



Item 10: Interconnection and Grid Analysis Update

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Board of Directors Meeting

September 14-15, 2026

Purpose

Provide updates on key Interconnection and Grid Analysis topics.

For information only

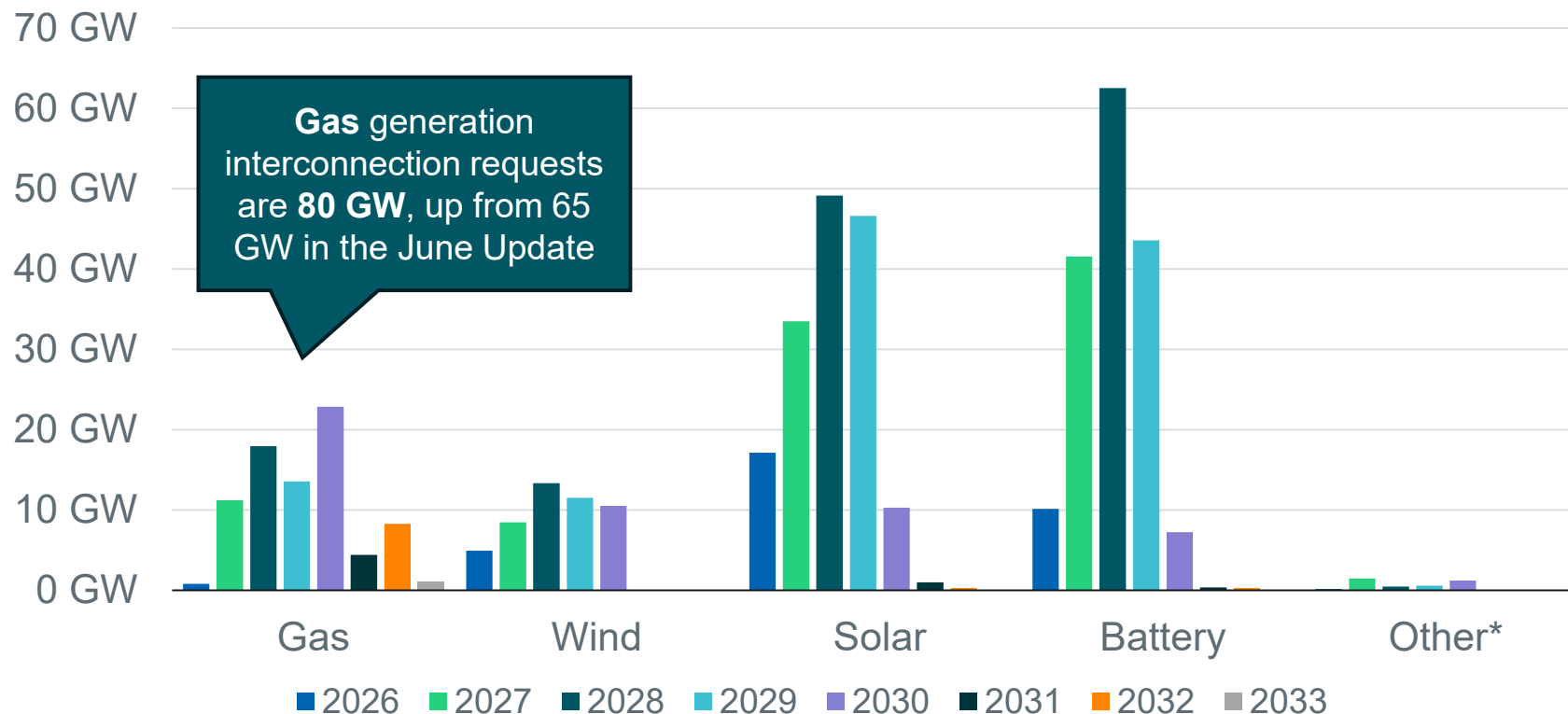
No action is requested; for discussion only.

Key Takeaways

- Large Load interconnection information is provided in a separate presentation, Item 14: Batch Zero Update.
- Solar and Battery still represent the majority of interconnection requests, however, Gas generation interconnection requests are up 23% (now 80 GW) since the June Board update.
- ERCOT is targeting to complete NOGRR 245 extension/ exemption analysis in Q4 2026.
- ERCOT is pursuing targeted mitigations for addressing emerging risks posed by Large Loads, notably proposing a NOGRR to address risks from undesirable oscillations.

Interconnection Queue Capacity by Fuel Type

Totals: Solar 158 GW (34.6%), Wind 49 GW (10.7%), Gas 80 GW (17.6%), Battery 166 GW / 398 GWh (36.3%), Other 4 GW (0.9%)
(Excludes capacity associated with projects designated as Inactive per Planning Guide Section 5.2.5)



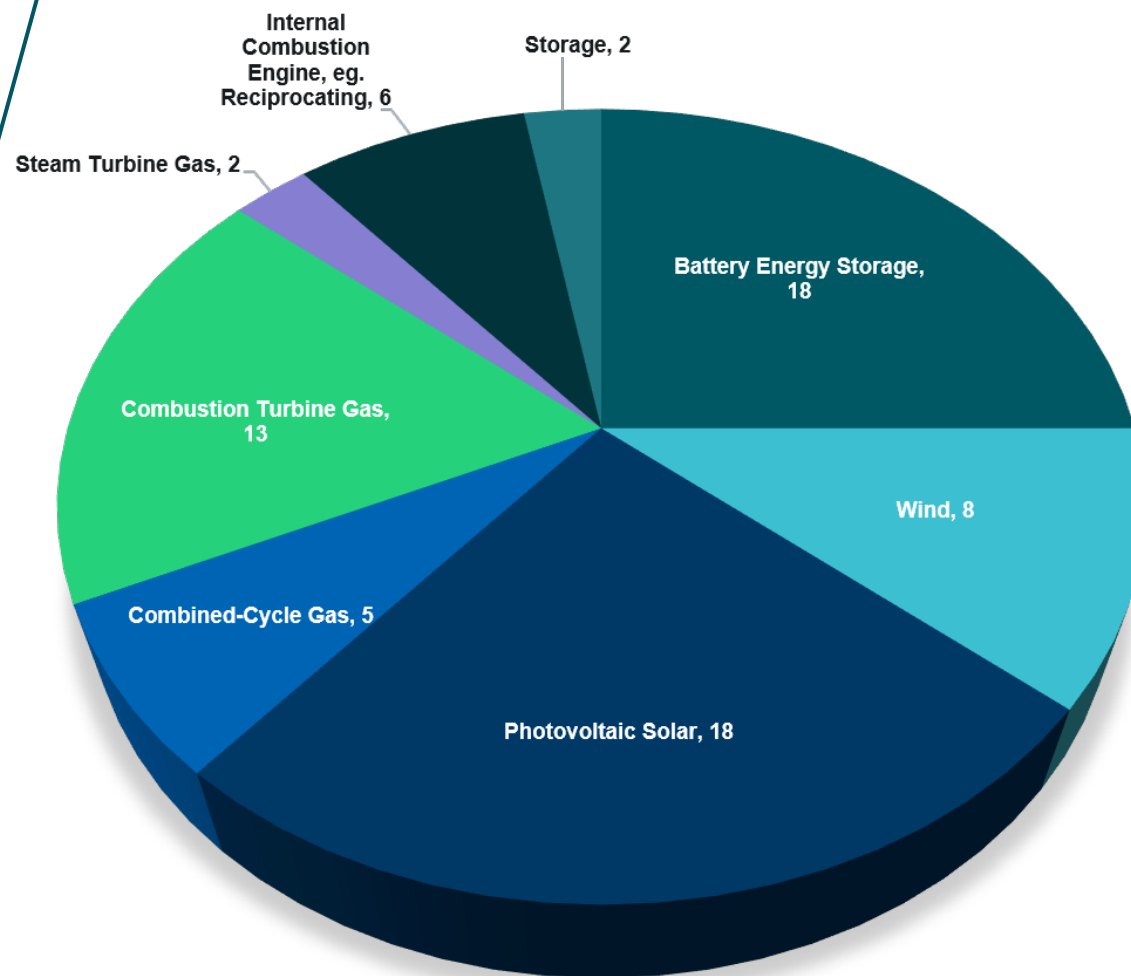
A break-out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>

- Other includes petroleum coke (pet coke), hydroelectric, fuel oil, nuclear, geothermal energy, other miscellaneous fuels reported by developers, and fuel cells that use fuels other than natural gas.
- The GWh cited for active planned battery storage projects is an estimate of the aggregate nameplate energy rating based on data provided through Request for Information (RFI) submissions for projects with signed interconnection agreements. Using the RFI data, an average design duration for these projects is calculated and then multiplied by the nameplate capacity for all active projects to derive the total energy rating.

Recent Generation Interconnection Activity

Applications Received in the last 60 days by Technology Type

26 new gas
generation
interconnection
requests in the
last 60 days



Key Takeaway: Gas generation interconnection requests outnumbered other types over the last 60 days. Solar and battery requests remain strong.

NOGRR 245 Implementation Update

- **Background**

- NOGRR 245 set forth certain reliability requirements for Inverter Based Resources (IBRs).
- Resource Entities (REs) could submit requests for an extension of time to meet the requirements and/or an exemption from the requirements.

- **Status of Extension/ Exemption Submissions (as of May 14, 2026)**

- ERCOT has **denied** extension and/or exemption requests for **25 IBRs**, primarily due to deficient dynamic model data.
- ERCOT has **granted** extension requests for **93 IBRs**.
- The **Reliability Assessment** to determine the impact of an RE's exemption request is **underway for 116 IBRs**.

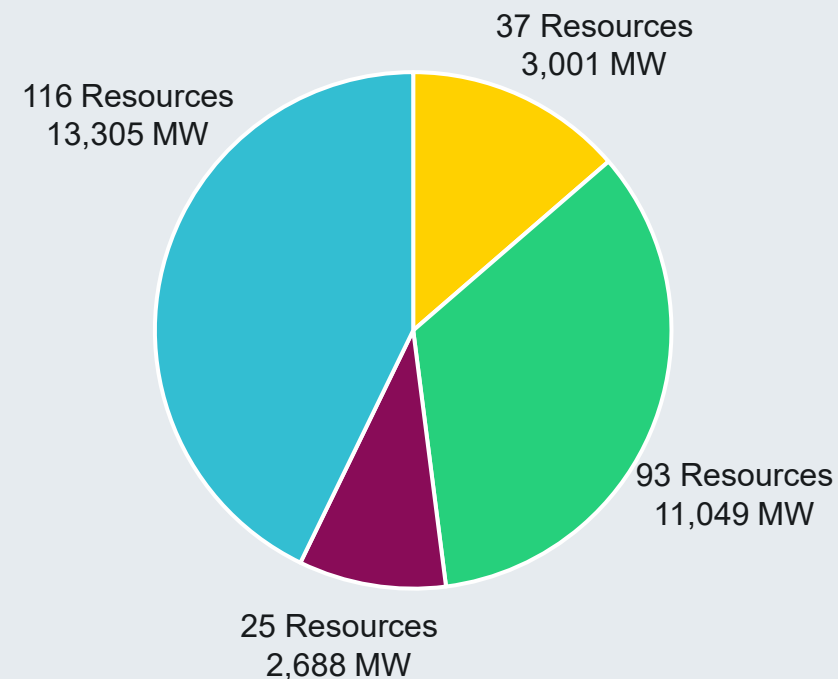
- **Next Step**

- Complete Reliability Assessment activities in Q4 2026.

Key Takeaway:

ERCOT is targeting to complete NOGRR 245 extension/ exemption analysis in Q4 2026.

Extension and/or Exemption Submission Status as of August 24, 2026



- Pending Determination
- Extension Approved
- Denied
- Pending Reliability Assessment

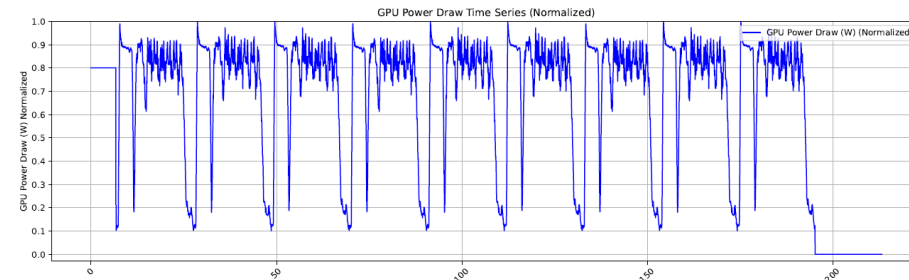
Addressing Emerging Operational Risks Posed by Large Loads

Risk	Description	Mitigation	Status
Ride-Through	Sensitive compute equipment trips offline during normal grid events, leading to grid imbalance and instability .	NOGRR 282/ NPPR 1308 : Implement ride-through requirements for Large Computational Loads.	The PUCT approved NOGRR 282/ NPPR 1308 in July, effective on August 1.
Oscillations	Certain data centers processes can oscillate in a way that damages grid equipment .	Draft NOGRR : Ensures Large Load processes do not oscillate in a manner that would cause grid damage. [More details on next slide.]	ERCOT plans to submit NOGRR in September or October.
Modeling	Dynamic models for Large Loads have proven to be inaccurate and thus are inadequate for studying their grid impacts.	ERCOT is working with Texas A&M University on developing more accurate models . PGRR 144 : Introduces model quality requirements for Large Loads.	Texas A&M has released a new model for crypto mining facilities and is working on a data center model. TAC endorsed PGRR 144 in August and is up for Board consideration in September .

Key Takeaway: ERCOT is pursuing targeted mitigations for addressing emerging risks posed by Large Loads.

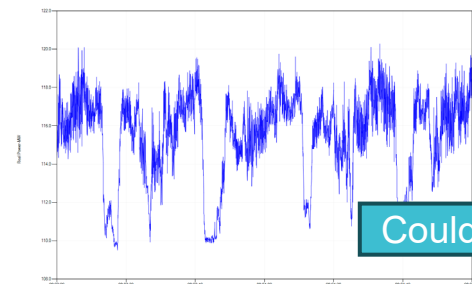
Draft NOGRR: Large Load MW Variation Challenges

- Large Loads, particularly those associated with data center AI training processes, are capable of producing **rapid fluctuations** in active power consumption. These variations can induce perturbations on synchronous generator shafts and **potentially result in equipment fatigue or damage**.
- Several industry events and actual load profiles have highlighted this concern. Since July 2025, **ERCOT collaborated** with industry experts and engaged stakeholders **to investigate these risks**.
- Consequently, ERCOT's draft **NOGRR, Large Load MW Variation Requirements**, will recommend a limit of 10 MW per 5 seconds for power variation in Large Loads. This proposal aims to manage reliability risks while facilitating Resource and Large Load interconnections.
- Continuous monitoring and enhanced situational awareness are also essential. Additional NOGRRs may be submitted to strengthen monitoring requirements.



Source: <https://arxiv.org/abs/2508.14318>

An actual data center in ERCOT



Could cause



Key Takeaway: ERCOT plans to propose a NOGRR to lower the risk of fatigue or damage to synchronous generators that may be caused by Large Load power fluctuations.