



## **Item 10.3: Commercial Markets Update**

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Reliability and Markets Committee Meeting

ERCOT Public

December 18-19, 2023

# Overview

- **Purpose**

- Update the Committee on Aggregate Distributed Energy Resource (ADER) Pilot
- Present trends in market outcomes covering RUC, congestion and ancillary services.

- **Voting Items / Requests**

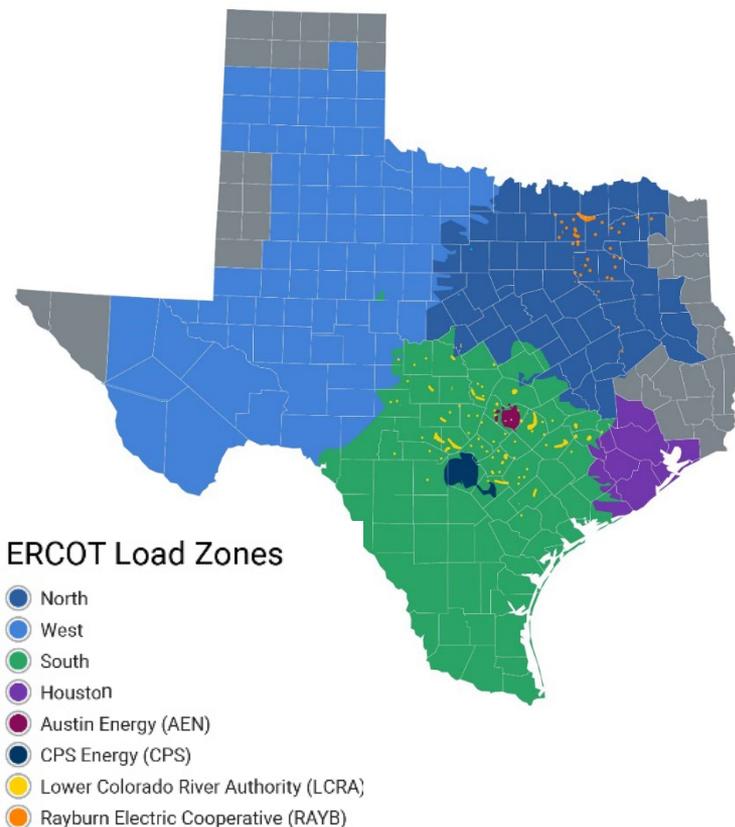
No action is requested of the Reliability and Markets (R&M) Committee or Board; for discussion only. The price correction is a separate agenda item.

- **Key Takeaways**

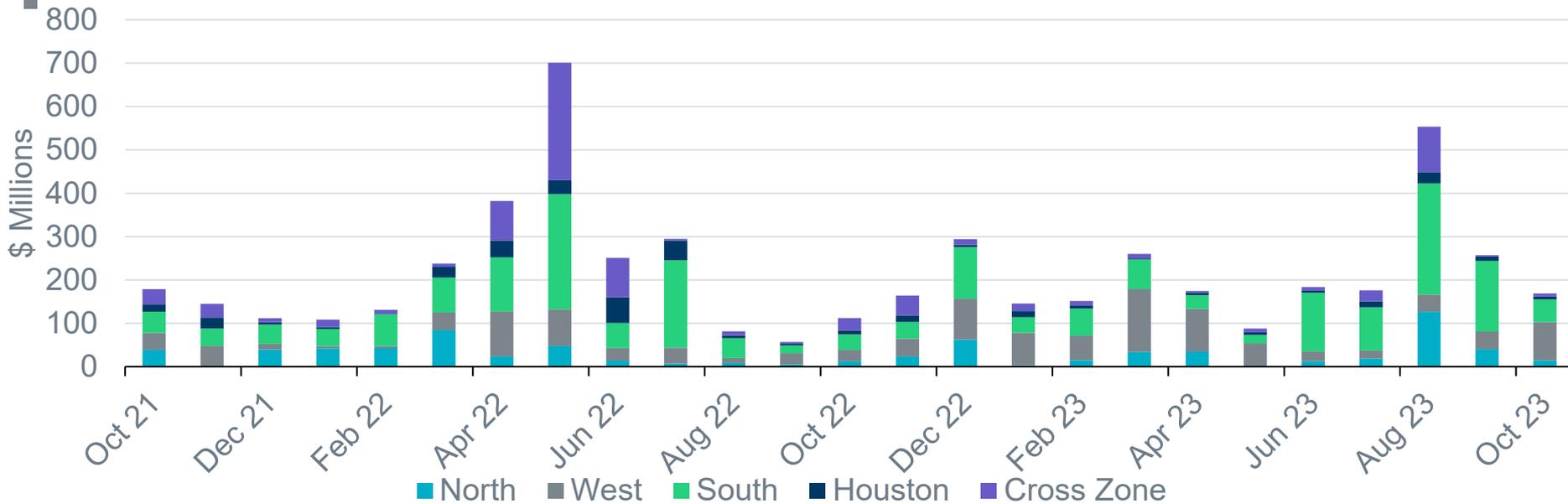
- Currently nine ADERs are fully qualified. Two ADERs are fully participating in Non-spin Reserve Service (NSRS).
- Congestion and ancillary service costs declined in October.
- RUC commitments for capacity remained low for the month of October.
- ERCOT staff is bringing a price correction for approval.

# Aggregate Distribution Energy Resources (ADERs)

- ADERs are a virtual aggregation of small consumer-owned energy devices.
- In June 2022, the PUCT directed ERCOT to begin developing a pilot project to test how ADERs will participate in ERCOT's wholesale market.
- ERCOT has accepted aggregation forms from 9 ADERs:
  - ERCOT-Wide Energy: **9.4 MW**
  - ERCOT-Wide Non-Spin: **3.1 MW**
- ADER capacity continues to rise both in terms of energy and qualified to provide non-spin reserve service
- As of 09/11/2023, they have carried non-spinning reserve service responsibility.
- Other ADERs have applied but are in various stages of registration/qualification and cannot fully participate yet.
- The task force has begun discussion around next steps for ADERs. Potential changes include opening the pilot to ADER participation in additional Ancillary Service products and improving validation and performance metrics.



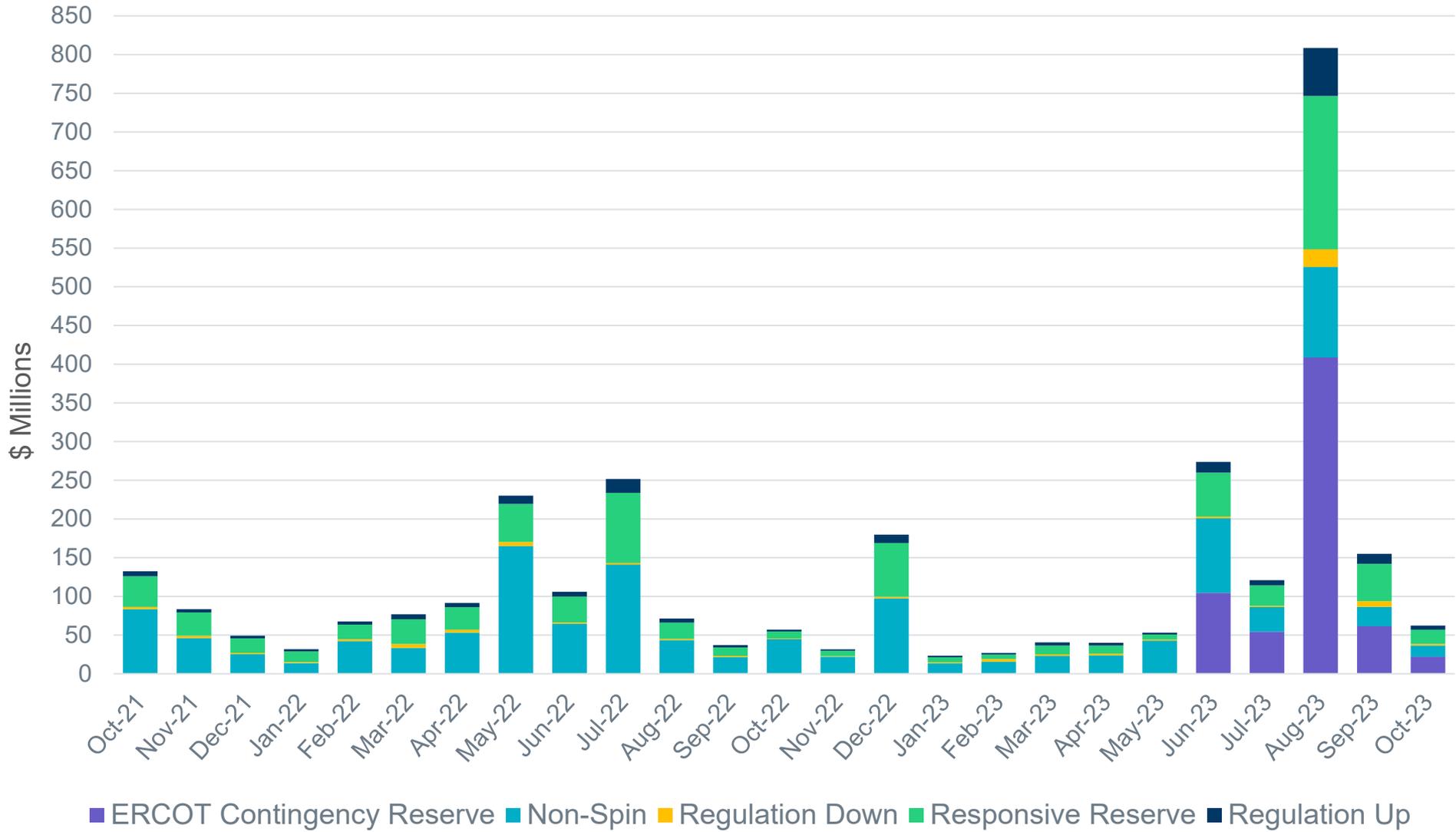
# Real-Time Congestion Rent by Zone



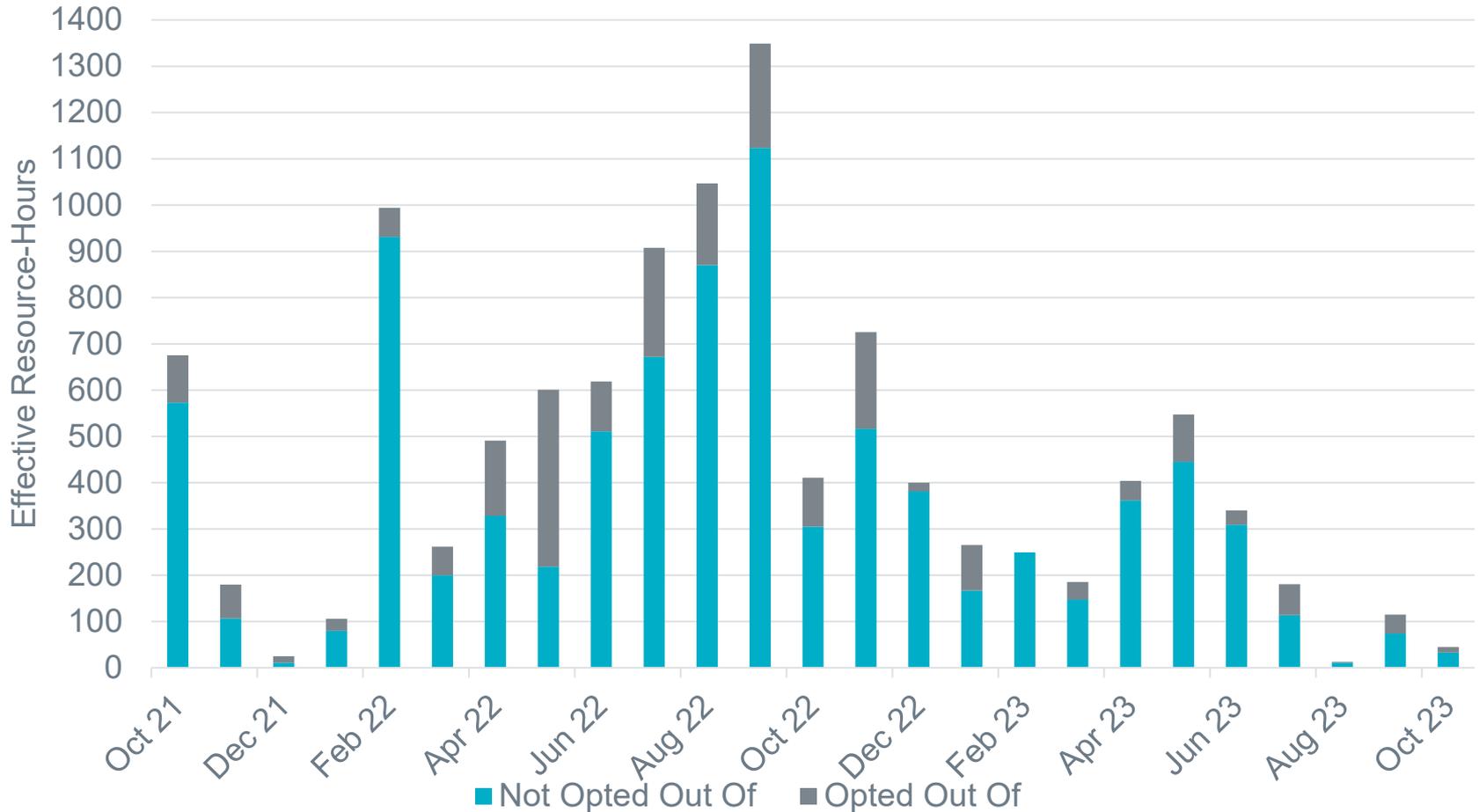
- Overall congestion rent was lower in October, as compared to September, with the largest month-to-month changes being in the West and South Zones.
- The two zones with the highest congestion rent were the West and South Zones.
  - Congestion rent in the West Zone was primarily driven by the loss of the 345 kV contingency from Morgan Creek to Champion Creek and Bitter Creek to Morgan Creek overloading the 345 kV transmission line from Morgan Creek to Tonkawa Switch.
  - Congestion rent in the South Zone was primarily driven by the loss of the Arroz to El Campo 138 kV manual contingency overloading the 138 kV transmission line from Blessing to Pavlov.
- Congestion Rent is determined using the shadow prices and MW flows for individual constraints in SCED as well as the length in time of SCED intervals.
- The “Cross Zone” category consists of cases in which the substations on either end of the constraint are in different zones.



# Ancillary Services for October 2023 totaled \$62.23M



# Seven Resources were Committed in October for Capacity and Congestion



“Effective Resource-Hours” excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.



# Details for Price Corrections Review

## Operating Days Meeting Significance Criteria

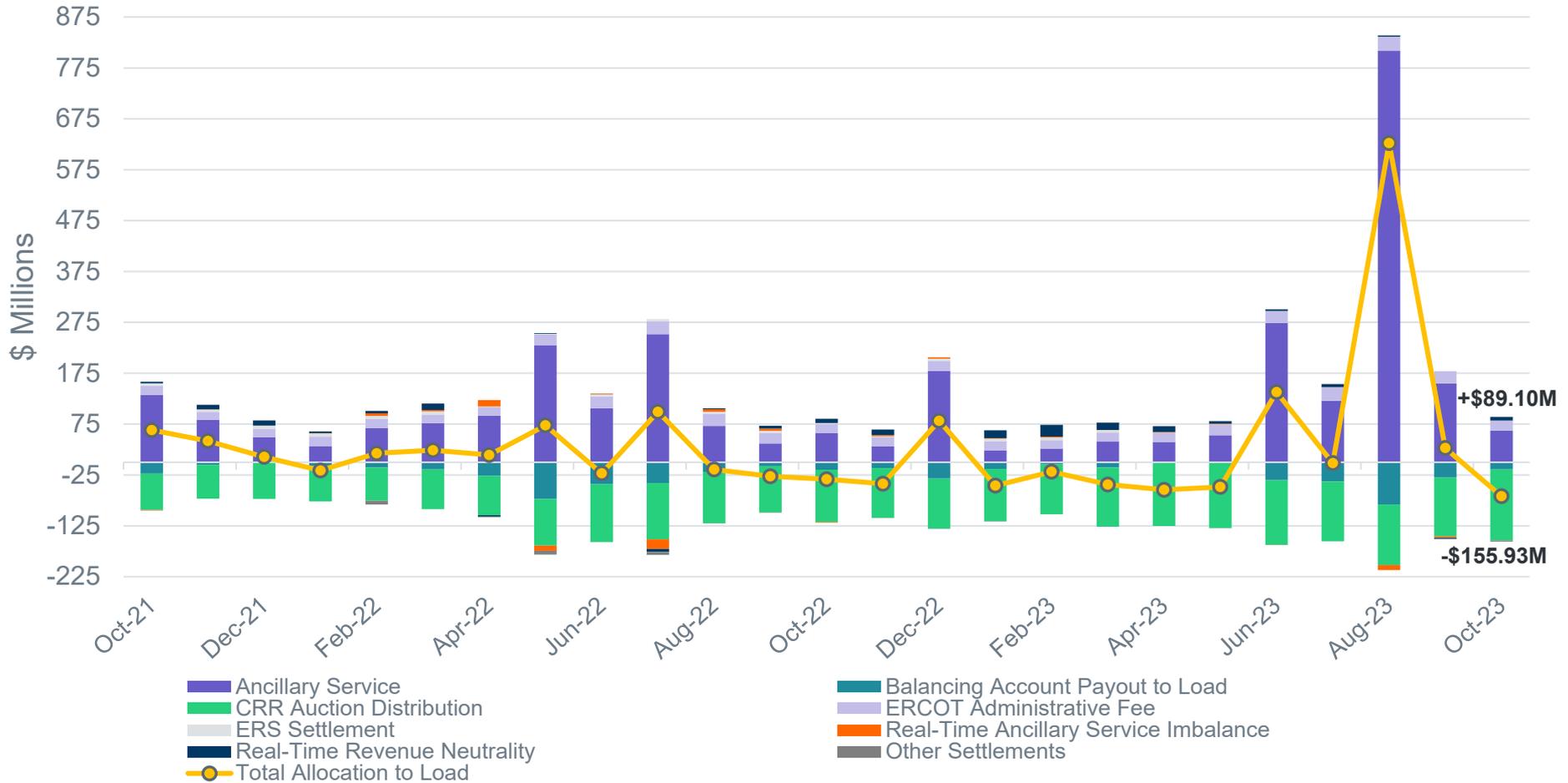
- On October 22, 2023, Emergency Basepoints were activated during a planned upgrade to the EMS system. The resulting impact analysis showed that this day had met criteria for price correction, with an estimated total dollar impact of \$607.37.
- On October 22, 2023, a technical issue impacted the ability of SCED to read in energy offer curves. This resulted in significantly high prices that were unable to be corrected before the prices became final. Files that contain the Real-Time Market price correction data for Operating Day October 22, 2023, have been posted on the ERCOT website; ERCOT will present these to the Technical Advisory Committee (TAC) and to the ERCOT Board of Directors (Board) for their review.

# Appendix

## Seven Resources were Committed in October for Capacity and Congestion

Resource #	Effective Resource-hours	Non-Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	6.0	0.0	6.0
2	6.0	0.0	6.0
3	12.0	12.0	0.0
4	3.0	3.0	0.0
5	7.0	7.0	0.0
6	6.0	6.0	0.0
7	4.9	4.9	0.0
<b>Total</b>	<b>44.9</b>	<b>32.9</b>	<b>12.0</b>

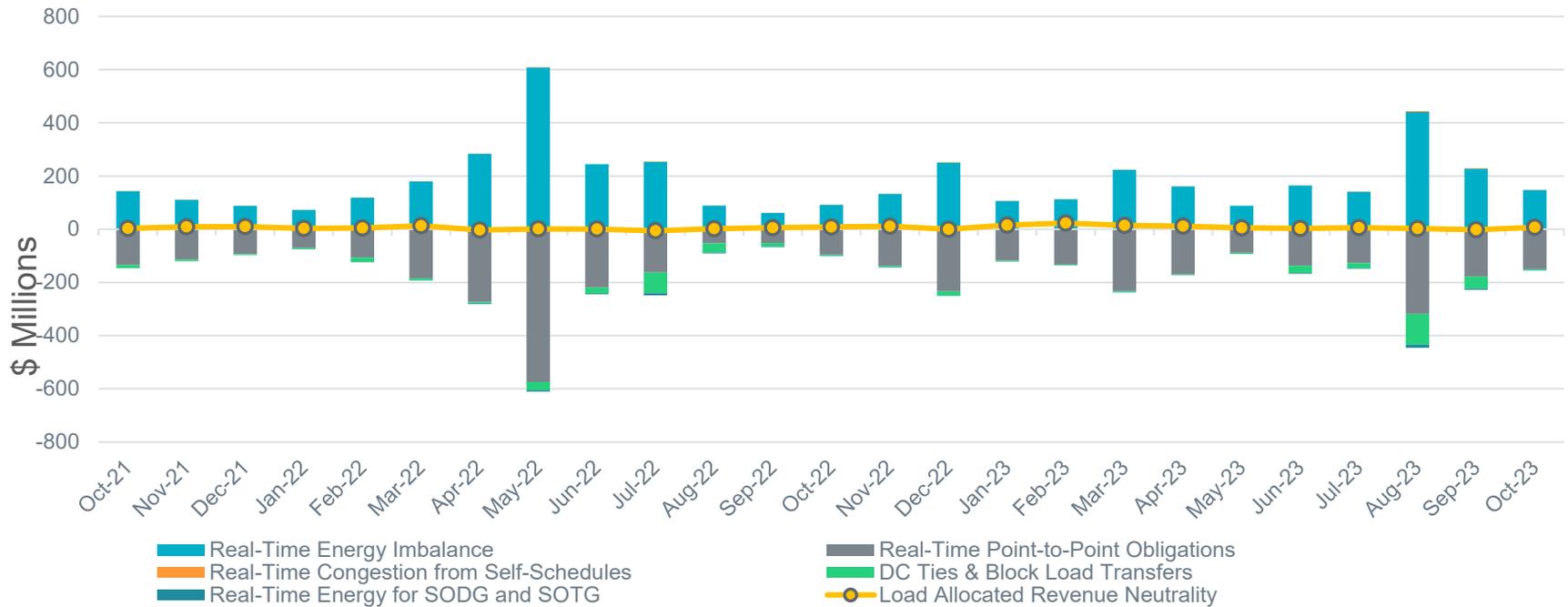
# Net Allocation to Load in October 2023 was (\$66.84) Million



This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee](#)



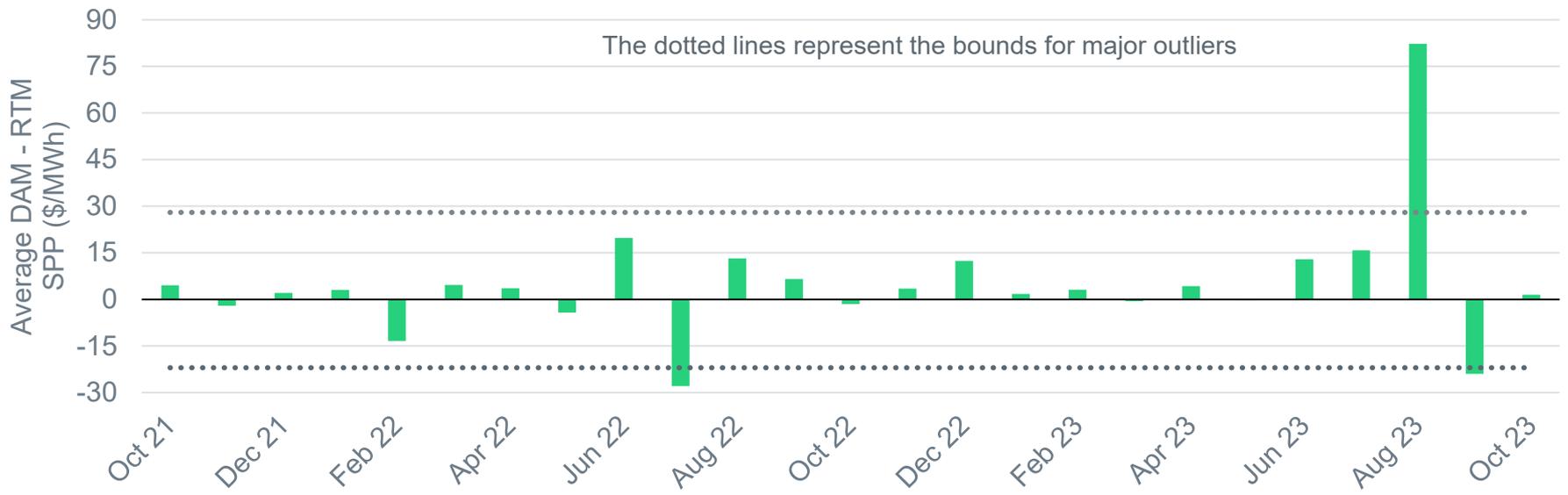
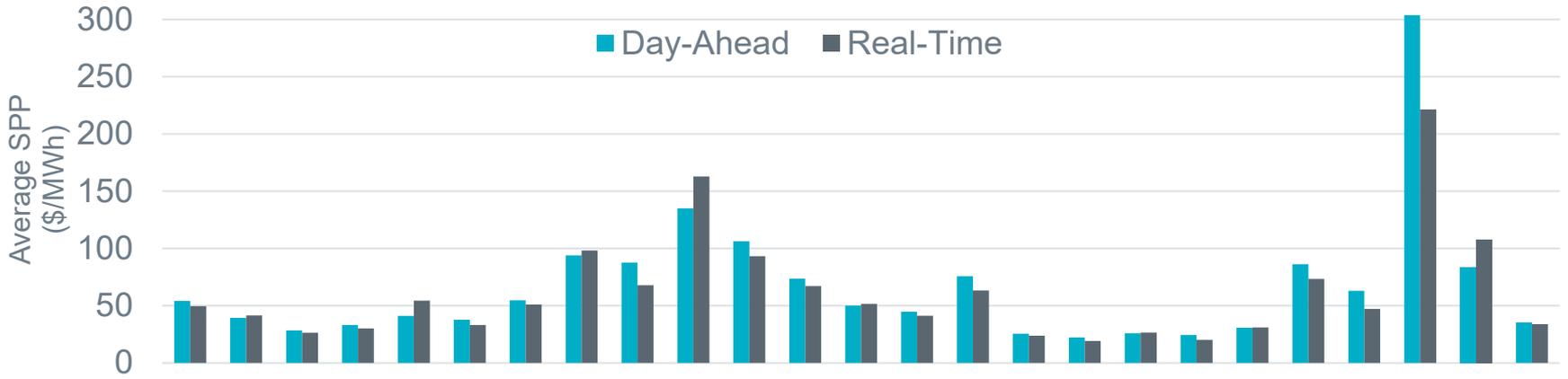
# Real-Time Revenue Neutrality Allocated to Load was \$7.00M for October 2023



	October 2023 (\$M)
Real-Time Energy Imbalance	\$147.71
Real-Time Point-to-Point Obligation	(\$149.28)
Real-Time Congestion from Self-Schedules	\$0.23
DC Tie & Block Load Transfer	(\$4.70)
Real-Time Energy for SODG and SOTG	(\$0.95)
<b>Load Allocated Revenue Neutrality</b>	<b>\$7.00</b>

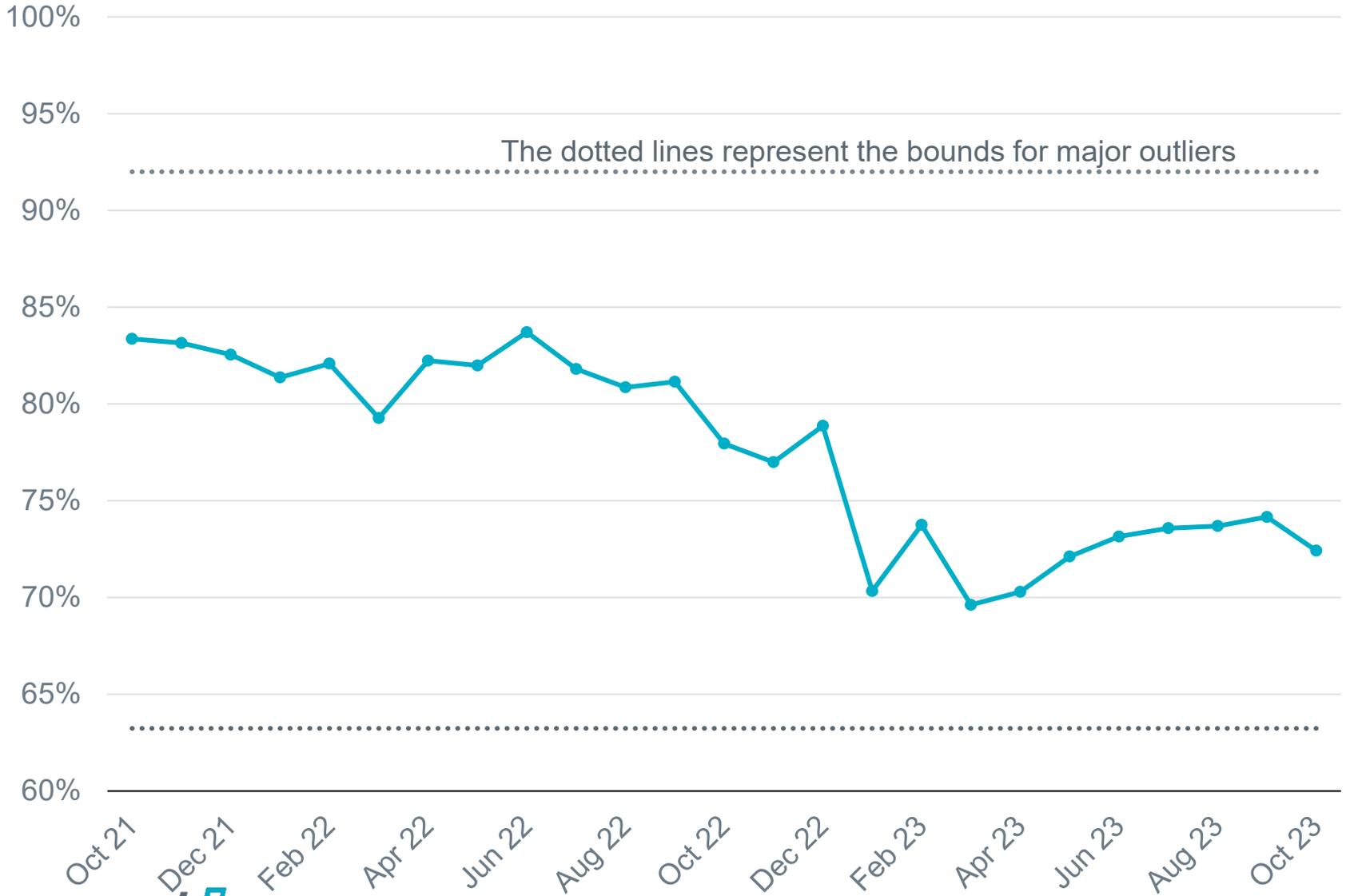


# Day-Ahead and Real-Time Market Price Differences



\*Averages are weighted by Real-Time Market Load

# Percentage of Real-Time Load Transacted in the Day-Ahead Market



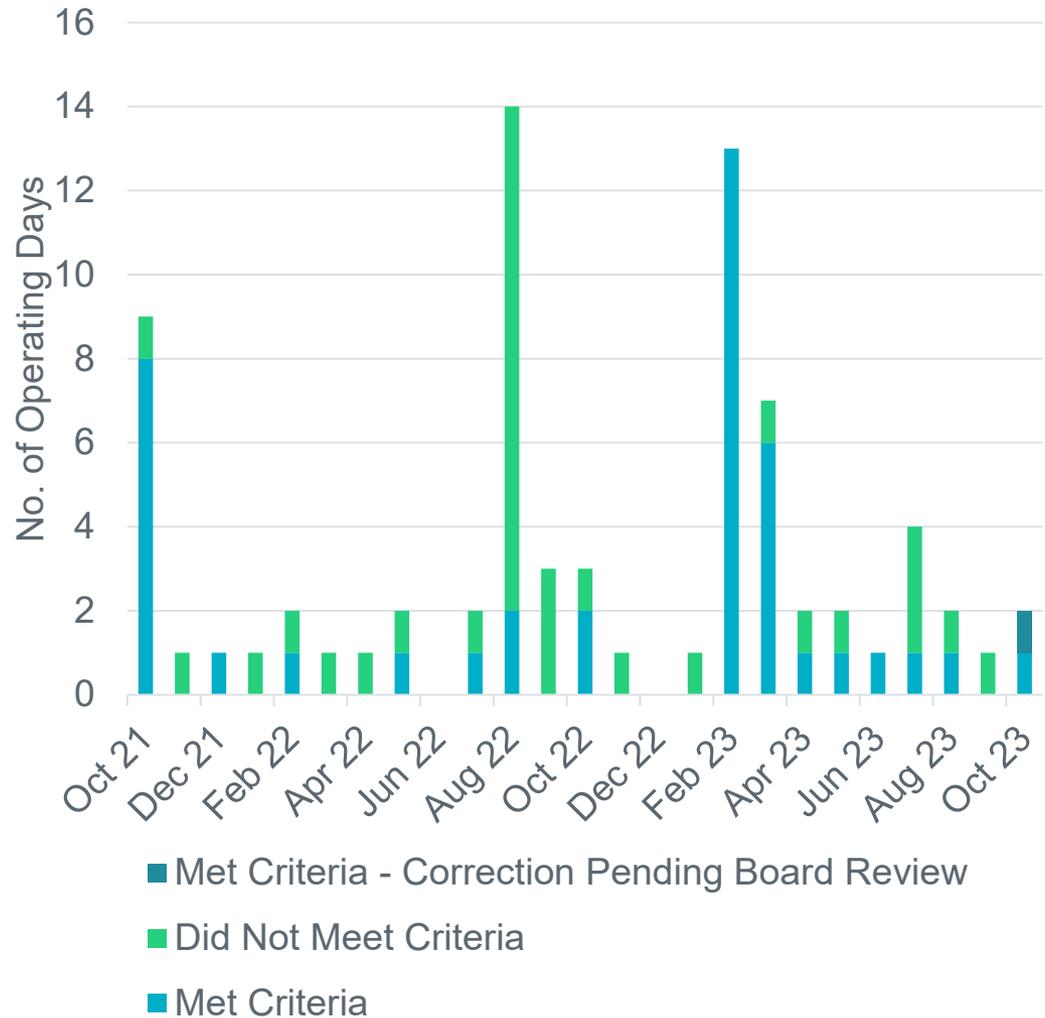
# CRR Value and Cost Differences



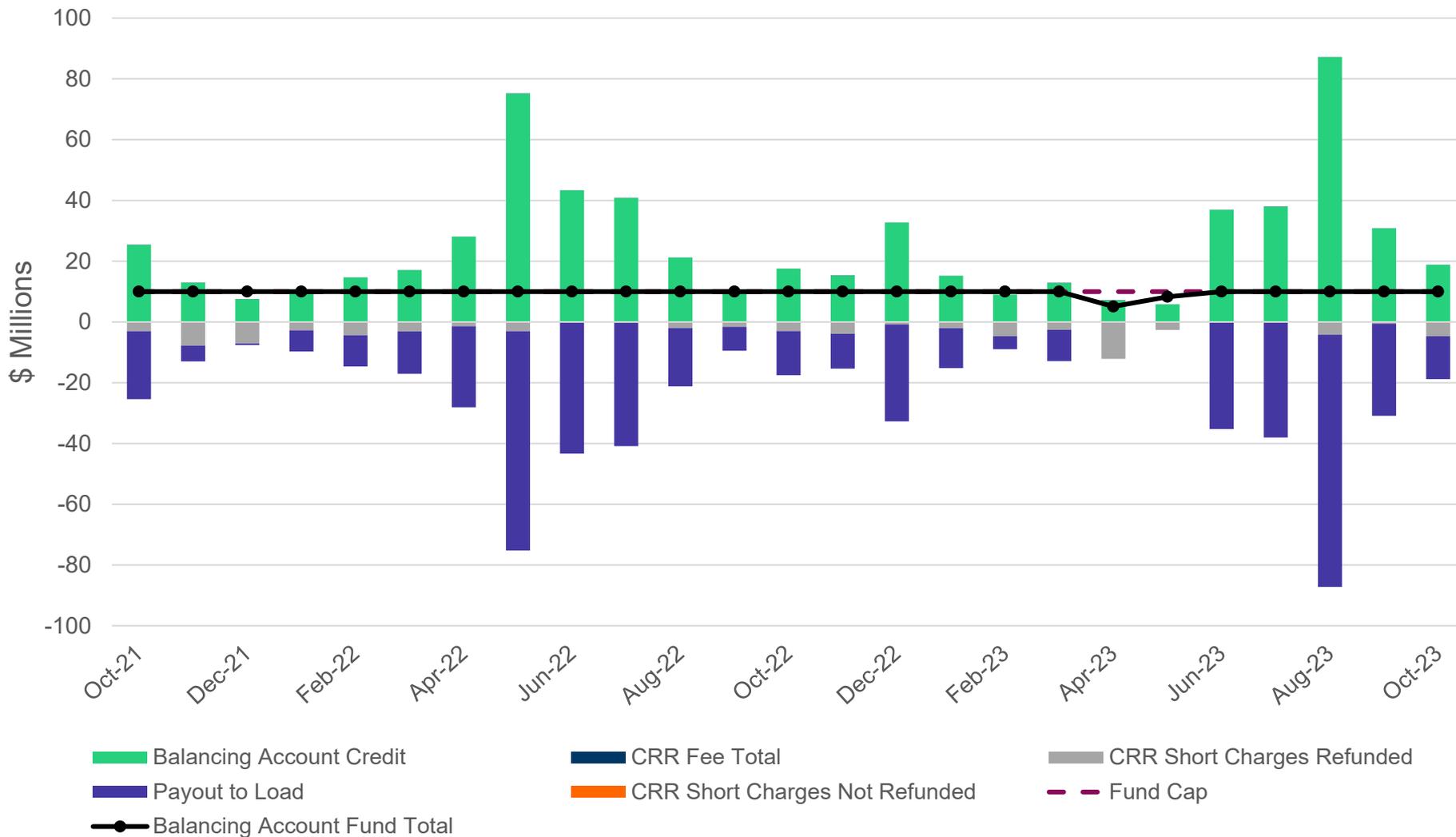
# Price Issues and the Impact of Nodal Protocol Revision Request (NPRR) 1024 on Price Corrections

This graph looks at the recent history of price issues in the RTM or DAM and breaks the impacted Operating Days into three categories:

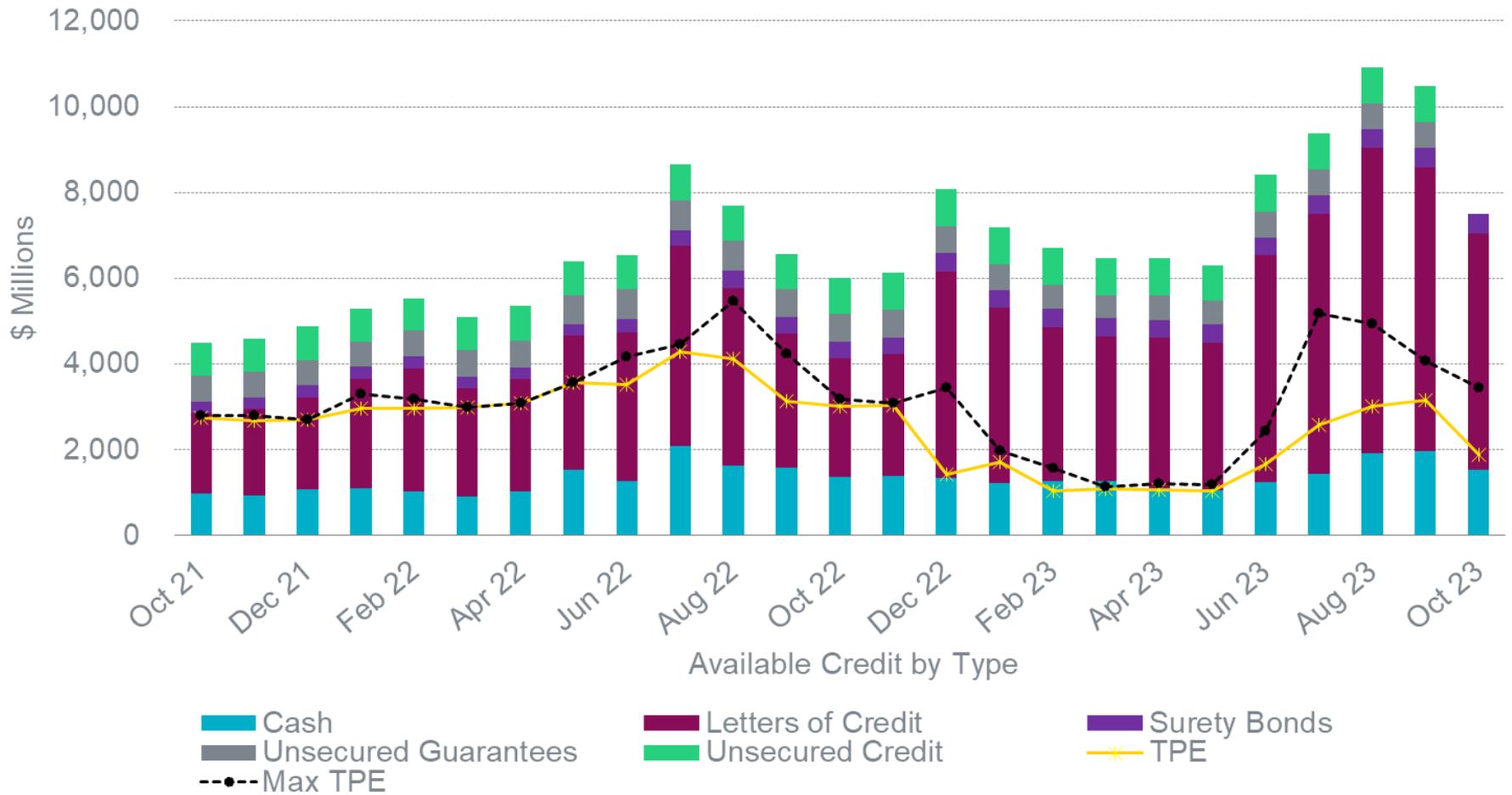
- Days that met the criteria for “significance” under NPRR1024 and were corrected;
- Days that were not corrected because they did not meet the criteria for “significance” under NPRR1024; and
- Days that met criteria for “significance” under NPRR1024 and are pending ERCOT Board of Directors’ approval.



# The CRR Balancing Account was fully-funded and excess amounts were allocated to Load



# Available Credit by Type Compared to Total Potential Exposure (TPE)



\*Numbers are as of month end except for Max TPE



# Retail Transaction Volumes – Summary – October 2023

Transaction Type	Year-To-Date		Transactions Received	
	October 2023	October 2022	October 2023	October 2022
<b>Switches</b>	957,294	1,041,526	91,334	75,040
<b>Acquisitions</b>	0	0	0	0
<b>Move - Ins</b>	2,635,493	2,633,636	262,154	261,008
<b>Move - Outs</b>	1,195,975	1,185,081	126,436	114,404
<b>Continuous Service Agreements (CSA)</b>	378,125	614,332	31,771	45,555
<b>Mass Transitions</b>	0	24,463	0	0
<b>Total</b>	<b>5,166,887</b>	<b>5,499,038</b>	<b>511,695</b>	<b>496,007</b>