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EMW's 2024 Preferred Plan

Witness: Cody VandeVelde

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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: EA-2024-0292

SURREBUTTAL TESTIMONY

OF

CODY VANDEVELDE

ON BEHALF OF

EVERGY MISSOURI WEST

Kansas City, Missouri

May 2025

Table of Contents

I.	<u>INTRODUCTION</u>	1
II.	<u>TARTAN FACTOR – NEED</u>	2
III.	<u>IRP PROCESS IS SUFFICIENT TO DETERMINE PROJECTS’ ECONOMIC FEASIBILITY</u>	6

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OF

CODY VANDEVELDE

Case No. EA-2024-0292

1 **I. INTRODUCTION**

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

3 A: My name is Cody VandeVelde. My business address is 818 S. Kansas Avenue, Topeka,
4 Kansas.

5 **Q: Are you the same Cody VandeVelde who filed Direct testimony in this docket on**
6 **October 25, 2024?**

7 A: Yes.

8 **Q: Who are you testifying for?**

9 A: I am testifying on behalf of Evergy Missouri West, Inc. d/b/a Evergy Missouri West
10 (“Evergy Missouri West,” “EMW,” or “the Company”).

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

12 A: The purpose of my Surrebuttal testimony is to respond to various witnesses from the
13 Missouri Public Service Commission Staff (“Staff”) and their testimony set forth in the
14 Staff Recommendation (“Staff Rec.”). I also address Staff witness J Luebbert’s Rebuttal,
15 along with the Office of the Public Counsel (“OPC”) witness Geoff Marke’s Rebuttal.
16 Specifically, I respond as to the following: (1) the importance of the Integrated Resource
17 Plan (“IRP”) in determining the Company’s “need” for additional generation resource
18 capacity and (2) utilizing the IRP outcomes and plans to evaluate the economic feasibility

1 of generation assets examined during the Company’s Request for Proposal (“RFP”) process
2 that led to the project selections.

3 **II. TARTAN¹ FACTOR – NEED**

4 **Q: Does Evergy Missouri West agree with Staff’s statement on page 12 of its**
5 **Recommendation that load responsible entities in the Southwest Power Pool (“SPP”)**
6 **must have sufficient capacity to satisfy the SPP’s increased reserve planning margins**
7 **beginning in 2026?**

8 A: Yes. Evergy Missouri West agrees that the Company, as a load responsible entity in SPP,
9 must have sufficient generating capacity to provide its customers with safe and adequate
10 service, along with meeting the SPP’s reserve margin requirements.

11 **Q: Were the large load customers that Staff discusses on page 8 of its Recommendation**
12 **relevant to Evergy Missouri West’s 2024 IRP analysis which determined the need for**
13 **Sunflower Sky Solar Project, LLC (“Sunflower Sky”) and Foxtrot Solar Energy LLC**
14 **(“Foxtrot”) (collectively, the “Projects”)?**

15 A: No. EMW’s 2024 IRP did not include most of these potential large load customers in its
16 generation planning forecast because there were no indications that those customers would
17 be requesting service from the Company at the time of the 2024 IRP analysis. Only the
18 “Project 1” 90 MW customer on that list was included in the 2024 IRP. Importantly, this
19 customer is already taking electric service from EMW and should not be considered
20 speculative. Thus, Staff’s concerns are not relevant as Projects 2 through 5 were not

¹ In re Tartan Energy Co., No. GA-94-127, 1994 WL 762882 (1994).

1 forecasted in EMW’s 2024 Triennial IRP Report which shows the need for the Projects
2 without the additional large load customers

3 **Q: OPC witness Marke states on page 3 of his Rebuttal that the Projects will have a**
4 **minimal impact on the Company’s capacity balance sheet, especially if hyperscale**
5 **users come online. Does EMW agree with OPC?**

6 A: No. The Projects are part of the Company’s comprehensive, diversified approach to
7 provide customers with safe and adequate service, as demonstrated by EMW’s 2024 IRP.
8 Solar energy provides substantial capacity during summer peak periods, directly aligning
9 with the increased demand for electricity when temperatures rise. By generating power at
10 the time it is most needed, solar energy effectively supports grid stability and helps to meet
11 the energy demand during hours of peak consumption.

12 **Q: Why is the IRP process appropriate for determining Evergy Missouri West’s**
13 **resource plan?**

14 A: Pursuant to 20 CSR 4240-22.060, the IRP process is Missouri’s state policy that guides
15 how an electric utility determines the most efficient and cost-effective resource plan based
16 upon the “minimization” of the net present value of revenue requirement (“NPVRR”) while
17 balancing customer and market risks. See C. VandeVelde Direct at 4.

18 **Q: Does EMW agree with Staff’s statement on page 14 that additional capacity is**
19 **necessary to provide safe and adequate service?**

20 A: Yes. As stated in my Direct at page 5 and per EMW’s 2024 Triennial IRP Report, the
21 Company needs capacity. The Projects are vital to meeting EMW’s capacity and energy
22 requirements as identified in the 2024 IRP Preferred Plans. Sunflower Sky (approximately
23 65 MW) and Foxtrot (approximately 100 MW) specifically correspond to the 150 MW of

1 solar addition that is identified in year 2027 in EMW’s 2024 IRP Preferred Plan. EMW
2 also determined the need for solar generation compared to other assets as a source of
3 emission-free energy and a hedge for customer against market prices for coal, natural gas,
4 and market power prices.

5 **Q: Regarding Staff’s Statement on page 14 of its Recommendation, do you agree that the**
6 **Projects providing a hedge against the commodity market such as power prices,**
7 **carbon prices, and fuel prices are not relevant to the question of need?**

8 A: No. Evergy Missouri West disagrees with Staff’s statement that the Projects “hedge
9 against risks associated with power prices, carbon prices, and fuel prices are not relevant
10 to the question of need.” Staff is not considering the total customer need when it says that
11 the only thing that drives “need” is a lack of service. Staff has left out a major component
12 of “need” in that to protect the customer with the FAC, the Company has a financial need
13 to protect the customer and hedge against market power prices, future carbon prices, and
14 fuel prices.

15 **Q: What elements of EMW’s “need” does Staff ignore by excluding the hedging benefits**
16 **of the Projects?**

17 A: As discussed throughout my Direct testimony, the diversification of the Company’s
18 generation portfolio by including these Projects in its fleet is essential to supplying its
19 customers with safe and adequate service at the lowest NPVRR taking into account other
20 risks and market factors. The IRP considers needs beyond those driven by forecasted
21 customer demand growth, SPP resource accreditation changes, and increasing SPP
22 planning reserve margins. The IRP also considers the “need” that is driven by planning

1 environments that account for a range of critical uncertain factors, as directed by 20 CSR
2 4240-22.060(5)-(7).

3 The IRP included a planning assumption to limit the amount of energy that EMW
4 customers rely on the SPP wholesale market to fulfill. Planning in this fashion creates a
5 “need” to acquire resources that provide capacity and energy to hedge against the future
6 uncertain factors. The Projects in this case have been proven to contribute to fulfilling that
7 need on a least-cost, expected NPVRR basis. The *Tartan* factors are not mutually
8 exclusive. While the Company agrees with Staff that the critical uncertain factors can also
9 be considered as part of the economic feasibility *Tartan* factor, the Company disagrees
10 with Staff because there is a need to hedge for the uncertainty and risks associated with
11 power prices, carbon prices, and fuel prices that should also be considered when evaluating
12 customer need.

13 **Q: How do the Projects help fulfill this need of a hedge for power prices, carbon prices,
14 and fuel prices?**

15 There is a need for a diversified portfolio that performs well when power prices, carbon
16 prices, and fuel prices are high. When the sun is shining, EMW will be able to supply
17 customers with the necessary energy provided from the Projects at no increase in cost. As
18 I stated in my Direct testimony at pages 7-8, The Company’s need for energy can and has
19 been partially met by the wholesale energy market, but its dependence on the market can
20 create pricing risk if it is covering a large portion of customer needs over the long-term.
21 These Projects permit the Company to optimize the free photons from the sun, rather than
22 further tethering fuel costs to commodity prices. An energy hedge, like owning the solar
23 resources that are the subject of this case, provides low-cost, emission-free energy, and can

1 provide greater energy cost stability and security in an inherently uncertain future. The
2 Commission has recognized these hedging benefits in a previous case where it found that
3 “[a]dding renewable energy generation in place of fossil fuel generation provides a hedge
4 against risks associated with power prices, carbon prices, and fuel prices.”²

5 **III. IRP PROCESS IS SUFFICIENT TO DETERMINE PROJECTS’ ECONOMIC**
6 **FEASIBILITY**

7 **Q: Does the Company agree with Staff’s view in Section III(D) of its Recommendation**
8 **that the IRP process does not represent an economic feasibility analysis?**

9 A: No. The IRP process allows the comparison of scenarios of future demand and supply
10 alternatives to evaluate the most effective and economically feasible assets based on
11 various inputs. Staff has relied on dictionary definitions of economic feasibility to form
12 its opinion and seems to assert that “profitability” be a requirement to justify a
13 resource’s economic viability, but under those definitions no assets would ever be built.
14 The Company uses Net Present Value of Revenue Requirement (“NPVRR”) as its
15 primary analytical metric to evaluate the economic feasibility of potential portfolios to
16 meet its customers’ needs. This allows the Commission to evaluate and compare an
17 asset’s cost to the utility (and the resulting cost in rates to customers) under a variety of
18 potential resource portfolios.

² See Report & Order at 30-31, In re Union Elec. Co. Applic. for a CCN for a Solar Facility, No. EA-2022-0245 (Apr. 12, 2023) (Boomtown Solar Project).

1 **Q: Is NPVRR the best metric to use to determine economic feasibility?**

2 A: Yes. The best measurement of economic feasibility in the regulated utility environment
3 is to compare the NPVRR of the various alternatives. The Policy Objectives of
4 Missouri’s Chapter 22 on Electric Utility Resource Planning state in Section 2(B): “The
5 fundamental objective requires that the utility shall ... [u]se minimization of the present
6 worth of long-run utility costs as the primary selection criteria in choosing the preferred
7 resource plan.” The NPVRR metric determines the value and need for the asset at the
8 portfolio level and can also be used to determine the economic feasibility and timing of
9 adding the asset to the Company’s generation fleet.

10 **Q: How can the NPVRR metric be utilized to evaluate the economic feasibility of specific**
11 **resources?**

12 A: Staff argues that a “lack of detail and transparency, aggregation of results, and inclusion of
13 generic assumptions included in the IRP render it insufficient to justify the economic
14 feasibility.” See Staff Rec. at 40. However, in doing so, Staff ignores an essential portion
15 of my Direct testimony at pages 12-13 which address this specific issue. At the time of
16 filing Direct testimony, when the costs of Sunflower Sky and Foxtrot were combined, “the
17 average cost of the cumulative 165 MW of solar additions is expected to be approximately
18 **** [REDACTED] ****, which is slightly lower than the cost of 2027 solar that was modeled and
19 selected as the least cost resource addition in the 2024 IRP.” See C. VandeVelde Direct at
20 12. We then ran a new resource planning scenario where the Company replaced “the
21 generic solar assumptions in the 2024 IRP with the specific costs and operating
22 characteristics of Foxtrot and Sunflower Sky.... This new scenario resulted in a 20-year
23 NPVRR of approximately \$11.044 billion, which is \$43 million lower than EMW’s

1 Preferred Plan (CAAA).” Id. at 13. While specific project costs do not need to be below
2 the assumed IRP generic pricing in order to be considered economically feasible, this
3 analysis demonstrated that the Projects are economically feasible and are appropriate to fill
4 the need identified by the 2024 IRP. Additionally, as Evergy witness John Carlson states in
5 his Surrebuttal testimony at page 7, the latest cost estimates for the Projects remain in line
6 with 2027 solar pricing studied in the 2024 IRP.

7 **Q: Does EMW agree with Staff’s statement on page 23 of its Recommendation that the**
8 **IRP process lacks “transparency” to compare project costs, as determined in the**
9 **RFP?**

10 A: No. As I indicated in my Direct testimony at pages 12-13, the IRP uses non-locational
11 specific assumptions for the characteristics and locations of new resources, however, the
12 use of such generic assumptions does not mean it may not have chosen the lowest cost
13 solution. Although they are not specific assets in the IRP, they are informed by the best
14 commercial information that Evergy possesses. Solar resources are expected to have
15 relatively similar production characteristics, based on the available technology for solar
16 panels, mounting structures, control systems and grid connection infrastructure, and the
17 predicted solar irradiance in eastern Kansas and western Missouri. The costs for new solar
18 were informed by the all-source 2023 RFP that Evergy conducted and confirmed in its
19 continued negotiations with counterparties.

20 Evergy Missouri West’s IRP results demonstrated the need for solar resources as
21 part of a resource portfolio that meets customer needs at lowest cost considering future
22 risks and uncertainties. To fill these needs, the Company rigorously evaluated the offers
23 from the all-source RFP to select the best projects, considering many factors such as more

1 refined cost estimates and specific locational risks. Despite recent economic inflation,
2 which affected Evergy's cost estimates for new natural gas resources, the current expected
3 costs and characteristics of the Projects are very similar to the modeled costs in the 2024
4 and 2025 IRPs and are well within the +/- 25% construction cost risk scenarios that were
5 modeled and included in the economic evaluation of the IRP resource plans. When the
6 resources become available (with production profiles expected to be very similar to the IRP
7 model over the long run), the assets will be the lowest cost energy resources on the system,
8 and will provide energy and production cost savings to Evergy Missouri West and its
9 customers

10 Contrary to Staff's view, both the IRP process and the RFP evaluation were very
11 transparent. The 2024 Triennial IRP Report clearly explains all cost assumptions and
12 resource characteristics, as well as the modeling framework and analysis of results. There
13 were numerous workpapers provided with the IRP which documented assumptions and
14 sources with retained formulas showing how calculations were made. In response to
15 Staff's' requests for "every input and every output" in data requests, EMW provided this
16 data. Staff also has access to the RFP evaluation which was managed by an outside
17 consultant and which included clearly defined metrics and decision criteria. The Company
18 has continued to update this proceeding as updates become available.

1 **Q: In response to Staff’s discussion of negative pricing and revenues in its**
2 **Recommendation at pages 23 through 26, how did EMW analyze and assess these**
3 **issues?**

4 A: Evergy used market price forecasts that included negative prices in its production cost
5 modeling for the IRP. The IRP algorithm solves for the fleet dispatch that minimizes the
6 production cost to serve load, considering the hourly price forecast.

7 Evergy contracted with 1898 & Co. to develop market price forecasts for the IRP.
8 The market pricing models were based on the finalized 2023 SPP Integrated Transmission
9 Planning models, reflecting current transmission topology and near-term transmission
10 upgrades, including those approved by the SPP Board of Directors at the conclusion of the
11 2023 process.

12 Evergy used six market price forecasts, representing high, mid, and low natural gas
13 price forecasts, and two different resource mix scenarios, representing moderate or
14 accelerated fleet transition, to incorporate the natural gas prices and carbon reduction
15 critical uncertain factors in its economic analysis of resource plans.

16 EMW’s Triennial 2024 IRP Report discusses the market price forecasting process
17 and assumptions and compares the prevalence of negative prices projected in the forecasts
18 to actuals over the past few years. The analysis shows that the market price forecasts appear
19 to align with recent SPP experience and tend to predict increased occurrence of negative
20 prices over the planning horizon as more renewable generation with production tax credits
21 is incorporated into the resource mix. Of course, the renewable generation must be built
22 for it to enter the supply stack and reduce prices. The hourly market prices for each forecast

1 were included in IRP workpapers, as well as the calculations for the analysis of forecasts
2 versus actuals.

3 **Q: Does the IRP process analyze the levelized cost of energy (“LCOE”) when evaluating**
4 **generation assets?**

5 A: Yes. The 2024 IRP included an evaluation of LCOE to rank the cost of potential supply-
6 side resource options, pursuant 4 CSR 240-22.010(2)(A). However, the IRP process does
7 not rely upon the LCOE metric to select utility Preferred Plans. Instead, Evergy utilizes
8 capacity expansion and production cost modeling that is ultimately quantified by
9 calculating the expected NPVRR of selected resources, consistent with the Commission’s
10 IRP Rule.

11 **Q: Should “a new and comprehensive metric, such as System Profitability” be utilized**
12 **instead of the LCOE, as Staff argues on page 33 of its Recommendation?**

13 A: No. The IRP Rule directs that the NPVRR analysis and metric be employed to evaluate
14 and compare the cost-effectiveness of resource plans. Additionally, the Company is also
15 required to analyze LCOE for potential supply-side resource options as a ranking approach,
16 not for portfolio selection. See 20 CSR 4240-22.020(29); .040(2)(A); .060(2)(A)4 & (A)7.
17 Since the IRP Rule specifies that NPVRR is the metric to use for the primary selection
18 criteria of resource portfolios, it is also the best metric to use when selecting specific
19 resources that are included in the utility’s portfolio.

20 EMW does not agree with Staff’s assertion at page 33 of its Recommendation that
21 “System Profitability” should be used to guide resource plans for Missouri customers. The
22 Company believes that the IRP process considers the appropriate objectives of system
23 reliability, cost minimization, and risk mitigation. The physical and economic risks to

1 EMW and its customers cannot be adequately or transparently quantified in an analysis
2 focused solely on the “profitability” provided by the SPP energy market. Regulated
3 utilities, like EMW, are in the business of safely and reliably meeting customers’ needs at
4 a reasonable price. They are not Independent Power Producers which are generally
5 structured as economic engine business models intending to construct resources with the
6 sole purpose of maximizing profit, nor should they be expected to construct resources only
7 when resources make profits for customers. Instead, regulated electric utilities should be
8 expected, as guided by the Commission’s IRP Rule, to determine the most efficient and
9 cost-effective resource plan based upon the “minimization” of the NPVRR. This is very
10 different than constructing to maximize profitability.

11 If the Company does not build energy resources that match its customer needs,
12 customers will remain exposed to the financial risk of paying the marginal energy cost
13 during times of scarcity, which may be exacerbated by mismatch of supply and demand
14 planning, and fuel price volatility. If EMW does not have enough capacity to meet SPP
15 planning reserve margin requirements, it will face penalties based on the expected cost of
16 new entry (the hypothetical capital and operating costs of a new natural gas-fired peaking
17 resource).

18 However, more importantly, if the Company lacks such capacity, it will not be able
19 to meet the industry reliability standards,³ and its customers will face an imminent risk of
20 losing service during life threatening events, such as Winter Storm Uri in 2021. The
21 physical risks of customer blackouts and the financial risks of significant supply/demand

³ Standard BAL-502-RF-03, North American Electric Reliability Corporation (NERC).

1 mismatch in energy prices are not explicitly quantified in markets. By making these risks
2 part of the objective assessment function and using cost minimization as the goal, EMW is
3 planning for the most optimal outcome for customers, consistent with the goals of the
4 Commission's IRP Rule.

5 **Q: Please summarize your testimony**

6 A: The Company has a fundamental responsibility to ensure sufficient generating capacity to
7 provide its customers with safe and adequate service while adhering to SPP's planning
8 reserve margin requirements. The Projects are essential to fulfill both capacity and energy
9 demands, in line with the 2024 Triennial IRP Report which calls for a 150 MW solar
10 addition in 2027. By incorporating solar generation, the Company mitigates risks
11 associated with fluctuating power demands, carbon restrictions, and volatile fuel prices.
12 Solar energy offers a stable, cost-effective resource that supports the Company's
13 commitment to a diversified generation portfolio. Finally, the Projects provide an effective
14 hedge against commodity price volatility and, most importantly, are economically feasible
15 as demonstrated by NPVRR.

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

17 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) Case No. EA-2024-0292
West for Permission and Approval of a)
Certificate of Public Convenience and Necessity)

AFFIDAVIT OF CODY VANDELDELDE

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

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

1. My name is Cody VandVelde. 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 thirteen (13) 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 VandVelde

Subscribed and sworn before me this 19th day of May 2025.



Notary Public

My commission expires: April 26, 2029



**Evergy Metro, Inc. d/b/a Evergy Missouri Metro and
Evergy Missouri West, Inc. d/b/a Evergy Missouri West**

Docket No.: EA-2024-0292

Date: May 19, 2025

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Document/Page	Reason for Confidentiality from List Below
VandeVelde Surrebuttal, p. 7, ln. 18	3, 4, and 6

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5. Reports, work papers, or other documentation related to work produced by internal or external auditors, consultants, or attorneys, except that total amounts billed by each external auditor, consultant, or attorney for services related to general rate proceedings shall always be public;
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