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November 18, 2024

Public Utility Commission of Texas
Chairman Thomas Gleason
William B. Travis Building
1701 Congress Avenue
Austin, TX 78701

Re: Linear generator inclusion in Texas Backup Power Package Program (Project 57236)

Dear Chairman Gleason,

Mainspring Energy ("Mainspring") provides this written testimony regarding development of the Texas Backup Power Package (BPP) program. Mainspring commends the Commission, the Advisory Committee, and their consultants for their dedication to ensuring resilient and equitable power solutions for Texans. On November 13, 2024, Brian Kauffman provided verbal testimony at the Commission-led stakeholder meeting on "Technology Components and Specifications".¹ These comments reiterate Mainspring's key request for inclusion of linear generator technology as a generation component in Backup Power Packages. These comments are particularly timely ahead of Patrick Engineering's final report.

Introduction

Mainspring Energy was founded in 2010 by three Stanford engineers seeking a new approach to generating clean, resilient, affordable electricity. Their research into high-efficiency methods of converting fuel to electricity led to the founding of the company and the development and prototype of their first linear generator. Mainspring's investors include NextEra Energy, Bill Gates, Khosla Ventures, American Electric Power, Chevron, Shell, Centrica Energy, Lightrock, ClearSky and KCK among others.

¹ Available at https://interchange.puc.texas.gov/Documents/57236_2_1438994.PDF

Mainspring installed its first commercial project in 2020, and has since delivered successful projects across the contiguous United States running on various fuels and in various prime power applications. Mainspring has over 70 years of aggregated runtime in the field and industry leading uptime metrics. Mainspring’s dispatchable, modular design delivers an efficient, clean, and economical solution for utility scale, data center, microgrid, biogas, commercial, and industrial customers.

Our core technology, the modular linear generator (250 kW/unit), is engineered for operational flexibility, fuel adaptability, and high electrical efficiency. This innovative technology has earned partnerships with critical facilities such as hospitals, water treatment centers, grocery stores, and grocery logistics hubs. The company has received numerous awards and grants, most recently \$87 M from the U.S. Department of Energy to expand into a \$175 M domestic manufacturing facility.²

Key Testimony Points

1. Support for Inclusive Technology Evaluation

Mainspring supports the finalization of the BPP but is concerned about potential exclusions of non-traditional technologies. Specifically, the linear generator might be inadvertently omitted from consideration due to its distinction from traditional gensets.

Mainspring first formally addressed this concern in its September 2024 letter under Project 55407.³ We urge the Commission to ensure all eligible and innovative technologies are considered, offering a broader array of solutions for critical resilience.

2. Technology Highlights

Fuel Flexibility: Mainspring’s Linear Generator can seamlessly switch between fuels—natural gas, propane, hydrogen, and biogas—without hardware changes, ensuring uninterrupted power even during pipeline disruptions.

Cost-Effective Resilience: With its low total cost of ownership and high efficiency, the technology maximizes the impact of allocated BPP funds, enabling service to more critical facilities.

² Available at

[https://www.mainspringenergy.com/news/us-doe-awards-mainspring-\\$87-million-manufacturing-grant/](https://www.mainspringenergy.com/news/us-doe-awards-mainspring-$87-million-manufacturing-grant/)

³ Available at https://interchange.puc.texas.gov/Documents/55407_16_1427676.PDF

Deployment in Texas: A recent sales order includes 33 linear generators across five sites, underscoring the technology's growing acceptance in the state.⁴

3. **Standards and Recommendations**

Mainspring recommends that the Commission adopt performance-based standards inclusive of innovative technologies. Industry-accepted specifications, such as SEL-351-7 and SEL-751 relays for non-export operations, can ensure compliance while fostering technological diversity.

4. **Call for Fair Evaluation**

Mainspring respectfully requests a thorough review of its linear generator technology within Patrick Engineering's final report. The contractor's evaluation should prioritize cost-effectiveness, flexibility, and reliability. Clarifying eligibility for non-genset solutions would expand options available under the BPP, aligning with the program's resilience goals and diversification of supply chains.

Conclusion

Mainspring Energy is poised to contribute significantly to Texas' resilience through its innovative linear generator technology. We urge the Commission and Advisory Committee to adopt an inclusive approach, enabling the full range of solutions to be considered in the BPP program. Thank you for the opportunity to participate in this vital initiative.

Should you have any questions, please do not hesitate to contact me at (610) 368-3010 or via email at brian.kauffman@mainspringenergy.com.

Sincerely,

/s/Brian Kauffman

Brian Kauffman

Director, Market Development
Mainspring Energy

⁴ Available at <https://www.mainspringenergy.com/news/mainspring-energy-expands-operations-to-texas/>