program.

In the case of the proposed LIS program, the Company has not proposed to similarly first get approval to do a LIS program, and then build another solar resource to serve the program once the demand catches up to the minimum sizing needed to cost effectively build the solar resource. Instead, the Company has proposed that, if approved by the Commission, the resource need will be met by transferring solar blocks from the portion of the Hawthorn solar facility that was built for and will be paid for by all Evergy Missouri Metro and Evergy Missouri West customers under Section 393.1665 RSMo. As customers sign up for the LIS program, an accounting adjustment will be made that will shift the cost burden from all Evergy Missouri Metro and Evergy Missouri West customers to customers of the LIS program. This approach benefits LIS program participants because it reduces the wait time to participate in an approved program once demand is shown because it is leveraging a resource already approved and built.

**Q: Was this contemplated and explained when the Company sought a Certificate of Convenience and Necessity ("CCN") from the Commission?**

A: Yes, it was.

**Q: How does the Company propose cost allocation would be handled for the LIS Subscription Pilot Program?**

A: In the event a LIS Subscription Pilot Program is approved in this rate case, the cost allocation for the 5 MW portion of the 10 MW Project built to comply with Section 393.1665 RSMo. and split evenly across all Evergy Missouri Metro and Evergy

Missouri West customers will be adjusted. It will be adjusted in that as low-income customers sign up for the LIS Subscription Pilot Program (up to 0.5 MW for each Missouri utility jurisdiction), a corresponding share of the cost is removed from the cost of service for all customers of that utility.

Furthermore, the Unanimous Stipulation and Agreement signed by the Company, Staff, Renew Missouri, and OPC in the same docket also contains the following language in footnote 5 in Paragraph 12:

> 1 MWac (0.5 MWac or 1,000 shares each for Evergy Missouri West and Evergy Missouri Metro) of the Project is proposed to meet the needs of a low-income solar program in the Company's ER-2022-0129 and ER-2022-0130 pending rate cases. In the event that a low-income solar program utilizing this portion of the Project is not ultimately approved by the Commission as part of these rate cases, the Signatories agree that this remaining 1 MWac (or 0.5 MWac each for Evergy Missouri West and Evergy Missouri Metro) will also be available to meet the demand for future Solar Subscription Pilot Rider participants. All Evergy Missouri Metro and Evergy Missouri West customers (split evenly) are responsible to pay for prudently incurred costs related to this 1 MW portion until such time either 1) the proposed low income solar program is approved in some form as part of the rate case or, if not approved 2) following the rate case completion, the demand for the Solar Subscription program increases to the point where these associated shares are transferred from all Evergy Missouri Metro and Evergy Missouri West customers paying for the 1 MW portion to SSP customers per the process outlined in Paragraph 12.

**Q: If an LIS Program is approved, and after the solar shares are transferred into the LIS Program once the 0.5 MW demand threshold is reached for each jurisdiction, what happens if there is churn in the program and certain LIS participants who signed up no longer participate?**

A: Once the initial tranche for each territory has been fully subscribed, the Company will create an active customer waitlist. If a customer elects to unenroll the next enrolled customer for that corresponding jurisdiction will be eligible to join the active program

queue. In the event that the LIS program falls below its 0.5 MW threshold for each jurisdiction after the initial transfer of solar shares from the Section 393.1665 RSMo. portion of the Hawthorn solar facility, I believe this program should be treated consistent to how the Unanimous Stipulation treated the same issue for Section 393.1665 RSMo. solar shares transferred to the Schedule SSP program.

**Q: What is that treatment?**

A: Paragraph 12 of the stipulation states:

> As the waiting list of Evergy Missouri West or Evergy Missouri Metro customers reaches 1,000 shares (0.5 MWac), Evergy will include each additional 0.5 MWac portion in the total portions of the Project designated as solar subscription assets and will apply the same fuel adjustment clause impacts to this new total as was applicable to the original allocation

In other words, once solar shares are transferred from the Section 393.1665 RSMo. portion of the Hawthorn solar project to the Schedule SSP, then that creates a new baseline of subscription level and, per the Schedule SSP tariff, shareholders are responsible to cover 75% of the cost of the unsubscribed solar blocks for the program. It seems reasonable that the Company would be held to this same provision for the LIS program as well after shares are transferred to the program to fulfill demand for the LIS program.

## IX. ANNUALIZATION ADJUSTMENT FOR MEEIA DEMAND REDUCTION

**Q: Did Staff make an adjustment for the annualized energy and demand savings from Evergy's MEEIA programs?**

A: No. While Staff witness J Luebbert adjusts for annualized energy savings from MEEIA programs, he does not adjust for annualized demand savings from MEEIA's programs.

**Q: Does Staff explain why they do not adjust for MEEIA demand savings?**

A: No. However, in the 2018 rate case (ER-2018-0145 and ER-2018-0146), Staff witness Robin Kliethermes indicates in her Rebuttal testimony that hourly demand load shapes were needed "for each [MEEIA] measure type" to make such a demand adjustment.

**Q: Given that, did Evergy provide load shapes for Staff to adjust for MEEIA demand savings in this case?**

A: Yes. Evergy provided end-use hourly load shapes in this case in response to data requests[25]. An end-use is a grouping of measures by type and therefore these load shapes can be utilized by Staff.

**Q: Should MEEIA demand be included in the Company's annualization adjustment?**

A: MEEIA programs realize kW and/or kWh savings - sometimes one or both depending on the end-use measure. Evergy employs a rigorous evaluation, measurement and evaluation process ("EMV") that utilizes a third-party, independent contractor to determine the energy and demand savings that results from its MEEIA programs. This process also requires significant stakeholder participation and review. Given that both MEEIA demand and energy savings impact revenue, it is my expectation that both would be adjusted by Staff in the annualization adjustment. Please refer to the Direct testimony of Albert Bass regarding how MEEIA energy and demand savings were reflected in the Company's direct case.

**Q: Does that conclude your testimony?**

A: Yes, it does.

[25] ER-2022-0130 DR MPSC 0223 and ER-2022-0129 DR MPSC 0225.

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement A General Rate Increase for Electric Service | ) ) ) ) | Case No. ER-2022-0129 |
| In the Matter of Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Request for Authority to Implement A General Rate Increase for Electric Service | ) ) ) ) | Case No. ER-2022-0130 |

## AFFIDAVIT OF KIMBERLY H. WINSLOW

**STATE OF MISSOURI )**
**) ss**
**COUNTY OF JACKSON )**

Kimberly H. Winslow, being first duly sworn on her oath, states:

1. My name is Kimberly H. Winslow. I work in Kansas City, Missouri, and I am employed by Evergy Metro, Inc. as Senior Director, Energy Solutions.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Evergy Missouri Metro and Evergy Missouri West consisting of thirty-two (32) pages, having been prepared in written form for introduction into evidence in the above-captioned dockets.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Kimberly H. Winslow

Subscribed and sworn before me this 13th day of July 2022.

Notary Public

My commission expires: 4/26/2025

ANTHONY R. WESTENKIRCHNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 26, 2025
PLATTE COUNTY
COMMISSION #17279952