



PUBLIC

Item 6.2: Large Electronic Load Ride-Through Requirements

Jeff Billo
Director, Operations Planning

Board of Directors Meeting

December 8-9, 2025

- **Purpose**

Provide an overview of NOGRR 282, *Large Electronic Load Ride-Through Requirements*, and NPRR 1308, *Related to NOGRR 282, Large Electronic Load Ride-Through Requirements*, and ERCOT requests Board designation of the Revision Requests as Board Priority Revision Requests.

- **Voting Items**

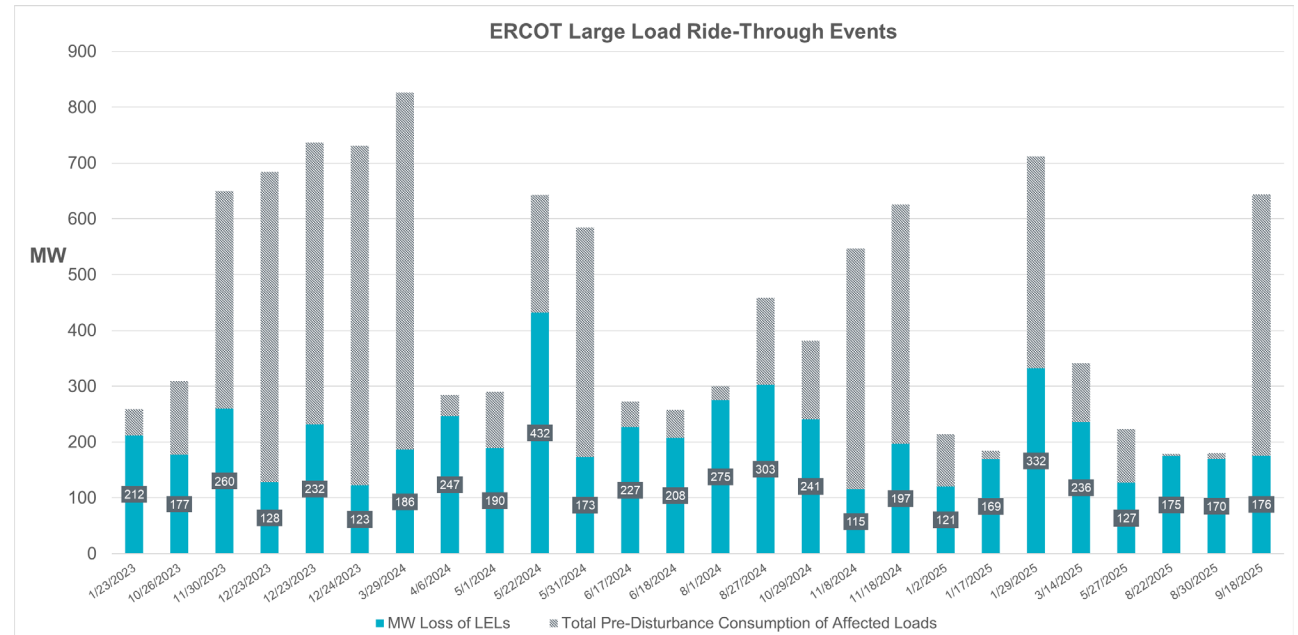
- Designate NOGRR 282 and NPRR 1308 as Board Priority Revision Requests.
- Direct TAC and ERCOT to provide regular status updates to the Board.

Key Takeaways

- ERCOT is pursuing ride-through requirements on Large Electronic Loads (LEL) to mitigate the reliability risk of multiple LELs simultaneously tripping during a common system disturbance, potentially resulting in frequency and voltage instability.
- ERCOT is requesting that the Board designate NOGRR 282 and NPRR 1308 as Board Priority Revision Requests.

Background for NOGRR 282 and NPRR 1308

- ERCOT has been working on several initiatives related to Large Load integration.
- One of those initiatives is addressing the issue of Large Electronic Loads (LELs), i.e. data centers and crypto mining facilities, tripping offline (“ride-through”) during normal voltage disturbances on the transmission system.
- ERCOT has identified 26 LEL ride-through events since the beginning of 2023.
- As additional LELs are interconnected to the system, the reliability risk of a major event will increase if the risk is not mitigated.



Key Takeaway: Lack of ride-through capability for LELs represents a growing reliability risk to the ERCOT system.



Large Electronic Load Ride-Through Requirements

- ERCOT submitted NPRR 1308 and NOGRR 282 on November 14, 2025.
 - NPRR 1308 defines a Large Electronic Load (LEL) as a Large Load (>75MW) in which 50% or greater of the Demand at the site consists of computational load, such as data centers and crypto mining facilities.
 - NOGRR 282 establishes frequency and voltage ride-through requirements for LELs.
 - ERCOT is investigating need for additional ride-through requirements on other types of Large Loads.
- Requirements are placed directly on the Customers owning the LELs.
 - Requirements are **not** retroactive; LELs that received approval to energize or have completed LLIS studies and interconnection agreements with TDSPs before November 14, 2025, are exempt.
 - Exempt LELs are incentivized to meet proposed ride-through requirements to avoid potential curtailment under certain system conditions.
 - ERCOT may require a non-exempted LEL to disconnect from the ERCOT System if it fails to meet the ride-through requirements and poses imminent risk to system reliability.

Key Takeaway: ERCOT is pursuing ride-through requirements on LELs to mitigate reliability risk.



Board Priority Designation

- ERCOT worked with TDSPs, LEL developers, and OEMs to develop the technical specifications before submitting **NOGRR 282** and **NPRR 1308**.
 - However, ERCOT expects further refinement to the requirements as these Revision Requests go through the stakeholder process.
- ERCOT requests the Board designate these Revision Requests as **Board Priority Revision Requests**, pursuant to Nodal Protocol Section 21.5.
 - These Revision Requests address a growing reliability risk to the ERCOT system.
 - The requirements provide clarity of expectations to LEL developers.
- ERCOT also requests that the Board direct TAC and ERCOT to provide status updates on these Revision Requests at each regularly scheduled meeting of the Board.
 - This will allow the Board to provide direction as may be needed during the stakeholder process.

Key Takeaway: ERCOT is requesting that the Board designate these Revision Requests as Board Priority Revision Requests, pursuant to Nodal Protocol Section 21.5 and direct TAC and ERCOT to provide regular status updates.



Appendix



Nodal Protocol Section 21.5

21.5 Urgent and Board Priority Nodal Protocol Revision Requests and System Change Requests

- (1) The party submitting a Nodal Protocol Revision Request (NPRR) or System Change Request (SCR) (“Revision Request”) may request that the Revision Request be considered on an urgent timeline (“Urgent”) only when the submitter can reasonably show that an existing Protocol or condition is impairing or could imminently impair ERCOT System reliability or wholesale or retail market operations, or is causing or could imminently cause a discrepancy between a settlement formula and a provision of these Protocols.
- (2) The Protocol Revision Subcommittee (PRS) may designate the Revision Request for Urgent consideration upon a valid motion in a regularly scheduled meeting of the PRS or at a special meeting called by the PRS leadership. Criteria for designating a Revision Request as Urgent are that the Revision Request requires immediate attention due to:
 - (a) Serious concerns about ERCOT System reliability or market operations under the unmodified language or existing conditions; or
 - (b) The crucial nature of settlement activity conducted pursuant to any settlement formula.
- (3) The ERCOT Board may designate any existing Revision Request a Board Priority Revision Request. If the ERCOT Board directs ERCOT Staff to file a Revision Request, it may further direct that a Revision Request be designated a Board Priority Revision Request. All Board Priority Revision Requests will be considered on an Urgent timeline.
- (4) ERCOT shall prepare an Impact Analysis for Urgent and Board Priority Revision Requests as soon as practicable.
- (5) The PRS shall consider the Urgent or Board Priority Revision Request and Impact Analysis, if available, at its next regularly scheduled meeting, or at a special meeting called by the PRS leadership to consider the Urgent or Board Priority Revision Request.
- (6) If recommended for approval by PRS, ERCOT shall post a PRS Report on the ERCOT website within three Business Days after PRS takes action. The Technical Advisory Committee (TAC) chair may request action from TAC to accelerate or alter the procedures described herein, as needed, to address the urgency of the situation.
- (7) Any Urgent or Board Priority Revision Requests shall be subject to an Impact Analysis pursuant to Section 21.4.9, ERCOT Impact Analysis Based on Technical Advisory Committee Report, and ERCOT Board consideration pursuant to Section 21.4.10, ERCOT Board Vote.





Date: December 1, 2025
To: Board of Directors
From: Dan Woodfin, Vice President, System Operations
Subject: Request to Designate as Board Priority Revision Requests
NOGRR282, *Large Electronic Load Ride-Through Requirements*, and
NPRR1308, *Related to NOGRR282, Large Electronic Load Ride-Through Requirements*

Issue for the ERCOT Board of Directors

ERCOT Board of Directors Meeting Date: December 8-9, 2025

Item No.: 6.2

Issue: Electric Reliability Council of Texas, Inc. (ERCOT) requests that the ERCOT Board of Directors (Board) designate Nodal Operating Guide Revision Request (NOGRR) 282, *Large Electronic Load Ride-Through Requirements*, and Nodal Protocol Revision Request (NPRR) 1308, *Related to NOGRR282, Large Electronic Load Ride-Through Requirements*, as Board Priority Revision Requests pursuant to section 21.5(3) of the ERCOT Protocols. ERCOT further requests that the Board direct the Technical Advisory Committee (TAC) and ERCOT to provide status updates on these Revision Requests at each regularly scheduled meeting of the Board while the Revision Requests are pending in the stakeholder process.

Background/History: ERCOT has identified 26 events since the beginning of 2023 in which data center or cryptomining loads have tripped offline during normal voltage disturbances on the transmission system. When loads trip due to voltage excursions (also referred to as failing to “ride through”), this can result in sudden changes to the frequency that can cause other loads and generators to trip offline, potentially resulting in cascading outages. This risk will only increase with the growing number of Large Electronic Loads (LEL) such as data centers and cryptominers in the ERCOT Region.

To ensure that LELs do not threaten system reliability during such conditions, ERCOT has submitted NOGRR 282, which would establish voltage and frequency ride-through requirements for LELs. These requirements would apply to all new LELs and would need to be met as a condition for interconnection and for maintaining interconnection with the ERCOT System. As a companion to NOGRR 282, ERCOT has also submitted NPRR 1308, which defines “Large Electronic Load” as a Large Load (>75MW) in which

50% or greater of the Demand at the site consists of computational load, such as data centers and crypto mining facilities.

Key Factors Influencing Issue: Designation of NOGRR 282 and NPRR 1308 as Board Priority Revision Requests pursuant to Protocols § 21.5(3) will ensure that they will receive priority status in the stakeholder process and can proceed to Board approval as soon as possible. The ride-through requirements proposed in NOGRR 282 are essential to reliability with the substantial growth in new LELs anticipated in the ERCOT Region. While ERCOT anticipates that some further refinement of these requirements may be appropriate based on further discussions with stakeholders, prompt approval of these Revision Requests is necessary to provide certainty to LEL project developers regarding the necessary performance specifications, which are critical to finalizing LEL project design.

ERCOT has also requested that the Board direct that TAC and ERCOT provide updates on the status of NOGRR 282 and NPRR 1308 at each regularly scheduled meeting of the Board. This will ensure the Board can provide feedback as may be needed.

Conclusion/Recommendation: Given the important reliability purpose for the ride-through requirements proposed in NOGRR 282 and the need for prompt certainty regarding these requirements, ERCOT recommends that the Board designate NOGRR 282 and NPRR 1308 as Board Priority Revision Requests. To ensure the Board can provide any needed direction on these Revision Requests during the stakeholder process, ERCOT further recommends that the Board direct TAC and ERCOT to provide updates on the status of NOGRR 282 and NPRR 1308 at each regularly scheduled meeting of the Board while the Revision Requests are pending in the stakeholder process.



ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.

BOARD OF DIRECTORS RESOLUTION

WHEREAS, ERCOT has observed that many Large Electronic Loads (LELs) have failed to ride through voltage and frequency excursions in recent years;

WHEREAS, the anticipated growth in LELs that cannot ride through these excursions will increase the risk that the ERCOT System could be subject to cascading outages;

WHEREAS, Nodal Operating Guide Revision Request (NOGRR) 282, *Large Electronic Load Ride-Through Requirement*, proposes voltage and frequency ride-through requirements for LELs that would mitigate these reliability concerns;

WHEREAS, Nodal Protocol Revision Request (NPRR) 1308, *Related to NOGRR282, Large Electronic Load Ride-Through Requirements*, proposes a definition of "Large Electronic Load" that will refer to large data centers, cryptomining facilities, and other similar computational loads;

WHEREAS, developers of LELs need certainty regarding any voltage and frequency ride-through requirements so they can appropriately design their facilities to comply with these requirements;

WHEREAS, ERCOT Protocols § 21.5(3) allows the Board of Directors (Board) to designate any existing Revision Request as a Board Priority Revision Request;

WHEREAS, designating NOGRR 282 and NPRR 1308 as Board Priority Revision Requests will ensure these Revision Requests receive priority treatment in the stakeholder process; and

WHEREAS, after due consideration of the alternatives, the Board deems it desirable and in the best interest of ERCOT to designate NOGRR 282 and NPRR 1308 as Board Priority Revision Requests;

THEREFORE, BE IT RESOLVED, that NOGRR 282 and NPRR 1308 are hereby designated as Board Priority Revision Requests and the ERCOT Technical Advisory Committee and ERCOT are hereby directed to provide periodic updates to the Board at each regularly scheduled meeting of the Board while these Revision Requests remain pending in the ERCOT stakeholder process.

CORPORATE SECRETARY'S CERTIFICATE

I, Brandon Gleason, Assistant Corporate Secretary of ERCOT, do hereby certify that, at its _____ meeting, the Board passed a motion approving the above Resolution by _____.



IN WITNESS WHEREOF, I have hereunto set my hand this ____ day of _____,
2025.

Brandon Gleason

Assistant Corporate Secretary