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Item 7: System Operations Update

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Vice President, System Operations

Board of Directors Meeting

June 1-2, 2026

Purpose

- Provide an update on key operational metrics to the Board of Directors
- Provide information on hot topics

For information only

No action is requested; for discussion only.

Key Takeaways

- All key operational metrics are trending well.
- ERCOT filed two adjustment methodologies for Commission consideration and recommended basing the forecast on the Batch Zero study approach.
- ERCOT has performed a study of the frequency load loss limit by applying FFR Down. There is only a marginal improvement, and this improvement does not replace the need for ride through requirements in NOGRR282.

Update on the 2026 Long-Term Load Forecast (LTLF) Methodology

Filed Adjustment Methodologies

- On May 18, 2026, ERCOT filed a request with the PUC for approval to adjust the preliminary 2026 Long-Term Load Forecast (LTLF) pursuant to the process outlined in 16 Tex. Admin. Code § 25.370(e)(2)(B).

- ERCOT presented two adjustment methodologies for Commission consideration:

- **Option 1: Historical Realization Rate Method**
  - Uses actual historical realization rates from 2025 RFI applied to computational Large Loads with expected energization dates through March 1, 2026.
  - ERCOT reviewed State Estimator data, satellite imagery, bus information, Large Load Interconnection Queue data, and internal load tracking data to determine whether each computational Large Load from the 2025 RFI energized.
  - The resulting energization success rate would be applied to computational Large Loads in the LTLF.
- **Option 2: Batch Zero Study-Based Method — ERCOT Recommended**
  - Substitutes Large Load values from the *2026 RTP Compliance Plan* with Large Loads identified for inclusion as base load in the Batch Zero process.
  - Adds such Batch Zero Large Load MW values to the base economic forecast and medium loads to produce the adjusted LTLF.
  - Initial Batch Zero load values are expected in mid-August 2026.

Key Takeaway: ERCOT filed two adjustment methodologies for Commission consideration: an immediately available historical realization approach and ERCOT's preferred Batch Zero study-based approach.

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Preferred Option: Batch Zero Study-Based Forecast

Why ERCOT Recommends This Option

- Produces an actionable forecast because transmission development would be based on the loads identified through the Batch Zero process.
- Uses a forward-looking study process rather than relying solely on historical energization outcomes.
- Uses load information developed through the ERCOT stakeholder process and TDSP/TSP consultation.

Primary Tradeoffs

- Batch Zero loads and MW values will not be confirmed until mid-August 2026.
- This timing affects related planning and resource adequacy work, including:
  - May 2026 Capacity, Demand and Reserves (CDR) Report
  - 2026 Regional Transmission Plan (RTP)
  - 2026 Triennial Reliability Assessment / Reliability Standard analysis
- ERCOT anticipates Reliability Assessment results could move to November/December 2026 under the Batch Zero timeline.

Key Takeaway: ERCOT recommends Batch Zero because it produces a more actionable, forward-looking forecast, but final values are not expected until mid-August 2026.

Decision Timeline and Next Steps

Commission Decision Path

- ERCOT's filing initiated the adjustment process under 16 TAC § 25.370(e)(2)(B).
- ERCOT issued the required Market Notice to solicit comments on the proposed LTLF adjustment.
- Responsive comments are due 14 days after ERCOT's filing: June 1, 2026.
- ERCOT anticipates Commission consideration of the proposed LTLF adjustment at the June 18, 2026 Open Meeting.

Planning and Resource Adequacy Study Impacts

- The timing of the adjusted LTLF affects the May 2026 CDR Report, 2026 RTP, and 2026 Triennial Reliability Assessment / Reliability Standard analysis.
- ERCOT has separately requested good cause exceptions related to the May 2026 CDR Report and 2026 RTP.
- Reliability Assessment results are expected to move to late 2026 under the Batch Zero timeline.

Key Takeaway: No Board action is requested today. The key near-term milestone is Commission consideration on June 18, after which ERCOT will proceed based on Commission direction.

Fast Frequency Response Down Study Results

FFR Down Study Results for Large Load Steady-State Frequency Limit

Background:

- Currently, there are no ride-through requirements for Large Loads, and ERCOT has observed Large Loads tripping offline during fault events. This has raised concerns that a high-frequency event could have cascading effects on other resources.

Studies:

- ERCOT conducted studies to identify a steady-state frequency limit of 3,200 MW load loss to ensure reliable grid operations.
- ERCOT was asked to study whether a potential Fast Frequency Response (FFR) Down Ancillary Service could improve the Large Load frequency limit.
- The FFR Down study used the TSAT case that identified the original 3,200 MW Limit.
- For study purposes, FFR Down was modeled as the high frequency analog to the existing FFR (Up), triggering at 60.15 Hz with full response applied within 250 ms (15 cycles). Existing FFR (Up) has a 59.85 Hz trigger condition.
- ERCOT evaluated FFR Down response levels ranging from 300 MW to 1,500 MW to determine the impact on system frequency performance and the steady-state frequency limit.

Results:

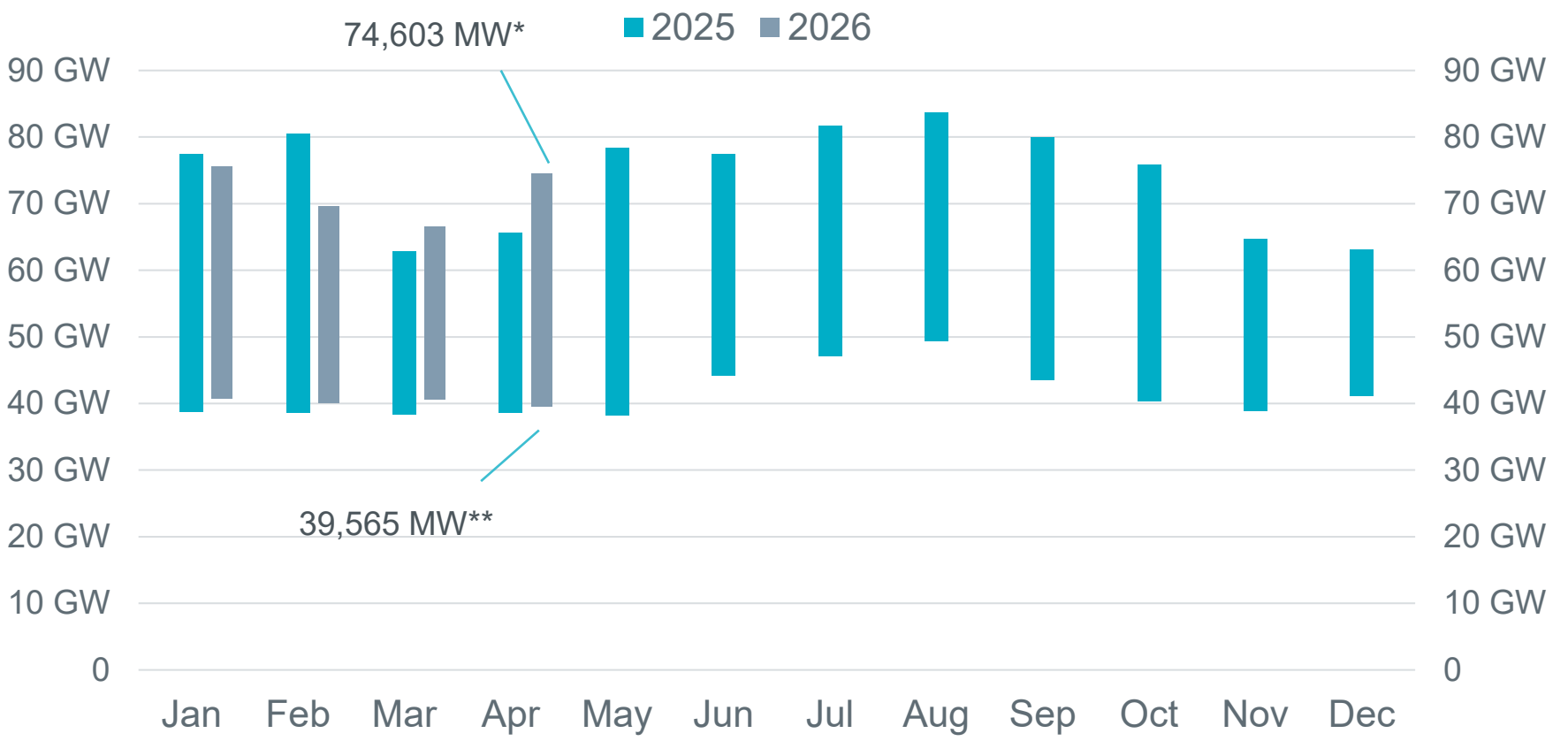
- For the studied case, achieving an 800 MW improvement to the steady-state frequency limit would require at least 800 MW of FFR Down capability.
- Under single-stage FFR Down design, quantities above 1,200 MW could overcorrect smaller qualifying load-loss events and cause frequency to swing below 60 Hz; to support higher quantities, a more complex, multi-stage design and methodology may be needed.

Key Takeaway: FFR Down, as studied, would provide only a marginal improvement to the steady-state frequency limit relative to the implementation effort and does not replace the need for ride through requirements in NOGRR282.

Detailed Study Results: Link

Appendix

Demand



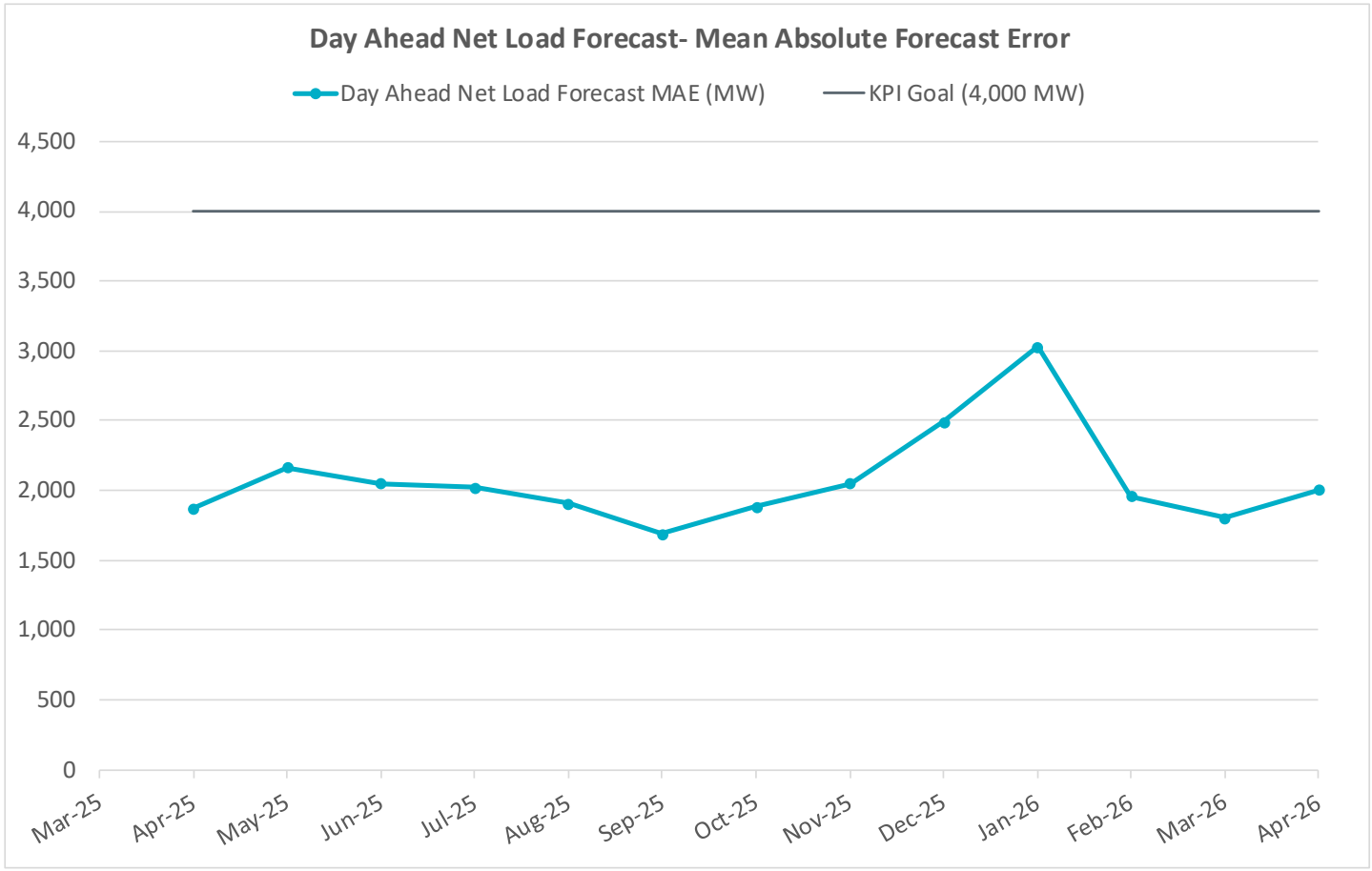
*Based on the maximum net system hourly value from April release of Demand and Energy 2026 report.

**Based on the minimum net system 15-minute interval value from April release of Demand and Energy 2026 report.

Data for latest two months are based on preliminary settlements.

Key Takeaway: ERCOT set new all-time highs for demand for the months of March and April, 66,515 and 74,603 MWs, respectively.

Forecast Performance

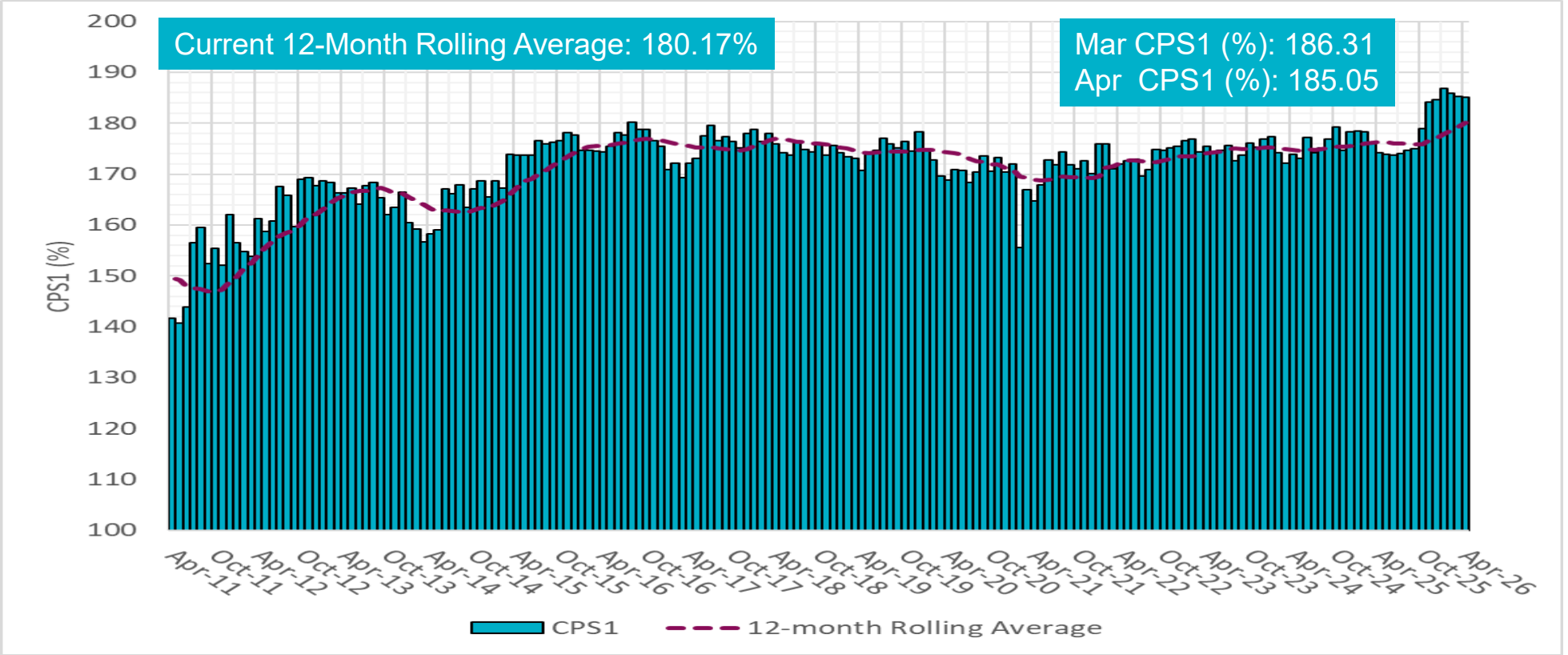


Key Takeaway: Day Ahead Net Load Forecast Mean Absolute Forecast Error is a new Key Performance Indicator from 2023. This metric has met the target and has been trending well.

Frequency Control

- Control Performance Standard 1 (CPS-1) is a measure of the frequency control on a power system, pursuant to NERC Standard BAL-001. The 12-month rolling-average of this measure is required to stay above 100%.

12 Month Rolling Average CPS1 KPI
Target > 140 % | Stretch > 150%



Key Takeaway(s): Frequency control has been performing extremely well

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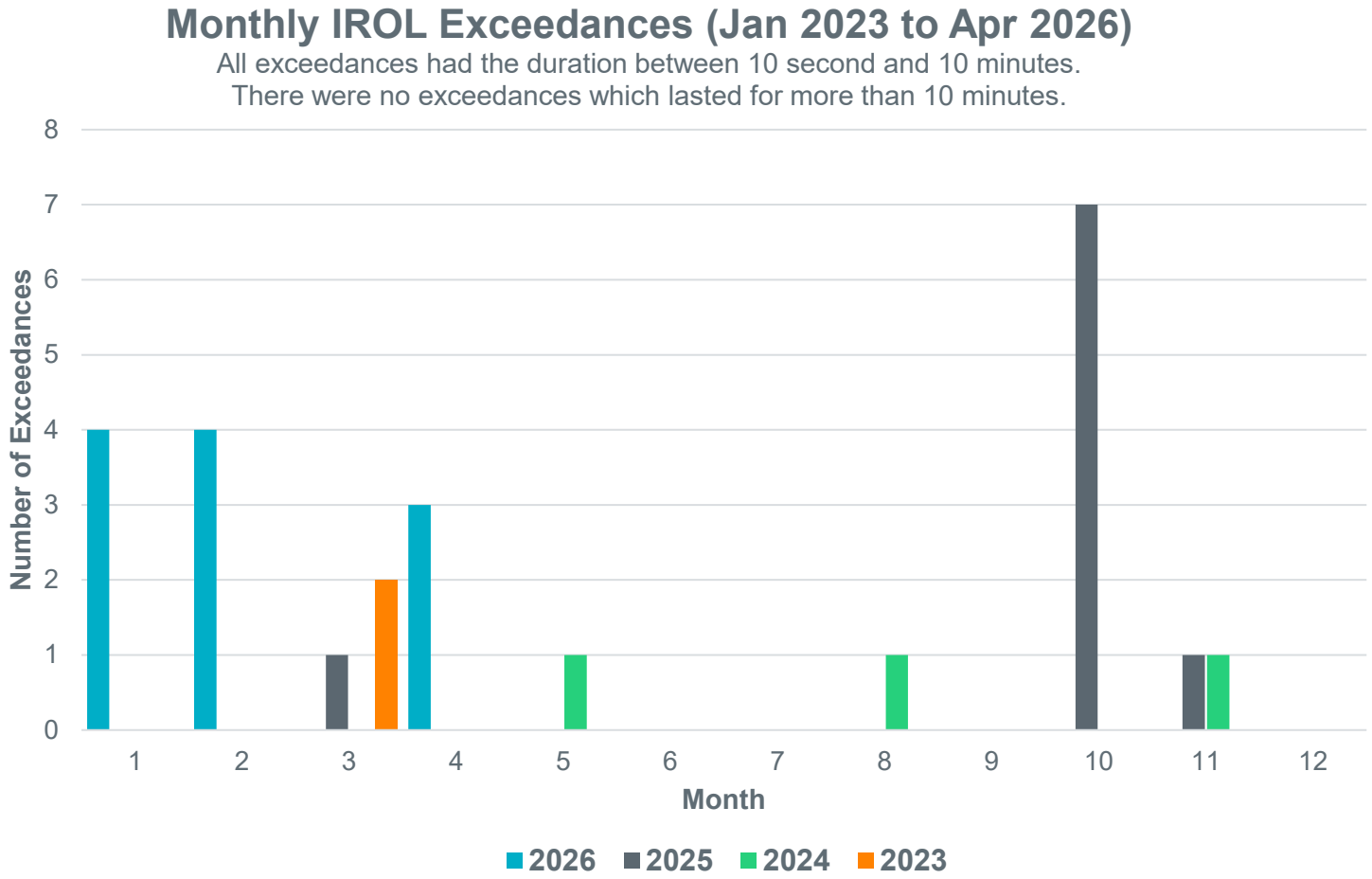
Transmission Limit Control

The most-recent Interconnection Reliability Operating Limit (IROL) exceedance occurred in April 2026.



- 04/11/26 E_PASP IROL Exceedance @ 3:07 PM for 40 secs due to solar ramp up in surrounding area.
- 04/13/26 E_PASP IROL Exceedance @ 1:45 PM for 40 secs due to solar ramp up in Southern WZ.
- 04/17/26 E_PASP IROL Exceedance @ 7:18 PM for 4 mins due to forced outage of 345kV line Southern WZ.

Key Takeaway: In April, ERCOT had 3 IROL exceedances occur.

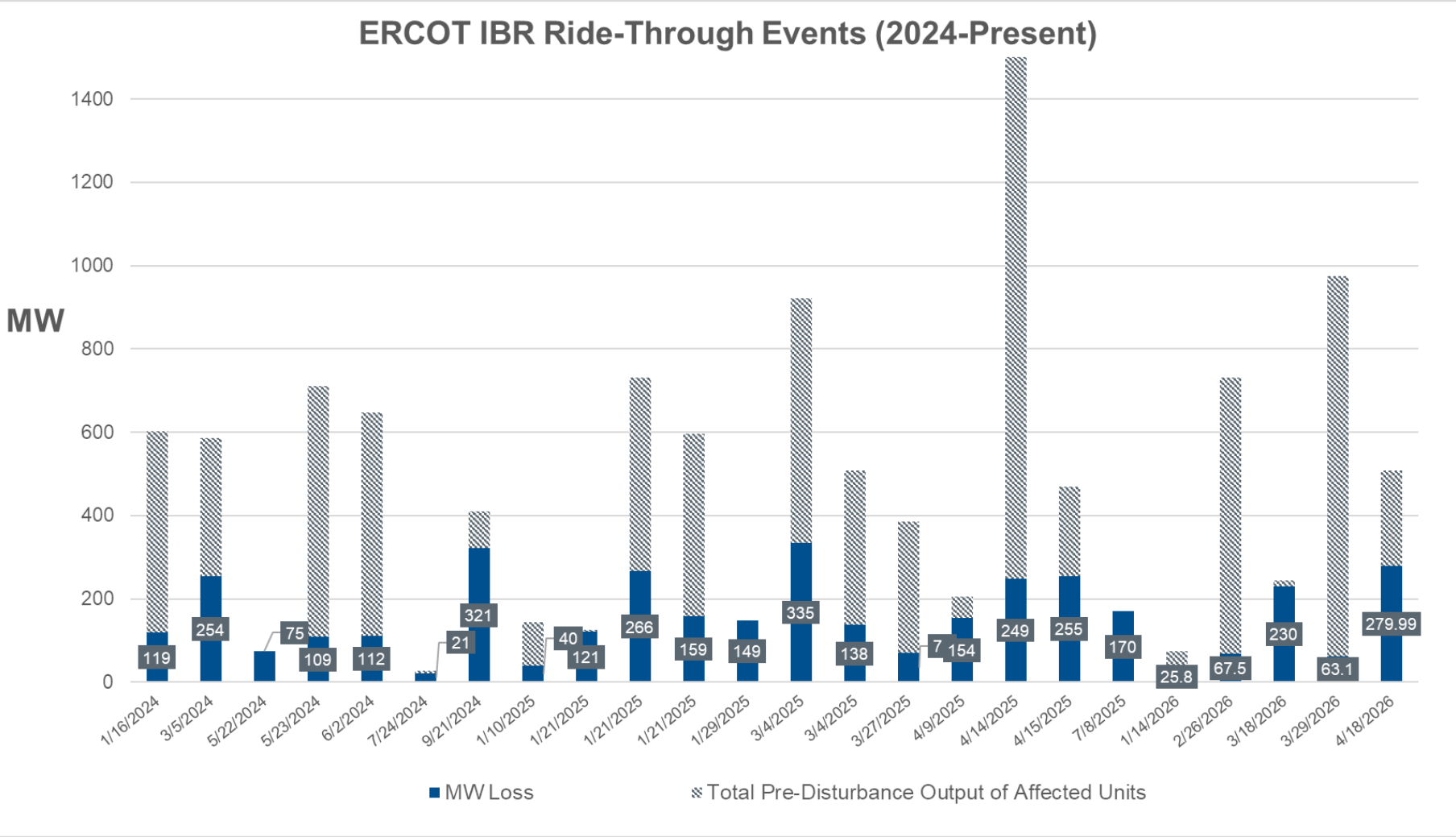
2026 Year-to-Date (YTD) Event Analysis Summary

Event Type	Number of Events (All 2026)	Number of Events (Mar-Apr 2026)
NERC Reportable by ERCOT*	1	0
Inverter Based Resource (IBR) Ride-Through Events	5	3
Large Load Ride-Through Events	4	3
Large Load Oscillation Events	0	0
IBR Oscillation Events	8	6
IBR Large MW Change Events (no fault associated)	21	12
Miscellaneous (transmission or telemetry event)	0	0

Key Takeaway: The Event Analysis team investigates each event to keep the system reliable and prevent reoccurring issues.

*Meeting the criteria for NERC's Electric Reliability Organization Event Analysis Process and requiring ERCOT to submit a report.

IBR Ride-Through Events



Key Takeaway: ERCOT continues to have IBR ride-through events, although the magnitude of events has remained below 500 MW.

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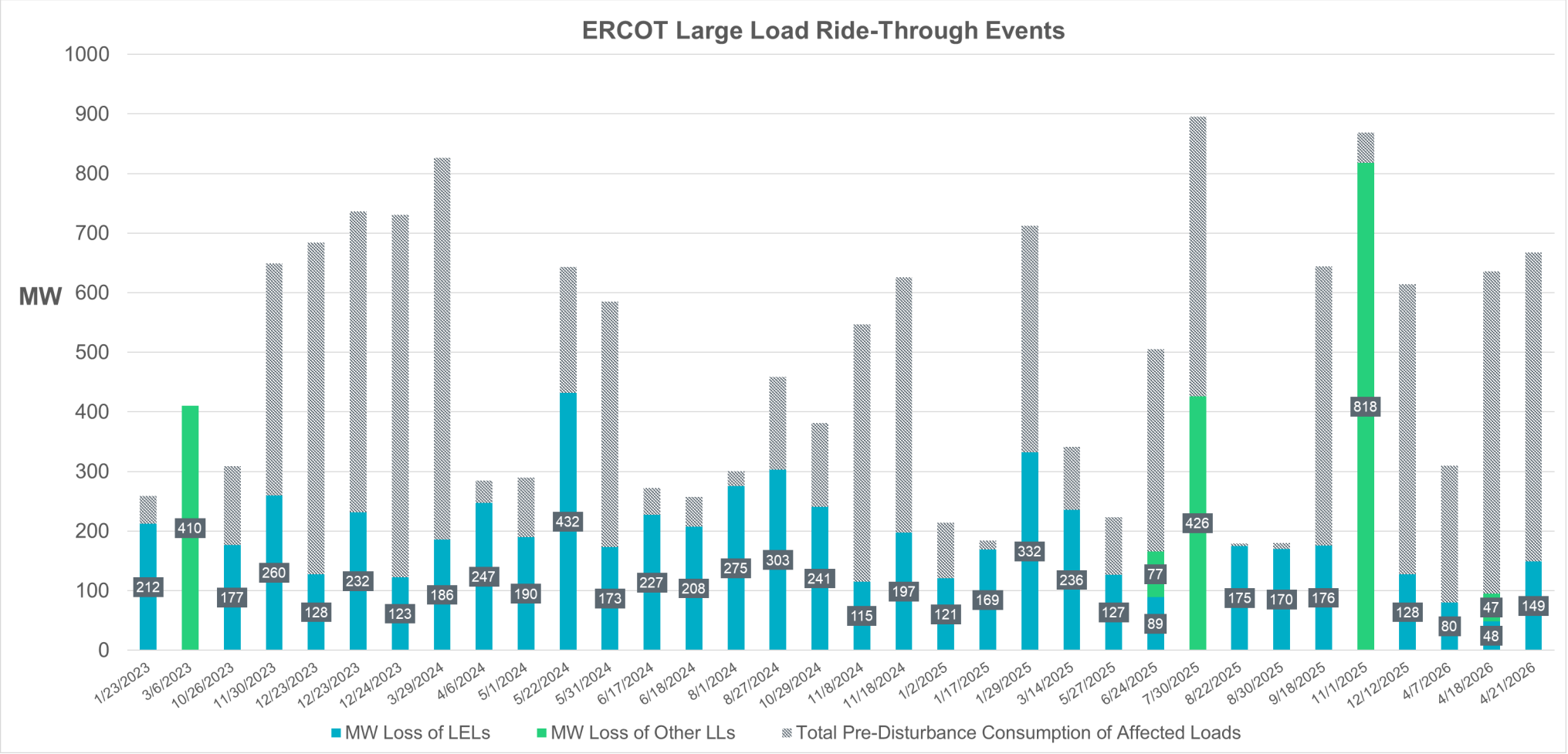
Large Load Ride-Through Events



Key Takeaway: Large Electronic Loads reduce consumption quickly when system faults occur in their area. The magnitude and frequency of these events will likely increase as more of these types of loads are connected to the system, especially when they are concentrated in an area.