Exhibit No. 16

Evergy – Exhibit 16
Testimony of Cody VandeVelde
Surrebuttal
File No. EA-2025-0075

Exhibit No.:	
Issue:	IRP Process and Resource Adequacy; Fuel Supply; Reliance on Battery Storage and Wholesale Markets
Witness:	Cody VandeVelde
Type of Exhibit:	Surrebuttal Testimony
Sponsoring Party:	Evergy Missouri West
Case No.:	EA-2025-0075
Date Testimony Prepared:	May 14, 2025

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: EA-2025-0075

SURREBUTTAL TESTIMONY

OF

CODY VANDEVELDE

ON BEHALF OF

EVERGY MISSOURI WEST

Kansas City, Missouri

May 2025

Table of Contents

SURREBUTTAL TESTIMONY

OF

CODY VANDEVELDE

Case No. EA-2025-0075

I. INTRODUCTION AND EXECUTIVE SUMMARY

Q: Are you the same Cody VandeVelde who filed Direct testimony in this case on November 15, 2024, and Supplemental Direct on February 19, 2025?

A: Yes. I previously submitted Direct testimony and Supplemental Direct on behalf of Evergy Missouri West, Inc. ("Evergy Missouri West," "EMW," "West," or the "Company") and Evergy Metro, Inc. ("Evergy Missouri Metro," "EMM," or "Metro") (collectively the "Applicants" or "Companies"). The Applicants, along with Evergy Kansas Central, Inc. and Evergy Kansas South, Inc. ("Evergy Kansas Central" or "EKC"), are the operating utilities of Evergy, Inc. ("Evergy").

Q: What is the purpose of your Surrebuttal testimony?

A: The purpose of my Surrebuttal testimony is to respond to the Staff Report & Recommendation ("Staff Rec") provided by members of the Missouri Public Service Commission Staff ("Staff"). I also respond to testimony submitted by Sierra Club, Renew Missouri Advocates ("Renew Missouri"), and the Office of the Public Counsel ("OPC"). Specifically, I address the following issues: (1) the purpose of the Integrated Resource Planning ("IRP") process and its critical role in assuring resource adequacy; (2) Staff's proposed economic conditions related to the IRP process; (3) OPC's claims, previously rejected by the Commission, that EMW's resource planning has been imprudent; and (4) the inherent flaws in claims made by Sierra Club and Renew Missouri that EMW should rely on the wholesale markets and on battery storage systems to meet the challenges of

significant load growth and the increasing capacity requirements of Southwest Power Pool, Inc. ("SPP").

As discussed herein and throughout the Company's Application and supporting testimony, the Company is pursuing CCNs for the Projects as a critical step to address the growing demand for both capacity and energy in the region. As the need for reliable power increases, especially with the influx of large-load customers, the Projects are essential to ensuring the Company can continue to deliver safe, reliable, and adequate service. The Projects are part of a holistic strategy consistent with and supported by EMW's IRP process and Preferred Plan.

II. INTEGRATED RESOURCE PLANNING

Q: Several opposing Rebuttal witnesses criticized the IRP process. What is your response to those criticisms?

A: Those witnesses either misapplied, misunderstood, or ignored the fundamental objective and purpose of the IRP, the multitude of inputs and wide number of variables that are used to determine both the net present value of revenue requirement ("NPVRR") of the generation assets, and other key considerations that EMW and other Missouri utilities use to select their preferred plan. See generally Staff Rec.; M. Goggin Rebuttal (Sierra Club); W. Jones Direct[1] (Renew Missouri); J. Seaver Rebuttal (OPC).

[1] Mr. Jones rebuttal testimony is incorrectly labeled as direct testimony. See Order Setting Proc. Sched. at 1 (Feb. 26, 2025).

Q: What are the primary criteria that are used during the IRP process to evaluate and recommend generation assets?

A: To achieve the IRP's fundamental objective of selecting a preferred plan that provides customers and the public with safe, reliable, and efficient service, and fulfills other goals, Evergy follows a process that uses the 'minimization' of the NPVRR as its primary measure along with ensuring adequate capacity and limiting risks, pursuant to IRP Rule Section 22.010(2)(B). See C. VandeVelde Direct at 5. The IRP involves a robust process that evaluates significant risks and uncertain factors to solve for reliability and affordability, while also comparing all types of demand-side and supply-side resources on an equivalent basis to determine recommended generation resources.

Q: Given that one of the primary goals of the IRP is to minimize NPVRR, do you agree with the Staff Recommendation's statements on page 26 regarding the value of the NPVRR calculations and meeting the *Tartan*[2] economic feasibility factor?

A: No. The Policy Objectives of Missouri's Chapter 22 – Electric Utility Resource Planning state in Section (2)(B): "The fundamental objective requires that the utility shall… use minimization of the present worth of long-run utility costs as the primary selection criteria in choosing the preferred resource plan." Evergy is required to use NPVRR for resource planning economic evaluation. Using this metric is not only valuable at the portfolio level to test economic feasibility, but the metric can also be used to determine the economic feasibility of specific resources and the timing of adding specific resource types. Staff's testimony does not provide support for their contrarian view that conflicts with the

[2] In re Tartan Energy Co., No. GA-94-127, 1994 WL 762882 (1994).

Commission's Resource Planning Rule which explicitly states that NPVRR is the trusted metric to evaluate resource economic feasibility (i.e., that the costs and benefits of a specific resource outweigh that of the alternatives to that resource).

I agree with Staff that the resource plan with the lowest NPVRR may not necessarily indicate that it is the most economically feasible or the best plan for the customer. However, the NPVRR analysis and the IRP process itself are critical to arriving at a Preferred Plan that is both economically feasible and that can be implemented to ensure customers have the energy when they need it without incurring significant risks. By definition, for a project to be economically feasible it must compare the value created for the customer, the ability to fund the projects, and the impact of market conditions. This is how the IRP process was designed and the value it provides to a utility. As an example of the Commission's support of the IRP process and its economic feasibility, the Commission recently reviewed the Company's IRP process and rejected claims that EMW was imprudent in the fuel and purchased power costs that it incurred to serve customers. See Report & Order at 9-10, 13-14, In re Evergy Mo. West Eleventh Prudence Review of FAC Costs, No. EO-2023-0277 (Aug. 7, 2024); Report & Order at 9, In re Evergy Mo. West Rate Case, No. ER-2024-0189 (Dec. 4, 2024).

In support of the feasibility of the Viola Generating Station, McNew Generating Station and Mullin Creek #1 Generating Station (collectively, the "Projects"), we filed EMW's 2024 Triennial IRP Report which provided EMW's Preferred Plan and then to further update the economic factors, I filed Supplemental Direct Testimony in February which described four major changes in assumptions. Most notable, was the dramatic load growth that is occurring in Evergy's service territories in response to current and projected

increases in data centers and other economic development, as well as SPP's increased planning reserve margins and changing resource accreditation requirements. See VandeVelde Supp. Direct at 4-5 (Feb. 19, 2025). Most recently, EMW submitted its Annual IRP Update. See 2025 Annual IRP Update, In re Resource Plan of Evergy Mo. West, Inc., No. EO-2025-0251 (March 13, 2025). Both of these filings, which present new facts and updated modeling results, detail the economic and practical feasibility of the Projects which have been overlooked or ignored by the parties.

Q: Staff's Recommendation at page 37 states that aspects of Evergy's 2025 Annual IRP Update did not include objective criteria, such as the assignment of probabilities to critical, uncertain factors. What is your response to this statement?

A: Staff has provided no specifics about what was deficient with the probabilities given to any specific variable in the alternative resource plans. Additionally, Staff seems to have ignored the Commission's Rule at 20 CSR 4240-22.070(1) which states: "The utility shall use the methods of formal decision analysis to assess the impacts of critical uncertain factors on the expected performance of each of the alternative resource plans developed pursuant to 4 CSR 240- 22.060(3), to analyze the risks associated with alternative resource plans, to quantify the value of better information concerning the critical uncertain factors and to explicitly state and document the subjective probabilities that utility decision-makers assign to each of these uncertain factors. This assessment shall include a decision-tree representation of the key decisions and uncertainties associated with each alternative resource plan."

The Company uses utility industry knowledge to assign probabilities to varying levels of identified critical uncertain factors to test the robustness of different resource

plans. When possible, the levels are shaped by reputable third-party data sources and the probabilistic analysis is based on reasonable weighting factors which are identified by Evergy's utility decision-makers that have extensive utility industry experience. The IRP resource plans are then evaluated based on the 27 deterministic future endpoints, combining the risks of each identified critical uncertain factor forecast. See Triennial IRP Report, Vol. 6 at 68-69, In re Evergy Mo. West 2024 Triennial Compliance Filing, No. EO-2024-0154 (Apr. 2024). The Company's Uncertain Factor Analysis is discussed at length. Id. at 73-105.

Staff's criticism that the Company's alternative resource plans "may not be exhaustive" is a misunderstanding of how the IRP process works. See Staff Rec. at 37; VandeVelde Supp. Direct at 4-5. If reasonable limits regarding such factors or variables are not subjectively chosen, the process of analysis becomes unmanageable as there would be an endless number of IRP scenarios or combinations which is not productive in helping narrow the future scenarios to determine the best plan to meet customers' needs. EMW has taken steps to ensure that the IRP is sufficiently robust so that both the Company and the Commission can be confident that the Preferred Plan will fulfill the policy objectives of the Commission's IRP Rule. See 20 CSR 4240-22.060(7). Additionally, pursuant to 20 CSR 4240-22.080(16)(A), the Commission found "Evergy Missouri Metro's and Evergy Missouri West's 2024 Triennial IRP filing, and their resource acquisition strategies comply with the requirements of Commission Rule 20 CSR 4240-22." See Order Approving 2024 Triennial IRP at 9, No. EO-2024-0153, No. EO-2024-0154 (Dec. 4, 2024).

Q: In the event that objective criteria changes, does Evergy have a process to study the impact on resource planning?

A: Yes. This is evidenced by EMW studying objective changes in this CCN case, particularly the analysis included in my "CCN Supplemental Direct" testimony. There were four major changes in assumptions between the "CCN Supplemental Direct" model analysis when compared to EMW's 2024 Triennial IRP. See C. VandeVelde Supp. Direct at 4. The major changes included: "(1) alignment of DSM profiles to recent Commission Orders regarding MEEIA Cycle 4, (2) assessment of the SPP's most recent resource adequacy requirements, (3) updated load forecasts, and (4) updated construction costs and attributes of combined cycle and simple cycle natural gas generation resources."

Q: What is Evergy's response to the Staff Recommendation criticism (page 32-33) that the Company did not account for any potential reduction in generation to meet the Environmental Protection Agency's ("EPA") Greenhouse Gas ("GHG") Rule restrictions on emissions?

A: Evergy stands by its response to Staff Data Request ("DR") 0077 which stated that for purposes of base modeling to select a Preferred Plan the IRP's capacity expansion modeling was based on the mid-carbon constraint forecast level. Additionally, the NPVRRs of the alternative resource plans were calculated based on evaluations of futures with low, mid, and high carbon constraints. Id. But, as Staff states, carbon capture was not modeled because it is unlikely that the technology for carbon capture will be available in 2032 for the assets in question. See Staff Rec. at 32-33. While the GHG Rule's restrictions on emissions were not modeled in Evergy's 2024 Triennial IRP, they were included in

Evergy's 2025 Annual IRP Update. See EMW 2025 Annual IRP Update at 108 (Mar. 2025). See C. VandeVelde Supp. Direct at 3-4.

In addition, given the new Administration and change in leadership at the EPA, Evergy considers the future of the GHG Rule to be uncertain and therefore deemed it inappropriate to include GHG Rule compliance into the 2025 IRP Annual Update base modeling to select a Preferred Plan. See Staff Rec. at 32. Instead, Evergy chose to study specific Alternative Resource Plans ("ARP") that were designed with GHG Rule compliance in mind. For new natural gas combined cycle and simple cycle resources, the GHG Rule ARPs limited the capacity factor to 40% in order meet future compliance. It is important to note that all six ARPs that studied GHG Rule compliance included the Projects in capacity expansion modeling. This further supports that these assets are economic for customers even when considering GHG Rule compliance.

We continue to monitor the direction of the new Administration and the EPA and will adapt the expected carbon constraints within the IRP process accordingly.

Q: Did EMW's IRP process consider natural gas fuel costs associated with the Projects, as Renew Missouri witness Mr. Jones discusses at pages 6-12 of his testimony?

A: Yes. Both the 2024 Triennial IRP and the 2025 IRP Annual Update reports identified natural gas prices as a critical uncertain factor. Additionally, Evergy used high, mid (base), and low natural gas forecasts in its development of the resource plans and evaluation of plan economics.

Q: How do you respond to Renew Missouri witness Mr. Jones testimony at page 14 that the 2024 IRP analysis of natural gas price ranges was "outdated?"

A: Evergy used the best available natural gas forecast data available at the time of preparing the 2024 Triennial. Evergy uses forecasts from multiple industry vendors and forward market data to create its mid forecast. The high and low forecasts are developed by using the mid forecast and scaling it based on the fundamental supply and demand forecasts in the EIA Annual Energy Outlook. The EIA builds its forecasts considering a variety of factors including current laws and regulations, assessments of economic and demographic trends, technology improvements, oil and natural gas supply and demand drivers, renewable energy costs, and international prices. Evergy used the high and low oil and gas supply cases to encompass the range of fundamental drivers that may affect the long-term natural gas price forecast. The same gas price forecast data was used for the 2025 IRP Annual Update since Evergy's updated mid forecast for 2025 was very similar to the 2024 forecast and the EIA did not publish a 2024 Annual Energy Outlook. After filing the 2025 IRP Annual Update, the EIA released its 2025 Annual Energy Outlook which included updated natural gas price forecasts.

Q: How does the natural gas price data in EIA's 2025 Annual Energy Outlook compare to the natural gas price forecast used in Missouri West's 2024 and 2025 IRPs?

A: The updated EIA natural gas price forecasts further support the reasonableness of EMW's 2024 and 2025 IRP natural gas price forecasts and validate that EMW's price forecasts were not "outdated." Figure 1 shows a side-by-side comparison of EIA's 2025 Annual Energy Outlook gas price forecast and Evergy's gas price forecast used in the 2024 and 2025 IRPs. This data, and the fact that Evergy's mid forecast is on average higher than

EIA's recently published base case forecast, refutes Mr. Jones' assertion that the mid-case forecast produced for the 2024 IRP is not sufficient for assessing the likely fuel cost related to the proposed plants.

FIGURE 1: Comparison of EIA Gas Price Forecast vs. EMW's 2024 IRP Forecast ($/MMBtu)

EIA 2025 Annual Energy Outlook

	Base Case	Low Gas Supply	High Gas Supply
2024	2.19	2.19	2.19
2025	2.94	4.04	2.42
2026	2.84	4.24	2.19
2027	2.76	4.36	2.14
2028	2.93	4.78	2.31
2029	3.16	5.41	2.43
2030	3.43	6.56	2.60
2031	3.67	7.44	2.78
2032	4.30	8.38	3.15
2033	4.87	8.93	3.31
2034	5.26	9.34	3.43
2035	5.49	9.72	3.55
2036	5.60	10.26	3.64
2037	5.64	10.53	3.68
2038	5.68	10.62	3.75
2039	5.71	11.04	3.84
2040	5.86	11.30	3.99
2041	6.09	11.62	4.15
2042	6.34	11.82	4.27
2043	6.67	11.90	4.34

Evergy 2024 IRP Forecast

	Mid	High	Low
2024	3.21	4.61	2.69
2025	3.74	5.96	3.09
2026	3.87	6.54	3.29
2027	3.78	6.57	3.27
2028	3.83	6.78	3.29
2029	3.79	6.73	3.29
2030	3.83	6.64	3.36
2031	3.93	6.75	3.46
2032	4.10	7.00	3.59
2033	4.32	7.18	3.71
2034	4.46	7.28	3.62
2035	4.83	7.74	3.80
2036	4.95	7.98	3.84
2037	5.25	8.37	4.01
2038	5.48	8.47	4.08
2039	5.63	8.87	4.27
2040	6.04	9.18	4.46
2041	6.45	9.51	4.71
2042	6.66	9.71	4.82
2043	6.93	10.03	5.04

It is important to note that the gas price forecasts in the EMW IRPs reflect a forecasted monthly basis differential between the Henry Hub trading location and the Panhandle Eastern trading location in order to more closely align with gas prices that EMW would transact within its service territory.

On average over the 20-year time frame the basis differential was -$0.154/MMBtu. This means that if EMW's IRP gas price forecast was adjusted for the basis differential (to be apples-to-apples with EIA's forecast at Henry Hub) it would be approximately 15-cents higher than the data shown in Figure 1 above.

Figure 2 compares the EIA base case gas price forecast to the EMW 2024 and 2025 IRP gas price forecast after adjusting for the basis differential. As shown, over the 20-year period the IRPs adjusted mid-case natural gas price forecast is on average $0.34 higher than EIA's 2025 base case forecast.

FIGURE 2: Comparison of EIA Gas Price Forecast vs. EMW's 2024 IRP forecast Adjusted For -$0.154/MMBtu Basis Differential ($/MMBtu)

	EIA 2025 Annual Energy Outlook (Base Case)	Evergy 2024 IRP Forecast (Adjusted Mid Forecast)	Difference (IRP minus EIA)
2024	$2.19	$3.36	$1.17
2025	$2.94	$3.89	$0.95
2026	$2.84	$4.02	$1.18
2027	$2.76	$3.93	$1.17
2028	$2.93	$3.98	$1.05
2029	$3.16	$3.94	$0.78
2030	$3.43	$3.99	$0.55
2031	$3.67	$4.08	$0.41
2032	$4.30	$4.26	-$0.04
2033	$4.87	$4.47	-$0.40
2034	$5.26	$4.62	-$0.64
2035	$5.49	$4.99	-$0.50
2036	$5.60	$5.10	-$0.50
2037	$5.64	$5.41	-$0.24
2038	$5.68	$5.63	-$0.05
2039	$5.71	$5.78	$0.07
2040	$5.86	$6.19	$0.33
2041	$6.09	$6.61	$0.51
2042	$6.34	$6.81	$0.48
2043	$6.67	$7.08	$0.41
Average	$4.57	$4.91	$0.34

Q: Did Mr. Jones rely on "outdated" natural gas price data in his testimony?

A: Yes. On pages 24-29 of his testimony, he relies on outdated natural gas forecasts from the Company's 2021 Triennial IRP Report, filed in No. EO-2021-0036 (Apr. 30, 2021). As such, this data is irrelevant to the reasonableness of EMW's current proposal to construct the Projects and to receive the Commission's authorization to do so.

Moreover, the more recent data from 2024 that Mr. Jones cites at pages 9-10 and in subsequent pages does not support his view that that the high-case scenario for natural gas

costs should be relied upon, instead of the mid-case scenario. As an example, during the months of January through August 2024 the Company's mid-case natural gas price forecast averaged $3.16/MMbtu, while the high-case price forecast averaged $4.51/MMBtu. The actual delivered natural gas price during these eight months was $2.48/MMBtu which is below the mid-case forecast.

Q: What is your response to Mr. Goggin's claim that Evergy's IRP analysis failed to "capture" the impact of transmission congestion on the three proposed natural gas projects?

A: Mr. Goggin claims that geographic constraints were not adequately modeled in EMW's IRP. See Goggin Rebuttal at 29-30. It is important to understand that the assets that are the subject of this case are not built and therefore do not have an existing SPP pricing node to leverage for IRP modeling. Instead, new-build resources are modeled at an aggregated pricing node of generation resources, which is a reasonable estimate for modeling purposes since at the time of the 2024 IRP the locations of the natural gas resources were not finalized.

Additionally, these resources will each require transmission network upgrades that will increase the available transfer capability at their connection points, therefore reducing congestion, ensuring grid reliability, and allowing the Projects to support the firm, dispatchable power needs for the region. Please see Evergy Witness Jason Humphrey's Surrebuttal testimony at page 11 which discusses SPP's Definitive Interconnection System Impact Study process. For IRP purposes, even if the location of the assets were known for the 2024 IRP, using an existing pricing node on the current system that is close in proximity to the new-build natural gas resources would not suffice as the current system does not

consider the transmission upgrades that will be built to give the grid the ability to accommodate the firm, dispatchable power provided by these three new plants.

Q: Did Evergy Missouri West compare the Projects with other alternative resource generation assets based on the results of the transmission congestion analysis?

A: Yes. Both the 2024 Triennial IRP and the 2025 Annual IRP Update assessed a variety of alternative resource generation plans, including the attributes of thermal resources like the Projects compared with storage and renewable resources. The 2024 and 2025 IRPs contain substantial data and analysis that shows why these firm, dispatchable resources are the most reliable and economical technologies to meet EMW customer needs. EMW is planning for an all-of-the-above approach to meet customer needs. In addition to the Projects, the 2025 IRP relies on market capacity, solar, and wind resources between 2026 and 2029. The Company also studies batteries and makes them available to IRP capacity expansion. While it agrees that batteries can earn revenue by charging during periods of low prices, the IRP modeling results have not shown batteries to be the right resource type to meet reliability needs most cost-effectively for customers. The currently available short, four-hour duration battery systems cannot provide the energy and capacity benefits of the Projects which will provide safe and adequate service to EMW's customers. That said, the Company is committed to continuing to study batteries in future IRPs, particularly as technology evolves and longer-duration storage options become more commercially available at competitive costs.

III. RESPONSE TO STAFF'S RECOMMENDATION

A. Economic Conditions

Q: Does EMW agree with Staff's Recommendation on page 53 that EMW should re-model the capacity expansion of its IRP to allow the model to select retirement dates?

A: No. EMW's 2025 IRP preferred plan has only one coal resource retirement planned prior to 2039, EMW's 8% share in Jeffrey 3, which is 59 MW. Re-modeling this retirement date would not have a material impact on EMW's need for firm dispatchable resources to meet its customer's energy and capacity needs. Moreover, allowing the model to select a different retirement date would not remove the operational and environmental compliance risks that EMW is planning for.

The eventual replacement of an aging coal fleet is a complex planning endeavor. There are many risk factors that need to be considered, some quantitative and others qualitative. By 2030, most of Evergy's coal fleet will be 50 years old or more. Given the age and condition of these units, increasing importance of reliability for future resource performance accreditation, the broader headwinds facing the fuel supply and coal industry supply chain, and future environmental regulation risk, Evergy has embraced a pragmatic long-term plan that balances customer risks and trade-offs of retirement timelines. This is accomplished best through studying discrete retirement dates.

Similar to Evergy subjectively selecting critical uncertain factors, as I discussed above, utilizing the IRP's capacity expansion process to analyze various retirements dates would be impractical and unreasonable as there would be countless variables that each alternative plan would have to determine based upon theoretical asset retirement dates. The IRP model is not designed to select a specific asset retirement date. It is essential to maintain flexibility surrounding retirement decisions as each facility has unique variables

to consider. For example, the age of the equipment may not align with the plant's operational age which needs to be factored into the retirement decision, based on the importance of that particular equipment. Additionally, under newly enacted Section 393.401 (contained in Senate Bill No. 4), Evergy is required to replace dispatchable generation resources on a watt-for-watt basis. See Mo. Rev. Stat. § 393.401. Thus, it is critical that Evergy retain flexibility regarding retirement dates, as the model will run indefinitely and lacks the sophistication to predict when failures may occur.

Evergy expects that major capital costs will be needed in the middle of the time horizon to keep the coal resources operational and meet environmental compliance obligations. The IRP modeling tests the tradeoffs of continuing to incur costs to keep each resource operating (going forward cost) versus meeting customer needs by adding new resources. Aligning potential retirement dates with the expected timing of large spends is a practical way to analyze the economic advantage of avoiding such investments.

Q: Should Evergy Missouri West delay the retirements of its generation assets and conform to the model's selection date in an effort to reduce the costs, as Staff suggests at page 53 of its Recommendation?

A: Although delaying unit retirements can help to address cost issues in the short term, it is only one of numerous steps that Evergy is considering, given the dramatic rise in load growth, significant changes to resource adequacy requirements in a short timeframe, and the immediate need for additional resources. The IRP process helps to ensure that there is an economically feasible solution to the Company's capacity requirement that is sufficient to satisfy a range of resource planning scenarios. Among the factors to consider in extending retirement dates is whether operational issues will arise as existing units continue

to operate and the financial support that will be needed to extend the lives of aging coal plants and to maintain safe and reliable service. The assumed retirement dates in the Company's IRP remain flexible as it balances reliability and affordability. Evidence of this can be found in EMW's 2025 IRP as the Company delayed the Jeffrey Unit 2 retirement that was previously planned for 2030 in the 2024 IRP. The Company is now planning to convert the unit to natural gas operations and to keep it online through the IRP planning horizon.

Q: Should EMW establish a range of values for each level of the critical uncertain factors when evaluating the IRP, as Staff suggests on page 53?

A: No. As I discussed above, Evergy's current methodology of evaluating critical uncertain factors is sufficiently robust. Importantly, the Commission reviewed this methodology found that EMW's 2024 Triennial IRP filing met the standards stated in 20 CSR 4240-22.

The established methodology already yields 27 endpoints that are used to test the sensitivity and impact of the three identified critical uncertain factors for each resource plan. If Staff is asking for an even broader range across more levels of the critical uncertain factors, it could have a multiplying effect on the analysis and could easily result in hundreds of endpoints for each plan studied in EMW IRPs.

Q: Should EMW lower the capacity factor in the capacity expansion model to no greater than the maximum allowable to comply with the EPA's GHG regulation to permit the IRP model to select generation resources, as Staff recommends?

A: No. As discussed previously in this testimony, given the new Administration and EPA leadership changes, Evergy considers the future of the GHG Rule to be uncertain and has

not included GHG Rule compliance in its base IRP modeling for Preferred Plan selection as there is already sufficient carbon constraint analysis via the Company's critical uncertain factor modeling analysis. As discussed on pages 109-111 of EMW's 2025 Annual IRP Update, Evergy conducted an analysis to comply with the GHG Rule without employing CCS (carbon capture and sequestration/storage). For capacity expansion and production cost modeling, Evergy used high natural gas prices with a mid-point carbon dioxide restriction, assumed increased demand for natural gas to exert upward pressure on prices, and restricted the emissions requirement. The analysis concluded that the GHG compliance plans required significant costs to implement with little impact on capacity expansion, and that the GHG expansion plans were identical except for some minor capacity purchases.

B. *Tartan* Factor – Need

Q: Does EMW agree with Staff's conclusion on page 19 of its Recommendation that "additional capacity is effectively a necessity because the lack of service is such an inconvenience"?

A: Yes. Staff's Recommendation states the obvious. EMW needs generation resources to provide safe and adequate service to its customers, especially because there is an influx of large load customers to the Company's service territory, as Staff noted in its Recommendation at page 9. In addition to the large load customers, Staff's Recommendation recognized at pages 12-16 that SPP is increasing its planning reserve margins and asking FERC to approve enhancements to its accreditation methodology, thus further increasing the need for the Projects. Id. at 14. Additionally, and as discussed further in Evergy witness Jason Humphrey's Surrebuttal, the Projects are ideally situated to satisfy EMW's needs because their advanced technology permits them to operate seasonally and efficiently during peak market conditions.

C. *Tartan* Factor – Economic Feasibility

Q: Does EMW agree with Staff's statement on page 29 that EMW did not provide an estimated quantification of the risks of high fuel prices in its IRP?

A: No. As I discussed above in Section II, EMW analyzed and quantified the impact of high natural gas fuel prices in its 2024 Triennial IRP and its 2025 Annual Updated IRP. See 2024 Triennial IRP Report, Vol. 4, at 2; 2025 Annual IRP Update at 17.

IV. RESPONSE TO OPC: RESOURCE PLANNING

Q: Does EMW agree with OPC witness Mr. Seaver who states on page 2 of his Rebuttal testimony that the Company has been imprudent by relying on purchase power agreements ("PPA") to serve its customers in the past?

A: No. As discussed in Evergy witness Kevin Gunn's Surrebuttal Testimony, OPC has simply recycled its longstanding but unsuccessful argument that the Company's resource planning over the past decade and longer has been imprudent because it did not build sufficient generation capacity. However, past decisions made by EMW to add or not add resources have been based on extensive IRP modeling and analysis which includes an assessment of the all-in, long-term costs of these decisions, as determined primarily by the NPVRR.

When EMW assesses the potential to add new generation or to enter into a PPA, the Company considers whether the all-in-costs (fixed and variable) of a solution are more or less than the value they provide. The Company has not avoided doing what is necessary to serve its customers and has made its decisions based upon the comprehensive IRP process. Just as OPC's arguments that the Company's resource planning process was imprudent were rejected by the Commission's in its final orders in the 2022 Winter Storm Uri securitization case, No. EF-2022-0155, and in the 2024 fuel adjustment clause prudence review, No. EO-2023-0277, they should be rejected here. As noted by Mr. Gunn

in his Surrebuttal, the Commission has never found that EMW's resource planning was imprudent. OPC has provided no basis for the Commission to change course.

V. RESPONSE TO SIERRA CLUB: RELIANCE ON SPP MARKET

Q: Does EMW agree with Mr. Goggin's analysis beginning on page 36 of his Rebuttal Testimony that capacity purchases are now available at low costs in the SPP and should be relied upon rather than building the Projects?

A: No, not as a long-term resource adequacy strategy. As a preliminary observation, it should be noted that Mr. Goggin's preference for capacity purchases is contrary to the position of Staff and OPC who generally believe that EMW should rely less on the SPP wholesale energy market and more on building generation for both capacity and energy.

Capacity purchases may be available in limited quantities in SPP now, but those conditions are not expected to continue, given the broader resource adequacy issues faced by all SPP members. Capacity purchases can be valuable for customers, especially when used to fill gaps until longer-term resources can be constructed or acquired to meet customer's long-term needs. As we stated in the 2025 Annual IRP Update at page 23, with high load growth expected over the next few years, planned retirements, and the expiration of wind PPA contracts, Evergy does not expect other utilities in SPP to build generation to serve the needs of Evergy customers. See 2024 Triennial IRP Report, Vol. at 22.

Q: Is there uncertainty in EMW's service territory regarding large load customers, such as data centers for artificial intelligence, as Mr. Goggin suggests on page 39?

A: While nationwide large load customer uncertainty may be debatable, EMW has taken a conservative approach in planning for such customers. As described in Section 2 of EMW's 2025 IRP Annual Update, Evergy has a large pipeline of prospective new large load customers, but not all are included in base load planning until certain progress on Evergy's internal review process has been met to avoid exposing EMW's Preferred Plan to unnecessary risks. EMW's 2025 IRP included only large load customers that are already taking service from EMW or those that have been submitted to the SPP for a load interconnection study and are expected to sign construction and service agreements later in 2025.

VI. RESPONSE TO RENEW MISSOURI: MARKET RISK AND RELIANCE ON BATTERIES

Q: Are the Projects a strong hedge against the wholesale power market risk, as Mr. Jones states at pages 31-35 of his testimony?

A: Yes. As I discussed on pages 8-9 of my Direct, the Projects provide a significant hedge against the SPP wholesale market.

Q: Should the Commission reject EMW's position that the Projects will reduce the Company's need to purchase power, as Mr. Jones states in his testimony at 31-35?

A: No. Mr. Jones' argument only makes sense if the Projects are not dispatched by SPP which is unlikely to occur. As discussed in Evergy witness Jason Humphrey's Surrebuttal, new natural gas-fired generating facilities are among the most efficient resources with the lowest heat rates in the SPP market. The advanced technology of these facilities permits the gas-fueled turbines to operate seasonally and efficiently during peak market conditions.

Q: Should EMW commit to using battery storage as a substitute for the Projects, as Mr. Jones recommends in his testimony at pages 39-51?

A: No. As discussed above in Section II, batteries were evaluated as part of EMW's 2024 Triennial IRP and in its 2025 Update, but they were not selected in the Company's Preferred Plan because they are not economically feasible to satisfy our capacity and energy needs. According to the most recent IRPs, relying on batteries for base-load generation is neither prudent nor in the public interest because of their short-term duration. See EMW 2024 Triennial IRP, Vol. 4 at 58.

Q: Please summarize your testimony.

A: The IRP process is designed to balance reliability and affordability, considering various risks and uncertainties, and is performed in accordance with the Commission's resource planning rule. The robust analysis in both the 2024 and 2025 IRP supports the economic feasibility of the Projects in EMW's Preferred Plan. Due to SPP's increasing resource adequacy requirements, growing reliability needs regionally, and significant load growth, these firm, dispatchable Projects are positioned best to deliver safe, reliable, and efficient service. The Projects were studied against alternatives, including battery resources, and proven to be the most-effective resources to meet customers' needs. Stakeholders' arguments that "cherry-pick" in an attempt to discredit EMW's 2024 Triennial IRP should be disregarded, as the Commission has previously acknowledged the IRP complied with its resource planning rules. There is a need for EMW to add resources now. Delaying the

decision just creates uncertainty and customer risk which underscores the urgency to move forward and approve these CCNs.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Evergy Missouri West, Inc. d/b/a Evergy Missouri West and Evergy Metro, Inc. d/b/a Evergy Missouri Metro for Permission and Approval of a Certificate of Public Convenience and Necessity For Natural Gas Electrical Production Facilities	))))))))	Case No. EA-2025-0075

AFFIDAVIT OF CODY VANDEVELDE

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

Cody VandeVelde, being first duly sworn on his oath, states:

1. My name is Cody VandeVelde. I work in Topeka, Kansas and I am employed by Evergy Metro, Inc. as Senior Director, Strategy and Long-Term Planning - Energy Resource Management.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Evergy Missouri West consisting of twenty-two (22) 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.

Cody VandeVelde

Subscribed and sworn before me this 14th day of May 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
COMMISSION #17279952