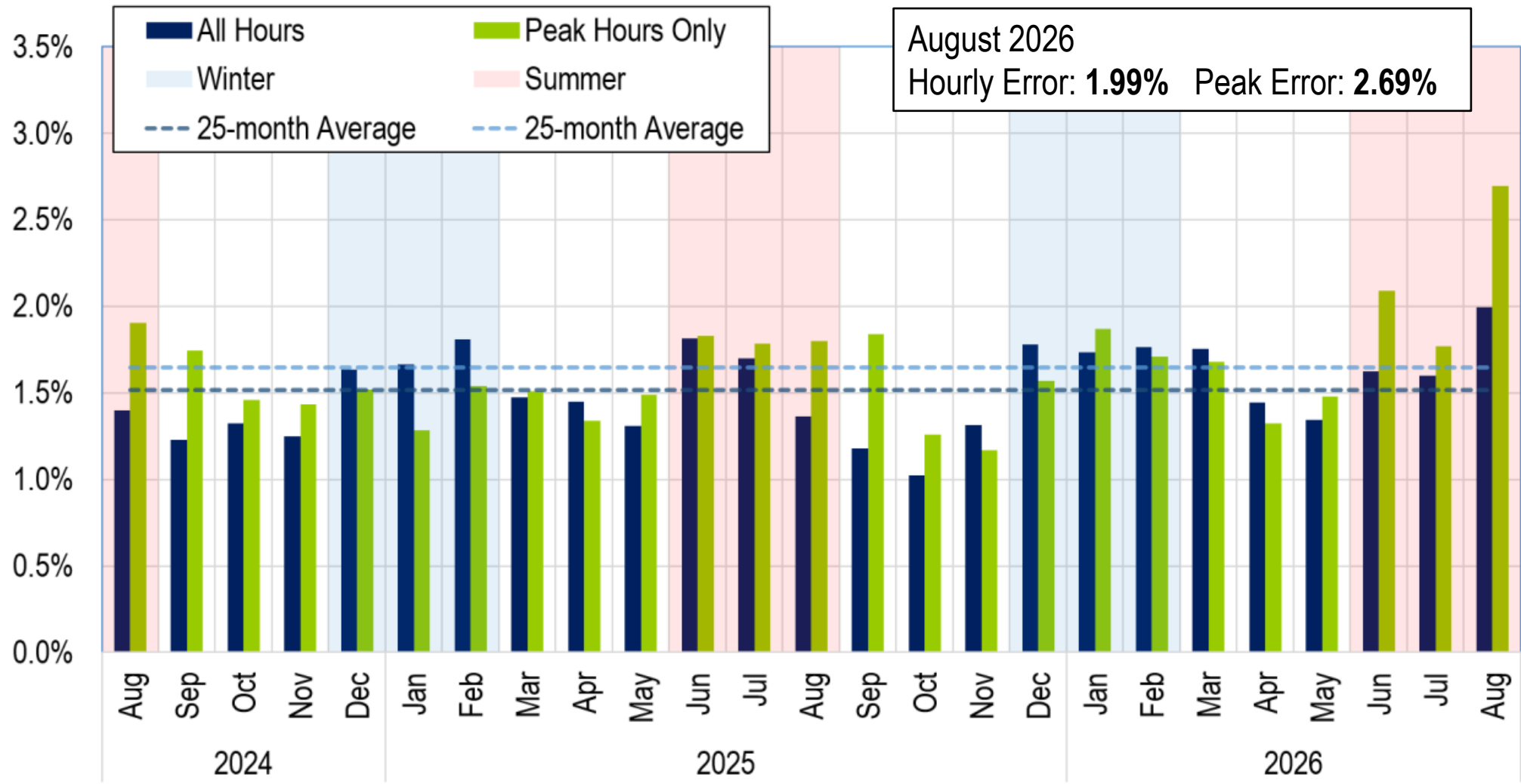


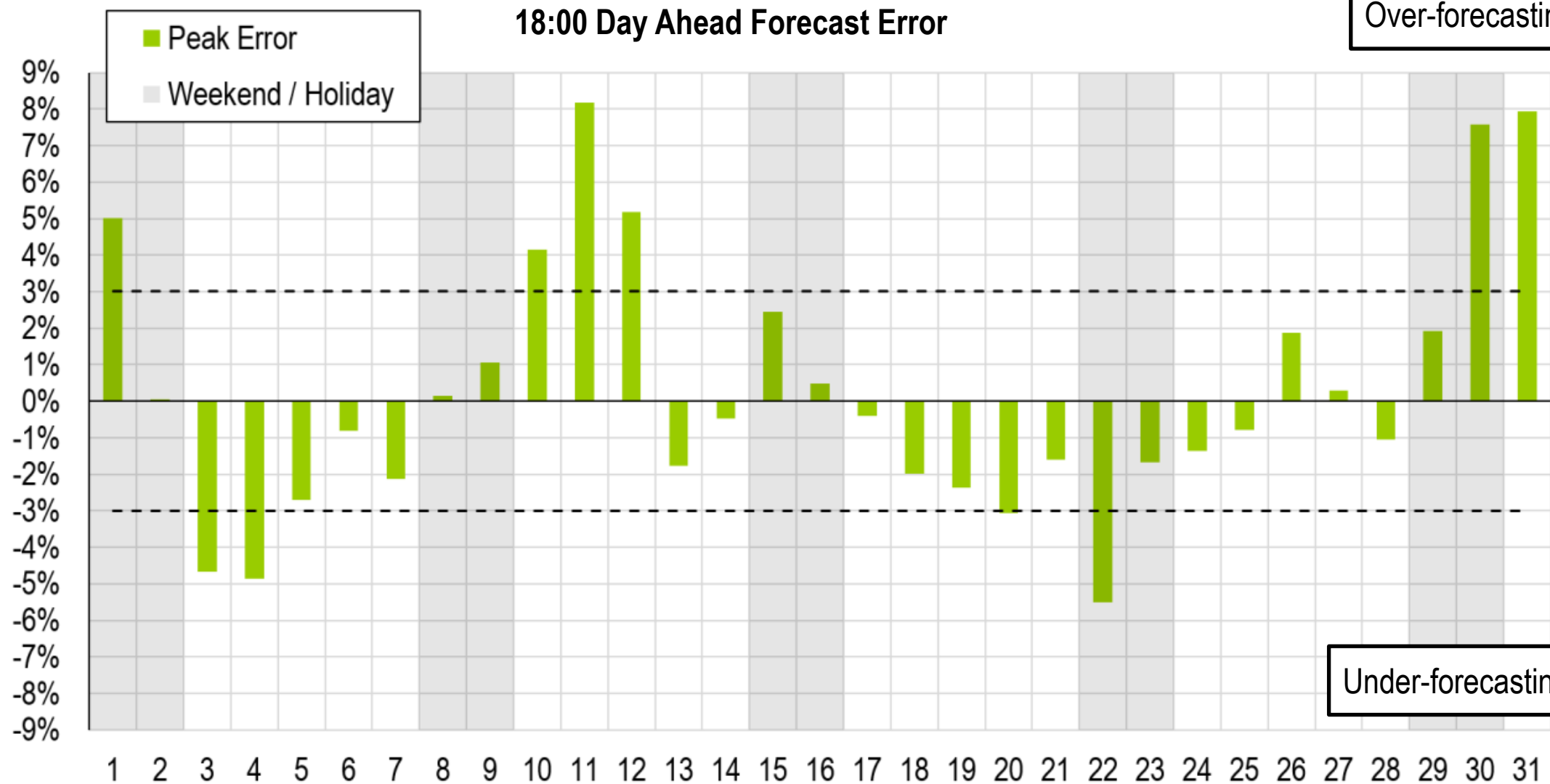
System Operations Report

Marcus Smith, Lead Engineer –
Operations Uncertainty & Risk
David Kimmel, Sr. Engineer II –
Performance Compliance
Members Committee Webinar
September 28, 2026

Disclaimer: While materials are current at the time of publishing, applicable requirements may change. PJM Governing Documents control.



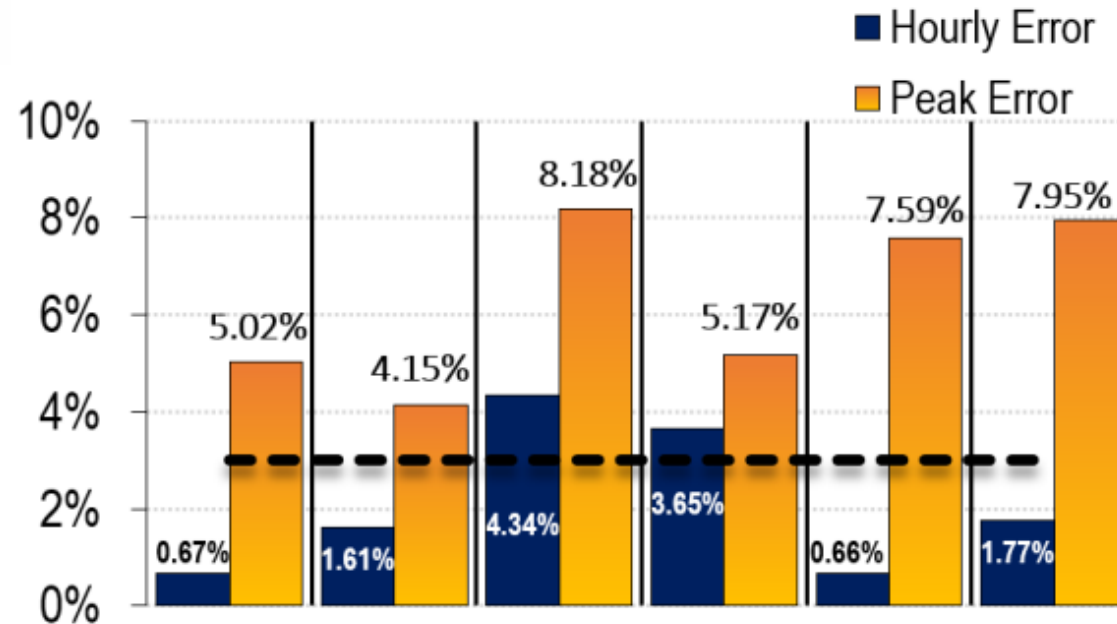
Daily Peak Forecast Error (August)



Days Exceeding 3% Forecast Error at Peak Hour

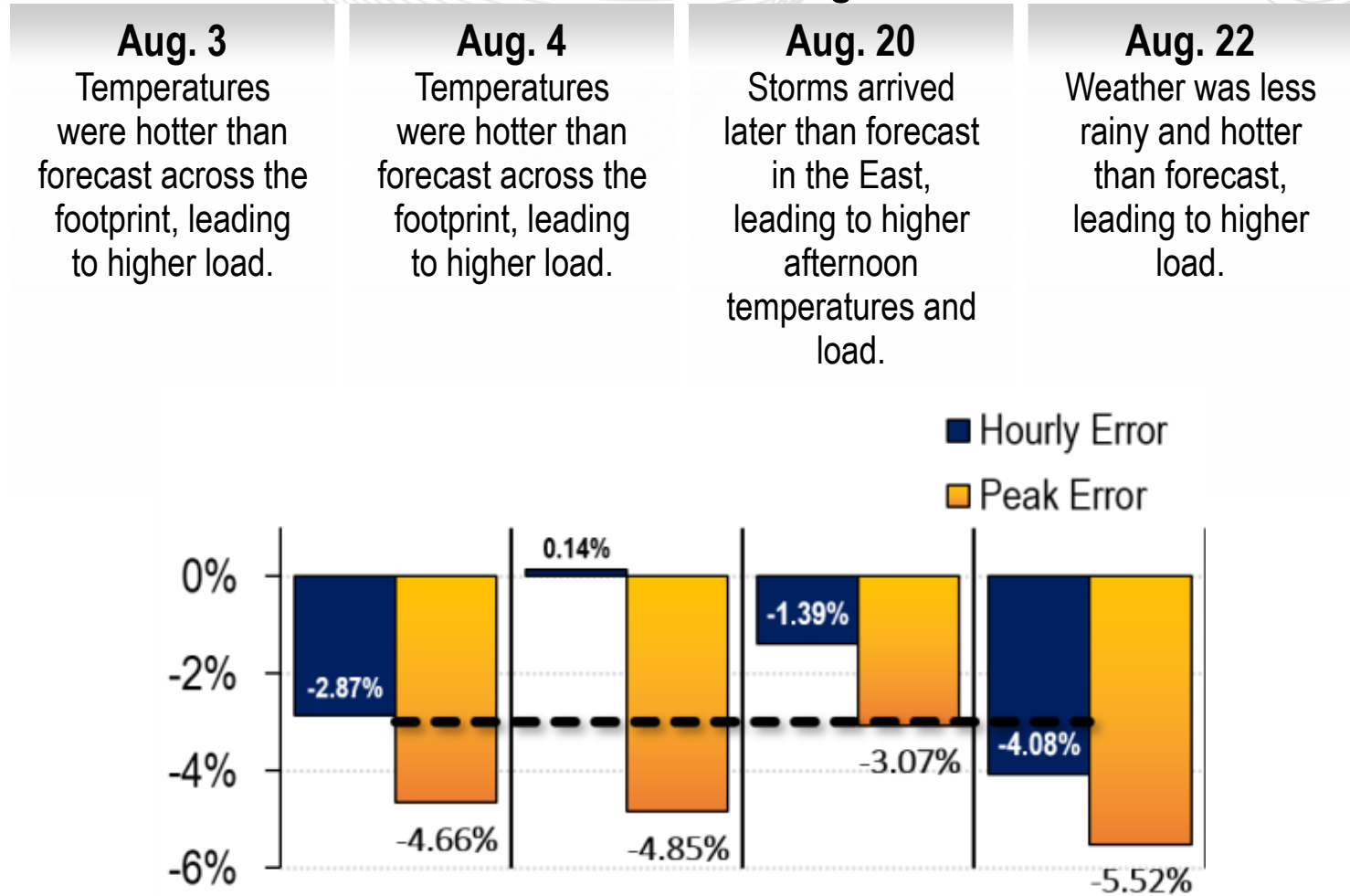
Over-forecasting

Aug. 1	Aug. 10	Aug. 11	Aug.12	Aug. 30	Aug. 31
Thunderstorm activity in the West held temperatures cooler than forecast, leading to decreased load.	Weather was rainier and cooler than forecast, leading to decreased load.	Weather was significantly cooler and rainier than forecast, leading to decreased load.	Temperatures were cooler than forecast across the footprint, leading to lower load.	Temperatures were cooler than forecast across the footprint, leading to lower load.	Weather was cooler and rainier than forecast in the East, leading to decreased load.

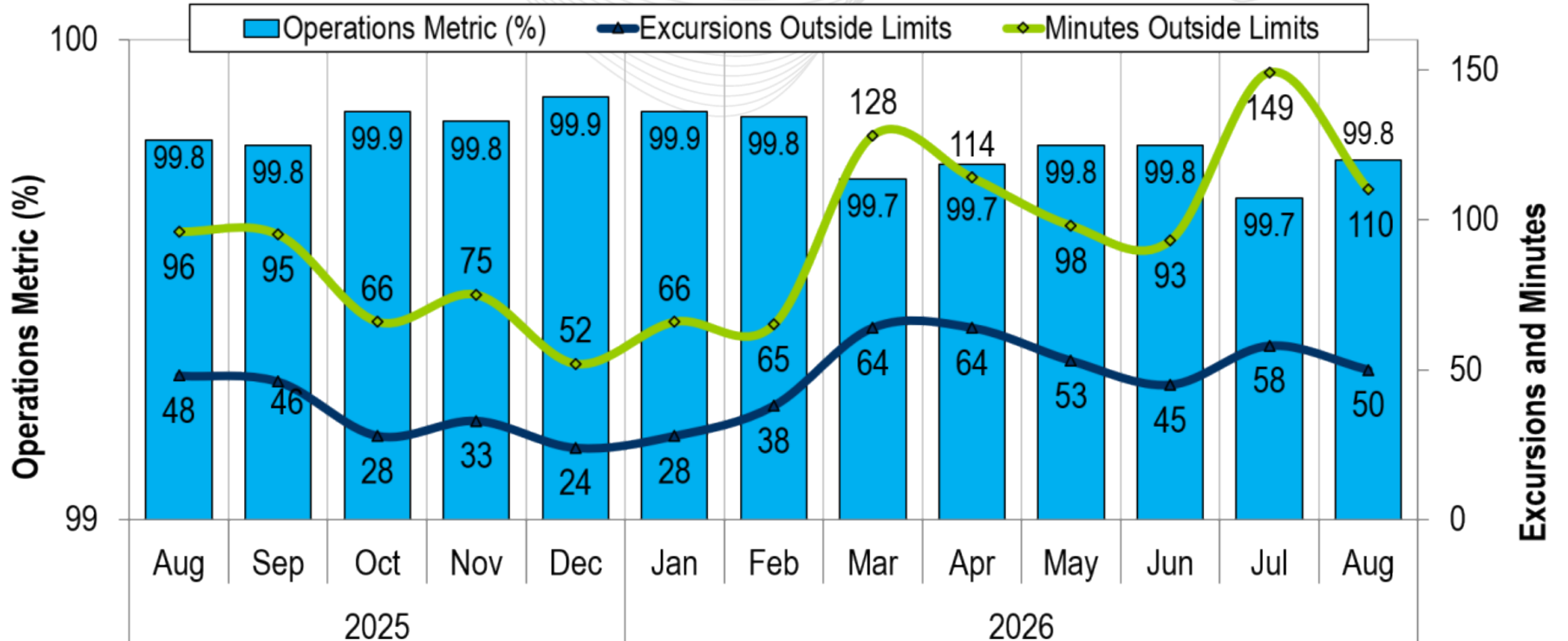


Days Exceeding 3% Forecast Error at Peak Hour

Under-forecasting



Monthly BAAL Performance Score

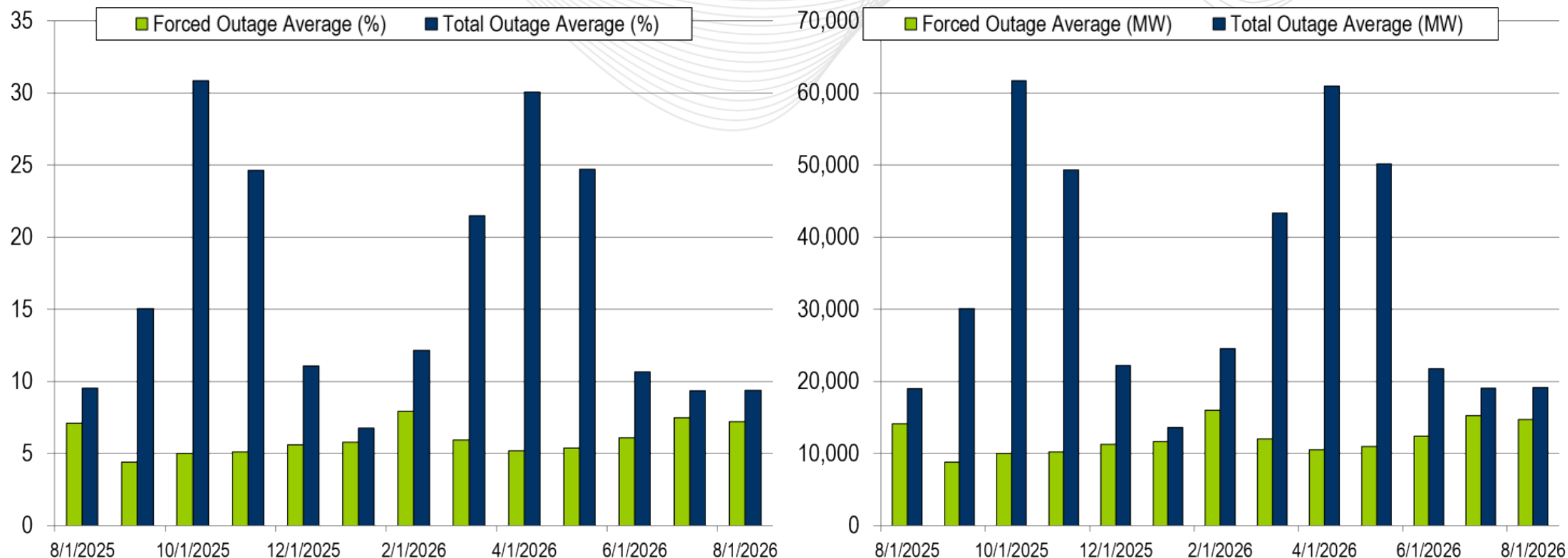


PJM's BAAL performance has exceeded the goal of 99% for each month in 2025 and 2026.

- The following Emergency Procedures occurred:
 - 1 Spin Event
 - 4 Shared Reserve Events
 - 1 Maximum Generation Emergency/Load Management Alert
 - 1 NERC EEA Level 1
 - 4 Hot Weather Alerts
 - 31 Post Contingency Local Load Relief Warnings

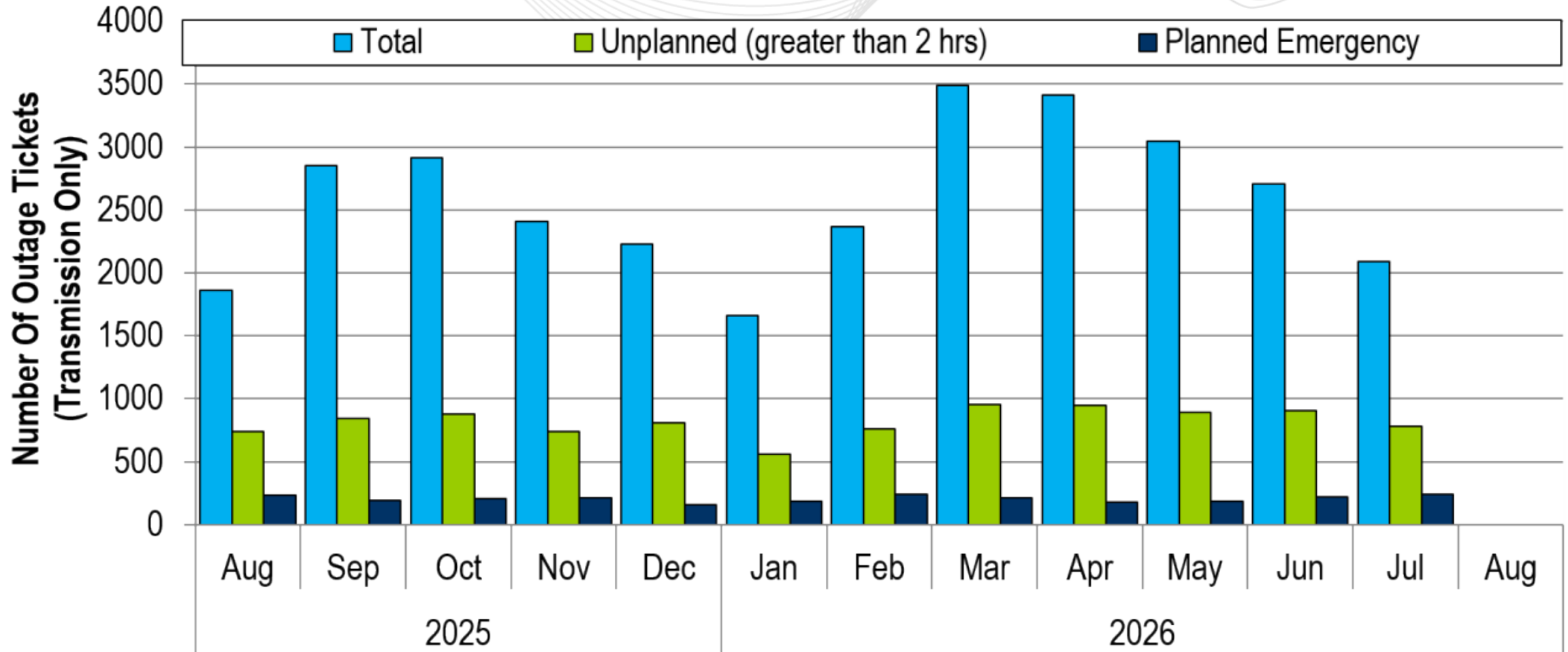
- No Shortage Cases Approved in August 2026

RTO Generation Outage Rate - Monthly



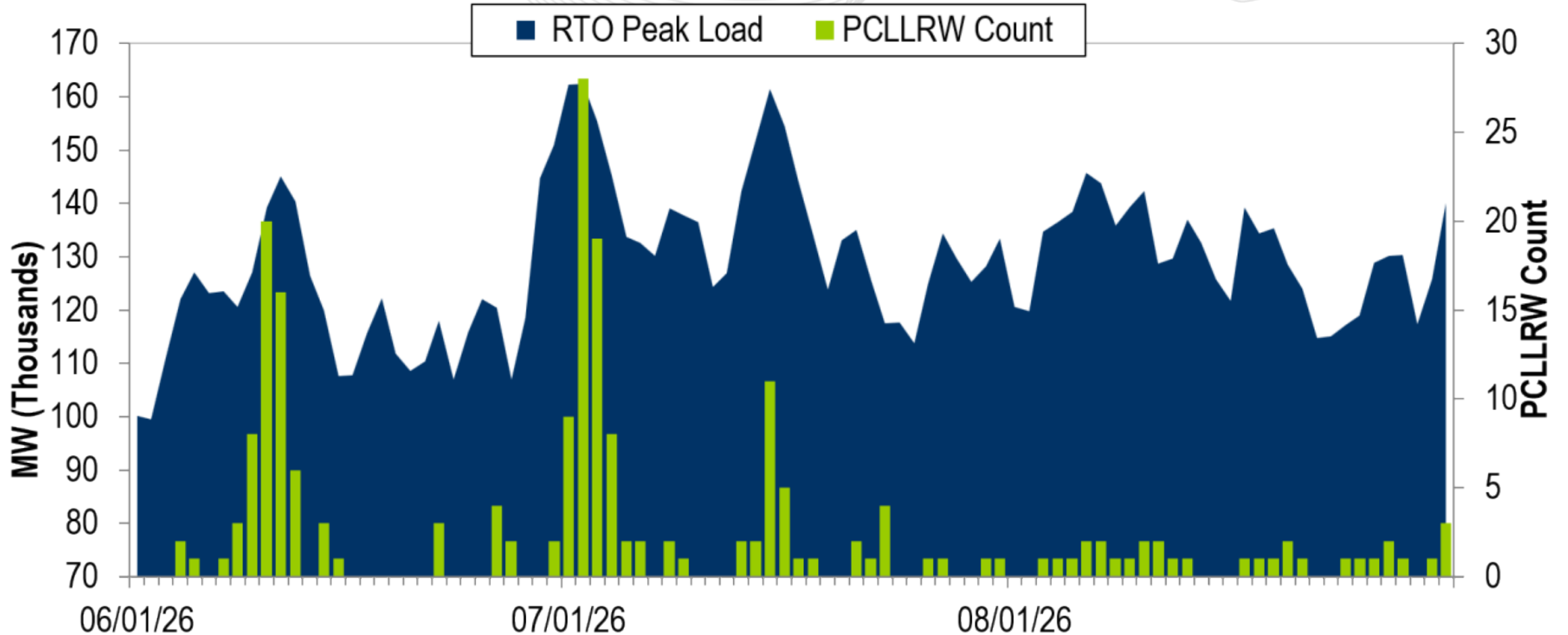
The 13-month average forced outage rate is 6.01% or 12,126 MW.
The 13-month average total outage rate is 16.59% or 33,463 MW.

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		
Date	08/05/26		
Start Time	09:43:18		
End Time	09:48:44		
Duration	00:05:26		
Region	RTO		
Resource Type	Gen	DR	Total
Assigned (MW)	2222	401	2623
Estimated Expected Response of Assigned Resources (MW)	1207	218	1425
Actual Response of Assigned Resources (MW)	1358	340	1698
Output Increase of Resources without Assignment (MW)	2320	0	2320
Percent Response To Assignment (%)	61%	85%	65%
Percent Response To Estimated Expected Response (%)	112%	156%	119%
Penalty (MW)	0	0	0

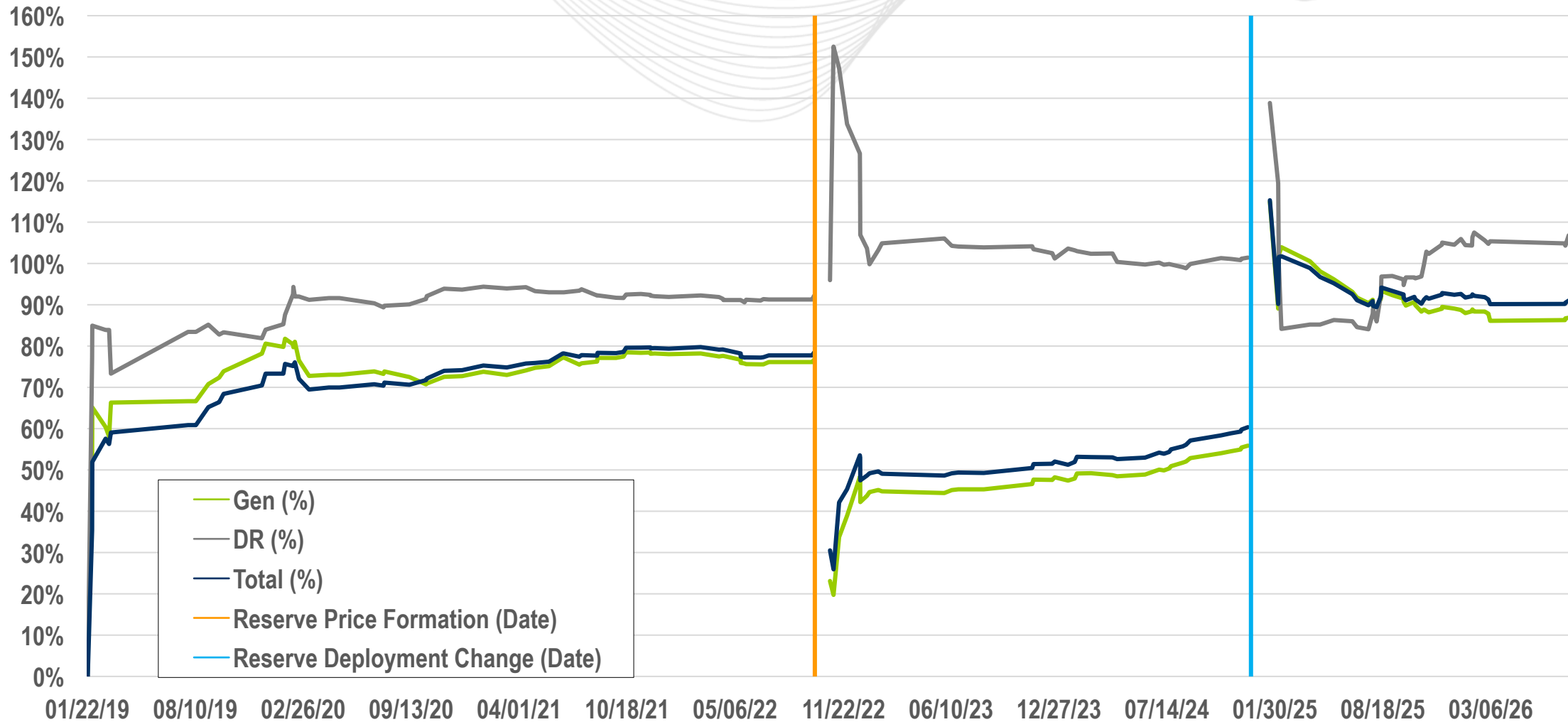
Event Counted Toward Qualifying Events	Qualifying Reason	Individual Percent Response To Assignment (%)	Average Percent Response To Assignment (%)
03/01/26 19:29:03	≥10 Minutes	71.0%	71.0%



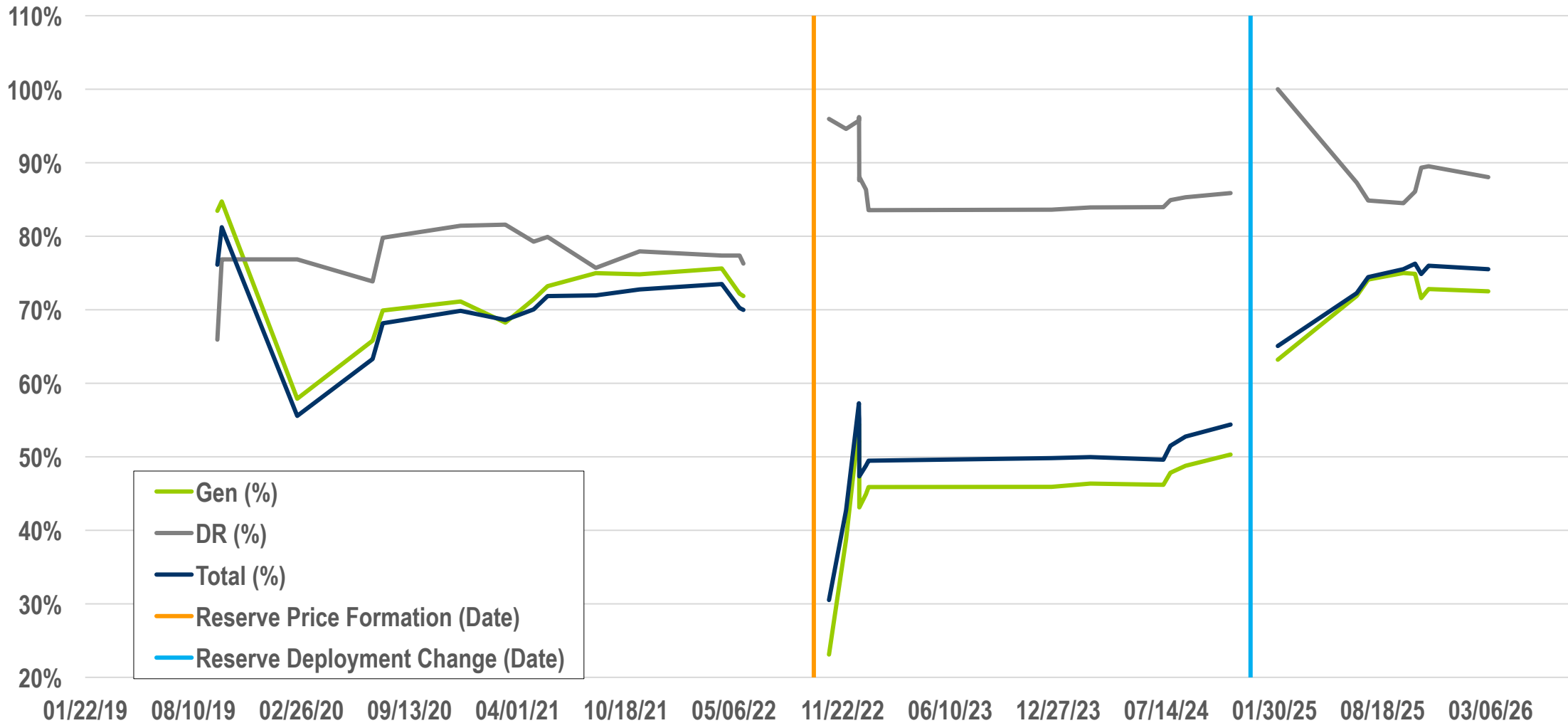
Synchronized Reserve Historical Changes

- Reserve Price Formation (RPF)
 - Implemented on October 1, 2022
 - Consolidated Synchronized Reserve Tier 1 and Tier 2
- Increase of Synchronized Reserve Requirement to 130%
 - Implemented on May 2023
 - In response to Synchronized Reserve performance following RPF and Winter Storm Elliott
- Reserve Deployment Changes
 - Implemented on December 17, 2024
 - Automatically added the Synchronized Reserve assignment to the unit's basepoint
 - PJM dispatch can deploy less than 100%
- Procedure/rules created for changing the Synchronized Reserve Requirement
 - Implemented on April 1, 2025
 - Retroactive starting on January 1, 2025

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,
Marcus.Smith@pjm.com

System Operations Report

Presenter:

David Kimmel,
David.Kimmel@pjm.com

SME:

Ross Kelly,
Ross.Kelly@pjm.com

A green speech bubble containing a white question mark, positioned above a blue speech bubble with three horizontal lines, indicating a question or contact point.

?

Member Hotline

(610) 666 – 8980

(866) 400 – 8980

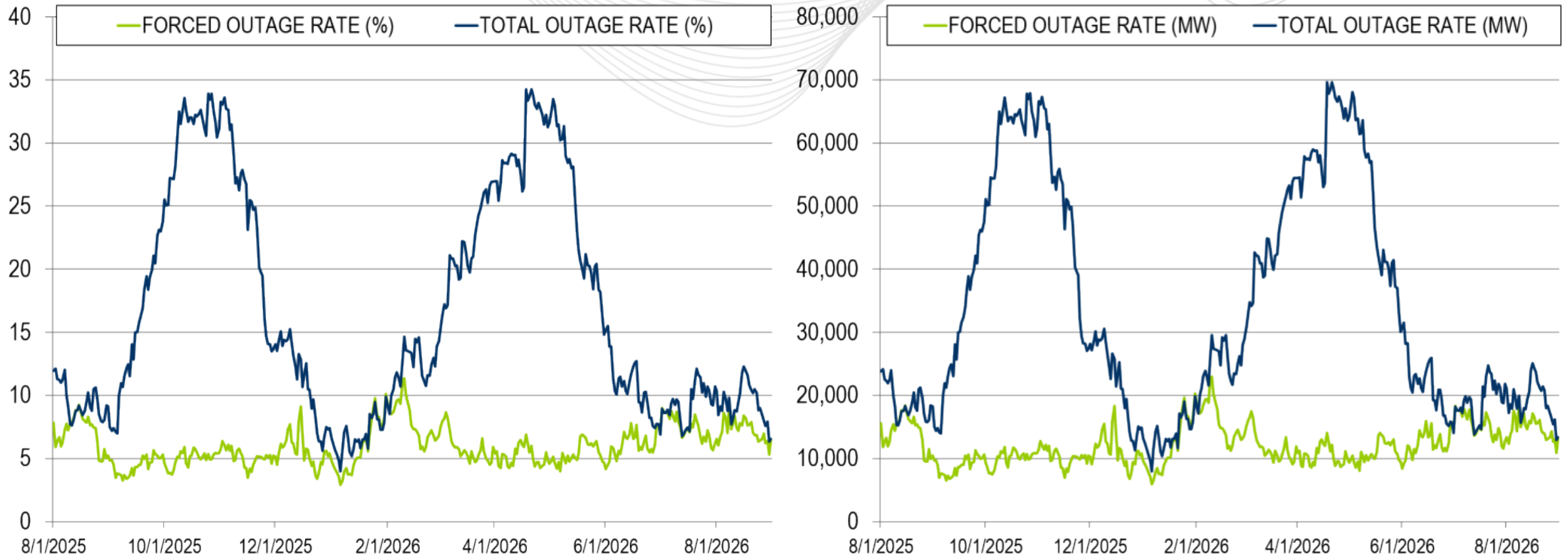
custsvc@pjm.com

Appendix

Goal Measurement: Balancing Authority ACE Limit (BAAL)

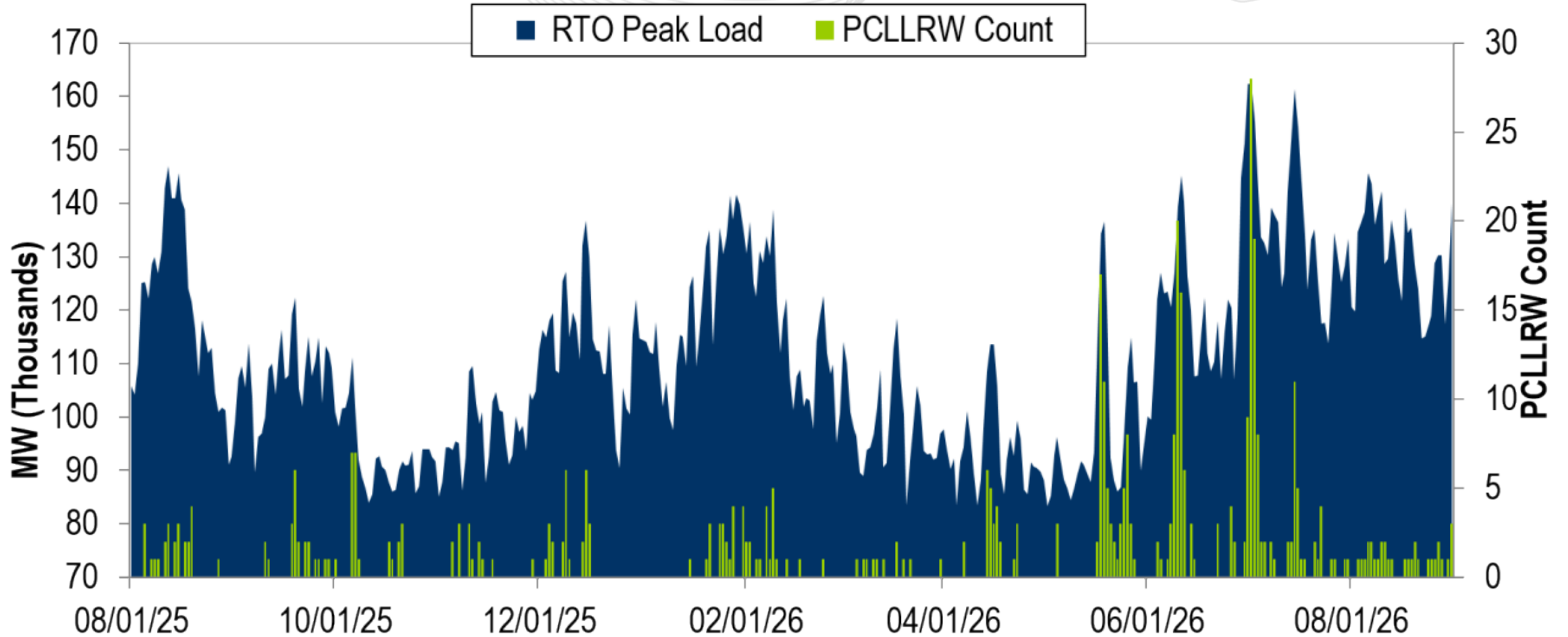
- The purpose of the new BAAL standard is to maintain interconnection frequency within a predefined frequency profile under all conditions (normal and abnormal), to prevent frequency-related instability, unplanned tripping of load or generation, or uncontrolled separation or cascading outages that adversely 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 6.01% or 12,126 MW.
The 13-month average total outage rate is 16.59% or 33,463 MW.

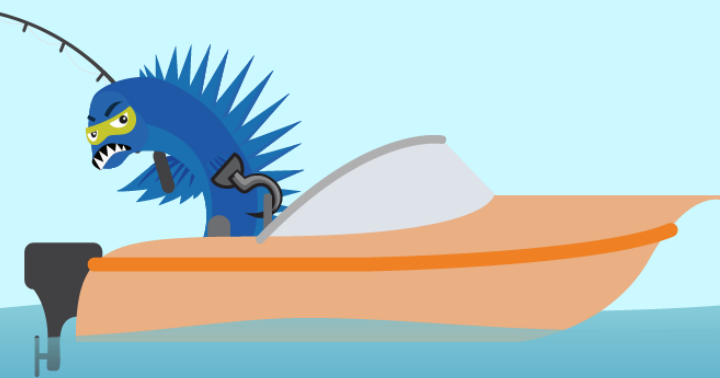
PCLLRW Count Vs. Peak Load – Daily Values For 13 Months



**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