

TAC Report

NPRR Number	230	NPRR Title	Resolution of Alignment Items A40, A108, A127 and A138 and Clarification/Updates to Load and Demand Forecast, Statement of Opportunities, and Long Term Wind Power Forecast
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Comments

ERCOT submits these comments to correct a section reference in paragraphs (a) and (b) of Section 3.12, Load Forecasting. The changes are highlighted below.

Revised Proposed Protocol Language

2.2 ACRONYMS AND ABBREVIATIONS

~~LTLF~~ Long-Term Load Forecast

3.2.1 Calculation of Aggregate Resource Capacity

- (1) ERCOT shall use Outages in the Outage Scheduler and, when applicable, the Resource Status from the Current Operating Plan (COP) to calculate the aggregate capacity from Generation Resources and Load Resources projected to be available in the ERCOT Region and in Forecast Zones in ERCOT. "Forecast Zones" have the same boundaries as the 2003 ERCOT Congestion Management Zones. Each Resource will be mapped to a Forecast Zone during the registration process.
- (2) ~~On a rolling 36-month basis,~~ Monthly, ERCOT shall calculate the aggregate weekly Generation Resource capacity ~~and Load Resource capacity in for~~ the ERCOT Region and the Forecast Zones projected to be available during the ERCOT Region peak Load hour of each week for the following 36 months, starting with the second week ~~and the~~

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aggregate weekly Load Resource capacity for the ERCOT Region projected to be available during the ERCOT Region peak Load hour of each week for the following 36 months, starting with the second week.

- (3) On a rolling hourly basis, ERCOT shall calculate the aggregate hourly Generation Resource capacity and Load Resource capacity in the ERCOT Region and Forecast Zones projected to be available during each hour for the following seven days.
- (4) Projections of Generation Resource capacity from Intermittent Renewable Resources (IRRs) ~~Wind-powered Generation Resources (WGRs)~~ shall be consistent with capacity availability estimates, such as the effective Load carrying capability of wind, developed jointly between ERCOT and the appropriate Technical Advisory Committee (TAC) subcommittee and approved by the ERCOT Board or typical production expectations consistent with expected wind profiles as appropriate for the scenario being studied ~~that capacity forecasted in Section 3.13, Renewable Production Potential Forecasts.~~
- (5) ERCOT shall publish procedures describing the forecasting process on the Market Information System (MIS) Public Area.

3.2.2 Demand Forecasts

- (1) Monthly, ERCOT shall develop ~~and publish monthly on the Market Information System (MIS) Secure Area the weekly peak hour~~ Demand forecasts for the ERCOT Region and for the by-Forecast Zones for each week, based on the 36-Month Load Forecast as described in Section 3.12, Load Forecasting, for the following 36 months, starting with the second week ~~for the next 36 months using the 36-Month Load Forecast as described in Section 3.12, Load Forecasting.~~ During the development of this forecast, ERCOT may consult with Qualified Scheduling Entities (QSEs), Transmission Service Providers (TSPs), and other Market Participants that may have knowledge of potential Load growth.
- (2) ERCOT may, at its discretion, publish on the Market Information System (MIS) Secure Area, additional peak Demand analyses for periods beyond 36 months.
- (3) ERCOT shall develop and publish hourly on the MIS Secure Area peak Demand forecasts by Forecast Zone for each hour of the next seven days using the Seven-Day Load Forecast as described in Section 3.12.
- (4) For purposes of Demand forecasting, ERCOT may choose to use the same forecast as that used for the Load forecast.
- (5) ERCOT shall publish procedures describing the forecasting process on the Market Information System (MIS) Public Area.

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3.2.3 System Adequacy Reports

- (1) ERCOT shall publish system adequacy reports to assess the adequacy of Resources and Transmission Facilities to meet the projected Demand. ERCOT shall provide reports on a system-wide basis and by Forecast Zone, where applicable.
- (2) ERCOT shall generate and post a “Medium-Term System Adequacy Report” on the MIS Secure Area. ERCOT shall update the report monthly using the latest aggregate Generation Resource capacity and Load Resource capacity. The data will be provided for each week, starting with the second week, of a rolling 36-month period. The Medium-Term System Adequacy Report will provide:
 - (a) Generation Resource capacity at the time of forecasted weekly peak Demand;
 - (b) Load Resource capacity at the time of the forecasted weekly peak Demand;
 - (c) Weekly peak forecast Demand described in Section 3.2.2, Demand Forecasts;
 - (d) Calculated system reserve, highlighting any deficiency hours, that excludes Load Resource capacity;
 - (e) Calculated system reserve, highlighting any deficiency hours, that includes Load Resource capacity shown as a reduction in forecast Demand;
 - (f) Ancillary Service requirements; and
 - (g) Transmission constraints that have a high probability of being binding in the Security-Constrained Economic Dispatch (SCED) or Day-Ahead Market (DAM) given the forecasted system conditions for each week excluding the effects of any transmission or Resource Outages.
- (3) ERCOT shall generate and post a “Short-Term System Adequacy Report” on the MIS Secure Area. ERCOT shall update this report hourly following updates to the Seven-Day Load Forecast and on detection of a change to Resource Status that changes the availability of a Resource. The Short-Term System Adequacy Report will provide:
 - (a) For Generation Resources, the available On-Line Resource capacity for each hour, using the COP for the first seven days;
 - (b) For Load Resources, the available capacity for each hour using the COP;
 - (c) Forecast Demand for each hour described in Section 3.2.2, ~~Demand Forecasts~~;
 - (d) Ancillary Service requirements for the Operating Day and subsequent days; and
 - (e) Transmission constraints that have a high probability of being binding in SCED or DAM given the forecasted system conditions for each week including the effects

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of any transmission or Resource Outages. The binding constraints may not be updated every hour.

3.2.4 Statement of Opportunities

- (1) ERCOT shall annually publish on the MIS Public Area a “Statement of Opportunities” ~~report~~ that provides a projection of the capability of existing and planned Generation Resources, Load Resources, and Transmission Facilities to reliably meet ERCOT’s projected needs. A Statement of Opportunities ~~report~~ published in even-numbered years shall use a ten-year study horizon and be published by December 31 of those years. A Statement of Opportunity ~~report~~ published in odd-numbered years shall use a five-year study horizon and be published on or around October 1 of those years.
- (2) If additional information is required to complete the Statement of Opportunities, ERCOT shall prescribe these reporting requirements for Generation Entities and TSPs to report ~~to ERCOT~~ their plans for adding new facilities, upgrading existing facilities, and mothballing or retiring existing facilities. ERCOT also shall prescribe any additional reporting requirements needed for Load Entities to report to ERCOT their plans for adding new Load Resources or retiring existing Load Resources.
- (32) Prior to prescribing new reporting requirements for the development of the Statement of Opportunities, ERCOT shall use information already being provided by Market Participants if doing so is cost-effective.

3.12 Load Forecasting

ERCOT shall produce and use Load forecasts to serve operations and planning objectives.

- (a) ERCOT shall update and post hourly on the Market Information System (MIS) Secure Area a “Seven-Day Load Forecast” as described in 3.12.1, Seven-Day Load Forecast, that ~~generates-provides~~ forecasted hourly Load over the next 168 hours for each of the Weather Zones and for each of the Forecast Zones.
- (b) ERCOT shall ~~update-develop~~ and post monthly on the MIS Secure Area a “36-Month Load Forecast” as described in 3.12.1, Seven-Day Load Forecast, that provides a daily minimum and maximum Load forecast for the next 36-months for the ERCOT Region, for each of the Weather Zones, and for each of the Forecast Zones. The 36-Month Load Forecast is used in the Outage coordination process and for Resource adequacy reporting.

3.12.1 Seven-Day Load Forecast

- (1) ERCOT shall use the Seven-Day Load Forecast to predict hourly Loads for the next 168 hours based on current weather forecast parameters within each Weather Zone. Preparation for Day-Ahead Operations requires an accurate forecast of the Loads for which generation capacity must be secured. The Seven-Day Load Forecast must have a

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“self-training” mode that allows ERCOT to review historic Load data and provide the ability to retrain the Seven-Day Load Forecast algorithm.

- (2) The inputs for the Seven-Day Load Forecast are as follows:
 - (a) Hourly forecasted weather parameters for the weather stations within the Weather Zones, which are updated at least once per hour; and
 - (b) Training information based on historic hourly integrated Weather Zone Loads.
- (3) ERCOT shall review the forecast suggested by Seven-Day Load Forecast and shall use its judgment, if necessary, to modify the result prior to implementation in the Ancillary Service capacity Monitor, Day-Ahead Reliability Unit Commitment (DRUC), Hour-Ahead Reliability Unit Commitment (HRUC), and Resource adequacy reporting.

~~3.12.2 — 36 Month Load Forecast~~

- ~~(1) — ERCOT shall use the 36 Month Load Forecast to predict daily minimum and maximum Loads for the next 36 months. An accurate 36 Month Load Forecast is required to perform Outage Coordination, Resource adequacy reporting and other Operations analysis for the three years ahead.~~
- ~~(2) — ERCOT shall review the forecast suggested by the 36 Month Load Forecast and shall use its judgment if necessary to modify the result before implementation and posting on the MIS Secure Area.~~

3.13 Renewable Production Potential Forecasts^[st1]

- (1) ERCOT shall produce forecasts of Renewable Production Potential (RPP) for Wind-powered Generation Resources (WGRs) to be used as an input into the Day-Ahead Reliability Unit Commitment (DRUC) and Hour-Ahead Reliability Unit Commitment (HRUC). ERCOT shall produce the forecasts using information provided by WGR Entities, meteorological information, and Supervisory Control and Data Acquisition (SCADA). WGR Entities shall install telemetry at their WGRs and transmit the ERCOT-specified site-specific meteorological information to ERCOT. WGR Entities shall also provide detailed equipment status at the WGR facility as specified by ERCOT to support the RPP forecast. ERCOT shall provide forecasts for each WGR to the Qualified Scheduling Entities (QSEs) representing WGRs. QSEs shall use the ERCOT-provided forecasts for WGRs throughout the Day-Ahead and Operating Day for applicable markets and Reliability Unit Commitments (RUCs). Similar requirements for solar power and run-of-the-river hydro must be developed as needed.
- ~~(2) — WGR Entities shall provide ERCOT and their respective QSEs with Long Term Wind Power Forecast (LTWPF) profiles for each WGR having an aggregated rating larger than 10 MW at its point of interconnection with the transmission system. The profiles must forecast the daily generation shape by hourly production of wind power Renewable~~

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~~Production Potential and the WGR Entities shall provide the profiles to ERCOT for each month on a rolling 36 month basis.~~

- ~~(23)~~ ERCOT shall develop cost-effective tools or services to forecast energy production from Intermittent Renewable Resources (IRRs) with technical assistance from QSEs scheduling ~~Renewable Resources~~IRRs. ERCOT shall use its best efforts to develop accurate and unbiased forecasts, as limited by the availability of relevant explanatory data. ERCOT shall post on the Market Information System (MIS) Secure Area objective criteria and thresholds for unbiased, accurate forecasts within five Business Days of change.