System Operations Report

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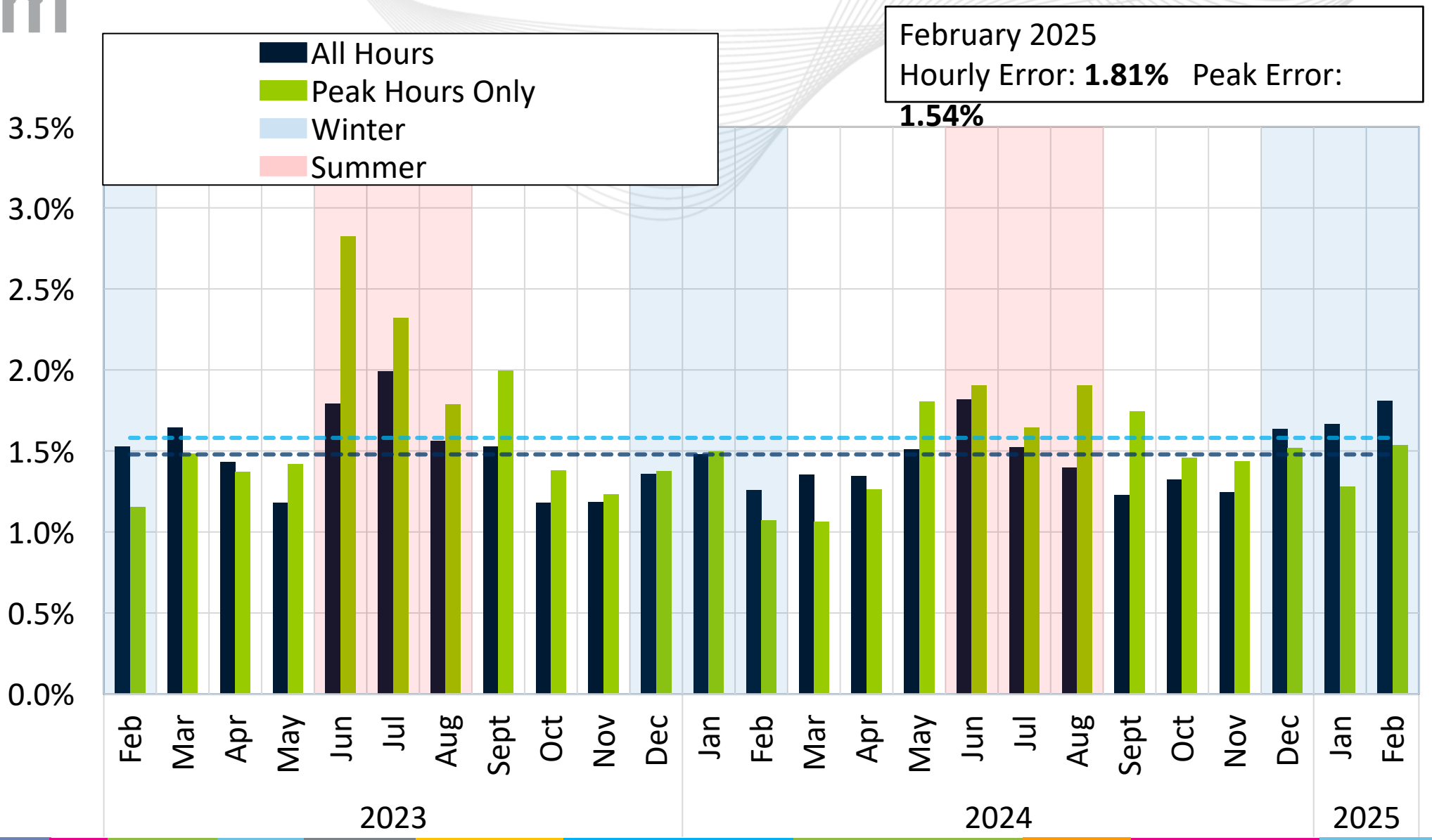
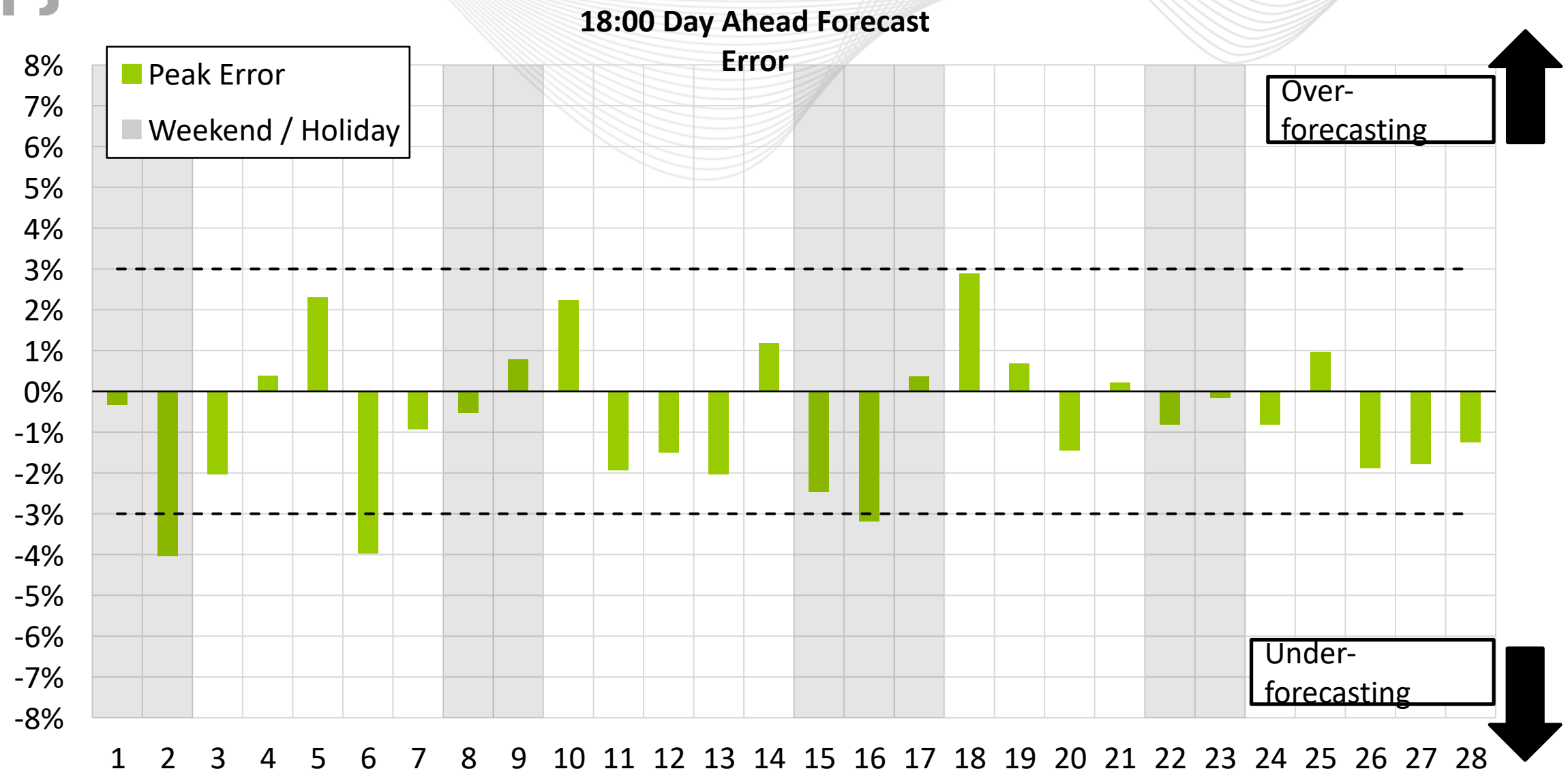
Operating Committee

March 6, 2025

Average Load Forecast Error



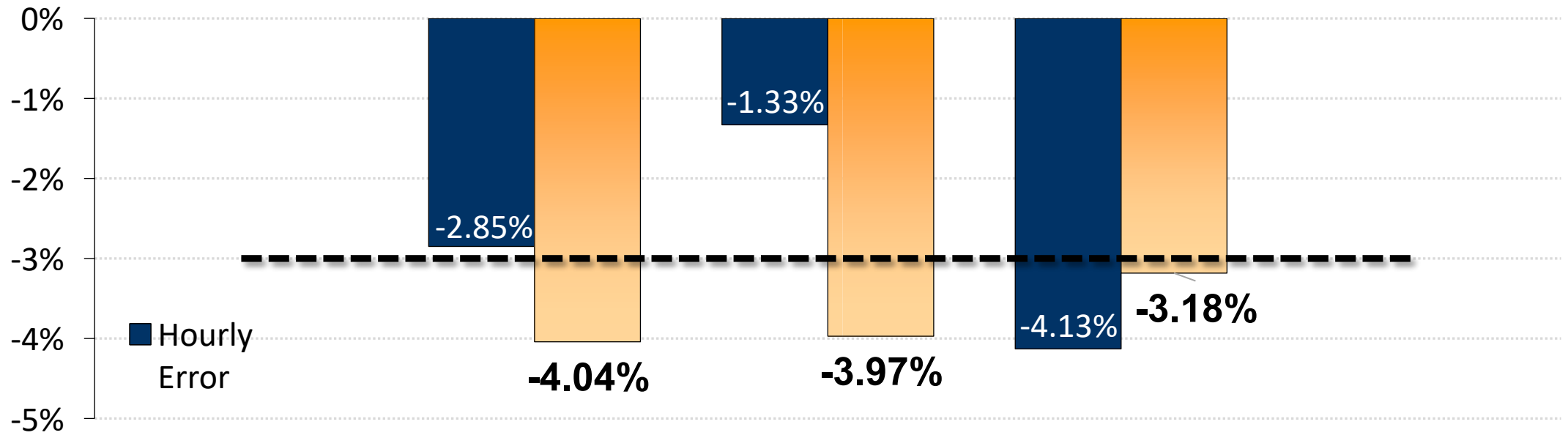
Daily Peak Forecast Error (February)



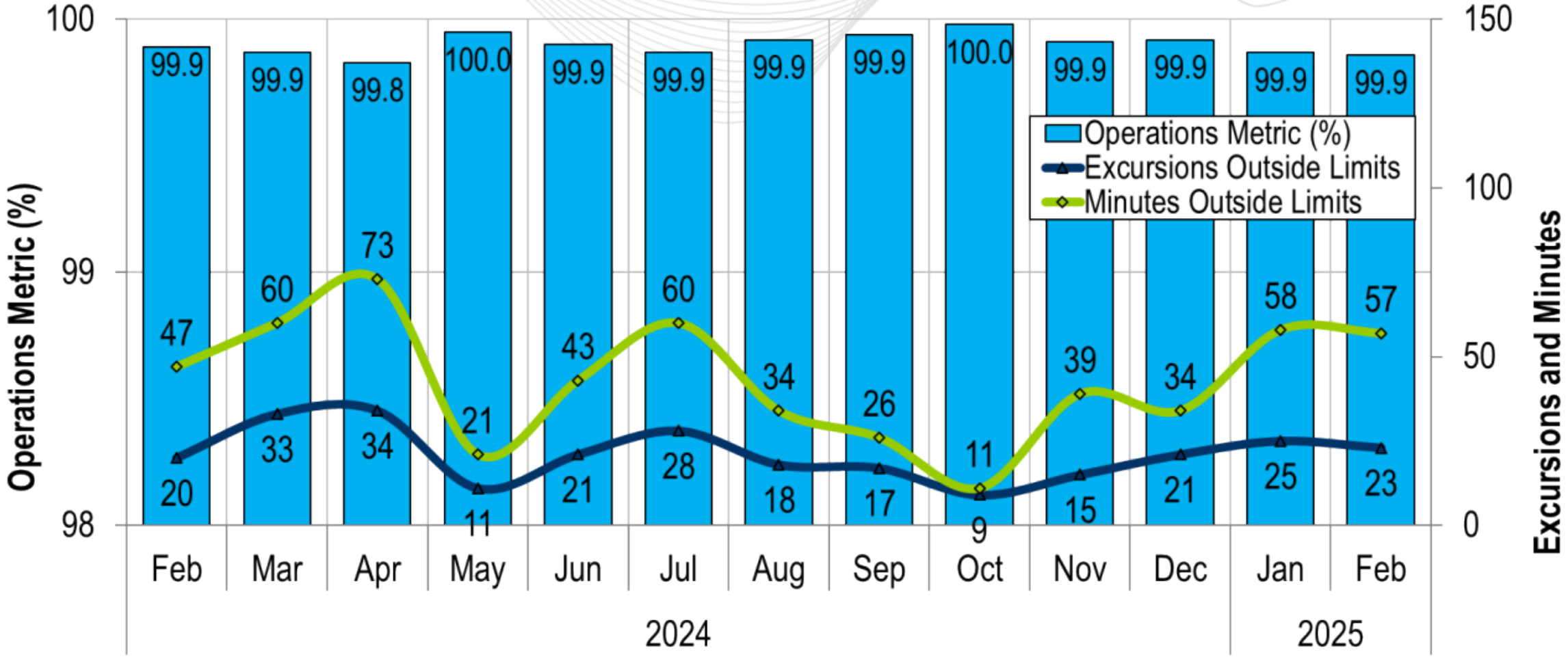
Days Exceeding 3% Forecast Error at Peak Hour

Under-forecasting

Feb. 2	Feb. 6	Feb. 16
Temperatures came in cooler than forecast along with a storm system that brought precipitation across RTO and increased loads for	Storm system led to prolonged and increased morning load, shifting timing of morning peak by two hours, leading to under-forecasting.	Heavy rain, cooler than forecast temperatures, and a drastic change in temperature from the prior day led to higher loads.



Monthly BAAL Performance Score



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

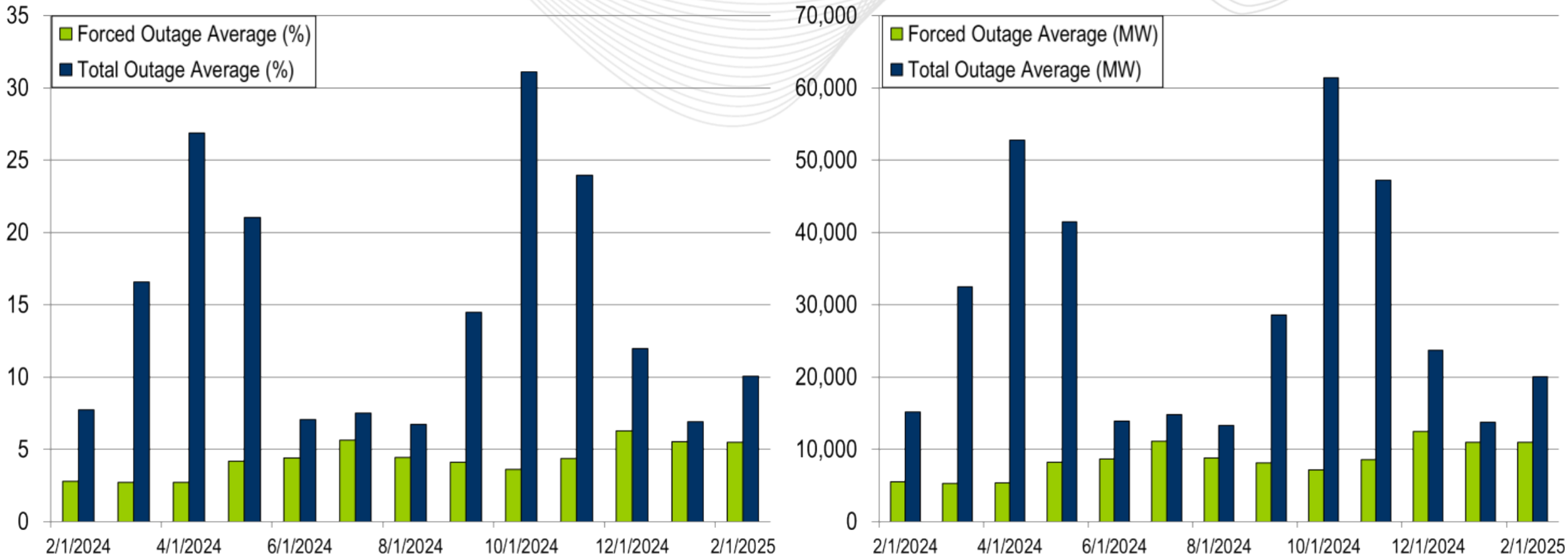
Operational Summary (February)

- The following Emergency Procedures occurred:
  - 3 Shared Reserve events
  - 3 Spin Events
  - 1 Pre-Emergency Load Management Reduction Action
  - 2 Cold Weather Alerts
  - 16 Post Contingency Local Load Relief Warnings

Shortage Case Approvals

- 3 Shortage Cases Approved
- The approved Shortage Cases occurred on:
  - 02/05/2025:
    - 2 shortage cases approved for the 10:10 and 10:15 intervals
    - Factors: unit tripping
  - 02/11/2025:
    - 1 shortage cases approved for the 9:10 interval
    - Factors: load increase

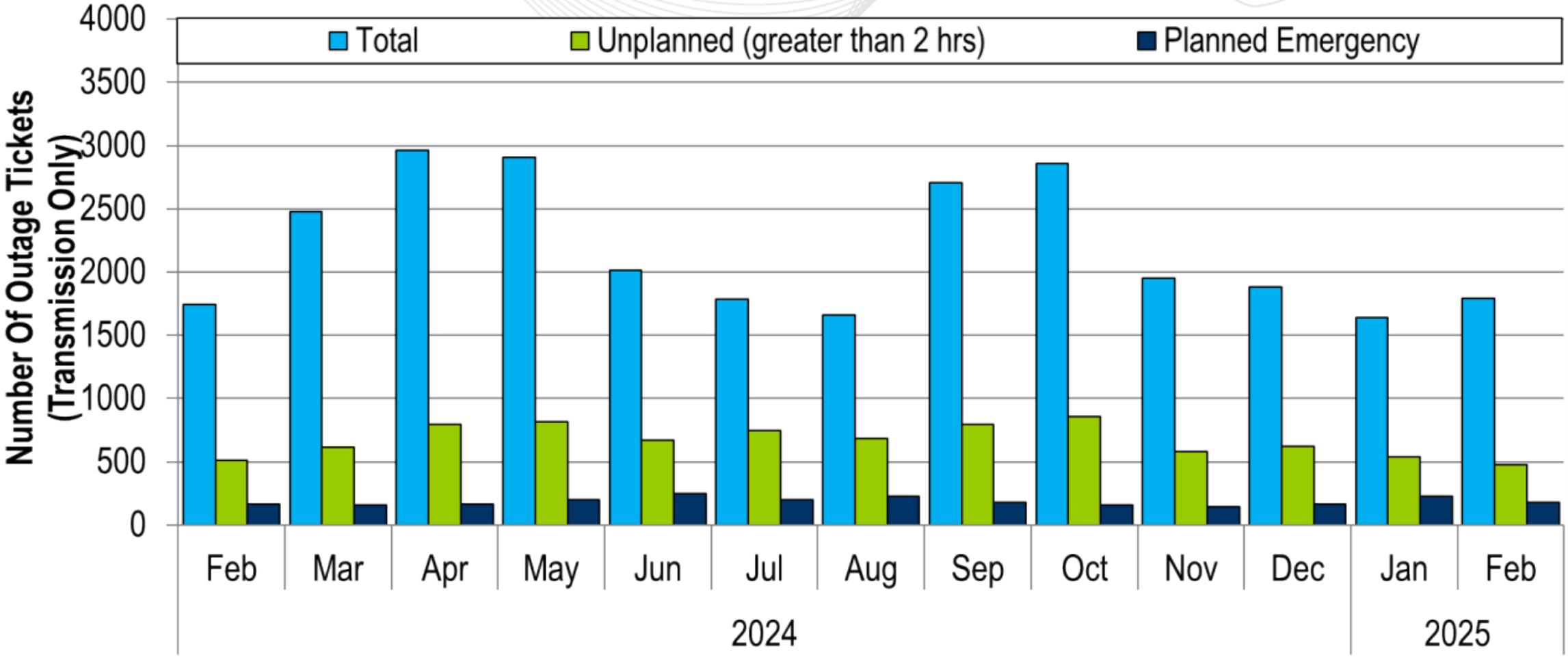
RTO Generation Outage Rate - Monthly



The 13-month average forced outage rate is 4.35% or 8,581 MW.

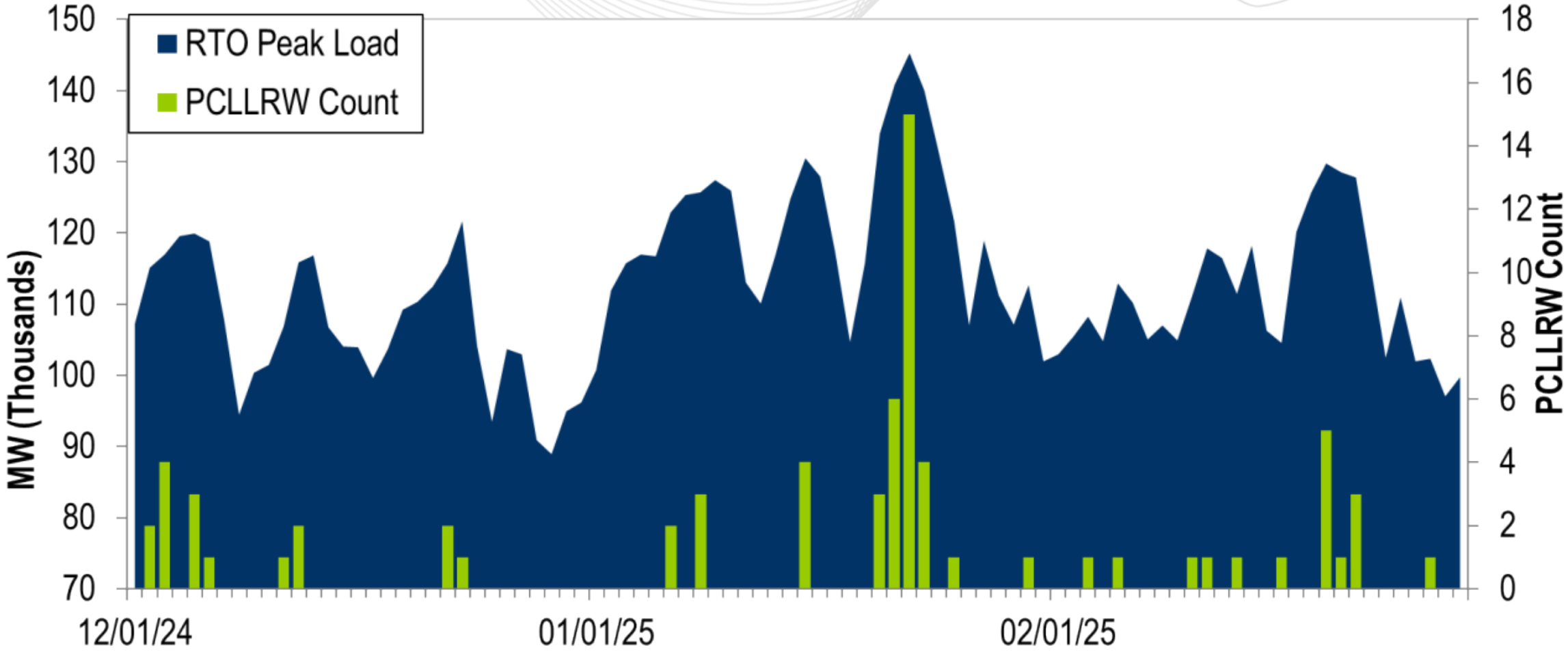
The 13-month average total outage rate is 14.82% or 29,214 MW.

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	02/05/25			02/06/25			02/11/25		
Start Time	10:05:14			13:56:50			09:04:57		
End Time	10:15:17			14:01:49			09:10:16		
Duration	00:10:03			00:04:59			00:05:19		
Region	RTO			RTO			RTO		
Resource Type	Gen	DR	Total	Gen	DR	Total	Gen	DR	Total
Assigned (MW)	1827	98	1924	1800	106	1906	1754	196	1950
Estimated Expected Response of Assigned Resources (MW)	1827	98	1924	897	53	950	933	104	1037
Actual Response of Assigned Resources (MW)	1155	98	1252	1149	32	1181	1021	40	1061
Output Increase of Resources without Assignment (MW)	1646	0	1646	1876	0	1876	1606	0	1606
Percent Response To Estimated Expected Response (%)	63%	100%	65%	128%	60%	124%	109%	38%	102%
Penalty (MW)	672	0	672	0	0	0	0	0	0

Contact

Load Forecast Report

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Appendix

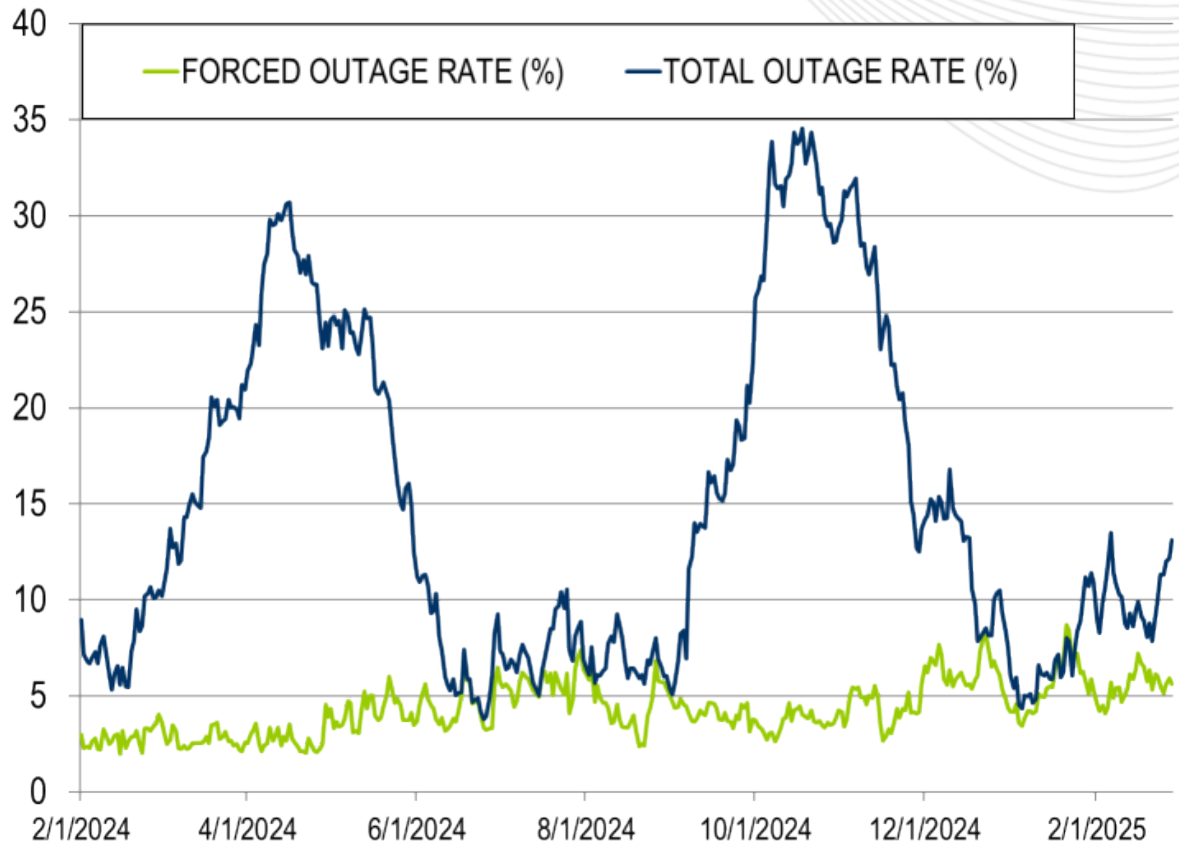
Balancing Authority ACE Limit - Performance Measure

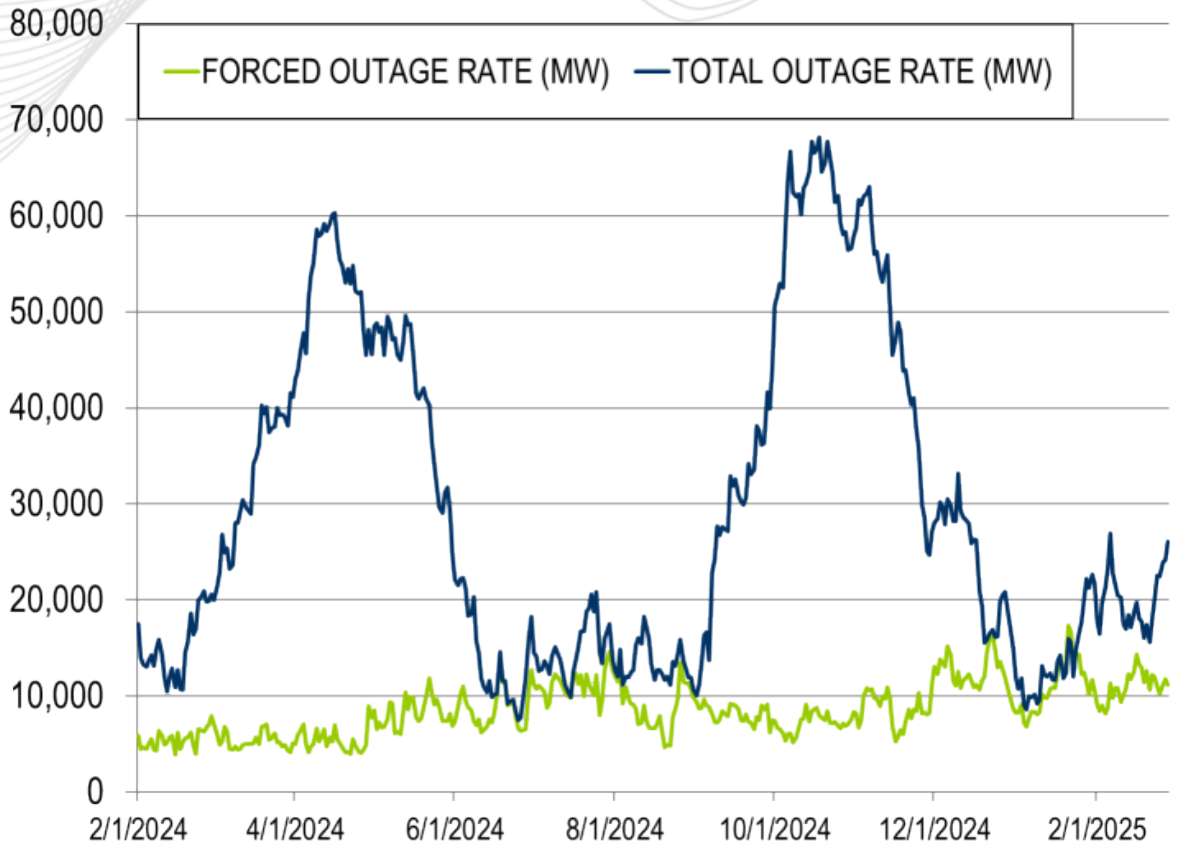
Goal Measurement: Balancing Authority ACE Limit (BAAL)

- 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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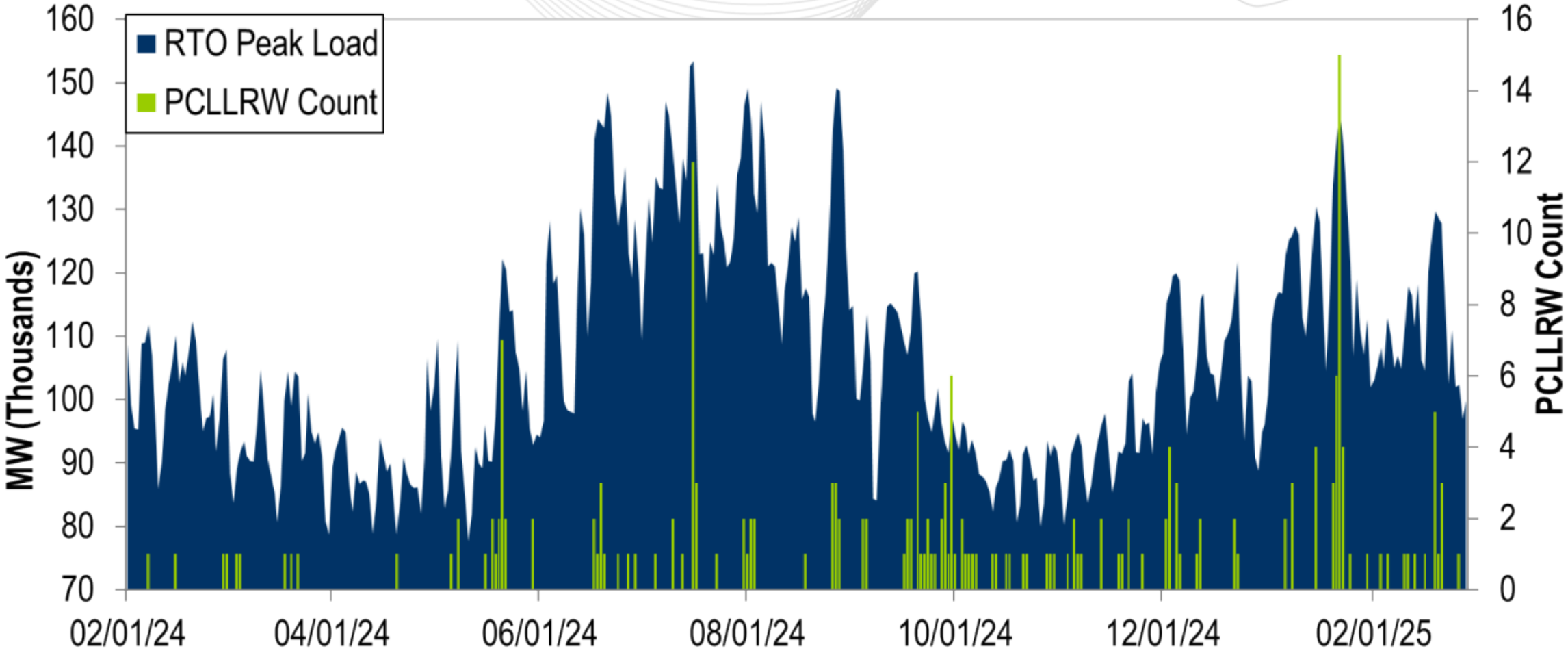
PCLLRW Count Vs. Peak Load – Daily Values For 13 Months



PROTECT THE POWER GRID

THINK BEFORE YOU CLICK!

Be alert to malicious phishing emails.

Report suspicious email activity to PJM.

(610) 666-2244 / it_ops_ctr_shift@pjm.com