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Reliability and Markets Committee Meeting

Item 7.1.1: Update on Reliability

ERCOT Public October 16, 2023



Overview

Purpose

Provide an overview of the ongoing work to provide information to the Public Utility Commission of Texas (PUC) in establishing a Reliability Standard for the ERCOT Region

Voting Items / Requests

No action is requested of the R&M Committee or Board; for discussion only

Key Takeaways

- ERCOT continues to work iteratively with the PUC to provide information to aid in defining a Reliability Standard for the region.
- Future work will include additional focused iterations, execution of a Value of Lost Load customer survey, and a refined definition of the Cost of New Entry.



Reliability Standard Development

Work continues evaluating the three-part framework and concept of exceedance probability.

1. FREQUENCY

Loss of Load Expectation (LOLE) The expected number of loss of load (LOL) days for 2026 (calculated as the probability-weighted average for 1,050 simulations), where a LOL day means that at least one event occurs during that day.

2. MAGNITUDE

Unserved Energy (UE): The hourly unserved energy amount in MWh for an Event (equivalent to MW/hour); for multihour events, only the highest hourly UE is used; *Maximum Magnitude* is the highest hourly unserved energy amount in MWh across 1,050 simulations

3. DURATION

The longest period of consecutive Events; *Maximum Duration* is the longest period of consecutive Events across 1,050 simulations

Exceedance Probability - The likelihood that Magnitude and Duration will be higher than a given risk tolerance threshold

Key Takeaway: ERCOT continues to work iteratively with the PUCT to provide information to aid in the definition of a Reliability Standard.



Study Status and Next Steps

- ERCOT filed simulation results with the PUC for 48 scenarios and proposed additional scenario simulations, which include a resource mix with more Inverter Based Resources; and suggested narrowing the range of exceedance probabilities to a specific target level for further analysis; i.e., 3%
- ERCOT and PUC staff are coordinating an ERCOT-hosted workshop in October to review current analysis and obtain stakeholder input
- Targeting January 2024 to begin the Value of Lost Load (VOLL) customer survey
- A Request for Proposal was issued for a contractor to conduct a Cost of New Entry (CONE) study

