

NPRR329 – Printable Version

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NPRR Number	342	NPRR Title	Notification and Actions to Address Outcomes Inconsistent With Efficient Operation of the ERCOT Market
Revision Description		<p>This Nodal Protocol Revision Request (NPRR) details the process for notifying Market Participants of market outcomes in the Day-Ahead Market (DAM) and Real-Time Market (RTM) that are inconsistent with the “efficient operation of the market” in the ERCOT Region, as that term is defined in paragraph (c)(2) of P.U.C. SUBST. R. 25.503, Oversight of Wholesale Market Participants. The NPRR gives ERCOT discretion to implement corrective measures and advise Market Participants to discontinue practices that are inconsistent with efficient operation of the market. The NPRR allows the ERCOT CEO to deem any NPRR designed to correct such activity as Urgent.</p> <p>It is assumed that prior to taking actions allowed by NPRR342, ERCOT shall consult with the Independent Market Monitor (IMM) and Public Utility Commission of Texas (PUCT) Staff regarding actions that are inconsistent with the efficient operation of ERCOT markets.</p>	

Proposed Protocol Language Revision

4.1 Introduction

- (1) The Day-Ahead Market (DAM) is a daily, co-optimized market in the Day-Ahead for Ancillary Service capacity, certain Congestion Revenue Rights (CRRs), and forward financial energy transactions.
- (2) Participation in the DAM is voluntary, except for Reliability Must Run (RMR) Units, the participation of which is governed by their respective RMR Agreements and Section 4.4.8, RMR Offers.
- (3) DAM energy settlements use DAM Settlement Point Prices that are calculated for Resource Nodes, Load Zones, and Hubs for a one-hour Settlement Interval using the Locational Marginal Prices (LMPs) from DAM. In contrast, the Real-Time energy settlements use Real-Time Settlement Point Prices that are calculated for Resource Nodes, Load Zones, and Hubs for a 15-minute Settlement Interval.

- (4) To the extent that the ERCOT CEO or designee determines that Market Participant activities have produced an outcome inconsistent with the efficient operation of the

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ERCOT administered markets as defined in P.U.C. Subst. R 25.503(c)(2). ERCOT may prohibit the activity by Notice for a period beginning on the date of the Notice and ending no later than 45 days after the date of the Notice. ERCOT may issue subsequent Notices on the same activity. The ERCOT CEO may deem any Nodal Protocol Revision Request (NPRR) designed to correct the activity or issues affecting the activity as Urgent pursuant to Section 21.5, Urgent Nodal Protocol Revision Requests.

4.5.3 Communicating DAM Results

- (1) As soon as practicable, but no later than 1330 in the Day-Ahead, ERCOT shall notify the parties to each cleared DAM transaction (e.g., the buyer and the seller) of the results of the DAM as follows:
 - (a) Awarded Ancillary Service Offers, specifying Resource, MW, Ancillary Service type, and price, for each hour of the awarded offer;
 - (b) Awarded energy offers from Three-Part Supply Offers and from DAM Energy-Only Offers, specifying Resource (except for DAM Energy-Only Offers), MWh, Settlement Point, and Settlement Point Price, for each hour of the awarded offer;
 - (c) Awarded DAM Energy Bids, specifying MWh, Settlement Point, and Settlement Point Price for each hour of the awarded bid;
 - (d) Awarded CRR Offers (PTP Options and PTP Options with Refund), specifying CRR identifier(s), number of CRRs in MW, source and sink Settlement Points, and price, for each Settlement Interval of the awarded offer; and
 - (e) Awarded PTP Obligation Bids, number of PTP Obligations in MW, source and sink Settlement Points, and price for each Settlement Interval of the awarded bid.
- (2) As soon as practicable, but no later than 1330, ERCOT shall post on the Market Information System (MIS) Public Area the hourly:
 - (a) Day-Ahead MCPC for each type of Ancillary Service for each hour of the Operating Day;
 - (b) Day-Ahead Settlement Point Prices (DASPPs) for each Settlement Point for each hour of the Operating Day;
 - (c) Day-Ahead hourly LMPs for each Electrical Bus for each hour of the Operating Day;
 - (d) Shadow Prices for every binding constraint for each hour of the Operating Day;

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- (e) Quantity of total Ancillary Service Offers received in the DAM, in MW by Ancillary Service type for each hour of the Operating Day; and
 - (f) Aggregated Ancillary Service Offer Curve of all Ancillary Service Offers for each type of Ancillary Service for each hour of the Operating Day.
- (3) As soon as practicable, ERCOT shall post on the ERCOT website the hourly:
- (a) Energy bought in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Bids (in MWh) bought in the DAM at each Settlement Point for each hour of the Operating Day;
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that sink at each Settlement Point for each hour of the Operating Day; and
 - (iii) The total quantity of PTP Options that were declared before DAM execution by the Non-Opt-In Entity (NOIE) to be settled in Real-Time and not cleared in the DAM (in MWh) that sink at each Settlement Point for each hour of the Operating Day; and
 - (b) Energy sold in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Offers (in MWh), from Three-Part Supply Offers and DAM Energy Only Offers, bought in the DAM at each Settlement Point for each hour of the Operating Day;
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that source at each Settlement Point for each hour of the Operating Day; and
 - (iii) The total quantity of PTP Options that were declared before DAM execution by the NOIE to be settled in Real-Time and not cleared in the DAM (in MWh) that source at each Settlement Point for each hour of the Operating Day.
- (4) ERCOT shall monitor Day-Ahead MCPCs and Day-Ahead hourly LMPs for errors and if there are conditions that cause the price to be questionable, ERCOT shall notify all Market Participants that the DAM prices are under investigation as soon as practicable.
- (5) All DAM LMPs, MCPCs, and Settlement Point Prices are final at 1000 of the next Business Day after the Operating Day. After DAM LMPs, MCPCs, and Settlement Point Prices are final, if ERCOT determines that prices are in need of correction, it shall notify Market Participants and describe the need for such correction. DAM LMPs, MCPCs, and Settlement Point Prices cannot be changed unless the ERCOT Board finds that the DAM

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LMPs, MCPCs, or Settlement Point Prices are significantly affected by [aa](#) software or data error.

[NPRR303 & NPRR293: Replace Section 4.5.3 above with the following upon system implementation:]

4.5.3 Communicating DAM Results

- (1) As soon as practicable, but no later than 1330 in the Day-Ahead, ERCOT shall notify the parties to each cleared DAM transaction (e.g., the buyer and the seller) of the results of the DAM as follows:
 - (a) Awarded Ancillary Service Offers, specifying Resource, MW, Ancillary Service type, and price, for each hour of the awarded offer;
 - (b) Awarded energy offers from Three-Part Supply Offers and from DAM Energy-Only Offers, specifying Resource (except for DAM Energy-Only Offers), MWh, Settlement Point, and Settlement Point Price, for each hour of the awarded offer;
 - (c) Awarded DAM Energy Bids, specifying MWh, Settlement Point, and Settlement Point Price for each hour of the awarded bid;
 - (d) Awarded CRR Offers (PTP Options and PTP Options with Refund), specifying CRR identifier(s), number of CRRs in MW, source and sink Settlement Points, and price, for each Settlement Interval of the awarded offer; and
 - (e) Awarded PTP Obligation Bids, number of PTP Obligations in MW, source and sink Settlement Points, and price for each Settlement Interval of the awarded bid.
- (2) As soon as practicable, but no later than 1330, ERCOT shall post on the Market Information System (MIS) Public Area the hourly:
 - (a) Day-Ahead MCPC for each type of Ancillary Service for each hour of the Operating Day;
 - (b) Day-Ahead Settlement Point Prices (DASPPs) for each Settlement Point for each hour of the Operating Day;
 - (c) Day-Ahead hourly LMPs for each Electrical Bus for each hour of the Operating Day;
 - (d) Shadow Prices for every binding constraint for each hour of the Operating Day;
 - (e) Quantity of total Ancillary Service Offers received in the DAM, in MW by Ancillary Service type for each hour of the Operating Day;

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- (f) Energy bought in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Bids (in MWh) bought in the DAM at each Settlement Point for each hour of the Operating Day;
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that sink at each Settlement Point for each hour of the Operating Day; and
 - (iii) The total quantity of PTP Options that were declared before DAM execution by the Non-Opt-In Entity (NOIE) to be settled in Real-Time and not cleared in the DAM (in MWh) that sink at each Settlement Point for each hour of the Operating Day;
 - (g) Energy sold in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Offers (in MWh), from Three-Part Supply Offers and DAM Energy Only Offers, bought in the DAM at each Settlement Point for each hour of the Operating Day;
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that source at each Settlement Point for each hour of the Operating Day; and
 - (iii) The total quantity of PTP Options that were declared before DAM execution by the NOIE to be settled in Real-Time and not cleared in the DAM (in MWh) that source at each Settlement Point for each hour of the Operating Day; and
 - (h) Aggregated Ancillary Service Offer Curve of all Ancillary Service Offers for each type of Ancillary Service for each hour of the Operating Day.
- (3) ERCOT shall monitor Day-Ahead MCPCs and Day-Ahead hourly LMPs for errors and if there are conditions that cause the price to be questionable, ERCOT shall notify all Market Participants that the DAM prices are under investigation as soon as practicable.
- (4) All DAM LMPs, MCPCs, and Settlement Point Prices are final at 1000 of the next Business Day after the Operating Day. After DAM LMPs, MCPCs, and Settlement Point Prices are final, if ERCOT determines that prices are in need of correction, it shall notify Market Participants and describe the need for such correction. DAM LMPs, MCPCs, and Settlement Point Prices cannot be changed unless the ERCOT Board finds that the DAM LMPs, MCPCs, or Settlement Point Prices are significantly affected by aa software or data error.

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6.1 Introduction

- (1) This Section addresses the following components: the Adjustment Period and Real-Time Operations, including Emergency Operations.
- (2) The Adjustment Period provides each Qualified Scheduling Entity (QSE) the opportunity to adjust its trades, Self-Schedules, and Resource commitments as more accurate information becomes available under Section 6.4, Adjustment Period. During the Adjustment Period, ERCOT continues to evaluate system sufficiency and security by use of Hour-Ahead Reliability Unit Commitment (RUC) processes, as described in Section 5, Transmission Security Analysis and Reliability Unit Commitment. Under certain conditions during the Adjustment Period, ERCOT may also open one or more Supplemental Ancillary Service Markets (SASMs), as described in Section 6.4.8.2, Supplemental Ancillary Services Market.
- (3) During Real-Time operations, ERCOT dispatches Resources under normal system conditions and behavior based on economics and reliability to match system Load with On-Line generation while observing Resource and transmission constraints. The Security-Constrained Economic Dispatch (SCED) process produces Base Points for Resources. ERCOT uses the Base Points from the SCED process and uses the deployment of Regulation Up (Reg-Up), Regulation Down (Reg-Down), Responsive Reserve (RRS), and Non-Spinning Reserve (Non-Spin) to control frequency and solve potential reliability issues.
- (4) Under Emergency Conditions, as described in Section 6.5.9, Emergency Operations, ERCOT may implement manual procedures and must keep the Market Participants informed of the status of the system.
- (5) Real-Time energy settlements use Real-Time Settlement Point Prices that are calculated for Resource Nodes, Load Zones, and Hubs for a 15-minute Settlement Interval, using the Locational Marginal Prices (LMPs) from all of the executions of SCED in the Settlement Interval. In contrast, the Day-Ahead Market (DAM) energy settlements will use DAM Settlement Point Prices that are calculated for Resource Nodes, Load Zones, and Hubs for a one-hour Settlement Interval.
- (6) To the extent that the ERCOT CEO or designee determines that Market Participant activities have produced an outcome inconsistent with the efficient operation of the ERCOT-administered markets as defined in P.U.C. Subst. R 25.503(c)(2), ERCOT may prohibit the activity by Notice for a period beginning on the date of the Notice and ending no later than 45 days after the date of the Notice. ERCOT may issue subsequent Notices on the same activity. The ERCOT CEO may deem any Nodal Protocol Revision Request

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(NPRR) designed to correct the activity or issues affecting the activity as Urgent pursuant to Section 21.5, Urgent Nodal Protocol Revision Requests.

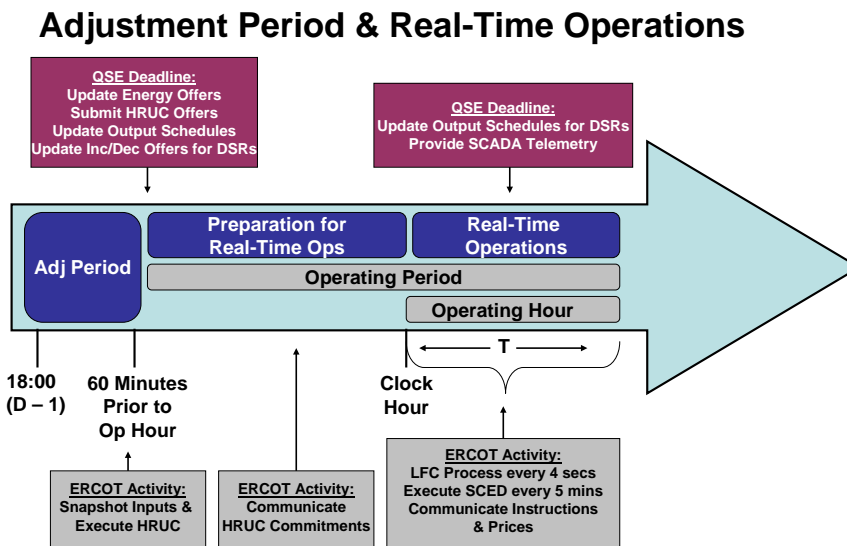
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6.3 Adjustment Period and Real-Time Operations Timeline

- (1) The figure below highlights the major activities that occur in the Adjustment Period and Real-Time operations:



- (2) Activities for the Adjustment Period begin at 1800 in the Day-Ahead and end one full hour before the start of the Operating Hour. The figure above is intended to be only a general guide and not controlling language, and any conflict between this figure and another section of the Protocols is controlled by the other section.
- (3) ERCOT shall monitor Real-Time Locational Marginal Prices (LMPs), Supplemental Ancillary Services Market (SASM) Market Clearing Prices for Capacity (MCPCs), and

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Real-Time Settlement Point Prices for errors and if there are conditions that cause the price to be questionable, ERCOT shall notify all Market Participants that the Real-Time LMPs, SASM MCPCs, and Real-Time Settlement Point Prices are under investigation as soon as practicable.

- (a) If it is determined that the Real-Time Settlement Point Prices are erroneous and correcting such prices will not affect the Base Points that were received by QSEs, then ERCOT shall correct the prices before the prices are considered final in paragraph (4) below.
 - (b) If it is determined that correcting the Real-Time Settlement Point Prices will affect the Base Points that were received by QSEs, then ERCOT shall correct the prices before the prices are considered final in paragraph (4) below and settle the Security-Constrained Economic Dispatch (SCED) executions as failed in accordance with Section 6.5.9.2, Failure of the SCED Process.
 - (c) If the Base Points received by QSEs are inconsistent with the Real-Time Settlement Point Prices, then ERCOT shall consider those Base Points as due to manual override from the ERCOT Operator and settle the relevant Settlement Interval(s) in accordance with Section 6.6.9, Emergency Operations Settlement.
- (4) All Real-Time LMPs, SASM MCPCs, and Real-Time Settlement Point Prices are final at 1600 of the next Business Day after the Operating Day. After Real-Time LMPs, SASM MCPCs, and Real-Time Settlement Point Prices are final, if ERCOT determines that prices are in need of correction, it shall notify Market Participants and describe the need for such correction. Real-Time LMPs, SASM MCPCs, and Real-Time Settlement Point Prices cannot be changed unless the ERCOT Board finds that the Real-Time LMPs, SASM MCPCs, or Real-Time Settlement Point Prices are significantly affected by [a software or data error](#).

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