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Case No. EO-2025-0154

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MISSOURI PUBLIC SERVICE COMMISSION **CASE NO. EO-2025-0154**

SURREBUTTAL TESTIMONY

OF

DEREK BROWN

ON BEHALF OF

EVERGY MISSOURI METRO AND EVERGY MISSOURI WEST

Kansas City, Missouri September 2025

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SURREBUTTAL TESTIMONY

OF

DEREK BROWN

Case No. EO-2025-0154

1		I. <u>Introduction and Executive Summary</u>
2	Q:	Please state your name and business address.
3	A:	My name is Derek Brown. My business address is 818 S. Kansas Avenue, Topeka, Kansas.
4	Q:	By whom and in what capacity are you employed?
5	A:	I am employed by Evergy Kansas Central, Inc. I serve as Large Customer Strategy &
6		Planning Director for Evergy Metro, Inc. d/b/a as Evergy Missouri Metro ("Evergy
7		Missouri Metro" or "EMM"), Evergy Missouri West, Inc. d/b/a Evergy Missouri West
8		("Evergy Missouri West" or "EMW"), Evergy Metro, Inc. d/b/a Evergy Kansas Metro
9		("Evergy Kansas Metro" or "EKM"), and Evergy Kansas Central, Inc. and Evergy South,
10		Inc., collectively d/b/a as Evergy Kansas Central ("Evergy Kansas Central" or "EKC") the
11		operating utilities of Evergy, Inc. ("Evergy")
12	Q:	On whose behalf are you testifying?
13	A :	I am testifying on behalf of Evergy Missouri Metro and Evergy Missouri West (collectively
14		the "Company" or "Applicants").
15	Q:	What are your responsibilities?
16	A:	I lead all aspects of moving potential customers through the Path to Power process. In this
17		position, I collaborate with various teams, including but not limited to Transmission
18		Planning, Transmission and Substation Construction, Customer, Origination, Regulatory
19		and Legal to ensure effective project delivery and alignment with our strategic objectives.

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

A: I hold both a Bachelor's and Master's Degree in Electrical Engineering, Power Systems from Kansas State University, and am certified as a Professional Engineer in Kansas.

I have held various technical and leadership roles at Evergy for 15 years. My current role is Director of Large Customer Strategy and Planning. Prior to this role, I was a Senior Manager of Regulatory Affairs at Evergy for three years, specializing in transmission policy at the Federal, State, and Regional Transmission Operator ("RTO")/Independent System Operator ("ISO") levels. I also held roles as an Engineer and Manager of Transmission Planning and Operations Planning at Evergy for 12 years. I have significant expertise in power flow, short-circuit, and dynamic modeling and was responsible for developing and updating of Evergy's portion of the Southwest Power Pool ("SPP") planning and operations models. I have also performed and overseen various studies using these models to meet the Company's, National Energy Reliability Corporation ("NERC"), and Southwest Power Pool ("SPP") Tariff requirements.

I have served as the company's identified subject matter expert for Transmission Planning Standards; Modeling, Data, and Analysis Standards; and Nuclear Standards in my previous roles at Evergy.

I have served as both a member and in leadership roles on SPP working groups and task forces. Currently, I serve as Member of SPP Board-Level Consolidated Planning Process Task Force, Market and Operations Policy Committee, SPP Economic Studies Working Group, Transmission Owner Selection Process Task Force and am the Chair of the SPP Transmission Working Group.

- 1 Q: Have you previously testified in a proceeding before the Missouri Public Service
- 2 Commission (the "Commission" or "MPSC") or before any other utility regulatory
- 3 agency?
- 4 A: No.
- 5 Q: What is the purpose of your surrebuttal testimony?
- 6 A: The purpose of my surrebuttal testimony is to address Staff's statements and positions
- 7 concerning Capacity, Energy, and Market issues, specifically those topics related to the
- 8 SPP.

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- 9 Q: Is Evergy actively involved in SPP?
- Yes. Evergy is one of the larger members of SPP and is an active participant in the SPP

 Stakeholder process with representatives on almost all the 30+ stakeholder organizational

 groups that work within SPP to develop policy and processes. Many of the Evergy

 representatives hold leadership positions that allow for further influence and awareness on

 the activities of the organizational groups. The SPP organizational groups provide guidance

 in regard to, and approval of, all phases of the administration of SPP wholesale markets,

 SPP planning functions, including transmission and generation, and also policies and

procedures for the reliable and secure operation of the bulk electric system.

Evergy representatives also meet regularly with the State Commission staffs and their Cost Allocation Working Group representatives to discuss ongoing issues within SPP and Evergy's positions on those issues.

II. Response to Staff's Report and Recommendation 1

2 Q: What is the purpose of this section of testimony?

A:

A:

A: Staff includes a number of seemingly informational statements concerning the Company's
 resource adequacy and developments at SPP. I will offer additional perspectives on these
 items.

Q: Please elaborate on SPP's latest changes in its resource adequacy requirements.

As discussed by Staff on pages 15-18, SPP filed with the Federal Energy Regulatory Commission ("FERC") proposing to implement changes to capacity accreditation for certain generation resource assets. The accreditation methodology implements effective load carrying capability for wind, solar, and electric storage assets, and a performance-based accreditation methodology for thermal and other conventional generation resources. See Staff Rec. at 15. Additionally, SPP approved minimum requirements for a utility's planning reserve margin ("PRM") of 16% for summer and 36% for winter, effective 2026 and 2026/2027, respectively. See Staff Rec. at 17.

Q: Is the Company taking steps to comply and adjust to these changes?

Yes. Evergy continuously monitors and incorporates SPP's changes in its resource adequacy requirements into its Integrated Resource Plan ("IRP") to ensure that Evergy has sufficient energy to provide its customers with safe and adequate service. See Mo. Rev. Stat. § 393.130.1. It is through these resource planning efforts that the Company maintains a robust, resilient resource plan that considers least cost options to meet long-term planning requirements, to meet our obligation to provide dependable, efficient, and affordable

¹ Staff Report and Recommendation ("Staff Rec." or "Recommendation").

1	service to Evergy's customers, and that they facilitate the continuation of Missouri's
2	successful economic development achievements

- 3 Q: Were SPP's capacity accreditation and planning reserve margin changes driven by
 4 large load growth?
- A: No. There are numerous variables attributable to SPP's change in resource adequacy requirements including weather, load growth, retiring of coal plants, and advancements in generation resource technology. In my opinion, the effects of Winter Storm Uri in February of 2021 were a primary driver of these changes.
- 9 Q: On pages 111-112 of its Recommendation, Staff discusses large load integration. Is
 10 Evergy familiar with this concept? If so, please elaborate.
- 12 Yes. Evergy has played an active role in large load integration discussions by participating
 12 in leadership and membership positions within SPP's stakeholder groups. As such, Evergy
 13 has been involved in the development of SPP's High Impact Large Load ("HILL")
 14 interconnection solutions, including those established in recent Revision Request 696
 15 ("RR696"). This Revision Request is designed to streamline the integration of large loads
 16 while maintaining system reliability and market efficiency.

17 Q: What is the status of this Revision Request?

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A:

The RR696 proposal was approved by the SPP Board of Directors on September 4, 2025, and is a culmination of months of collaborative work across planning, operations, and market design. It introduces a structured framework for integrating large loads, such as data centers, hydrogen electrolyzers, and industrial facilities into the transmission system. Specifically, introduces a more robust study process that includes enhanced stability analysis, ride-through capability assessments, and localized system impact evaluations.

SPP now requires detailed load forecast submissions from Transmission Customers ("TCs") for HILLs, including ramp rate limitations and operational behavior modeling, to ensure grid reliability and accurate market participation. The framework also introduces the High Impact Large Load Generation Assessment ("HILLGA"), which enables supporting generation to be studied alongside the load it serves, with results delivered within 90 days provided all required data is submitted and agreements are signed. HILLGA includes two study paths: one for common bus configurations where the load and generation share a point of interconnection, and another for local area configurations where the load and generation are within two buses. These paths are designed to limit grid injection and align generation deliverability with system capacity. Evergy has contributed technical feedback on HILL and HILLGA study methods, criteria, and timelines throughout the SPP stakeholder process. For example, Evergy worked with SPP staff and stakeholders to move the load ramp limit from the SPP Tariff to the market protocols to improve the efficiency and timeliness of any future updates to it possible without FERC having to approve it through a Tariff filing.

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Q: Is Evergy making changes to its processes to accommodate these developments?

Yes. Evergy's internal planning processes already incorporate some of the planning analysis principles now being formalized in RR696. For example, Evergy already performs stability analysis when evaluating a HILL and works with SPP staff to ensure any additional issues identified in this analysis will be mitigated by the solutions recommended by SPP. Additionally, we engage with current and prospective large customers on an ongoing basis to obtain the latest load profiles, forecast growth, and evaluate system impacts. This information is incorporated into the standard data submittals we supply SPP

and ensure alignment between SPP and Evergy on future transmission system needs and their associated solutions to preserve reliability of the system.

Q:

A:

A:

Overall, Evergy's active participation in SPP's large load integration discussions ensures that its stakeholders and customers are represented in shaping SPP's, particularly large load, evolving policies.

Q: Do you foresee any large load integration issues developing that could impact the Company's Large Load Power Service ("LLPS") Rate Plan?

No. The LLPS Rate Plan was designed with flexibility and scalability in mind. The changes proposed in RR696, including the HILL registration and study process, do not alter the cost allocation mechanisms underpinning the LLPS tariff. While RR696 introduces a new category of load and enhanced study practices and reporting requirements, these changes do not alter the cost allocation mechanisms underpinning Evergy's LLPS tariff. The LLPS Tariff's pricing components (demand charges, energy rates, and rider options) are based on Evergy's cost of service and customer usage characteristics, not on SPP's transmission planning or interconnection study outcomes. As such, Evergy does not anticipate any adverse impacts to the LLPS Rate Plan or its cost structure.

Staff mentions recent Large Load Stakeholder Engagement meetings at the SPP and possible changes for large load interconnection. Are there any developments to report related to those efforts?

Yes. One of the most notable developments underway is Conditional High Impact Large Load Service (CHILLS), a new non-firm transmission service designed to accommodate large loads that cannot be reliably served under existing firm service conditions. CHILLS would allow for interconnection and service under a structured, time-limited framework,

with the expectation that the customer will pursue firm service within seven years. This temporary service is proposed to be interruptible for reliability reasons and includes specific curtailment protocols that may be triggered even before SPP declares Conservative Operations.

Importantly, while the development of CHILLS represents a new interconnection and transmission service pathway for large loads, it is not anticipated to require changes to Evergy's LLPS Rate Plan or our Path to Power process. CHILL is currently undergoing stakeholder review and is expected to be presented for final approval to the SPP Board of Directors in **November 2025**, following MOPC action in **October 2025**. If approved, implementation would begin in **early 2026**, with service agreements and study processes available shortly thereafter.

Looking further ahead, SPP is also in early development of a new product called Price Adaptive Load (PAL), which would allow loads—large or small—to respond dynamically to real-time market prices. PAL is intended to support flexible, price-sensitive operations and may be particularly attractive to customers with scalable or interruptible processes. While still in early development, PAL is expected to enter formal stakeholder review in Fall 2025, with policy approval targeted for January 2026 and final Revision Request language anticipated by April 2026. Evergy is actively monitoring and participating in these discussions to ensure our customer offerings remain aligned with regional market innovations.

1	Q:	Staff argues on pages 22-25 and 30 of its Recommendation that each LLPS customer		
2		should be registered with SPP as a separate commercial pricing node. Is this approach		
3		commonly used within SPP?		
4	A:	No. Neither SPP's Integrated Marketplace Protocols (Protocols) nor Tariff include the		
5		defined term of "commercial pricing nodes "but the Protocols do define Price Nodes as "A		
6		single node in the Commercial Model that has a one-to-one relationship to an Electrical		
7		Node where Locational Marginal Prices are calculated." Evergy is not aware of any		
8		instance in SPP where a customer is registered to a separate and specific Price Node.		
9	Q:	What utility operational concerns are associated with registering a large load		
10		customer as a separate commercial pricing node?		
11	A:	Registering a large load customer as a separate commercial pricing node introduces several		
12		operational and strategic concerns for the utility if the large load is bid in separately from		
13		the rest of the Evergy load on the system:		
14		1) In the SPP Day-Ahead ("DA") market, energy demand bids can't be viewed		
15		in a silo and are often influenced by broader considerations and do not		
16		always align with actual load forecasts. This misalignment can lead to		
17		inefficiencies in market participation and increased exposure to real-time		
18		price volatility. Introducing a separate pricing node for a single customer		
19		could exacerbate this issue by isolating their load from the broader portfolio,		
20		reducing the utility's ability to optimize across its system.		
21		2) Forecasting individual loads is inherently more error-prone than forecasting		
22		aggregated system loads. This increases the risk of imbalance charges and		

complicates settlement processes. Additionally, splitting out a single load

introduces back-end system changes and reconciliation challenges that can
be costly and time-consuming to implement and maintain.

Q:

A:

Managing an additional commercial pricing node requires more resources.

Market operations staff would need to monitor, forecast, bid, and settle each of this type of load independently, increasing the administrative burden.

This could necessitate additional staffing or reallocation of existing resources, impacting operational efficiency.

What risks are associated with separate commercial pricing nodes?

There are a multitude of issues with the disaggregation of commercial pricing nodes. First, the settlement process would forego the single, unified energy charge and would require separate accounting for fuel procurement expense, uplift charges, and congestion-management costs.

Second, disaggregation magnifies forecasting errors. Under an aggregated model, any over or under-estimation at a specific node is statistically decreased by the diversity of the broader portfolio. Once the portfolio is separated into discrete, high-volume nodes, that diversity benefit evaporates, and forecasting inaccuracies accumulate, thereby increasing imbalance charges and volatility in settlement results.

Third, assessing nodal pricing on an individual basis could increase potential incremental uplift obligations. Similar to the situation just described, under an aggregated model, any over or under-estimation at a specific node is statistically decreased by the diversity of the broader portfolio. Once the portfolio is separated into discrete, high-volume nodes, that diversity benefit of an aggregated model is lessened, and forecasting inaccuracies accumulate, thereby increasing volatility in settlement results.

Fourth, separate nodes require the utility to allocate its resource stack on a nodal, rather than system basis. This would require the utility to decide which generation asset would be assigned to each node, which increases concerns of cross-subsidization and transparency, contrary to Section 393.130.7.

Fifth, regarding fuel procurement, unless new contractual mechanisms are developed, there is no clear, tariff-supported methodology for allocating those fuel costs to discrete settlement locations, exposing the utility to prudence challenges and customers to unanticipated cost shifts.

Finally, congestion hedging issues would be raised if separate pricing nodes were implemented. If multiple commercial nodes are established, the utility must either subdivide the existing Network-Integrated Transmission Service Agreement ("NITSA") or procure additional congestion hedges, each of which introduces incremental administrative burden, potential shortfalls in hedge coverage, and corresponding financial exposure for customers.

- Staff explores Day Ahead and Real Time Imbalances occurring within the SPP Integrated Marketplace. Have they represented this topic correctly?
- 17 A: No, as discussed below, Staff's explanation is not correct.

Q:

18 Q: Are real time locational marginal prices in SPP always higher than day ahead prices?

19 A: No. Real time Locational Marginal Prices ("LMPs"), the prices of electricity at a specific point on the power grid, are not always higher than day ahead prices. The relationship between day ahead and real time prices is driven by a variety of dynamic market factors including load forecast accuracy, weather variability, generator availability, and

1		transmission congestion. For example, in 2024, the average real time market price was			
2		\$26.18 and the day ahead price was \$27.56. ²			
3	Q:	How would you describe imbalances occurring today? Does the Company see			
4		variation currently?			
5	A:	Real time deviations from day ahead market submissions/expectations drive imbalances.			
6		These occur all of the time and are not evidence of some mistake or oversight, but instead			
7		natural fluctuations occurring within the market. Examples of imbalances Evergy currently			
8		observes.			
9		 Load Forecast Accuracy: Deviations between forecasted and actual load can 			
10		cause real-time prices to diverge from day-ahead expectations. For			
11		example, if actual demand is lower than forecasted, real-time prices may			
12		fall below day-ahead prices.			
13		• Weather Variability: Sudden changes in weather—such as unexpected			
14		cloud cover, wind shifts, or temperature swings—can impact both			
15		generation availability and load, influencing real-time prices independently			
16		of day-ahead projections.			
17		 Generator Availability and Outages: Real-time prices can spike or drop 			
18		depending on the availability of generation resources. Unplanned outages			

 System Topology and Congestion: Transmission constraints and changes in system topology (e.g., line outages or switching) can lead to localized

or ramping limitations can create scarcity or surplus conditions not reflected

in the day-ahead market.

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² <u>See</u> SPP, "State of the Market 2024" at 1 (May 28, 2025).

1	congestion in real time, affecting LMPs in ways that were not anticipated in
2	the day-ahead market.

O:

A:

On pages 29-30 of its Recommendation, Staff proposes that LLPS customers, pursuant to Section 393.130.7, should have separate pricing nodes because they are "non-conforming loads." Does Evergy agree?

No. Staff's Recommendation conflates LLPS customers with the "non-conforming load" designation used in the Market Protocols for SPP Integrated Marketplace. That conflation is inaccurate and risks mischaracterizing the nature of LLPS customers and the purpose of the non-conforming load designation. "Non-conforming loads" are typically those with atypical or unpredictable load shapes that deviate significantly from standard load forecasting models. On the contrary, the LLPS customers, such as data centers, advanced manufacturing facilities, and hydrogen production are highly metered, forecastable, and often operate with consistent load profiles. Moreover, the assertion that more granular data from LLPS customers must be embedded in the tariff contracts to ensure reliability is unnecessary. Evergy already has robust internal processes in place to engage with large customers during the interconnection and onboarding process through the Path to Power. Evergy routinely collects detailed operational data, conducts load forecasting, and coordinates with our transmission and distribution planning teams to ensure system readiness.

It is also important to distinguish between planning and operations. Planning is a forward-looking, collaborative process that Evergy conducts with customers and regional stakeholders. Operations, on the other hand, are real-time and governed by market rules and system constraints. Embedding planning requirements into the tariff, especially when

- they are already being met through existing utility practices, adds administrative burden
- 2 without improving reliability outcomes.
- 3 Q: Would separate pricing nodes have an impact on the Company's Fuel Adjustment
- 4 Clause ("FAC")?
- 5 A: I understand it would. As I understand it, the FAC currently manages costs for the system
- as a whole. Any effort to subdivide the Company interactions with the Integrated
- 7 Marketplace would introduce additional cost information that would have to be accounted
- 8 for in the FAC calculations. As noted in the testimony of Mr. Brad Lutz, the Company
- 9 considered FAC effects in the Company proposal. We expect approval of Staff's LLPS
- would require some level of confirmation to ensure all of the new elements are incorporated
- into the FAC correctly.
- 12 III. Conclusion
- 13 Q: Please summarize your testimony regarding Staff's Recommendation.
- 14 A: Evergy's LLPS Rate Plan aligns with SPP market practices and Missouri law, supporting
- reliable and cost-effective service for large loads. Evergy is actively engaged in the SPP
- stakeholder processes used to develop the policies and enhance the study methods used to
- grant service to large loads and has incorporated SPP's new resource adequacy
- requirements into its planning to ensure system reliability. Additionally, separate
- 19 commercial pricing nodes for individual customers are not used in SPP and would
- 20 introduce unnecessary complexity, increase forecasting, and risk. The Commission should
- reject Staff's nodal proposal and approve the Company's LLPS Rate Plan.
- 22 Q: Does this conclude your testimony?
- 23 A: Yes.

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

n the Matter of the Application of Evergy Met	ro,)	
nc. d/b/a Evergy Missouri Metro and Evergy)	
Missouri West, Inc. d/b/a Evergy Missouri Wes	st for)	File No. EO-2025-0154
Approval of New and Modified Tariffs for)	
Service to Large Load Customers)	

AFFIDAVIT OF DEREK BROWN

STATE OF MISSOURI) s COUNTY OF JACKSON)

Derek Brown, being first duly sworn on his oath, states:

- 1. My name is Derek Brown. I work in Topeka, Kansas, and I am employed by Evergy Metro, Inc. as Large Customer Strategy & Planning Director.
- 2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Evergy Missouri Metro and Evergy Missouri West consisting of fourteen (14) 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.

Derek Brown

Subscribed and sworn before me this 12th day of September 2025.

Notary Public

My commission expires: April 26, 2029

ANTHONY R WESTENKIRCHNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 26, 2029
PLATTE COUNTY