



System Operations Report

Michael Stewart, Sr. Engineer II—
Operations Uncertainty & Risk

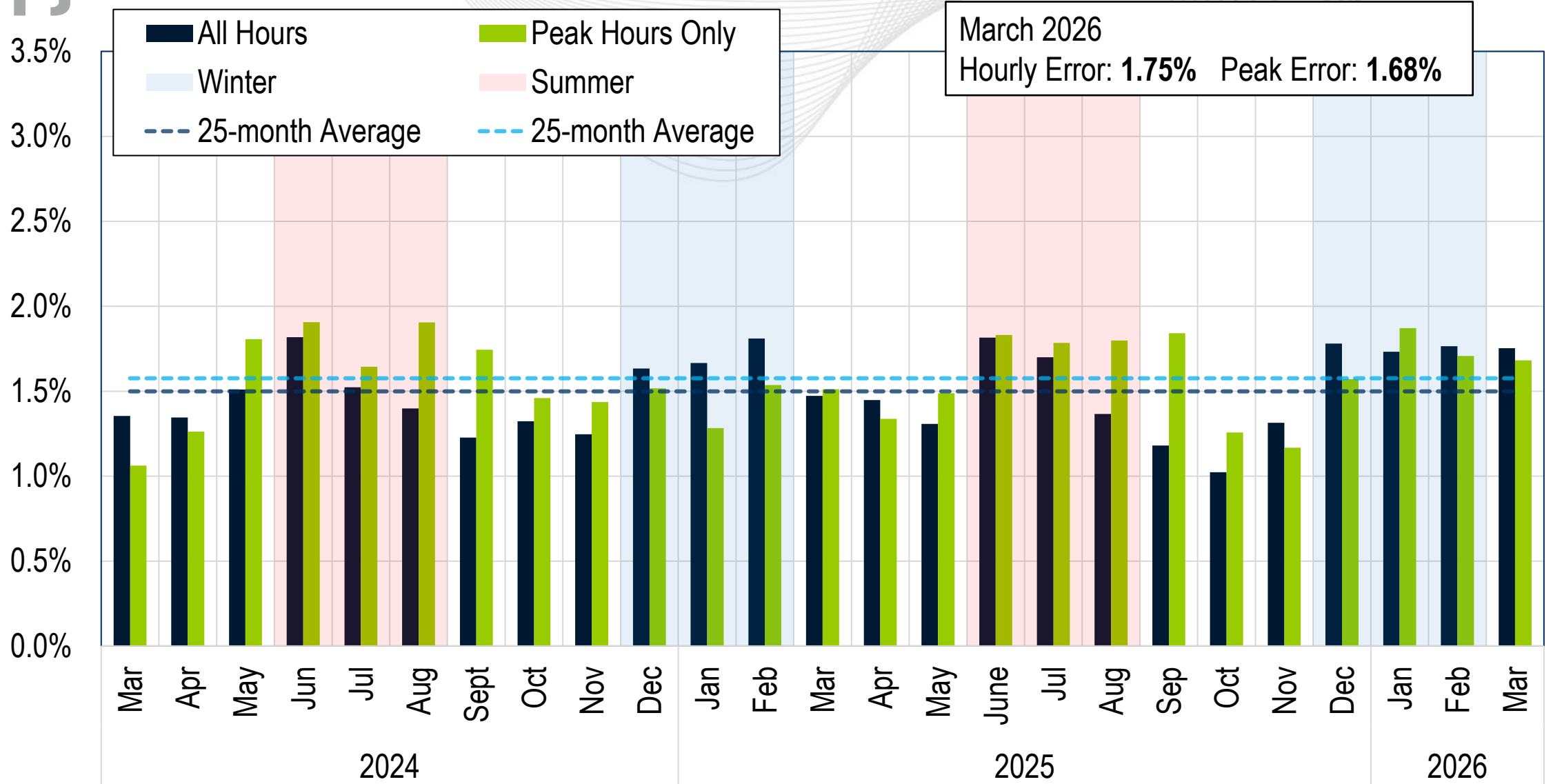
David Kimmel, Sr. Engineer II —
Performance Compliance

Members Committee

April 22nd, 2026

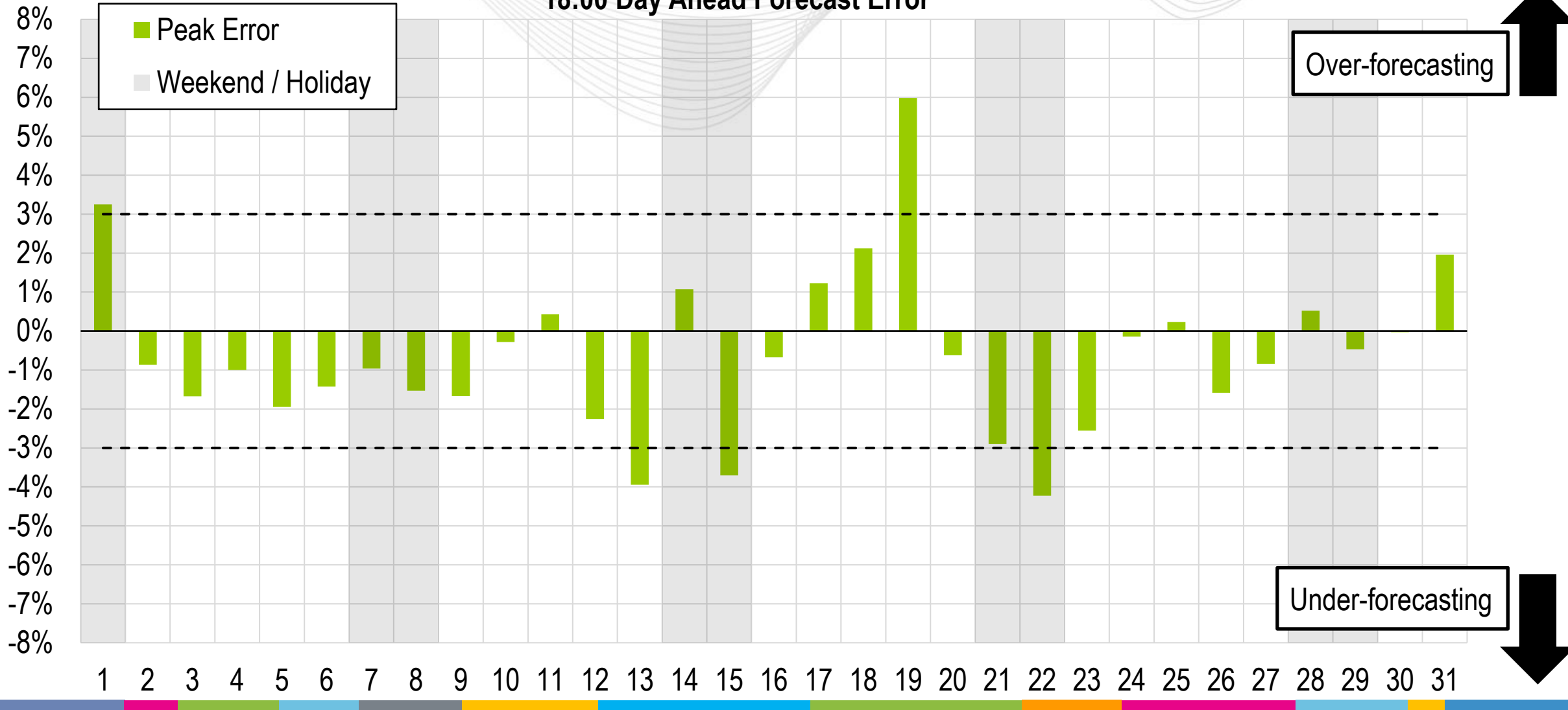


Average Load Forecast Error



Daily Peak Forecast Error (Mar.)

18:00 Day Ahead Forecast Error



Days Exceeding 3% Forecast Error at Peak Hour

Over-forecasting

Mar. 1

Temperatures came in warmer than forecast, leading to lower loads.

Mar. 19

Temperatures came in much warmer than forecast across the RTO, leading to lower loads.

Under-forecasting

Mar. 13

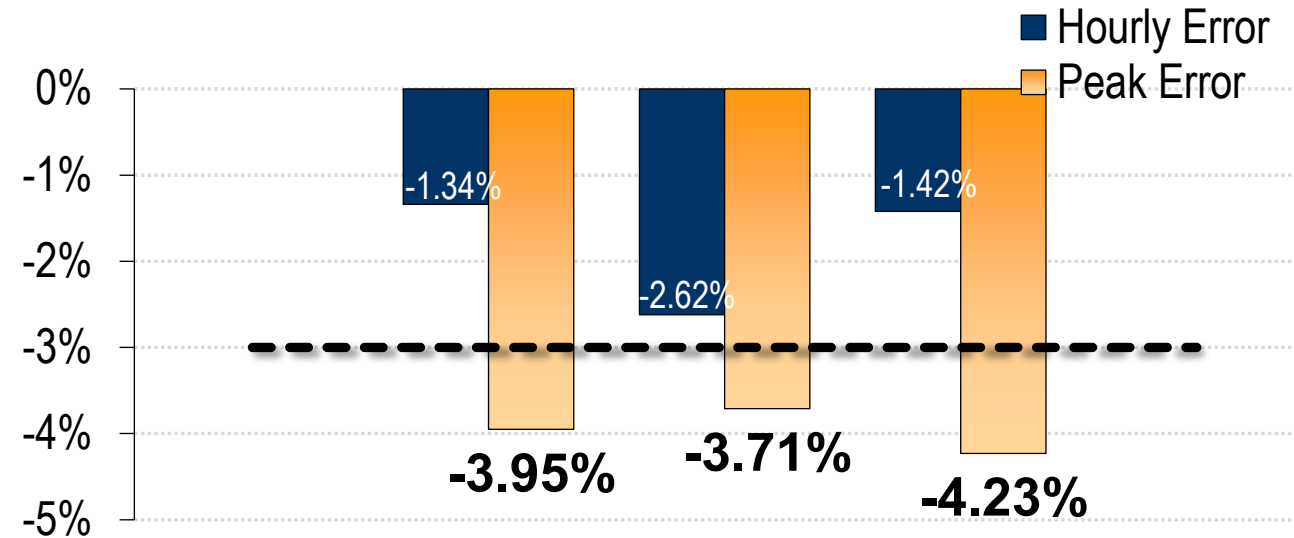
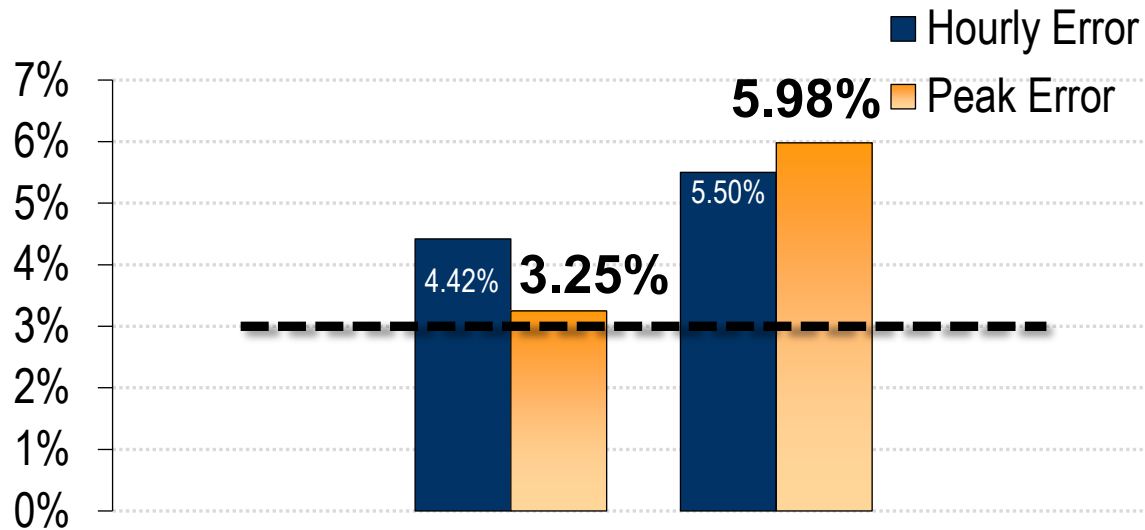
Temperatures came in cooler than forecast in several zones, leading to higher loads.

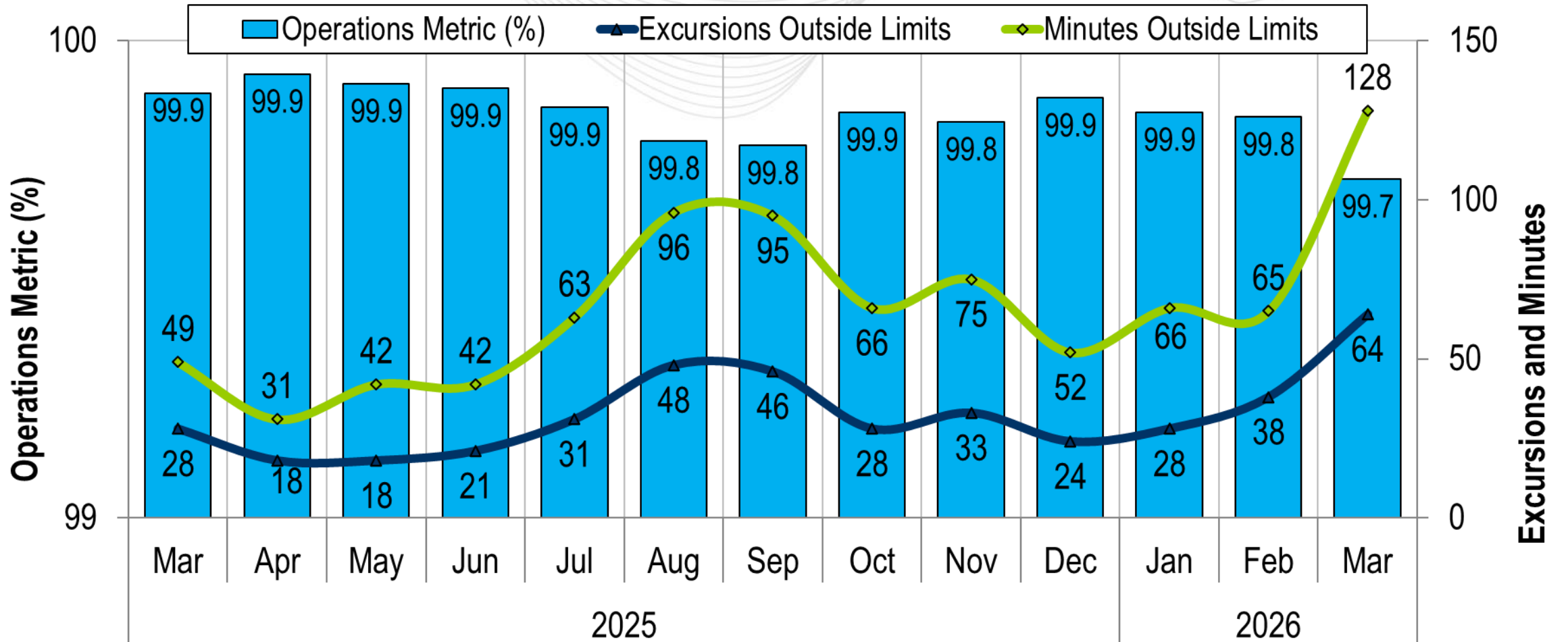
Mar. 15

Temperatures came in cooler than forecast in several zones, resulting in higher loads.

Mar. 22

Temperature forecast error occurred in several zones, leading to higher loads.



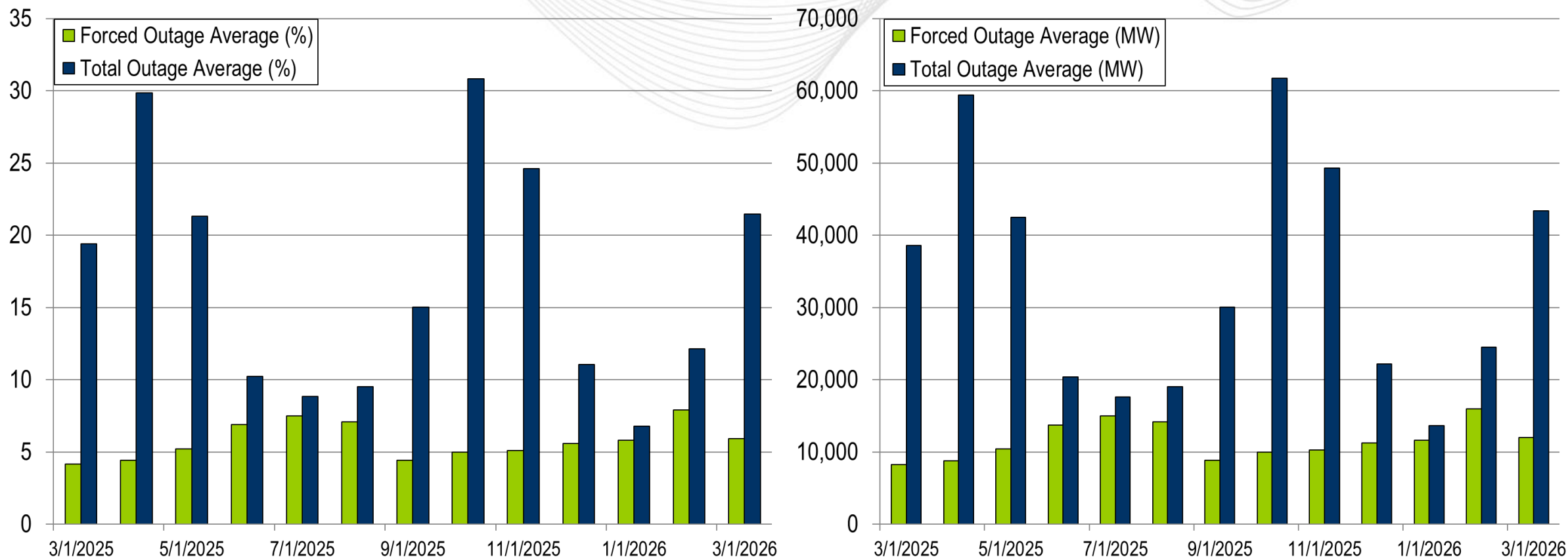


PJM's BAAL performance has exceeded the goal of 99% for each month in 2025 and 2026.

- The following Emergency Procedures occurred:
 - 2 Spin Events
 - 4 Shared Reserve Events
 - 1 High System Voltage Action
 - 3 Geomagnetic Disturbance Warnings
 - 11 Post Contingency Local Load Relief Warnings

- 19 Shortage Cases Approved
- The approved Shortage Cases occurred on:
 - 03/01/2026:
 - 3 shortage cases approved for the 19:35, 19:40, and 19:45 intervals
 - Factors: Loss of generation
 - 03/12/2026:
 - 9 shortage cases approved for the 18:59 and 19:05 – 19:40 intervals
 - Factors: Transient shortage due to ramp limitations, solar dropping out, and load coming in
 - 03/13/2026:
 - 7 shortage cases approved for the 07:05 – 07:35 intervals
 - Factors: Transient shortage due to ramp limitations and load coming in higher than forecasted

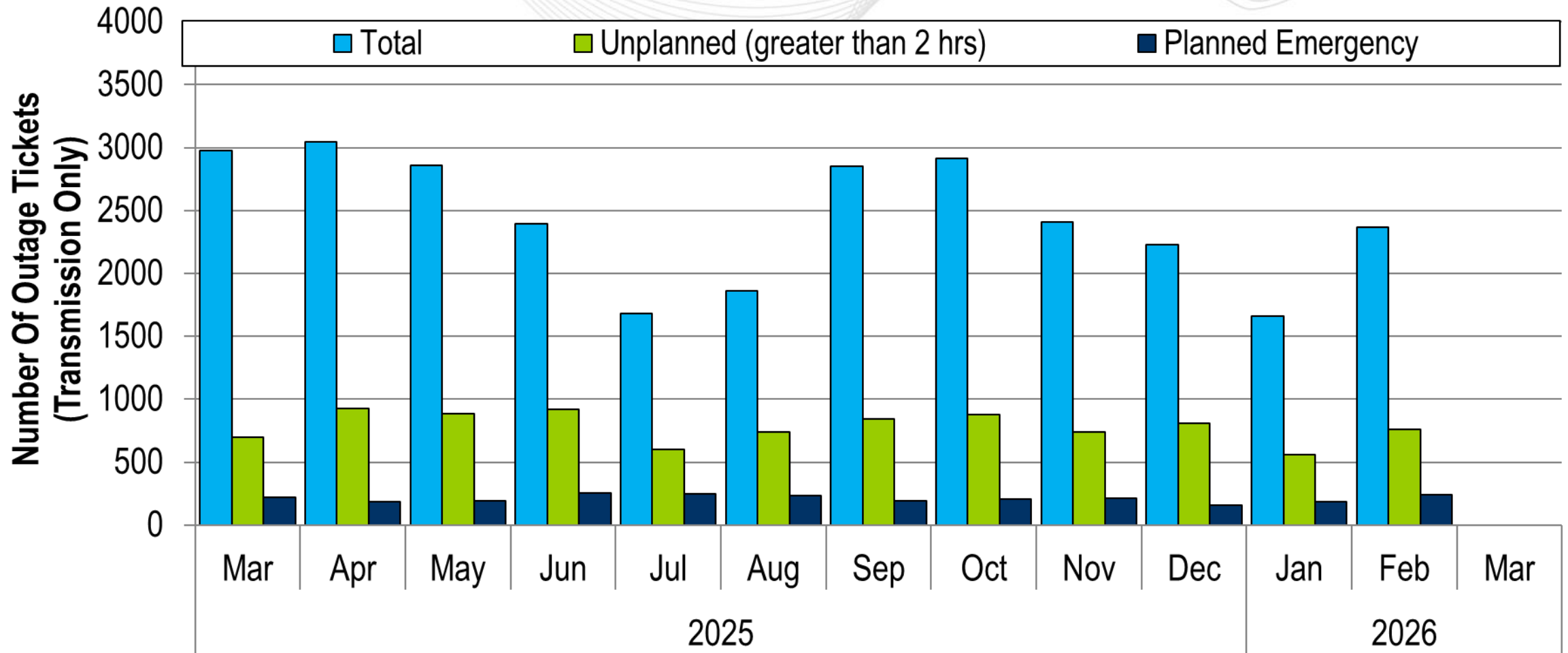
RTO Generation Outage Rate - Monthly



The 13-month average forced outage rate is 5.76% or 11,531 MW.
 The 13-month average total outage rate is 17.03% or 34,067 MW.

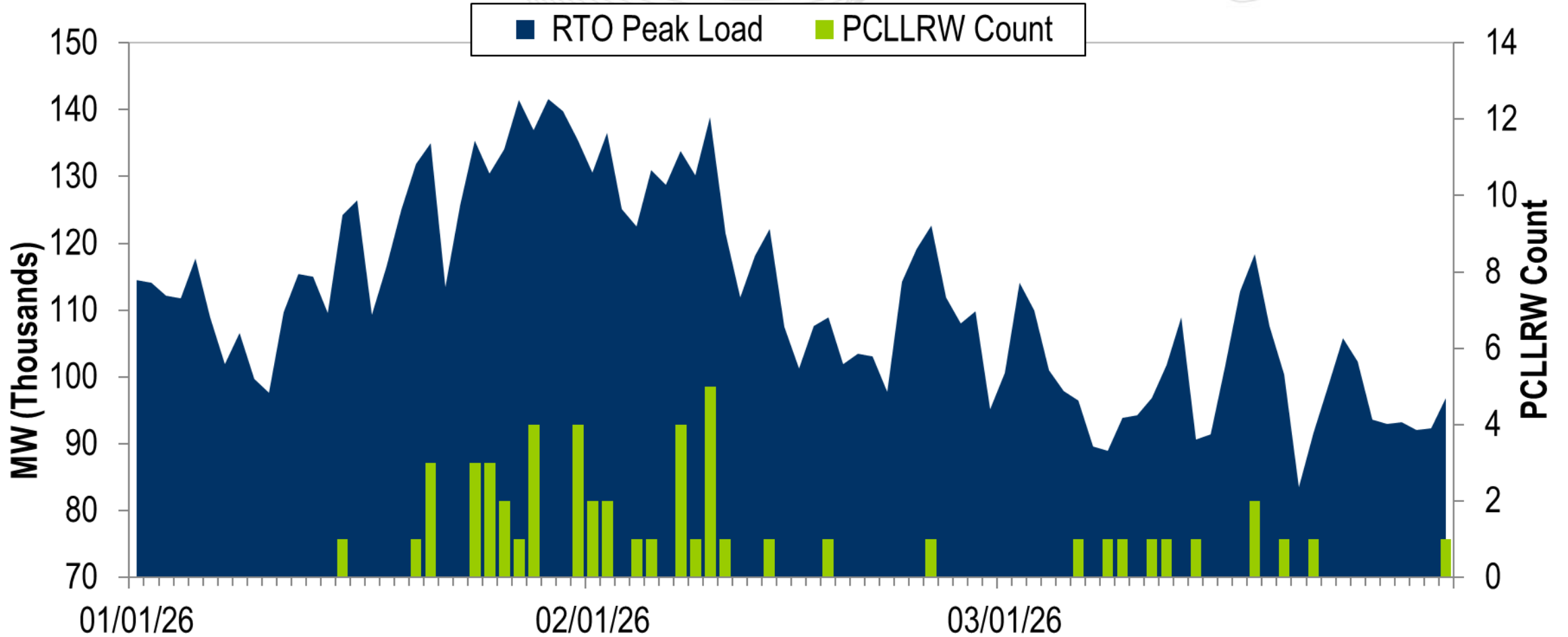


2024-2025 Planned Emergency, Unplanned, and Total Outages by Ticket (Transmission Only)



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

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



Event	1			2		
Date	03/01/26			03/05/26		
Start Time	19:29:03			02:24:46		
End Time	19:40:12			02:28:45		
Duration	00:11:09			00:03:59		
Region	RTO			RTO		
Resource Type	Gen	DR	Total	Gen	DR	Total
Assigned (MW)	1895	643	2537	2632	874	3506
Estimated Expected Response of Assigned Resources (MW)	1895	643	2537	1048	348	1396
Actual Response of Assigned Resources (MW)	1333	499	1832	268	439	706
Output Increase of Resources without Assignment (MW)	1108	0	1108	843	0	843
Percent Response To Assignment (%)	70%	78%	72%	10%	50%	20%
Percent Response To Estimated Expected Response (%)	70%	78%	72%	26%	126%	51%
Penalty (MW)	562	144	705	0	0	0

Event Counted Toward Qualifying Events	Qualifying Reason	Individual Percent Response To Assignment (%)	Average Percent Response To Assignment (%)
03/01/26 19:29:03	≥10 Minutes	72.2%	72.2%

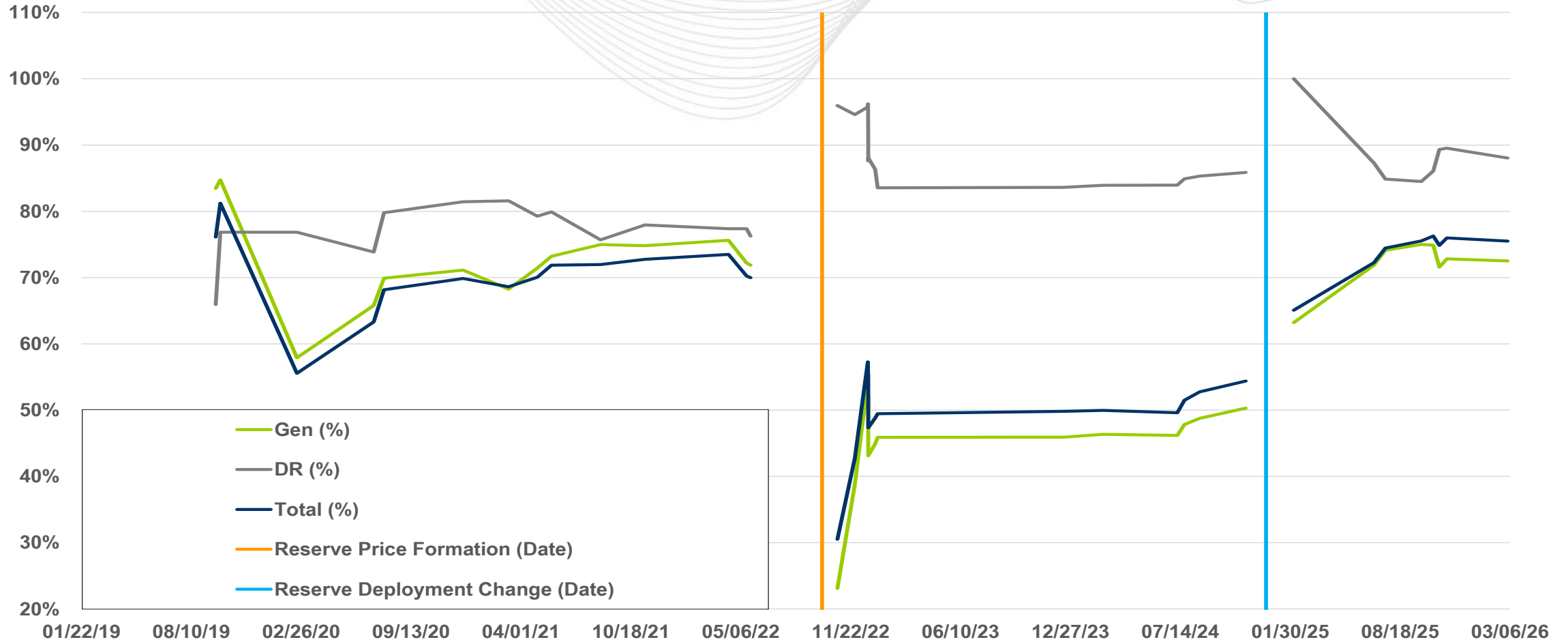


All Events: Running Average Synchronized Reserve Response To Estimated Expected Response





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



Load Forecast Report

Presenter/SME:

Marcus Smith,
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System Operations Report

Presenter:

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Member Hotline

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(866) 400 – 8980

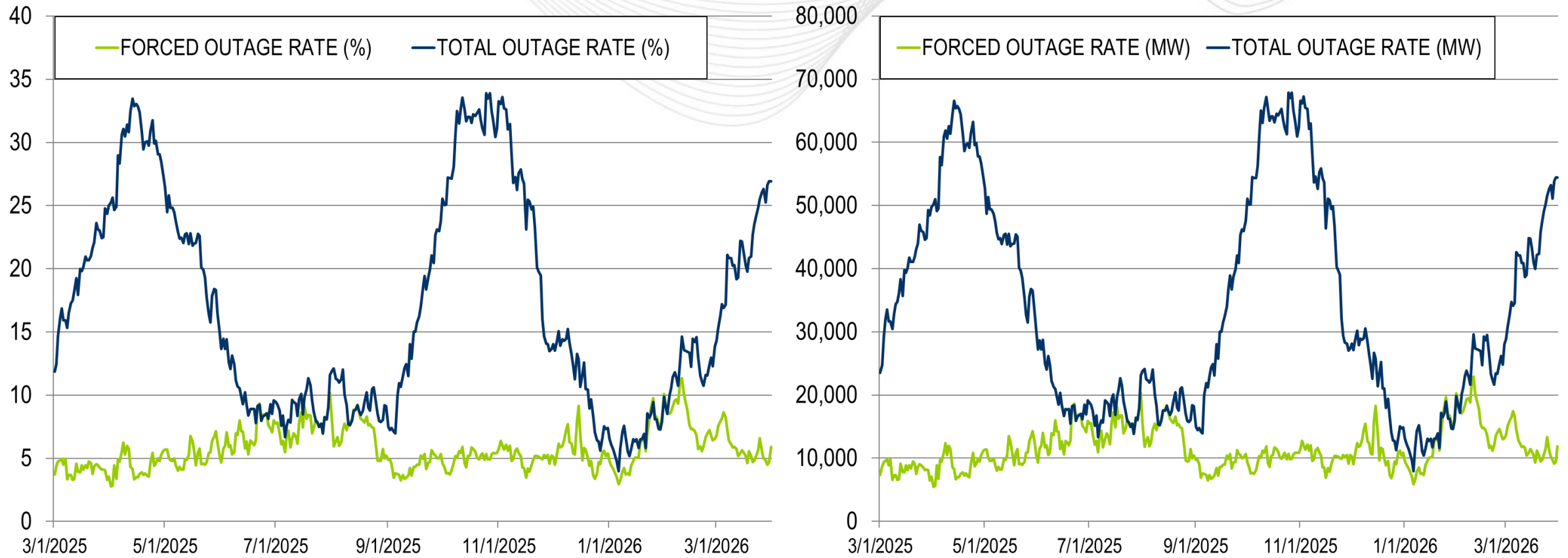
custsvc@pjm.com

Appendix

Goal Measurement: Balancing Authority ACE Limit (BAAL)

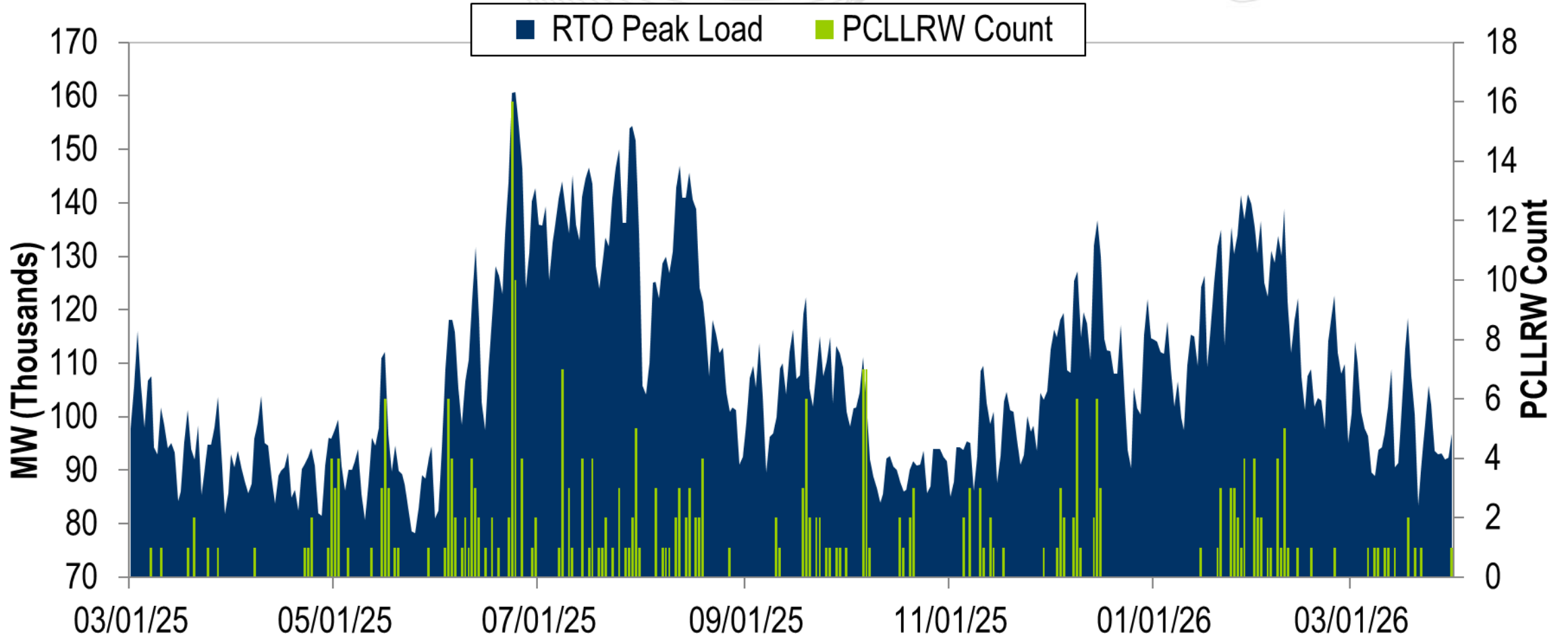
- The purpose of the new BAAL standard is to maintain interconnection frequency within a predefined frequency profile under all conditions (normal and abnormal), to prevent frequency-related instability, unplanned tripping of load or generation, or uncontrolled separation or cascading outages that adversely 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



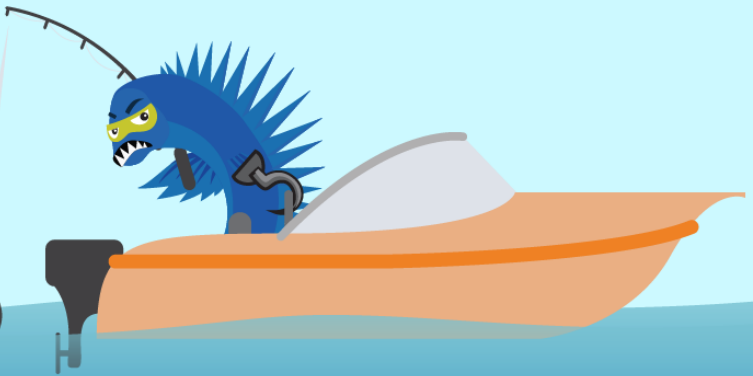
The 13-month average forced outage rate is 5.76% or 11,531 MW.
 The 13-month average total outage rate is 17.03% or 34,067 MW.

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.
Call (610) 666-2244 or email it_ops_ctr_shift@pjm.com**