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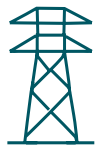
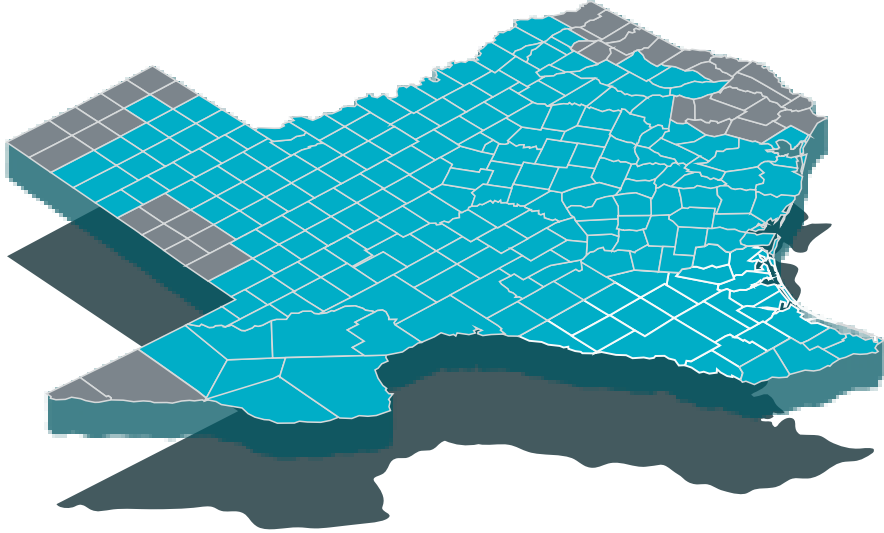


ERCOT Operations: Leveraging Load Flexibility for Grid Reliability

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ERCOT Facts



~\$14 billion Transmission projects endorsed in 2025



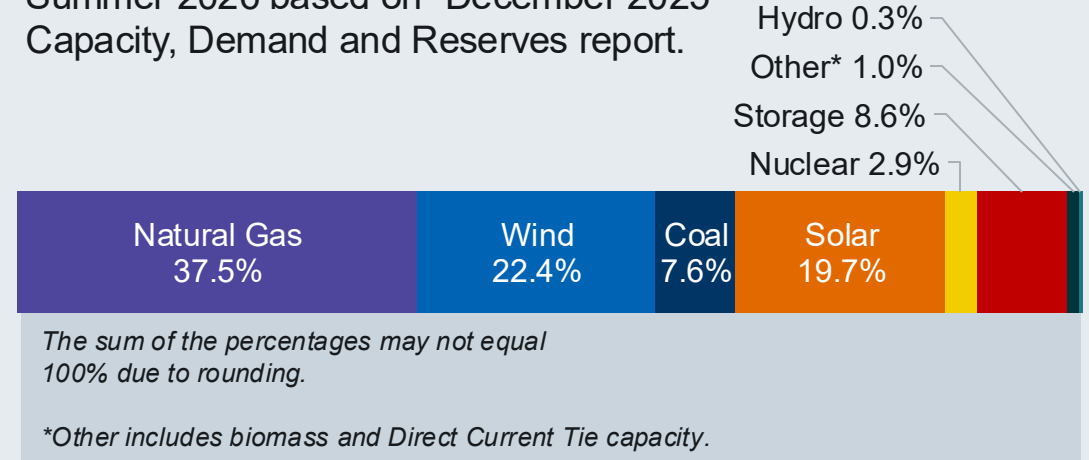
1,460+ generating units, including PUNs



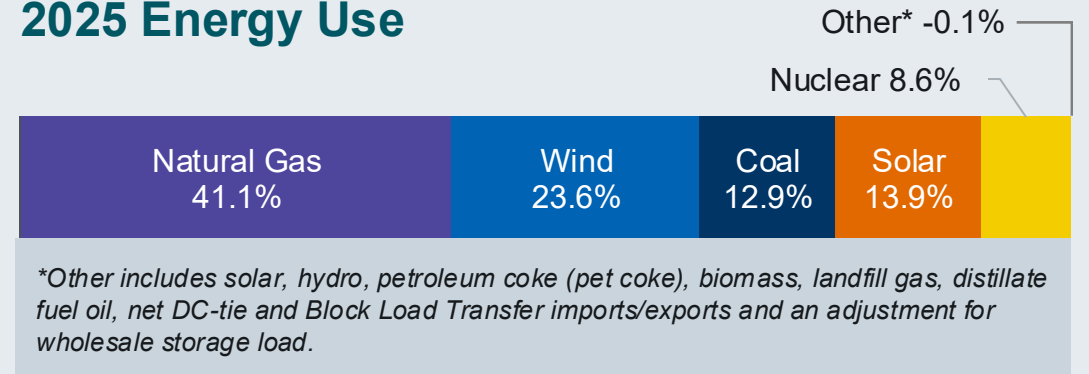
1,928+ active Market Participants that generate, move, buy, sell or use wholesale electricity

Summer 2026 Installed Capacity

Reflects operational installed capacity for Summer 2026 based on `December 2025 Capacity, Demand and Reserves report.



2025 Energy Use



ERCOT Records

Peak Demand Record

85,508 MW
(August 10, 2023)

Weekend Peak Demand Record

85,116 MW
(August 20, 2023)

Expected Capacity for Summer 2026

104,850+ MW
(December 2025 *Capacity, Demand and Reserves report*)

1 MW of electricity is enough to serve about **250** residential customers during ERCOT peak hours.

Wind, Solar & Energy Storage by the numbers



40,739 MW

of installed wind capacity as of March 2026, the most of any state in the nation

29,011 MW

Generation Record
(May 18, 2026)

69.15%

Penetration Record
(April 10, 2022)



38,608 MW

of utility-scale installed solar capacity as of March 2026

34,498 MW

Generation Record
(May 13, 2026)

72.74%

Penetration Record
(May 2, 2026)



19,693 MW

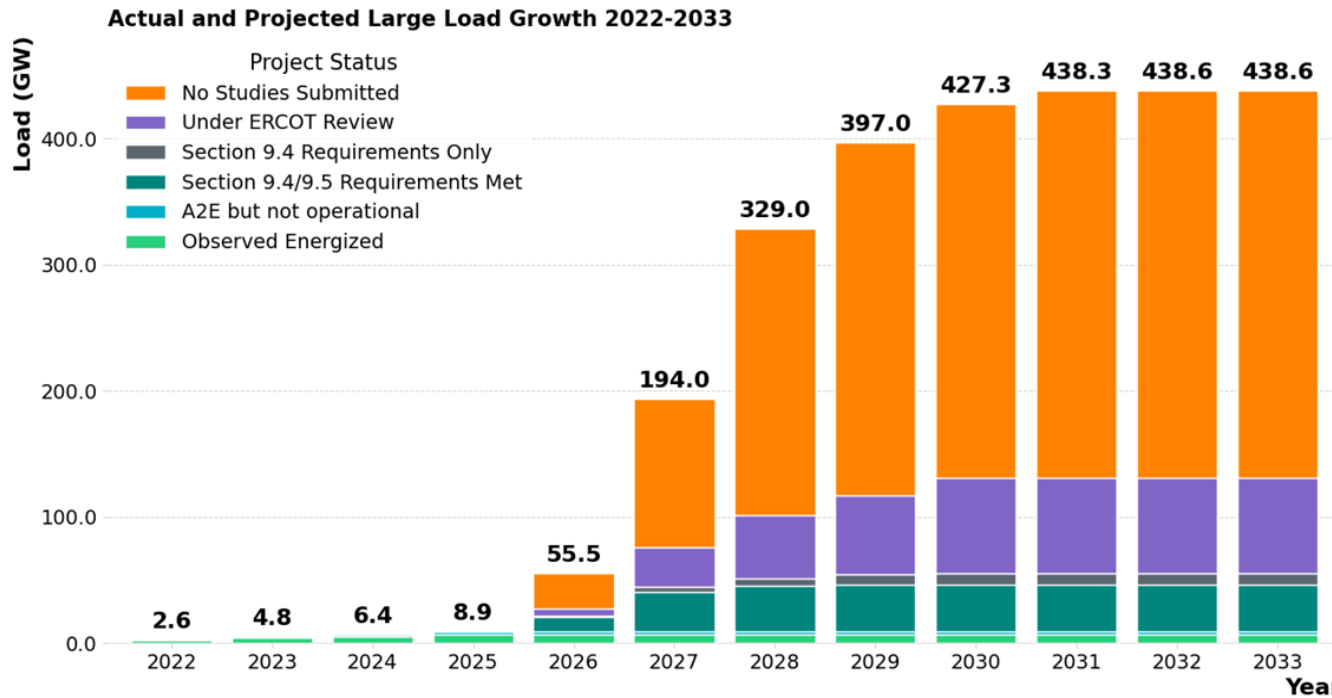
of installed energy storage capacity as of March 2026

10,515 MW

Energy Storage Generation Record
(March 13, 2026)

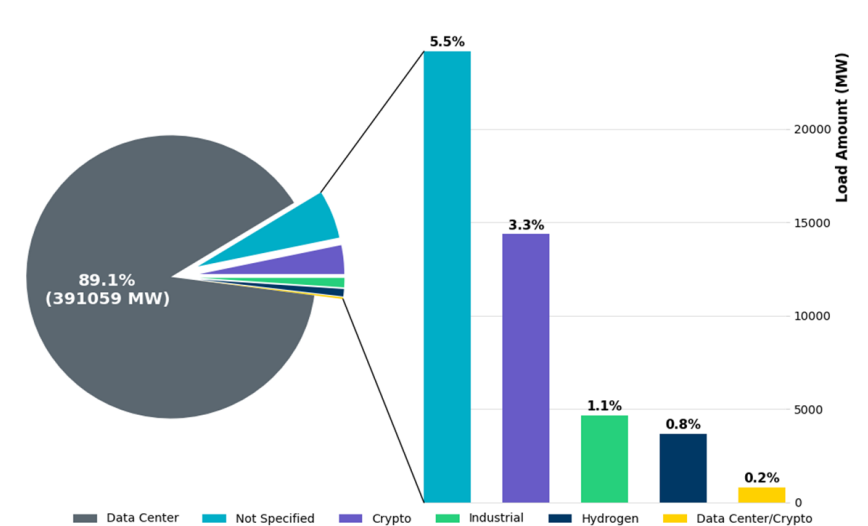
Large Load Interconnection Requests (as of May 21, 2026)

Actual and Projected Large Loads Growth 2022-2030



Project Status	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
No Studies Submitted	0.0	0.0	0.0	0.0	28.1	118.2	227.4	279.6	296.5	307.4	307.7	307.7
Under ERCOT Review	0.0	0.0	0.0	0.0	5.5	30.9	50.3	63.3	75.4	75.4	75.4	75.4
Section 9.4 Requirements Only	0.0	0.0	0.0	0.0	1.6	4.8	6.2	8.3	9.3	9.3	9.3	9.3
Section 9.4/9.5 Requirements Met	0.0	0.0	0.0	0.0	11.3	31.0	36.1	36.7	37.1	37.1	37.1	37.1
A2E but not operational	0.0	0.2	1.4	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Observed Energized	2.6	4.5	5.0	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Total (GW)	2.6	4.8	6.4	8.9	55.5	194.0	329.0	397.0	427.3	438.3	438.6	438.6

Large Loads by Project Type



Key Takeaway: ERCOT is tracking approximately 438 GW of Large Loads seeking interconnection, of which ~89% are data centers.

Load Participation Types in the ERCOT Market

CLR

Controllable Load Resource

Fully dispatchable by ERCOT

A Load Resource capable of controllably reducing or increasing consumption under direct Dispatch control by ERCOT via SCED.

Includes: Aggregate Load Resource (ALR)

CLR aggregating sites each <10 MW in a single Load Zone

Can participate in:

- Reg-Up & Reg-Down
- Responsive Reserve (RRS)
- ECRS & Non-Spin
- Real-Time SCED Energy
- Day-Ahead Market (DAM)

Must be SCED-qualified
Real-time telemetry required

Non-CLR

Non-Controllable Load Resource

Relay or XML dispatch controlled

A Load Resource registered with ERCOT that responds to XML Dispatch Instructions or under-frequency relays — not directly dispatched by SCED.

Can participate in:

- Responsive Reserve (RRS)*
- ECRS (≤50% of requirement)
- Non-Spinning Reserve
- Emergency Response (ERS)**

* RRS requires high-set relay ≥59.7 Hz

ERS

Emergency Response Service Resource

Pre-emergency & emergency curtailment

A Load (or generator) contracted to support grid reliability. ERS may be deployed during a Watch (PRC < 3,000 MW) or any EEA level, before firm load shed is required. ERS Loads need not register as a Load Resource.

Two response types:

- ERS-10: respond in 10 min
- ERS-30: respond in 30 min

Can participate in:

- Deployed when PRC < 3,000 MW (Watch or EEA)
- Weather-Sensitive or Non-WS
- Seasonal RFP procurement

No Load Resource registration Required - QSE offer only

VECL

Voluntary Early Curtailment Load

Pre-emergency voluntary curtailment

A load registered with ERCOT that curtails consumption when deployed by ERCOT via XML dispatch, before emergency conditions require firm load shed.

Trigger condition:

Deployed when PRC < 3,100 MW and cannot recover within 30 min

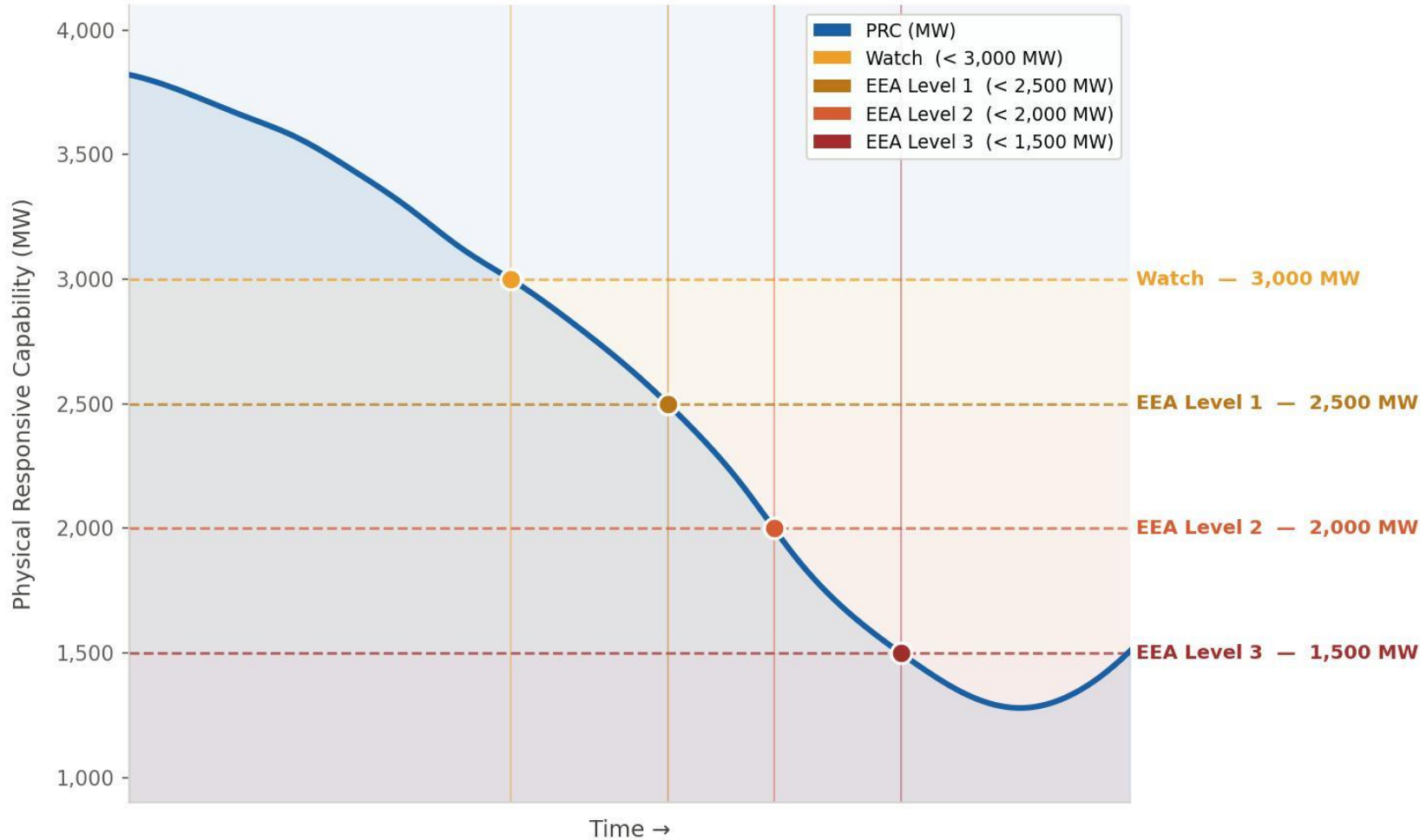
Can participate in:

- Pre-emergency curtailment
- Deployed ahead of ERS & EEA
- XML dispatch via QSE
- Ramp down within 30 minutes

Must register with ERCOT
Participate through a QSE

ERCOT Energy Emergency Alerts

ERCOT Energy Emergency Alert (EEA) Declaration Levels Relative to Physical Responsive Capability (PRC)



Physical Responsive Capability (PRC) is the total MW of capacity on the ERCOT system that can respond immediately to arrest a frequency decline following a sudden loss of generation.

Specifically, it is the sum of:

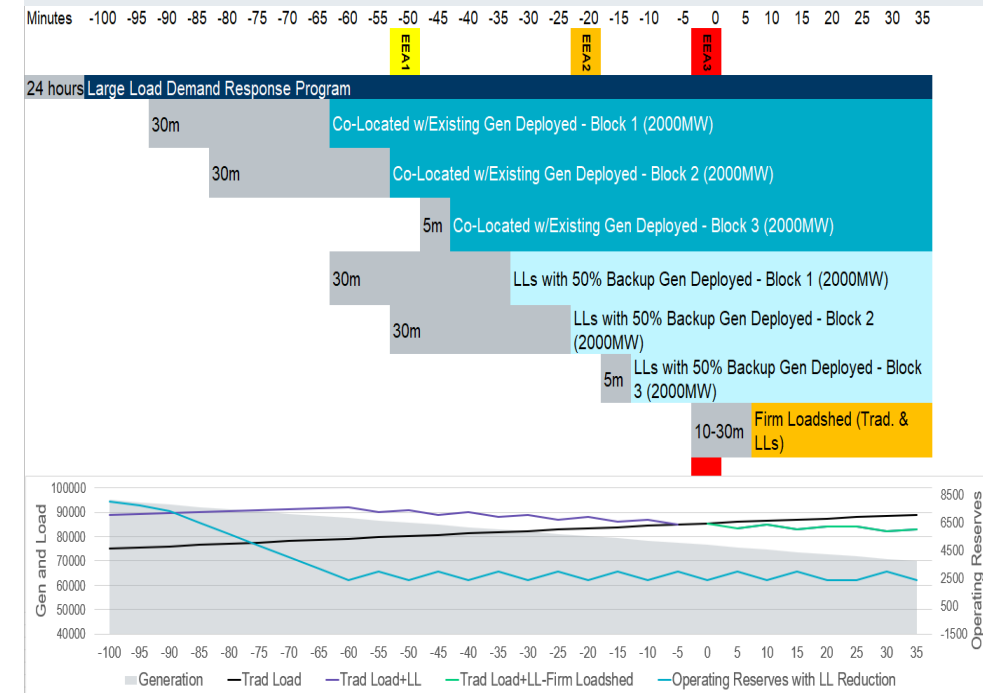
- Spinning generation capacity with governor response (primary frequency response)
- Load Resources providing Responsive Reserve Service (RRS) via high-set under-frequency relays or CLR qualified for Primary Frequency Response

Senate Bill 6 (SB6) Large Load Curtailment Implementation

- ERCOT is developing a Large Load Curtailment Manager (LLCM), a system that allows ERCOT to issue curtailment instructions for Large Loads in specific categories when ERCOT projects to be in tight operating conditions.
- ERCOT is aiming to build a minimum viable release of LLCM by June 2026, pending market rule approval.
 - This version of LLCM will focus on the ability to curtail Load Loads with net-metering arrangements that fall under SB6.
- Future releases of LLCM will also include:
 - SB6 50% Backup** - Large Loads with at least 50% backup generation, curtailed with notice to avoid loadshed.
 - VECL** - Voluntary Early Curtailment Loads (VECLs), created by NPRR 1238.
 - (Potentially) Large Loads impacting system stability that are defined as impacting a Generic Transmission Constraint.
- ERCOT is working on an NPRR related to this topic and plans to submit soon.

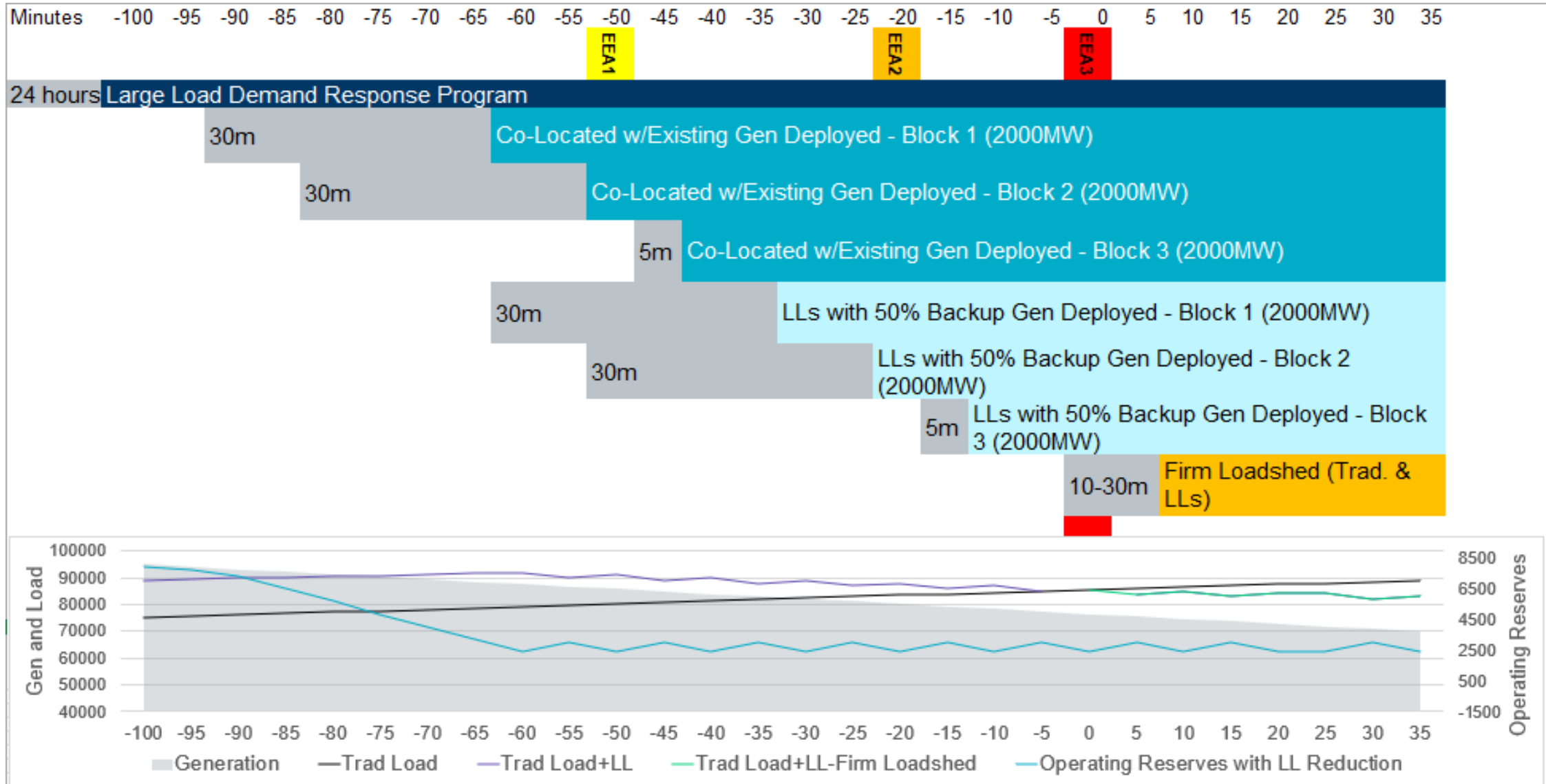
Key Takeaway(s): ERCOT is developing a LLCM to efficiently issue curtailment instructions of Large Loads, with the first phase focusing on SB6 Co-located Large Loads.

Example: LLCM Curtailments for Projected EEA Conditions



*Note this example is intended to illustrate the concept of LLCM curtailments. Look-ahead times and trigger points are not finalized.

LLCM Deployment Example



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Thank you!

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