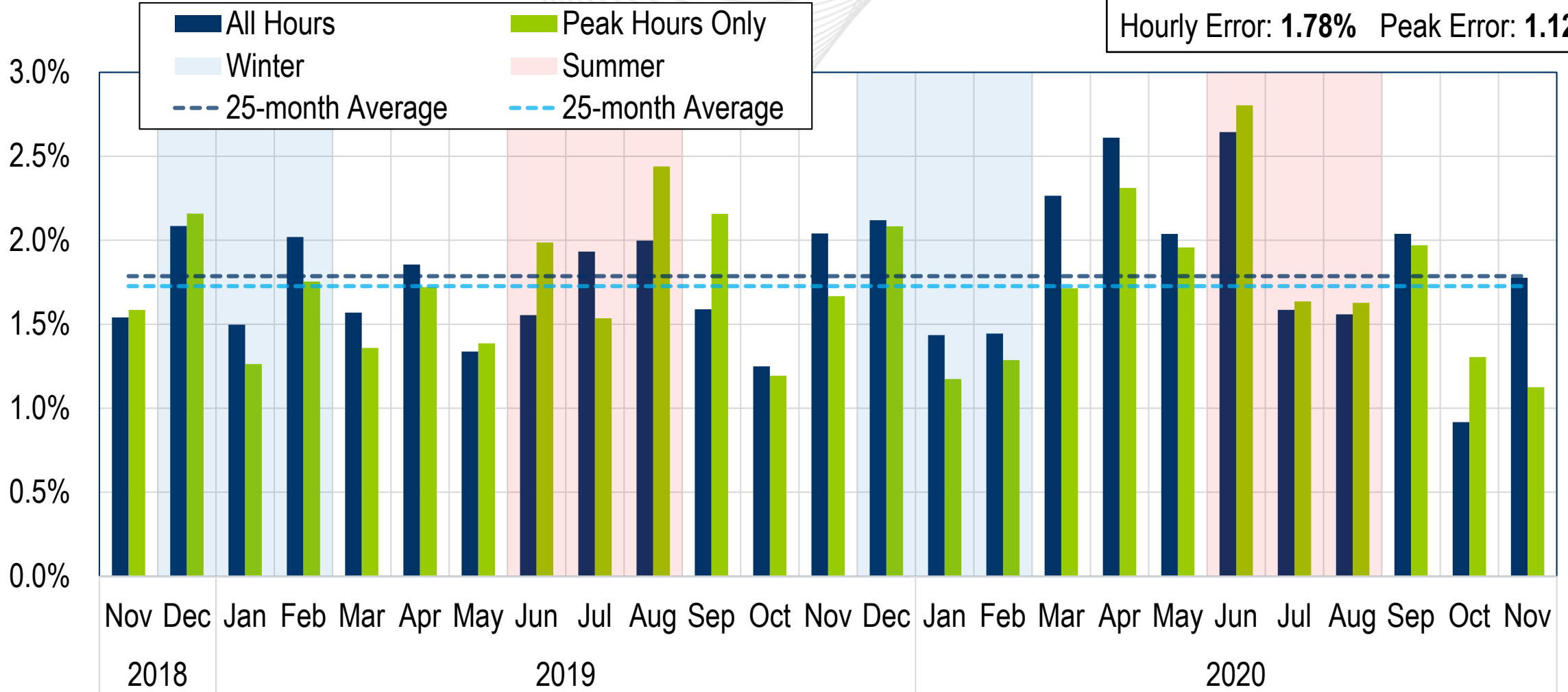




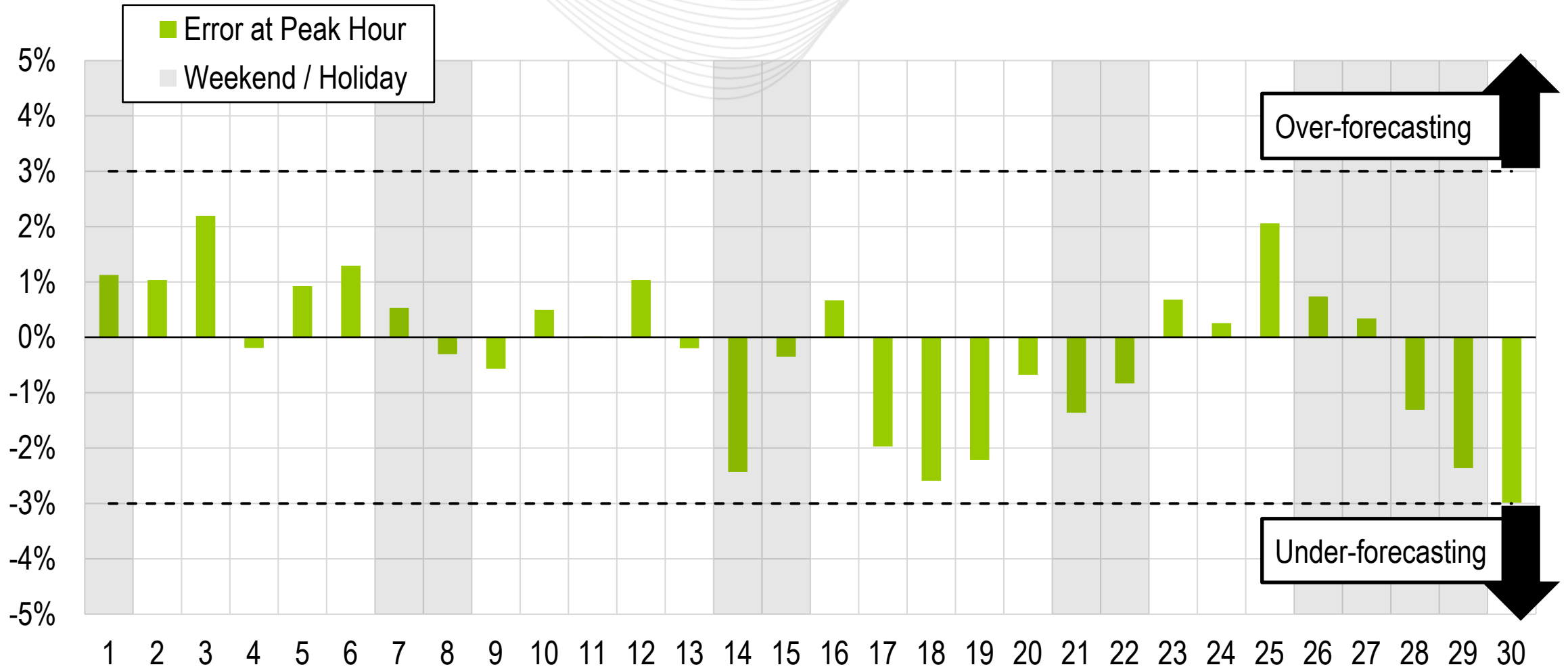
System Operations Report

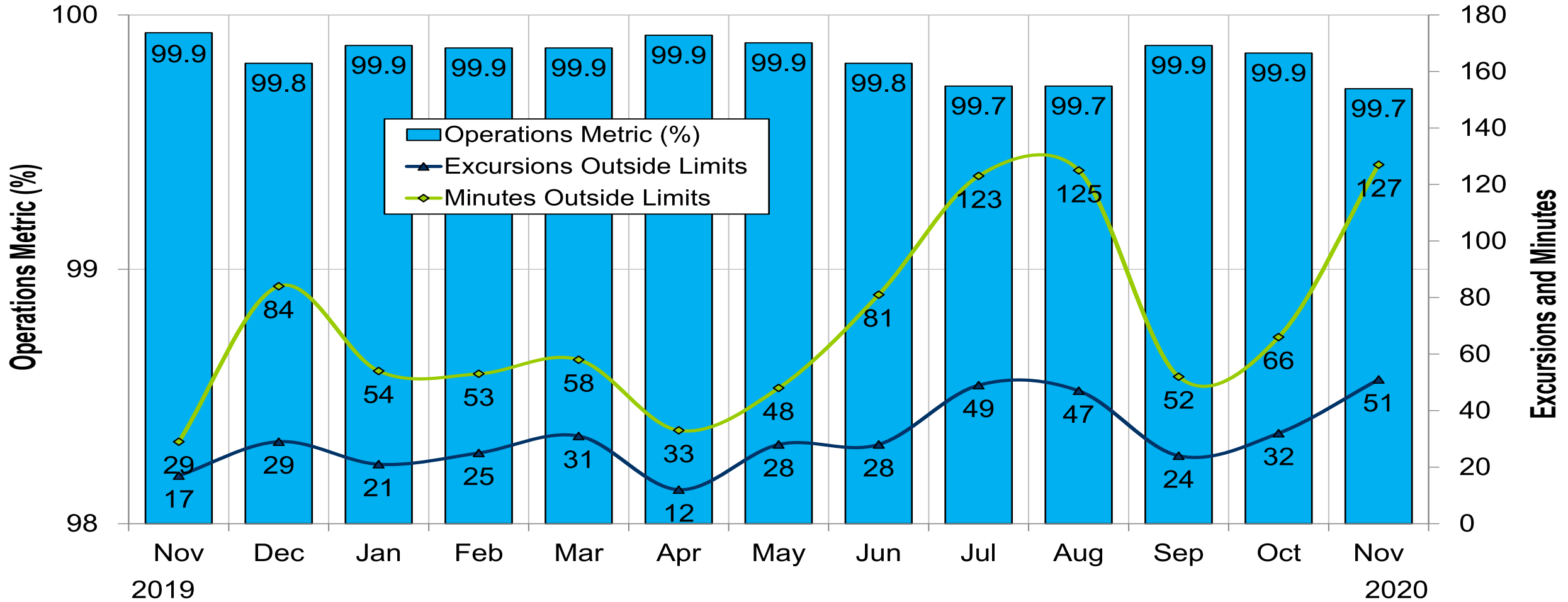
Hong Chen
Senior Lead Engineer, Markets Coordination
MC Webinar
December 14, 2020

November 2020
 Hourly Error: **1.78%** Peak Error: **1.12%**



Daily Peak Forecast Error (November)

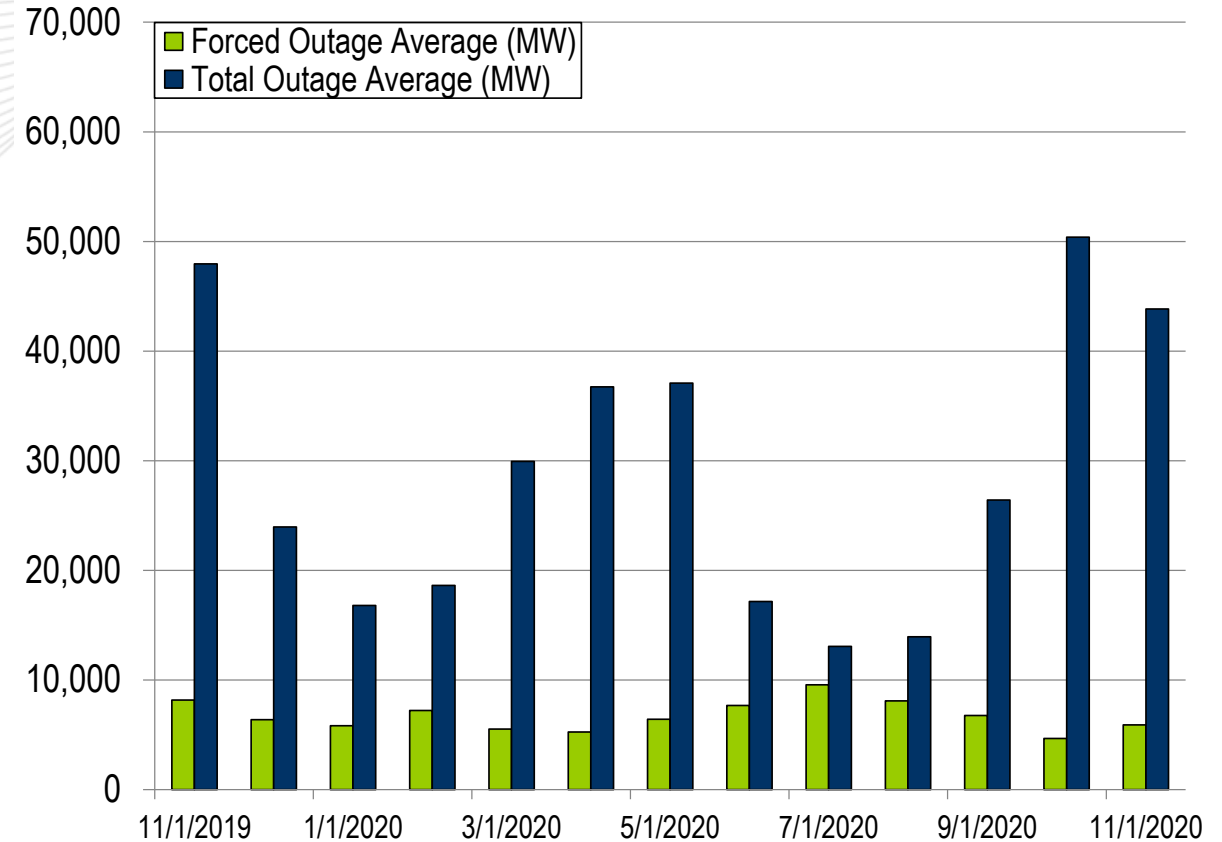
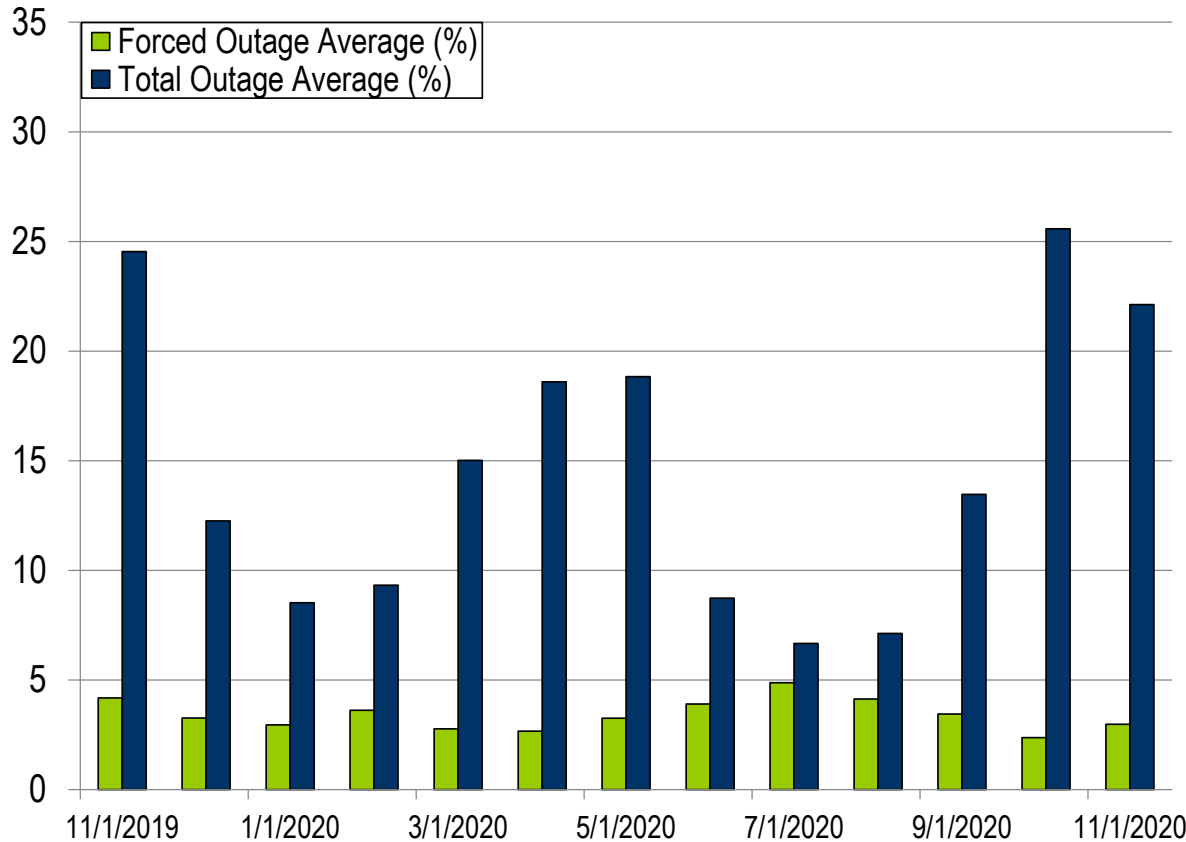




PJM's BAAL performance has exceeded the goal of 99% for each month in 2020.

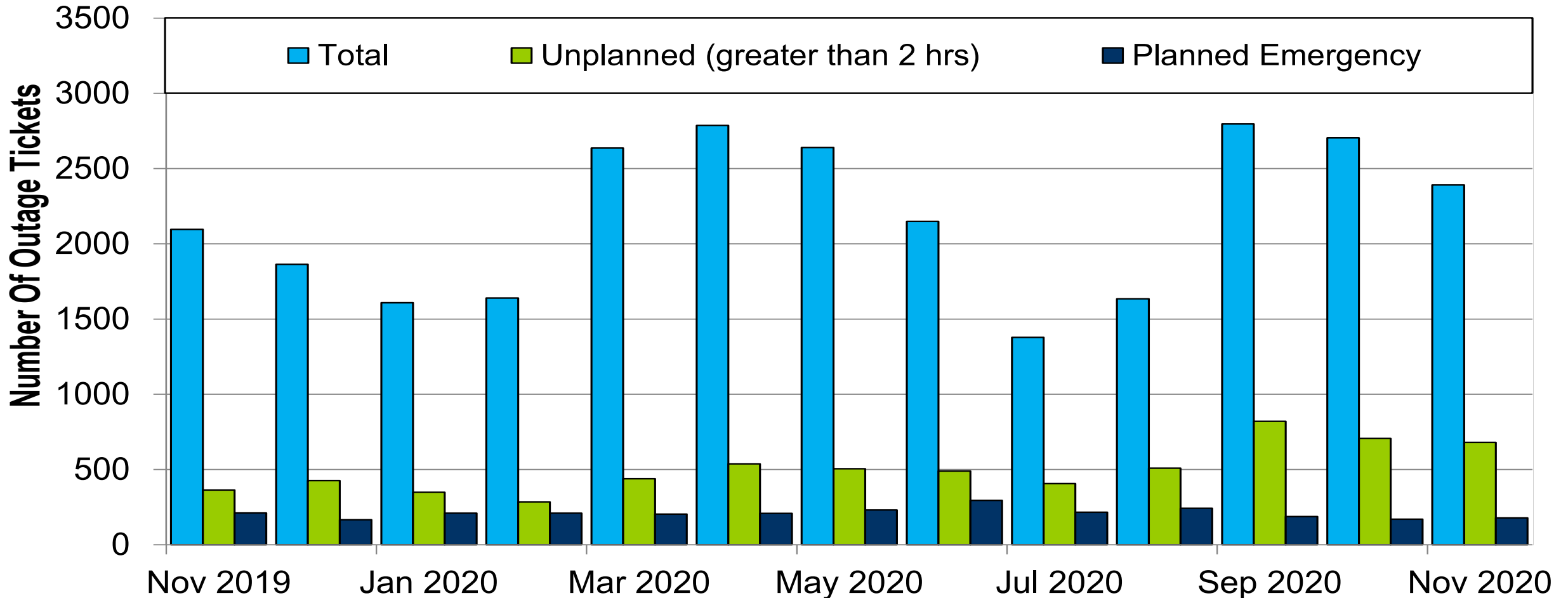
- One spinning event in the month of November
- Two reserve sharing events with the Northeast Power Coordinating Council (NPCC)
- The following Emergency Procedures occurred in November:
 - 10 Post-Contingency Local Load Relief Warnings (PCLLRW)
 - 3 High System Voltages
 - 3 Shortage Cases Approved

RTO Generation Outage Rate - Monthly



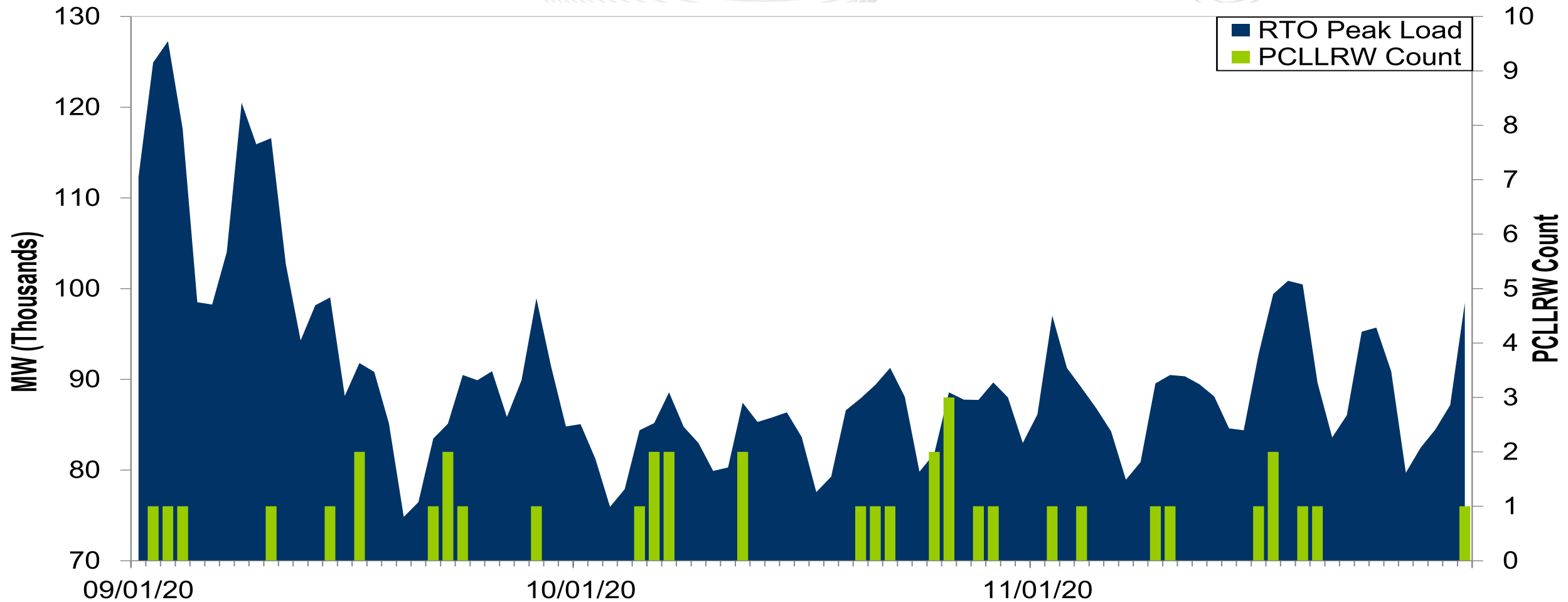
The 13-month average forced outage rate is 3.42% or 6,730MW.
 The 13-month average total outage rate is 14.68% or 28,925 MW.

2019-2020 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	11/13/20	02:46:10	02:52:02	00:05:52	RTO	1687.9	882.4

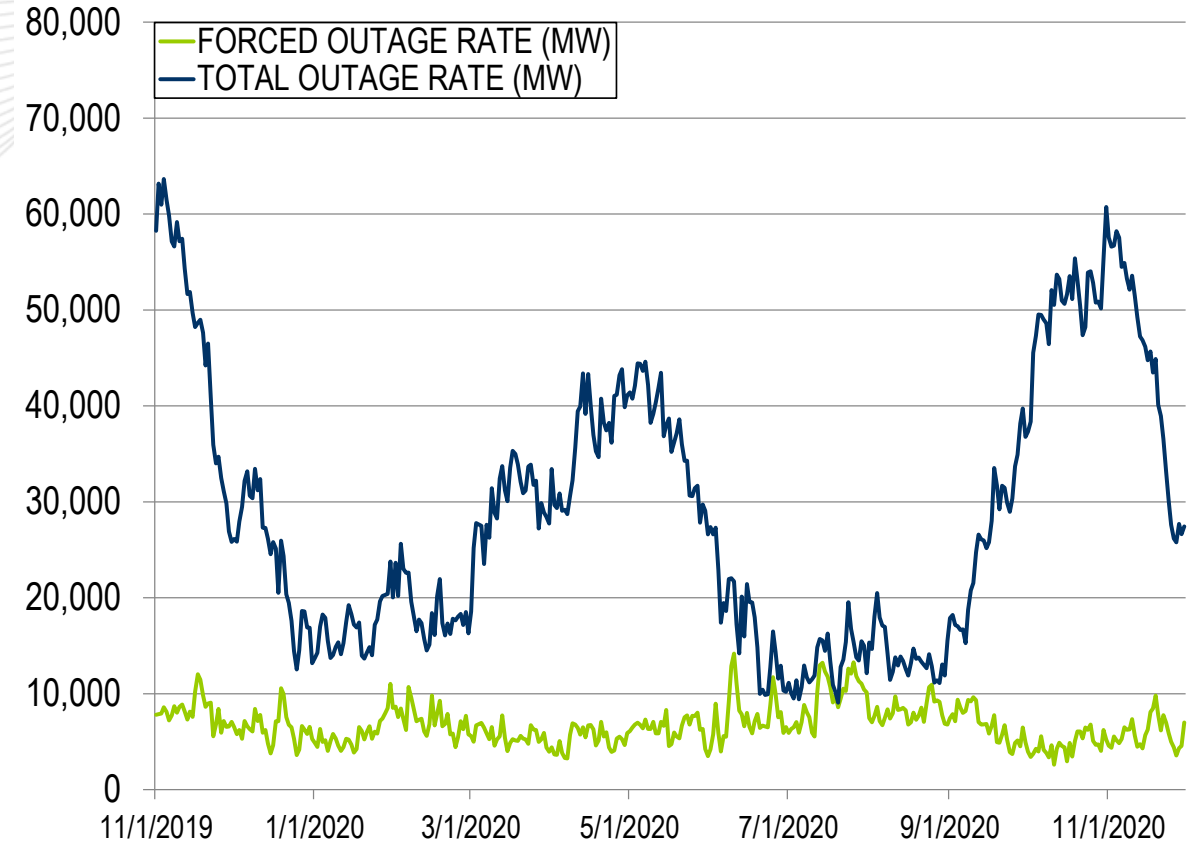
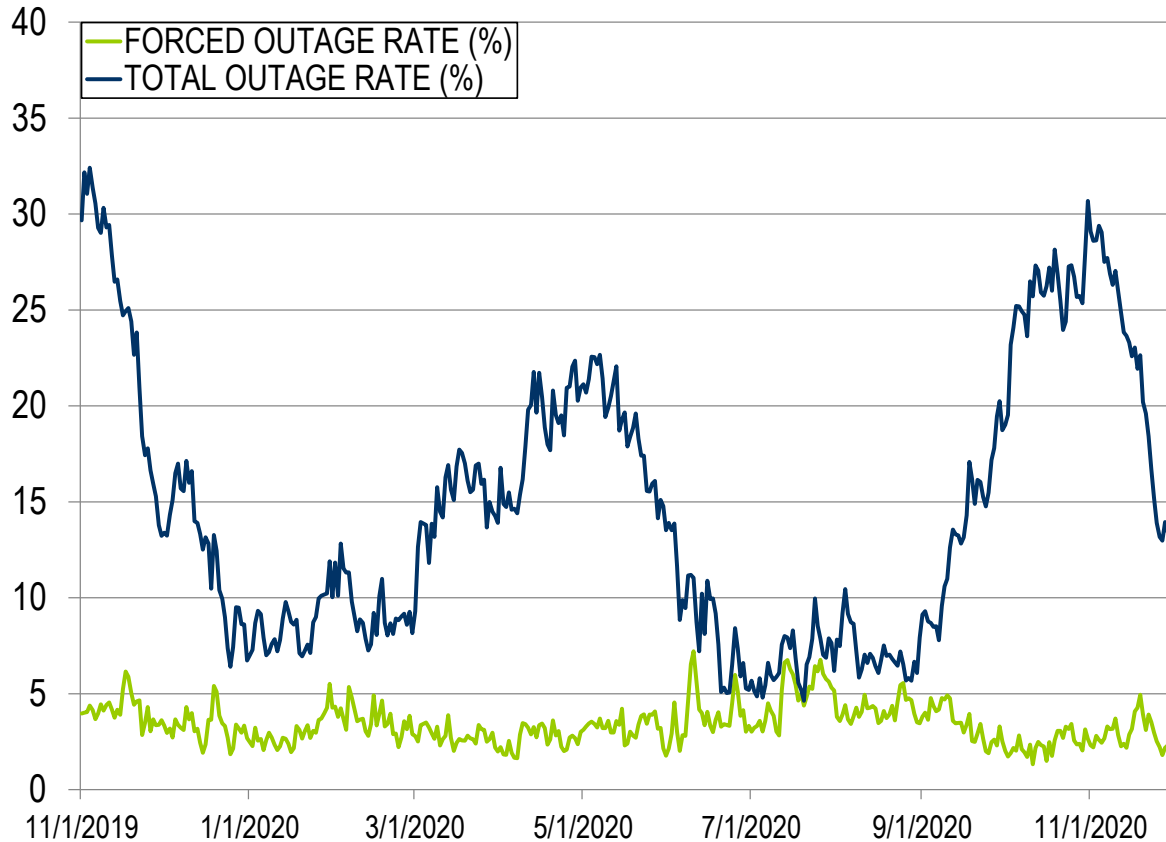
Event	Date	Start Time	End Time	Duration	Region	Tier 2 Assigned (MW)	Tier 2 Response (MW)	Tier 2 Penalty (MW)
1	11/13/20	02:46:10	02:52:02	00:05:52	RTO	603.9	603.9	0.0

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

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 3.42% or 6,730MW.
 The 13-month average total outage rate is 14.68% or 28,925 MW.

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

