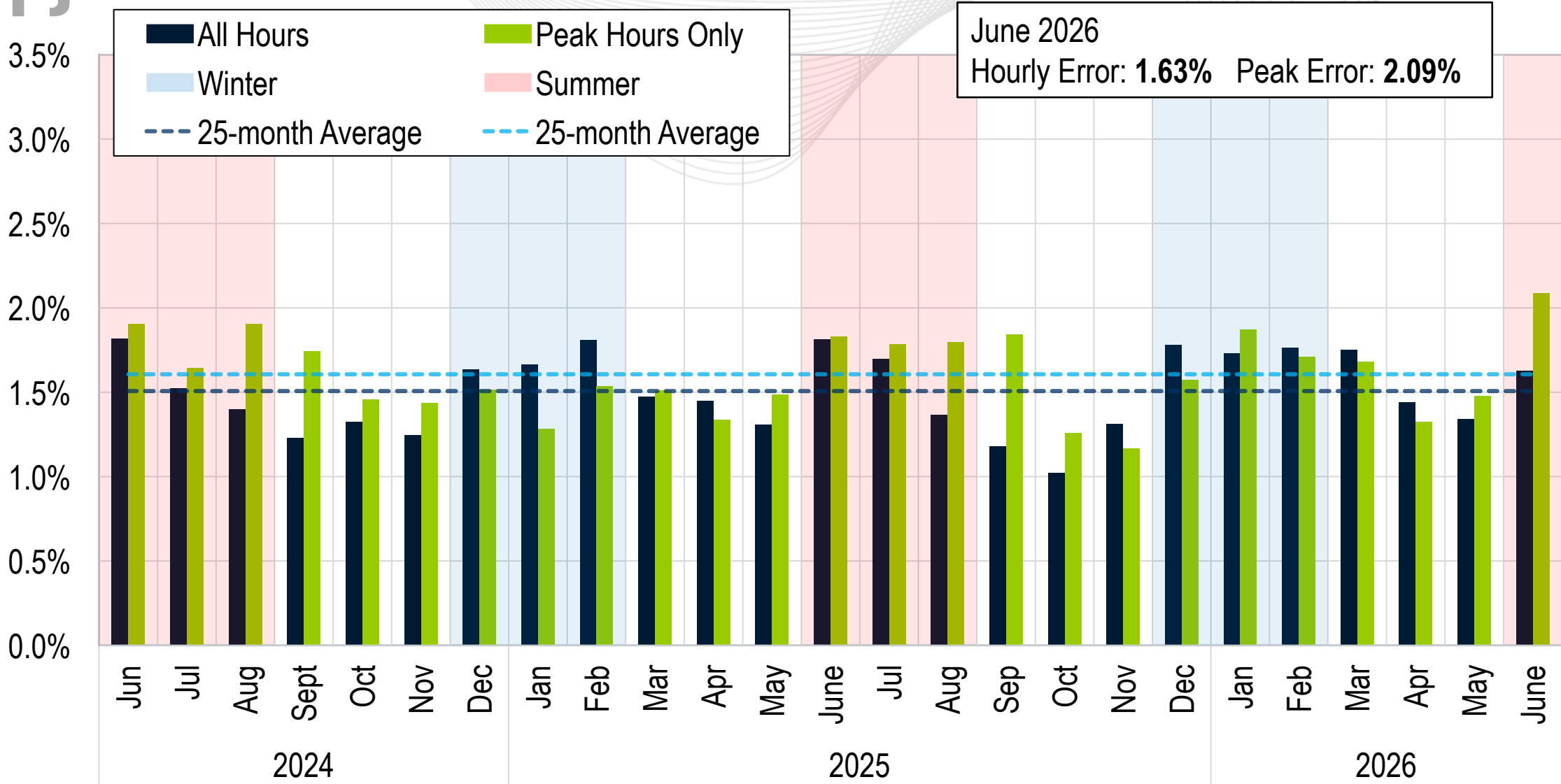


System Operations Report

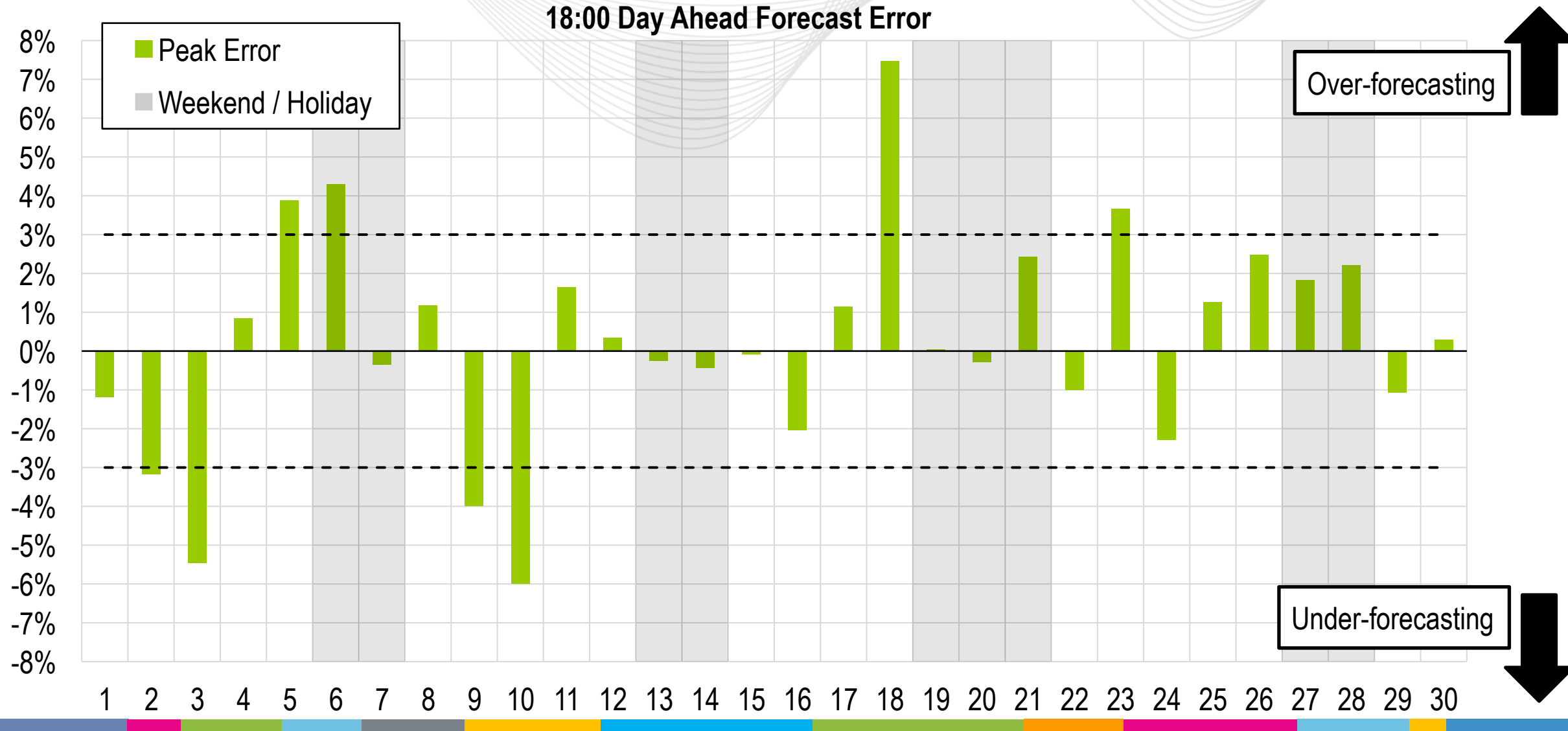
Marcus Smith, Lead Engineer –
Operations Uncertainty & Risk
David Kimmel, Sr. Engineer II –
Performance Compliance
Operating Committee
July 9, 2026

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

Average Load Forecast Error



Daily Peak Forecast Error (June)



Days Exceeding 3% Forecast Error at Peak Hour

Over-forecasting

June 5

Temps. were cooler in several zones, leading to decreased load.

June 6

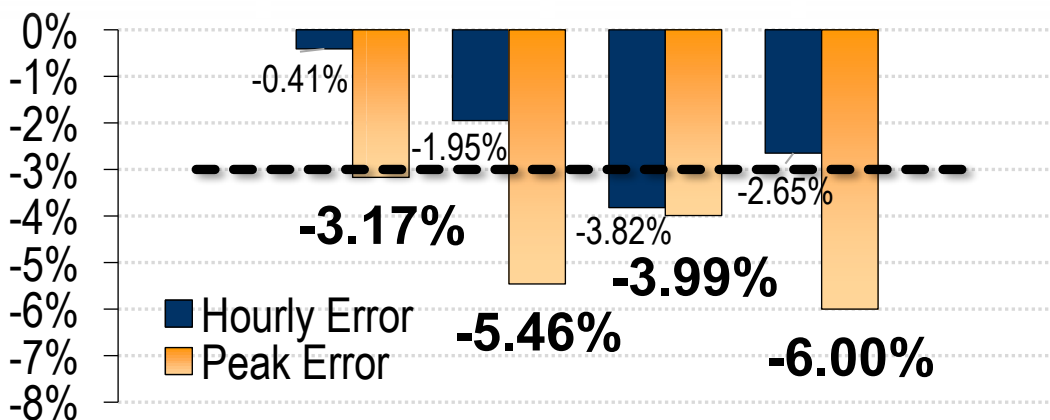
Temps. decreased, caused largely by the presence of thunderstorms, leading to low load.

June 18

Temps. were much cooler than forecast across the RTO, leading to lower load.

June 23

Thunderstorms impacted the East much more than forecast, leading to cooler temps. and suppressed load.



Under-forecasting

June 2

Temps. were higher than forecast, leading to increased load.

June 3

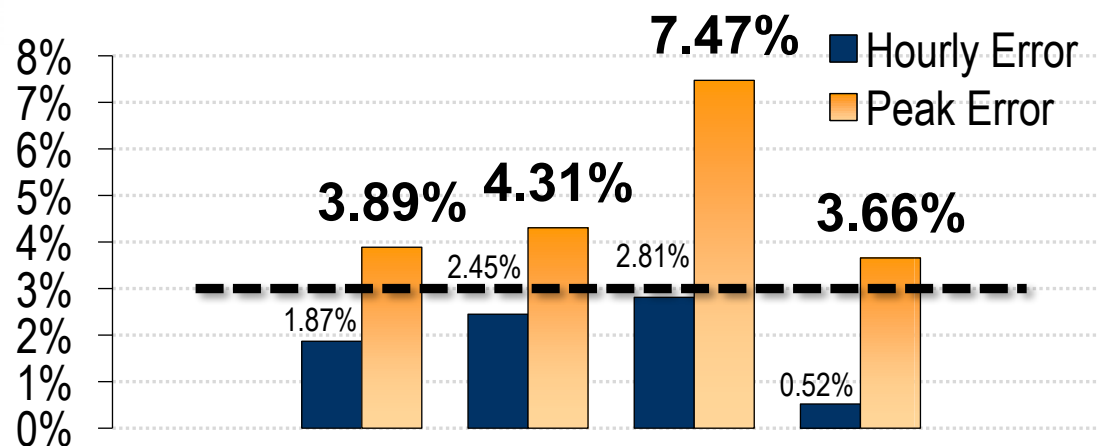
Temps. were higher than forecast, leading to increased load.

June 9

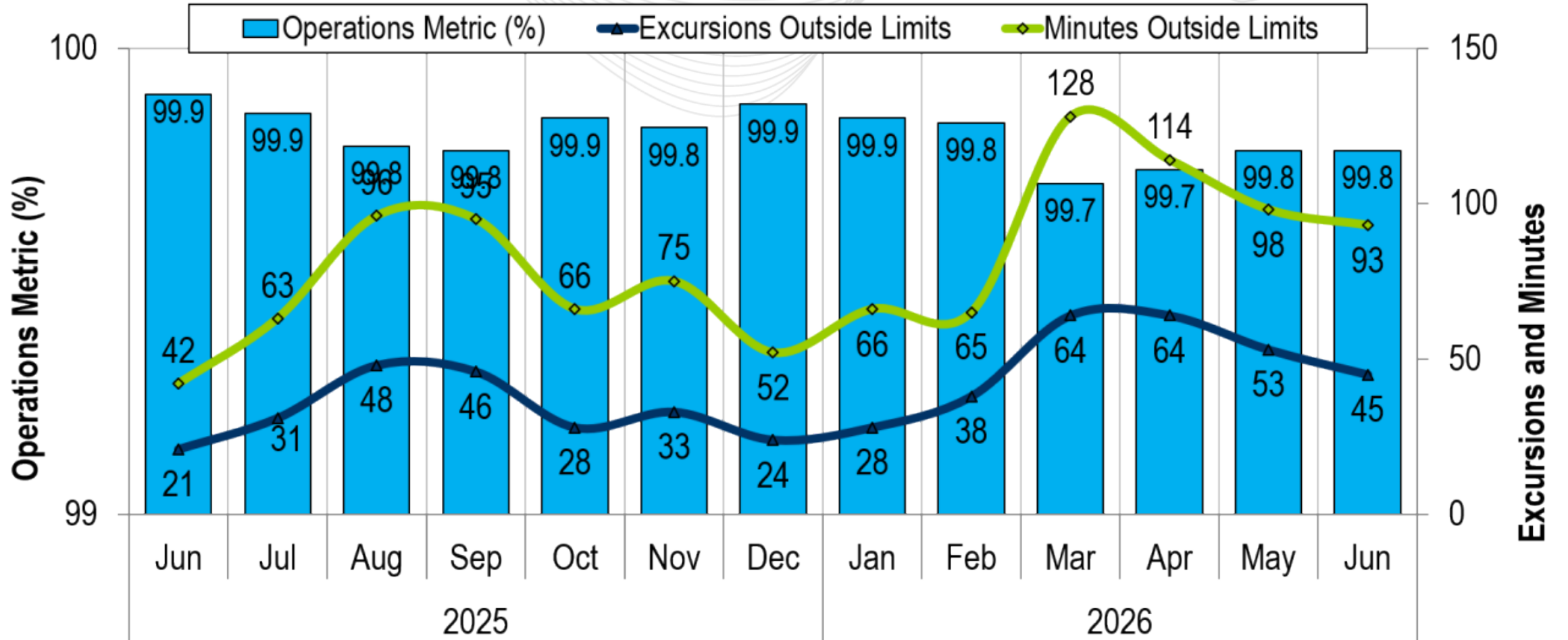
Less rain and fewer clouds than forecast in the Ohio Valley led to warmer temps. and higher load.

June 10

Hotter early temps. increased load, but thunderstorms in the East and COMED later reduced demand, shifting the load peak earlier than forecast.



Monthly BAAL Performance Score

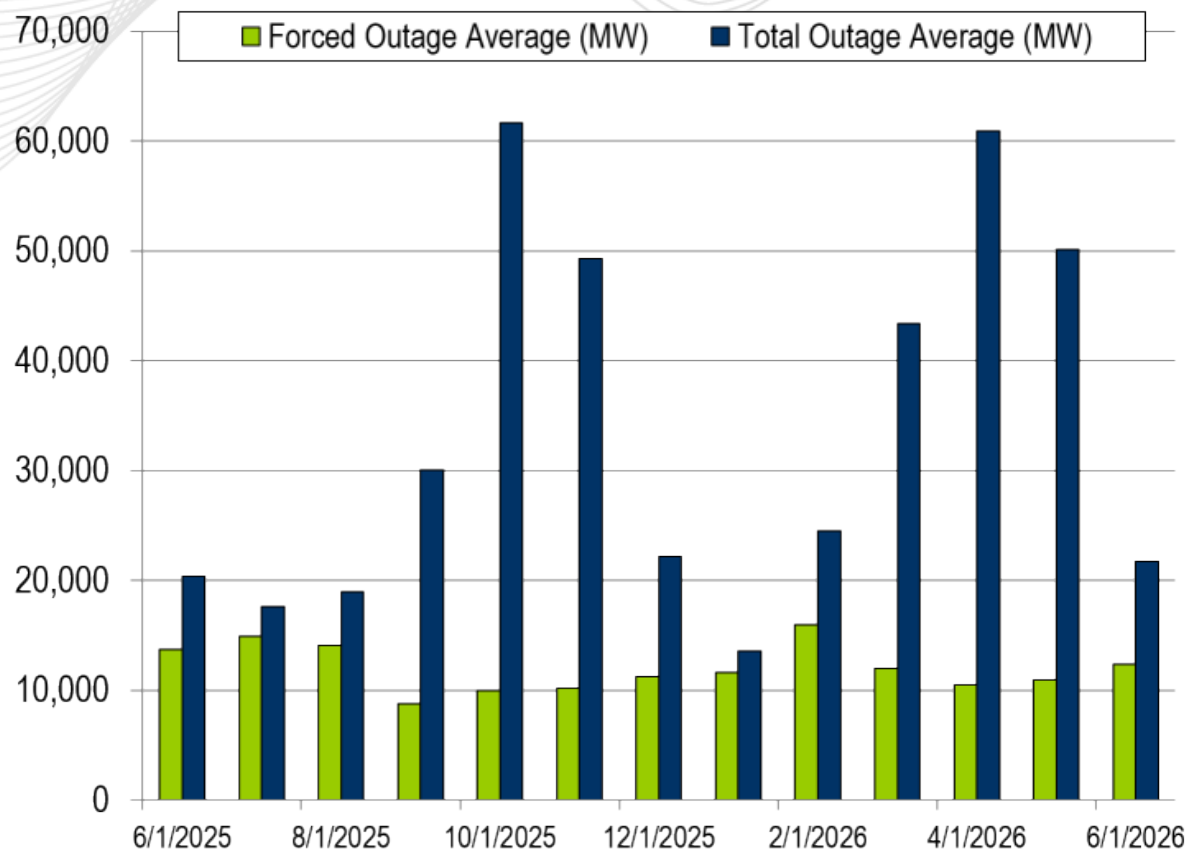
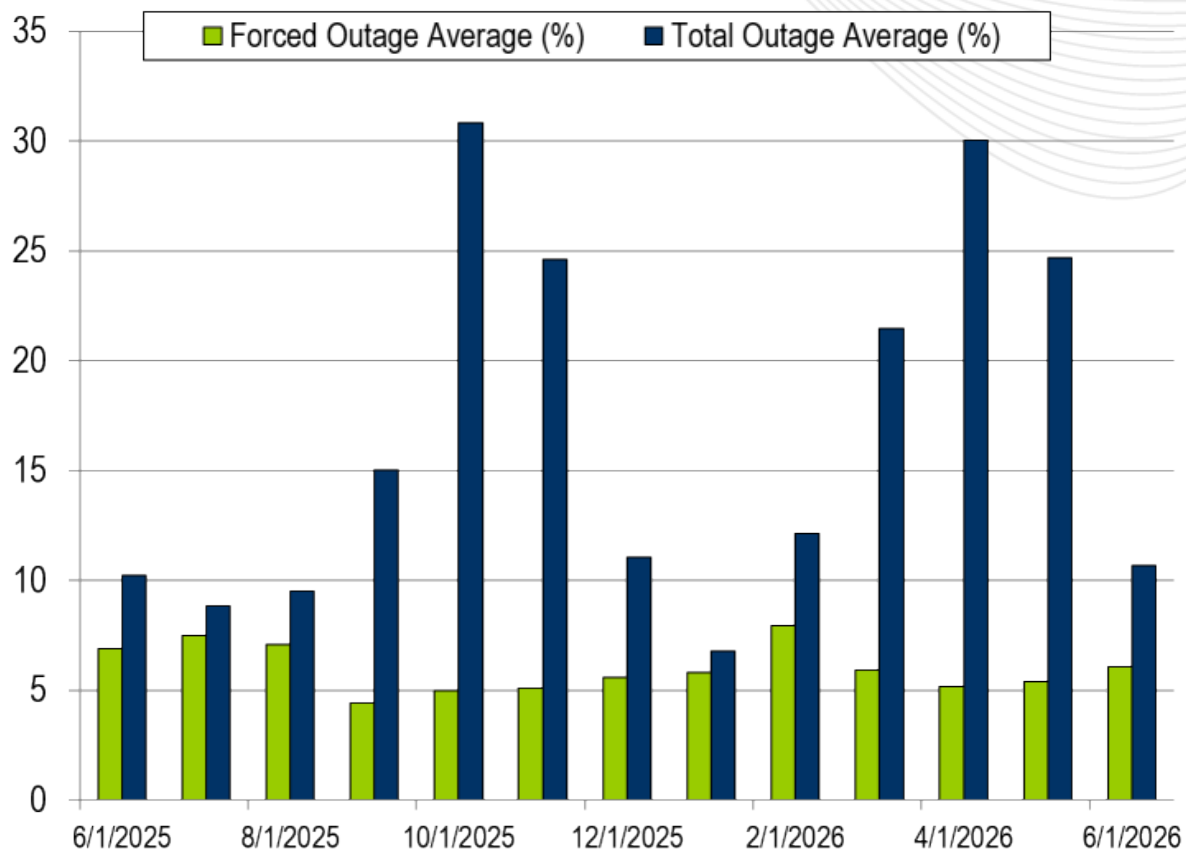


PJM's BAAL performance has exceeded the goal of 99% for each month in 2025 and 2026.

- The following Emergency Procedures occurred:
 - 3 Shared Reserve Events
 - 2 Maximum Generation Emergency/Load Management Alerts
 - 5 Hot Weather Alerts
 - 1 Geomagnetic Disturbance Warning
 - 1 Low Voltage Alert
 - 2 NERC EEA Level 1s
 - 72 Post Contingency Local Load Relief Warnings

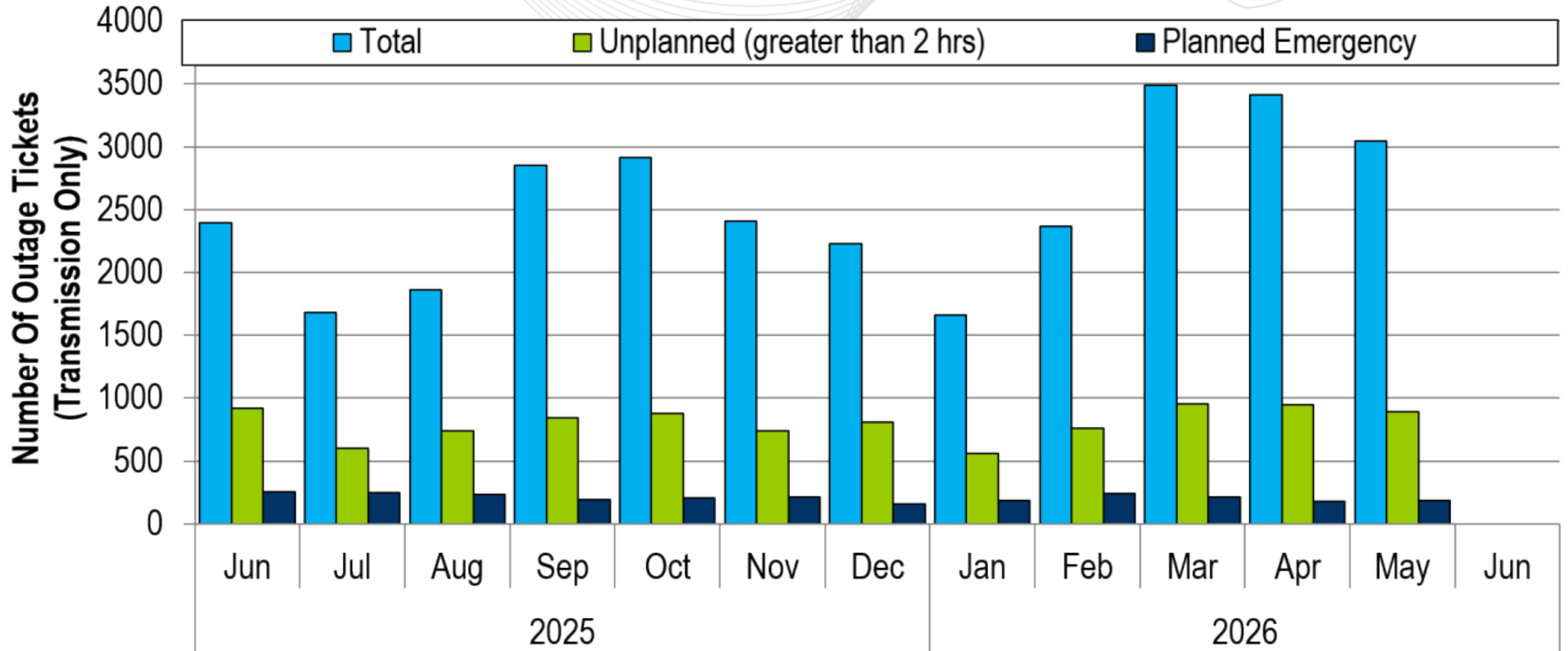
- 8 Shortage Cases Approved
- The approved Shortage Cases occurred on:
 - 06/02/2026:
 - 2 shortage cases approved for the 20:10 and 20:15 intervals
 - Factors: Unit trip coupled with large interchange ramp out
 - 06/17/2026:
 - 1 shortage case approved for the 22:20 interval
 - Factors: Unexpected loss of generation; Dispatch was able to recover before a second case was approved.
 - 06/29/2026:
 - 5 shortage cases approved for the 19:59, 20:05, 20:10, 20:15, and 20:20 intervals
 - Factors: Constraint binding hard, solar dropping out faster than steam could ramp up

RTO Generation Outage Rate - Monthly



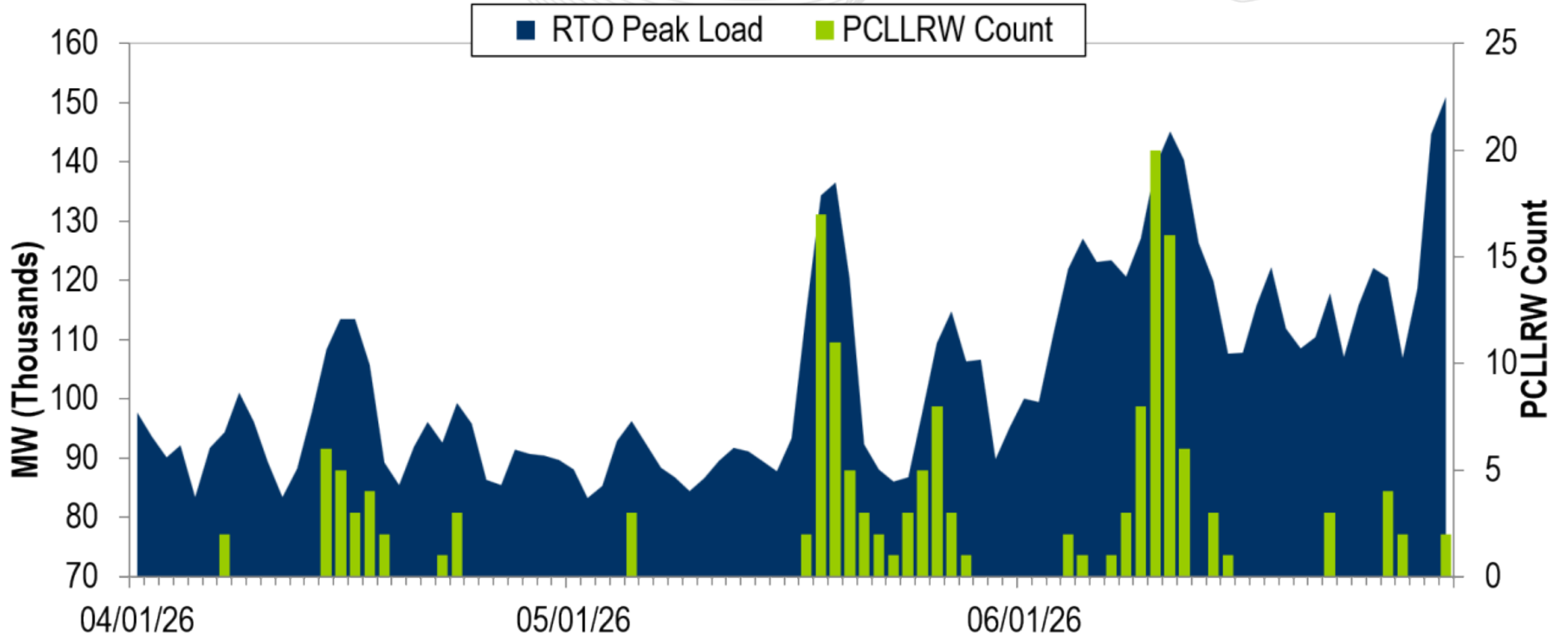
The 13-month average forced outage rate is 5.98% or 12,023 MW.
The 13-month average total outage rate is 16.64% or 33,486 MW.

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



There have been no events for the month of June 2026

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%

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

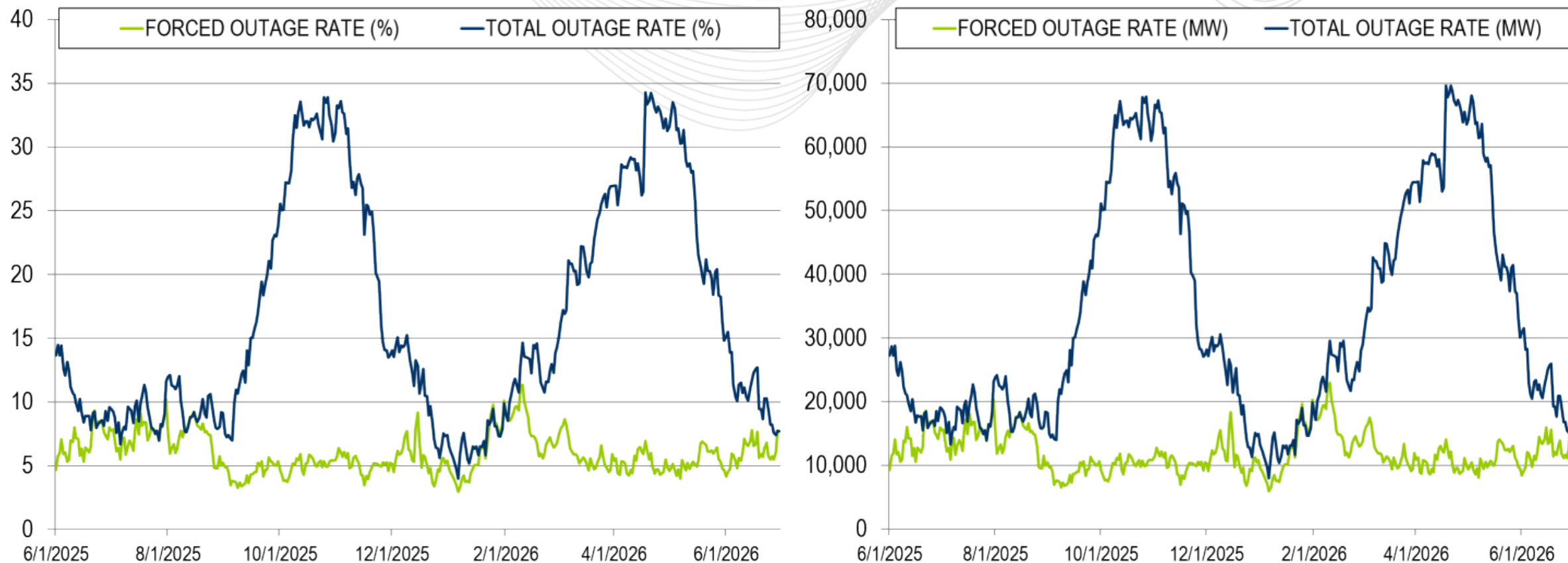
custsvc@pjm.com

Appendix

Goal Measurement: Balancing Authority ACE Limit (BAAL)

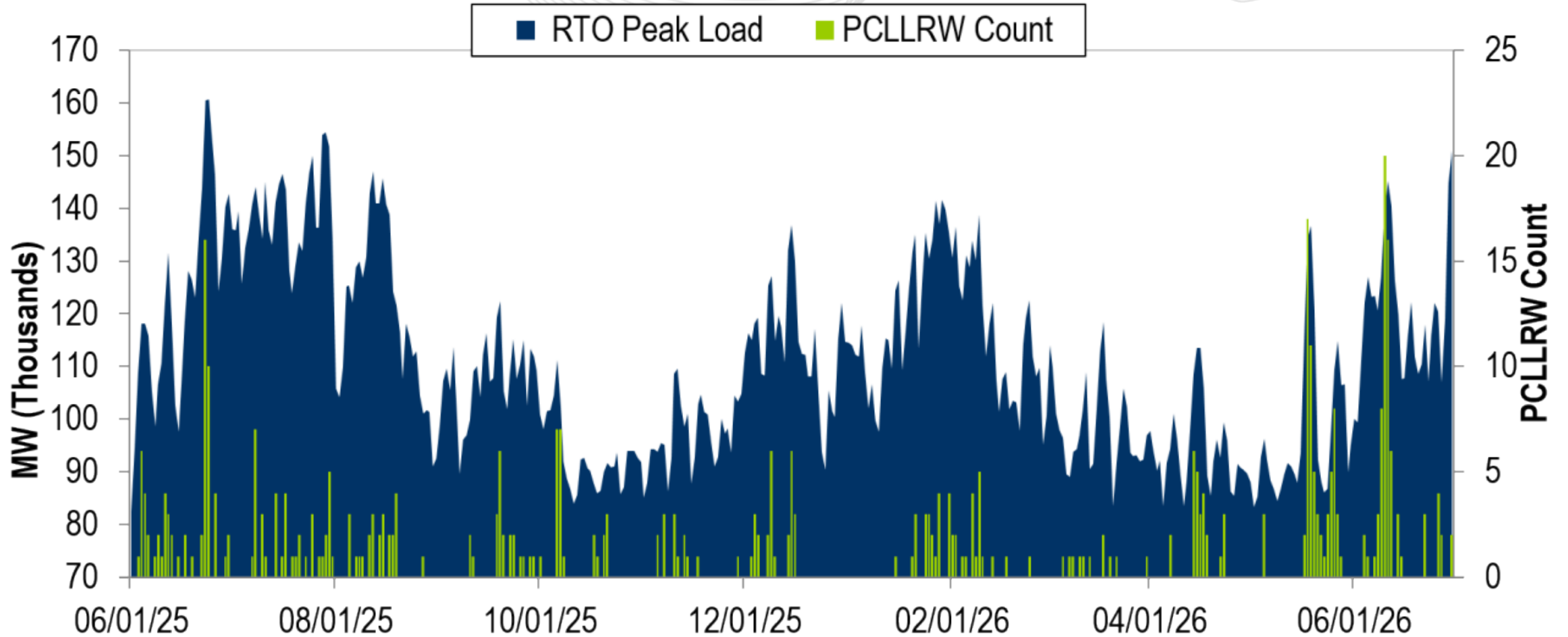
- The purpose of the new BAAL standard is to maintain interconnection frequency within a predefined frequency profile under all conditions (normal and abnormal), to prevent frequency-related instability, unplanned tripping of load or generation, or uncontrolled separation or cascading outages that adversely 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 5.98% or 12,023 MW.
The 13-month average total outage rate is 16.64% or 33,486 MW.

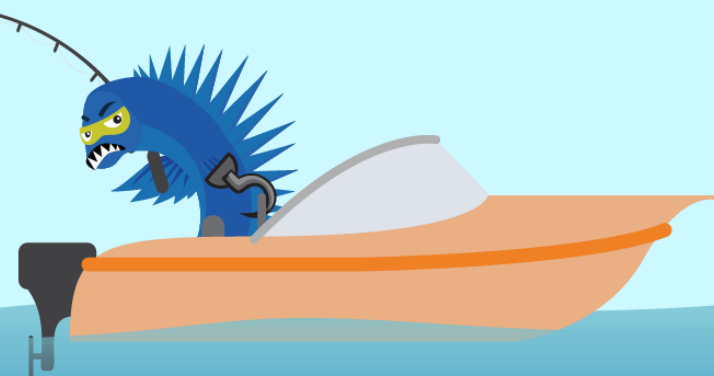
PCLLRW Count Vs. Peak Load – Daily Values For 13 Months



**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