




Summer Market Performance Report

June 2021

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Stakeholder Meeting
August 2, 2021

New instructions for raising your hand to ask a question

- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon  above the chat window located on the bottom right corner of the screen. **Note:** #2 only works if you dialed into the meeting.
- If you need technical assistance during the meeting, please send a chat to the event producer.
- Please remember to state your name and affiliation before making your comment.
- You may also send your question via chat to the meeting host - Kristina Osborne.

The objective of this analysis effort is to timely assess market performance during the Summer 2021

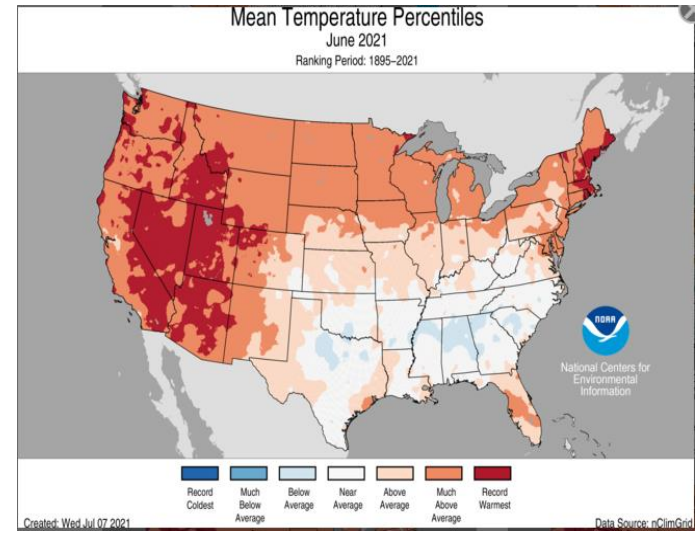
- Report on ISO's market performance and system conditions during summer 2021 when California power grid and the Western Interconnection are particularly constrained
 - Published for each month through September 2021
 - Informational call scheduled after report is posted
 - Call on Monday, Aug 2 to discuss June's report
 - Visit miscellaneous stakeholder meetings webpage for more information
- <http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx>

Enhancements are coming this summer as part of the Summer Readiness Initiative

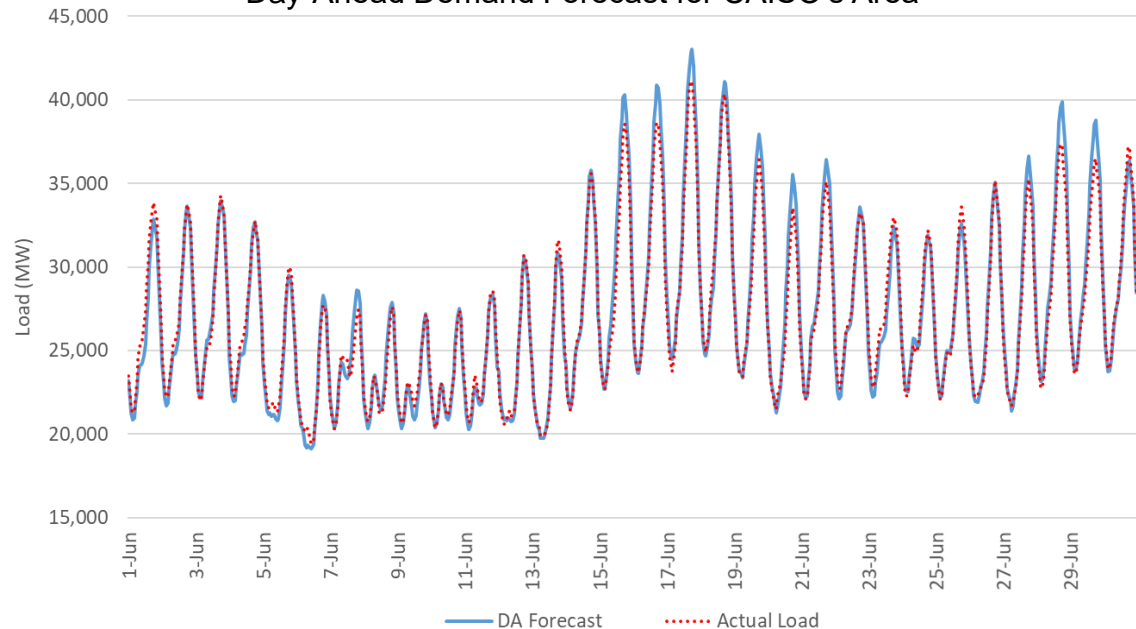
Summer enhancement	Date Implemented	Trigger	Dates/Hours Triggered
1. EIM resource capacity sufficiency test	15-Jun	Permanent feature	All the time
2. Import market incentives during tight system conditions	15-Jun	Warning or Emergency	June 17, 6-9pm
3. Intertie schedules information on OASIS	26-Jul	Permanent feature	All the time
4. Enhanced real-time pricing signals during tight supply conditions	15-Jun	Warning or Emergency	June 17, 6-9pm
5. Management of storage resources during tight system conditions	30-Jun	RUC undersupply	Not triggered
6. Reliability demand response dispatch and real-time price impacts	4-Aug	Activation of RDRR	Not active yet
Load, export and wheeling priorities	4-Aug	Permanent feature ¹	Not active yet
Interconnection process enhancements	25-May	Permanent feature	Not used yet
CAISO's public communication protocols	29-May	System Event driven	29-May, 11-Jun, 15-Jun, 27-Jun
Today's Outlook displays	4-Aug	Permanent feature	Not active yet

June's Conditions

- Two Significant Heat Events:
 - June 12 -20, 2021
 - June 24-30, 2021
- Drought Conditions throughout Western U.S leading to lower hydro production
- CAISO's system peaked on June 17 at about 41,345 MW
- Flex alerts triggered on June 17 and 18
- Hourly Energy Conservation load reductions from 77 to 735 MWs during the net peak hours.

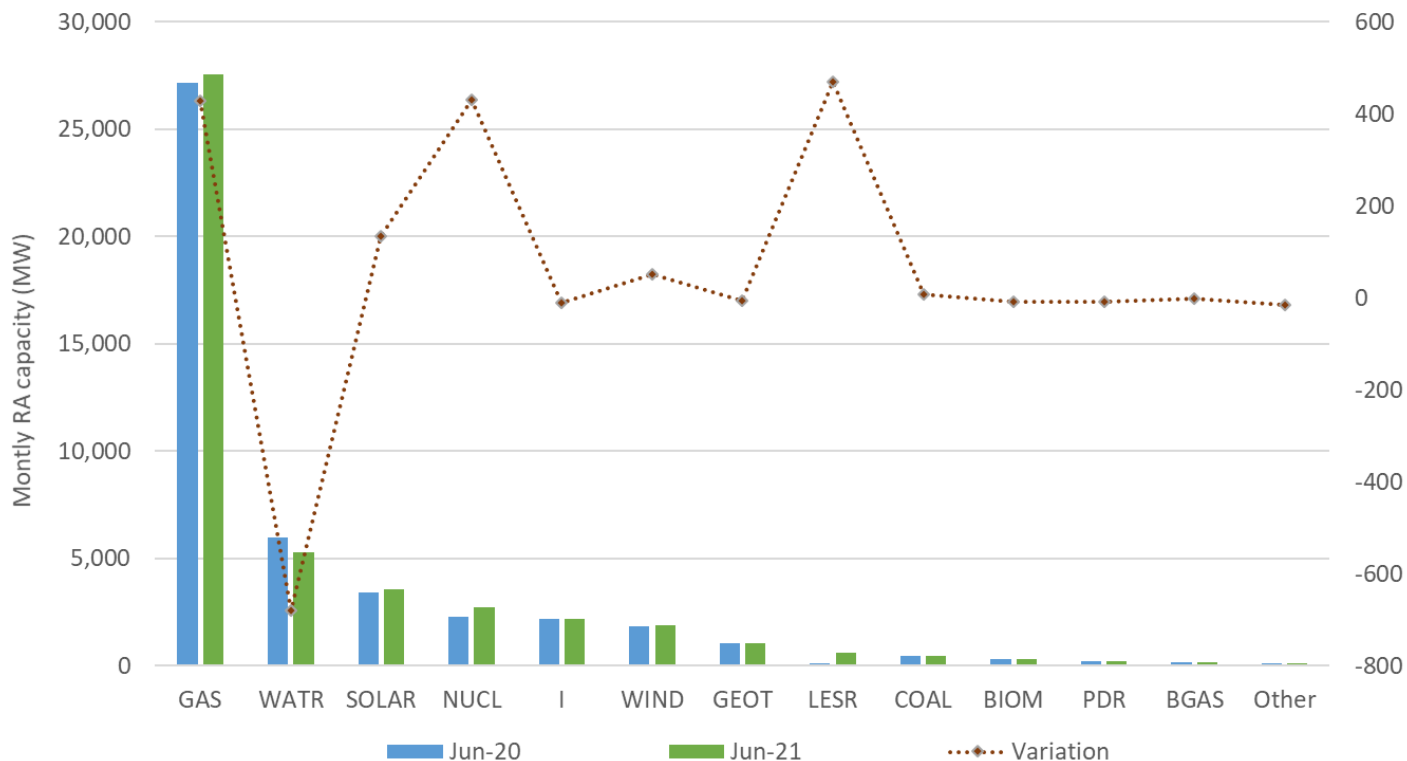


Day-Ahead Demand Forecast for CAISO's Area



Monthly RA showings for June 2021 RA is comparable to June's 2020 values

Gas: +420MW
 Hydro: -670MW
 Storage: +460MW
 Imports: About the same



RA June 2021: 46,113MW

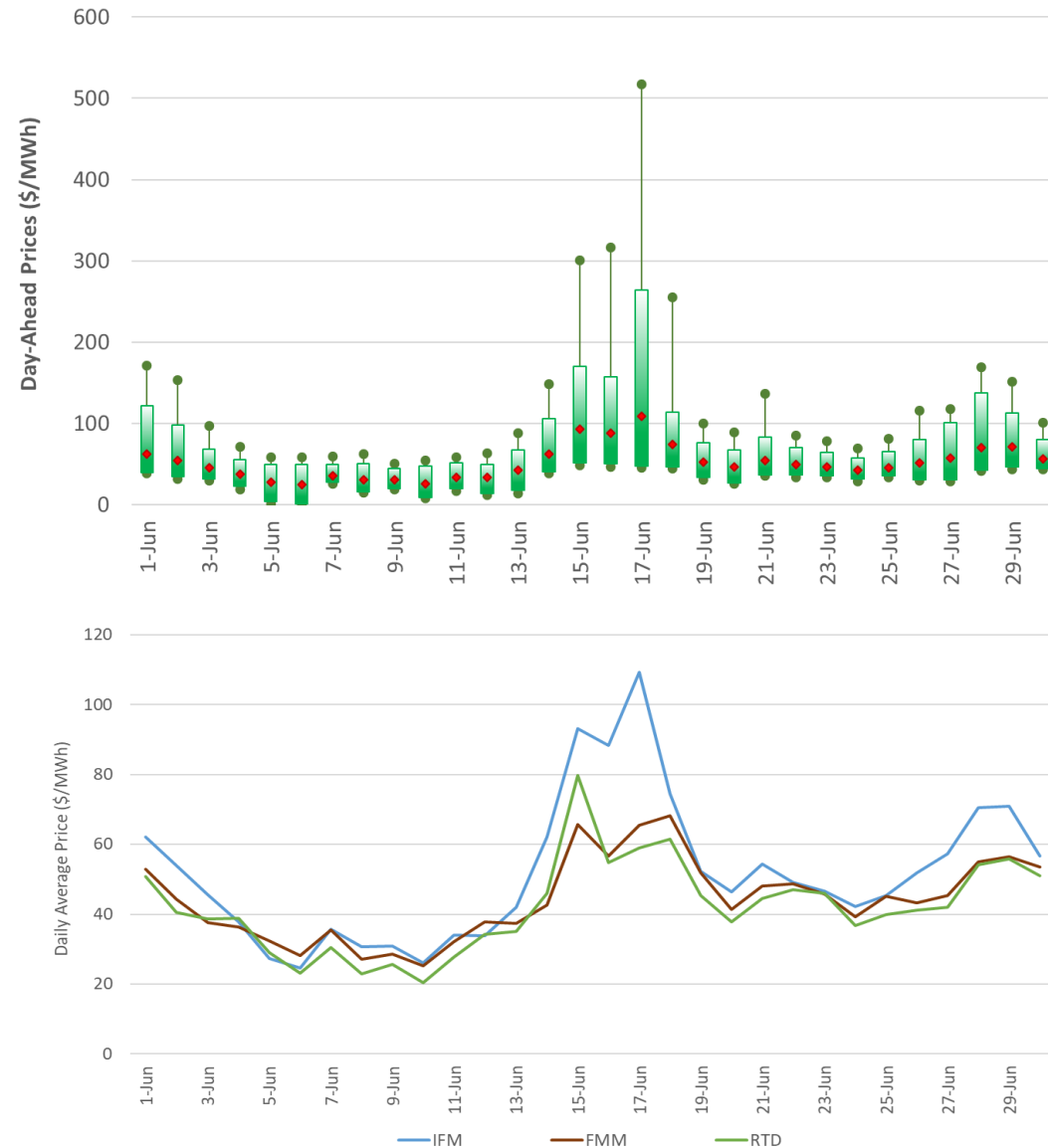
RA June 2020: 45,323MW

Prices across CAISO's markets diverged

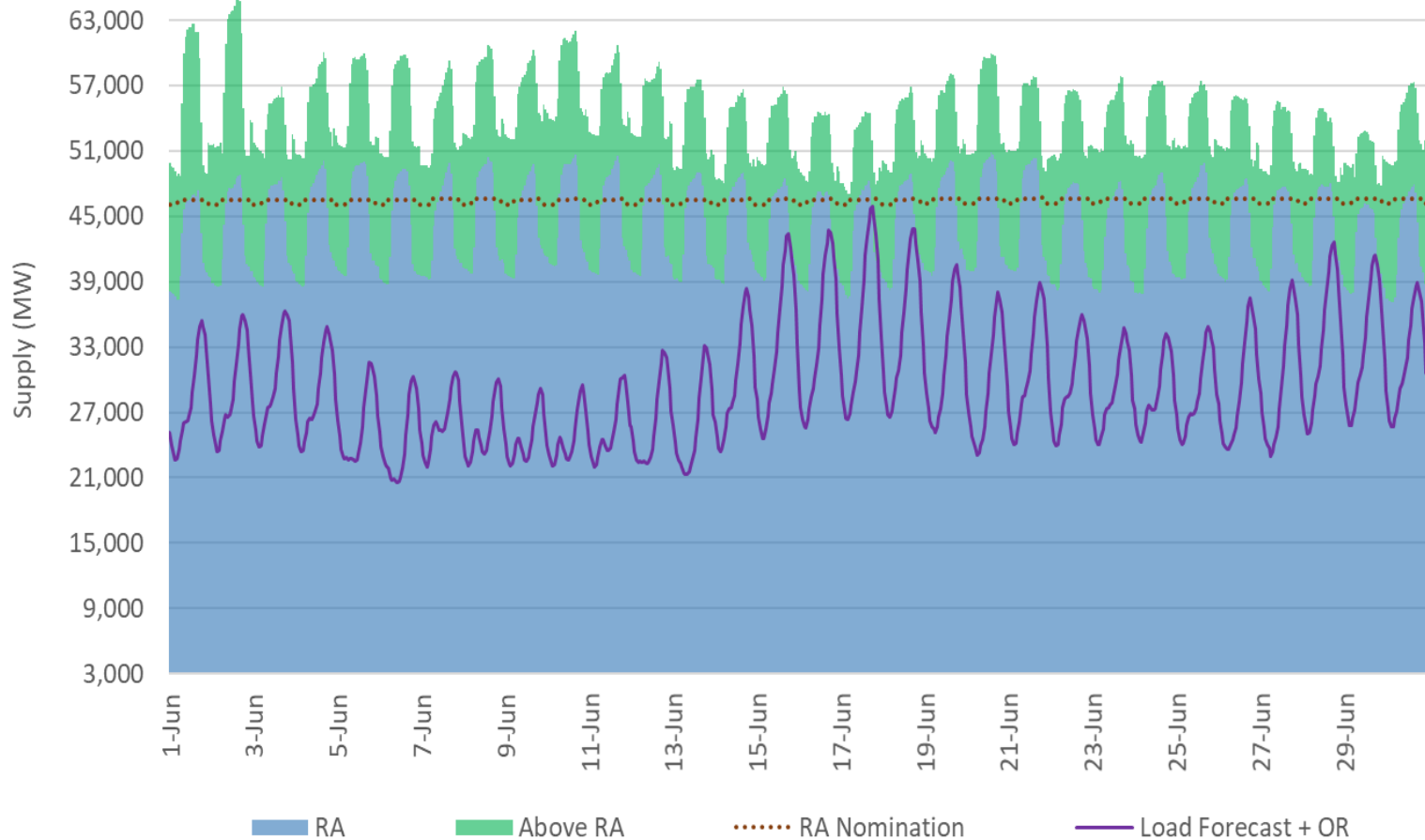
Prices in the day-ahead market were higher than those in real time

Lower demand realized in real-time

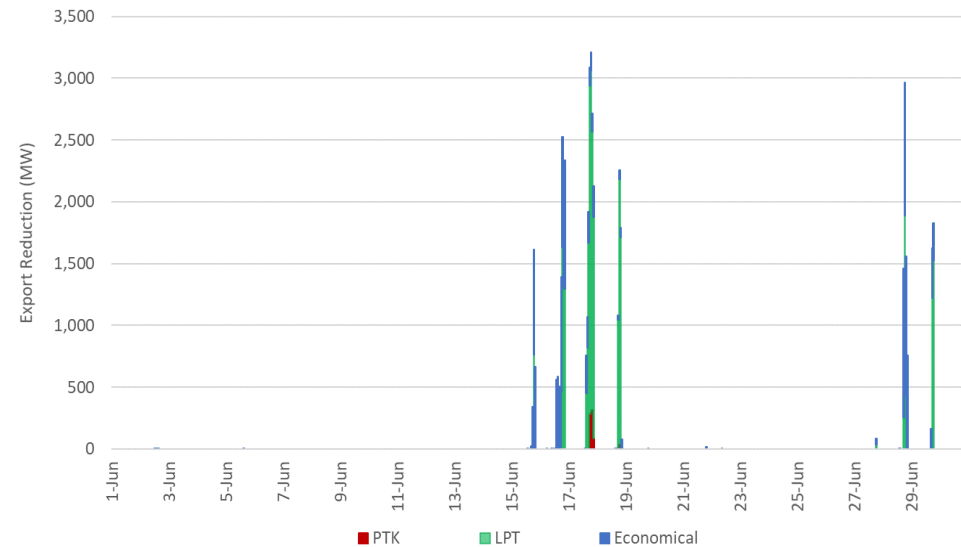
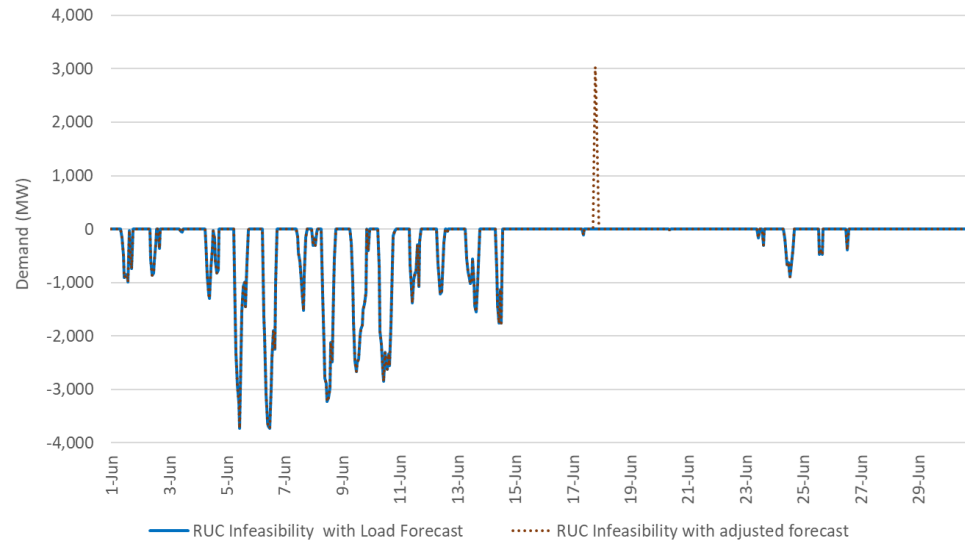
Economic transfers available in real-time



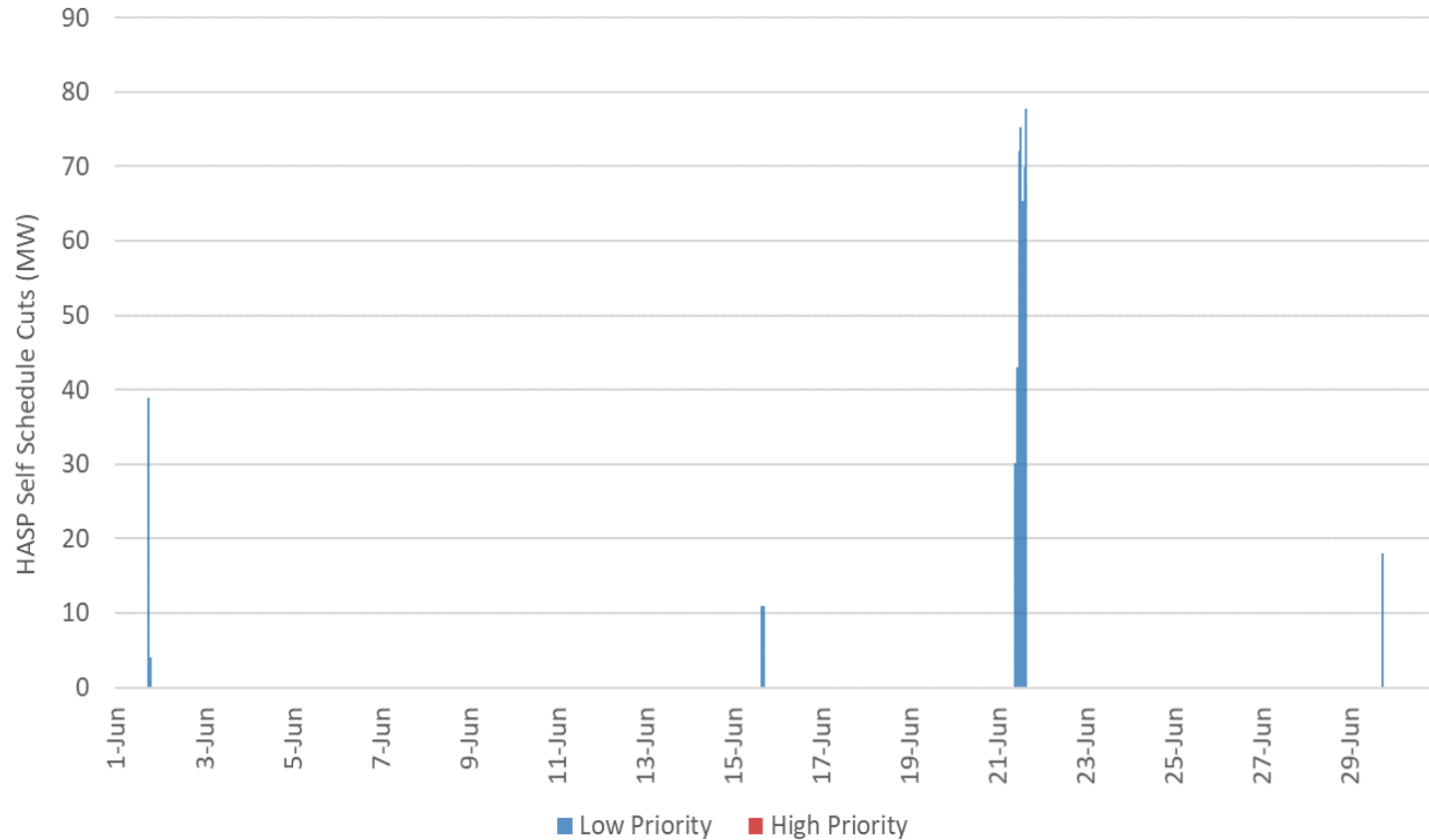
RA supply in the market was largely sufficient to cover CAISO's load needs



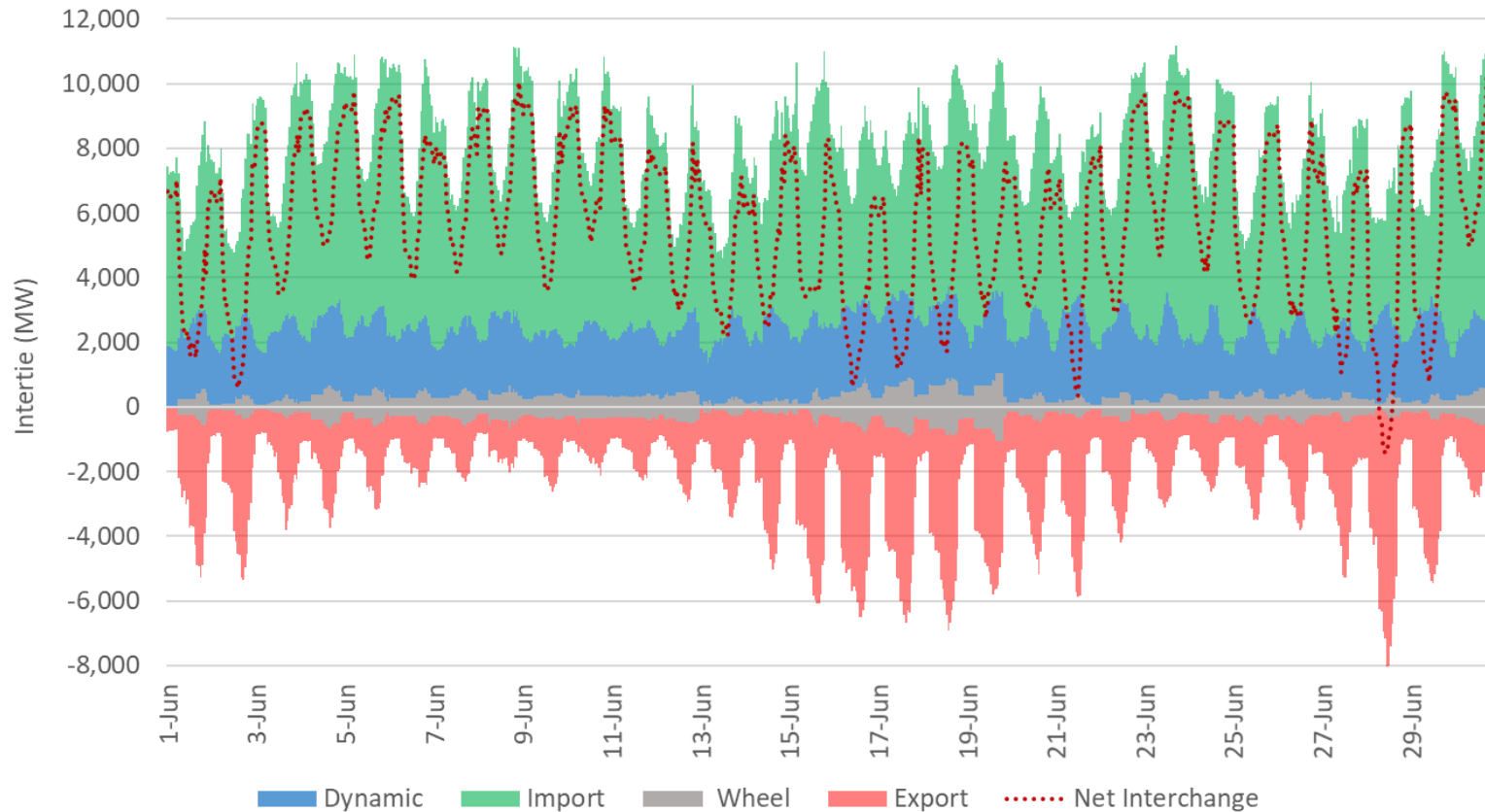
RUC had an infeasibility only on June 17, while Export were reduced in several days



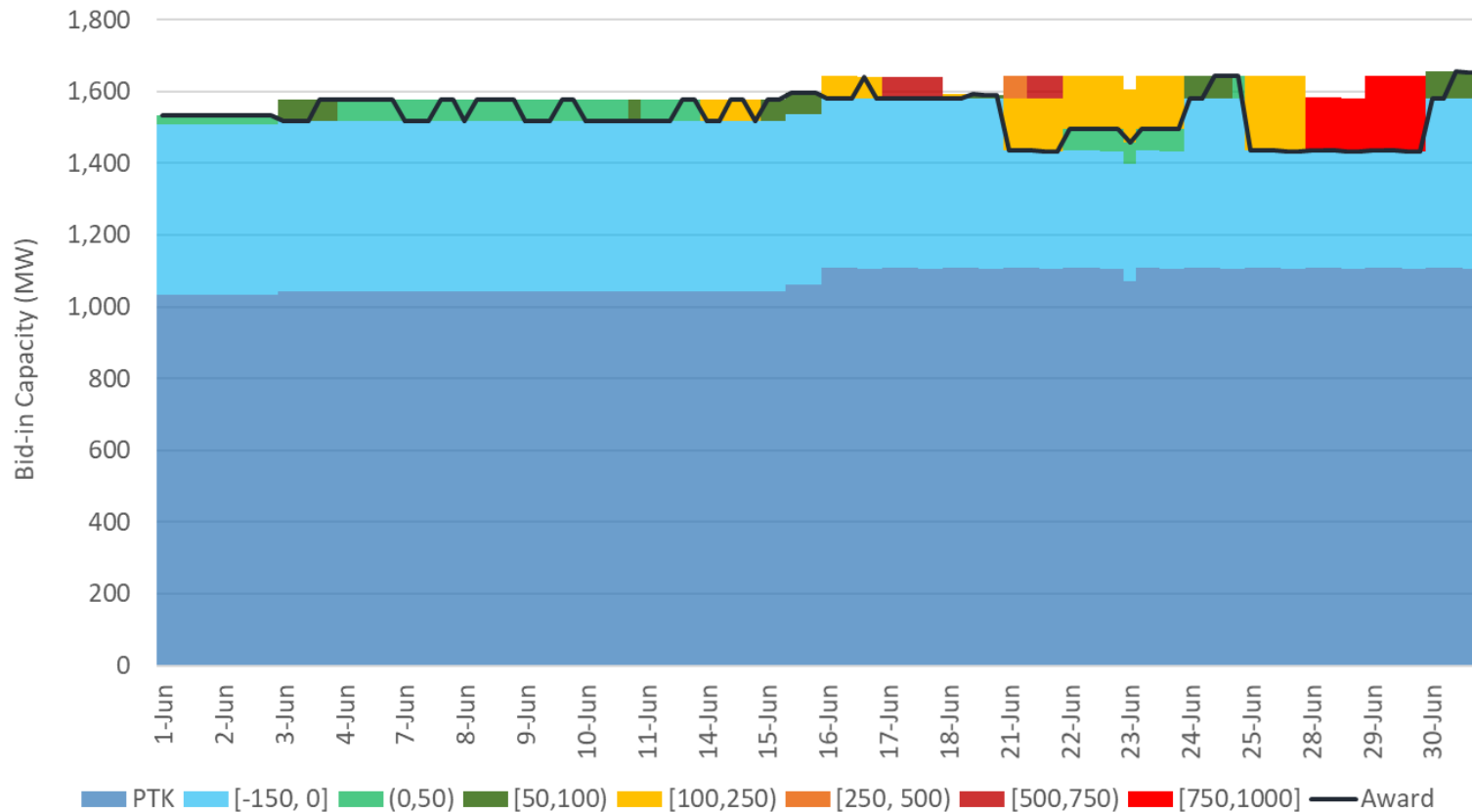
Export cuts in real-time were minimal in June since feasibility of exports is largely determined in the day-ahead timeframe



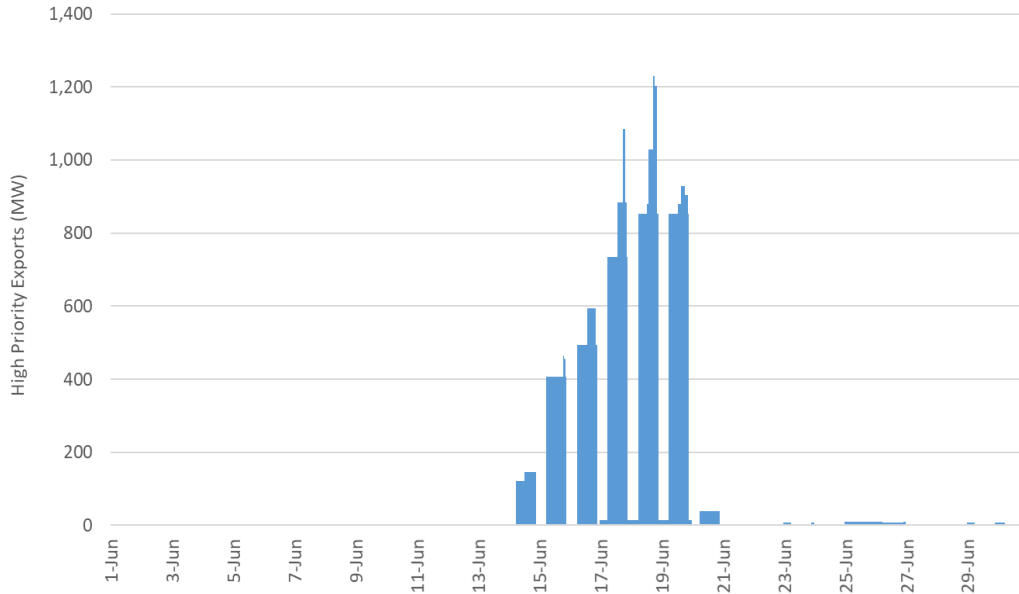
The net interchange during the two heat waves reached the low levels, becoming a net export on June 28



The vast majority of Static RA imports bid in the market with either a self schedule or at a prices of \$0/MWh or lower



Over 1,200MW of self scheduled wheels came in during the mid June heatwave

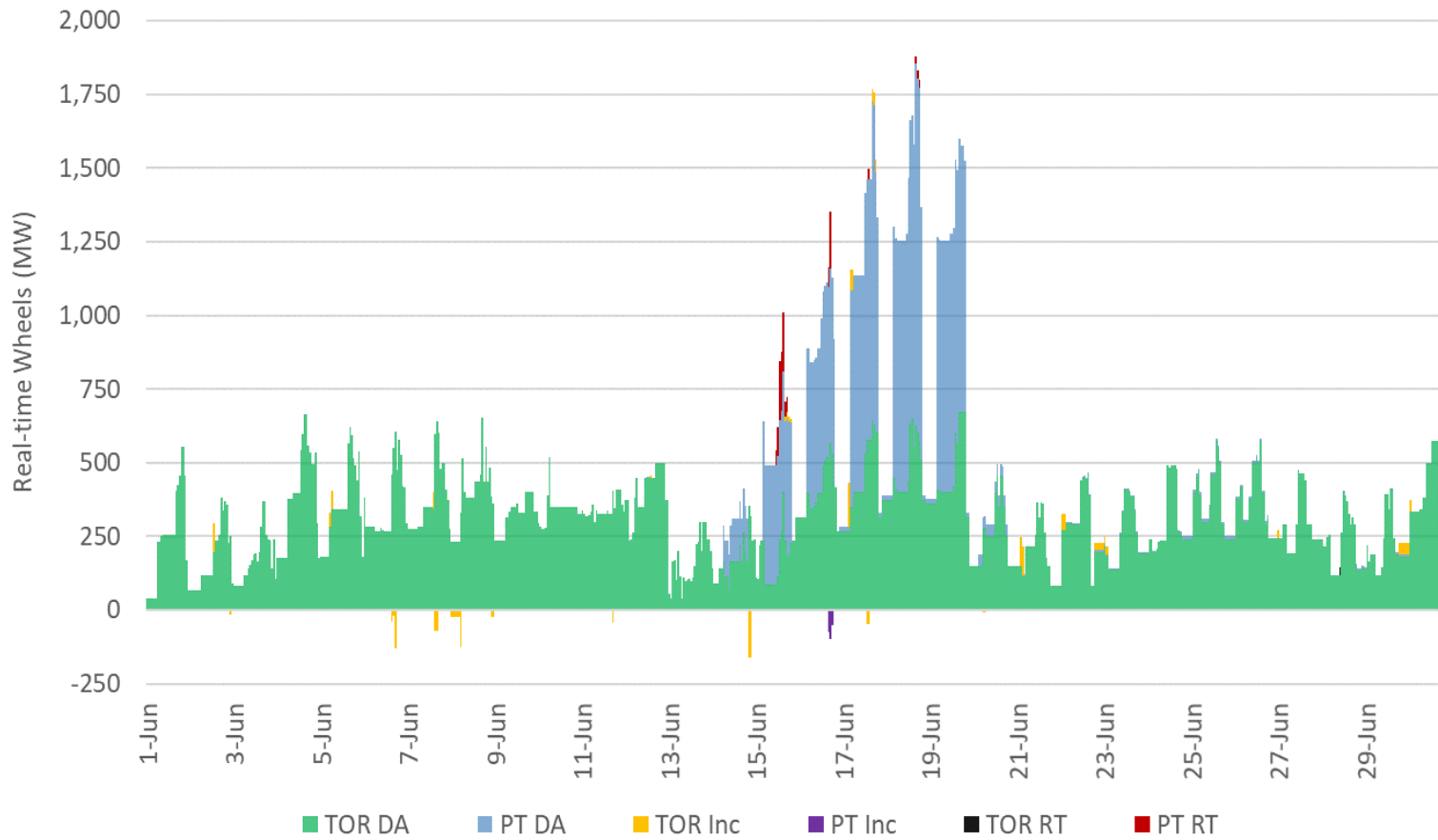


Given the existing scheduling priorities in June, all self schedule wheels were fully cleared

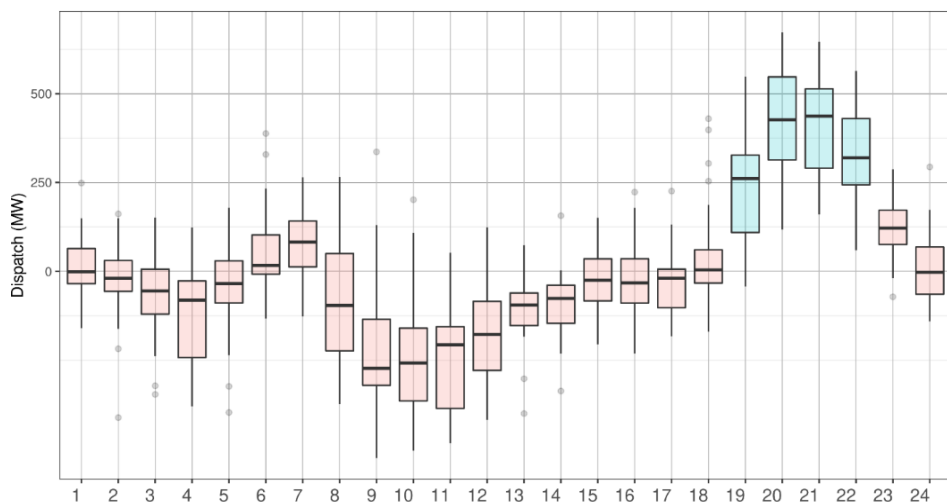
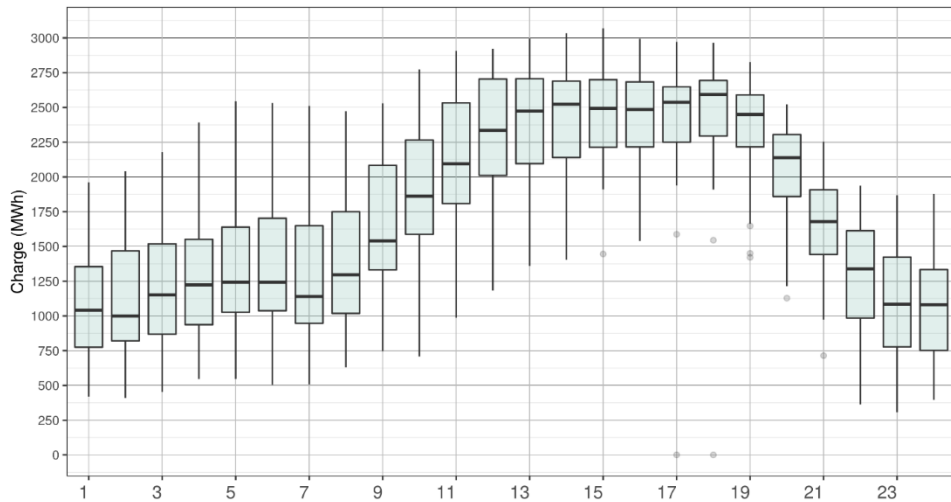
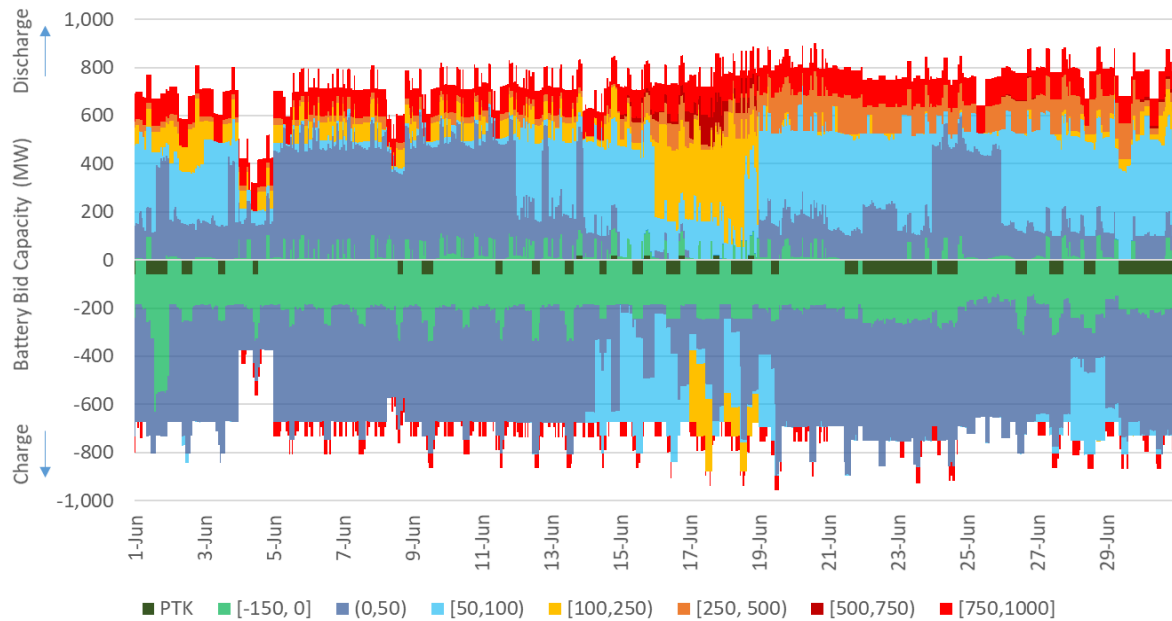
The maximum volume of wheels through were from the Northwest to the Southwest

Source	Sink				
	MEAD230	PaloVerde	MCCULLOUGH500	MIR2	MDWP
CFEROA	100	75			
CFETIJ		100			
CRAG	37	79			
Malin	11	317		133	
MEAD230				89	
NOB	250	413		142	125
SYLMAR		122		122	

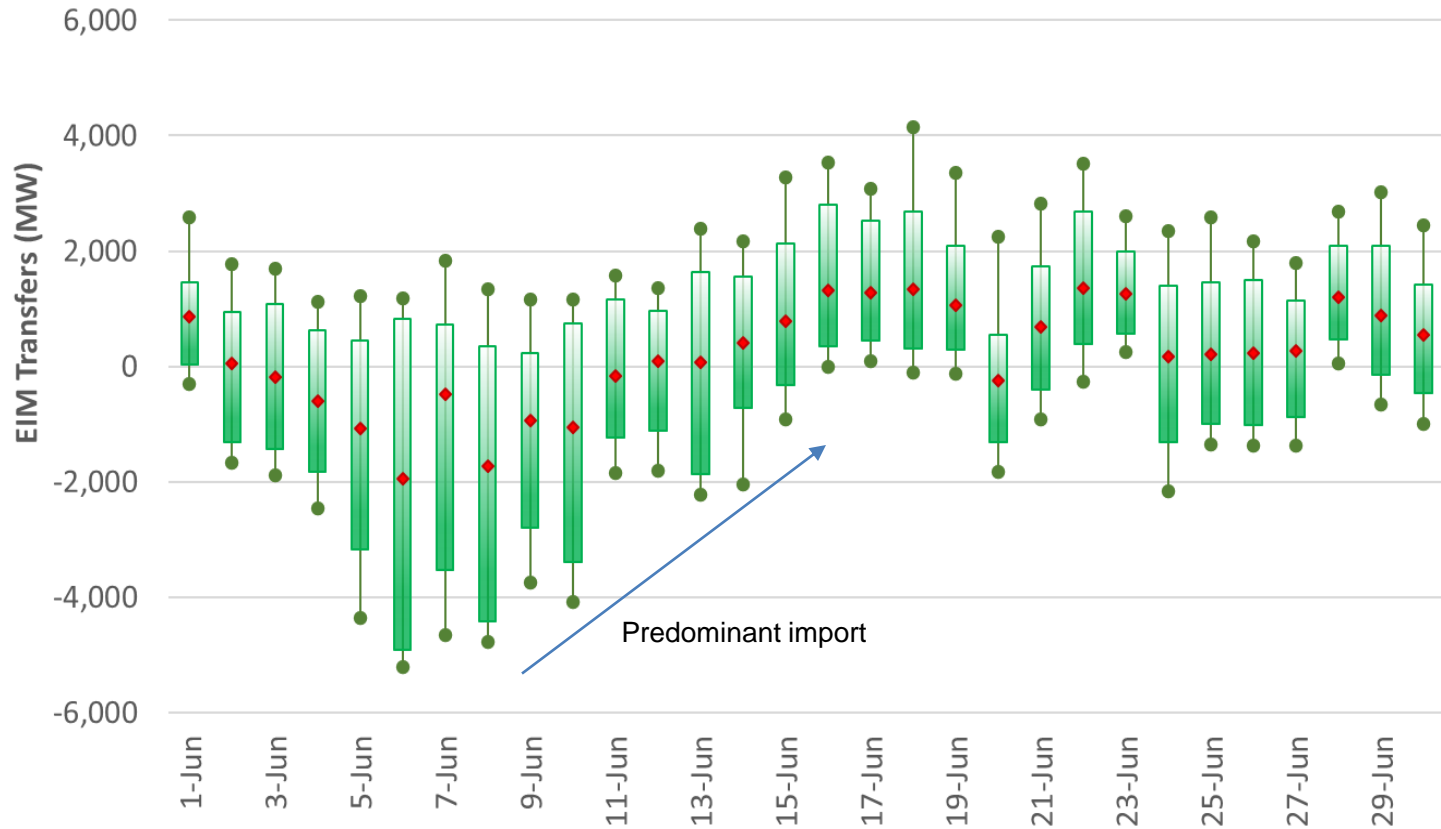
The majority of wheels cleared in the day-ahead market came as self schedules into the real-time market



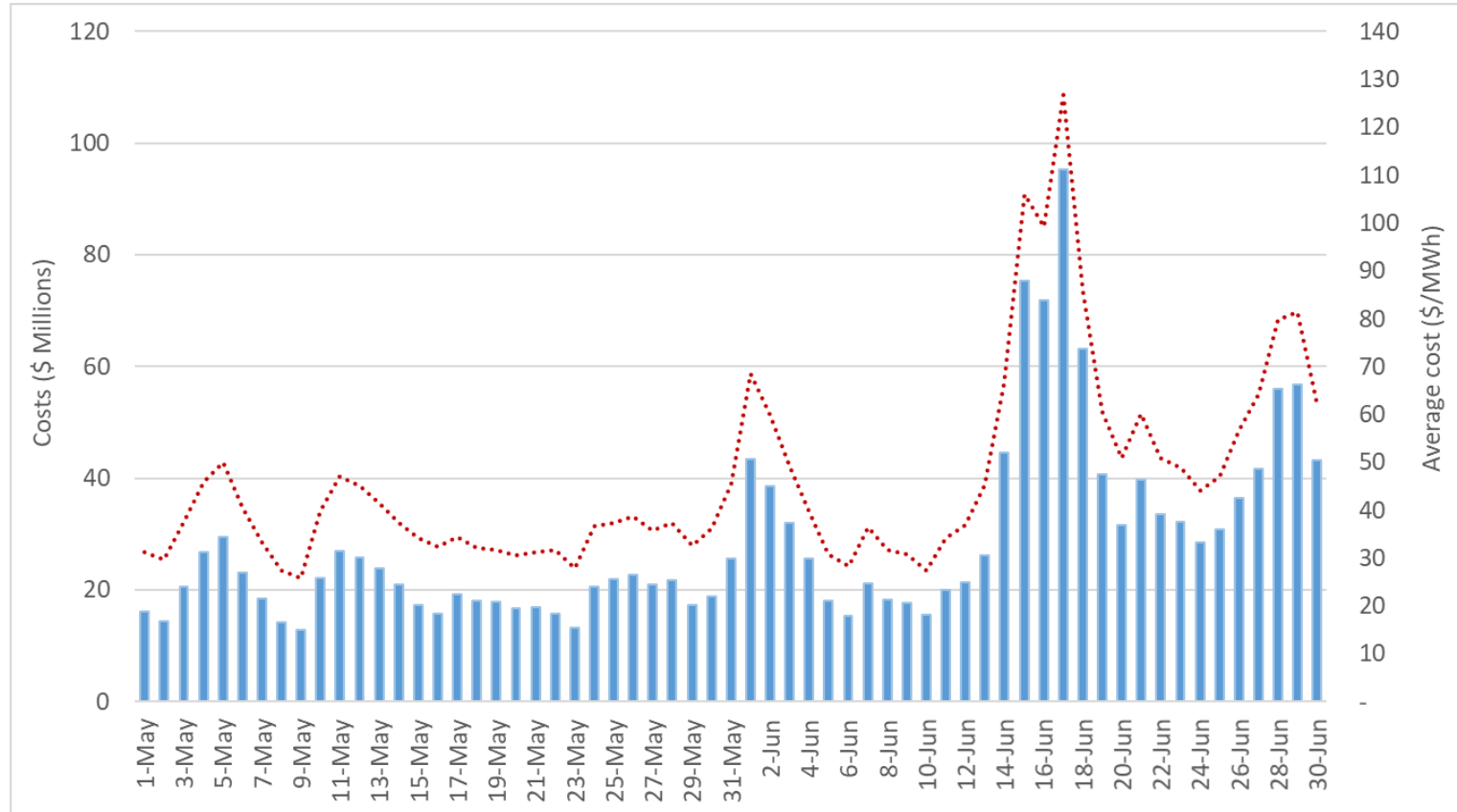
Storage resources were dispatched over 600 during peak hours, while charging in the early hours of the day



EIM transfers to CAISO during the mid June heatwave were predominantly in the import direction



Comparable to previous summer times, CAISO's market cost went up in mid June as higher demand settled at higher prices*



*This a preliminary estimate based on settlements data, which is still subject to change

Assessment of Summer Enhancement

- A few enhancements were in production in the June timeframe
- Real-time market incentives for Imports
 - Triggered on June 17 but data not available yet to assess performance and impact
- Real-time pricing
 - A warning activated on June 17 but no Spin/Non-spin resources were released for energy
- Uncertainty component added to the capacity test
 - It increased the number of test failures across EIM areas
- Assessment of all summer enhancements will be done as they are activated in Production and data becomes available

Enhancement to the capacity test on June 15 resulted in an increasing number of test failures across EIM areas



Thank you!

- The presentation and report are available on the Miscellaneous Stakeholder Meetings webpage at <http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx>
- Please contact Kristina Osborne at kosborne@caiso.com if you have any questions following today's call.