System Operations Report

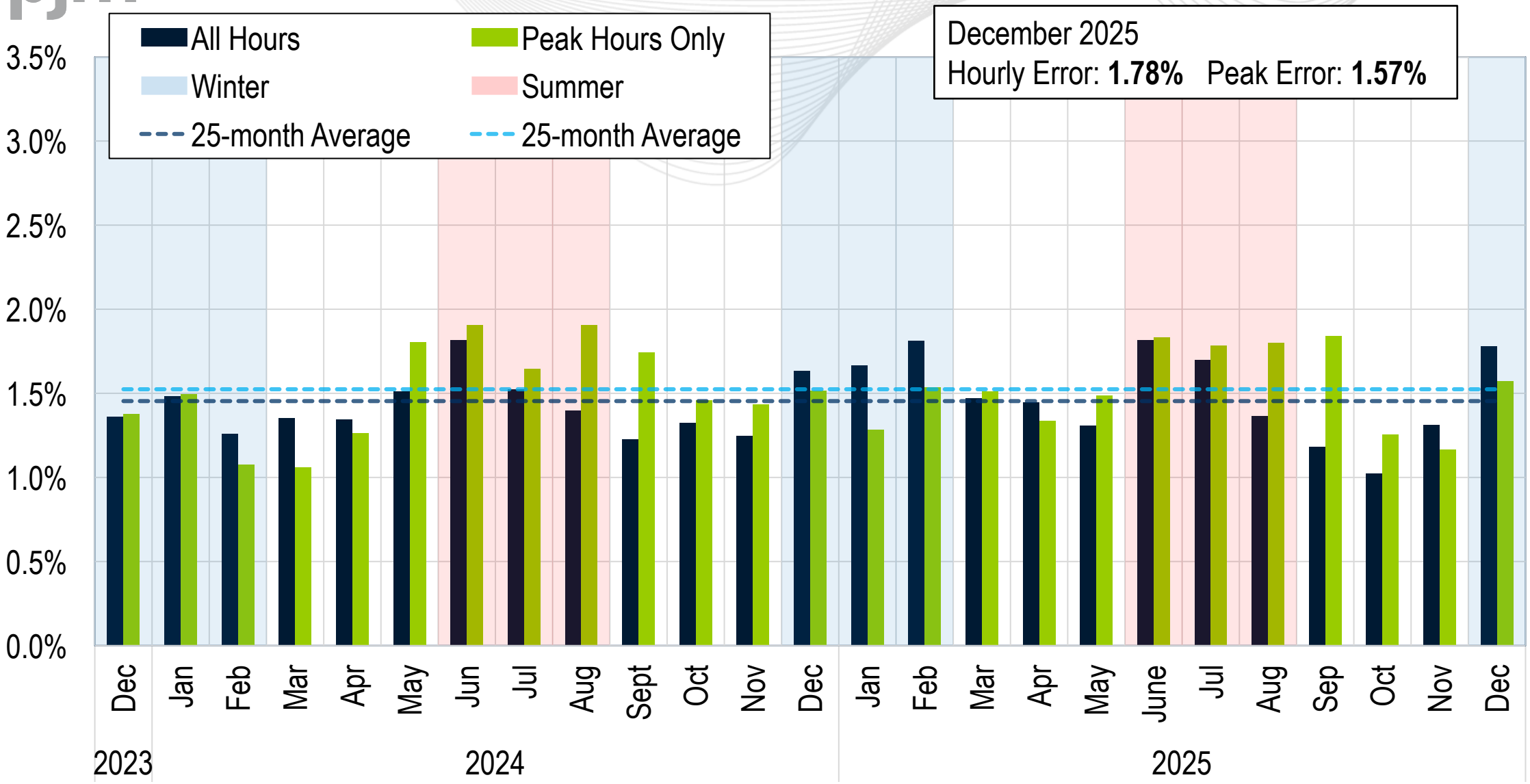
Marcus Smith, Lead Engineer – Operations Uncertainty & Risk

David Kimmel, Sr. Engineer II – Performance Compliance

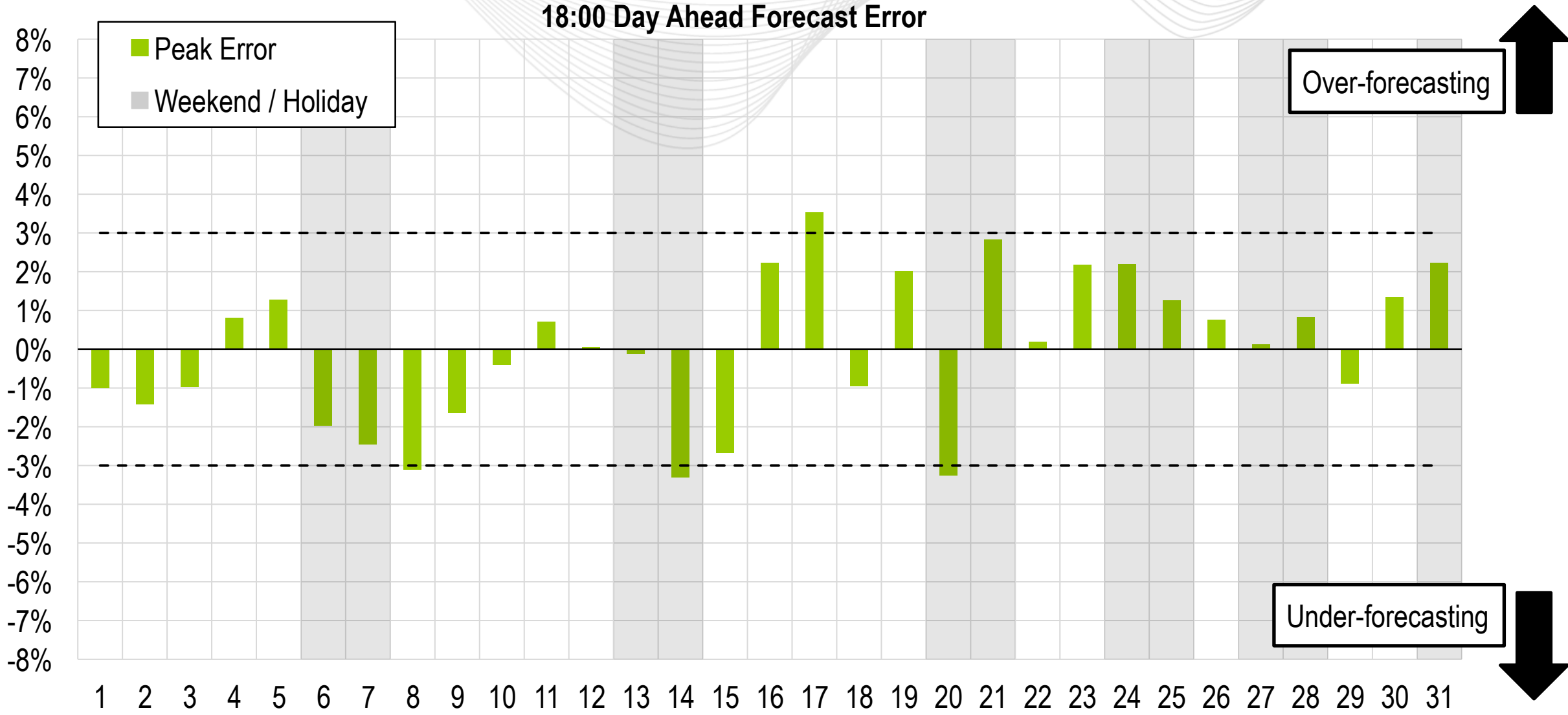
Operating Committee

January 8th, 2026

Average Load Forecast Error



Daily Peak Forecast Error (Dec.)



Days Exceeding 3% Forecast Error at Peak Hour

Over-forecasting

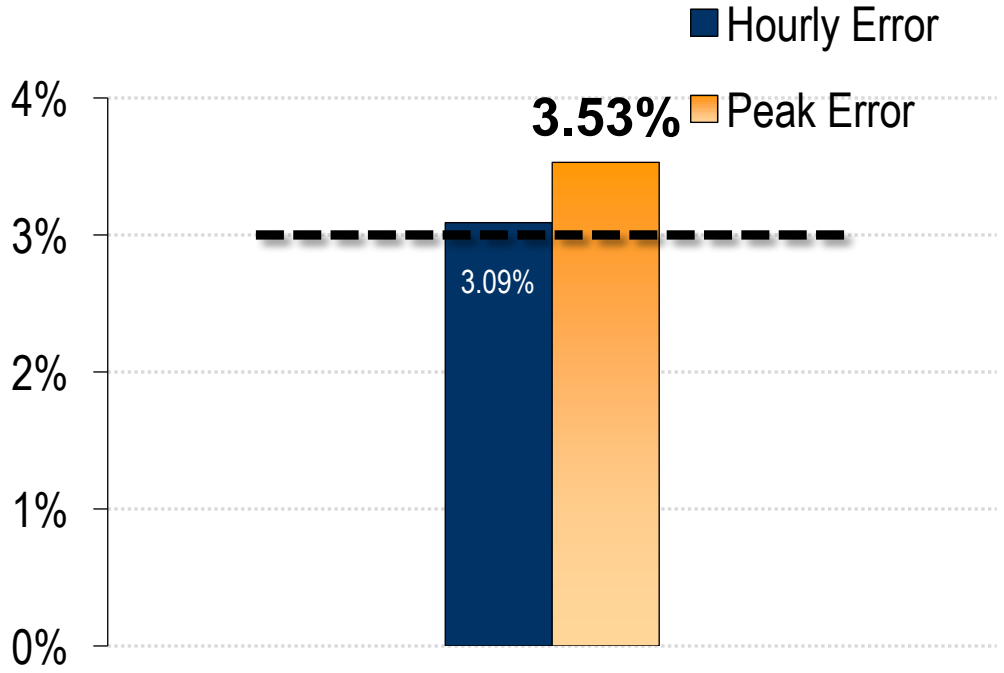
Dec. 17
Temperatures came in much warmer, leading to low loads

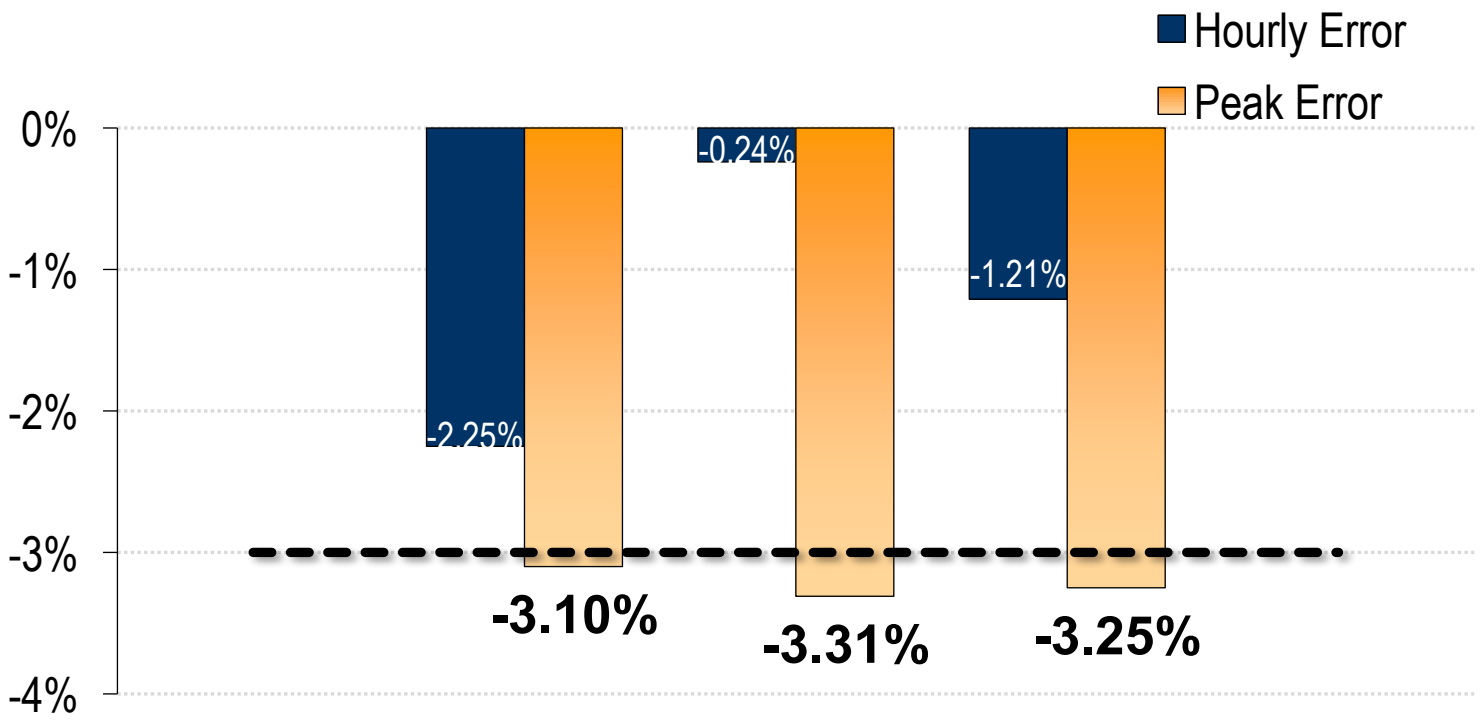
Under-forecasting

Dec. 8
Cloud coverage came in much more prevalent, leading to high loads

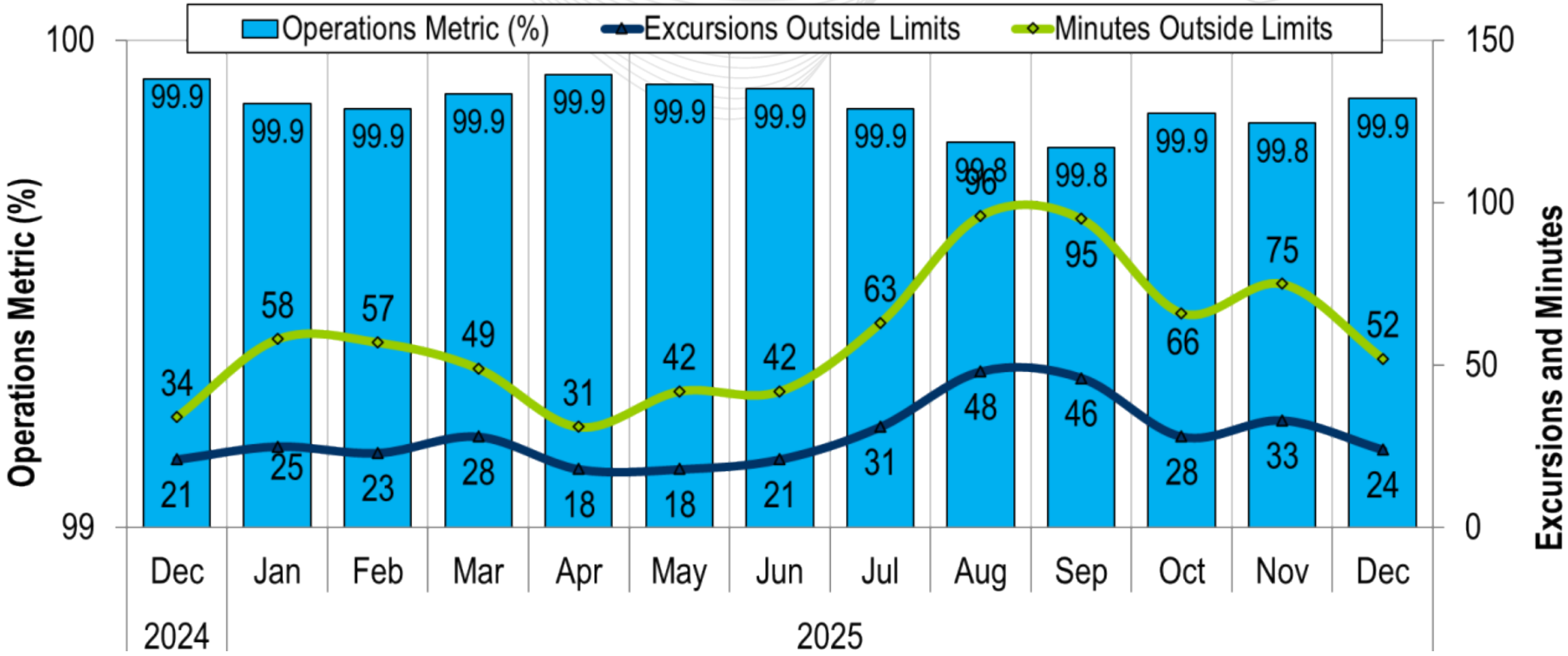
Dec. 14
Temperatures came in much cooler, leading to high loads

Dec. 20
Weather came in cooler and windier, leading to high loads





Monthly BAAL Performance Score



PJM's BAAL performance has exceeded the goal of 99% for each month in 2024 and 2025.

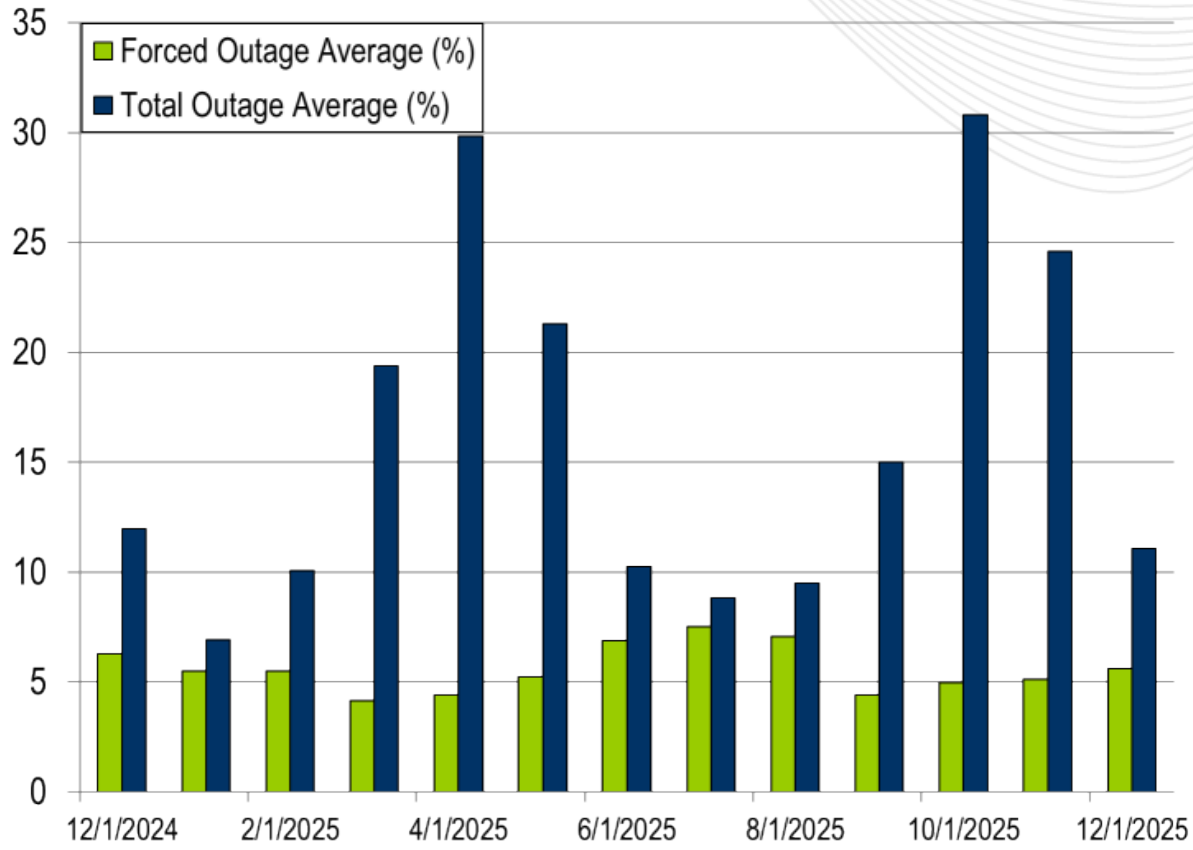
Operational Summary

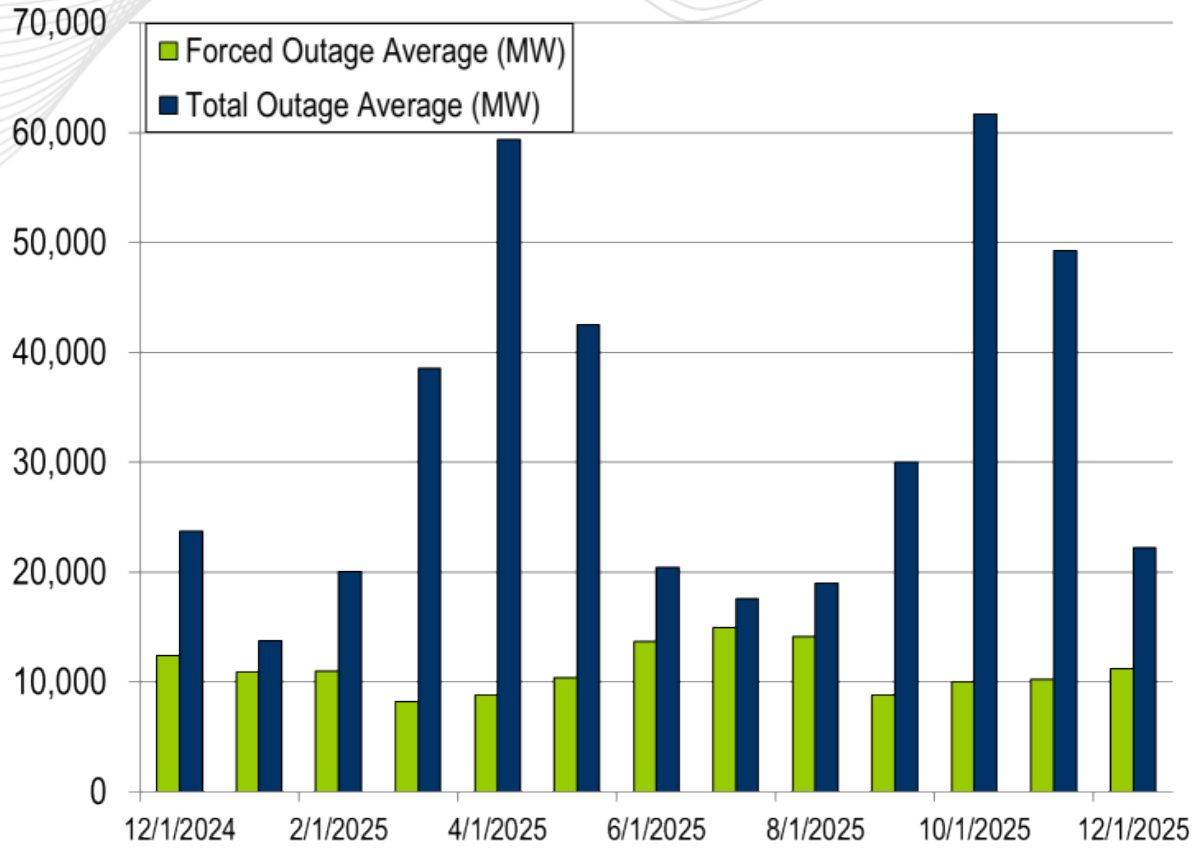
- The following Emergency Procedures occurred:
  - 3 Spin Events
  - 3 Shared Reserve Events
  - 1 High System Voltage Action
  - 3 Cold Weather Alerts
  - 26 Post Contingency Local Load Relief Warnings

Shortage Case Approvals

- There were no shortage case approvals in the month of December 2025

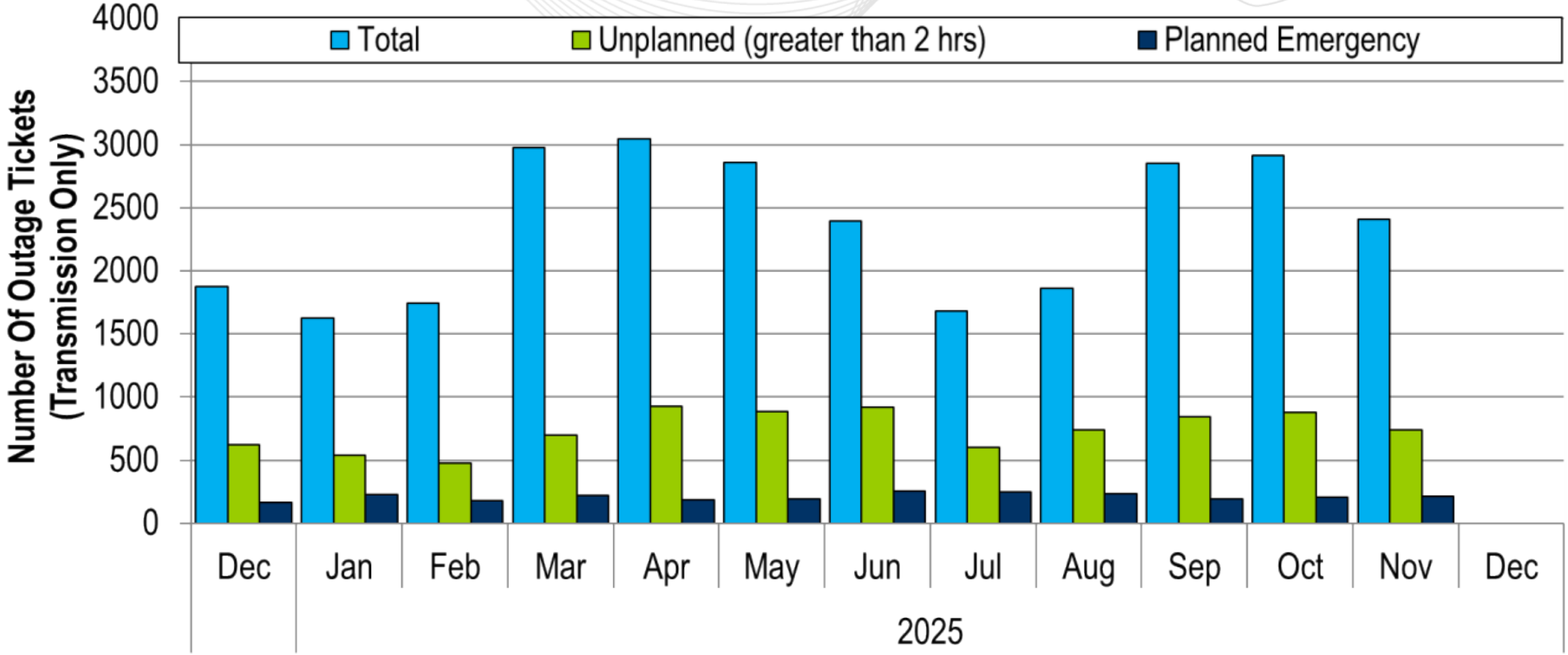
RTO Generation Outage Rate - Monthly





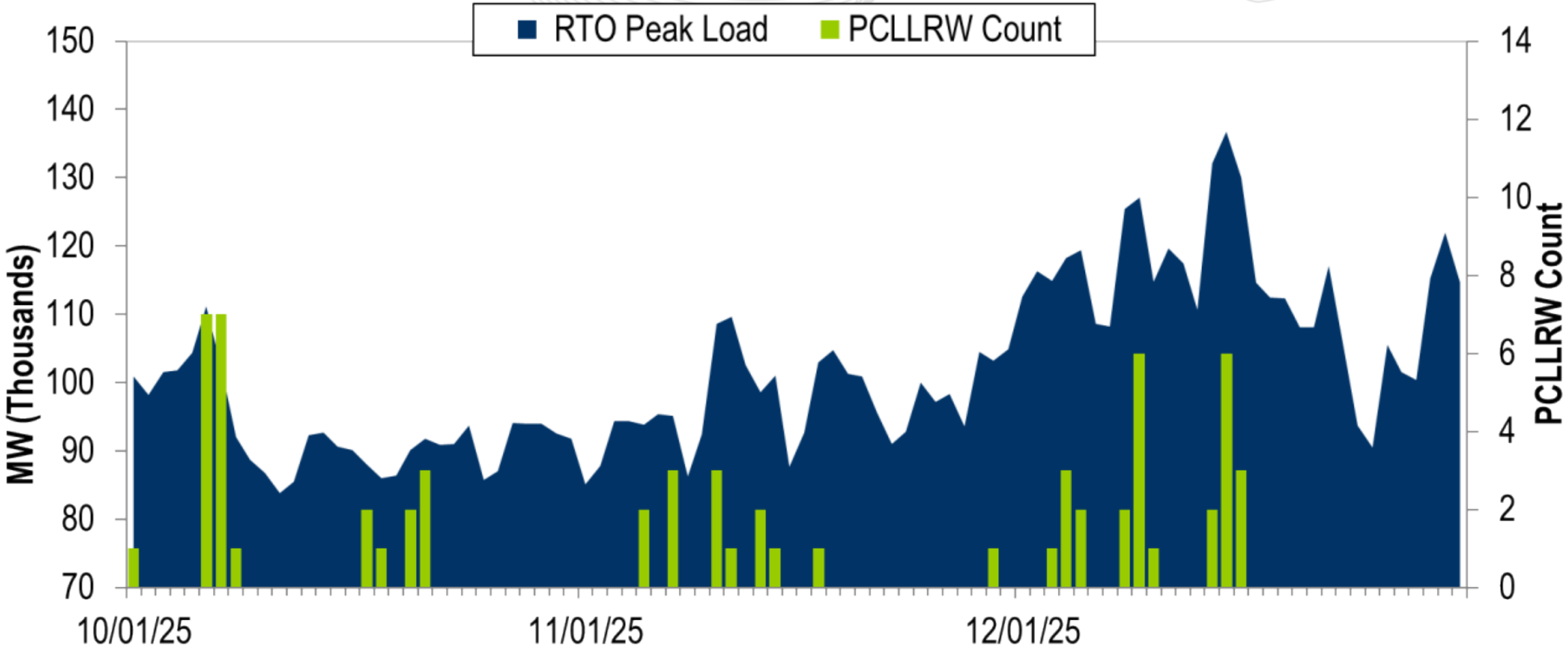
The 13-month average forced outage rate is 5.60% or 11,169 MW.
The 13-month average total outage rate is 16.14% or 32,200 MW.

2024-2025 Planned Emergency, Unplanned, and Total Outages by Ticket (Transmission Only)



Note: “Unplanned Outages" include tripped facilities. One tripping event may involve multiple facilities.

PCLLRW Count Vs. Peak Load – Daily Values For 3 Months

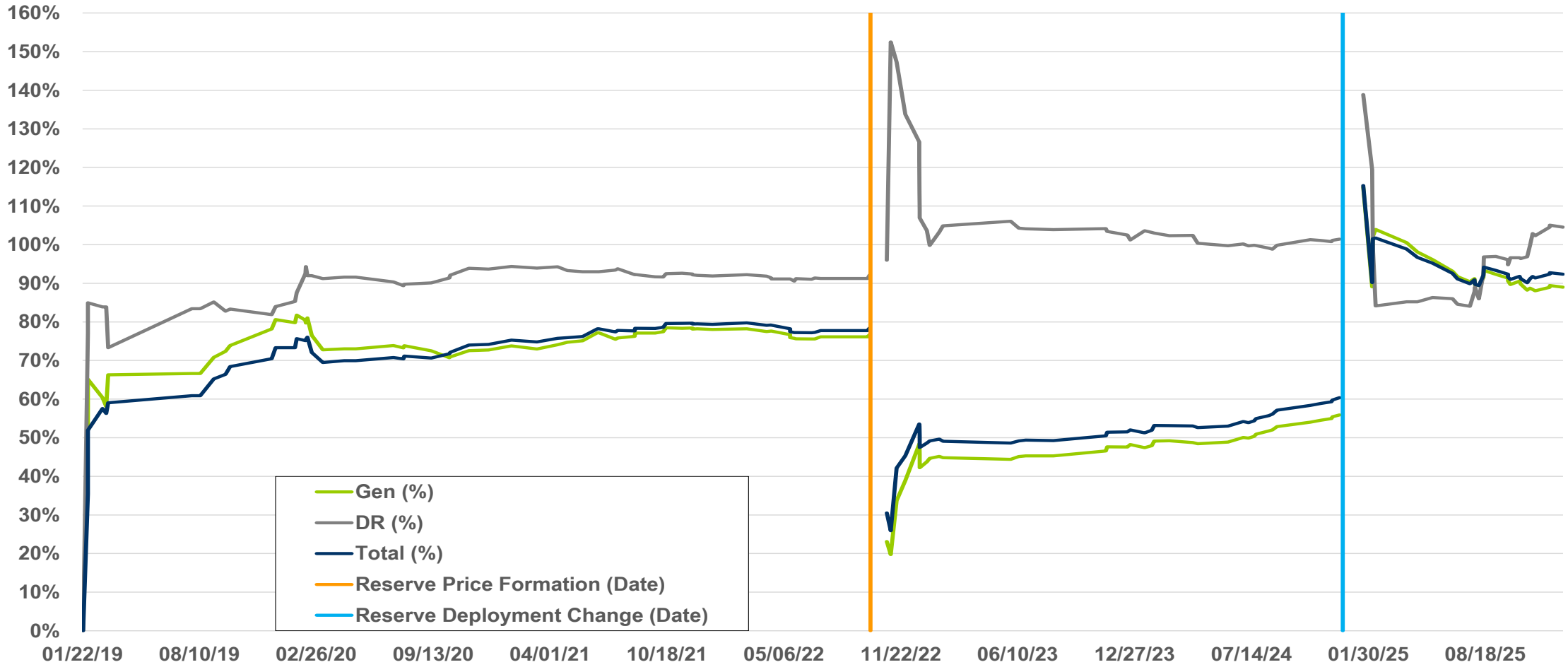


Spin Response

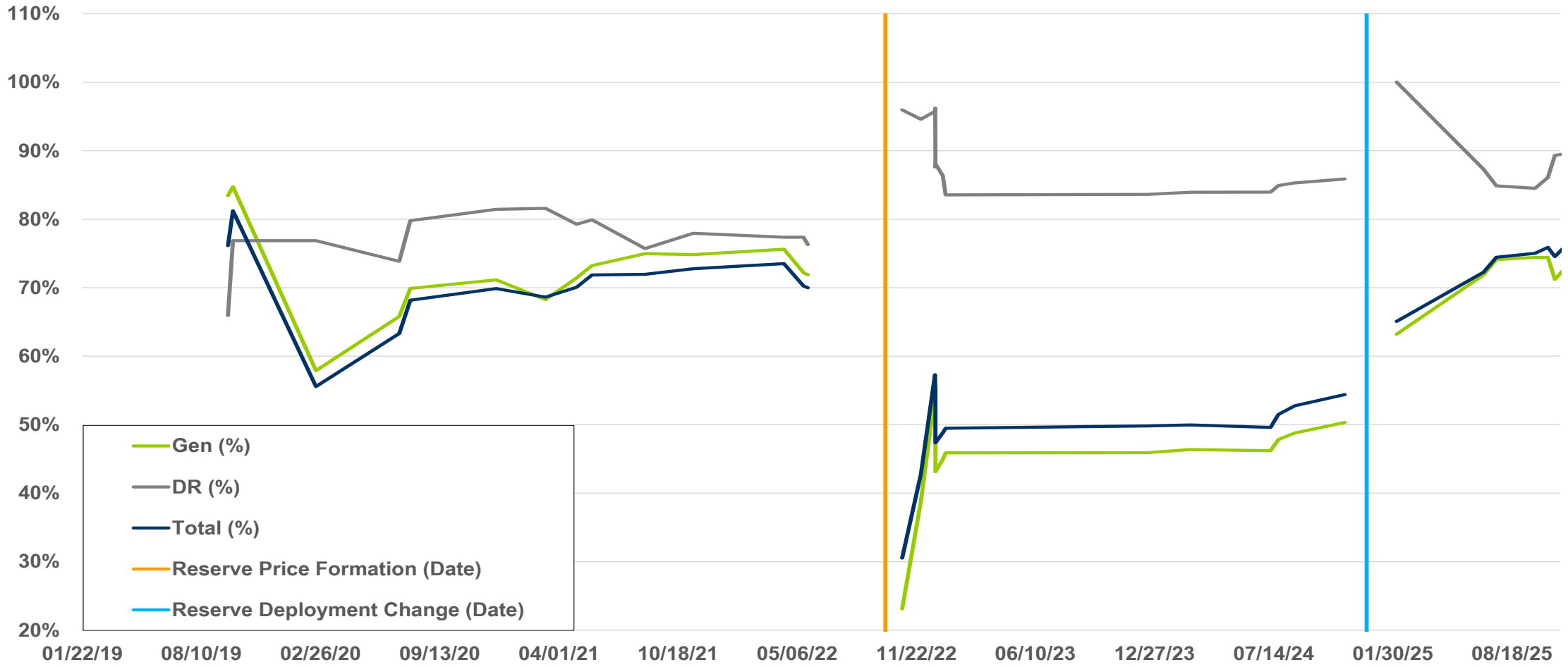
Event	1			2			3		
Date	12/05/25			12/06/25			12/28/25		
Start Time	19:30:47			05:05:30			17:07:09		
End Time	19:35:12			05:13:14			17:16:55		
Duration	00:04:25			00:07:44			00:09:46		
Region	RTO			RTO			RTO		
Resource Type	Gen	DR	Total	Gen	DR	Total	Gen	DR	Total
Assigned (MW)	2350	373	2723	2350	218	2568	2012	642	2654
Estimated Expected Response of Assigned Resources (MW)	1038	165	1202	1818	169	1986	1965	627	2592
Actual Response of Assigned Resources (MW)	1151	256	1407	1850	198	2048	1529	573	2102
Output Increase of Resources without Assignment (MW)	1393	0	1393	1623	0	1623	744	0	744
Percent Response To Assignment (%)	49%	69%	52%	79%	91%	80%	76%	89%	79%
Percent Response To Estimated Expected Response (%)	111%	156%	117%	102%	117%	103%	78%	91%	81%
Penalty (MW)	0	0	0	0	0	0	0	0	0

Event Counted Toward Qualifying Events	Qualifying Reason	Individual Percent Response To Assignment (%)	Average Percent Response To Assignment (%)
11/11/25 10:04:49	Event > 10 Minutes, Response > 75%	83.0%	80.6%
12/06/25 05:05:30	Response > 75%	80.0%	
12/28/25 17:07:09	Response > 75%	79.0%	

All Events - Running Average Synchronized Reserve Response To Estimated Expected Response



10+ Minute Events - Running Average Synchronized Reserve Response To Assignment



Contact

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Appendix

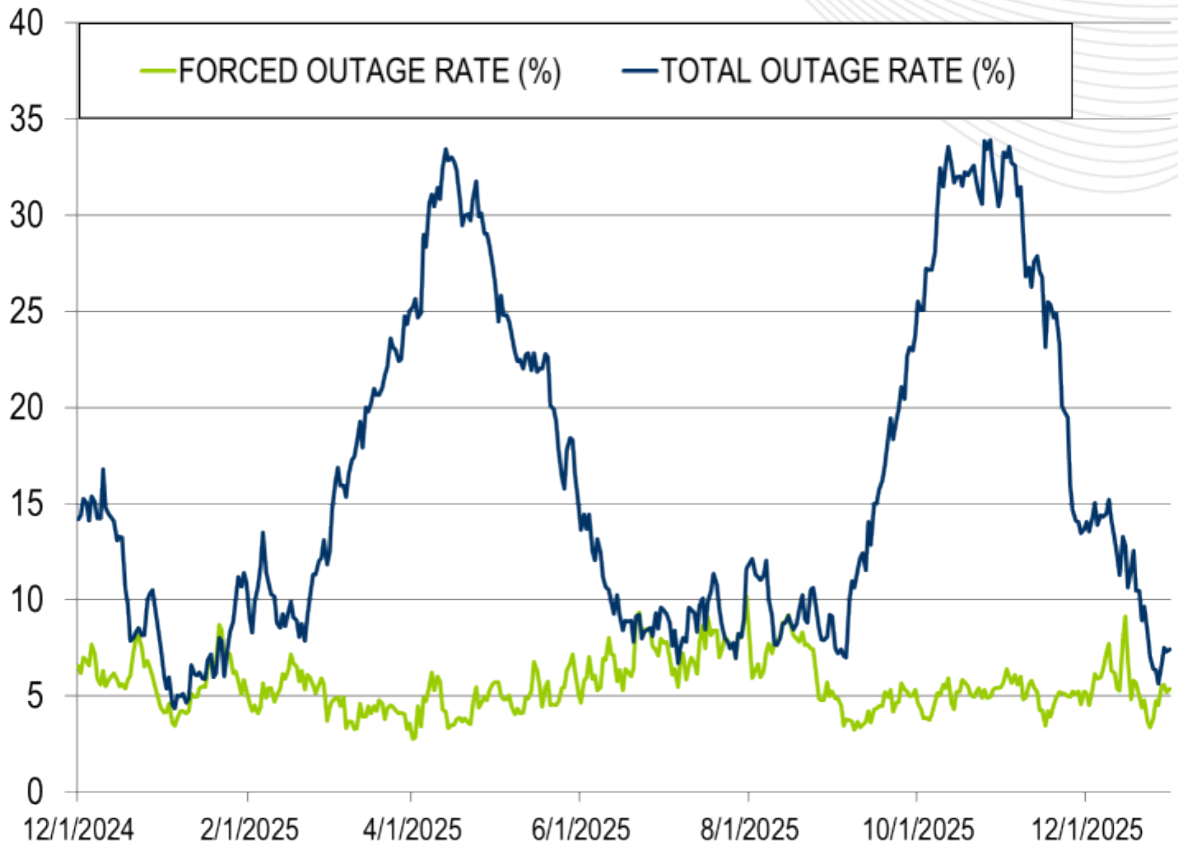
Balancing Authority ACE Limit - Performance Measure

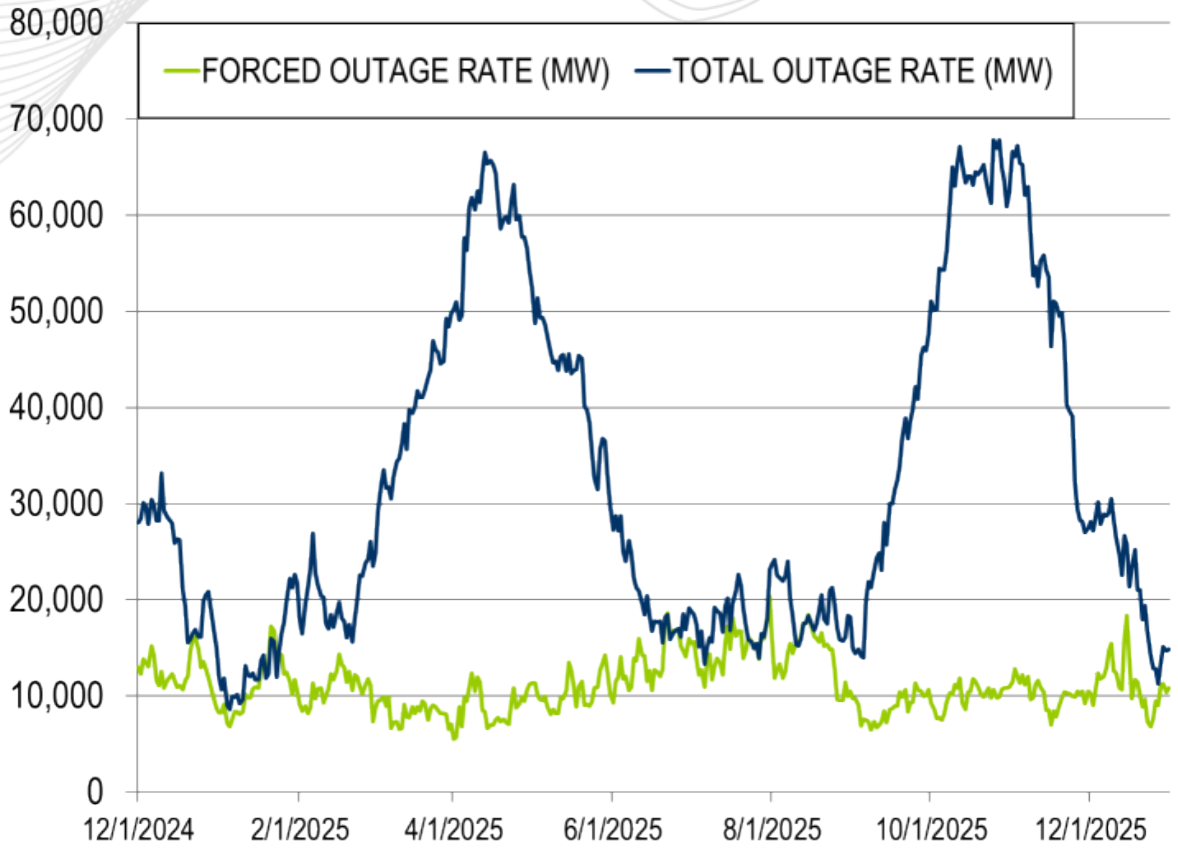
Goal Measurement: Balancing Authority ACE Limit (BAAL)

- The purpose of the new BAAL standard is to maintain interconnection frequency within a predefined frequency profile under all conditions (normal and abnormal), to prevent frequency-related instability, unplanned tripping of load or generation, or uncontrolled separation or cascading outages that adversely impact the reliability of the interconnection. NERC requires each balancing authority demonstrate real-time monitoring of ACE and interconnection frequency against associated limits and shall balance its resources and demands in real time so that its Reporting ACE does not exceed the BAAL ($BAAL_{LOW}$ or $BAAL_{HIGH}$) for a continuous time period greater than 30 minutes for each event.

- PJM directly measures the total number of BAAL excursions in minutes compared to the total number of minutes within a month. PJM has set a target value for this performance goal at 99% on a daily and monthly basis. In addition, current NERC rules limit the recovery period to no more than 30 minutes for a single event.

RTO Generation Outage Rate - Daily





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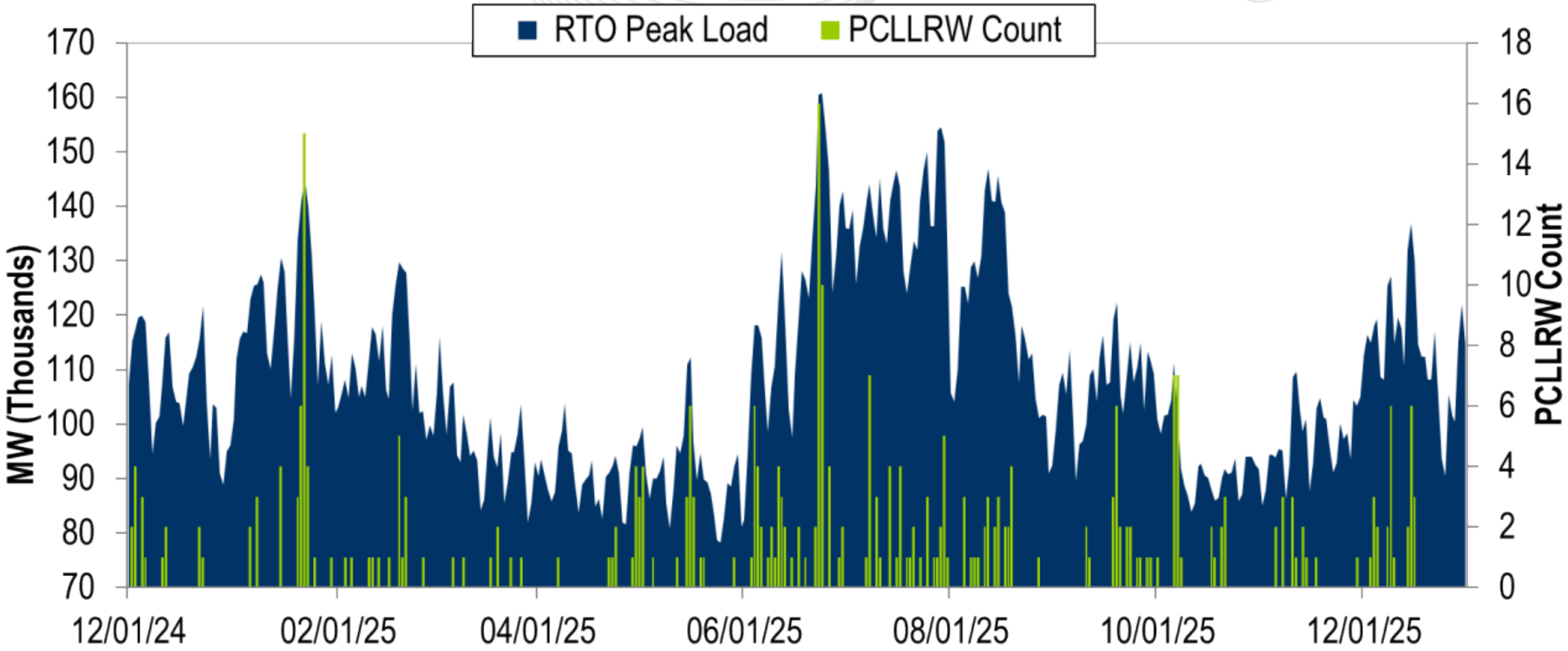

PROTECT THE POWER GRID

THINK BEFORE YOU CLICK!

pjm

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