

# EIM Resource Sufficiency Panel Discussion

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# What is the Resource Sufficiency Evaluation?

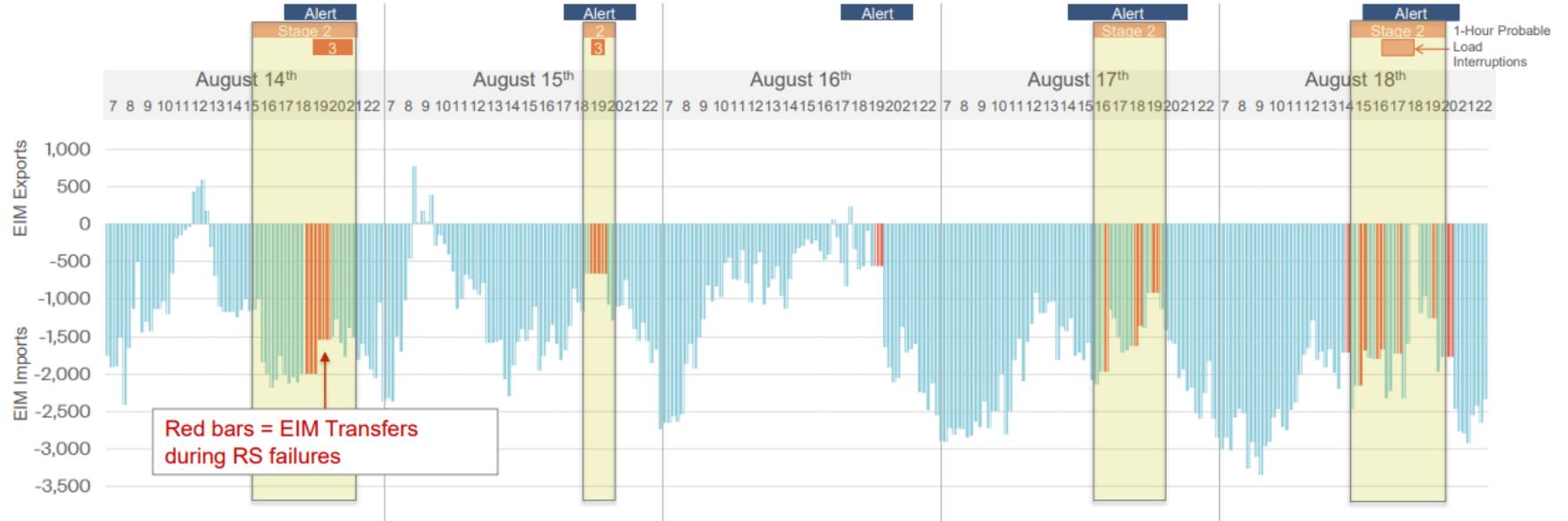
- EIM RSE is composed of 4 tests
  - Performed hourly for each EIM Entity Balancing Authority & CAISO BA

Test	Type / Timing
<b>Balancing Test</b> (not applicable CAISO BA)	Financially binding at T-40 Advisory at T-55, T-75
<b>Bid Range Capacity Test</b>	Binding at T-40, Advisory at T-55, T-75
<b>Flex Ramp Sufficiency Test</b>	Binding at T-40, Advisory at T-55, T-75
<b>[Transmission] Feasibility Test</b>	Non-binding

***“The purpose of the resource sufficiency evaluation is to ensure each EIM entity can adequately balance their own supply and demand prior to participating in the energy imbalance market.”***

# EIM Transfers to CAISO BAA During August Heatwave

## August 14<sup>th</sup> -18<sup>th</sup>, 2020



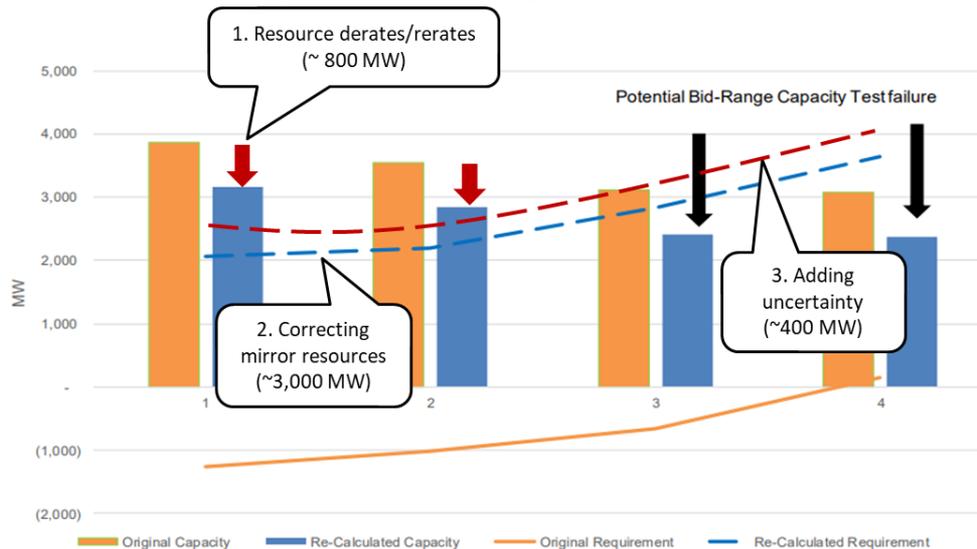
Heatwave Outcomes:	RS Design Challenges:
CAISO BAA continued passing RS, even during emergency conditions →	Existing capacity test fails to accurately measure ability to meet all BAA obligations
CAISO BAA received continued EIM imports, even during RS failures →	Any BAA that is importing in advance of an RS failure can continue to import, even during capacity shortfalls

Source: CAISO OASIS, WECC Western Heatwave Event 2020, October 20, 2020

# CAISO's Proposed Enhancements to RSE

- Even after enhancements, significant capacity continues to be shown:
  - Given that all available resources were in use (NERC EEA definitions), the blue bars should show CAISO's bid-range capacity near 0 MW.
  - However, CAISO BA still showing between 2,500 and 3,500 MW of available bid range capacity (blue bars) while in EEA 2 and EEA 3
- RSE pass / fail rate for CAISO BA also remains unchanged after the proposed enhancements are implemented.

## Capacity Test for August 14, 2020 HE 18



Source: CAISO's January 13, 2021 Resource Sufficiency Workshop

***These enhancements are a step in the right direction.***

***More remains to be done.***

# What remains to be done for EIM RS?

- EIM RSE must be **accurate**, **effective**, and **equitably applied** to all EIM Entity BAs and the CAISO BA
  - Should reflect the true operating capability of each BAA
  - Should proactively prevent leaning
- Diagnose and prioritize enhancements to the RSE by developing a crosswalk of capacity shown for RS and actual operational capability. Some areas for exploration as possible future enhancements are evaluated:
  - Resource ramping: Is bid range included in the test accessible within the intervals being tested?
  - Transmission deliverability: Is bid range stranded behind a binding constraint?
  - Uncertainty: Is net load & interchange uncertainty sufficiently accounted for? What happens when its not?
  - Demand response: Did quantities included in the tests perform during the heat wave?
  - Resource underperformance: Is it still an issue after known de-rates / re-rates are applied?
  - Reserve obligations: Is reserve treatment in the tests durable under emergency actions?
- Develop a process for ongoing, transparent review of the RSE.

***RSE is a foundational EIM design element and enhancements to it should be highly prioritized.***