



Item 5.2: Information Technology Update

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Technology and Security Committee Meeting

ERCOT Public
December 18, 2023

ERCOT Application Release this cycle

Application Release R6 (December)

- SCR822 - Create Daily Energy Storage Integration Report and Dashboard
- Outage Dashboard

Application Release Off-cycle

- SCR807 – Increase CRR Transaction Capability – Go Live 12/08/2023
- SCR816 – CRR Auction Bid Credit Enhancement – Go Live 12/08/2023
- NPRR1153 - ERCOT Fee Schedule Changes - Go Live 12/13/2023
- NOGRR249(a) - 2015-09 NERC FAC Standard Changes Alignment – GridGeo changes - Go Live December 11th week
- SCR824 – Increase File Size and Quantity Limits for RIOO Attachments – Go Live 12/13/2023
- Public API Beta release

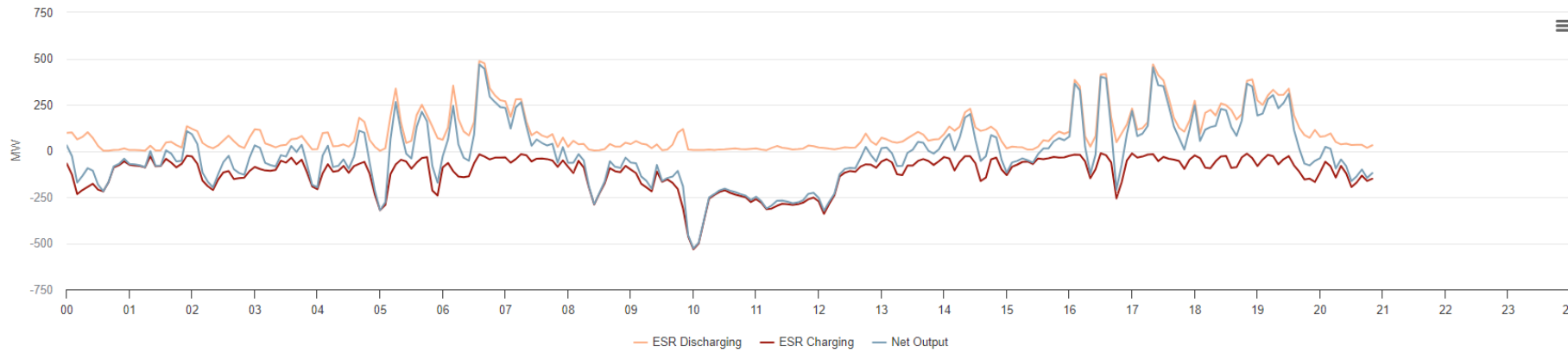
Key Takeaway: Continuing to maintain the tech health and do enhancements to our systems

SCR822 – Energy Storage Resources

Energy Storage Resources

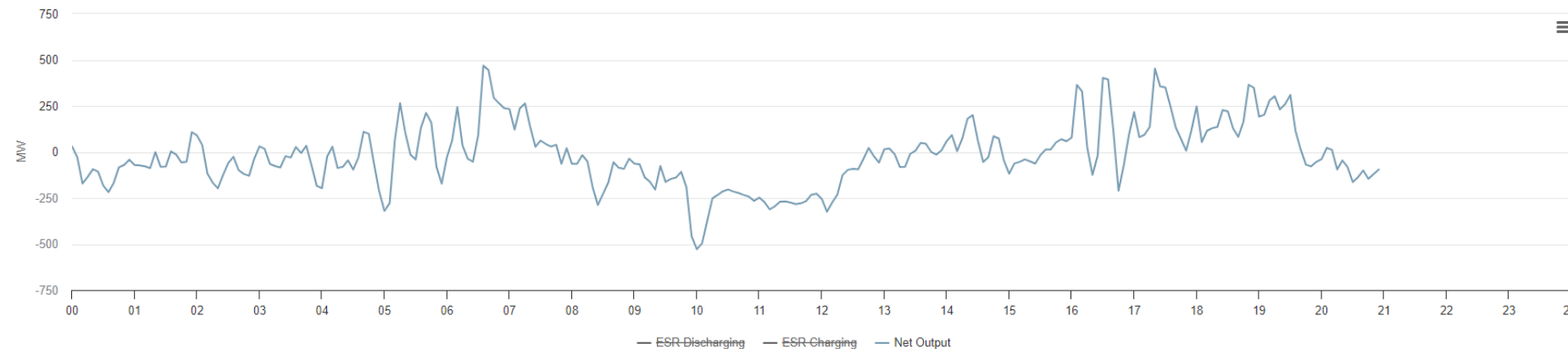
Energy Storage Resources is a graphical representation of energy storage charging and discharging production using real-time data.

Last Updated: Nov 28, 2023 20:51 CT



[Previous Day](#) | [Current Day](#)

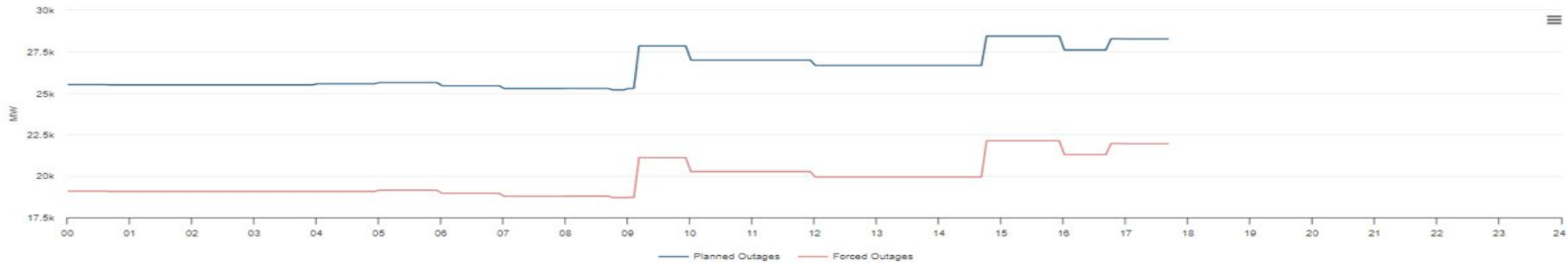
Last Updated: Nov 28, 2023 20:56 CT



This dashboard provides a graphical representation of 5-minute average values for total discharging, total charging, and net output from Energy Storage Resources (ESRs) computed using real-time telemetered data. Total discharging is a positive value and reflects the total MWs that ESRs inject into the grid. Total charging is a negative value and reflects the total MWs that ESRs consume from the grid. Net output is calculated as the sum of total discharging and total charging.

Generation Outage Dashboard

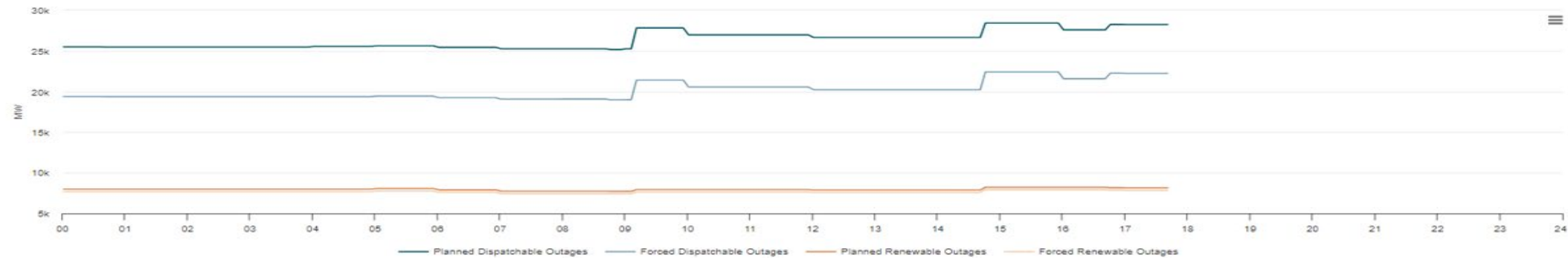
Last Updated: Dec 1, 2023 17:41 CT



CURRENT OUTAGES: 28,251 MW

Previous 6 Days | Current Day

Last Updated: Dec 1, 2023 17:41 CT



CURRENT OUTAGES: 28,251 MW

Previous 6 Days | Current Day

The dashboard provides Planned and Forced Outages MW values in real-time at both the system level and by resource type. The dashboard refreshes every 5 minutes with a 1-minute offset.



ERCOT Application Release Upcoming

Application Release R1 (January)

- NPRR1092 - Reduce RUC Offer Floor and Limit RUC Opt-Out Provision
- 2015-09 NERC FAC Standard Changes Alignment – EMS changes go live

Key Takeaway: Continuing to maintain the tech health and do enhancements to our systems.

EMS Upgrade

- **Completion Ahead of Time & Budget**

- **Ahead of Schedule:** The EMS Upgrade was launched successfully on November 2, 2023, achieving operational status almost a month ahead of the OKR target date of November 30, 2023, and a full eight months before the initially projected date of June 2024.
- **Seamless Transition:** The transition to the upgraded EMS occurred without any disruptions, maintaining all SCED Intervals throughout the cutover process where a disruption of 3 SCED intervals had been anticipated.
- **Efficient Testing:** On October 12, 2023, our closed-loop testing demonstrated robust performance, with the upgraded EMS managing the Grid for five hours. This crucial testing phase ensured a flawless cutover execution on November 2, 2023.

- **Post-Go-Live Achievements**

- **Optimized Infrastructure:** The EMS now operates on RHEL 8 compliant hardware, incorporates compatible third-party software, and is updated with the latest EMS and application software versions, all in alignment with our technology roadmap.
- **Enhanced Cybersecurity:** The EMS has been deployed with an enhanced security configuration, markedly boosting the cybersecurity of our most critical systems.

Key Takeaway: EMS upgrade project successfully delivered ahead of schedule and under budget

Oct 22nd Integer Overflow Issue

- **Problem**

- On Sunday 10/22/2023 starting around 6:30 am, ERCOT experienced Market submission failures that were reported by Market Participants. This affected submissions to both the Real-Time Market (RTM) as well as the Day-Ahead Market (DAM).

- **Impacts**

- Real Time Market impacted on 10/22 between 12:15 pm to 1:09 pm.
- Real Time Market Price correction required for impacted intervals.
- DAM closing timelines were extended with results published by 5:35 pm.
- Rejected some PTPs and Energy Only Offers/Bids Submissions due to incorrect credit calculations.

- **Root Cause** – Overflow of 32-bit integer counter submissions identifier

- **Fix** – Restart the sequence from 1

- **Improvement opportunities** – Improved communications to the market

Key Takeaway: Continue to focus on improving market applications health monitoring and improved communication to Market.