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MISSOURI PUBLIC SERVICE COMMISSION

EA-2025-0299

REBUTTAL TESTIMONY

OF

PHILIP A. FRACICA

ON BEHALF OF

RENEW MISSOURI ADVOCATES

May 7, 2026

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Philip A. Fracica. My business address is 501 Fay Street Suite 206, Columbia, Missouri, 65201.

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

A. I am employed by Renew Missouri Advocates d/b/a Renew Missouri ("Renew Missouri") as Director of Programs.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Renew Missouri.

Q. What are your responsibilities?

A. My current responsibilities are focused on clean energy policy advocacy with municipal utilities and rural electric cooperatives, researching utility clean energy programs, and advocating for the expansion of energy efficiency programs with a focus on low-income multifamily customers.

Q. Please describe your educational background and work experience.

A. My educational experience consists of a Bachelor of Science in Business Administration with an Emphasis in Finance from the University of Missouri. I am currently an MBA Candidate at the University of Missouri and am working towards completing my graduate degree this Fall. I started working at Renew Missouri in May 2014 as an intern and began working full-time with the organization in 2015. Over the last eleven years, I have submitted testimony for Renew Missouri in multiple rate cases and have primarily focused on low-income programs including the PAYS® program and expanding community solar program offerings to be more equitable. Outside of my experience writing testimony in cases I have been a member of the Missouri Weatherization Policy Advisory Council ("MWPAC") over the last six years to help provide input on the state's administration of federal funding for WAP and LIHEAP programs.

In 2019, I was appointed to Columbia Missouri's Integrated Electric Resource and Master Plan Task Force to help the city and its municipal utility, Columbia Water & Light, draft the Integrated Resource Plan ("IRP") for the city. Since 2023, I have been appointed to and have been serving on the City's Water and Light Advisory Board committee to provide input to City Council and Staff. This experience has further deepened my knowledge and understanding of long-term utility planning, operations, capacity requirements, NERC and FERC requirements, among many other key processes to daily utility operations.

Q. What is the purpose of your direct testimony in this proceeding?

A. The purpose of this testimony is to:

1. Discuss the growing role battery energy storage systems ("BESS") can play in supporting reliability and resource adequacy within the Southwest Power Pool ("SPP");
2. Explain why Empire District Electric Company d/b/a Liberty ("Liberty" or the "Company") proposed reliance on natural gas generation resources may expose customers to unnecessary long-term cost and regulatory risks;
3. Evaluate whether the Company adequately considered demand-side management ("DSM"), distributed energy resources, and non-wires alternatives in its preferred resource plan;
4. Describe how demand-side resources, battery storage, and energy efficiency programs can contribute to winter reliability and reduce customer costs;
5. Discuss the impacts the proposed project may have on low-income customers and customer affordability; and
6. Recommend that the Commission require the Company to more thoroughly evaluate diversified resource alternatives in future filings.

II. BATTERY STORAGE AND RESOURCE ADEQUACY

Q: Have other utilities in the area taken advantage of battery storage to compliment wind resources in their portfolio?

A: Yes. City Utilities ("CU") has benefited from a battery research project with a 1MWh lead-acid battery energy storage system that was installed in 2017. This allowed for CU to charge the batteries during off-peak times and discharge during peak periods. CU and the Company are both located in SPP's Region Four, giving the Company a similar opportunity to be uniquely positioned to benefit from storage given the location and market dynamics.

Q: Does SPP have a high concentration of battery storage systems compared to other RTOs?

A: No. SPP does not have a high concentration of battery storage systems compared to MISO and is even further behind when compared to other RTOs operating across North America. Because of the under-investment in battery systems across SPP and specifically within Region Four, it would be beneficial for the Company and SPP to gain additional experience in deploying battery systems. Region Four has only seen .6 GW of storage installed from 2020-2024, the lowest across all seven regions of SPP during this time period.[1] This means that battery storage sited in the region tends to have additional value as a diversified resource type.[2]

III. EVALUATION OF THE COMPANY'S PROPOSED RESOURCE PLAN

Q. Do you agree with the Company's conclusion that new natural gas generation is the most prudent solution to meet future capacity needs?

[1] Aurora Energy Research. (2025). *Battery energy storage impact and benefits assessment for SPP* (p. 9). Commissioned by American Clean Power. https://auroraer.com/resources/aurora-insights/market-reports/battery-energy-storage-impact-and-benefits-assessment-for-spp

[2] *Id.*

A. While I acknowledge the Company has identified a potential capacity need driven by evolving resource adequacy requirements in the Southwest Power Pool ("SPP"), Renew Missouri cautions that too much reliance on future natural gas build out in the SPP region could produce worse outcomes for ratepayers, and that future natural gas requests are not always the most reasonable or least-cost solution for ratepayers. Additionally, Liberty is in a unique position to utilize less expensive sources of capacity to meet Planning Reserve Margins ("PRM") by deploying BESS to unlock additional benefits of Liberty's existing wind capacity, as well as increasing energy efficiency efforts in a customer base that would benefit individually as well as collectively from such programs. As described in the Company's testimony, the identified need is largely driven by increasing winter PRMs and changes to accreditation methodologies. However, the Company's analysis appears to rely heavily on supply-side solutions while giving insufficient consideration to demand-side and distributed resource alternatives that could meet the same reliability objectives at lower cost and lower risk. Furthermore, SPP's 2026 Effective Load Carrying Capacity ("ELCC") found that four-hour battery systems had an ELCC of 100% in the Summer and 98% for the Winter months.[3] Given the relatively limited deployment of battery storage resources within SPP's Region Four, the Company has an opportunity to gain operational experience with these technologies while improving system flexibility and customer value under current market conditions.

Q. Does the Company's testimony demonstrate that natural gas generation is the only feasible option available to address winter reliability concerns?

[3] Southwest Power Pool (2026). *2026 SPP ELCC study report*. Southwest Power Pool. https://spp.org/documents/76577/2026%20spp%20elcc%20study%20report.pdf

A. No. The Company's testimony demonstrates that SPP's evolving accreditation framework places greater value on winter-capable resources, but it does not establish that natural gas generation is the only or least-cost means of meeting those requirements. As noted previously, SPP's 2026 ELCC study found that four-hour battery storage systems maintained extremely high accreditation values during both summer and winter periods. This indicates that battery storage resources are increasingly capable of contributing meaningfully toward reliability requirements within SPP's framework. Furthermore, the Company's testimony does not appear to evaluate whether combinations of battery storage, demand response, energy efficiency, and smaller flexible resources could satisfy the identified reliability need at lower cost or lower long-term risk to customers.

Q. What concerns do you have with the Company's reliance on a natural gas resource to meet this need?

A. My concerns fall into three primary categories: cost risk, regulatory risk, and resource flexibility. First, natural gas generation exposes customers to long-term fuel price volatility. While gas prices may appear favorable in the near term, history demonstrates that natural gas markets remain subject to geopolitical events, export demand pressures, infrastructure constraints, and weather-related volatility. All of which can contribute to fuel price uncertainty over the life of the proposed asset.[4] Additionally, large capital investment in gas infrastructure locks customers into decades of exposure to these risks that cannot be accurately quantified today. Second, there is significant regulatory and policy uncertainty surrounding carbon emissions and environmental compliance. The Company's own testimony acknowledges that resource planning must account

[4] Gross, S. (2026, April 1). *The Iran conflict's energy shocks are not yet fully realized*. Brookings Institution. https://www.brookings.edu/articles/the-iran-conflicts-energy-shocks-are-not-yet-fully-realized/

for evolving environmental regulations. A long-lived gas asset risks becoming uneconomic or stranded as federal and regional policies continue to evolve. Third, the proposed resource lacks the flexibility of a diversified portfolio approach. While the Company emphasizes reliability benefits, a single large thermal resource does not provide the same resilience that a combination of battery storage among other distributed energy resources, demand response, and energy efficiency can provide.

IV. DEMAND-SIDE RESOURCES AND NON-WIRES ALTERNATIVES

Q. Is there adequate information comparing demand-side resources and non-wires alternatives?

A. No. Based on the testimony provided, the Company removed demand-side management ("DSM") resources from its Preferred Plan and does not include them in its near-term strategy. The removal of DSM programs appears to be driven by regulatory uncertainty around MEEIA rather than evidence that all potential programs are not cost-effective. In my view, not evaluating DSM programs and other non-wires alternatives, even outside of MEEIA, represents an important limitation in the Company's analysis. Demand-side resources including energy efficiency, demand response, and load flexibility are widely recognized as cost-effective tools for reducing peak demand and improving system reliability. These resources can be deployed more quickly than traditional generation and at a fraction of the cost. From a policy and planning perspective, this creates a gap in the Company's resource strategy and shifts unnecessary cost burdens onto ratepayers.

Q. How could demand-side resources address the identified capacity need?

A. Demand-side resources are particularly well-suited to address the type of capacity need described by the Company. The Company's concern centers on winter peak reliability and rising

reserve margins. Targeted demand response programs such as interruptible load, smart thermostat programs, and managed electric heating can directly reduce peak demand during critical winter periods. Reducing winter peak demand can also lessen the Company's accredited capacity obligations under SPP's evolving resource adequacy framework. Additionally, energy efficiency investments - particularly in building envelope improvements and heating systems - can permanently reduce winter load, providing ongoing system benefits. These approaches not only reduce the need for new generation but can also lower customer bills, improve energy affordability, and reduce overall system costs.

Q. Why is flexibility important in long-term utility planning?

A. The electric sector is currently undergoing rapid technological and market transformation. Costs for battery storage, distributed generation, demand response technologies, and grid-interactive resources continue to evolve rapidly. In this environment, maintaining planning flexibility has substantial value to customers. Large, centralized generation investments commit customers to a single long-term resource pathway for several decades. By contrast, smaller incremental investments in distributed and demand-side resources allow utilities to adapt more gradually to changing market conditions, technological advancements, and regulatory developments. A diversified portfolio approach therefore reduces long-term planning risk while preserving optionality for future system needs.

V. CUSTOMER AFFORDABILITY, LOW-INCOME IMPACTS AND LONG-TERM PLANNING RISKS

Q. How does the proposed project impact low-income customers?

A. The proposed investment raises significant equity concerns. Low-income customers already face disproportionately high energy burdens. A large capital investment in new generation

infrastructure will ultimately be recovered through rates, increasing costs for all customers including those least able to afford them at a time when customers are already struggling with bill payments due to billing issues with the Company. At the same time, the Company's decision to eliminate DSM programs removes one of the most effective tools for reducing energy burden in low-income communities. In contrast, investments in energy efficiency and distributed resources can directly reduce bills for low-income households while also contributing to system reliability. These approaches align more closely with the public interest and the Commission's longstanding goal of ensuring just and reasonable rates.

Q. Are there additional risks associated with the proposed project?

A. Yes. In addition to cost and equity concerns, the proposed project presents long-term planning risks. The Company's reliance on the Expedited Resource Adequacy Study ("ERAS") process reflects a compressed timeline for resource development. While this may address near-term capacity concerns, it also limits the opportunity to fully evaluate alternatives.

Furthermore, the selection of a large, centralized gas resource may reduce the Company's flexibility to adapt to future technological and market changes. Energy markets are rapidly evolving, with declining costs for storage, distributed generation, and grid-interactive technologies. Committing to large assets today may crowd out more cost-effective and innovative solutions in the future. This is particularly important, given the pace of change occurring within SPP's accreditation methodologies, market structures, and long-term load forecasts.

Q. Are there specific financial risks associated with large thermal generation projects?

A. Yes. Large generation projects have experienced increasing construction cost pressures in recent years due to supply chain constraints, labor shortages, inflationary pressures, and equipment procurement challenges. These risks can expose customers to significant cost overruns over the

life of the project. By comparison, demand-side resources and modular distributed technologies can often be deployed incrementally with lower upfront capital exposure and shorter development timelines.

Q. How should the Commission evaluate this proposal in the context of the public interest?

A. The Commission should evaluate this proposal not only on the basis of near-term reliability, but also on long-term cost, risk, and alignment with state energy policy. The Missouri Comprehensive State Energy Plan emphasizes affordability, efficiency, and innovation. A resource strategy prioritizing demand-side solutions and distributed resources is more consistent with these objectives than one that relies primarily on new fossil generation.

Additionally, the Commission should consider whether the proposed project represents the least-cost, least-risk option available to customers. Based on the information provided, the Company has not made a persuadable argument for what's best for its customers.

Q. Based on the risks outline in your testimony, why does Renew Missouri not recommend denial of the certificate of convenience and necessity request?

A. Renew Missouri believes that modeling DSM and BESS could provide valuable insight into appropriate levels of implementation to reduce or offset the amount of natural gas generation required. However, considering timing and operational implications Liberty is facing and the revamping of the IRP process Missouri is currently undertaking, the level of modeling and analysis contemplated would require more stakeholder engagement in the process and time, which leads Renew Missouri to recommend that the Commission order such analysis be completed as part of its next IRP filing or as part of its next request for a certificate of convenience and necessity ("CCN").

Q. In the future, how do you recommend the Company approach resource evaluation and selection?

A. I recommend that the Company:

1. Conduct a comprehensive evaluation of demand-side resources, including energy efficiency and demand response;
2. Explore hybrid resource portfolios that combine smaller-scale generation with distributed resources;
3. Reassess the role of DSM programs in addressing peak demand and customer affordability; and
4. Develop a targeted strategy for low-income customer participation in energy programs.

These steps would provide a more balanced, flexible, and cost-effective approach to meeting future energy needs.

VI. CONCLUSION

Q. Please summarize your position.

A. While the Company has identified a legitimate concern regarding future capacity needs, it has not made an effective argument that an increased natural gas build out is the reasonable or cost-effective solution. The Company's analysis places undue emphasis on supply-side resources while undervaluing demand-side and distributed alternatives. This approach increases costs and risks for customers, particularly low-income households. A more balanced resource strategy, one that incorporates energy efficiency, demand response, and distributed energy resources, would better serve the public interest by enhancing reliability, reducing costs, and improving energy equity. However, in light of the relatively limited request Liberty is currently putting forward, Renew

Missouri instead recommends that the Commission order Liberty to model DSM and BESS as part of future CCN requests and IRP proceedings.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of the Empire District Electric Company d/b/a Liberty for a Certificate of Convenience and Necessity to Support Resource Adequacy	))))	**File No. EA-2025-0299**

AFFIDAVIT OF PHILIP A. FRACICA

STATE OF MISSOURI)
) ss
COUNTY OF BOONE)

COMES NOW Philip A. Fracica and on his oath states that he is of sound mind and lawful age; that he prepared the foregoing Rebuttal Testimony; and that the same is true and correct to the best of his knowledge and belief.

Further the Affiant sayeth not.

Philip Fracica

Subscribed and sworn before me this 7 th day of May 2026.

Notary Public

JAMES M. OWEN
Notary Public - Notary Seal
STATE OF MISSOURI
Boone County
My Commission Expires: August 16, 2027
Commission #15637358