
ERCOT Trending Topics

TOPIC: New Ride-through Requirements for Large Computational Facilities

In this ERCOT Trending Topic, we explain what “ride through” means, why it’s important, and how ERCOT’s new rules approved by the Public Utility Commission of Texas will ensure a more stable electric grid for Texans.

KEY POINTS

- “Ride through” is the ability for large computational facilities, such as data centers and crypto-mining facilities, to remain connected to the electric grid during brief, normal disturbances that impact the grid’s voltage or frequency
- Large computational facilities that automatically disconnect from the grid at the slightest disturbance can exacerbate small fluctuations, potentially damage equipment, and/or cause a wider grid stability issue
- The Public Utility Commission of Texas (PUCT) approved ERCOT’s new rules establishing ride-through requirements for large computational facilities
- The new rules were developed after extensive collaboration with stakeholders
- Ride-through requirements protect Texans by promoting grid stability

BACKGROUND

Texas’s growing economy has drawn hundreds of large computational facilities, like data centers and crypto miners, to the state seeking access to the ERCOT power grid. Unlike a traditional large industrial user such as a steel mill, whose electricity use rises and falls with production cycles, computational facilities consume massive amounts of electricity at a consistent level, around the clock.

These facilities also have been found to easily automatically disconnect from the grid — or trip offline — during small, routine grid disturbances. These factors present significant grid stability concerns that ERCOT plans to alleviate with two new rule changes that ensure large computational facilities contribute to grid reliability efforts.

What is ride through?

The Texas power grid operates at a steady frequency of 60 hertz, meaning the electrical current alternates direction 60 times every second. Think of it like the steady heartbeat that keeps the human body running. All equipment connected to the power grid is built to match that specific rhythm.

Small disturbances in the rhythm happen routinely. A transmission line that fails during a thunderstorm or a power plant unexpectedly going offline due to a mechanical issue can create a small disturbance. When that happens, the grid's frequency and/or voltage briefly dips or rises while the system rebalances.

RIDE THROUGH

Large computational facilities must remain connected to the grid during brief fluctuations to ensure reliability for all.



Most equipment is designed to stay connected to the grid and “ride through” these brief fluctuations in the rhythm. When equipment rides through a disturbance, the grid recovers quickly and most customers never notice anything happened.

Why does ride through matter?

If a large computational facility is unable to ride through a normal disturbance and disconnects, that sudden loss of a massive block of electricity demand can push the grid's frequency and voltage to swing in the opposite direction, potentially triggering more equipment to disconnect as a result.

What began as a routine, manageable event can balloon quickly, triggering instability that can damage equipment and cause broader outages that potentially affect other customers on the grid. ERCOT has recorded multiple instances where large computational facilities were unable to ride through events that the grid otherwise would have handled without incident.

How does this affect the average electricity customer in Texas?

ERCOT's new ride-through requirements for large computational facilities are designed to protect Texans. By requiring large electricity users to remain connected to the grid during routine disturbances, ERCOT reduces the risk of cascading effects on other customers and maintains the reliability upon which homes and businesses across Texas depend.

ERCOT's new rules and why they are significant to maintaining a reliable grid

ERCOT staff first began to tackle the issue of ride-through requirements in 2023 and did so over several years by conducting an extensive outreach and feedback process with its stakeholders, including the large computing industry. Staff met directly with data center operators and other large computational facility owners, held public stakeholder sessions, and incorporated numerous changes into the rules based on stakeholder input.

As a result, the two rule changes — [NOGRR282](#) (a Nodal Operating Guide Revision Request) and [NPRR1308](#) (a Nodal Protocol Revision Request) — work together to establish specific frequency and voltage ranges within which qualifying large computational facilities must remain connected to the grid. When grid conditions fall within these ranges — even temporarily — covered facilities may not disconnect.

ERCOT's Technical Advisory Committee (TAC), a body composed of industry representatives, voted to recommend approval of both rules. ERCOT's Board of Directors adopted them on June 2, 2026, and the PUCT approved them on July 9, 2026.

HOW THE RULE WAS DEVELOPED



Does this mean the facilities have to make changes to their equipment?

Potentially, yes, depending on how individual facilities are configured. Some older facilities are exempt from meeting the requirements but may be asked to curtail their usage at times to protect the grid if they cannot meet the requirements.

ERCOT designed the ride-through thresholds to be achievable with modern power systems and incorporated feedback from the industry about what is technically feasible. The applicability dates included in the rules are intended to give facilities adequate time to assess their systems and make any necessary adjustments.

What happens next?

With PUCT approval granted on July 9, 2026, the ride-through requirements go into effect on August 1, 2026.

Facilities subject to the new requirements should review NOGRR282 and NPRR1308 to understand their specific obligations and timelines. ERCOT will continue to monitor compliance and engage with computing industry representatives as implementation proceeds.