



Item 7.3: Commercial Markets Update

Kenan Ögelman

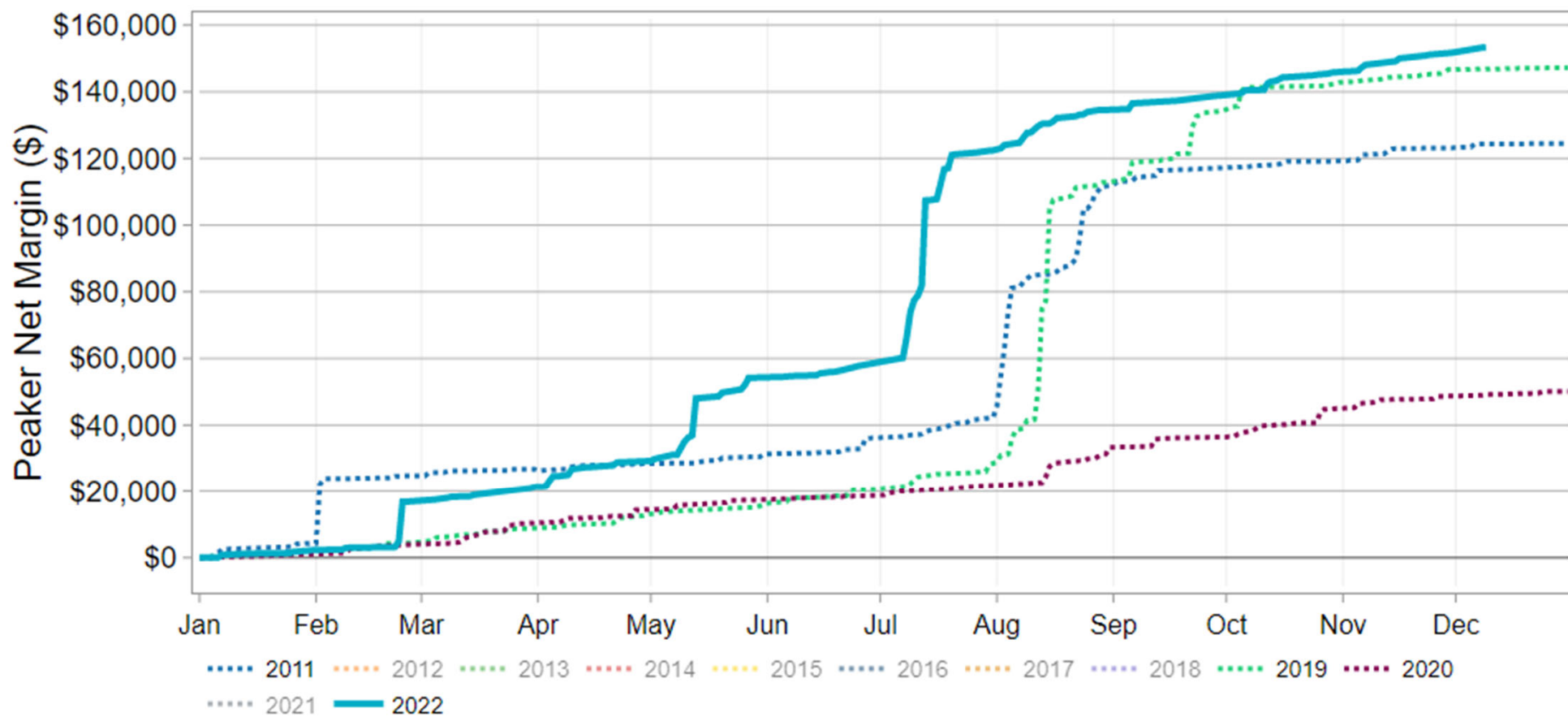
Vice President, Commercial Operations

Reliability and Markets Committee Meeting

ERCOT Public

December 19, 2022

2022 Peaker Net Margin was at \$153,336 per MW as of December 9.

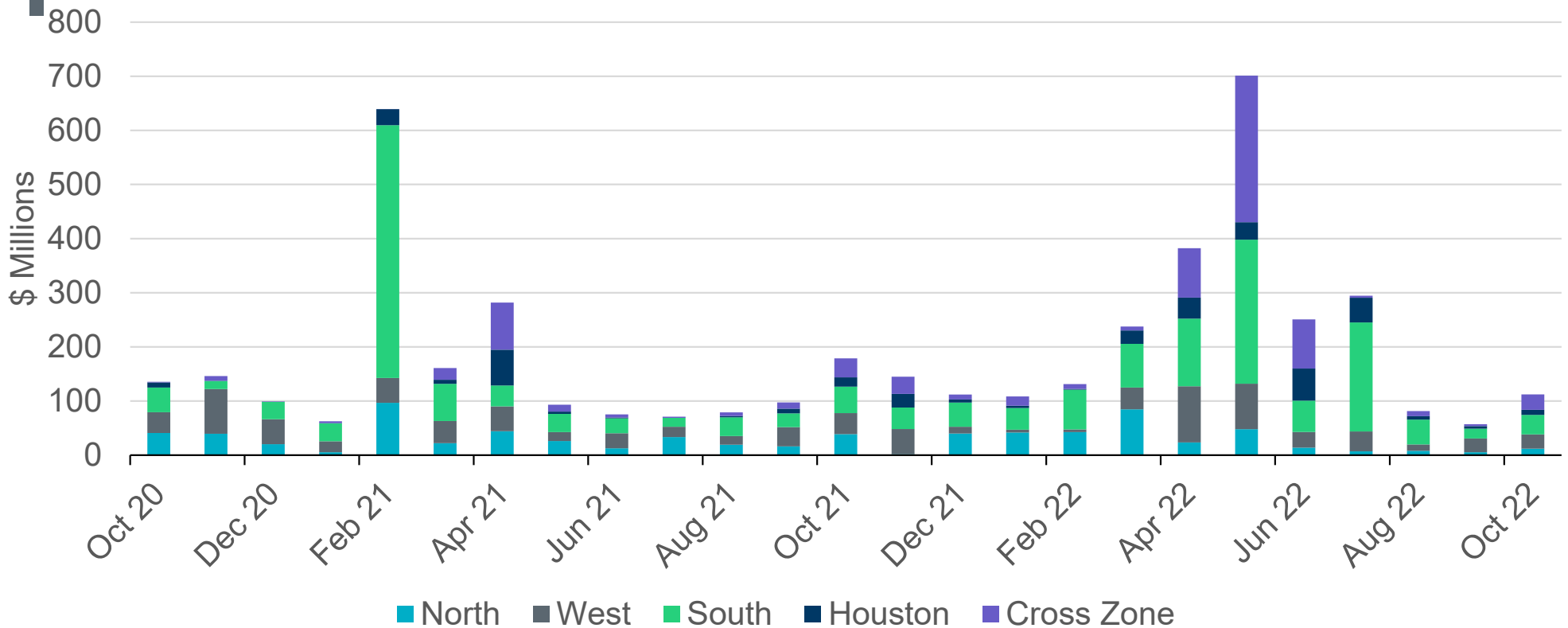


Aggregate Distributed Energy Resource Pilot Update

- With approval of the pilot at the last Board and review by the PUCT, ERCOT staff has created a [page on the website](#) to host relevant information including the approved governing document.
- The ADER Task Force has continued to meet, with topics including consumer protections, cyber security, and education on use of the pilot forms.
- ERCOT staff has not yet received any Details of the Aggregation forms, however we are working with interested parties and intend to provide regular updates to the Board as forms begin to come in and ADERs are registered for participation in the pilot.

Appendix

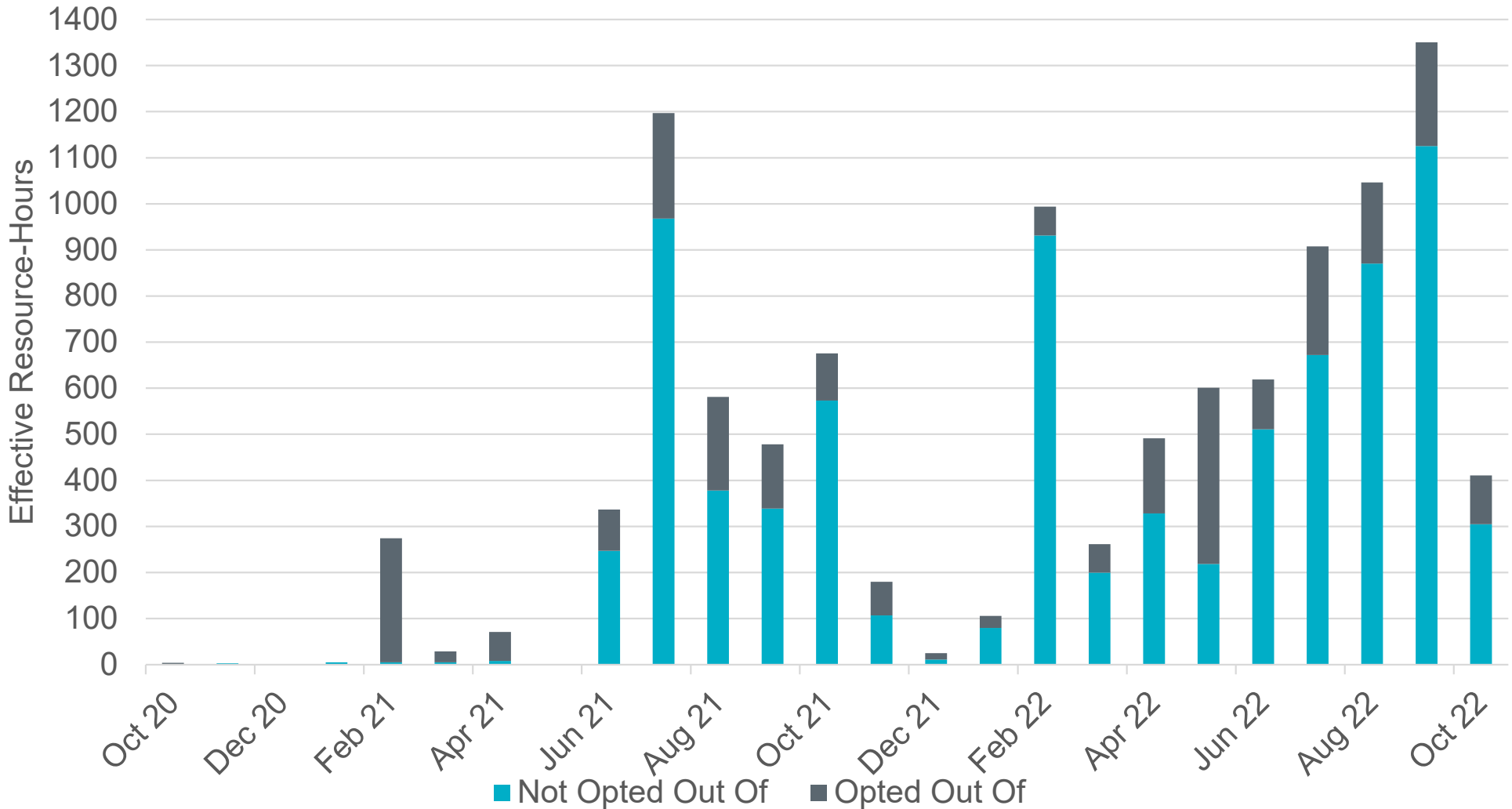
Real-Time Congestion Rent by Zone



- Congestion rent increased in all zones in October 2022 compared to September 2022.
- The two zones with the highest congestion rent were the South and Cross Zones.
 - Congestion rent in the South Zone was primarily driven by the loss of the Whitepoint to Angstrom & Lon Hill 345 kV double circuit contingency overloading the 138 kV line from Coletto to Victoria station.
 - Congestion rent in the Cross Zone was primarily driven by the West Texas Export Generic Transmission Constraint.
- 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.



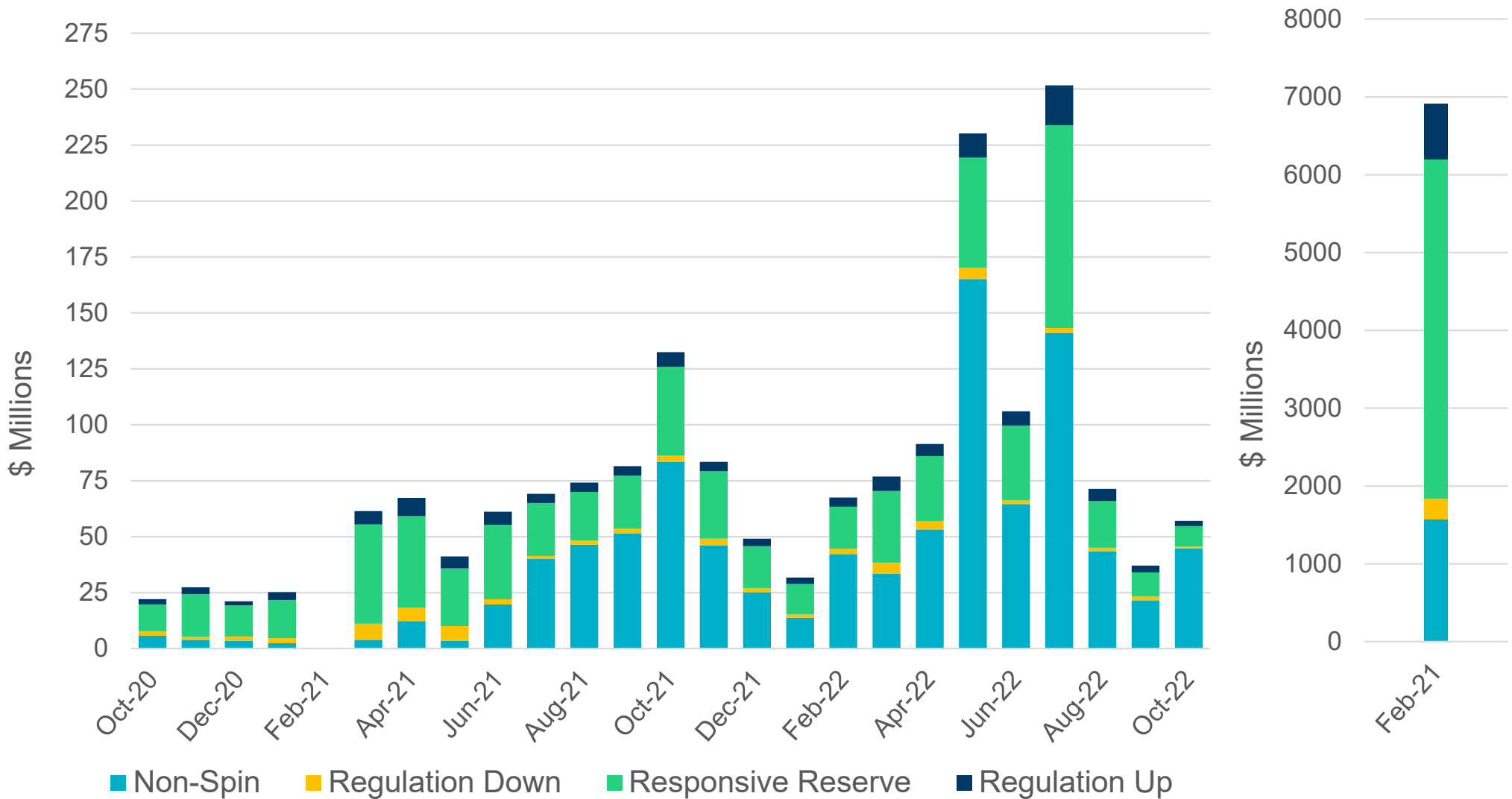
Twenty-two Resources were Committed in October either for Capacity, Congestion, or Minimum Run Time



“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.



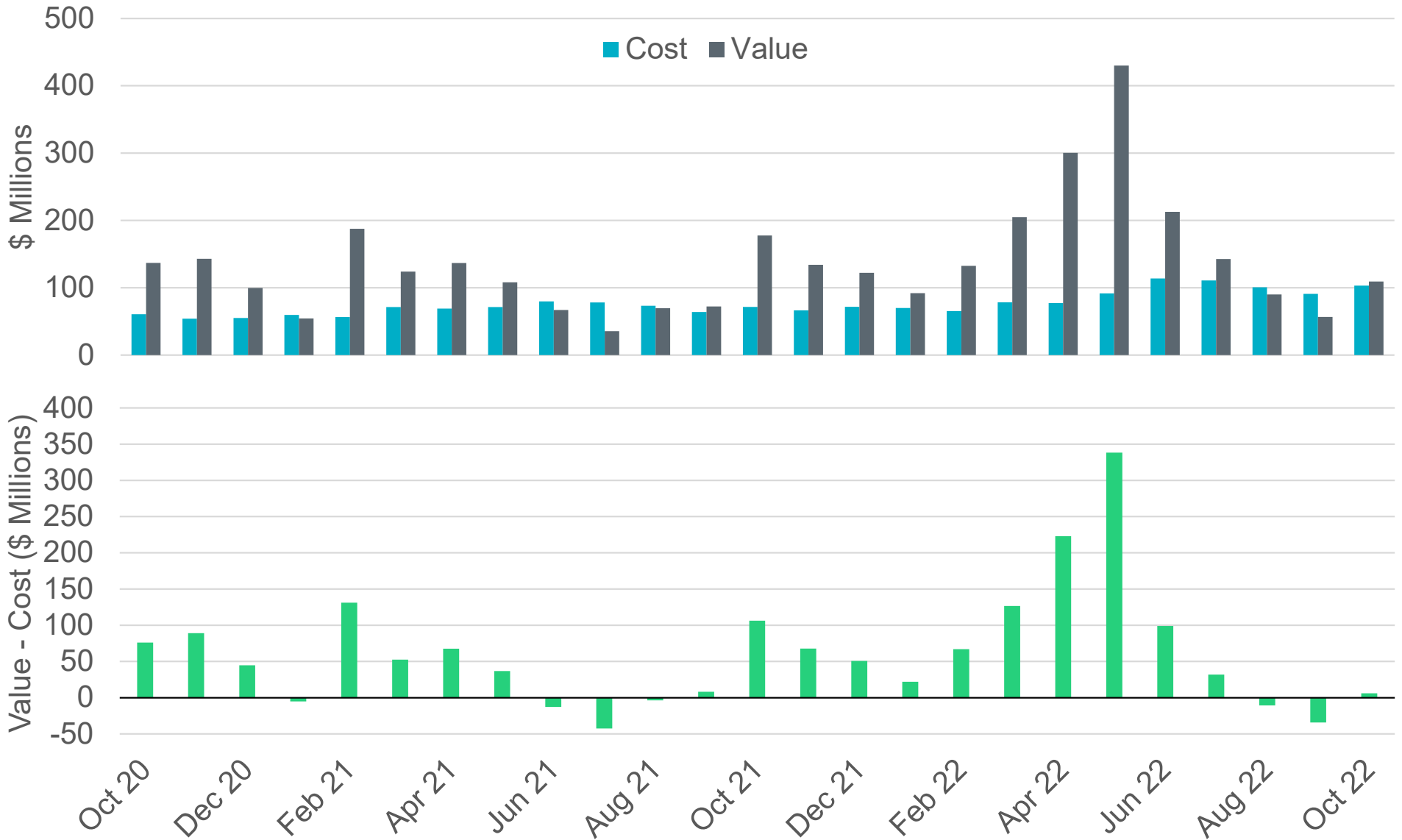
Ancillary Services for October 2022 totaled \$57.08M



Note: For visual purposes, February 2021 has been separated into its own graph with different scaling. The legend applies for both graphs.



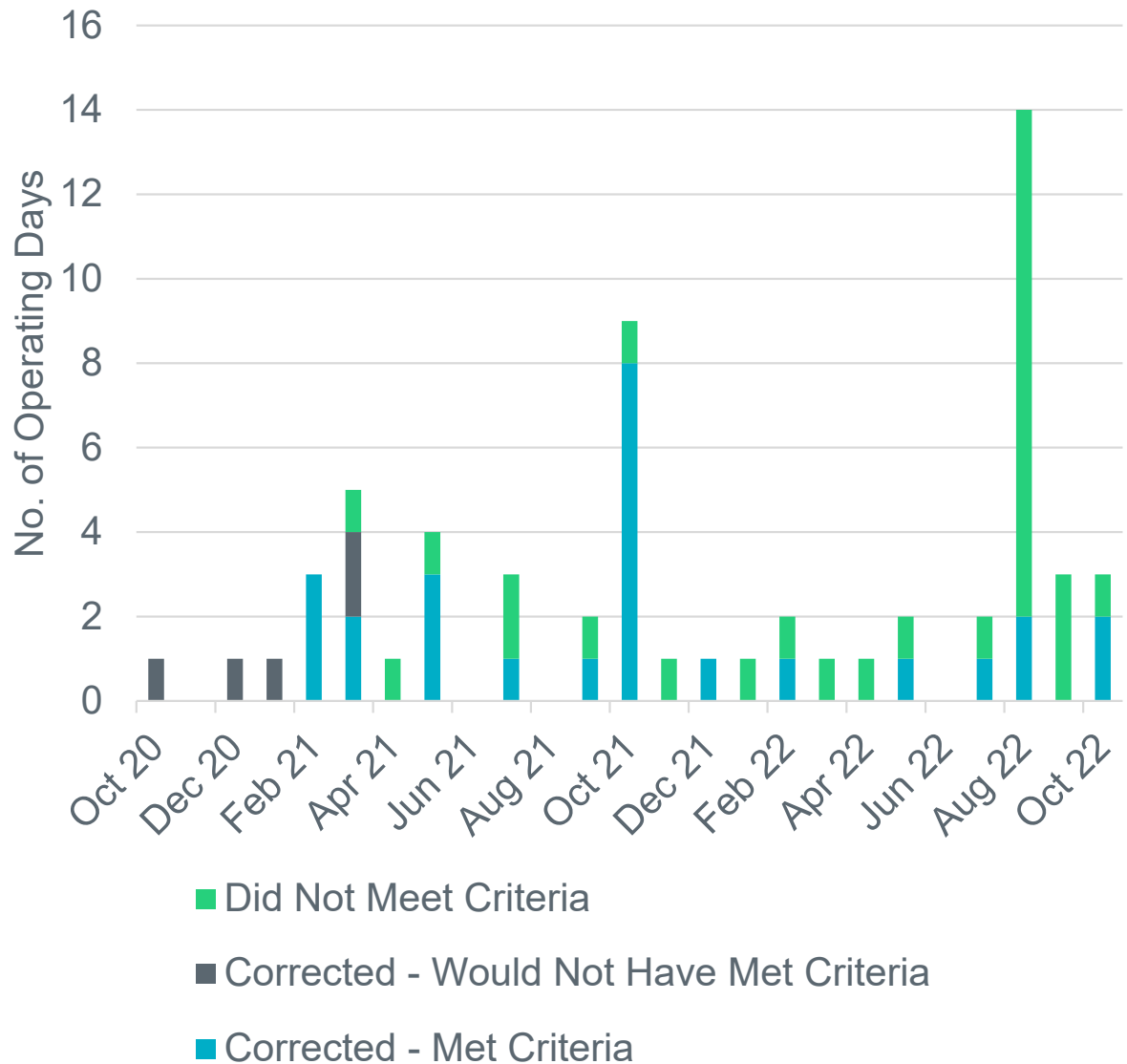
CRR Value and Cost Differences



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 would not have met the criteria for “significance” under NPRR1024, but were corrected because NPRR1024 was not yet in place; and
- Days that were not corrected because they did not meet the criteria for “significance” under NPRR1024.



Details for Operating Days not Meeting the Criteria for Significance

- On Operating Day October 30, 2022, a software error in the Supplemental Ancillary Service Market (SASM) resulted in Responsive Reserve Service (RRS) subtypes in Resources' Current Operating Plans (COPs) not being considered when calculating the Resources' available capacity to provide additional Ancillary Services. This resulted in Ancillary Service awards through a SASM to Resources that did not have available capacity to provide Ancillary Services, as well as incorrect RRS Market Clearing Prices for Capacity (MCPCs).
 - Because ERCOT was not aware of the error until November 4, 2022, ERCOT was unable to determine corrected prices prior to prices becoming final at 16:00 on the second business day after the impacted Operating Day, per ERCOT Protocol Section 6.3.
 - Upon completion of ERCOT's impact analysis, ERCOT determined that the largest absolute value impact to any single Counter-Party was \$146.19, which does not meet the criteria necessary to request ERCOT Board approval for price correction under Section 6.3(7)(b).

Details for Operating Days Meeting the Criteria for Significance

- On Operating Day October 27, 2022, the Bearkat Generic Transmission Constraint was modeled incorrectly, with one of the transmission lines in the constraint definition being monitored in the wrong direction. This resulted in incorrect DAM and SCED solutions when it was binding.
 - DAM was rerun with the corrected model and prices were posted prior to 10AM of the second business day, in accordance with ERCOT Protocol Section 4.5.3(5). The largest absolute value change to a Settlement Point Price was \$8.15.
 - SCED was rerun with the corrected model and prices were posted prior to 4PM of the second business day, in accordance with the ERCOT Protocol Section 6.3(5). The largest absolute value change to a Settlement Point Price was \$745.66.

Issue with Auction Clearing Price Used to Calculate the CRR Auction Credit Requirement

- Software error in CMM system that incorrectly determined the Effective Auction Clearing Price (EACP) used to calculate the Auction Credit Requirement (ACR) used for the pre-auction screening process and in the auction clearing process for each CRR auction.
- Error introduced by system changes to automate calculation of EACP in Sept 2021.
- Error identified a year later by relatively new Market Participant who was shadowing credit calculations.
- Cause of wrong ACP was an incorrect conversion of the time format from GMT (CRR) to CPT (for CMM) for ACPs.
- Both financially and volumetrically the impact was small:
 - The overall net difference in awarded MW for all OBL and OPT bids/offers was 0.7 MW.
 - Out of 342,349 total bids and offers (OBLs and OPTs), 362 had differences in awarded MWs.
 - 265 OPTs and 97 OBLs had changes in awarded MWs ranging from -3.7 MW to 4.4 MW.
 - Of the 25 impacted CRRAHs, the total difference in awards was 3.3 MW. The additional 3.3 MW awarded was across 4 CRRAHs, and no impact to other 21 CRRAHs.
 - The overall difference in auction revenue was \$268.83.

Retail Transaction Volumes – Summary – October 2022

Transaction Type	Year-To-Date		Transactions Received	
	October 2022	October 2021	October 2022	October 2021
Switches	1,041,526	1,114,562	75,040	56,991
Acquisitions	0	48,862	0	0
Move - Ins	2,633,636	2,354,520	261,008	233,687
Move - Outs	1,185,081	1,087,330	114,404	105,290
Continuous Service Agreements (CSA)	614,332	588,545	45,555	77,849
Mass Transitions	24,463	26,584	0	0
Total	5,499,038	5,220,403	496,007	473,817