Exhibit No. 56

Evergy Missouri Metro – Exhibit 56
Kayla Messamore
Rebuttal Testimony
File Nos. ER-2022-0129 & ER-2022-0130

Exhibit No.:	
Issue:	Sibley, Plant Retirements, Wind Purchased Power Agreements, Voltage Optimization
Witness:	Kayla Messamore
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NOS.: ER-2022-0129 / 0130

REBUTTAL TESTIMONY

OF

KAYLA MESSAMORE

ON BEHALF OF

EVERGY MISSOURI METRO and EVERGY MISSOURI WEST

Kansas City, Missouri
July 2022

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REBUTTAL TESTIMONY

OF

KAYLA MESSAMORE

Case No. ER-2022-0129 / 0130

Q: Please state your name and business address.

A: My name is Kayla Messamore. My business address is 1200 Main, Kansas City, Missouri 64105.

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

A: I am employed by Evergy Metro, Inc. and serve as Vice President of Strategy and Long Term Planning for Evergy Metro, Inc. d/b/a as Evergy Missouri Metro ("Evergy Missouri Metro"), Evergy Missouri West, Inc. d/b/a Evergy Missouri West ("Evergy Missouri West"), Evergy Metro, Inc. d/b/a Evergy Kansas Metro ("Evergy Kansas Metro"), and Evergy Kansas Central, Inc. and Evergy South, Inc., collectively d/b/a as Evergy Kansas Central ("Evergy Kansas Central") the operating utilities of Evergy, Inc.

Q: Who are you testifying for?

A: I am testifying on behalf of Evergy Missouri Metro and Evergy Missouri West (the "Companies").

Q: What are your responsibilities?

A: My responsibilities include development of Evergy's corporate strategy and leadership of long-term planning activities, which include Energy Resource Management ("ERM"), Transmission Planning, Distribution Planning, Operations Compliance Engineering and Operations Technology. Specifically related to this

testimony, the activities of ERM include integrated resource planning, wholesale energy purchase and sales evaluations, and renewable energy standards compliance. The activities of Operations Technology include deployment of automated field devices and supporting software.

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

A: I hold a Bachelor of Business Administration from the University of Texas at Austin. I worked as a strategy consultant in the power and utilities industry beginning in 2014 and have worked in strategy and planning at Evergy since 2018.

Q: Have you previously testified in a proceeding at the Missouri Public Service Commission ("MPSC" or "Commission") or before any other utility regulatory agency?

A: Yes.

Q: What is the purpose of your rebuttal testimony?

A: The purpose of my rebuttal testimony is to respond to the following issues (witnesses identified):

- Section I: Sibley Retirement (Geoff Marke, Office of the Public Counsel – "OPC")
- Section II: Coal Retirements and Resource Planning (Devi Glick, Sierra Club)
- Section III: Renewable Energy Standard ("RES") Assignments and Purchased Power Agreement ("PPA") Evaluation (Nancy Harris, MPSC Staff – "Staff")

- Section IV: PPA Costs and Fuel Adjustment Clause (Brad Fortson, Staff)
- Section V: Voltage Optimization (Geoff Marke, OPC)

Section I - Sibley Retirement

Q: What claim does OPC make regarding the Sibley Station retirement?

A: OPC claims that Evergy Missouri West's ("EMW") decision to retire Sibley was imprudent (Marke Direct, p. 10, lines 21-22). Note that Sibley Units 1, 2, and 3 were all retired in 2017 and 2018, but OPC's testimony focuses almost exclusively on the retirement of Sibley Unit 3. As a result, I will also focus on Sibley Unit 3 and will use "Sibley" to refer specifically to Unit 3 below (unless otherwise noted).

Q: Do you agree with this claim?

A: No.

Q: Has OPC provided a basis for this claim?

A: Yes. OPC provided a "list of non-exhaustive reasons" (Marke Direct, p. 10, line 22) for this claim.

Q: Do OPC's stated reasons support their claim that the decision to retire Sibley was imprudent?

A: No. OPC's stated reasons do not support its claim.

Q: Why do these reasons not support OPC's claims?

A: OPC provided nine reasons (Marke Direct, pages 10-12, starting line 23) that it claims as support for its belief that the decision to retire Sibley was imprudent. I will address each of the nine reasons.

Reason 1: The Sibley retirement was accelerated. (Marke Direct, p. 10, lines 23-24)

Response: The fact that the Sibley retirement occurred earlier than what had been assumed in setting rates does not mean that the decision was imprudent. While unrecovered capital costs from a retirement are included in the Company's IRP analysis, they are irrelevant to a retirement decision which assumes that these costs will eventually be recovered. These costs are "sunk" and are not generally considered in a retirement decision. What is important are the going forward costs which were evaluated in the IRP process. EMW had determined through the IRP process that the plant should be retired as the retirement would reduce the long-term net present value of revenue requirements ("NPVRR") and therefore reduce costs to customers going forward as opposed to continuing to operate the plant.

The retirement of Sibley Units 1 and 2 in 2017 were first shown to reduce NPVRR in the Company's 2012 IRP. The retirement of Sibley Unit 3 in 2018 was first shown to reduce NPVRR in the Company's 2017 IRP Annual Update.

Reason 2: Sibley was EMW's largest dispatchable baseload plant and was replaced with "take-or-pay" purchased power contracts. (Make Direct, p. 10, lines 25-27)

Response: The fact the Sibley was EMW's largest generating resource does not make the decision to retire it imprudent. The reason to retire was based on the long-term economic savings that would benefit EMW customers as demonstrated through the IRP process.

Reason 3: EMW was the only Missouri electric IOU with load growth and was short of capacity. (Marke Direct, p. 11, lines 1-6).

Response: A utility having positive load growth and owning less physical generating capacity than load does not inherently make its decision to retire a generating unit imprudent. The decision to retire Sibley was based on a long-term economic analysis showing that retiring the station would benefit EMW customers. The economic evaluation conducted through the IRP process took EMW's projected load growth and specific generation supply portfolio into consideration when the retirement decision was made. Having load growth while owning less physical capacity than load does not mean that a utility's decision to retire certain resources was imprudent if there is a more economic way to meet customer needs and capacity requirements.

Reasons 4/5: The Sibley capacity was replaced with a capacity contract with Evergy Metro which proved inadequate during Winter Storm Uri. (Marke Direct, p. 11, lines 7-11)

Response: The simple fact that EMW purchases some generating capacity from Evergy Metro does not make the decision to retire Sibley imprudent.[1] Winter Storm Uri was an extraordinary event that caused the largest controlled firm load shed event in U.S. history and led to the death of over 200 people, according to the FERC, NERC and Regional Entity Staff Report of November 2021, entitled "The February 2021 Cold Weather Outages in Texas and the South Central United

[1] Note that the EMW capacity purchase from Evergy Metro was made through a formal request for proposal ("RFP") process that was competitively bid. Evergy Metro's formal offer to sell capacity to EMW was made prior to any offers from outside suppliers being received by EMW.

States."[2] The extreme cold temperatures, extended period of those temperatures and precipitation contributed to what some have described as an "85 year event."[3] The Southwest Power Pool ("SPP") indicated this was the first time in SPP history that it had to move to EEA 2 or EEA 3 status.[4]

Moreover, Winter Storm Uri occurred over two years after Sibley Unit 3 suffered a forced outage in September 2018 and was retired in November 2018.

Keeping an old, uneconomic coal plant in service for such unusual and extraordinary events would likely be criticized by OPC and others as an imprudent expense, and there are no guarantees that the plant would be available under such extreme conditions. In addition, an assessment of events which occur after a decision is made (i.e., 20/20 hindsight) is irrelevant in determining the prudence of a decision based on the information available at the time it was made.

Reason 6: IRP modeling only considered the full retirement of Sibley, no seasonal operations and no decommissioning costs modeled. (Marke Direct, p. 11, lines 12-14)

Response: As reflected in the net present value of revenue requirements, the IRP demonstrated that the costs to keep Sibley in operation exceeded the benefits. Given that the energy benefits did not always cover even Sibley's total fuel costs and its average annual SPP margins 2015-2017 were only approximately $4M, it is highly unlikely that operating Sibley on a seasonal basis could be

[2] In Paragraph 4 of its September 23, 2021 Staff Recommendation in the Companies' Winter Storm Uri AAO Application in Case No. EU-2021-0283, Staff agreed that Winter Storm Uri was "an extraordinary event of a material nature for purposes of Evergy's request to accumulate and defer associated costs."
[3] Staff Report at, Case No. EO-2021-0264, In the Matter of the Cause of the February 2021 Cold Weather Event and its Impact on Investor Owned Utilities, (Apr. 30, 2021).
[4] Id.

economic given the future capital investment and O&M required to keep the plant operational (forecasted to be $165M 2018-2021).

While it is correct that decommissioning costs were not included in the IRP retirement analysis, this has been the case in for all plants in all prior IRPs that have evaluated plant retirements. These costs would be incurred whenever a plant is retired, meaning the only variation caused by a retirement date change would be the time-value-of-money impact, and therefore have not been included. To date, there have been no objections to this approach in any EMW or Evergy Metro IRP. This modeling assumption does not make the decision to retire Sibley imprudent. Including these costs in the IRP (both in plans that kept the plant in service and plans where Sibley was retired) would not have changed the retirement decision.

Reason 7: OPC claims that the IRP did not consider the continued operation of Sibley, allowed for continued operation of Crossroads "even though Sibley was more profitable", and modeled the continued operation of Jeffrey Energy Center. (Marke p. 11, lines 15-20)

Response: OPC's claim that the IRP did not consider the continued operation of Sibley is incorrect. The 2017 IRP evaluated eight plans (out of 15 total EMW plans) with continued operations and demonstrated that retirement was the lower cost option.

While the IRP did assume continued operation of Crossroads, Crossroads is a gas peaking facility that has significantly lower O&M and capital costs than an old coal plant. Peaking facilities such as this have not typically been considered to be retirement candidates in IRP evaluations as they provide capacity at a relatively

low cost. The fact that a Crossroads retirement was not evaluated in the IRP does not make the decision to retire Sibley imprudent.

Sibley was in no way profitable. There were months when energy revenues did not cover total fuel costs, let alone O&M and capital costs for continued operation. In 2018 when Sibley was retired, SPP energy revenues were $26 million, fuel costs were $23 million, and non-fuel O&M costs were $29 million, for a net loss of $26 million before any capital costs are considered. Crossroads, by comparison, had SPP margins of $881,000 and non-fuel O&M of $1.2 million, for a net loss of only $286,000. OPC's general assertions that Sibley is "more profitable" without providing any supporting data – particularly when it was well known that Sibley's all-in costs were tens of millions of dollars more than its annual SPP margins[5] – simply ignores the facts.

Although OPC is correct that the Jeffrey Energy Center was assumed to continue operation in the IRP, EMW is only an 8 percent minority owner of that generating station. and would not control a retirement decision for the facility. As such, it was not modeled as a decision for EMW to make. The fact that a retirement option was not modeled for Jeffrey, a resource owned 92 percent by other entities, does not make the decision to retire Sibley imprudent.

Reason 8: OPC claims that EMW "attempted to game the retirement of Sibley". (Marke Direct, p. 11, lines 21-23)

[5] Presentation to Staff and OPC regarding GMO Capacity Planning in November 2017 when Sibley retirement was discussed included summary of 2017 SPP margins ($5 million YTD) versus O&M costs ($28 million per year).

Response: The timing of Sibley's retirement in relation to the OPC Complaint Case, No. EC-2019-0200, has nothing to do with the decision to retire Sibley. The Commission made no reference to "gaming" in its Report and Order which stated at pages 13-14 that "the prudence of that decision is not at issue in this case" which "will be addressed in a future general rate case," meaning this proceeding. Company witness Ives details the timeline regarding Sibley's retirement. The actual timing of Sibley's retirement does not make the decision imprudent which is supported by EMW's 2017 IRP and is well documented.

Reason 9: OPC claims the decision is based on the modeling assumption that KCPL and GMO resources are part of one utility.

Response: OPC's claim is false and unsupported. Since the acquisition of Aquila in 2008, the IRP process has included modeling each utility separately (per the IRP requirements) and as a combined entity. The 2017 IRP demonstrated that the retirement of Sibley was economic for EMW customers as a separate utility. Plan GCGHP, which was selected as the Preferred Plan for EMW and included the Sibley 3 retirement, was the lowest cost plan modeled for EMW as a standalone utility. Once again, OPC makes claims that are not supported by the facts.

Q: OPC makes an analogy between Ford shutting down a plant producing F150s at a "more efficient, more productive and cleaner rate" to EMW's decision to retire Sibley. Do you agree with this analogy?

A: Not at all. Keeping Sibley in operation was demonstrated through the IRP process to be more expensive than retiring the plant. If the cost of operating an old Ford plant exceeded the benefits, I suspect Ford would close their plant as well.

Q: Please summarize your testimony regarding this issue.

A: OPC claims that the retirement of Sibley was imprudent. However, none of the nine reasons provided by OPC to support its argument actually demonstrate imprudence of the decision. The decision to retire Sibley was made through the IRP process which identified savings from the retirement of approximately $220 million for customers. OPC's nine reasons are all either irrelevant in assessing prudence of the decision and/or inconsistent with the relevant facts surrounding the decision. As a result, OPC's allegation of imprudence should be dismissed because it is unsupported.

Section II - Coal Retirements

Q: What recommendation does Sierra Club make regarding the cost of operating Evergy's coal plants?

A: Sierra Club has recommended the disallowance of $28.3M in capital costs and ** [redacted] ** in O&M for Evergy Metro's share of La Cygne Units 1 and 2, $20.8M in capital costs and ** [redacted] ** in O&M for Evergy Metro's share of Iatan 1, $6.6M in capital costs and ** [redacted] ** in O&M for Evergy Missouri West's share of Jeffrey Units 1-3 and $8.1M in capital costs and ** [redacted] ** in O&M for Evergy Missouri West's share of Iatan 1 on the basis that the Company has not demonstrated the prudence of continuing to operate the plants relative to retirement and replacement with alternatives.

Additionally, Sierra Club recommends that the Commission require Evergy conduct a "full retirement study of its coal fleet using optimized capacity expansion software" and that "the Commission should signal that, in future dockets, it will not

be inclined to approve cost recovery by the Companies of any capital investments of more than $1 million at these plants without prior Commission approval". (Glick Direct, pp. 4-5)

Q: Do you agree with Sierra Club's claim that the Companies have not demonstrated the prudence of continuing to operate the plants relative to retirement and replacement with alternatives?

A: No.

Q: Has Sierra Club provided a basis for this claim?

A: No. Sierra Club provides a variety of analyses of historical and forward-looking costs for the Companies' coal plants which they seem to be using as support for its claim.

Q: Do these analyses support Sierra Club's claim?

A: No, they do not. First, none of these analyses do anything to demonstrate alleged imprudence of the costs for which it has recommended a disallowance. Sierra Club has simply made an assertion that, because it is dissatisfied with the Companies' Integrated Resource Planning processes, the continued operation of all but two of Evergy's coal plants is potentially imprudent and thus all O&M and capital costs incurred at those facilities during the test year should be disallowed.

Second, its analyses simply compare costs to market values of energy, ancillary services, and capacity, and assert that if costs are greater than total revenues, the continued operation of the plant must be imprudent. This type of analysis completely ignores the fact that the Companies ultimately need to have sufficient economic capacity of some type to serve customers and meet reserve

margin requirements. Claiming that almost 1,700 MW of capacity[6] (over 4,300 MW if you include the capacity of those units which Evergy Missouri West and Evergy Metro do not own) should be retired on the basis of costs exceeding revenues and not including any assessment of costs for replacement capacity is ridiculous.

As regulated load-serving entities, Evergy Metro and Evergy Missouri West are responsible for meeting their resource adequacy requirements with accredited capacity whose fixed costs are included in customer rates if they are prudently incurred. The energy market is designed only to compensate resources for their short-run marginal costs – not their all-in costs. The "capacity value" which Sierra Club utilized in its analysis is similarly based on a short-term capacity sale and does not at all represent a true value of long-term capacity. While Sierra Club correctly points to the Integrated Resource Planning process as the place where such economics can be assessed, none of the analyses it presents come close to approximating an economic alternative resource plan when compared to the current IRP Preferred Plans of Evergy Metro and Evergy Missouri West. Other than asserting concerns about the Companies' IRP process – most of which have already been discussed and addressed in the joint filing after the 2021 Triennial IRP – these analyses do nothing to support Sierra Club's allegation of imprudence or recommended disallowance.

[6] Iatan 1, La Cygne 1 & 2, Jeffrey 1-3 (units included in recommended disallowance)

Q: Do you agree with the recommendation that Evergy Missouri West and Evergy Metro should be required to conduct a "full retirement study of its coal fleet using optimized capacity expansion software"?

A: No. First, this recommendation relates to the IRP process and should be addressed as part of the IRP and not as part of this general rate case.

Second, as Sierra Club is well aware because it was part of the joint resolution following the 2021 IRP, the Companies are utilizing capacity expansion modeling beginning with the 2022 Annual Update.

Third, Sierra Club seems to believe that any assessment of retirement options that doesn't use an "optimized capacity expansion" tool is inherently flawed. However, there is nothing magical about capacity expansion software. These tools simply compare going-forward costs of the available alternatives and determine the lowest-cost option to meet capacity and energy requirements, subject to any modeling constraints (e.g., import limitations or annual build limits). The Commission's approach to IRPs that Sierra Club criticizes involves the comparison of a variety of resource plans (including different combinations of retirements and demand-side/supply-side additions) to assess which is the lowest cost, and allows for the assessment of the value of incremental changes to the resource plan. The IRP process and the capacity expansion model have the same goal.

For example, testing the impact to the net present value of revenue requirement ("NPVRR") of retiring each coal unit in 2023 will demonstrate which

unit is the best option (in terms of reducing NPVRR) for accelerated retirement, regardless of whether a capacity expansion model is used.

Q: Do you agree with Sierra Club's recommendation at page 5 of its Direct Testimony that "the Commission should signal that, in future dockets, it will not be inclined to approve cost recovery by Evergy of any capital investments of more than $1 million at these plants without prior Commission approval"?

A: No. It is unclear what additional value Sierra Club thinks this will bring when the Commission already has the authority to review the prudence of investments after they are made.[7] In fact, Sierra Club has provided no evidence that any actual investments which have been made were imprudent despite the fact that it recommends the disallowance of all of them at many of the Companies' plants.

Section III - RES Assignments and PPA Evaluation

Q: What recommendation does Staff make regarding the RES and PPAs?

A: Staff makes mention of a concern regarding a "transparent methodology for determining which PPAs are being used for compliance with RES", but does not make a recommendation on that issue. Staff does make a recommendation that Evergy "develop a standard process for evaluating proposals for PPA's so that all factors such as market price and delivered price are transparent and comparable among proposals". (Harris, p. 5)

[7] In addition, 20 CSR 4240-20.045 provides that a certificate of convenience and necessity must be obtained for the "improvement, retrofit or rebuild of an asset that will result in a ten percent (10%) increase in rate base as established in the electric utility's most recent rate case."

Q: Does Staff provide support for this recommendation?

A: No. Staff does not demonstrate that there are any specific concerns with how Evergy is evaluating PPAs currently and only asserts that "a standard process" is necessary.

Q: Do you agree that a new standard process is necessary?

A: No. I believe the Company's evaluation methodology for new resources (whether for PPA or ownership) already includes the elements that Staff outlines and no change is necessary.

Q: What are the elements included in the Company's evaluation of new resources?

A: As included in response to the referenced Staff Data Request regarding Cimarron Bend III (DR 0281.2), the Company assessed both the busbar and delivered (where available) prices of alternative PPAs. In addition, factors such as projected capacity factor, location on the transmission system (and resulting congestion / curtailment risk), developer qualifications, and interconnect queue status are also assessed as potential differentiators between projects. While these elements are all assessed in selecting a "short list" for further negotiation, there are many dynamics which come into play once negotiations begin which would be difficult to capture in a "standard process". For example, originally proposed prices will often change (increase or decrease) over the course of negotiations, new information could become available as the result of SPP interconnection studies, or the amount of capacity available from a specific resource could change (increase or decrease), just to name a few. All of these dynamics have the potential to impact ultimate resource selection.

Section IV - Staff's Proposal to include new language in the Fuel Adjustment Clause regarding Purchased Power Agreements

Q: What is the Staff's recommended change to the Evergy Missouri Metro ("EMM") and EMW Fuel Adjustment Clause ("FAC") tariff language in this Docket?

A: Staff has proposed to include a provision in both the EMM and EMW FAC tariffs to exclude Purchased Power Agreement ("PPA") costs that exceed PPA revenues for PPAs executed after May 2019. (Fortson Direct, p.2, lines 3-7)

Q: Do you agree with the proposed change?

A: No. The Commission should reject this proposal as it lacks merit.

Q: Please explain.

A: Reasons to reject this proposed FAC change include:

(1) The proposal is short-sighted. The decision to enter PPAs is generally based on projected long-term economics and not short-term wholesale market conditions. Regarding the two wind PPAs at issue in the FAC prudence reviews in Case No. EO-2019-0067, Staff was correct when they stated, "the performance of these contracts should be viewed on a long-term basis and not just from the results during the review periods" (Fortson Direct, p.5 lines 18-20). Staff's proposal in this Docket to now disallow cost recovery based on short-term energy market revenues is diametrically counter to this. If the decision to enter such contracts is prudent, all costs and benefits from these PPAs should be included when establishing retail rates.

(2) The proposal is unreasonable. The Southwest Power Pool ("SPP") wholesale market was not designed to fully recover all costs for participating generating facilities. The market was designed to reliably dispatch participating generators at the lowest cost for the region, given factors such as generator availability, generator offers and transmission availability. There are likely very few generating facilities that recover all costs from SPP market revenues. EMM's and EMW's owned generating facilities do not recover the total cost of the facilities from SPP revenues. There is no requirement that other generating resources fully recover their costs from SPP. Penalizing a utility for PPAs that do not fully recover costs from short-term SPP market revenues is simply unreasonable.

(3) The proposal creates a strong bias against PPAs. Penalizing utilities when short-term SPP market revenues are less than the cost of a PPA provides a very strong incentive for utilities to avoid future PPAs. Since a utility does not earn a return on PPAs, and Staff's proposed FAC language effectively caps PPA cost recovery at an unknown level, this creates a situation where utilities only have downside risk with PPAs. This may ultimately result in long-term resource planning decisions that are not in retail customers best interest as it effectively removes PPAs from the set of potential resource options and limits the utility's ability to select resources best suited to the present situation. While Evergy feels owned resources are the

preferred path going forward, this is bad policy. As stated earlier, if the decision to enter a PPA is prudent, all costs and benefits from the PPA should be included when establishing retail rates.

(4) The proposal is incomplete. Staff's proposed FAC tariff language to exclude "net costs associated with purchased power agreements entered into after May 2019 whose costs exceed its revenues resulting in a net loss" (Fortson p. 16, lines 13-14 and lines 28-30) creates many unanswered questions. For starters, over what period are costs and revenues netted? Is the netting of "costs" and "revenues" done on an hourly basis with losses accumulated hourly? Is the "net loss" for one PPA netted against any net gain from other PPAs?

PPAs create additional retail customer value beyond the short-term SPP revenues received. For example, most PPAs include capacity as well as energy. Capacity has value that may or may not be difficult to quantify. Under Staff's proposed language, a utility would not receive credit for the capacity benefits provided by the PPA. Renewable PPAs also create Renewable Energy Certificates ("RECs") which are bundled with the energy the Company receives from the PPA. The value of RECs is also ignored in Staff's proposal.

PPAs can also create a hedge against future higher energy prices that could be driven by any number of reasons, including future restrictions on utility CO_2 emissions. Under Staff's proposed language, a utility would not receive credit for the hedge value provided by PPAs.

In addition, in many cases a utility will obtain firm transmission service for the generating facility under the PPA. This firm transmission may have SPP transmission congestion rights ("TCRs") associated with the service. TCRs are intended to provide a hedge for transmission congestion costs and provide an additional revenue stream to the utility. It is unclear if this revenue stream would be included in the revenue calculation under Staff's proposal.

Section V - Voltage Optimization

Q: What does OPC recommend regarding Voltage Optimization?

A: OPC recommends "that the Commission order Evergy to issue a request for proposals for an independent, third-party consultant to conduct a study of its distribution system designed to gauge the costs and benefits of a voltage optimization program in both Evergy Metro and Evergy West service territories."

Q: Do you agree with this recommendation?

A: No, I do not think such a study is necessary. The Companies are capable of performing an internal study of the costs and benefits of voltage optimization and already planned to do so in support of further refinement of its Advanced Distribution Management System ("ADMX") roadmap. Additionally, if such a study were performed externally, the Companies do not believe the timeline OPC has proposed (before March 1, 2023) would be sufficient for completion given time needed for the request for proposal, vendor selection, and the study itself.

Q: Do you agree with how OPC characterized the benefits of voltage optimization?

A: Not entirely, no. I believe that OPC has potentially overstated the benefits and underestimated the costs of deploying voltage optimization. Generally, the benefits from voltage optimization to any single customer are small and, deploying voltage optimization – if it is not done in a targeted and methodical way – can require significant investments in new equipment and complex software which must be intentionally and seamlessly integrated with existing system operations software to ensure it is utilized effectively.

Q: Do the Companies have experience with any facets of voltage optimization for the benefit of customers?

A: Yes. While OPC is correct that the Companies have not undertaken any voltage optimization programs in the last three years through PISA, they have a long history with voltage optimization. The Companies have hundreds of capacitors and regulators installed on the system which manage voltages across the system. In 2006 Evergy Metro rolled out Dynamic Voltage Control ("DVC") equipment in substations which was utilized on peak demand days to fractionally reduce voltage on distribution circuits and, in aggregate, reduce peak demand on the system. The DVC program also relied on automated and communicating capacitor banks which assisted in maintaining voltage throughout the length of the circuit. Without the automated capacitor banks, the DVC program would not have been possible because voltage would degrade as power flowed further from the substation breaker.

Q: What did Evergy Missouri Metro and Evergy Missouri West learn from these deployments?

A: Through the DVC implementation, they gained a greater appreciation of the need to bring the control and monitoring of many different types of equipment into a single user interface with built-in intelligence. This would allow operators to focus on managing the distribution system and responding to emergencies without the DVC program causing more strain on control room personnel. The Evergy Missouri Metro DVC program was managed through separate Energy Management System and Outage Management System software packages. When activated, the program heavily relied on operators to monitor voltage alarms throughout the DVC footprint through both software systems in addition to managing the distribution system which is already very taxing on peak demand days.

Q: Any other lessons learned from Evergy's DVC program?

A: Yes. The length of the circuit is a limiting factor for the DVC program. Electric utilities already have unique challenges maintaining adequate voltage on distribution circuits that are longer in nature. Equipment like distribution regulator stations are routinely deployed in rural areas to maintain voltage over long distances. Implementing the DVC program on rural circuits would likely be cost prohibitive due to the amount of equipment necessary to maintain voltage if it was reduced at some point along the circuit.

Q: How are these lessons learned being incorporated into Evergy's planned deployment of voltage optimization?

A: The Companies currently plan to deploy centralized voltage optimization as part of their ADMX roadmap. A key element of this will be providing a more intelligent, easier-to-manage tool for operators to manage existing DVC equipment as well as capacitors and regulators deployed on the system. Additionally, as part of its evaluation for potential broader voltage optimization deployment, Evergy engineers will incorporate the length of the circuit and the resulting voltage drop at the end of the circuit when determining what equipment is necessary to successfully utilize voltage optimization on that circuit. If new regulators are needed on the circuit in order to maintain voltage within allowable bands, it's less likely that deployment of voltage optimization on that circuit will be cost-effective.

Q: Why is Evergy's ADMX implementation and thus potential for voltage optimization three years in the future?

A: The nature of ADMX software, its associated communications, and device rollout and integration is extremely complex. The Companies are beginning the process to explore the marketplace to see what functionality exists for software to perform a myriad of functions – including voltage optimization – to better control, monitor, and automatically change the flow of power on the distribution system. The implementation of the ADMX roadmap is expected to take many years. The marketplace for software of this type is very dynamic and vendors continue to make substantial improvements to their software. For this reason, the Companies are being methodical in assessing the available solutions on the market before it

finalizes a broad voltage optimization roadmap. Additionally, while it is not part of a territory-wide deployment like DVC or a new voltage optimization platform, the Companies continue to install communications on existing capacitors and regulators. They are also installing new capacitors and regulators with communications capability, which perform voltage optimization as part of their native functionality regardless of whether they are connected to a centralized voltage optimization "engine."

Q: Does that conclude your testimony?

A: Yes, it does.

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 KAYLA MESSAMORE

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

Kayla Messamore, being first duly sworn on his oath, states:

1. My name is Kayla Messamore. I work in Kansas City, Missouri, and I am employed by Evergy Metro, Inc. as Director of Long Term Planning.

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 twenty-three (23) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

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.

Kayla Messamore

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