



# System Operations Report

Brian Oakes

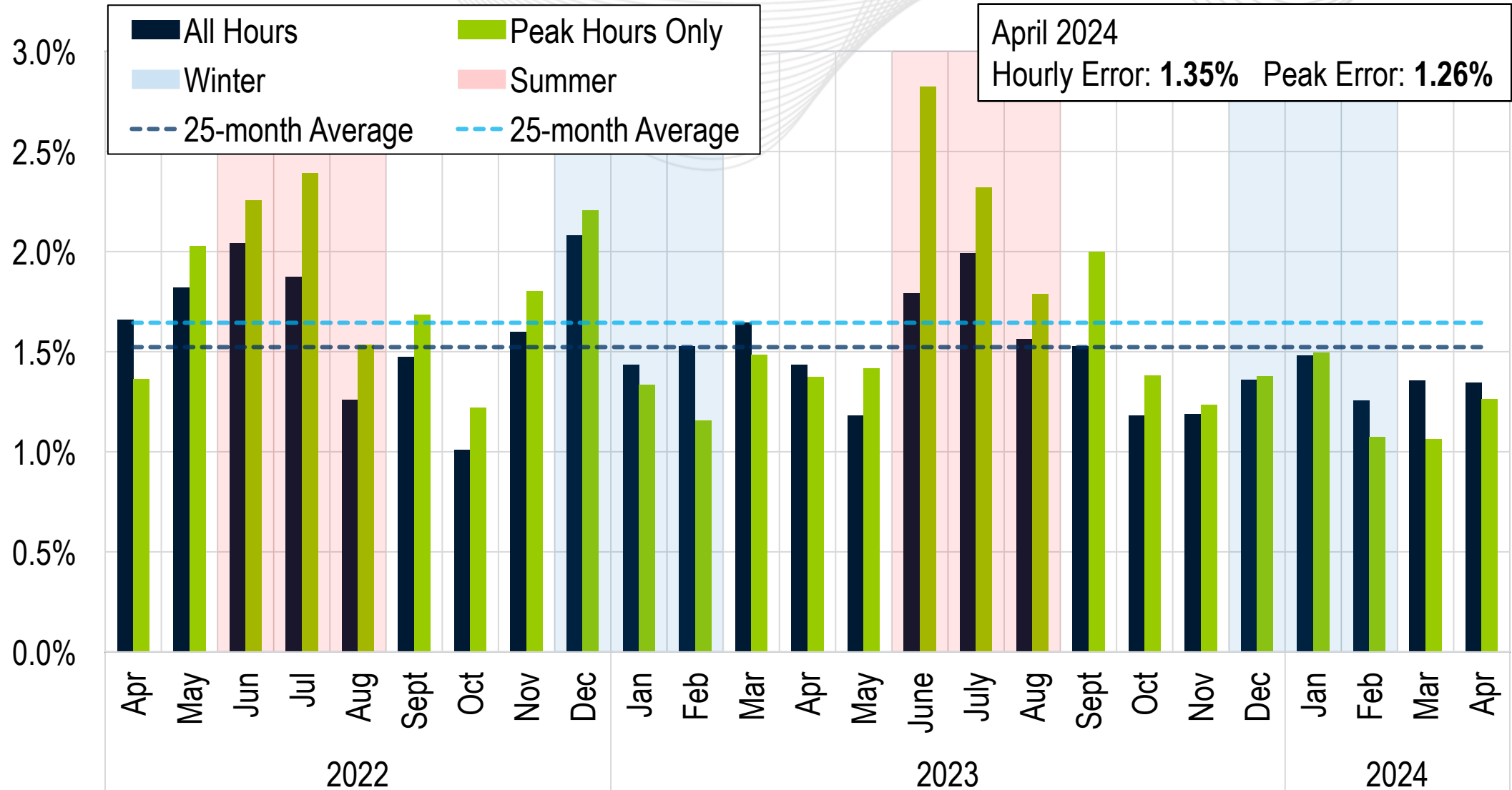
Senior Lead Engineer, Markets Coordination

MC Webinar

May 20, 2024

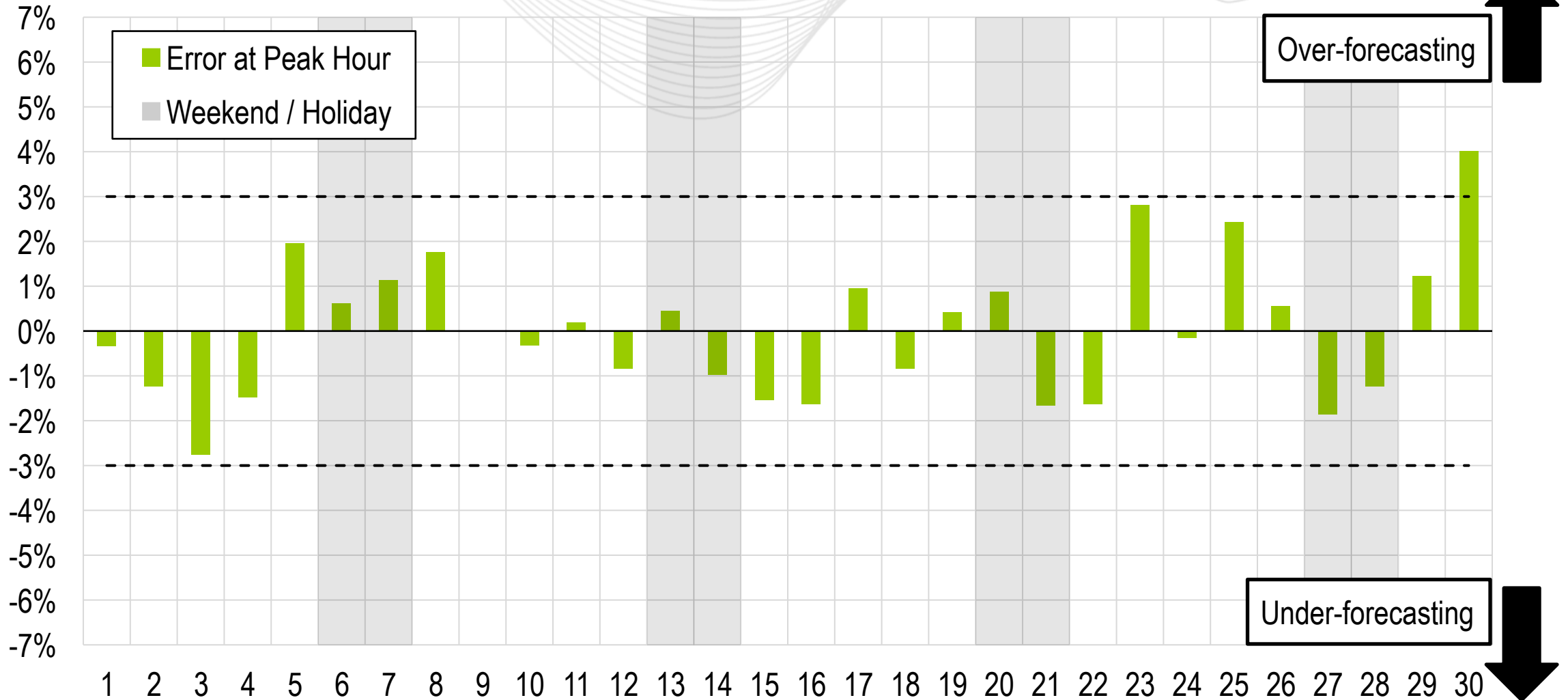


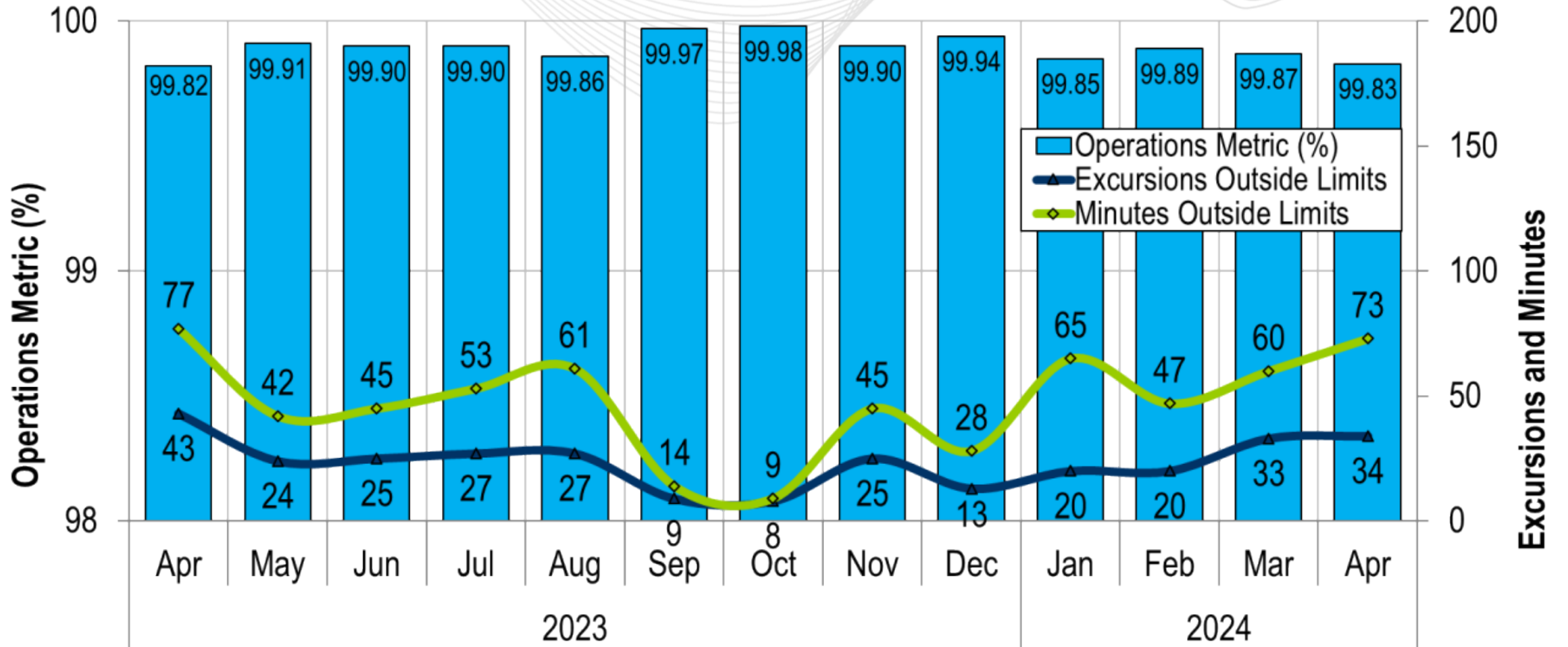
# Average Load Forecast Error



# Daily Peak Forecast Error (April)

## 18:00 Day Ahead Forecast Error

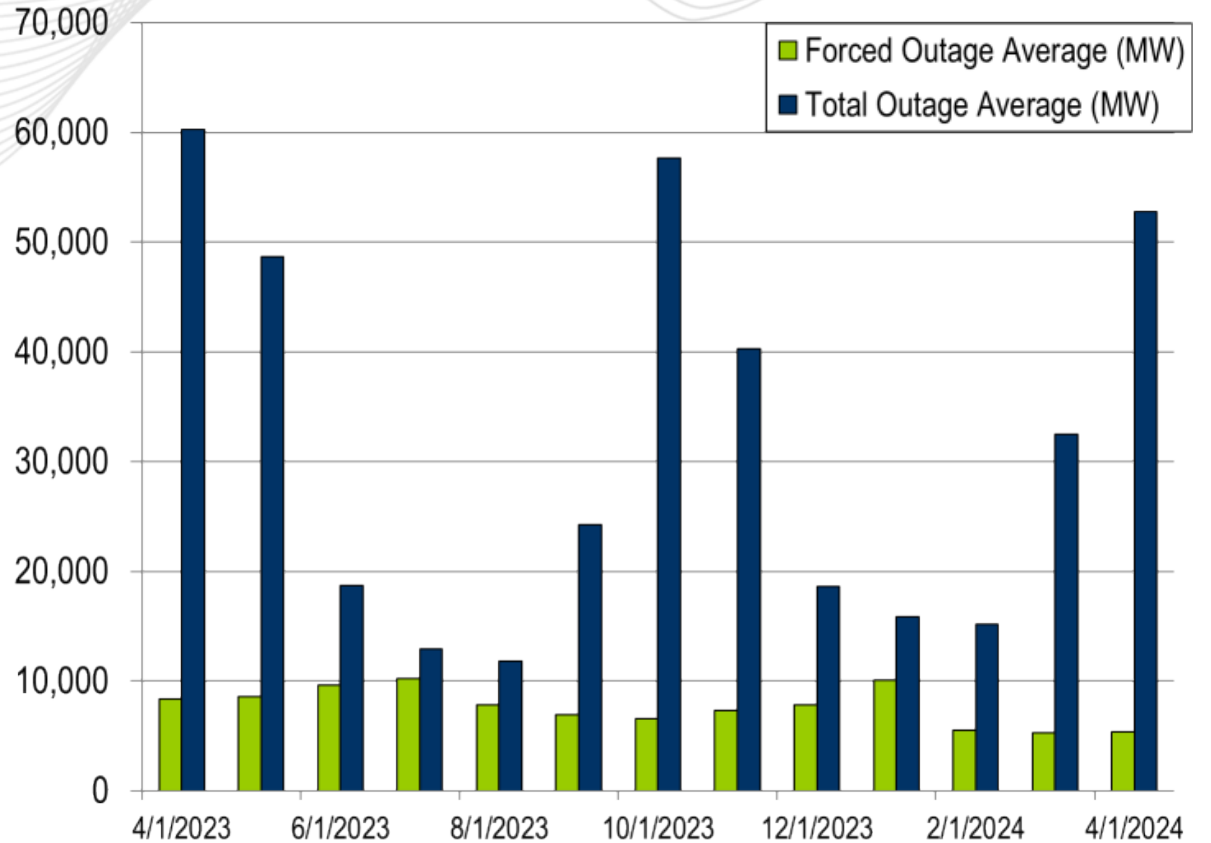
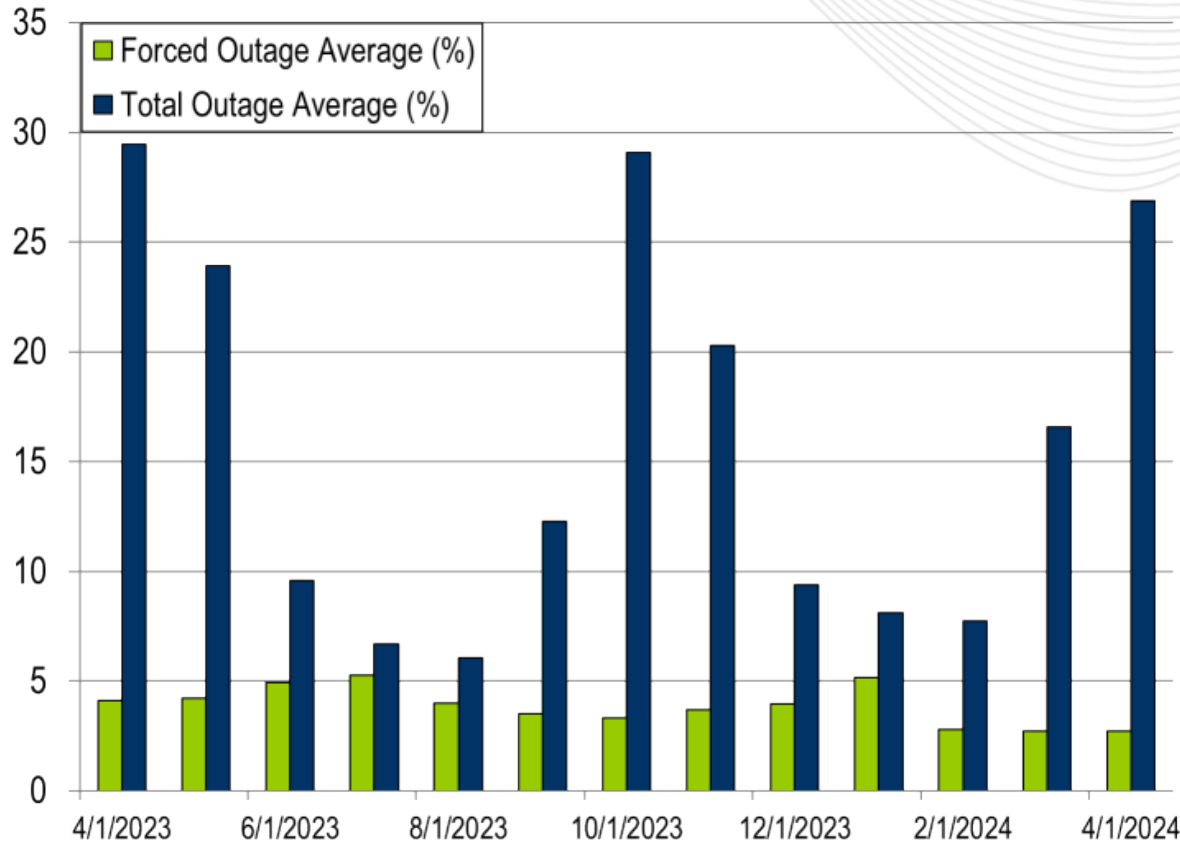




PJM's BAAL performance has exceeded the goal of 99% for each month in 2023 and 2024.

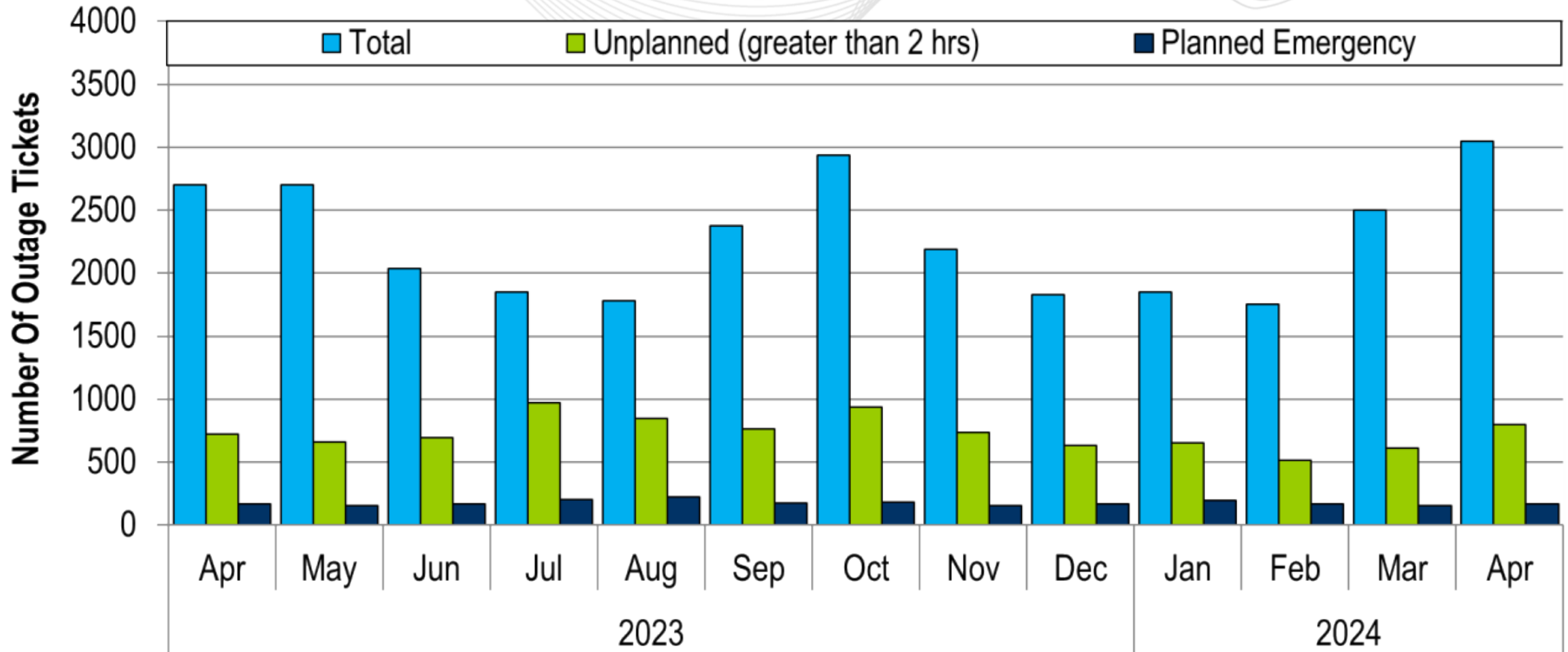
- 2 Spin events
- 2 Shared Reserve events
- The following Emergency Procedures occurred:
  - 1 High System Voltage Action
  - 1 Geomagnetic Disturbance Warning
  - 1 Post Contingency Local Load Relief Warnings (PCLLRWs)

- 1 Shortage Case Approved
- The approved Shortage Cases occurred on:
  - 04/14/2024:
    - 1 Shortage Case for the 20:25 interval
    - Factors: load increase and interchange



The 13-month average forced outage rate is 3.89% or 7,682 MW.  
 The 13-month average total outage rate is 15.83% or 31,472 MW.

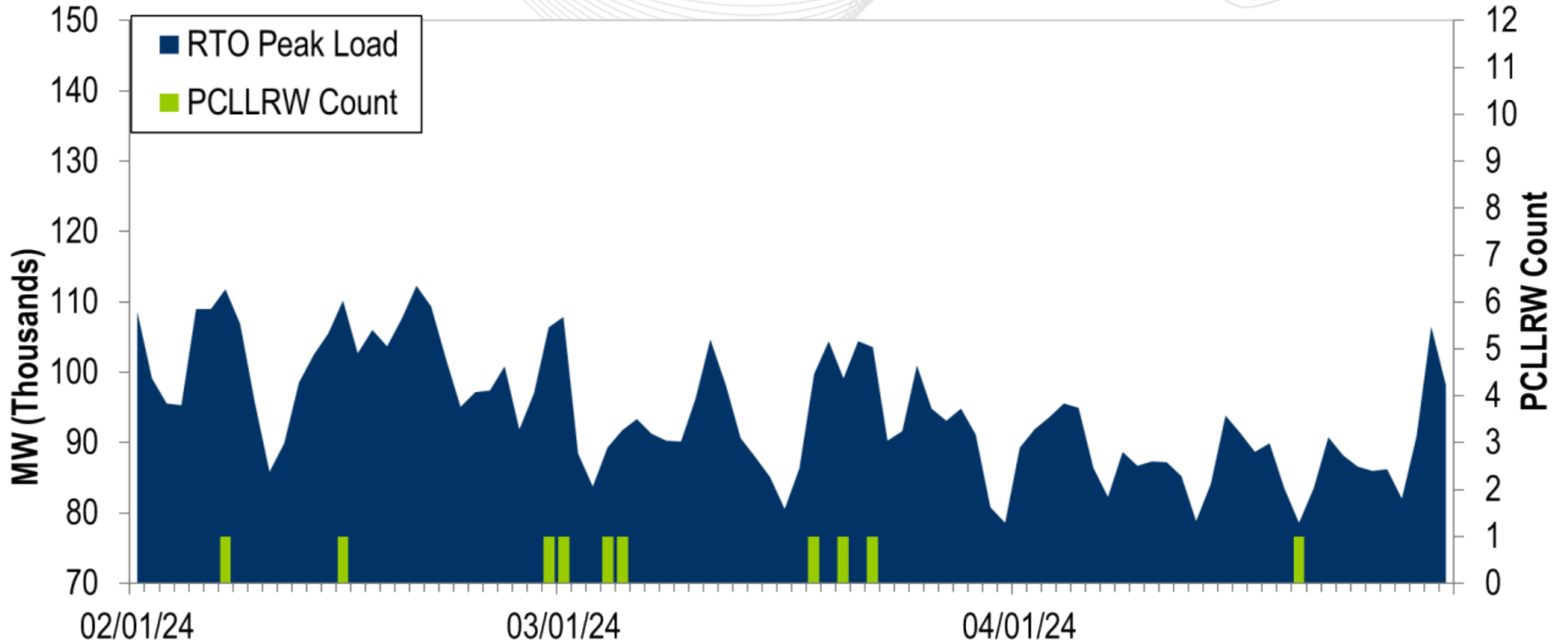
# 2022-2023 Planned Emergency, Unplanned, and Total Outages by Ticket



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	04/04/24			04/13/24		
Start Time	10:50:20			00:36:37		
End Time	10:55:35			00:43:43		
Duration	00:05:15			00:07:06		
Region	RTO			RTO		
Resource Type	Gen	DR	Total	Gen	DR	Total
Assigned (MW)	1517	402	1919	1716	253	1970
Estimated Expected Response of Assigned Resources (MW)	796	211	1008	1219	180	1398
Actual Response of Assigned Resources (MW)	296	220	516	501	85	585
Output Increase of Resources without Assignment (MW)	1857	0	1857	1254	0	1254
Percent Response To Estimated Expected Response (%)	37%	104%	51%	41%	47%	42%
Penalty (MW)	0	0	0	0	0	0

## System Operations Report

Presenter:

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SME:

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## Member Hotline

(610) 666 – 8980

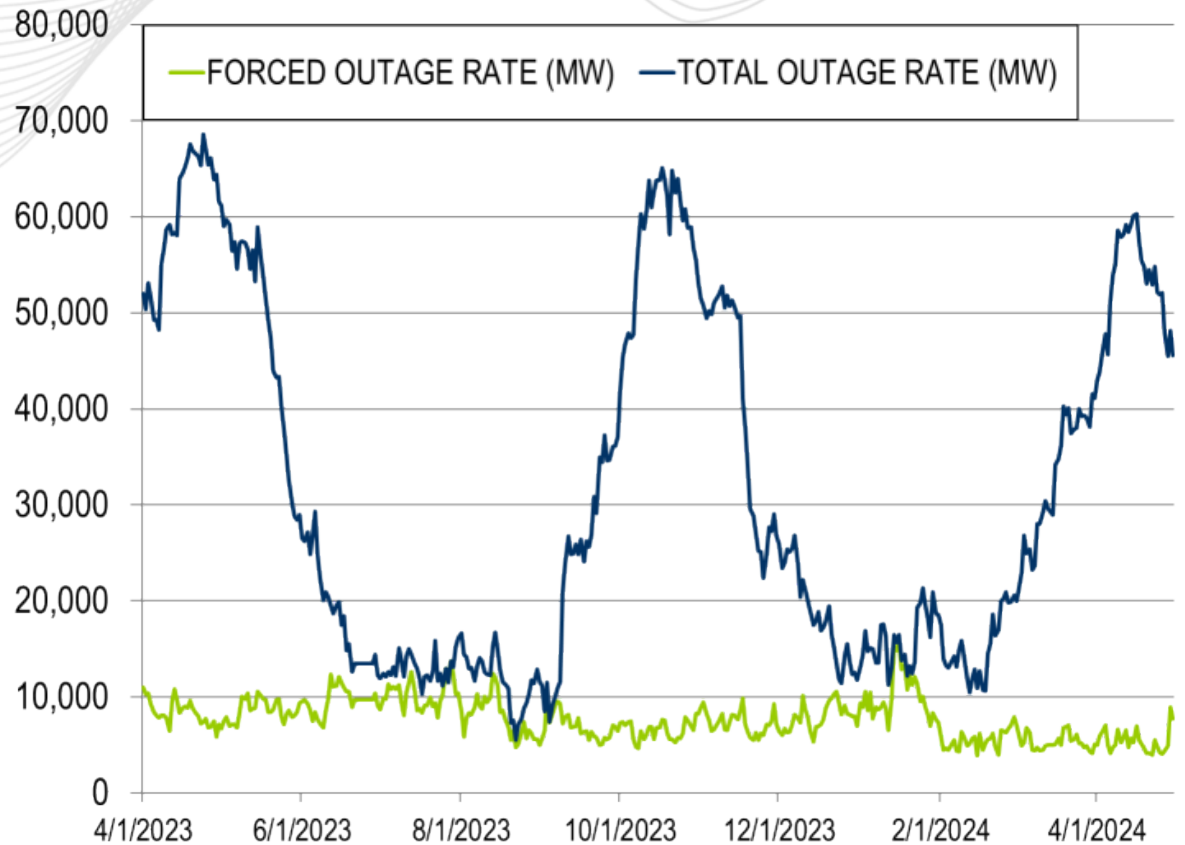
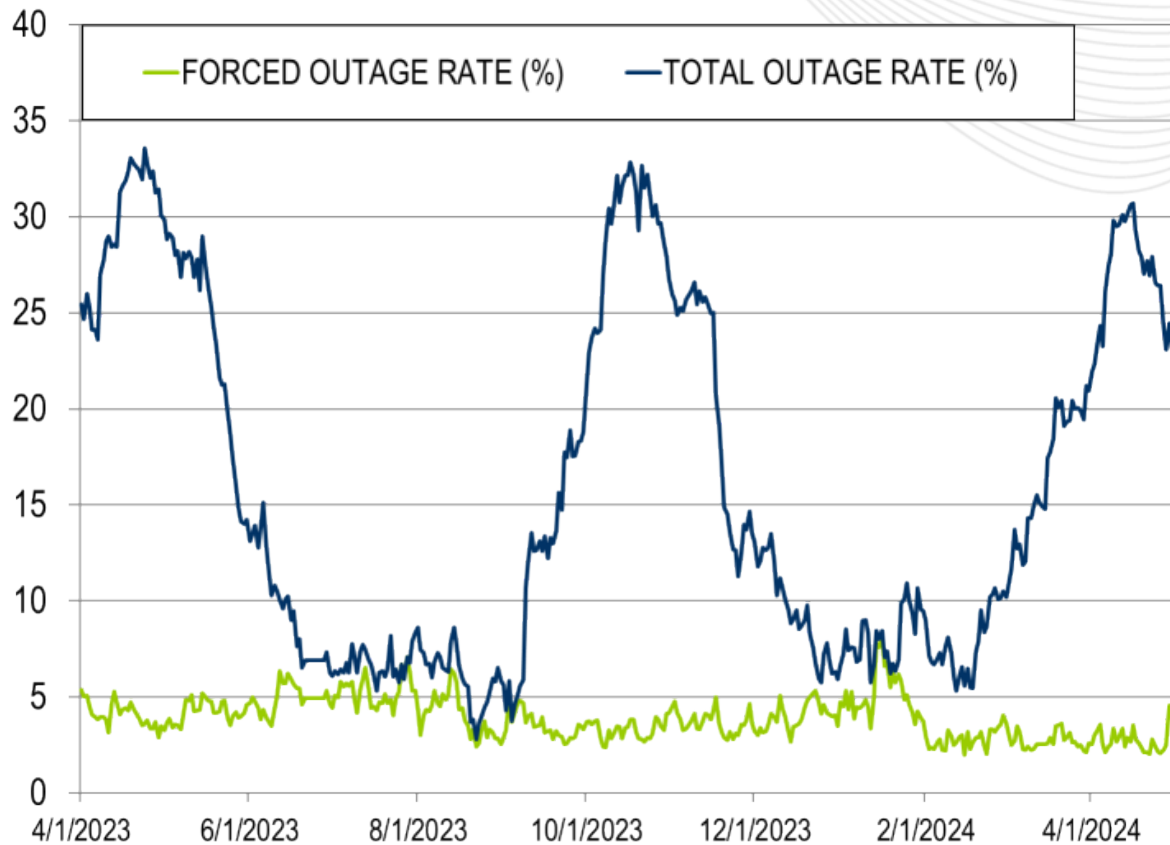
(866) 400 – 8980

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# Appendix

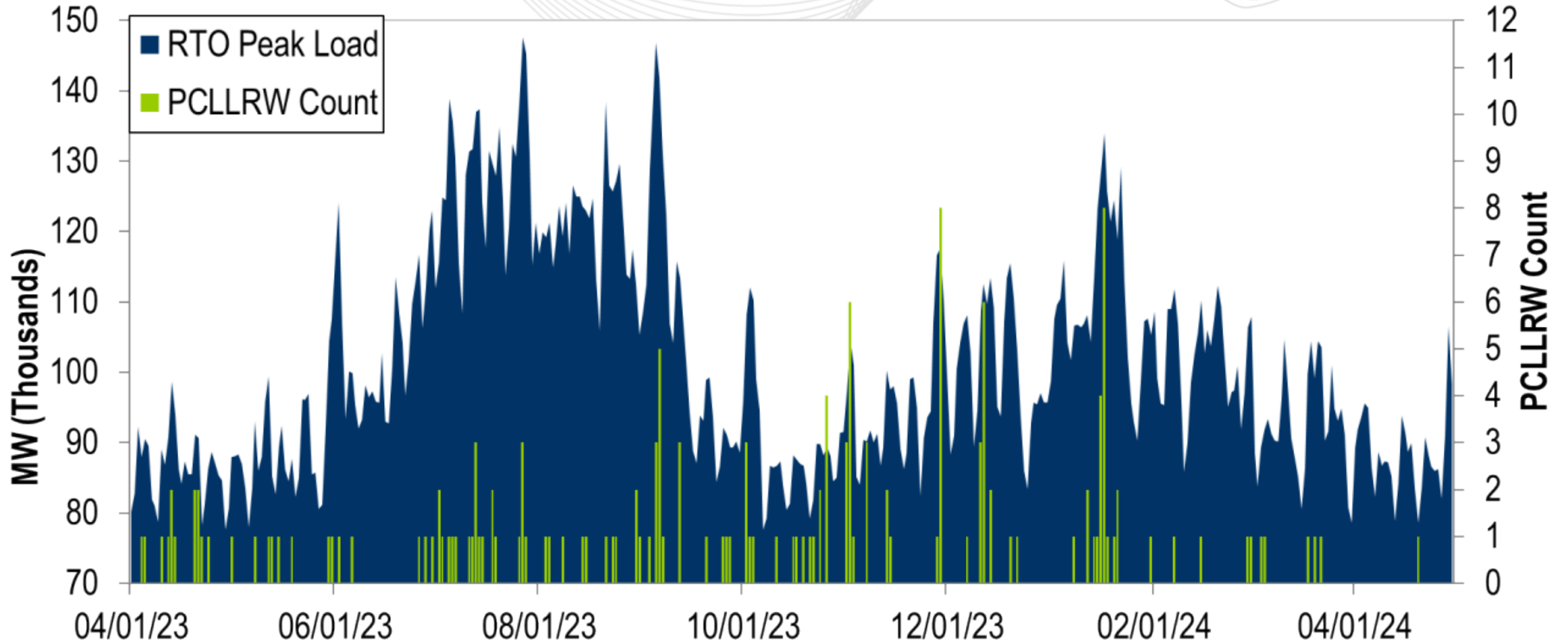
## Goal Measurement: Balancing Authority ACE Limit (BAAL)

- 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.



The 13-month average forced outage rate is 3.89% or 7,682 MW.  
 The 13-month average total outage rate is 15.83% or 31,472 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.**  
(610) 666-2244 / [it\\_ops\\_ctr\\_shift@pjm.com](mailto:it_ops_ctr_shift@pjm.com)

