Item 8.1.1: Update on Reliability Standard Study Results

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Reliability and Markets Committee Meeting

ERCOT Public
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Reliability Standard Update

- **Purpose**
  - Provide an overview for the ongoing work to provide information to the PUCT 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 PUCT to provide information to aid in the definition of a Reliability Standard.
- Future work will report reliability and capital cost impacts of setting frequency, magnitude and duration at certain levels; the impacts of resource mix and capacity retirement assumptions are also being explored.

Reliability Standard Work

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

- *FREQUENCY*
  - *LOLE*: Loss of Load Expectation. The expected number of 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. Example: LOLE of 0.1 days in 1 year, or equivalently, 1 day in 10 years

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

- *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.

Scenario Analysis Schedule – Target Dates

- Model updates
  - Incorporated unplanned thermal outage and weatherization standard impact modeling for the 10 new Weatherization Zones; accounts for Uri outages.
  - Added ERCOT's new Firm Fuel Supply Service to reduce "fuel limitation" outages.
  - Incorporated multi-floor Operating Reserve Demand Curve (ORDC) representation.
  - Updated Cost of New Entry (CONE) and Value of Lost Load (VOLL) cost parameters for next set of scenario simulations.
  - As a baseline, using an 85% outage reduction rate for thermal resources due to weatherization standards.
- Investigating the use of cloud computing to reduce computing time.
- Complete subset of the next 48 scenarios by September 15.
- Present initial results to the PUCT in September with completed 48 scenarios provided to the BOD and PUC in October.

Key Takeaway: The next set of scenario simulations is intended to report reliability and capital cost impacts of setting frequency, magnitude and duration at certain levels; the impacts of resource mix and capacity retirement assumptions are also being explored.