



Item 11: TAC Report

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2021 Technical Advisory Committee (TAC) Chair

Special Board of Directors Meeting

ERCOT Public

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Technical Advisory Committee (TAC)

The Technical Advisory Committee (TAC), comprised of stakeholders, makes recommendations to the Board of Directors and is assisted by four subcommittees:

- [Protocol Revisions Subcommittee \(PRS\)](#)
- [Reliability and Operations Subcommittee \(ROS\)](#)
- [Retail Market Subcommittee \(RMS\)](#)
- [Wholesale Market Subcommittee \(WMS\)](#)

TAC and its subcommittees meet monthly. Numerous task forces and working groups reporting to these major subcommittees also meet regularly.

TAC makes recommendations to the ERCOT Board regarding ERCOT policies and procedures and is responsible for prioritizing projects through the Protocol Revision Request, System Change Request and Guide revision processes.

Summary of TAC Update

Revision Requests Recommended for Approval by TAC – Unopposed:

- PGRR093, Replace Inadvertent Deletions in Section 5
- PGRR094, Clarify Notification Requirement for Generator Construction Commencement or Completion
- RRGR031, Related to NPRR995, RTF-6 Create Definition and Terms for Settlement Only Energy Storage
- SCR813, NMMS Jointly-Rated Equipment Coordination Confirmation
- SCR814, Point-to-Point (PTP) Obligation Bid Interval Limit

Revision Requests Recommended for Approval by TAC – Non-Unanimous

- NPRR1082, Emergency Response Service (ERS) Test Exception for Co-located ERS Loads
- NPRR1087, Prohibit Participation of Critical Loads as Load Resources or ERS Resources – URGENT
- NPRR1090, ERS Winter Storm Uri Lessons Learned Changes and Other ERS Items – URGENT
- NPRR1093, Load Resource Participation in Non-Spinning Reserve – URGENT
- NOGRR232, Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve – URGENT
- OBDRR032, Non-Spin Changes Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve
- OBDRR033, ORDC Changes Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve

Summary of TAC Update

August/September TAC Highlights

- Emergency Conditions Issues List Review
- Sunsetting of Real-Time Co-Optimization Task Force (RTCTF)
- NRG Application for Permanent Site-Specific Exemption from Compliance with ERCOT Nodal Metering Protocols, Section 10.3.2.3(6)
- TAC Procedures
- Major Transmission Elements (MTE) List
- Port Lavaca Area Improvement RPG Project
- Revisions to Boundary Threshold
- TAC/TAC Subcommittee Structural and Procedural Review

Guide Revisions Recommended for Approval by TAC

- RMGRR167, Switch Hold Removal Documentation Clarification
- NOGRR223, Add Phasor Measurement Recording Equipment Requirement to Modified Generating Facilities in Interconnection Process
- NOGRR227, Add Phasor Measurement Recording Equipment Location for Main Power Transformer for Intermittent Renewable Resource (IRR)

Revision Requests with Opposing Votes (Vote)

NPRR1082, Emergency Response Service (ERS) Test Exception for Co-located ERS Loads

Purpose (Enerwise)	This Nodal Protocol Revision Request (NPRR) changes the testing criteria for Emergency Response Service (ERS) Load with obligations no greater than 100 kW that is co-located with an ERCOT Generator. If the ERS Load and ERS Generator are evaluated separately, the ERS Load will be considered to have passed its testing obligations if the ERS Generator meets the combined testing obligations of both the ERCOT Generator and the ERS Load.
TAC Vote	On 9/29/21, TAC voted via roll call to recommend approval of NPRR1082 as recommended by PRS in the 9/16/21 PRS Report. There was one opposing vote from the Independent Power Marketer (IPM) Market Segment.
ERCOT Market Impact Statement	ERCOT Staff has reviewed NPRR1082 and believes the market impact for NPRR1082 improves grid reliability by preventing unnecessary testing and delays where the ERS Load with an obligation of no more than 100 kW is co-located with an ERS Generator, and the ERS Generator is capable of reliably meeting the combined ERS obligations of both the ERS Generator and the ERS Load.
Effective Date/Priority	Upon system implementation
ERCOT Impact	Less than \$5k (O&M); impacts to Data Management & Analytic Systems
Business Case Highlights	When ERS Load with an obligation of no more than 100 kW is co-located with ERS Generation, if is not necessary to ensure the reliability of the ERS Load if the ERS Generation is capable of reliably meeting the combined ERS obligations of both the ERS Generator and the ERS Load. This modification prevents unnecessary testing and delays in the event ERS Load does not pass an ERS test under Section 8.1.3.2.

NPRR1087, Prohibit Participation of Critical Loads as Load Resources or ERS Resources – URGENT

Purpose (ERCOT)	<p>This NPRR defines “Critical Load” and prohibits the registration and participation of such Loads as Load Resources or ERS Resources; requires any Resource Entity that owns or controls a currently registered Load Resource to ensure and attest that the Load Resource is not located behind an ESI ID for a Critical Load, or if it is located behind such an ESI ID, that the Load Resource itself is not the Critical Load or else has available backup generation or another technology that will ensure the Load’s continued availability during an emergency deployment; and requires a QSE representing an ERS Resource to ensure and attest that the ERS Resource is not located behind an ESI ID for a Critical Load, or if it is located behind such an ESI ID, that the ERS Resource itself is not the Critical Load or else has available backup generation or another technology that ensures the ERS Resource’s continued availability during emergency deployment.</p>
TAC Vote	<p>On 9/29/21, TAC voted via roll call to recommend approval of NPRR1087 as recommended by PRS in the 9/16/21 PRS Report as amended by the 9/24/21 Enel X comments and the Revised Impact Analysis. There was one opposing vote from the IPM Market Segment.</p>
ERCOT Market Impact Statement	<p>ERCOT Staff has reviewed NPRR1087 and believes the market impact for NPRR1087 improves grid reliability by ensuring Load Resources and participants in the ERS program can fulfill all their obligations under that program.</p>
Effective Date/Priority	<p>November 1, 2021</p>
ERCOT Impact	<p>No impact</p>
Business Case Highlights	<p>This NPRR explicitly requires that any Resource Entity representing a Load Resource and any QSE representing an ERS Resource must ensure that the Load Resource or ERS Resource is not located behind an ESI ID for a Critical Load, or if it is located behind such an ESI ID, that the Load Resource or ERS Resource is not the Critical Load at the site or else uses backup generation or another technology that ensures the Load’s continued availability during emergency deployment.</p>

NPRR1090, ERS Winter Storm Uri Lessons Learned Changes and Other ERS Items – URGENT

Purpose (ERCOT)	This NPRR makes a number of revisions pertaining to ERS that addresses items 48 and 102 of TAC’s Emergency Conditions List.
TAC Vote	On 9/29/21, TAC voted via roll call to recommend approval of NPRR1090 as recommended by PRS in the 9/16/21 PRS Report; and the Revised Impact Analysis. There was one opposing vote from the IPM Market Segment.
ERCOT Market Impact Statement	ERCOT Staff has reviewed NPRR1090 and believes the market impact for NPRR1090 provides transparency, efficiency, and reliability improvements based on lessons learned from Winter Storm Uri.
Effective Date/Priority	Upon system implementation – Priority 2021; Rank 3360
ERCOT Impact	Between \$15k and \$25k; impacts to Market Operation Systems and Data Management & Analytic Systems
Business Case Highlights	Clarify that ERCOT has the flexibility to declare when exhausted ERS service types will be renewed for some or all of the ERS Time Periods, thus beginning a new ERS Contract Period; Eliminate the three-hour deployment limit and the requirement for the ERCOT Operator to issue new deployment instructions for subsequent obligations during extended events; Eliminate scheduled unavailability and planned maintenance; Modify availability language related to the treatment of ERS Resources for short ERS Contract Periods to include a specific case that was omitted in the original language and allow for consistent treatment of resources; Remove the requirement to reduce the time-weighting factor for intervals by 25% after eight hours, as it is not necessary; Remove unnecessary language from the ERS Resource-level event performance criteria that is only relevant for QSE portfolio-level event performance criteria, and adding language that clarifies what is considered a successful ERS Resource-level event performance to satisfy the annual ERS Resource testing requirements; Remove language related to testing ERS Generators for failing self-tests; Modify QSE-level event performance calculations to include capacity weighting, which will make the calculations consistent with QSE-level Standard Contract Term event performance calculations.

NPRR1093, Load Resource Participation in Non-Spinning Reserve – URGENT

Purpose (ERCOT)	<p>This NPRR changes the Protocols to allow Load Resources that are not Controllable Load Resources to provide Non-Spinning Reserve (Non-Spin). The NPRR largely reinstates Protocol requirements that were in place during the first five years of the Nodal market implementation that were subsequently changed to enable Controllable Load Resource participation in Security-Constrained Economic Dispatch (SCED) and Non-Spin. Additionally, it also incorporates market design changes that have been made for the Operating Reserve Demand Curve (ORDC) and Reliability Deployment Price Adder process when deploying Ancillary Services from Load Resources that are not Controllable Load Resources.</p>
TAC Vote	<p>On 9/29/21, TAC voted via roll call to recommend approval of NPRR1093 as recommended by PRS in the 9/16/21 PRS Report; and the Revised Impact Analysis. There were six opposing votes from the Cooperative (4) (LCRA, STEC, Brazos, GSEC) and Independent Generator (2) (Luminant, Calpine) Market Segments; and two abstentions from the IPM (Shell) and Municipal (Garland) Market Segments.</p>
ERCOT Market Impact Statement	<p>ERCOT Staff has reviewed NPRR1093 and believes the market impact for NPRR1093 allows ERCOT to access additional capacity from Load Resource participating in Non-Spin that otherwise would not be accessible, will improve Non-Spin offer liquidity, and will allow ERCOT to procure the required quantities of Non-Spin more competitively.</p>
Effective Date/Priority	<p>Upon system implementation – Priority 2021; Rank 3195</p>
ERCOT Impact	<p>Between \$450k - \$650k; impacts to Market Operation Systems, Data Management & Analytic Systems, Energy Management Systems, Credit, Settlements & Billing Systems, Grid Decision Support Systems, ERCOT Website and MIS System, Content Delivery Systems, Integration Systems</p>
Business Case Highlights	<p>ERCOT Staff has reviewed NPRR1093 and believes the market impact for NPRR1093 allows ERCOT to access additional capacity from Load Resources participating in Non-Spin that otherwise would not be accessible, will improve Non-Spin offer liquidity, and will allow ERCOT to procure the required quantities of Non-Spin more competitively.</p>



NOGRR232, Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve – URGENT

Purpose (ERCOT)	This Nodal Operating Guide Revision Request (NOGRR) aligns the Nodal Operating Guide with revisions from NPRR1093 to allow Load Resources that are not Controllable Load Resources to provide Non-Spin Ancillary Service.
TAC Vote	On 9/29/21, TAC voted via roll call to recommend approval of NOGRR232 as recommended by ROS in the 9/21/21 ROS Report. There were six opposing votes from the Cooperative (4) (LCRA, STEC, Brazos, GSEC) and Independent Generator (2) (Luminant, Calpine) Market Segments; and two abstentions from the IPM (Shell) and Municipal (Garland) Market Segments.
ERCOT Market Impact Statement	ERCOT Staff has reviewed NOGRR232 and believes the market impact for NOGRR232 allows ERCOT to access additional capacity from Load Resources participating in Non-Spin that otherwise would not be accessible, will improve Non-Spin offer liquidity, and will allow ERCOT to procure the required quantities of Non-Spin more competitively.
Effective Date/Priority	Upon system implementation of NPRR1093
ERCOT Impact	No impact (There are no additional impacts to this NOGRR beyond what was captured in the Impact Analysis for NPRR1093.)
Business Case Highlights	Alignment between Protocols and the Nodal Operating Guide is necessary and proper.

OBDRR032, Non-Spin Changes Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve

Purpose (ERCOT)	This Other Binding Document Revision Request (OBDRR) aligns the Non-Spinning Reserve Deployment and Recall Procedure with revisions from NPRR1093 to allow Load Resources that are not Controllable Load Resources to provide Non-Spin Ancillary Service.
TAC Vote	On 9/29/21, TAC voted via roll call to recommend approval of OBDRR032 as submitted and the Impact Analysis. There were six opposing votes from the Cooperative (4) (LCRA, STEC, Brazos, GSEC) and Independent Generator (2) (Luminant, Calpine) Market Segments; and two abstentions from the IPM (Shell) and Municipal (Garland) Market Segments.
ERCOT Market Impact Statement	ERCOT Staff has reviewed OBDRR032 and believes the market impact for OBDRR032 allows ERCOT to access additional capacity from Load Resources participating in Non-Spin that otherwise would not be accessible, will improve Non-Spin offer liquidity, and will allow ERCOT to procure the required quantities of Non-Spin more competitively.
Effective Date/Priority	Upon system implementation of NPRR1093
ERCOT Impact	No impact (There are no additional impacts to this OBDRR beyond what was captured in the Impact Analysis for NPRR1093.)
Business Case Highlights	Alignment between the Protocols and Other Binding Documents is necessary and proper.

OBDRR033, ORDC Changes Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve

Purpose (ERCOT)	This OBDRR aligns the Methodology for Implementing ORDC to Calculate Real-Time Reserve Price Adder with revisions from NPRR1093 to allow Load Resources that are not Controllable Load Resources to provide Non-Spin Ancillary Service.
TAC Vote	On 9/29/21, TAC voted via roll call to recommend approval of OBDRR033 as submitted and the Impact Analysis. There were six opposing votes from the Cooperative (4) (LCRA, STEC, Brazos, GSEC) and Independent Generator (2) (Luminant, Calpine) Market Segments; and two abstentions from the IPM (Shell) and Municipal (Garland) Market Segments.
ERCOT Market Impact Statement	ERCOT Staff has reviewed OBDRR033 and believes the market impact for OBDRR033 allows ERCOT to access additional capacity from Load Resources participating in Non-Spin that otherwise would not be accessible, will improve Non-Spin offer liquidity, and will allow ERCOT to procure the required quantities of Non-Spin more competitively.
Effective Date/Priority	Upon system implementation of NPRR1093
ERCOT Impact	No impact (There are no additional impacts to this OBDRR beyond what was captured in the Impact Analysis for NPRR1093.)
Business Case Highlights	Alignment between the Protocols and Other Binding Documents is necessary and proper.



August/September TAC Highlights

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Emergency Conditions Issues List Review. TAC and its subcommittees continue to work through the Emergency Conditions List items. Subcommittees report monthly to TAC on progress, changes, and additions to the items on the list. 38 of the items are currently in progress and 12 have been completed.

Sunsetting of Real-Time Co-Optimization Task Force (RTCTF). On 8/27/21, TAC unanimously voted to sunset the RTCTF; noting that future updates will be reported in ERCOT's monthly Portfolio Management presentation at PRS.

TAC Procedures. On 8/27/21, TAC unanimously voted to approve revisions to the TAC Procedures to codify quorum and voting participation requirements for hybrid remote/in-person meetings.

August/September TAC Highlights

NRG Application for Permanent Site-Specific Exemption from Compliance with ERCOT Nodal Metering Protocols, Section 10.3.2.3(6). On 8/27/21, TAC unanimously voted to recommend approval of the NRG Application for Permanent Site-Specific Exemption from Compliance with ERCOT Nodal Metering Protocols, Section 10.3.2.3(6), for the Limestone Generating station, including all six ERCOT Polled Settlement (EPS) meter points at the site.

TAC/TAC Subcommittee Structural and Procedural Review. On 9/17/21, TAC leadership hosted a meeting to discuss its annual TAC and TAC Subcommittee structural and procedural review. Results and recommendations were considered at the 9/29/21 TAC meeting.

Major Transmission Elements (MTE) List. On 9/29/21, TAC unanimously voted to approve the MTE List as endorsed by WMS and ROS.



August/September TAC Highlights

Port Lavaca Area Improvement RPG Project. On 9/29/21, TAC unanimously voted to endorse the Port Lavaca Area Improvement RPG Project Option 2EA.

Revisions to Boundary Threshold. On 9/29/21, TAC unanimously voted to recommend that the boundary threshold be increased to 7.5% for all weather zones.

Notice of Guide Revisions Recommended for Approval by TAC (*Approved by PUCT*)

RMGRR167, Switch Hold Removal Documentation Clarification. This Retail Market Guide Revision Request (RMGRR) clarifies current documentation that is required for a successful submission to request the removal of a switch hold due to a deferred payment plan or tampering.

NOGRR223, Add Phasor Measurement Recording Equipment Requirement to Modified Generating Facilities in Interconnection Process. This NOGRR adds the requirement to have phasor measurement recording equipment at existing facilities that have an aggregated generating capacity above 20 MVA at a single site following any modification that is described in paragraph (1)(b) of Planning Guide Section 5.1.1, Applicability, in order to enter the Generation Resource Interconnection or Change Request process.

NOGRR227, Add Phasor Measurement Recording Equipment Location for Main Power Transformer for Intermittent Renewable Resource (IRR). This NOGRR allows for single phase current magnitude/angle data for an interconnected IRR over 20 MVA to be taken from either side of the main power transformer where turbines exist on a feeder(s) that were aggregated to two or more IRRs.