

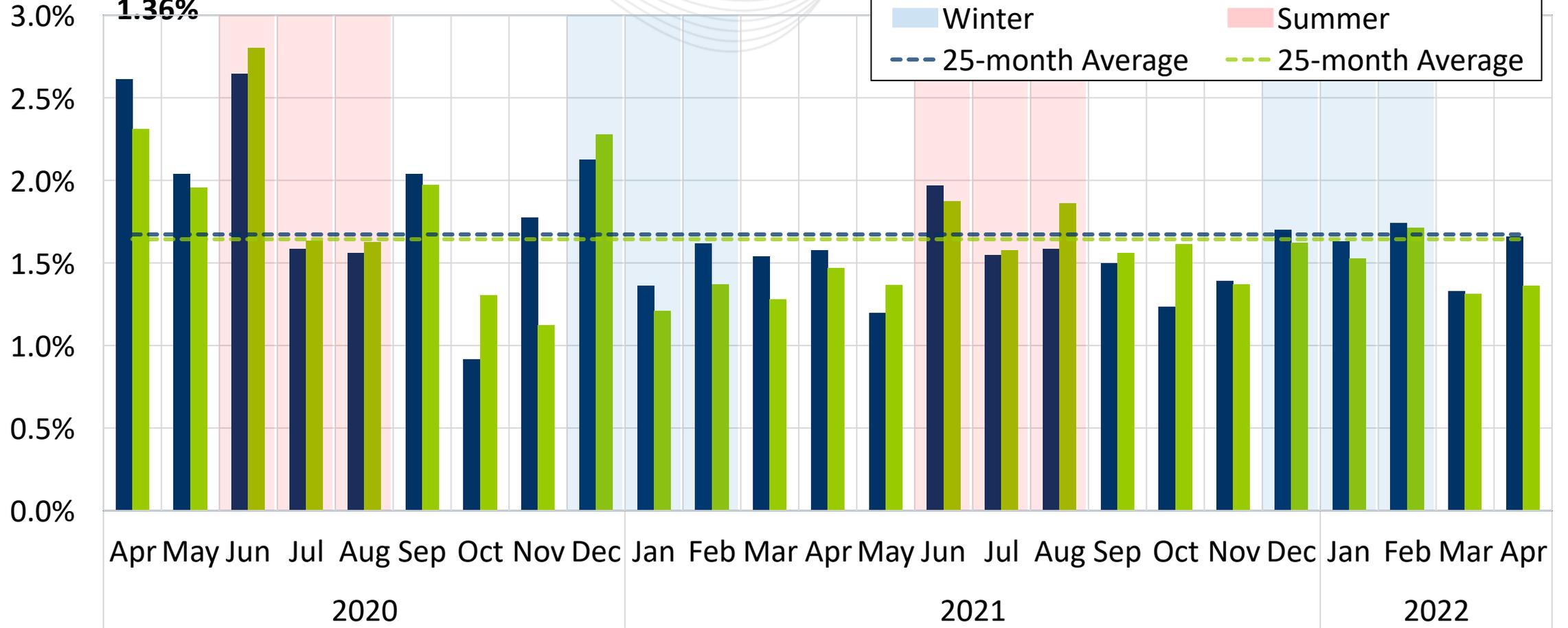


# System Operations Report

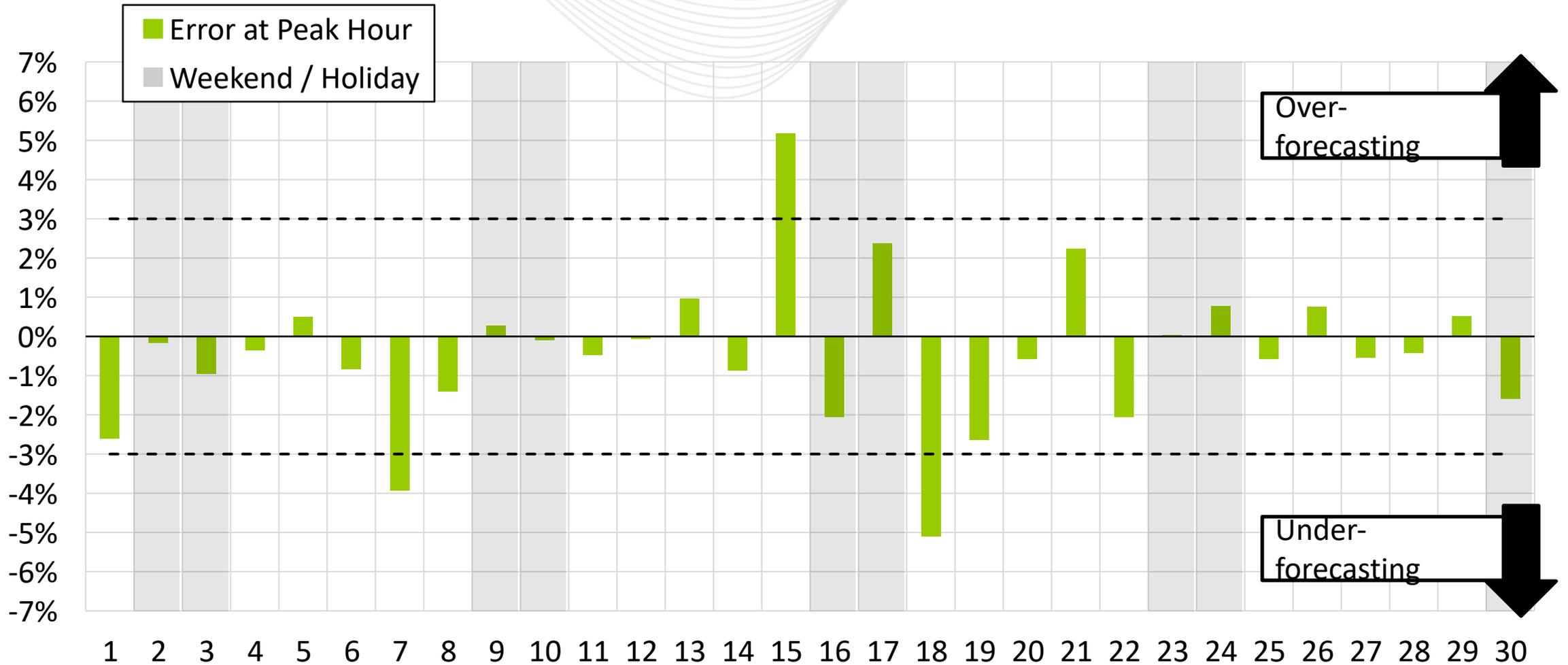
Stephanie Schwarz  
Manager, Markets Coordination  
Operating Committee  
May 12, 2022

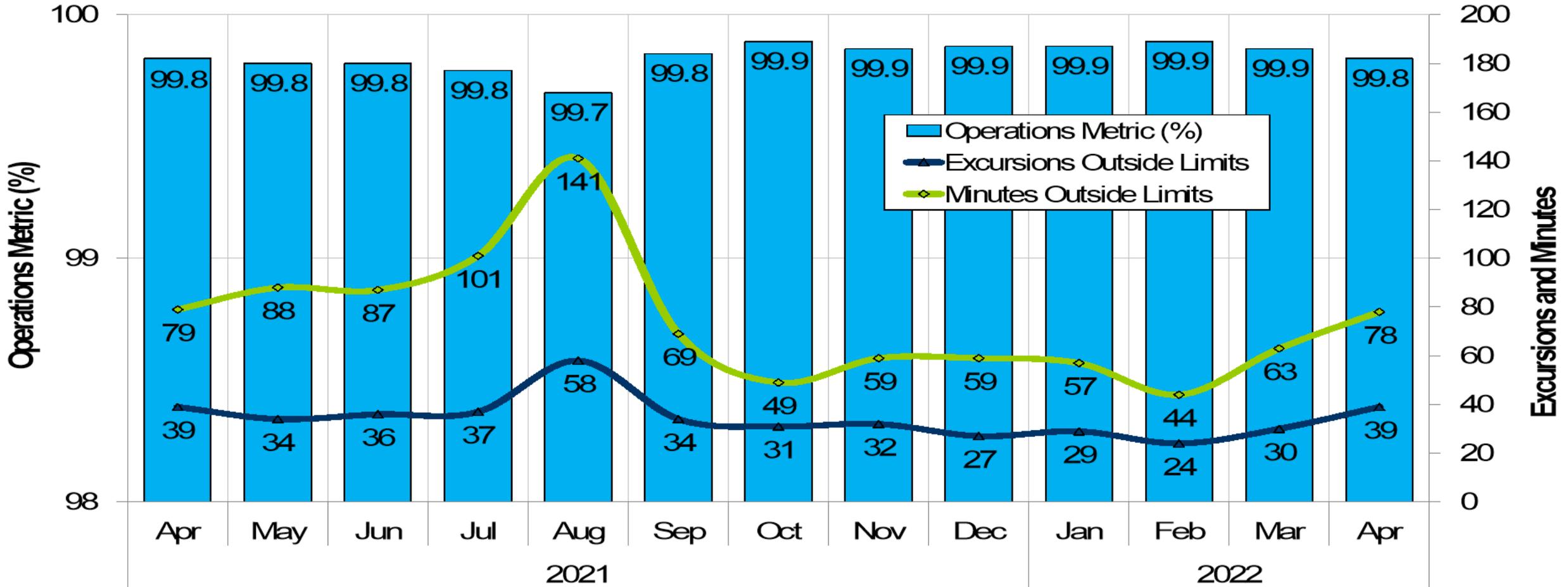
April 2022  
 Hourly Error: **1.66%** Peak Error:  
**1.36%**

<span style="color: #003366;">■</span> All Hours	<span style="color: #92D050;">■</span> Peak Hours Only
<span style="color: #ADD8E6;">■</span> Winter	<span style="color: #FFB6C1;">■</span> Summer
<span style="color: #0000FF; text-decoration: underline dashed;">---</span> 25-month Average	<span style="color: #90EE90; text-decoration: underline dashed;">---</span> 25-month Average



# Daily Peak Forecast Error (April)

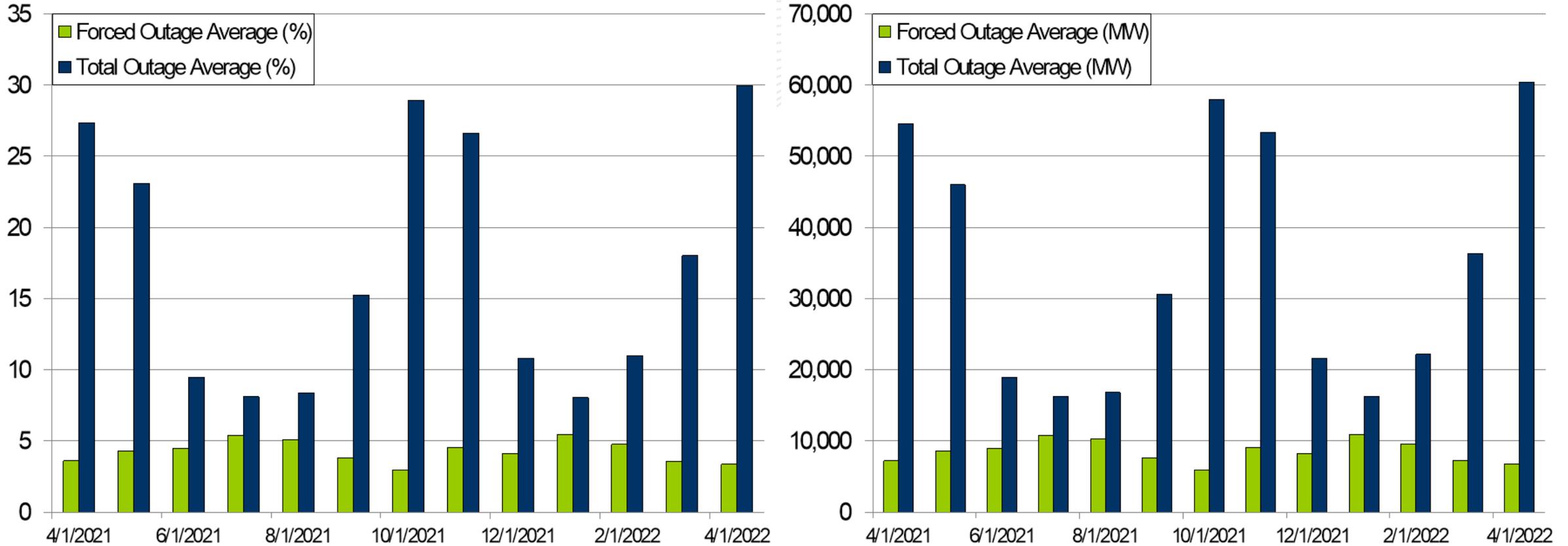




PJM's BAAL performance has exceeded the goal of 99% for each month in **2022.**

- Three spinning events
- Five reserve sharing events with the Northeast Power Coordinating Council (NPCC)
- The following Emergency Procedures occurred:
  - 7 Post-Contingency Local Load Relief Warnings (PCLLRW)
  - 2 High System Voltages
  - 1 Geomagnetic Disturbance Warning

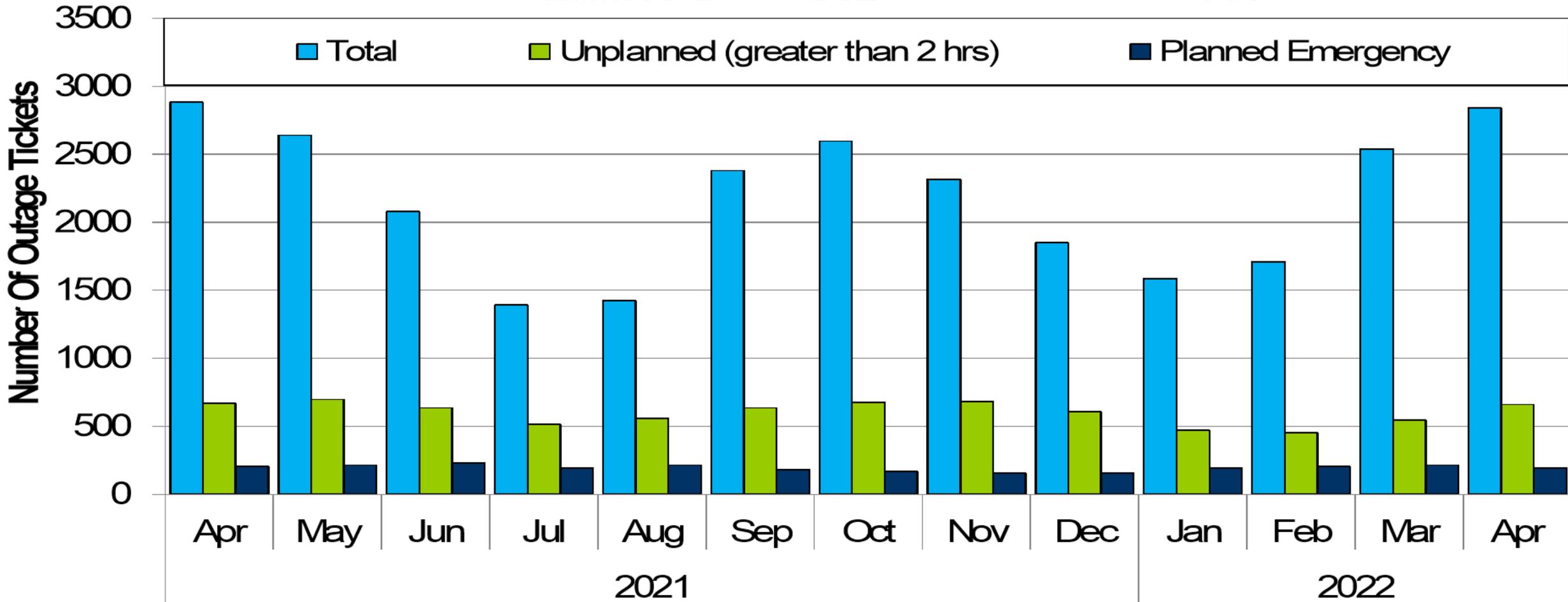
- 2 Shortage Cases Approved
- The approved Shortage Cases occurred on:
  - 04/13/22:
    - 1 Shortage Case for 17:35
    - Unit tripping during evening ramp
    - Wind/Solar was decreasing
  - 04/14/22:
    - 1 Shortage Case for 09:40
    - Unit tripping while load was increasing



The 13-month average forced outage rate is 4.26% or 8,541 MW.

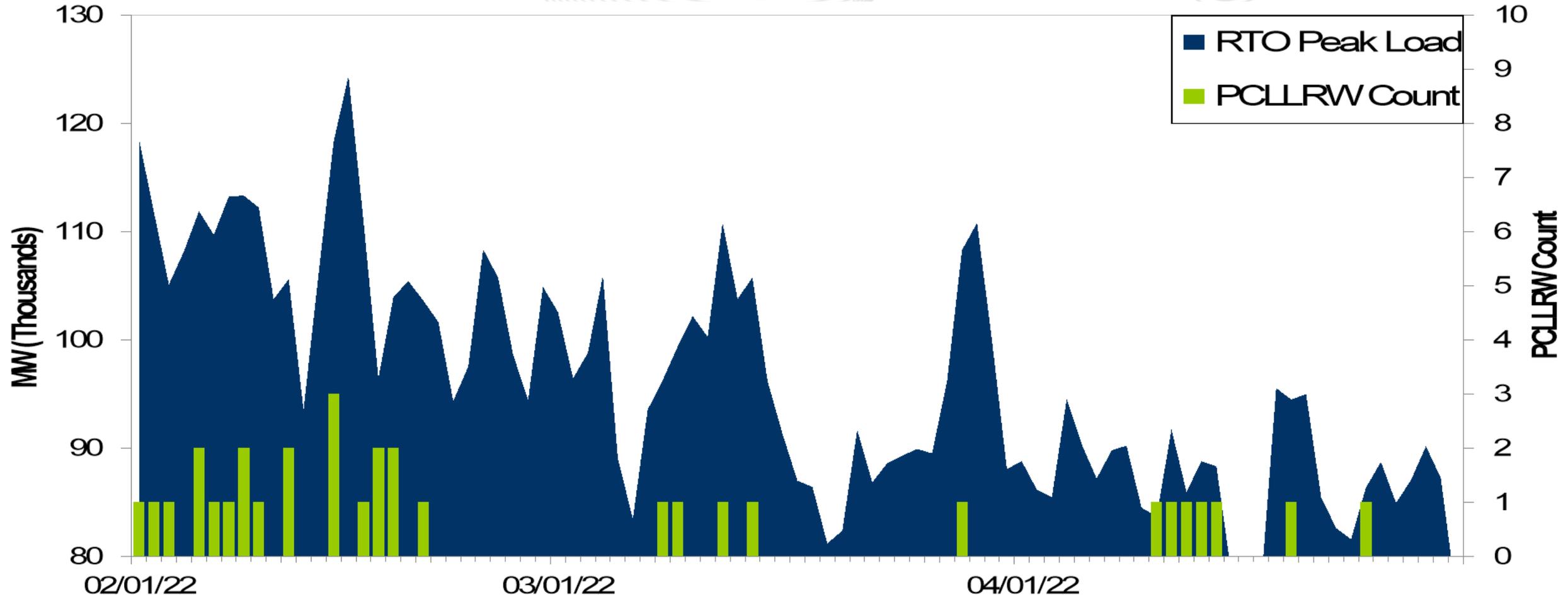
The 13-month average total outage rate is 17.29% or 34,690 MW.

# 2021-2022 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	Tier 1 Estimate (MW)	Tier 1 Response (MW)
1	04/06/22	11:45:42	11:55:25	00:09:43	RTO	413.9	393.0
2	04/13/22	17:25:17	17:53:45	00:28:28	RTO	651.9	390.0
3	04/14/22	09:30:33	09:38:40	00:08:07	RTO	691.7	432.7

Event	Date	Start Time	End Time	Duration	Region	Tier 2 Assigned (MW)	Tier 2 Response (MW)	Tier 2 Penalty (MW)
1	04/06/22	11:45:42	11:55:25	00:09:43	RTO	1183.5	1183.5	0.0
2	04/13/22	17:25:17	17:53:45	00:28:28	RTO	880.6	718.4	162.2
3	04/14/22	09:30:33	09:38:40	00:08:07	RTO	840.8	840.8	0.0

\*Tier 2 Response is equal to Tier 2 Assigned for events with duration less than ten minutes

Presenter:  
Stephanie Schwarz,  
[Stephanie.Schwarz@pjm.com](mailto:Stephanie.Schwarz@pjm.com)

SME:  
Ross Kelly,  
[Ross.Kelly@pjm.com](mailto:Ross.Kelly@pjm.com)

System Operations Report



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

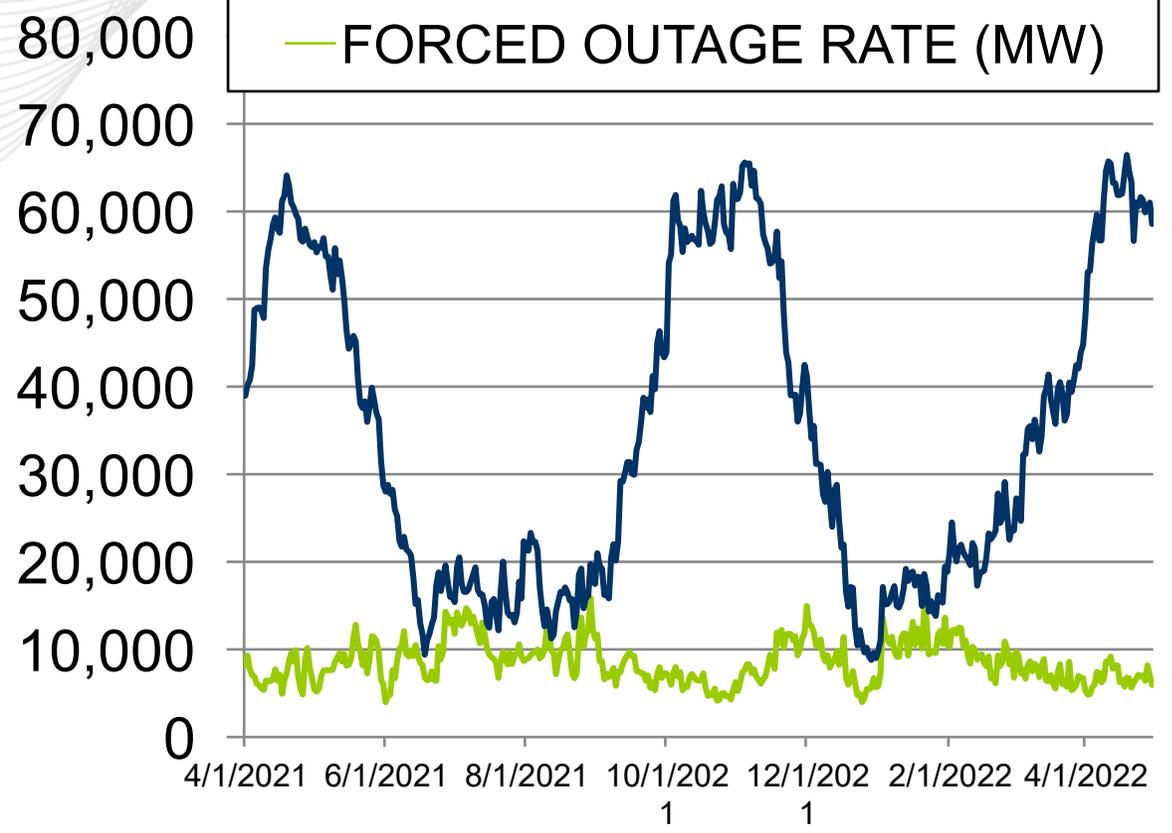
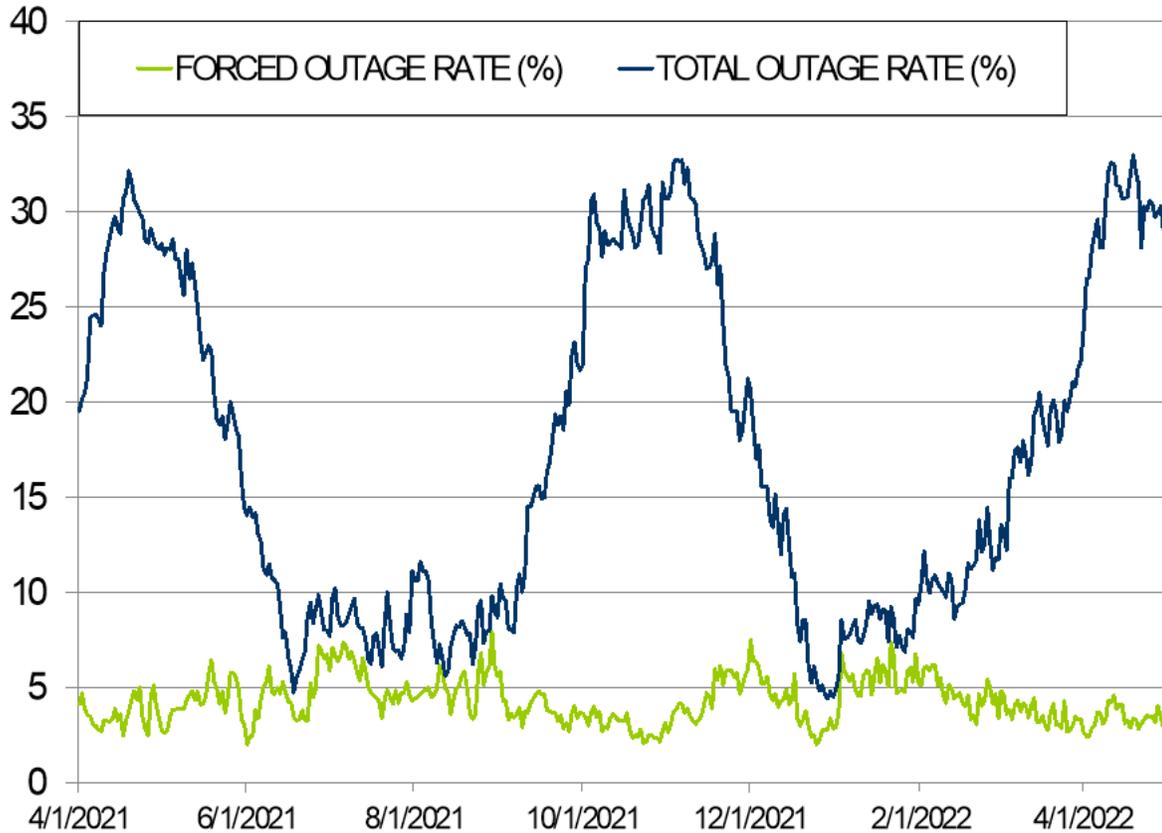
[custsvc@pjm.com](mailto:custsvc@pjm.com)

# 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

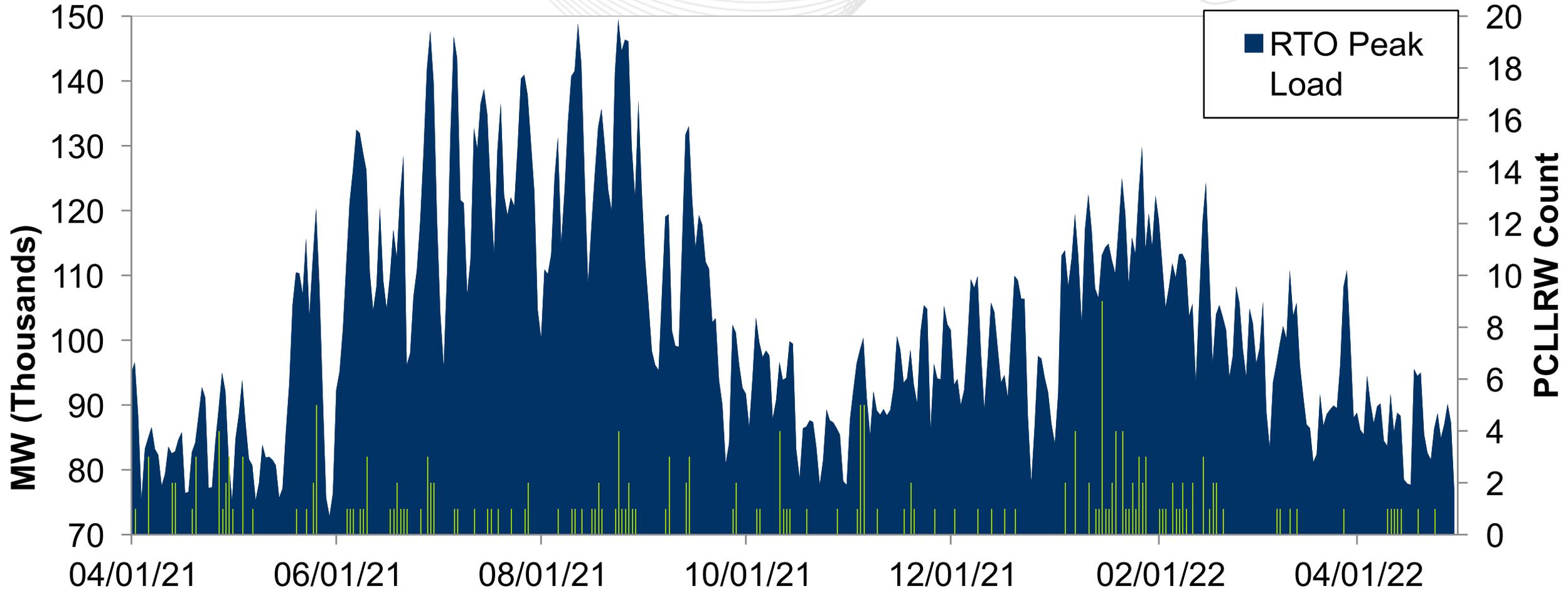


The 13-month average forced outage rate is 4.26% or 8,541 MW.

The 13-month average total outage rate is 17.29% or 34,690 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)

