

System Operations Report

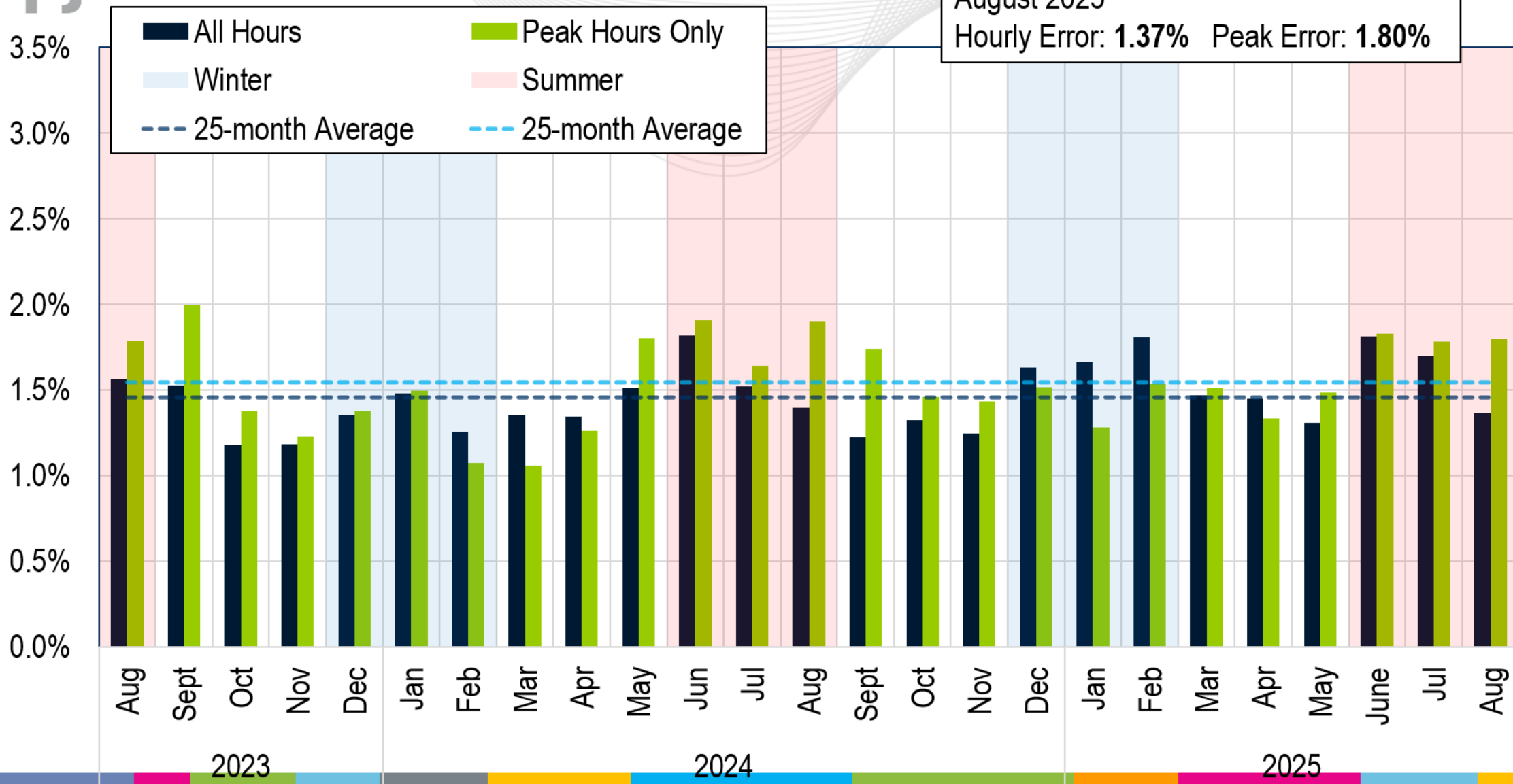
Marcus Smith, Lead Engineer –
Markets Coordination

David Kimmel, Sr. Engineer II –
Performance Compliance

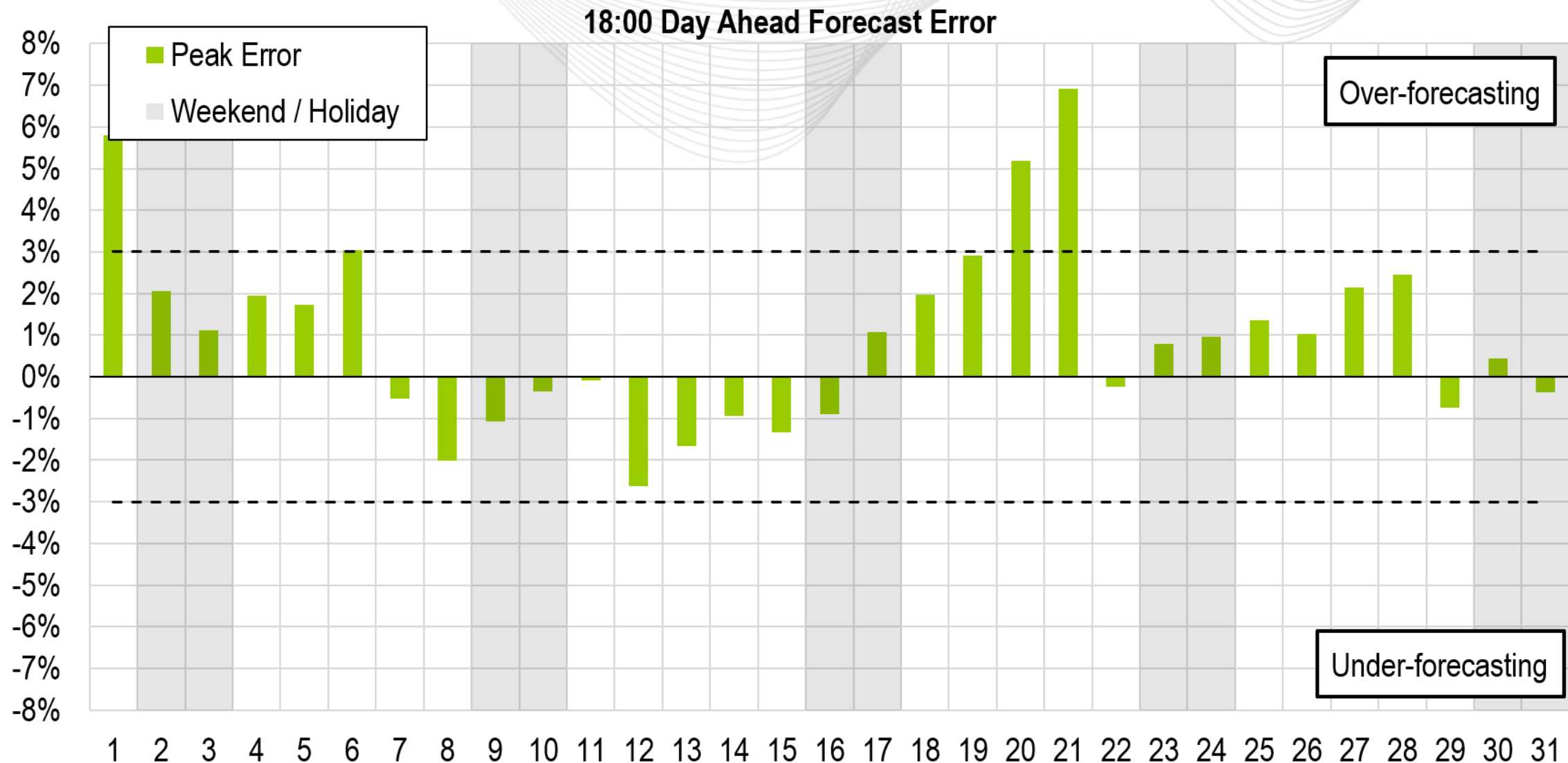
Members Committee

September 25th, 2025

Average Load Forecast Error



Daily Peak Forecast Error (August)



Days Exceeding 3% Forecast Error at Peak Hour

Over-forecasting

August 1

Several zones came in with cooler ambient temperature than forecast, leading to much lower loads

August 6

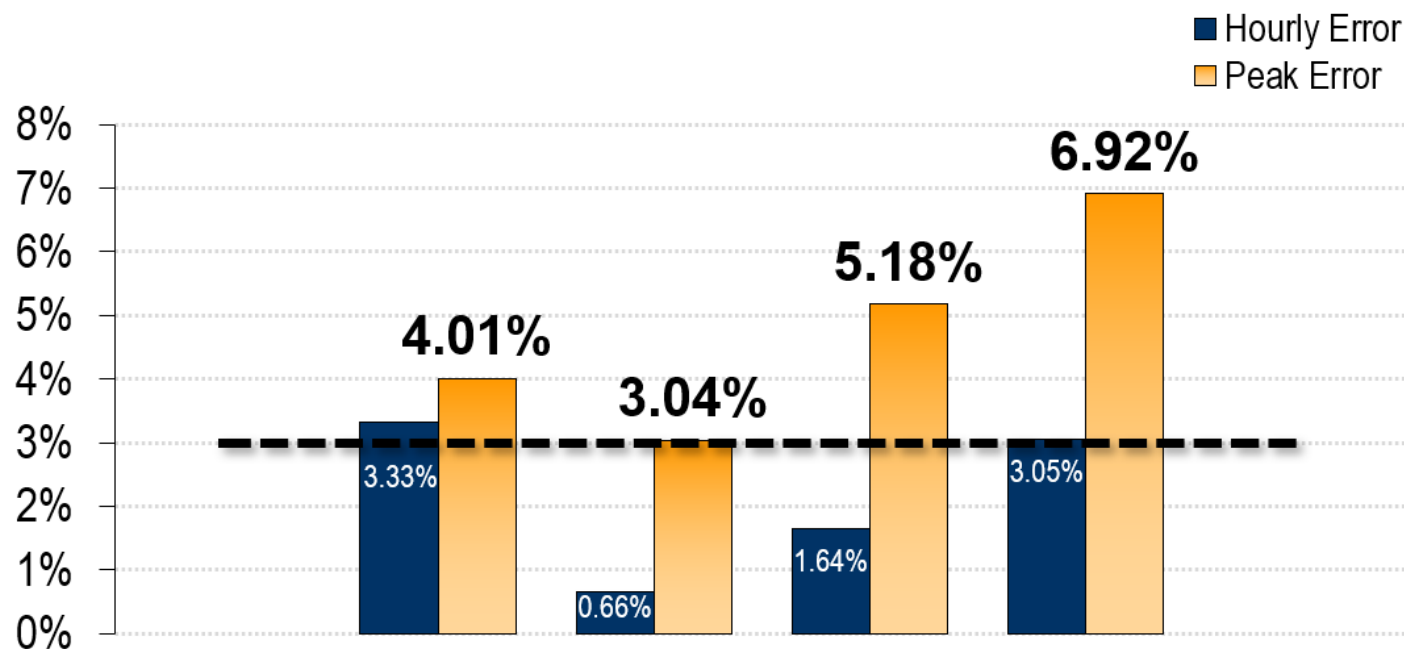
Temperature came in lower than forecast in the east, leading to lower loads and over forecasting

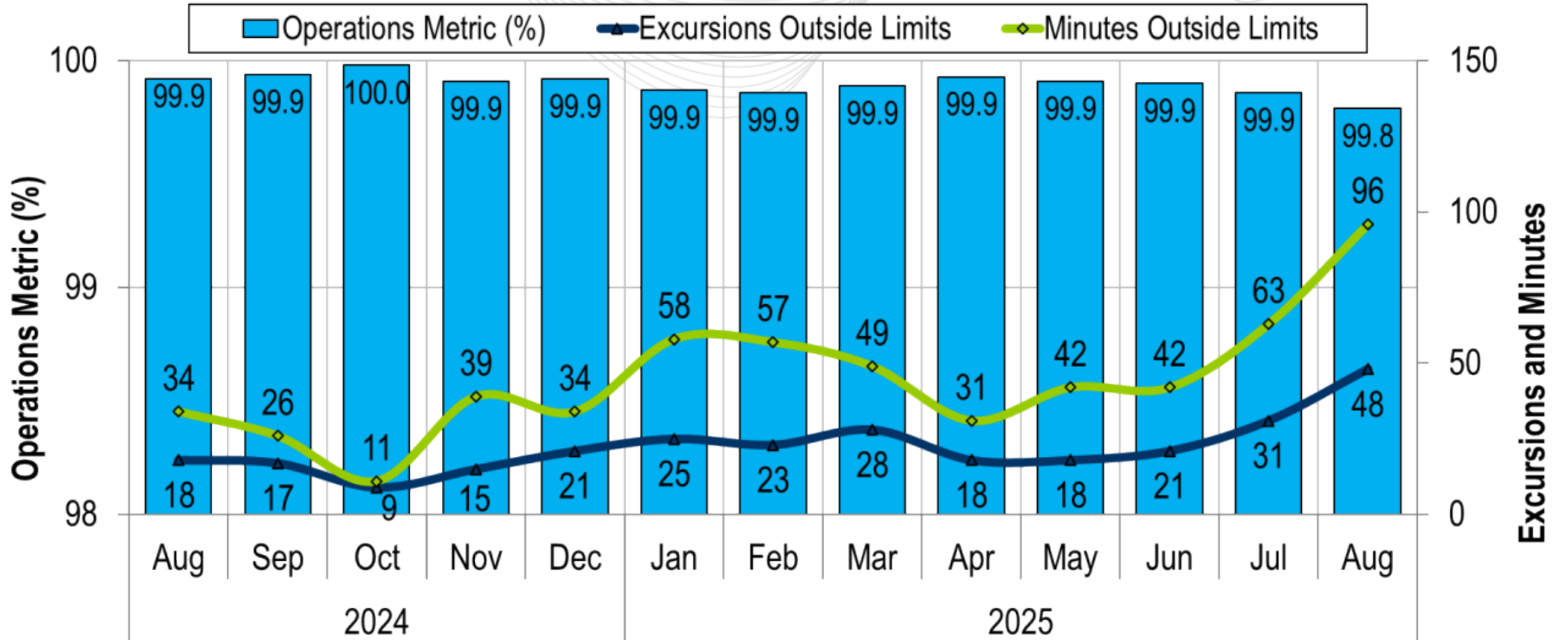
August 20

A few zones came in lower in temperature than expected, leading to lower loads and over

August 21

Several zones had excessive temperature error, coming in much cooler than expected, resulting in lower loads and over forecasting



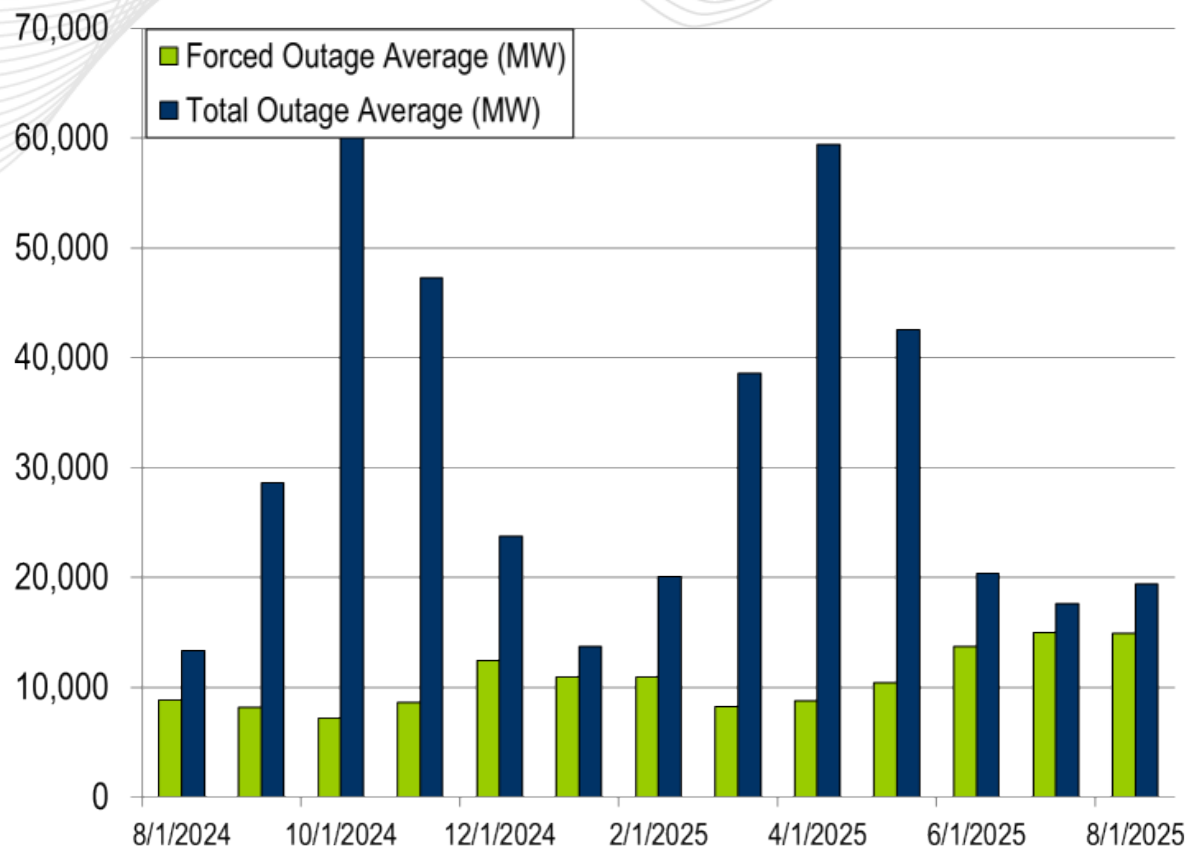
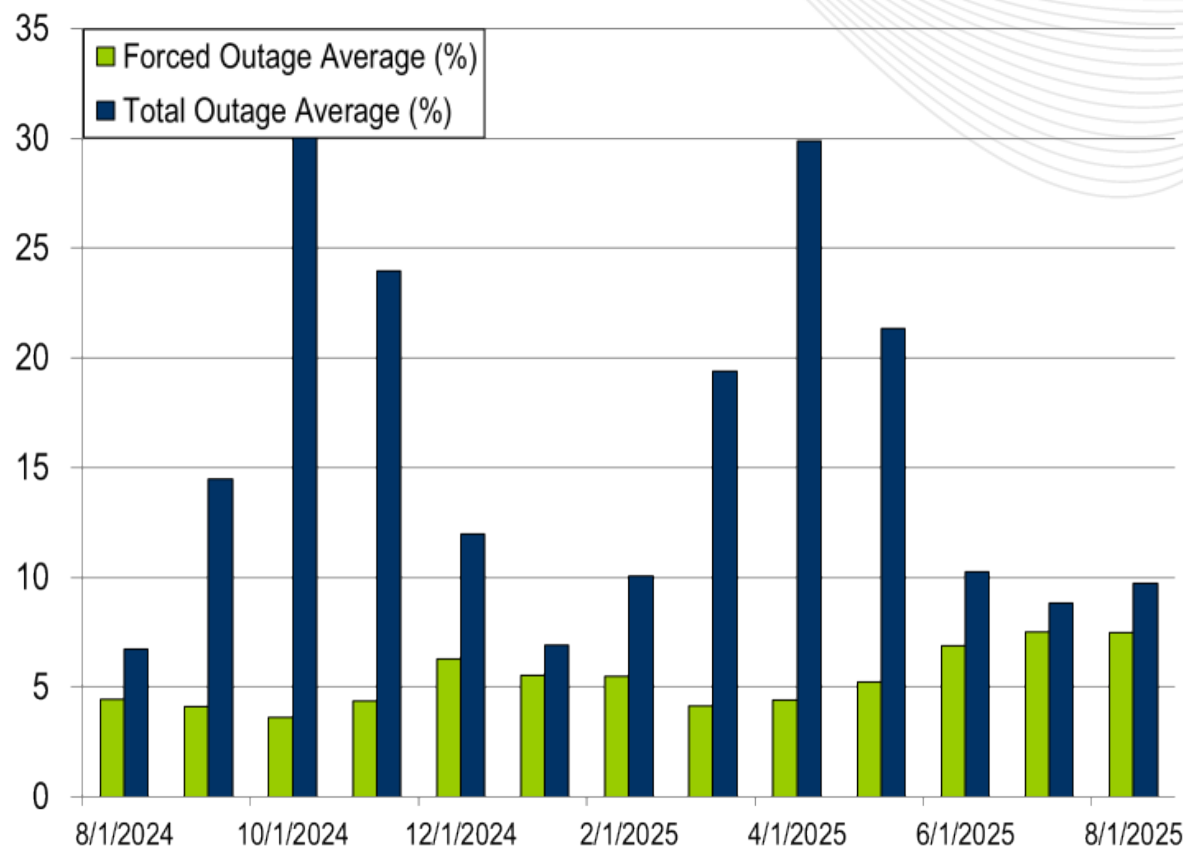


PJM's BAAL performance has exceeded the goal of 99% for each month in 2024 and 2025.

- The following Emergency Procedures occurred:
 - 3 Spin Event
 - 1 Shared Reserve event
 - 1 NERC EEA Level 2
 - 3 Pre-Emergency Load Management Reduction Actions
 - 1 Emergency Load Management Reduction Actions
 - 2 High System Voltage Action
 - 2 Hot Weather Alerts
 - 25 Post Contingency Local Load Relief Warnings

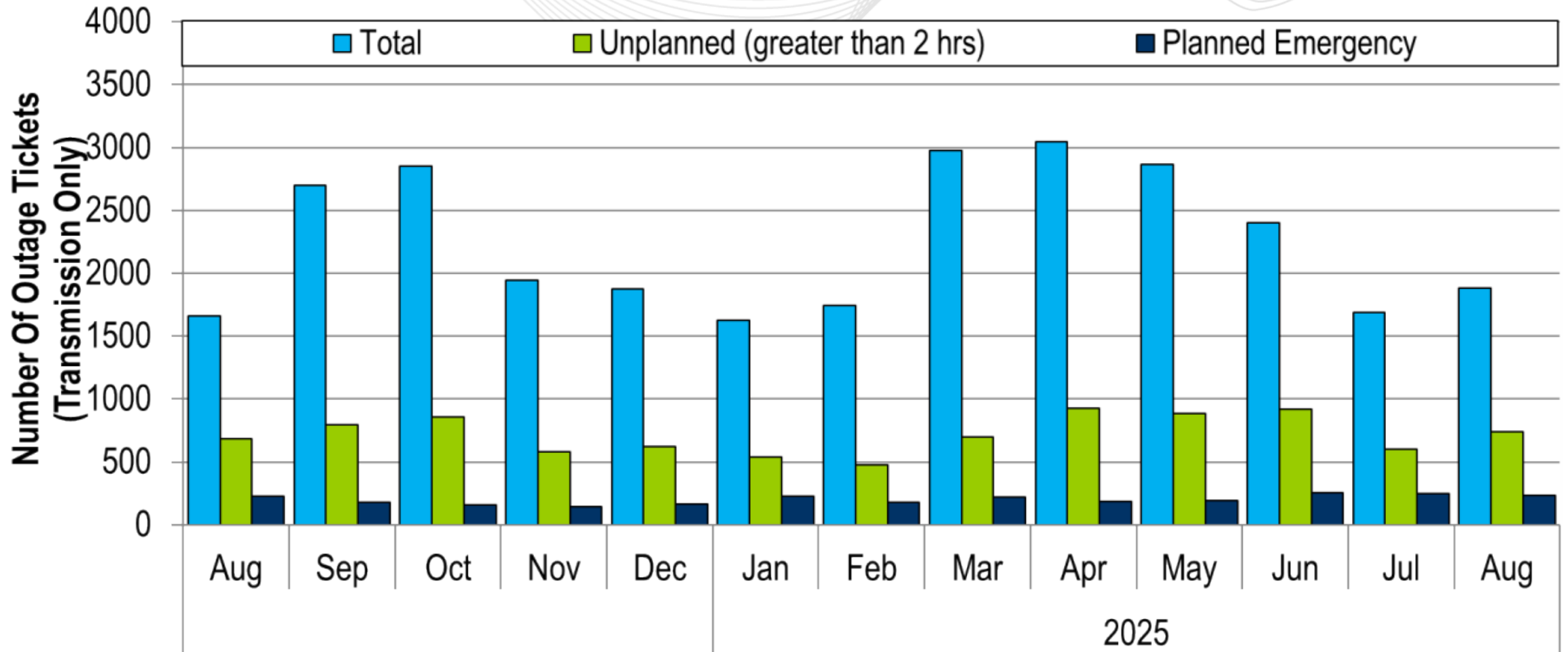
- 5 Shortage Cases Approved
- The approved Shortage Cases occurred on:
 - 08/14/2025:
 - 3 shortage cases approved for 17:35, 17:40, and 17:50 intervals
 - Factors: Large interchange ramps, solar dropping out faster than load, CTs scheduled had not come in yet
 - 08/15/2025:
 - 2 shortage cases approved for 17:59 and 18:05 intervals
 - Factors: Large interchange ramps, solar dropping out faster than load, CTs scheduled had not come in yet

RTO Generation Outage Rate - Monthly



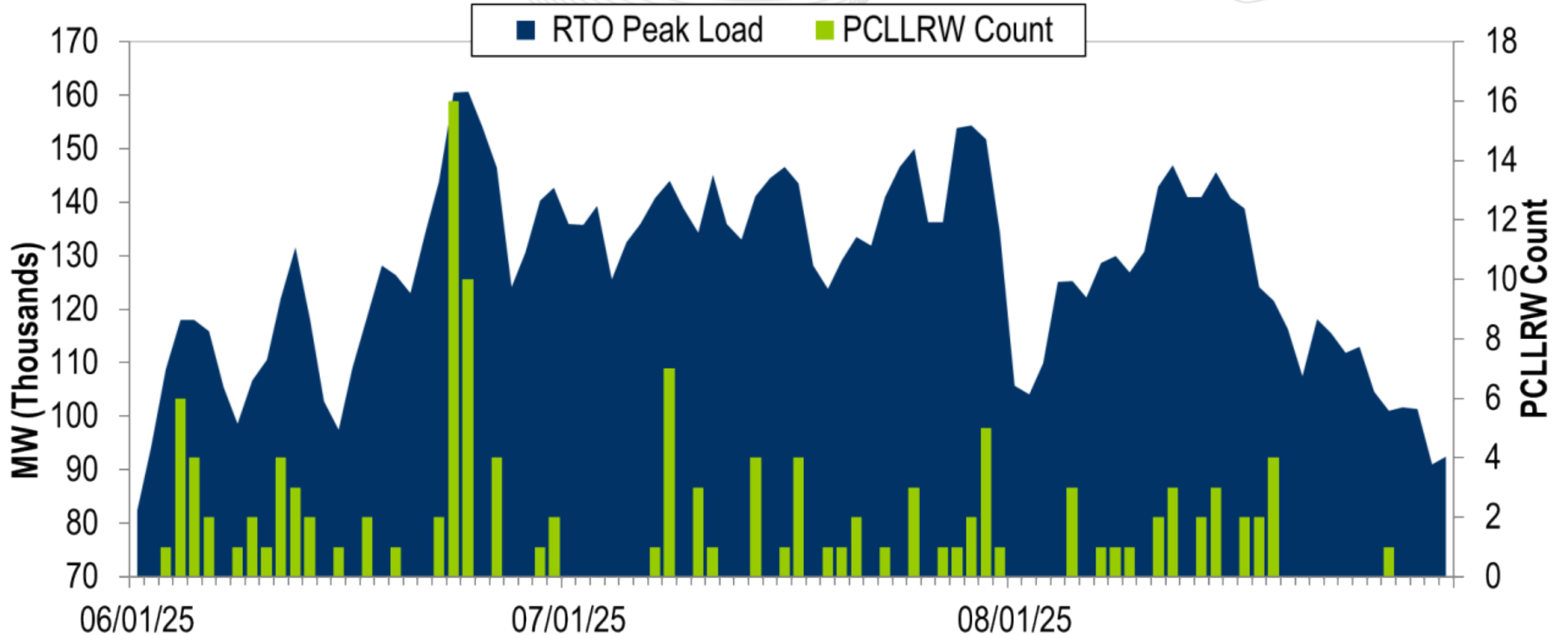
The 13-month average forced outage rate is 5.29% or 10,498 MW.
The 13-month average total outage rate is 14.61% or 28,965 MW.

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			3		
Date	08/06/25			08/14/25			08/15/25		
Start Time	18:49:11			17:40:51			15:33:03		
End Time	18:57:07			17:45:09			15:38:15		
Duration	00:07:56			00:04:18			00:05:12		
Region	MAD			RTO			RTO		
Resource Type	Gen	DR	Total	Gen	DR	Total	Gen	DR	Total
Assigned (MW)	1679	83	1762	2855	538	3392	3245	454	3699
Estimated Expected Response of Assigned Resources (MW)	1332	66	1398	1228	231	1459	1688	236	1924
Actual Response of Assigned Resources (MW)	1165	35	1200	1454	396	1851	2084	373	2458
Output Increase of Resources without Assignment (MW)	719	0	719	1857	0	1857	2155	0	2155
Percent Response To Assignment (%)	69%	42%	68%	51%	74%	55%	64%	82%	66%
Percent Response To Estimated Expected Response (%)	87%	53%	86%	118%	171%	127%	124%	158%	128%
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 (%)
02/05/25 10:05:15	Duration ≥ 10 minutes	65.1%	74.4%
07/01/25 10:18:26	Duration ≥ 10 minutes	79.5%	
07/22/25 15:11:28	Duration ≥ 10 minutes	78.8%	

Load Forecast Report

Presenter/SME:

Marcus Smith,
Marcus.Smith@pjm.com

System Operations Report

Presenter:

David Kimmel,
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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.

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Member Hotline

(610) 666 – 8980

(866) 400 – 8980

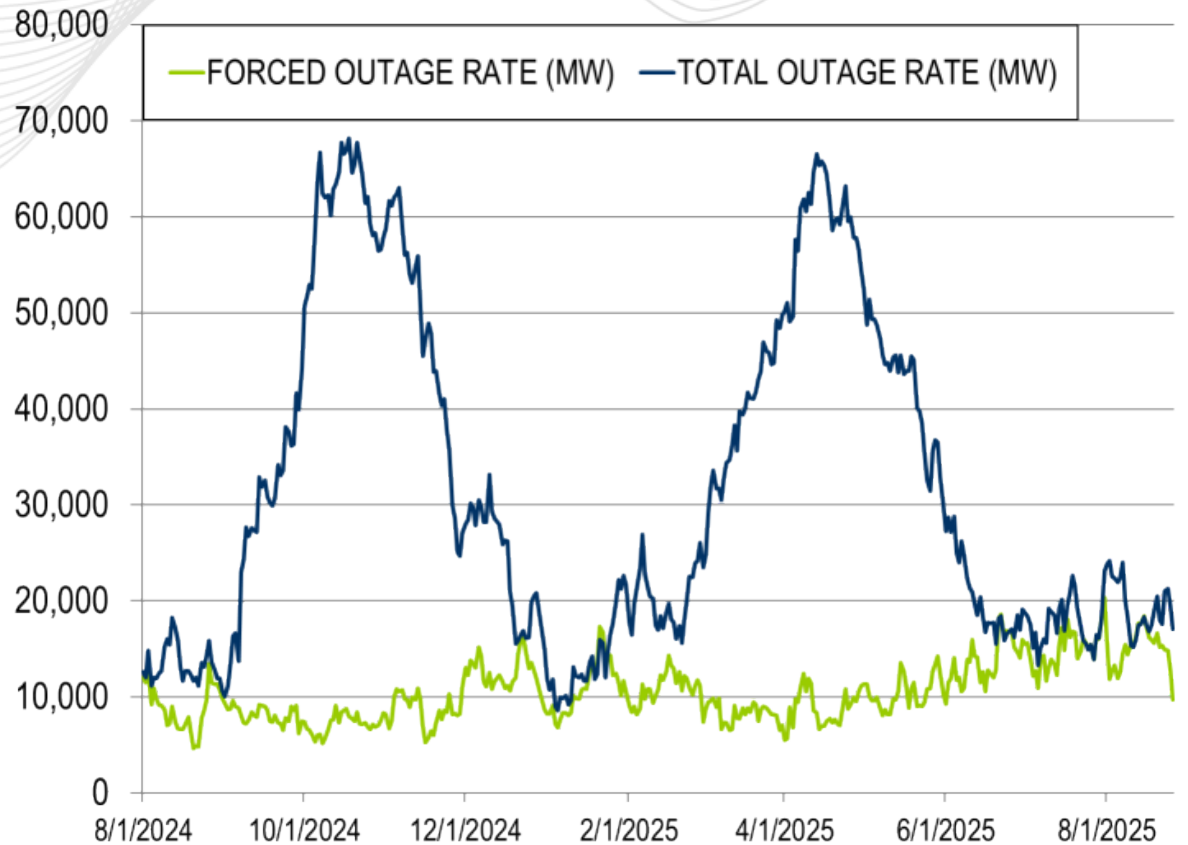
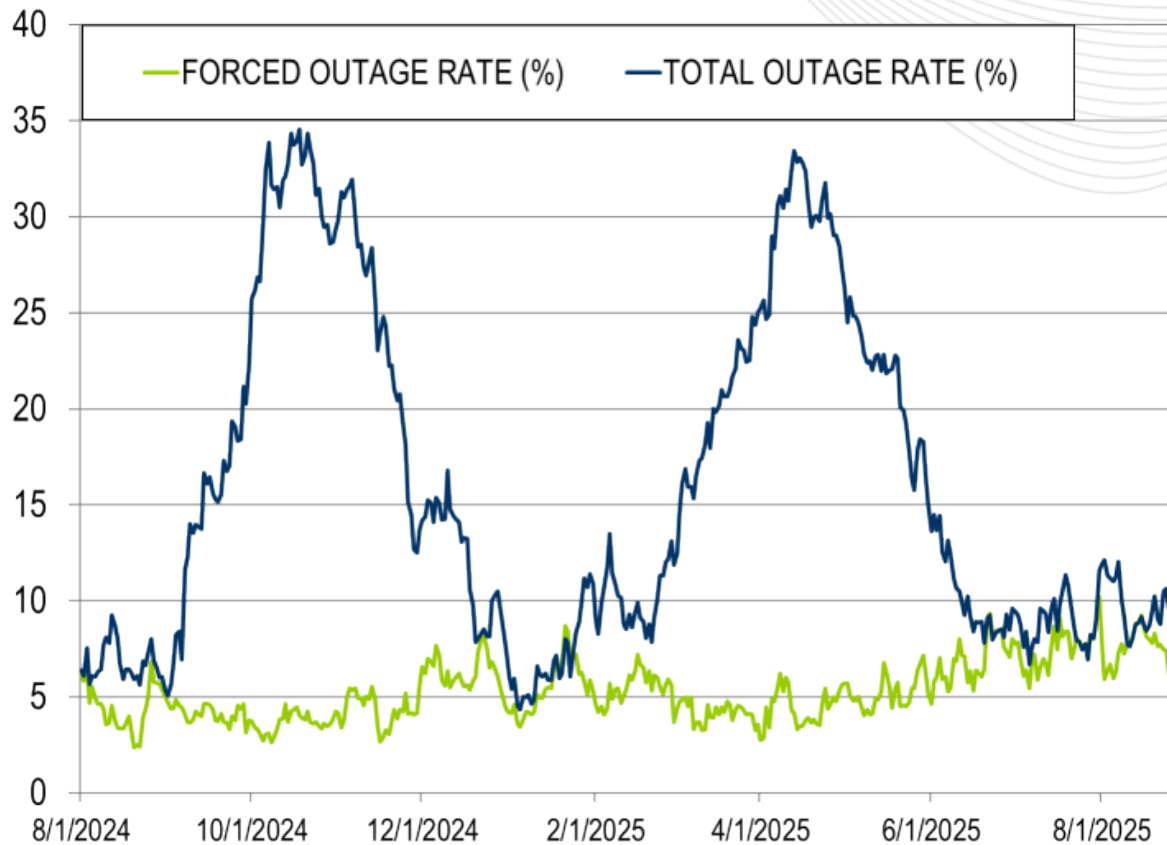
custsvc@pjm.com

Appendix

Goal Measurement: Balancing Authority ACE Limit (BAAL)

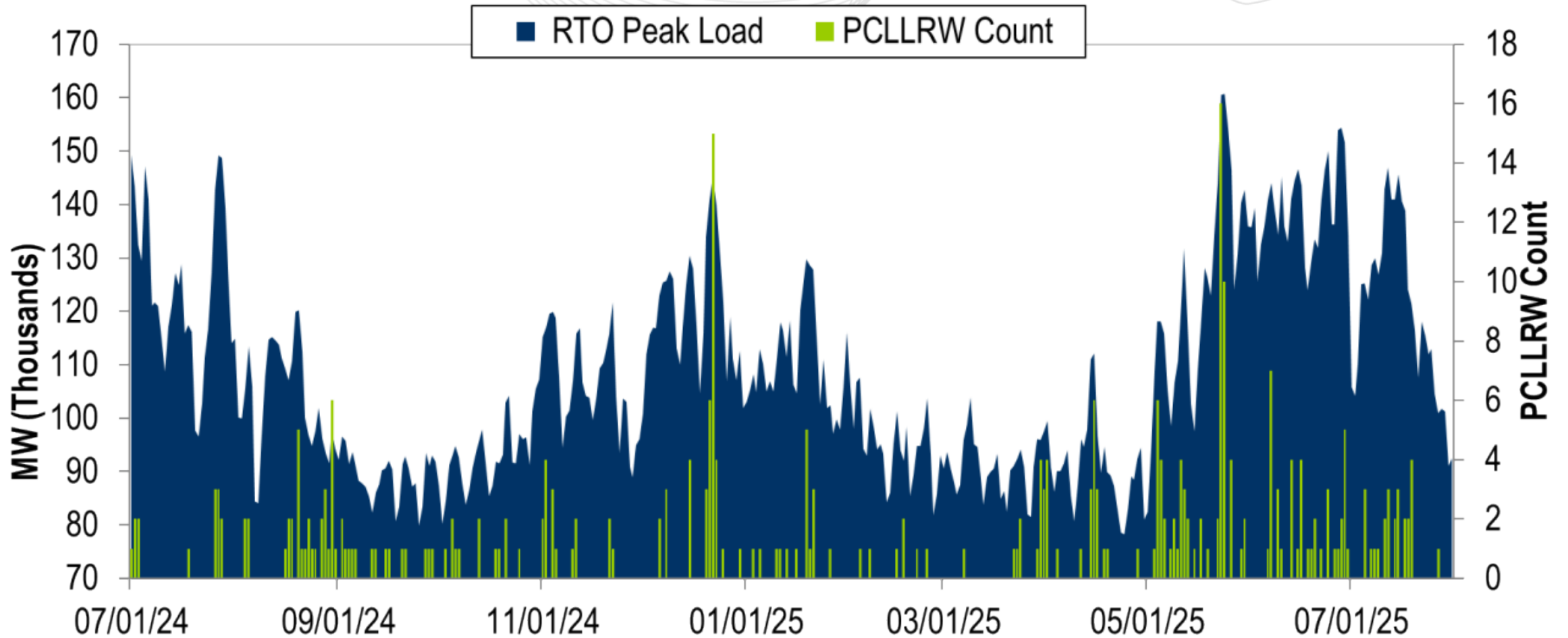
- The purpose of the new BAAL standard is to maintain interconnection frequency within a predefined frequency profile under all conditions (normal and abnormal), to prevent frequency-related instability, unplanned tripping of load or generation, or uncontrolled separation or cascading outages that adversely 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 5.29% or 10,498 MW.
The 13-month average total outage rate is 14.61% or 28,965 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