



California ISO



Preliminary Root Cause Analysis

Joint report with CAISO, CPUC and CEC on the heat storm and energy events of August 14 through 19

October 12, 2020

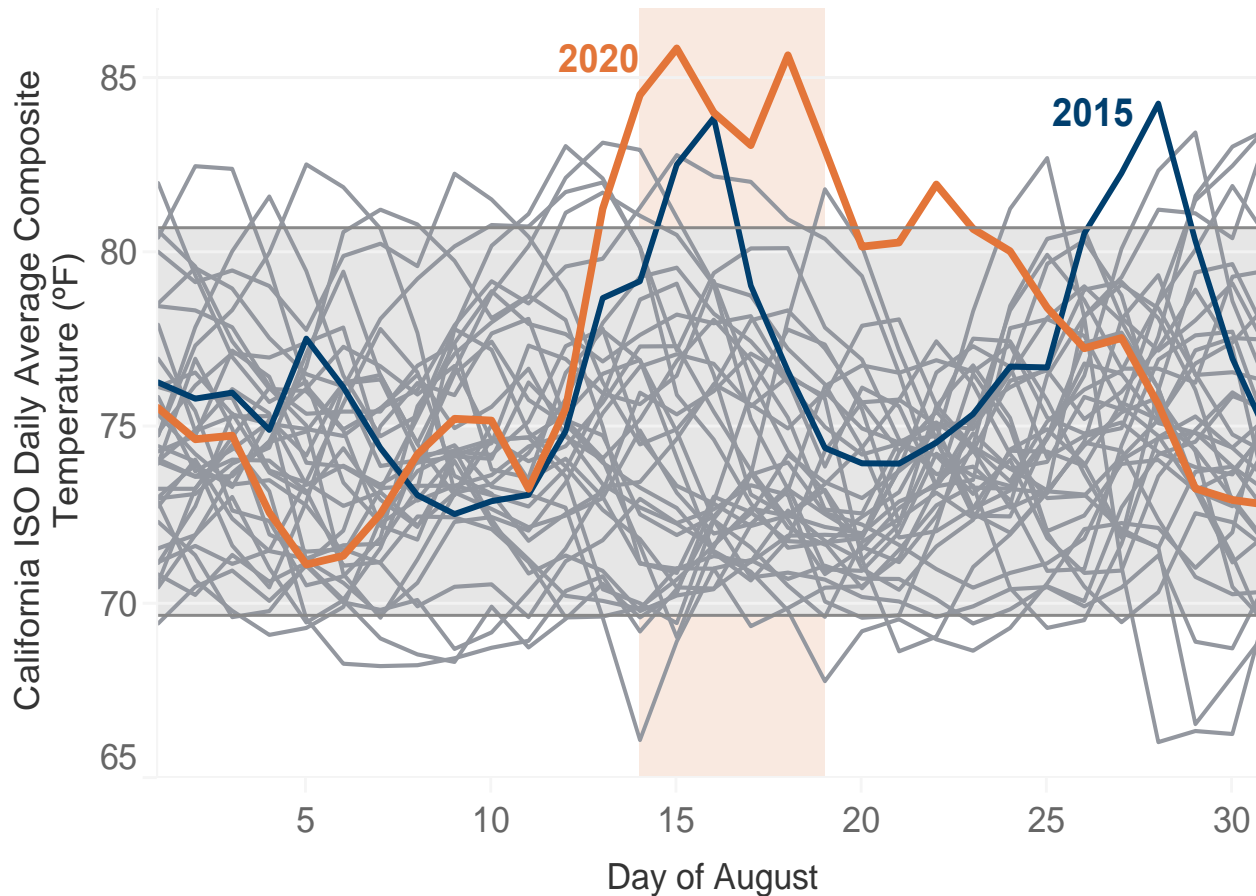
CAISO, CPUC and CEC Each Play an Integral Role in Maintaining Reliability

- The **CEC** prepares and adopts the hourly, long-term electricity demand forecasts to be used in a variety of planning efforts, including resource adequacy.
- The **CPUC** sets reliability requirements for the investor-owned utilities, community choice aggregators, and energy service providers that participate in the CAISO market to ensure there is sufficient capacity to meet the forecasted demand.
- The **CAISO** operates the transmission system and wholesale energy markets to maintain the reliability of the grid.

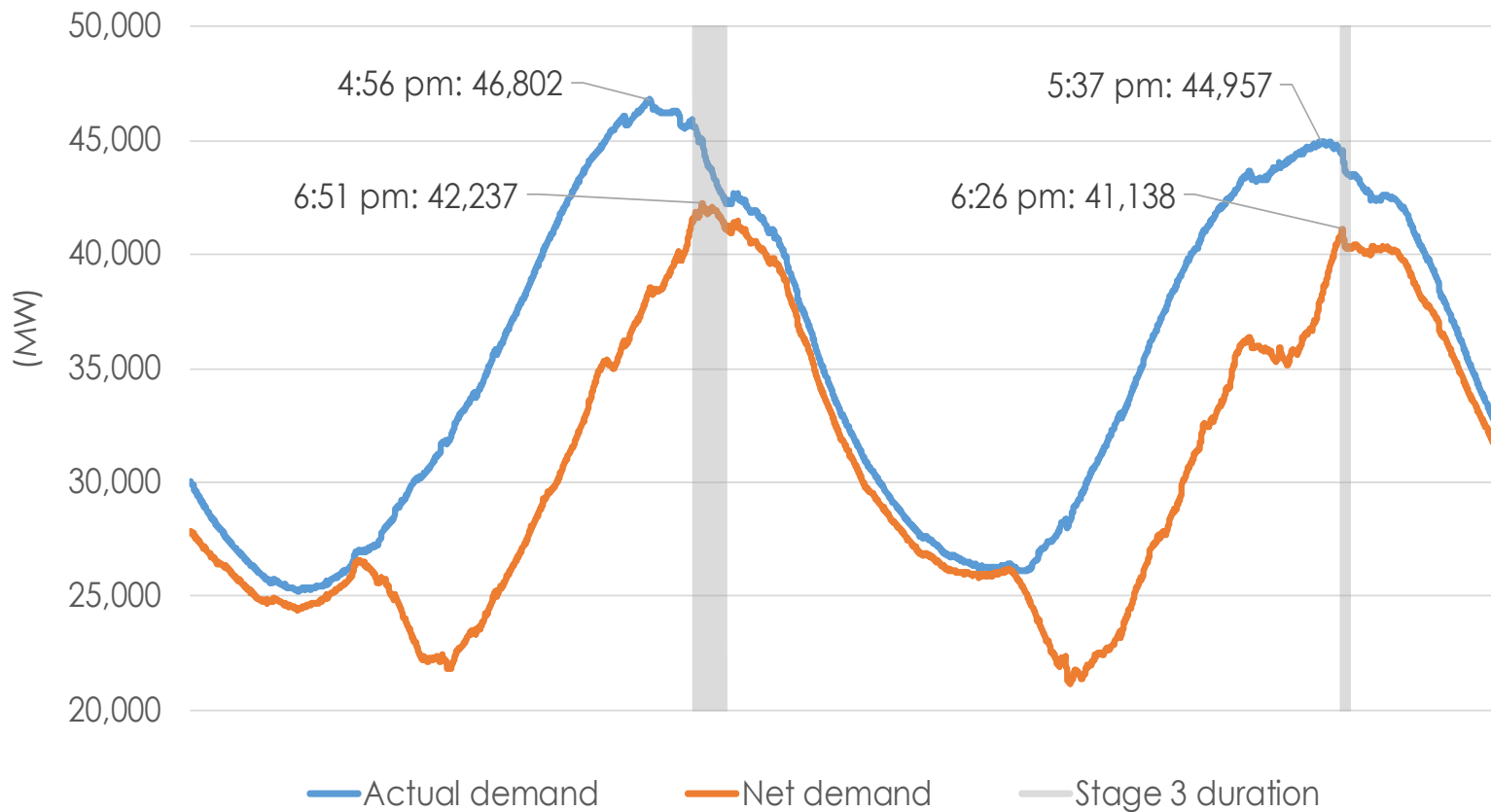
Preliminary root causes

- The existing reliability planning processes are not designed to fully address an extreme heat storm like the one experienced in mid-August.
- In transitioning to a reliable, clean and affordable resource mix, planning targets have not kept pace to lead to sufficient resources that can be relied upon to meet demand in the early evening hours. This makes balancing demand and supply more challenging. These challenges were amplified by the extreme heat storm.
- Some practices in the day-ahead energy market exacerbated the supply challenges due to highly stressed conditions.

Existing reliability planning processes are not designed to fully address extreme heat storm

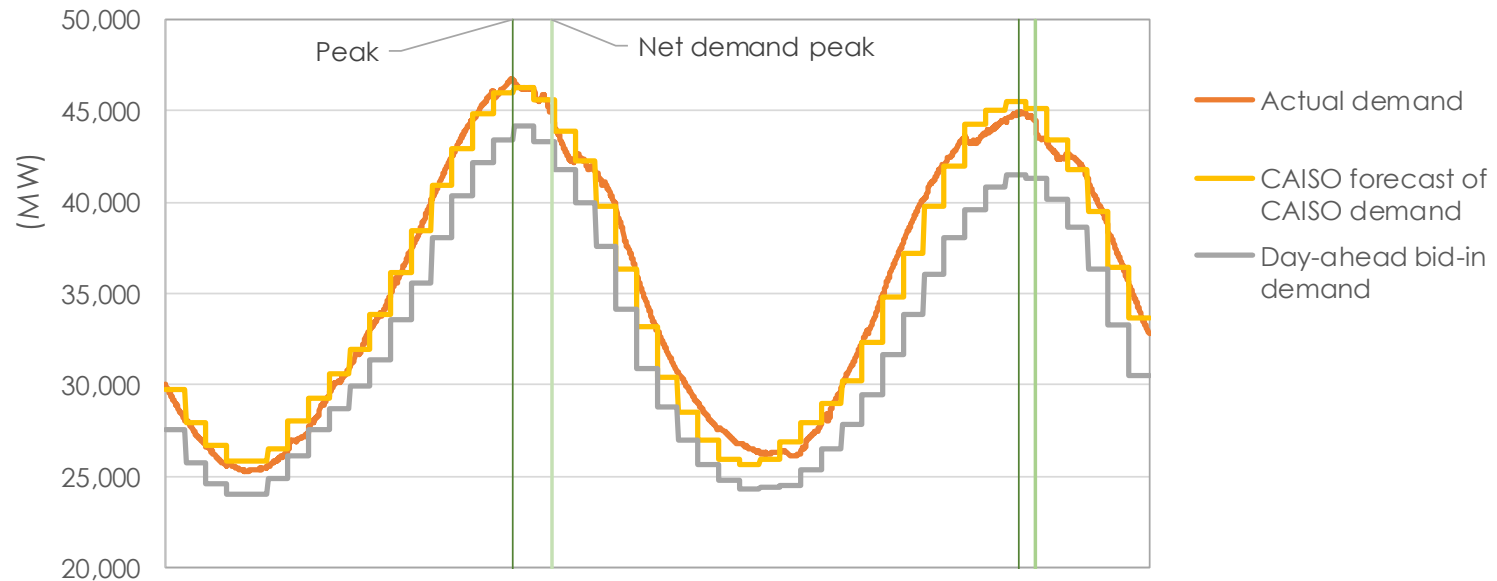


Planning targets have not kept pace to lead to sufficient resources that can be relied upon to meet demand in the early evening hours



Several practices in the day-ahead energy market exacerbated the supply challenges under highly stressed conditions

8/14 and 8/15 day-ahead bid-in demand, CAISO forecast, and actual demand



Day-ahead bid-in demand below actual:

	<u>8/14</u>	<u>8/15</u>
At peak:	3,386	3,434
Time of net demand peak:	1,792	3,219

Recommended Actions:

- Open proceeding on emergency procurement to cover high level load conditions and peak and net demand peak hour
- Perform a State-wide summer assessment and resource plan to inform planning
- Perform assessment of State resource plan
- Improve communications protocols
- Enhance market practices through stakeholder process
- Complete root cause analysis