



Item 12: Load Forecasting Review Update

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Board of Directors Meeting

ERCOT Public

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Status of the Load Forecasting Review Process

- ERCOT staff has developed a methodology for long-term load forecasting that better represents both peak demand behavior and long-term energy growth.
- ERCOT's goal was to ensure its methodology has been reviewed by the Board and stakeholders before it is incorporated into our processes.
- Stakeholder review included two workshops held jointly by the Reliability & Operations Subcommittee (ROS) and Wholesale Market Subcommittee (WMS) of the Technical Advisory Committee (TAC).
- ERCOT used the independent consultant Itron to review the methodology.

January TAC Highlights

Load Forecast Methodology for the Capacity, Demand, and Reserves (CDR) Report

- Stakeholders and ERCOT held two workshops that reviewed the preliminary Load forecast, associated mean absolute percentage error (MAPE) and ITRON's report.
- Most believed ERCOT's Load forecast methodology was a reasonable approach and there was general support for ITRON recommendations.
- Data requests have been made to ERCOT and additional analyses and history are needed to determine the statistical accuracy of the Load forecast.
- Due to concerns on Load response's impact on the calculation of summer peak Demand forecast and the CDR, TAC requested a WMS task force to review the appropriate allocation on Demand response programs.
- Some concerns included that the neural network and some modeling techniques are newly developed and have not been implemented by any other ISOs.

Addressing Stakeholder Feedback

- Data requests have been made to ERCOT and additional analyses and history are needed to determine the statistical accuracy of the Load forecast.
 - ERCOT will create a load forecasting web page and will provide the additional data over the next month.
 - ERCOT will also create a monthly report on the forecasting accuracy of the new model.
- Due to concerns on Load response's impact on the calculation of summer peak Demand forecast and the CDR, TAC requested a WMS task force to review the appropriate allocation on Demand response programs.

Addressing Stakeholder Feedback

- Some concerns included that the neural network and some modeling techniques are newly developed and have not been implemented by any other ISOs.
 - Neural networks have been used in other ISO settings, including:
 - Shorter-term load forecasting models by ISOs.
 - Previous ERCOT long-term load forecasts to allocate daily energy to hourly demand values.
 - Other ISOs have different long-term load forecasting objectives
 - Most forecast peaks and energy by separate models.
 - Don't have the need to create an 8,760 hour load forecast which is unique to ERCOT.
 - Applying this tool to long-term forecasting represents an innovative use of an established, tested tool that is more adaptable to changing conditions and new inputs.

Summary and next steps

- Most believed ERCOT's Load forecast methodology was a reasonable approach and there was general support for Itron's recommendations
 - ERCOT has implemented all of Itron's recommendations.
- At this point, ERCOT has not received any stakeholder feedback that indicates a need to rethink our proposed forecasting methodology.
- ERCOT is currently planning on publishing the Load Forecast based on the proposed methodology after accounting for the outstanding recommendation* from Itron.

*Not expected to have a material impact on the Preliminary Load Forecast.

