



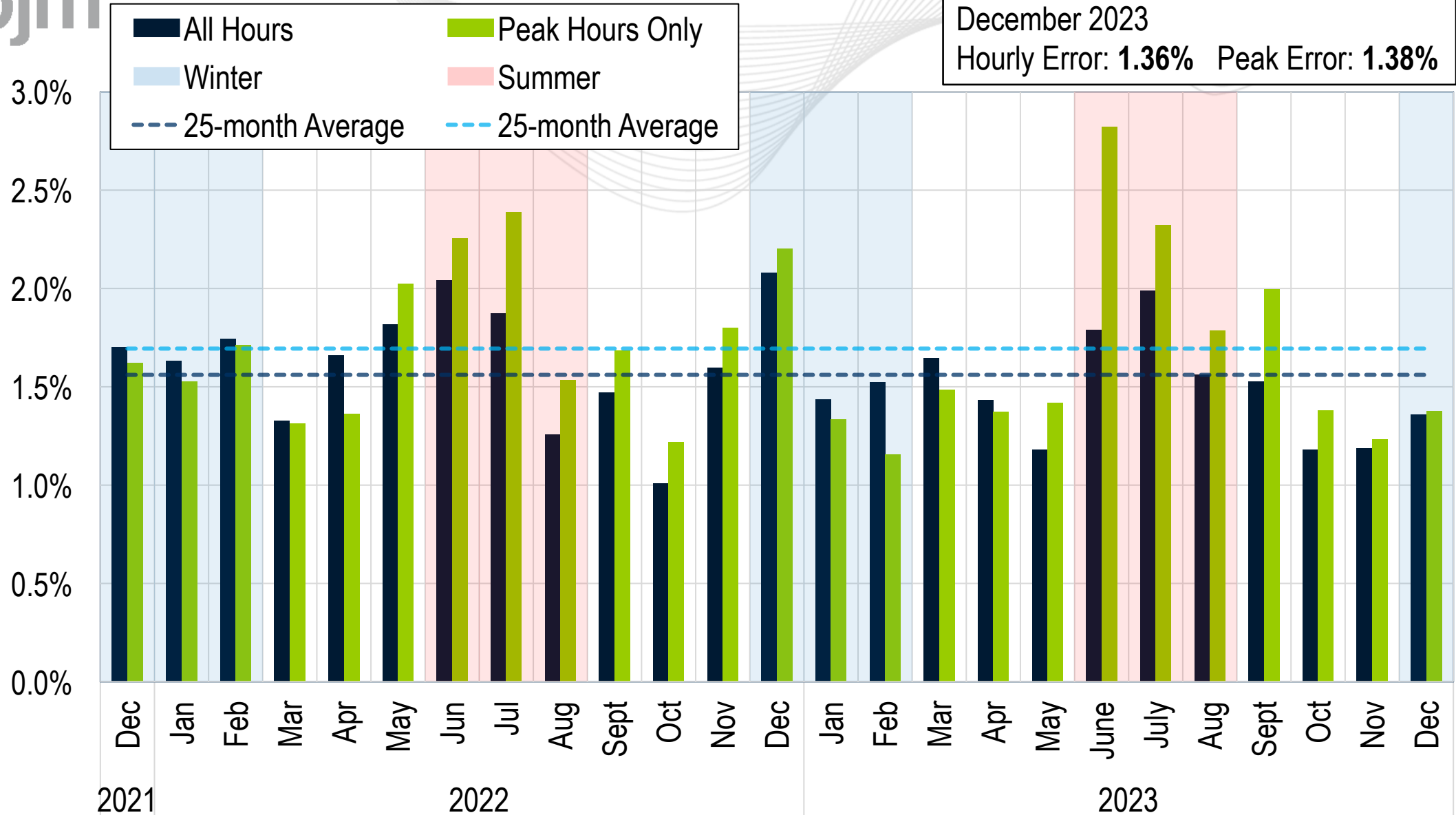
System Operations Report

Hong Chen
Principal Engineer, Markets Coordination
MC Webinar
January 22, 2024



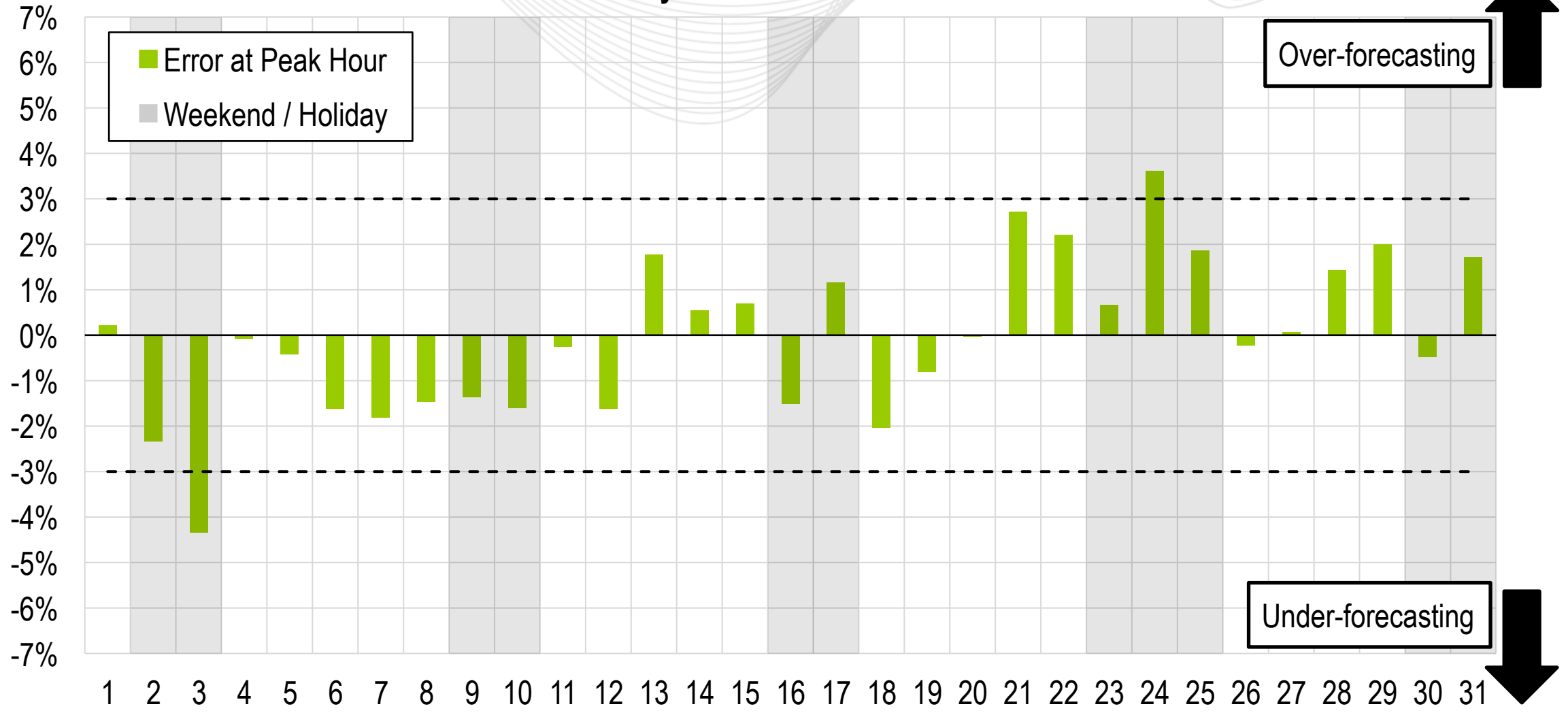
Average Load Forecast Error

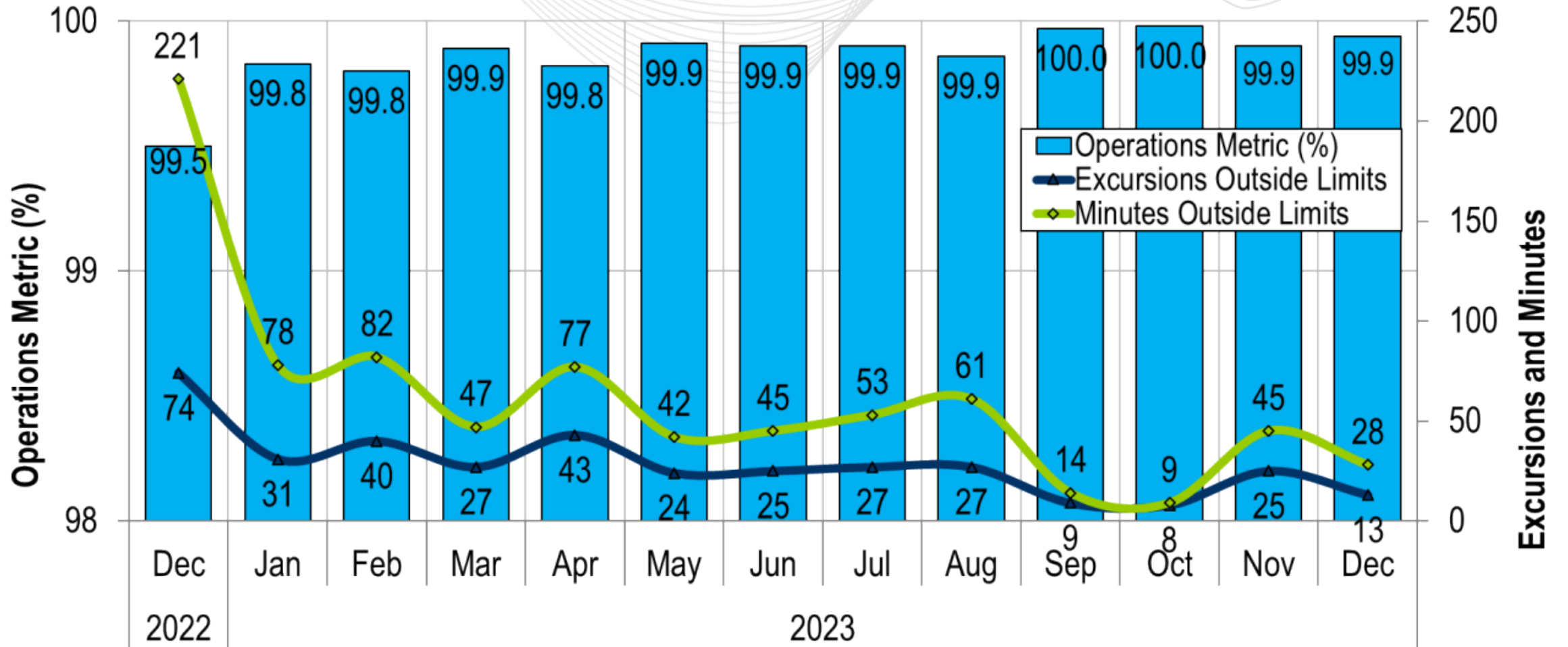
December 2023
Hourly Error: **1.36%** Peak Error: **1.38%**



Daily Peak Forecast Error (December)

18:00 Day Ahead Forecast Error

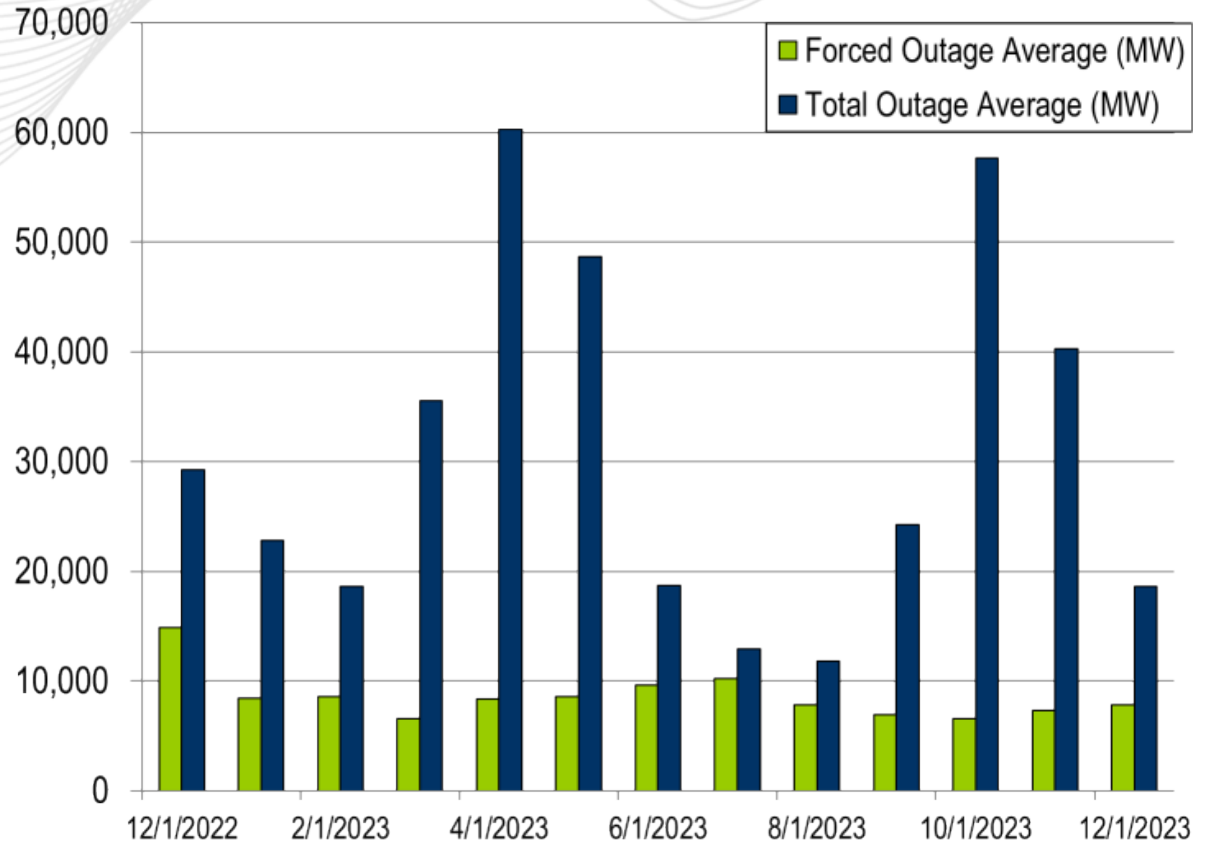
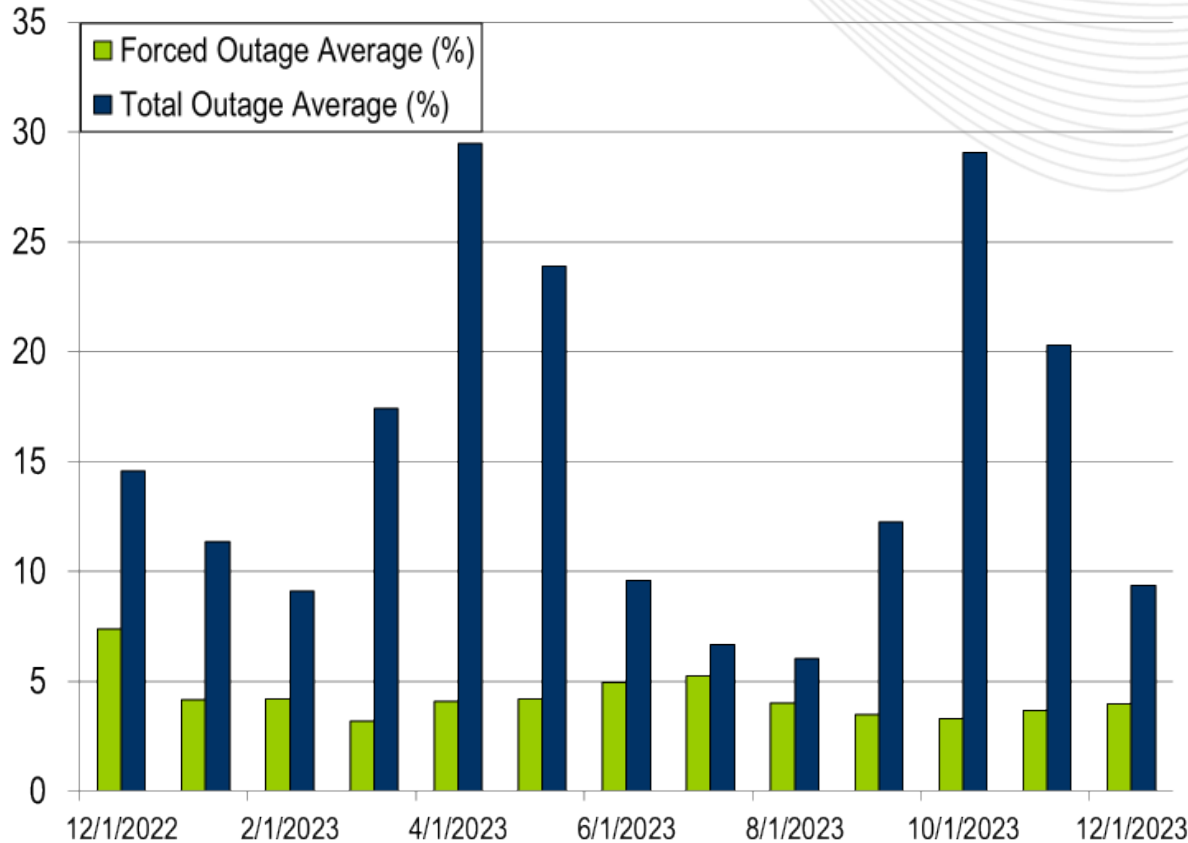




PJM's BAAL performance has exceeded the goal of 99% for each month in 2022 and 2023.

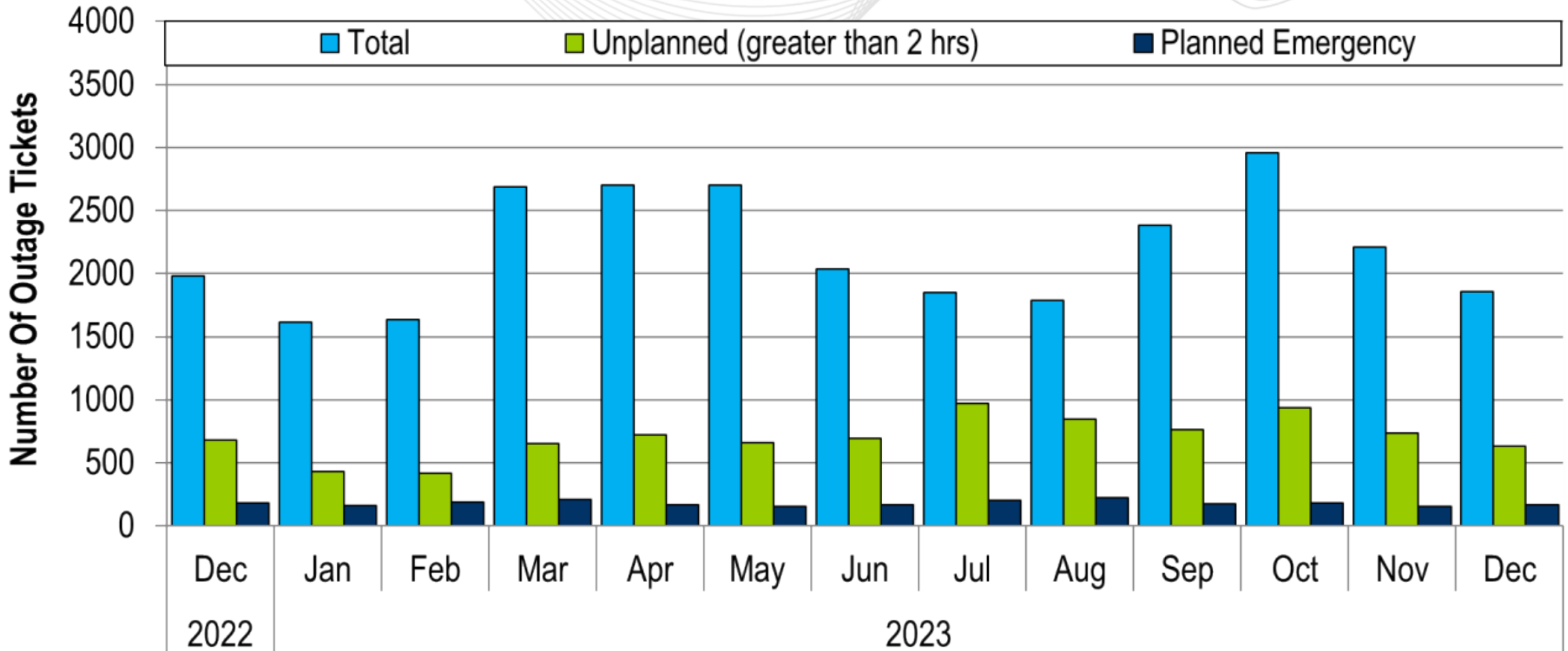
- 1 Shared Reserve event
- 2 Spin Events
- The following Emergency Procedures occurred:
 - 1 Geomagnetic Disturbance Warning
 - 2 High System Voltage Actions
 - 14 Post Contingency Local Load Relief Warnings (PCLLRWs)

- 1 Shortage Case Approved
- The approved Shortage Case occurred on:
 - 12/01/2023:
 - 1 Shortage Case for 14:15 interval
 - Factors: Mainly due to load, interchange, and drop off of wind and solar



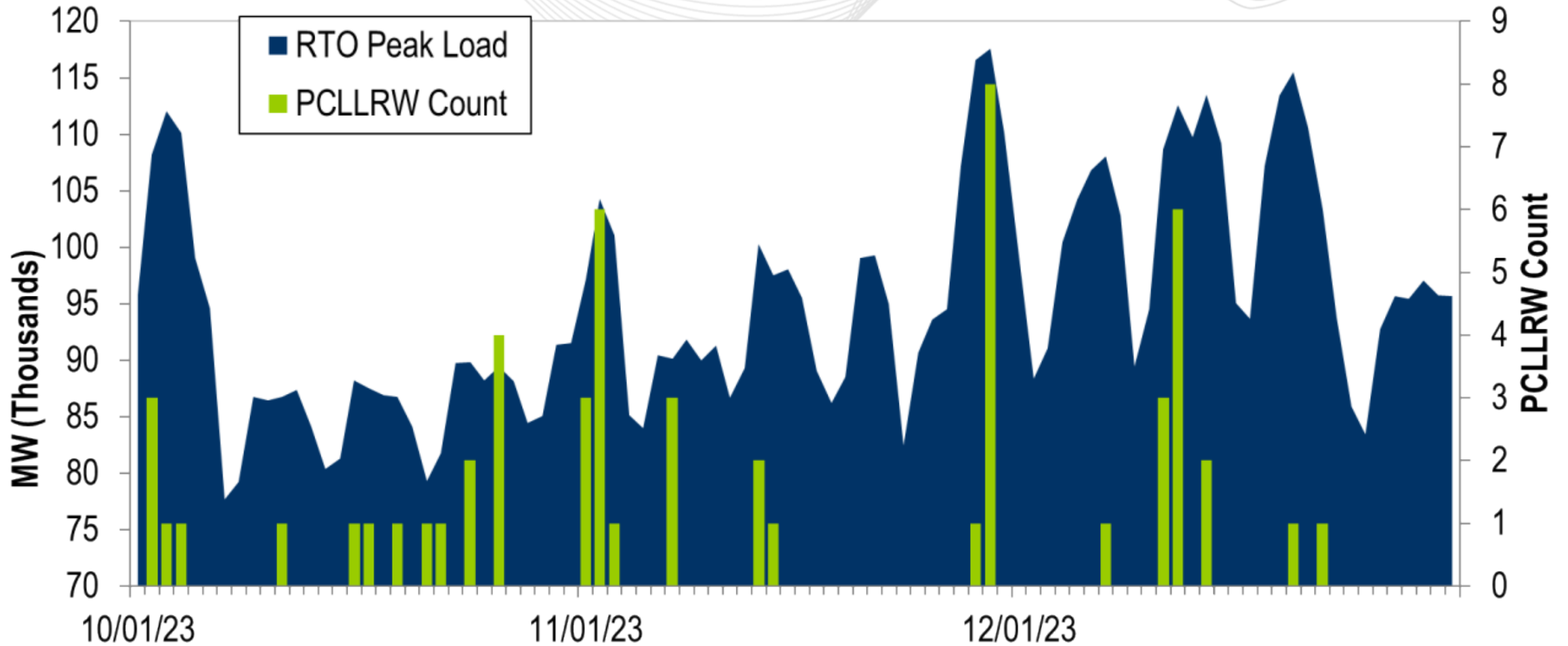
The 13-month average forced outage rate is 4.32% or 8,608 MW.
 The 13-month average total outage rate is 15.33% or 30,750 MW.

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	Date	Start Time	End Time	Duration	Region	Assigned (MW)	Response (MW)	Penalty (MW)
1	12/14/24	19:41:33	19:53:48	00:12:15	RTO	2712.0	1436.2	1275.8
2	12/19/24	09:51:31	09:58:01	00:06:30	RTO	2687.2	2687.2	0.0

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System Operations Report



Member Hotline

(610) 666 – 8980

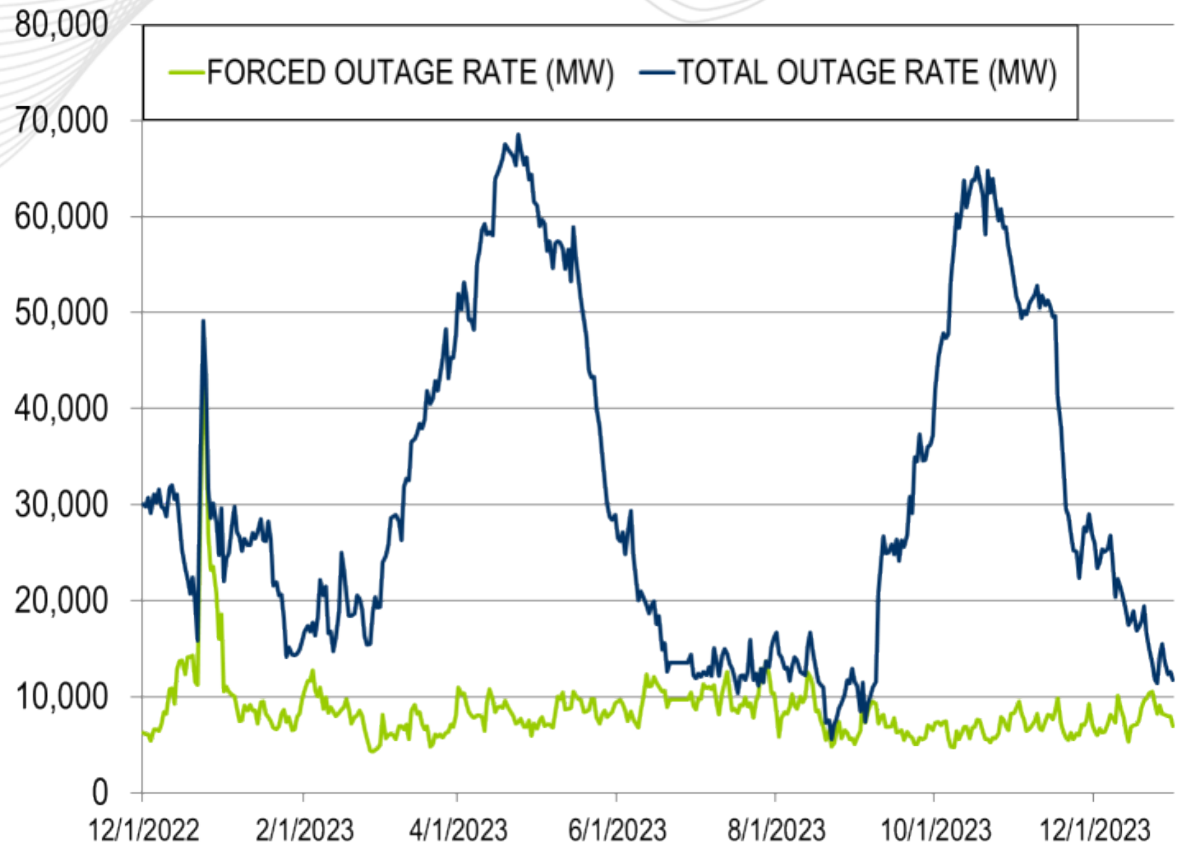
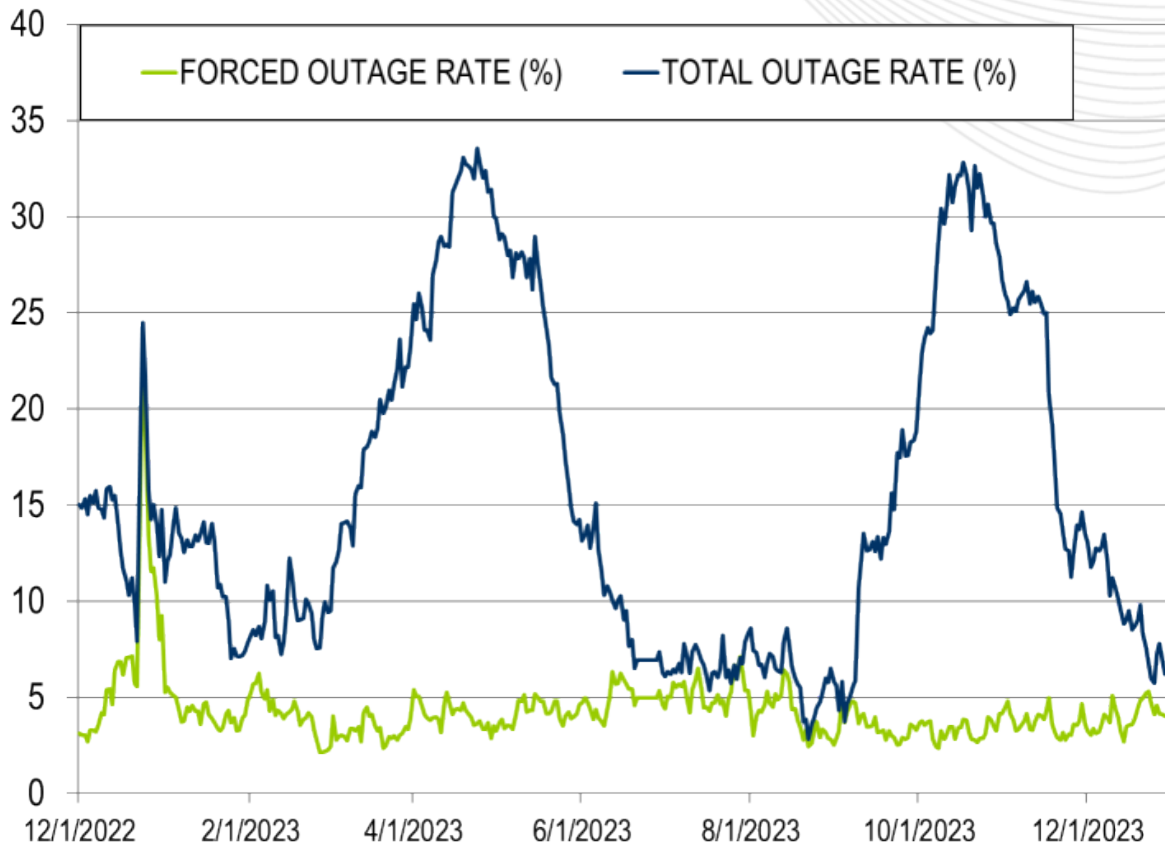
(866) 400 – 8980

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Appendix

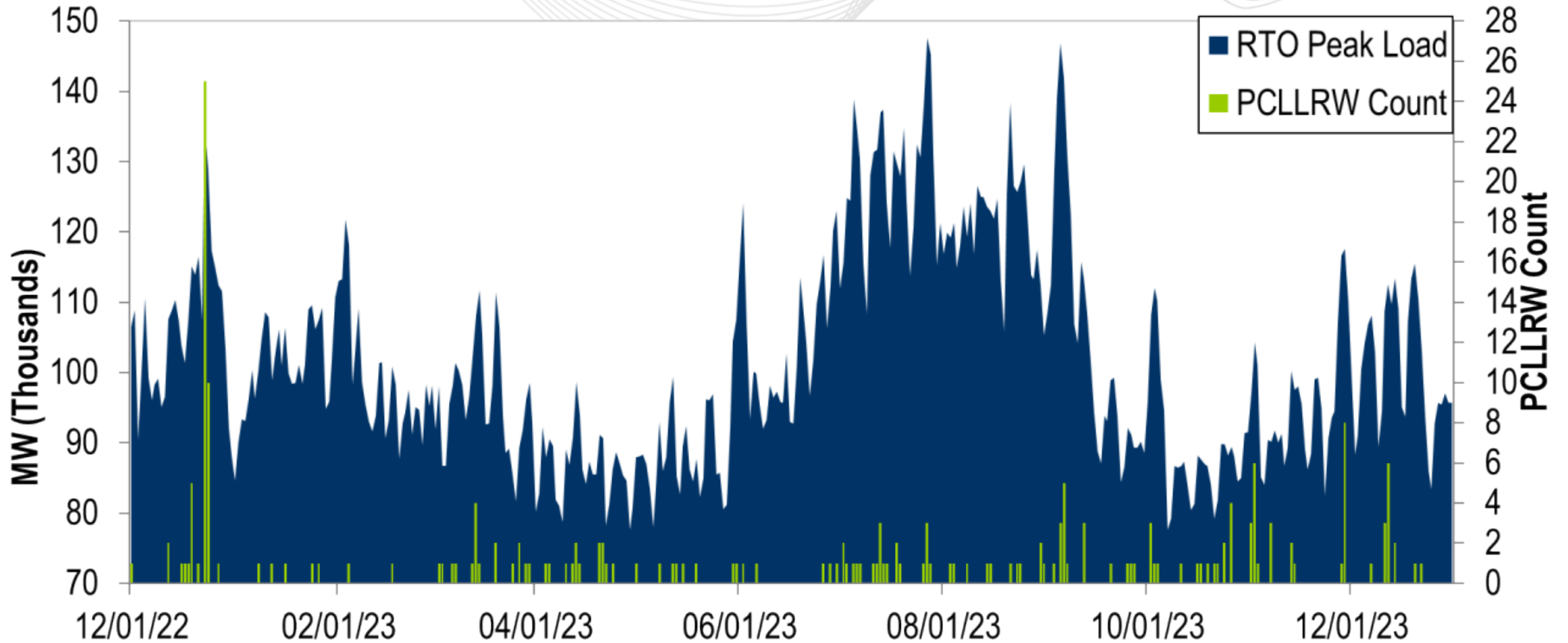
Goal Measurement: Balancing Authority ACE Limit (BAAL)

- 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 4.32% or 8,608 MW.
 The 13-month average total outage rate is 15.33% or 30,750 MW.

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



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