Filing Receipt

Received - 2023-03-29 11:06:25 AM
Control Number - 54584
ItemNumber - 5

PROJECT NO. 54584

RELIABILITY STANDARD FOR THE ERCOT MARKET	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF THE MICROGRID RESOURCES COALITION

The Texas chapter of the Microgrid Resources Coalition (MRC) hereby submits these comments in response to Commission Staff's Request for Comment filed on March 7, 2023, in the above-referenced Project.

The MRC is a national consortium of leading microgrid owners, operators, developers, suppliers, and investors formed to advance microgrids through advocacy to support their access to markets, compensate them fairly for their services, and provide a level playing field for their deployment and operations. The mission of the MRC is to promote microgrids as energy resources by advocating for policy and regulatory reforms that recognize and appropriately value the services that microgrids offer, while assuring non-discriminatory access to the grid for various microgrid configurations and business models. We generally support disaggregated, fair pricing for well-defined services both from the grid to microgrids as well as from microgrids to the grid. We promote community-based resilience standards and support utilities that are working toward new business models that value resilient distributed resources. We work for the empowerment of energy customers and communities. In January 2023, the MRC announced the launch of its Texas chapter and we appreciate the opportunity to comment in this proceeding.

Commission Staff is requesting feedback on several questions related to defining a new reliability standard for ERCOT. The MRC acknowledges the complexity of the task before the Commission to develop a more modern reliability standard that takes into account the evolving nature of the 21st century electricity system; the 1-in-10 standard used historically is no longer adequate to address the complexity of the ERCOT grid. It is the MRC's intention to highlight the importance of considering microgrids and the role that they can play in promoting reliability and resilience in Texas. Technology, innovation, and competition provide a foundation upon which modernized standards can and should be put in place. We first address the role of microgrids in the evolving electricity system and subsequently respond to a subset of the questions posed by Commission Staff. As the Commission considers these questions, MRC recommends review of the

2021 report by Energy Systems Integration Group (ESIG), *Redefining Resource Adequacy for Modern Power Systems*, which addresses several important principles relevant to this proceeding.[1]

Microgrids Are Part of the Reliability and Resilience Solution in ERCOT

A microgrid is a local energy grid with control capability that can operate in parallel with the existing grid or disconnect from it and operate autonomously, allowing for resilient and flexible electricity generation, such as during extreme weather events when the grid is unavailable. Stated differently, a microgrid consists of a group of interconnected loads and distributed energy resources (DERs) that can act as a single controllable entity. Operating in island mode means the microgrid operator, using sophisticated software known as a microgrid controller, can balance the microgrid's loads using included distributed generation and storage resources. Operating as a single controllable entity means that while the microgrid may include, for example, solar or natural gas distributed generation (such as combined heat and power or fuel cells), battery and thermal storage, and smart energy efficiency measures to modify load, the microgrid can interact with the grid as a single resource using the combined controllable import and export capabilities of all the included resources. Microgrids can operate independently of the grid in response to disruptive events, preserving the functioning of the included customers and their service recipients.

Given their mix of resources, microgrids can modify the load shape of their included customers with respect to the grid. They can do this directly in response to energy prices through time-of-use or transactive energy tariffs of their local utilities or through direct exposure to wholesale pricing through aggregators or retail electric providers in areas subject to retail competition. They can also participate in emergency demand response markets or respond to grid operator dispatch either for load reduction or export of power. These grid services reduce stress on the grid, and lower costs to customers by increasing competition and optimizing grid operation. In addition, microgrids are ideally suited to serve grid resilience – the ability to adjust and continue operations when the larger grid is disrupted.[2]

---

[1] Energy Systems Integration Group. 2021. *Redefining Resource Adequacy for Modern Power Systems. A Report of the Redefining Resource Adequacy Task Force.* Reston, VA. https://www.esig.energy/resource-adequacy-for-modern-power-systems/

[2] *See,* National Academy of Science, Engineering and Medicine: Enhancing the Resilience of the Nation's Electricity System, 2017, *available at* https://www.nap.edu/catalog/24836/enhancing-the-resilience-of-the-nations-electricitysystem

Comments on Specific Questions Posed by Commission Staff

(1) The Commission has previously considered various reliability metrics, such as Loss of Load Expectation (LOLE), Loss of Load Hours (LOLH), and Expected Unserved Energy (EUE). Which reliability metrics, including those not previously studied, should the Commission consider in establishing a reliability standard for the ERCOT power region? Which reliability metric, or combination of reliability metrics, should the Commission adopt for the reliability standard in ERCOT? What are the advantages of your chosen reliability metrics, and what are the disadvantages of alternative approaches?

MRC does not have a response to this question at this time.

(2) What is the most effective way that the Commission can include deliverability in the reliability standard?

MRC does not have a response to this question at this time.

(3) Additional considerations in establishing the reliability standard in the ERCOT power region. Should the reliability standard include a locational requirement? Should the reliability standard include a seasonal component? How can extreme events be captured in a reliability standard? How can the value of distributed energy and load resources be captured in a reliability standard?

A 2021 ESIG Report, *Redefining Resource Adequacy for Modern Power Systems*, includes as a key principle to modern resource adequacy the inclusion of demand flexibility (See "Principle 4: Load participation fundamentally changes the resource adequacy construct").[3] MRC submits that this is an important principle to include in defining a new reliability standard. Historical methods have treated load as static values, but in today's system, microgrids (and DERs more broadly) provide highly flexible loads that can either respond for calls to reduce load, or that can inject into the system as supply-side resources. These resources fundamentally change the nature of the grid and should be considered in developing a reliability standard. Demand-side resources should be given equal consideration as potential solutions to address reliability concerns, which will require a shift in how policy makers and market stakeholders think about the electricity system.

(4) How frequently should the Commission update the calculation of the requirement necessary to meet the reliability standard? What criteria should help determine the frequency of the update?

MRC does not have a response to this question at this time.

[3] ESIG Report at 21-22.

(5) If you have any industry or academic papers on the topic and best practices that you believe the Commission should review while establishing the reliability standard for the ERCOT power region, please provide them.

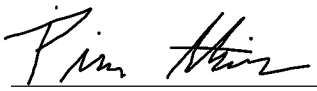
As noted above, we recommend review of the ESIG paper:

Energy Systems Integration Group. 2021. *Redefining Resource Adequacy for Modern Power Systems. A Report of the Redefining Resource Adequacy Task Force*. Reston, VA. https://www.esig.energy/resource-adequacy-for-modern-power-systems/

Conclusion

MRC appreciates the opportunity to provide these Comments and looks forward to working with the Commission and other interested parties on these issues.

Respectfully submitted,



Pierson Stoecklein
Executive Director
Microgrid Resources Coalition
659 C St. SE
Washington, DC 20003
pierson@microgridresources.org
202-599-8111

PROJECT NO. 54584

RELIABILITY STANDARD FOR THE ERCOT MARKET	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF THE MICROGRID RESOURCES COALITION
EXECUTIVE SUMMARY

The following is a summary of MRC's comments:

- A microgrid is a local energy grid with control capability that can operate in parallel with the existing grid or disconnect from it and operate autonomously, allowing for resilient and flexible electricity generation, such as during extreme weather events when the grid is unavailable. Microgrids are well-suited to providing a variety of grid services to reduce stress on the grid and lower costs to customers by increasing competition and optimizing grid operation. In addition, microgrids are ideally suited to serve grid resilience.
- It is critical to consider microgrids and the role that they can play in promoting reliability as the Commission determines a new reliability standard to reflect the changing grid of the 21st century.

Responses to the specific questions:

1. No response.
2. No response.
3. Microgrids (and DERs more broadly) provide highly flexible loads that can either respond for calls to reduce load, or that can inject into the system as supply-side resources. These resources fundamentally change the nature of the grid and should be considered in developing a reliability standard. Demand-side resources should be given equal consideration as potential solutions to address reliability concerns, which will require a shift in how policy makers and market stakeholders think about the electricity system.
4. No response.
5. See Energy Systems Integration Group. 2021. *Redefining Resource Adequacy for Modern Power Systems. A Report of the Redefining Resource Adequacy Task Force.* Reston, VA. https://www.esig.energy/resource-adequacy-for-modern-power-systems/