



Item 6.2: System Operations Update

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Reliability and Markets Committee Meeting

ERCOT Public
April 17, 2023

Overview

- **Purpose**

- Provide an update on key operational metrics to the R&M Committee
- Provide information on recent Ancillary Services performance
- Provide information on recent hot topics

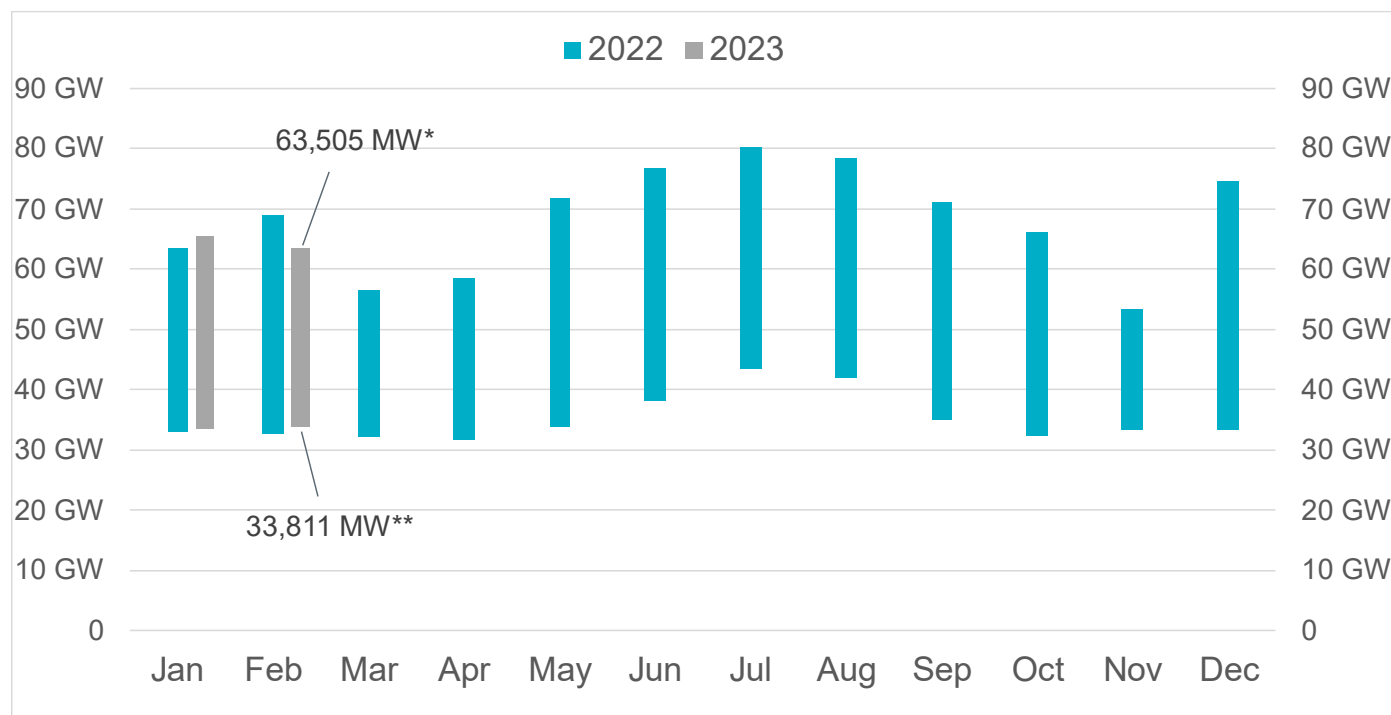
- **Voting Items / Requests**

- No action is requested of the R&M Committee or Board; for discussion only

- **Key Takeaways**

- All key operational metrics are trending well
- All Ancillary Services are performing well
- The new Maximum Daily Resource Planned Outage Capacity (MDRPOC) process has provided sufficient margin to accommodate planned resource outages

Demand



*Based on the maximum net system hourly value from February release of Demand and Energy 2023 report.

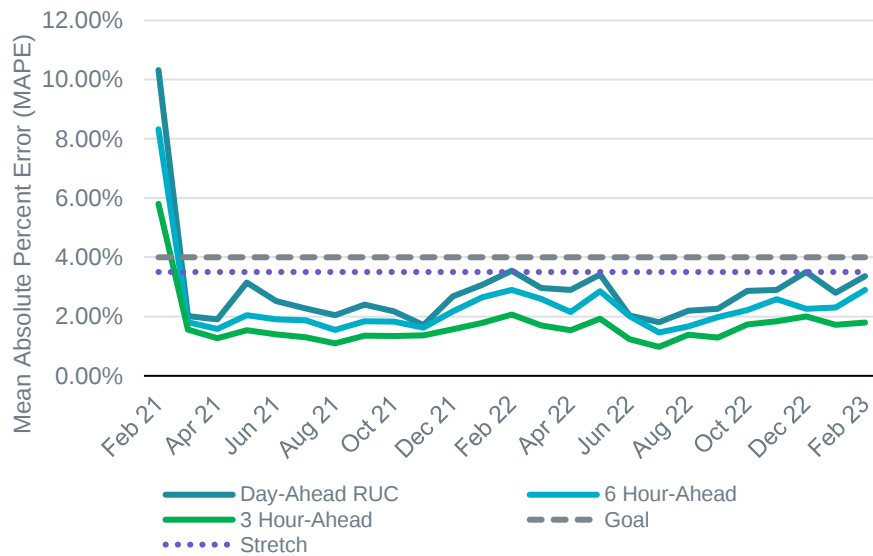
**Based on the minimum net system 15-minute interval value from February release of Demand and Energy 2023 report.

Data for latest two months are based on preliminary settlements.

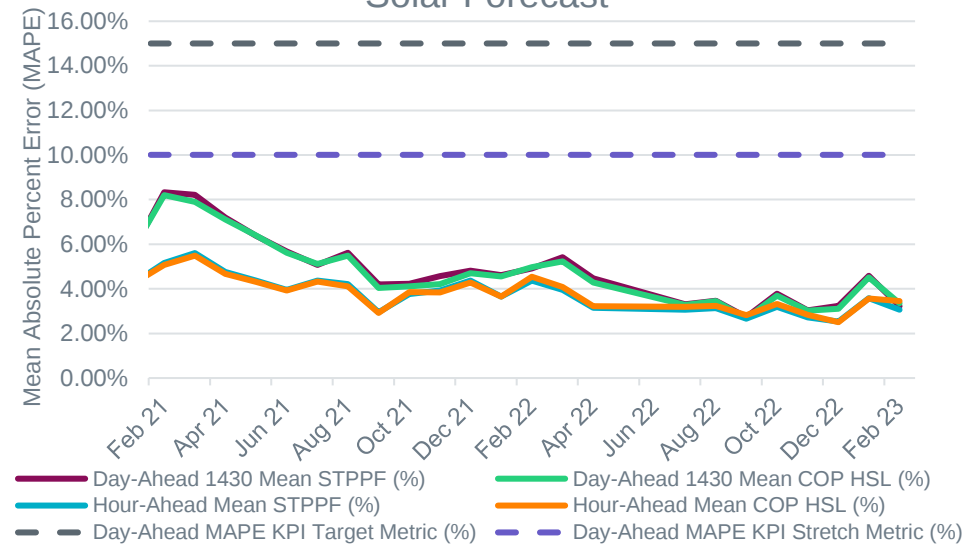
Key Takeaway: ERCOT's maximum peak demand for the month of February was 63,505 MW*; this was 6,307 MW less than the record of 69,812 MW set on 02/14/2021, and 5,462 MW less than the February 2022 demand of 68,968 MW.

Forecast Performance

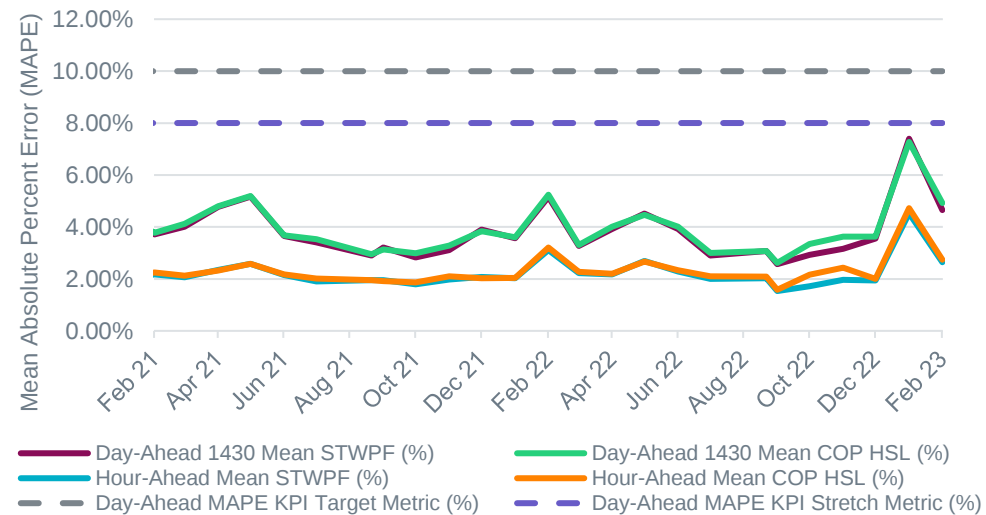
Mid-Term Load Forecast



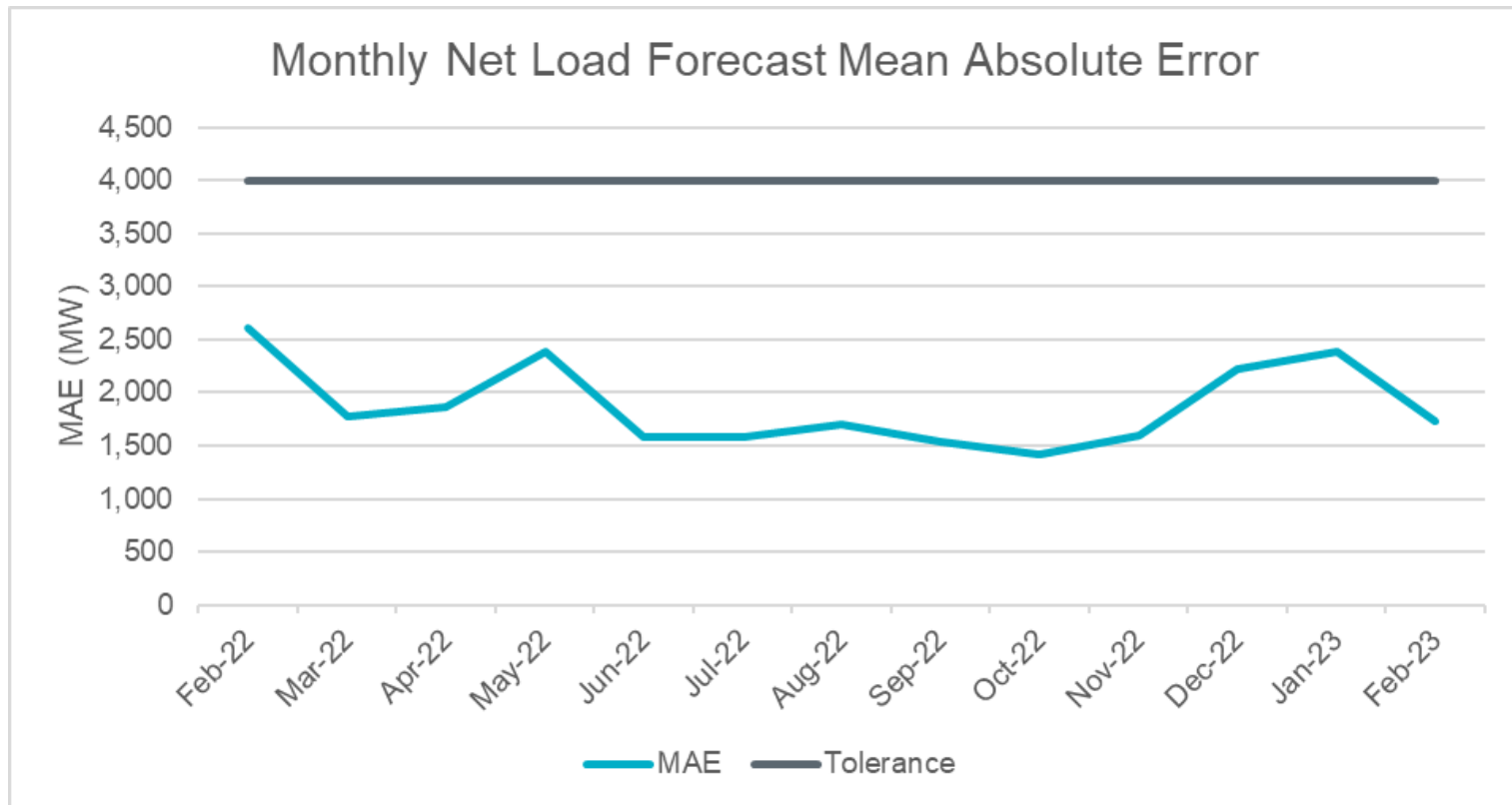
Solar Forecast



Wind Forecast



Forecast Performance

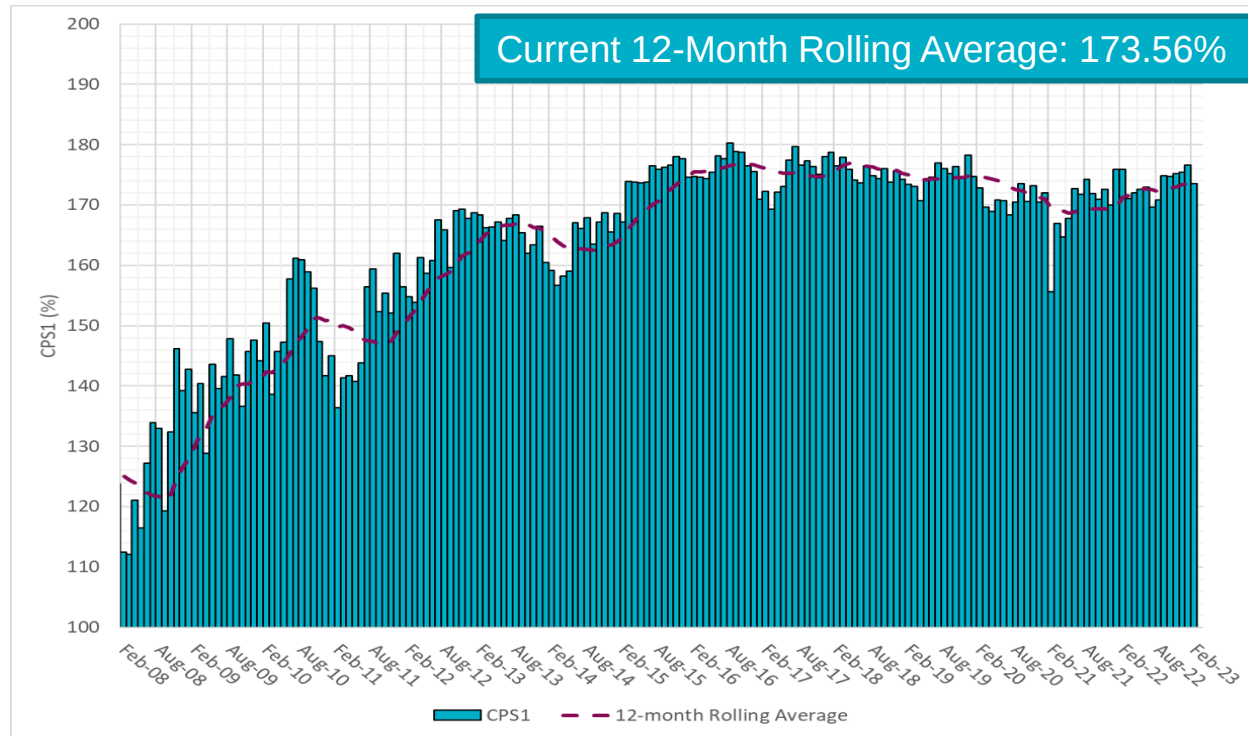


Key Takeaway: Day Ahead Net Load Forecast Mean Absolute Forecast Error has met the tolerance and has been trending well.

Frequency Control

- Control Performance Standard 1 (CPS-1) is a measure of the frequency control on a power system, pursuant to NERC Standard BAL-001. The 12-month rolling-average of this measure is required to stay above 100%.

12 Month Rolling Average CPS1 KPI
Target > 140 % | Stretch > 150%



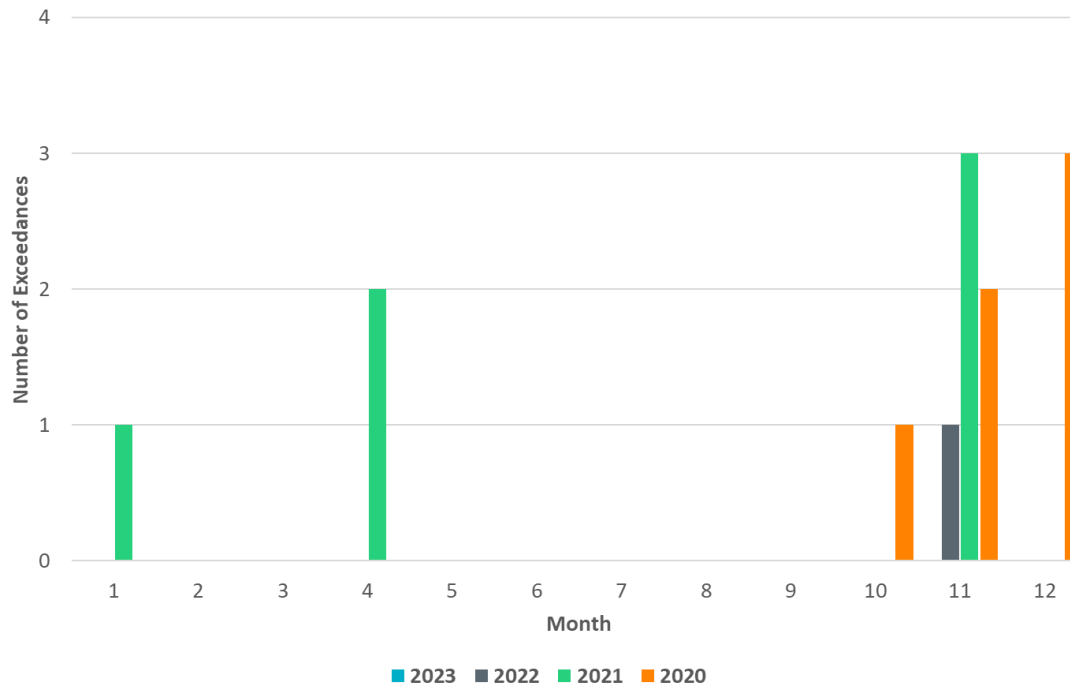
Key Takeaway: Frequency control has been performing extremely well.

Transmission Limit Control

- The most-recent Interconnection Reliability Operating Limit (IROL) exceedance occurred in November 2022.

Monthly IROL Exceedances (Jan 2020 to Feb 2023)

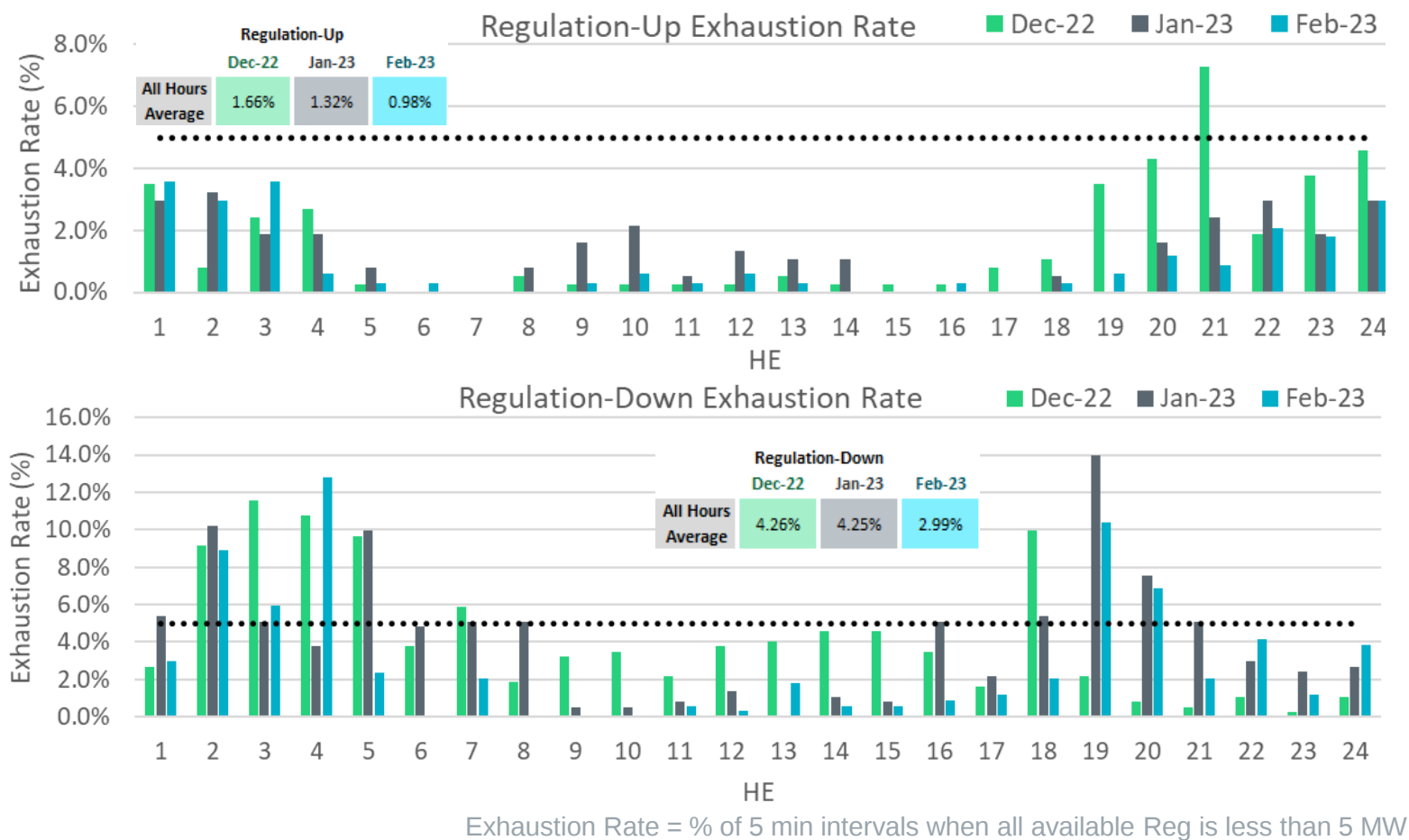
All exceedances had the duration between 10 second and 10 minutes.
There was no exceedance which lasted for more than 10 minutes.



Key Takeaway: ERCOT has not experienced significant reliability risks associated with exceeding IROLs.

Ancillary Services Performance

Regulation Service Deployments between Dec 2022 and Feb 2023

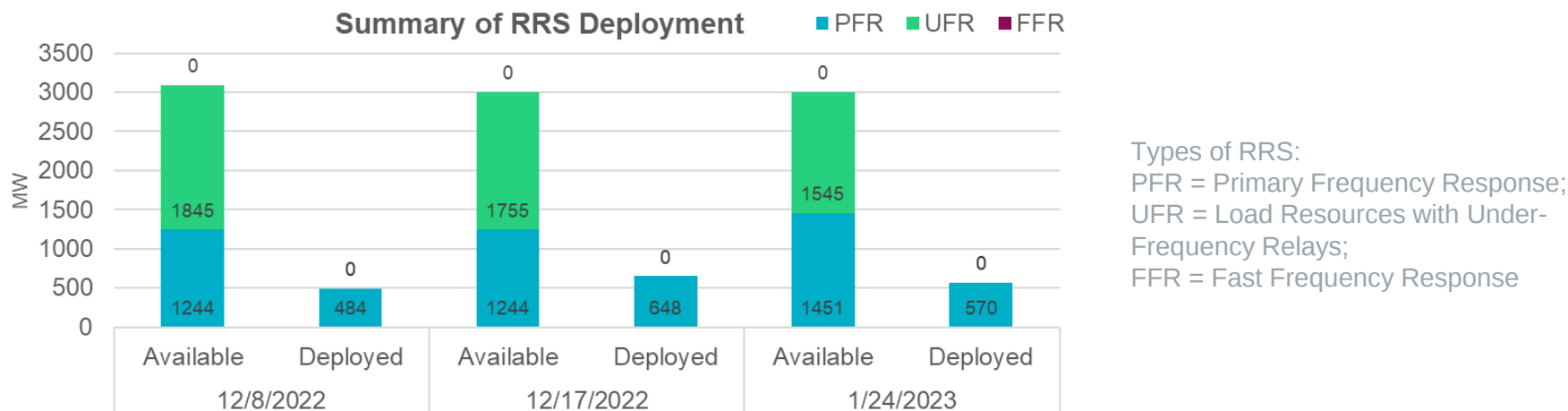


Key Takeaway: Regulation Up and Down exhaustion rates in Dec 2022, Jan 2023, and Feb 2023 were under the target of 5%.

Responsive Reserve Service (RRS) Deployments between Dec 2022 and Feb 2023

- Between Dec 2022 and Feb 2023, there were 3 events that resulted in deployment of RRS. In all cases the ERCOT grid recovered from the event within the targets established by NERC BAL-002 standard.

Date and Time Released to SCED	Date and Time Recalled	Duration of Event	Maximum MWs Released	Reason
12/08/2022 3:39:52	12/08/2022 3:43:24	00:03:32	484 (PFR)	Unit Trip (~595 MW)
12/17/2022 18:54:04	12/17/2022 18:59:00	00:04:56	648 (PFR)	Unit Trip (~552 MW)
01/24/2023 14:27:19	01/24/2023 14:31:42	00:04:23	570 (PFR)	Unit Trip (~713 MW)



Key Takeaway: RRS performed well in all three deployments between Dec 2022 and Feb 2023. No RRS Deployments in Feb 2023.

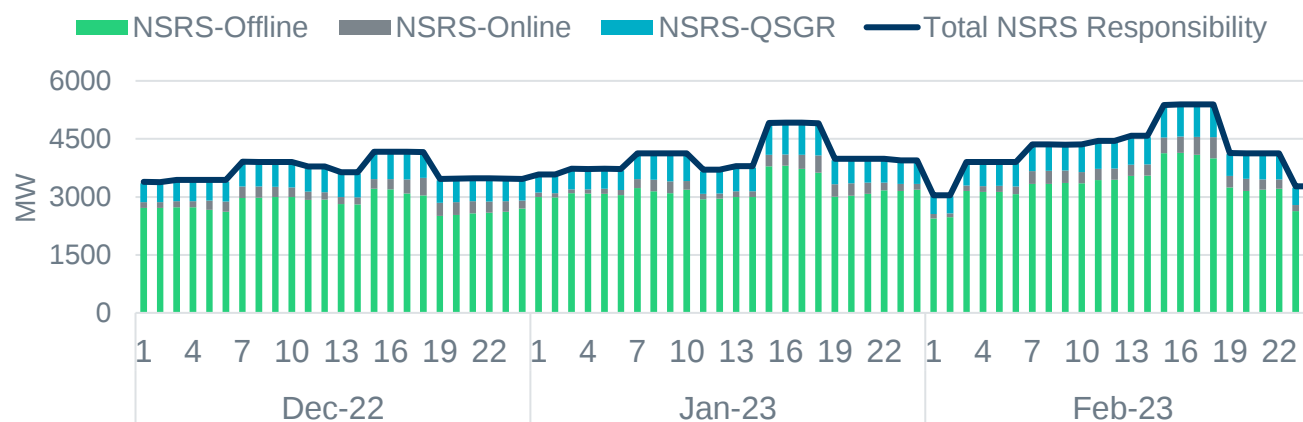
Non-Spinning Reserve Service (Non-Spin) Deployments between Dec 2022 and Feb 2023

Deployment Start Time	Deployment End Time	Deployment Duration	Max Deployment (MW)	Reason
12/13/2022 17:40	12/13/2022 19:30	1:50:00	2965	Available Headroom not sufficient for projected 30-minutes net load ramp
12/14/2022 18:43	12/14/2022 19:01	0:18:00	484.8	
12/16/2022 17:42	12/16/2022 19:17	1:35:00	967	
12/23/2022 6:52	12/23/2022 10:01	3:09:00	3222	
1/3/2023 17:21	1/3/2023 18:30	1:09:00	1135	
1/6/2023 16:53	1/6/2023 18:15	1:22:00	1215	
1/9/2023 17:26	1/9/2023 17:56	0:30:00	514	
1/17/2023 5:46	1/17/2023 7:25	1:39:00	468	
2/8/2023 18:07	2/8/2023 18:40	0:33:00	545	

Between Dec 2022 and Feb 2023, there were 9 events that resulted in deployment of offline Non-Spin.

- Note that, between Dec 2022 and Feb 2023, an average ~21% of Non-Spin was provided using online capacity and by Quick Start Generation Resources. This type of Non-Spin is always available to SCED to dispatch (with an offer floor of \$75) and no operator action is needed to deploy this capacity.

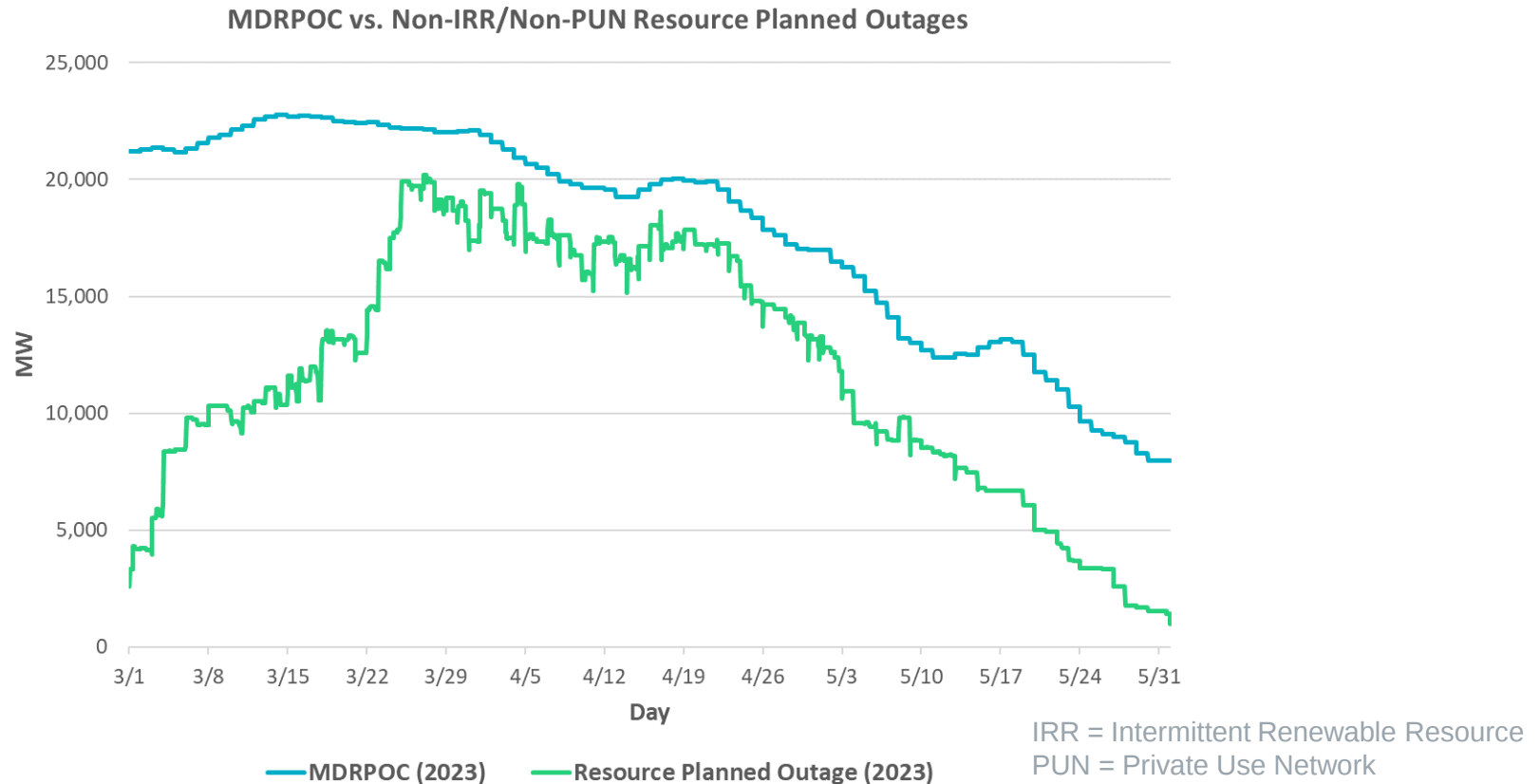
Non-Spin Responsibility



Key Takeaway: All recent Non-Spin deployments have been to meet 30-minute ramping needs. Non-Spin performed well in all deployments.

Maximum Daily Resource Planned Outage Capacity

Maximum Daily Resource Planned Outage Capacity (MDRPOC)



Key Takeaway: MDRPOC has provided sufficient margin to accommodate planned resource outages. Tight capacity days can still occur when actual conditions differ from the assumptions used to derive the MDRPOC.