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Issue(s):	Big Hollow Operation and Market Interaction
Witness:	Andrew M. Meyer
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File No.:	EA-2025-0238
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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. EA-2025-0238

SURREBUTTAL TESTIMONY

OF

ANDREW M. MEYER

ON

BEHALF OF

UNION ELECTRIC COMPANY

D/B/A AMEREN MISSOURI

St. Louis, Missouri
January, 2026

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ANDREW M. MEYER

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Andrew M. Meyer. My business address is One Ameren Plaza, 1901 Chouteau Ave., St. Louis, Missouri.

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

A. I am Senior Director, Energy Management & Trading for Ameren Missouri.

Q. Are you the same Andrew M. Meyer that submitted direct testimony in this case?

A. Yes, I am.

II. PURPOSE OF TESTIMONY

Q. To what testimony or issues are you responding?

A. I am responding to statements made by multiple witnesses that refer to fuel costs or operation of the Big Hollow natural gas simple cycle ("NGSC") or battery energy storage system ("BESS") projects. These statements include:

- MPSC Staff witness Poudel's discussion of an "arbitrage erosion effect."[1]

[1] File No. EA-2025-0238, *Staff Rebuttal Report*, p. 41, l. 12, filed December 12, 2025.

- OPC witness Seaver's statements that "the proposed purposes for acquisition of the BESS are vague..." and "…the fact that this BESS is not connected to an intermittent generator decreases its utility…"[2]
- OPC witness Marke's hypothetical statement regarding "If the MISO market is flooded with natural gas units and demand does not materialize as contemplated, these units will almost certainly be challenged economically…"[3]
- Renew Missouri witness Polk Sentell's caution about the possibility of overreliance on gas-fired resources.[4]

III. BESS WHOLESALE MARKET VALUE

Q. Does witness Poudel's claim that BESS resources capture revenue by arbitraging high and low prices throughout a given day offer a full representation of BESS resource revenue?

A. No, arbitrage represents only a fraction of the total BESS resource revenue. It is critically important to recognize that these resources participate in the Midcontinent Independent System Operator ("MISO") capacity markets as well and earn a revenue stream from sales of accredited capacity that have been converted into zonal resource credits ("ZRCs") in MISO Zone 5 (the Ameren Missouri load zone). MISO ZRCs are the fungible product used to demonstrate resource adequacy in the MISO Planning Resource Auction.

[2] File No. EA-2025-0238, Jordan Seaver Rebuttal Testimony, p.4, ll. 15-16 and p. 7, ll. 20-21.
[3] File No. EA-2025-0238, Geoff Marke Rebuttal Testimony, p. 15, ll. 3-4.
[4] File No. EA-2025-0238, Jessica Polk Sentell Rebuttal Testimony, p. 4, ll. 17-18.

Q. Specific to the MISO energy and ancillary market, is energy arbitrage the only method for the BESS resource to earn revenue?

A. No, the BESS unit can also provide ancillary services such as spinning reserve, which is a distinct revenue opportunity outside of energy sales revenue. The Staff's scenario modeling does not consider this opportunity.

Q. Witness Poudel states "when battery storage becomes prevalent, pricing differentials reduce and arbitrage revenues decline." Is this a definite outcome?

A. No, it is not a definite outcome. Regarding revenue from energy and ancillary market participation, it is true that if price volatility reduces throughout the day that opportunities to arbitrage energy using BESS resources would decline. However, witness Poudel's claim that the BESS resource may be inefficiently operated due to inability to forecast high and low prices lacks context. Mr. Poudel discusses the "duck curve" effect, a daily load curve net of renewable generation (typically solar) that tends to take the shape of a duck, and how it has potential to decrease market prices during periods of high renewable penetration. This fact alone suggests that price volatility across the 24 hours of any given day will still exist. And if we focus on the downward impact of solar renewable resources on market prices, it is not difficult to determine which hours the sun is visible.

Q. Using witness Poudel's duck curve example, which hours would generally experience upward price volatility?

A. It is logical to expect the hours of the day when the sun has gone down but customer demand is still high would experience upward price volatility. These early

evening hours, which represent the steepest portion of the duck curve, are likely candidates to deploy a BESS resource and capture market revenue from high prices.

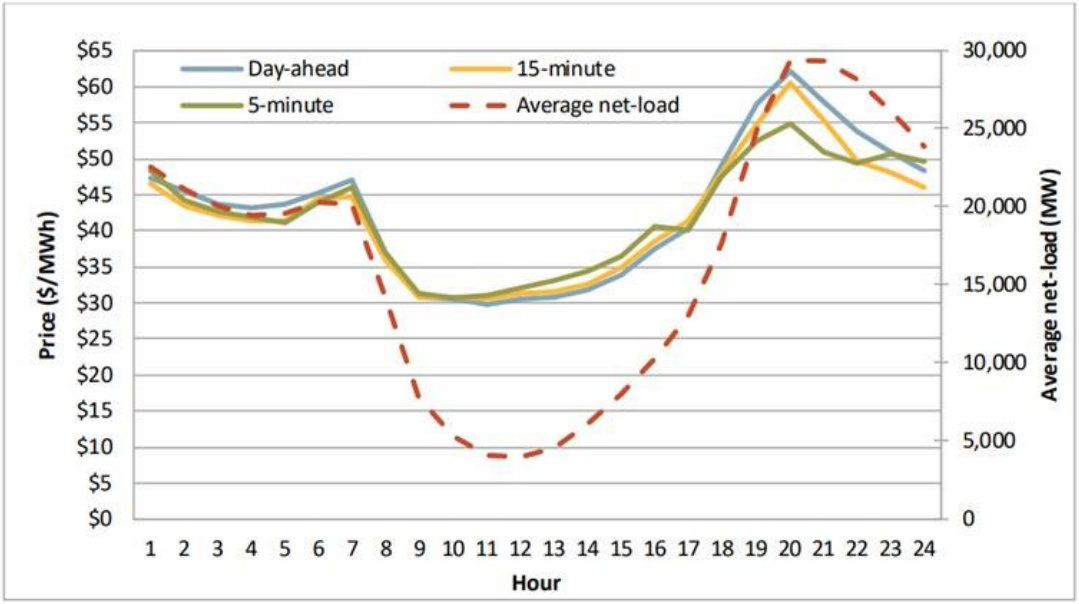
Q. If a duck curve does impact market prices similarly, is this consistent with an 'arbitrage erosion effect'?

A. No, quite the opposite. It suggests there *will be* price volatility and therefore opportunity to capture energy market revenues via BESS arbitrage. The scenario modeling performed by Staff suggests that due to higher penetrations of renewables and BESS that the current higher priced daytime peak load hours will be reduced and potentially current lower price hours in the evening and overnight may rise, creating a flat price shape for a given 24-hour day. But if the load and price relationships actually witnessed in the California ISO ("CAISO") (to which Staff refers) become the norm for MISO, then price volatility and BESS arbitrage opportunities will still exist. Consider the chart below produced by the CAISO Department of Market Monitoring.[5]

[5] California ISO 2025 Q3 Report on Market Issues and Performance, P. 50.
https://www.caiso.com/documents/2025-third-quarter-report-on-market-issues-and-performance.pdf

Figure 1.

Figure 4.8 Hourly load-weighted average energy prices for balancing areas in day-ahead market (CAISO July–September)



It reflects that a duck curve[6] does occur but that average energy prices in CAISO, which notably is a market that has already experienced significant solar installation, still fluctuate between $30 and $60 in a given day. This actual example suggests that sufficient BESS arbitrage opportunities may continue to exist regardless of heavy solar penetration in MISO.

Q. OPC witness Seaver claims that the "the proposed purposes for acquisition of the BESS are vague...." Do you agree?

A. No. As previously stated, BESS resources are eligible to participate in the MISO capacity market as well as the energy and ancillary market. As Mr. Arora's surrebuttal testimony discusses, we have an acute need for capacity to meet our load and MISO planning reserve margin requirements – this is the primary driver of adding the

[6] Shown as the 'Average net-load' line.

BESS capacity. Moreover, this capacity benefit could potentially be the largest share of revenue generated by the resource. Additionally, since the BESS is in Zone 5, it will serve to protect customers from capacity price spikes due to non-satisfaction of the Local Clearing Requirement (LCR) for the zone, so it (a) is providing needed accredited capacity, (b) substantial capacity revenues, and (c) mitigating the risk of price spikes that could result in costs for the Company and its customers absent the capacity.

Q. Does the Company agree with witness Seaver's claim that "…the fact that this BESS is not connected to an intermittent generator decreases its utility"?

A. No, this claim reflects a fundamental misunderstanding of how BESS works as part of the Company's overall system.

The BESS resource will pay the MISO energy price when charging and receive payment at the MISO energy price when discharging. Mr. Seaver claims that if the BESS were connected to renewable resources, and could charge directly from those renewables, that its charging cost would be at the incremental cost of renewable production, which could be theoretically near zero.[7] If that were true, then undoubtably this would make the BESS revenue appear healthier. But it is in fact not true. This is because if the renewable resource generation connected to the BESS were used to charge BESS, then that renewable generator would *forgo selling that same energy* into the wholesale market and therefore *its* energy revenue would be reduced. The energy market revenues forecasted by the Company reflect an appropriate value based on charging and discharging at market prices.

[7] Or perhaps the witness contends that BESS must be co-located with renewables to be charged by them, but this too isn't necessarily true since BESS can be charged by energy, including renewables, delivered by the transmission grid, as I discuss below.

Q. What else concerns you about OPC's assertion that the BESS project would be improved if connected to a renewable generator?

A. The OPC witness has incorrectly concluded that the complimentary operation of renewables and BESS can only occur if they are co-located, essentially with both of them being behind the same meter and acting as a combined resource. The reality is that even when located and metered separately, the renewables and BESS can still provide the same complimentary impact to the grid and produce the same energy market revenues. Even when located separately, the BESS can still be deployed when prices are highest, presumably when the low-cost renewable generation is not available. And charging the BESS at a market price instead of at a renewable generator's incremental cost of production allows the renewable generator to earn the same market revenues. From a reliability standpoint, the BESS provides capacity and an essential spinning reserve function that compliments the intermittent renewable generation, regardless of whether it is co-located with the renewables. Mr. Seaver's contentions simply reflect a misunderstanding of how MISO works and how BESS interacts with the grid.

IV. NGSC ADDITIONS IN THE MARKET

Q. OPC witness Marke raises concern that many utilities are adding natural gas-fired generation at the same time and expresses concerns about whether doing so is a good idea. What is the Company's reaction to this theory?

A. First, it seems beyond the scope of this Big Hollow discussion to speculate on the confidence, or lack thereof, of when other utilities will realize large load additions. Specifically, the Big Hollow NGSC project will have many benefits to existing customers and not just for new large load customers, and as Mr. Michels' direct testimony discusses,

there are reasons to construct the Big Hollow projects even if load did not materially increase. The Big Hollow NGSC will participate in the MISO capacity market and serve as a critical resource to protect customers from market price fluctuations. Its dual fuel capability will be especially important during the winter season when Ameren Missouri finds itself short capacity and energy during extreme cold weather events. When it is needed it will be needed by all customers.

Second, Dr. Marke's observations about what the macro-economic impacts of various levels of load growth and gas generation additions in MISO might or might not mean for the market appear to be based upon little other than his speculation about the possibility that material amounts of large loads won't show up in MISO or won't persist. To that extent, his point appears to be a re-litigation of the Company's large load tariff case. If large volumes of natural gas capacity are added to the market, it would take some time for the market to adjust to the additional resources, but it may also cause other impacts that will aid in the market's adjustment. For example, it may delay construction of some of the proposed renewable energy resources, or it may cause some generation owners who have delayed retirement of aging plants to proceed with their retirement. In other words, the market will adjust. Perhaps more importantly, if we are to consider Dr. Marke's speculation we should also consider the opposite – where new large customers are ready to receive service and there is no capacity to serve them. If they initiate service, the market will undoubtedly find itself in an even more precarious capacity dilemma than in Dr. Marke's scenario.

As Mr. Arora's surrebuttal testimony indicates, there is a very high likelihood that the Company's loads will grow significantly very soon, and in that case, we need the Big

Hollow projects. Of course, there will be additional debate before any additional generation beyond Big Hollow is built, but the Company does need to build the Big Hollow projects now.

Q. Renew Missouri witness Polk Sentell does not oppose the projects but "cautions" against "over-reliance on gas-fired resources." How do you respond?

A. Our resource plans do include both simple-cycle and combined cycle dispatchable gas-fired resources, but they also include substantial nuclear, coal, and BESS dispatchable resources (expected long-term to make up about 70% of our energy mix) and intermittent renewables (expected long-term to make up about 30% of our energy mix). Specific to the Big Hollow simple-cycle gas generators, since in the MISO marketplace gas-fired generation is typically offered based on spot fuel prices, our daily offer will be aligned with the Reference Levels the Independent Market Monitor ("IMM") uses for conduct threshold testing. And since gas generation is generally the fuel type most frequently setting MISO's System Marginal Price ("SMP"),[8] the gas generator margins will not erode during periods of high gas prices. This means, contrary to claims that too many gas resources may not be cost-effective, in fact gas-fired generation can remain cost-effective for customers even if gas prices do rise.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

[8] The IMM's Quarterly Report from Summer 2025 states that natural gas was the fuel type setting the SMP for 75% of the time summer of 2025. IMM Quarterly Report Summer 2025, P. 17 https://cdn.misoenergy.org/20250916%20Markets%20Committee%20of%20the%20BOD%20Item%2007%20IMM%20Quarterly%20Report717460.pdf

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and Certificate of Public Convenience and Necessity Authorizing it to Construct a New Generation Facility and Battery Energy Storage System	)))))	File No.: EA-2025-0238

AFFIDAVIT OF ANDREW M. MEYER

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

Andrew M. Meyer, being first duly sworn on his oath, states:

My name is Andrew M. Meyer, and hereby declare on oath that I am of sound mind and lawful age; that I have prepared the foregoing *Surrebuttal Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

Andew M. Meyer

Sworn to me this 16th day of January 2026.