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PROJECT NO. 24055

**PROTOCOL REVISION
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ELECTRIC RELIABILITY
COUNCIL OF TEXAS**

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**NOTICE OF ERCOT NODAL PROTOCOL REVISIONS
(APRIL 27, 2012)**

COMES NOW, Electric Reliability Council of Texas, Inc. (ERCOT) and respectfully informs the Public Utility Commission of Texas (PUCT, Commission) of revisions to the ERCOT Nodal Protocols.

Summary of Revisions

In accordance with the process set forth in Section 21 of the ERCOT Protocols, ERCOT adopted Nodal Protocol Revision Requests (NPRRs) 314, 359, 361 and 395 (effective April 27, 2012). These NPRRs were developed in the ERCOT committee process, and approved by the ERCOT Board of Directors (ERCOT Board) on July 19, 2011 (NPRR 314), August 16, 2011 (NPRR 359 and 361), and December 12, 2011 (NPRR 395). These NPRRs are described below.

NPRR	Description	ERCOT Nodal Protocol Sections Modified
314 (Unboxed language)	<i>Requirement to Post Generation Resources Temporal Constraints.</i> This NPRR specifies the need for ERCOT to post to the Market Information System (MIS) Certified Area the current time since a Generation Resource last went Off-Line (in hours) and the corresponding startup time ERCOT is using for all of Off-Line Generation Resources which may be considered in any Reliability Unit Commitment (RUC) process.	Section 5, Subsection 5.1 (Attachment A)
359 (Unboxed language)	Monthly TDSP Load Report. This NPRR creates a new secure report to provide aggregate Load data for Transmission Service Providers (TSPs) and Distribution Service Providers (DSPs) in a monthly posting.	Section 11, Subsection 11.5.1.2 (Attachment B)

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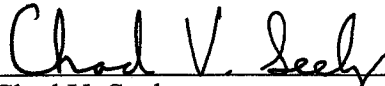
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<p>361 (Unboxed language)</p>	<p>Real-Time Wind Power Production Data Transparency. This NPRR adds a new public report to be posted every five minutes that provides, on both a system-wide and regional basis (West and North, South and Houston, are the two regions), the five-minute actual wind power production for a rolling historical 60-minute period; and changes the existing hourly report for Actual and Forecast Regional Wind Report to provide the following information on both a system-wide and regional basis: Aggregate Wind-powered Generation Resource (WGR) Power Output, Aggregate Short-term Wind Power Forecast (STWPF), Aggregate Wind-powered Generation Resource Production Potential (WGRPP), and Aggregate Current Operating Plan (COP) High Sustained Limits (HSLs) for On-Line WGRs.</p>	<p>Section 4, Subsection 4.2.2 (Attachment C)</p>
<p>395 (Unboxed language)</p>	<p>CRR Auction Offer Award Disclosure. This NPRR requires ERCOT to post Congestion Revenue Right (CRR) Auction offer awards following each CRR Auction in the exact fashion CRR Auction bid awards are currently posted on the MIS Public Area.</p>	<p>Section 7, Subsection 7.5.3.1 (Attachment D)</p>

The changes to the Nodal Protocol language as revised by the above NPRRs are shown in Attachments A through D in redline format.

The ERCOT Nodal Protocols, including these revisions, may be accessed on ERCOT's website at <http://nodal.ercot.com/protocols/index.html>.

Respectfully submitted,

A handwritten signature in cursive script that reads "Chad V. Seely". The signature is written in black ink and is positioned above a horizontal line.

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LIST OF ATTACHMENTS

ATTACHMENT A – Section 05-042712 Redline

ATTACHMENT B – Section 11-042712 Redline

ATTACHMENT C – Section 04-042712 Redline

ATTACHMENT D – Section 07-042712 Redline

ERCOT Nodal Protocols

Section 5: Transmission Security Analysis and Reliability Unit Commitment

~~March 1, 2012~~ April 27, 2012

5 TRANSMISSION SECURITY ANALYSIS AND RELIABILITY UNIT COMMITMENT

5.1 Introduction

- (1) Transmission security analysis and Reliability Unit Commitment (RUC) are used to ensure ERCOT System reliability and to ensure that enough Resource capacity, in addition to Ancillary Service capacity, is committed in the right locations to reliably serve the forecasted Load on the ERCOT System.
- (2) ERCOT shall conduct at least one Day-Ahead RUC (DRUC) and at least one Hourly RUC (HRUC) before each hour of the Operating Day. ERCOT, in its sole discretion, may conduct a RUC at any time to evaluate and resolve reliability issues.
- (3) The DRUC must be run after the close of the Day-Ahead Market (DAM).
- (4) The DRUC uses Three-Part Supply Offers submitted before the DAM by Qualified Scheduling Entities (QSEs) that were considered in the DAM but not awarded in the DAM. A QSE may not submit a Three-Part Supply Offer to be considered in the DRUC unless the offer was also submitted for consideration in the DAM.
- (5) ERCOT must initiate the HRUC process at least one hour before the Operating Hour to fine-tune the Resource commitments using updated Load forecasts and updated Outage information.
- (6) The RUC Study Period for DRUC is the next Operating Day. The RUC Study Period for HRUC is the balance of the current Operating Day plus the next Operating Day if the DRUC for the Operating Day has been solved.
- (7) HRUC may decommit Resources only to maintain the reliability of the ERCOT System.
- (8) For each RUC Study Period, the RUC considers capacity requirements for each hour of the RUC Study Period with the objective of minimizing costs based on Three-Part Supply Offers and while substituting a proxy Energy Offer Curve for the Energy Offer Curve. The proxy Energy Offer Curve is calculated in a way that minimizes the effect of the proxy Energy Offer Curves on optimization.
- (9) The calculated Resource commitments arising from each RUC process must be reviewed by ERCOT before issuing Dispatch Instructions to QSEs to commit, extend, or decommit Resources.
- (10) The Security Sequence is a set of prerequisite processes for RUC that describes the key system components and inputs that are required to support the RUC process, the RUC process itself, and the ERCOT review of the Resource commitment recommendations made by the RUC process.

- (11) The RUC process may not be used to buy Ancillary Service unless the Ancillary Service Offers submitted in the DAM are insufficient to meet the requirements of the Ancillary Service Plan.
- (12) After the use of market processes to the fullest extent practicable without jeopardizing the reliability of the ERCOT System, any ERCOT Dispatch Instructions for additional capacity that order a QSE to commit a specific Generation Resource to be On-Line shall be considered a RUC dispatch for the purpose of the Settlement of payments and charges related to the committed Generation Resource. An Operating Condition Notice (OCN), Advisory, Watch, or Emergency Notice requesting the available capacity of any currently available Generation Resources but not naming specific Generation Resources is not considered a RUC dispatch for purposes of Settlement.
- (13) ERCOT shall post on the Market Information System (MIS) Certified Area, for each Off-Line Generation Resource that may be selected by a RUC process, the current time since the Generation Resource last went Off-Line (in hours) and the corresponding start-up times ERCOT is using for each such Off-Line Generation Resource. The time since the Generation Resource last went Off-Line and start-up times shall be updated at least hourly.

[NPRR314: Insert paragraph (13) below upon system implementation:]

- (13) ~~ERCOT shall post on the Market Information System (MIS) Certified Area, for each Off-Line Generation Resource that may be selected by a RUC process, the current time since the Generation Resource last went Off-Line (in hours) and the corresponding start-up times ERCOT is using for each such Off-Line Generation Resource. The time since the Generation Resource last went Off-Line and start-up times shall be updated at least hourly.~~

ERCOT Nodal Protocols

Section 11: Data Acquisition and Aggregation

~~February 1, 2012~~ April 27, 2012

11 DATA ACQUISITION AND AGGREGATION

11.5 Data Aggregation

11.5.1 Aggregate Retail Load Data

11.5.1.2 TSP and/or DSP Load Data Posting/Availability

- (1) ERCOT will post TSP and/or DSP Load plus allocation of Distribution Losses, Transmission Losses, and UFE, by TSP and/or DSP, to the MIS Secure Area.
- (2) ERCOT will make the aforementioned data for each Settlement run type available to Market Participants via the MIS Secure Area within 48 hours of finalizing the data for Settlement Statements.
- (3) ERCOT will post to the MIS Secure Area, a monthly report including TSP and/or DSP 15-minute interval Load data for each Operating Day adjusted to exclude Block Load Transfers (BLTs) or Direct Current Tie (DC Tie) exports.

[NPRR359: Insert paragraph (3) below upon system implementation:]

- (3) ~~ERCOT will post to the MIS Secure Area, a monthly report including TSP and/or DSP 15-minute interval Load data for each Operating Day adjusted to exclude Block Load Transfers (BLTs) or Direct Current Tie (DC Tie) exports.~~

ERCOT Nodal Protocols

Section 4: Day-Ahead Operations

~~March 1, 2012~~ April 27, 2012

4 DAY-AHEAD OPERATIONS

4.2 ERCOT Activities in the Day-Ahead

4.2.2 *Wind-Powered Generation Resource Production Potential*

- (1) ERCOT shall produce and update hourly a Short-Term Wind Power Forecast (STWPF) that provides a rolling 48-hour hourly forecast of wind production potential for each Wind-powered Generation Resource (WGR). ERCOT shall produce and update an hourly Total ERCOT Wind Power Forecast (TEWPF) providing a probability distribution of the hourly production potential from all wind-power in ERCOT for each of the next 48 hours. Each Generation Entity that owns a WGR shall install and telemeter to ERCOT the site-specific meteorological information that ERCOT determines is necessary to produce the STWPF and TEWPF forecasts. ERCOT shall establish procedures specifying the accuracy requirements of WGR meteorological information telemetry.
- (2) ERCOT shall use the probabilistic TEWPF and select the forecast that the actual total ERCOT WGR production is expected to exceed 50% of the time (50% probability of exceedance forecast). To produce the STWPF, ERCOT will allocate the TEWPF 50% probability of exceedance forecast to each WGR such that the sum of the individual STWPF forecasts equal the TEWPF forecast. The updated STWPF forecasts for each hour for each WGR are to be used as input into each Reliability Unit Commitment (RUC) process as per Section 5, Transmission Security Analysis and Reliability Unit Commitment.
- (3) ERCOT shall produce the Wind-powered Generation Resource Production Potential (WGRPP) forecasts using the information provided by WGR owners including WGR availability, meteorological information, and Supervisory Control and Data Acquisition (SCADA).
- (4) Each hour, ERCOT shall provide, through the Messaging System, the STWPF and WGRPP forecasts for each WGR to the QSE that represents that WGR and shall post each STWPF and WGRPP forecast on the MIS Certified Area.
- (5) Each hour, ERCOT shall post to the MIS Public Area, on a system-wide and regional basis the hourly actual wind power production, STWPF, WGRPP, and aggregate Current Operating Plan (COP) High Sustained Limits (HSLs) for On-Line WGRs for a rolling historical 48-hour period. The system-wide and regional STWPF, WGRPP, and aggregate COP HSLs for On-Line WGRs will also be posted for the rolling future 48-hour period. ERCOT shall retain the STWPF and WGRPP for each hour.
- (6) Every five minutes, ERCOT shall post to the MIS Public Area, on a system-wide and regional basis, five-minute actual wind power production for a rolling historical 60-minute period.(4) ~~Each hour, ERCOT shall provide, through the Messaging System, the STWPF forecasts for each WGR to the QSE that represents that WGR and shall post each STWPF forecast on the MIS Certified Area.~~

- (5) ~~Each hour, ERCOT shall post the STWPF 50% probability of exceedance forecast on the MIS Public Area. ERCOT shall retain the STWPF for each hour.~~
- (6) ~~ERCOT shall post to the MIS Public Area on a regional basis a rolling 48 hour actual wind power production and the forecasted amounts from the STWPF and the TEWPF.~~

[NPRR361: Replace paragraphs (4), (5), and (6) above with the following upon system implementation:]

- (4) Each hour, ERCOT shall provide, through the Messaging System, the STWPF and WGRPP forecasts for each WGR to the QSE that represents that WGR and shall post each STWPF and WGRPP forecast on the MIS Certified Area.
- (5) Each hour, ERCOT shall post to the MIS Public Area, on a system wide and regional basis the hourly actual wind power production, STWPF, WGRPP, and aggregate Current Operating Plan (COP) High Sustained Limits (HSLs) for On-Line WGRs for a rolling historical 48 hour period. The system wide and regional STWPF, WGRPP, and aggregate COP HSLs for On-Line WGRs will also be posted for the rolling future 48-hour period. ERCOT shall retain the STWPF and WGRPP for each hour.
- (6) Every five minutes, ERCOT shall post to the MIS Public Area, on a system wide and regional basis, five-minute actual wind power production for a rolling historical 60-minute period.

ATTACHMENT D

ERCOT Nodal Protocols
Section 7: Congestion Revenue Rights

~~March 1, 2012~~ April 27, 2012

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7 CONGESTION REVENUE RIGHTS

7.5 CRR Auctions

7.5.3 ERCOT Responsibilities

7.5.3.1 Data Transparency

- (1) Following each CRR Auction, ERCOT shall record and make available to each CRR Account Holder on the MIS Certified Area the following information for each CRR awarded in, sold in, or allocated before, the CRR Auction to the specific CRR Account Holder:
 - (a) Unique identifier of each CRR;
 - (b) Type of CRR (PTP Option, PTP Obligation, PTP Option with Refund, PTP Obligation with Refund or FGRs);
 - (c) Clearing price and, if applicable, the Pre-Assigned Congestion Revenue Right (PCRR) pricing factor of each CRR;
 - (d) Except for FGRs, the source and sink of each CRR;
 - (e) FGR identity and direction;
 - (f) The date and time-of-use block for which the CRR is effective; and
 - (g) Total MW of each PTP pair of CRR, awarded, sold or allocated, or total MW for each flowgate, awarded, sold or allocated.
- (2) Following each CRR Auction, ERCOT shall post to the MIS Public Area the following information for all outstanding or sold CRRs following this auction:
 - (a) PTP Options and PTP Options with Refund – the source and sink, and total MWs;
 - (b) PTP Obligations and PTP Obligations with Refund – the source and sink and total MWs;
 - (c) FGRs – the identity of each directional flowgate, and the magnitude of positive flow (MW) on each directional network element represented by each flowgate;
 - (d) The identities of the CRR Account Holders that sold, were awarded, or were allocated CRRs in or before the CRR Auction;
 - (e) The clearing prices for each strip of CRR Auction bids and CRR Auction offers awarded in the CRR Auction;

SECTION 7: CONGESTION REVENUE RIGHTS

- (f) The identity and post contingency flow of each binding directional element based on the CRR Network Model used in the CRR Auction;
- (g) All CRR Auction bids and CRR Auction offers, without identifying the name of the CRR Account Holder that submitted the bid or offer; and
- (h) The clearing prices for each strip of CRRs bid or offered in the CRR Auction (2)
Following each CRR Auction, ERCOT shall post to the MIS Public Area the following information for all outstanding CRRs following this auction:
 - (a) PTP Options and PTP Options with Refund the source and sink, and total MWs;
 - (b) PTP Obligations and PTP Obligations with Refund the source and sink and total MWs;
 - (c) FGRs the identity of each directional flowgate, and the magnitude of positive flow (MW) on each directional network element represented by each flowgate;
 - (d) The identities of the CRR Account Holders that were awarded or allocated CRRs in or before the CRR Auction;
 - (e) The clearing prices for each strip of CRR blocks awarded in the CRR Auction;
 - (f) The identity and post contingency flow of each binding directional element based on the CRR Network Model used in the CRR Auction; and
 - (g) All CRR Auction Bids and CRR Auction Offers, without identifying the name of the CRR Account Holder that submitted the bid or offer.

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[NPRR395: Replace paragraph (2) above with the following upon system implementation:]

- (2) Following each CRR Auction, ERCOT shall post to the MIS Public Area the following information for all outstanding or sold CRRs following this auction:
 - (a) PTP Options and PTP Options with Refund the source and sink, and total MWs;
 - (b) PTP Obligations and PTP Obligations with Refund the source and sink and total MWs;
 - (c) FGRs the identity of each directional flowgate, and the magnitude of positive flow (MW) on each directional network element represented by each flowgate;
 - (d) The identities of the CRR Account Holders that sold, were awarded, or were allocated CRRs in or before the CRR Auction;
 - (e) The clearing prices for each strip of CRR Auction bids and CRR Auction offers awarded in the CRR Auction;

SECTION 7: CONGESTION REVENUE RIGHTS

- (f) The identity and post contingency flow of each binding directional element based on the CRR Network Model used in the CRR Auction;
- (g) All CRR Auction bids and CRR Auction offers, without identifying the name of the CRR Account Holder that submitted the bid or offer; and
- (h) The clearing prices for each strip of CRRs bid or offered in the CRR Auction.