



California ISO

Resource Sufficiency Evaluation (RSE) Enhancements initiative – RSE Analysis Discussion Continuation

Market Policy and Performance

December 8, 2021

Additional questions related to RSEE
[presentation](#) at the 11/19/21 MSC meeting

RSE Enhancements Initiative – Updated Schedule

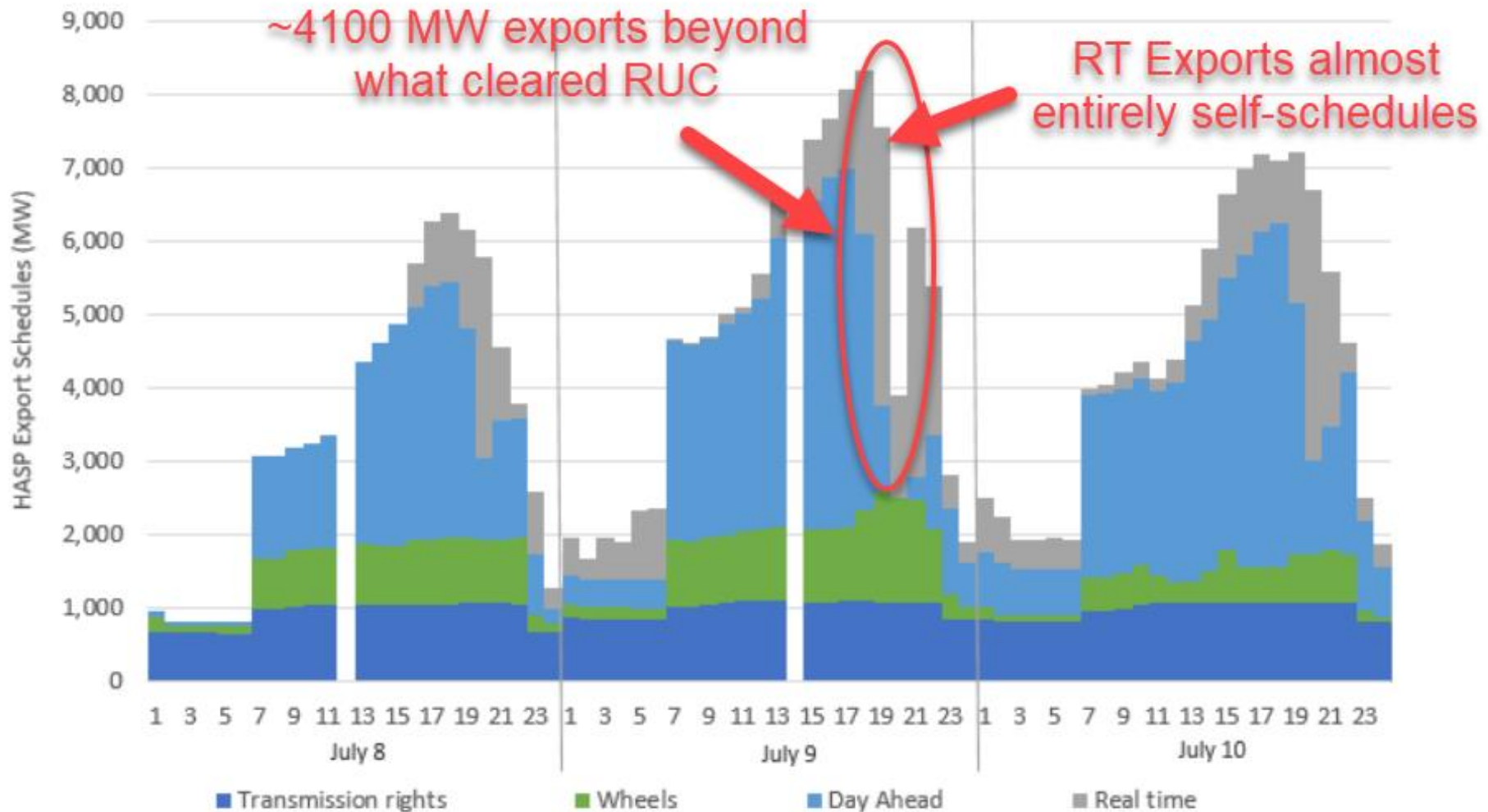
Date	Milestone
Dec 8, 2021	Workshop to follow-up MSC call
Dec 16, 2021	Revised Draft Final Proposal Posted (Tentative)
Dec 21, 2021	Revised Draft Final Proposal Stakeholder Call
Jan 10, 2022	Revised Draft Final Proposal Comments Due
February 9, 2022	Joint Governance Meeting

Note: Dates are tentative until confirmed in a public notice.

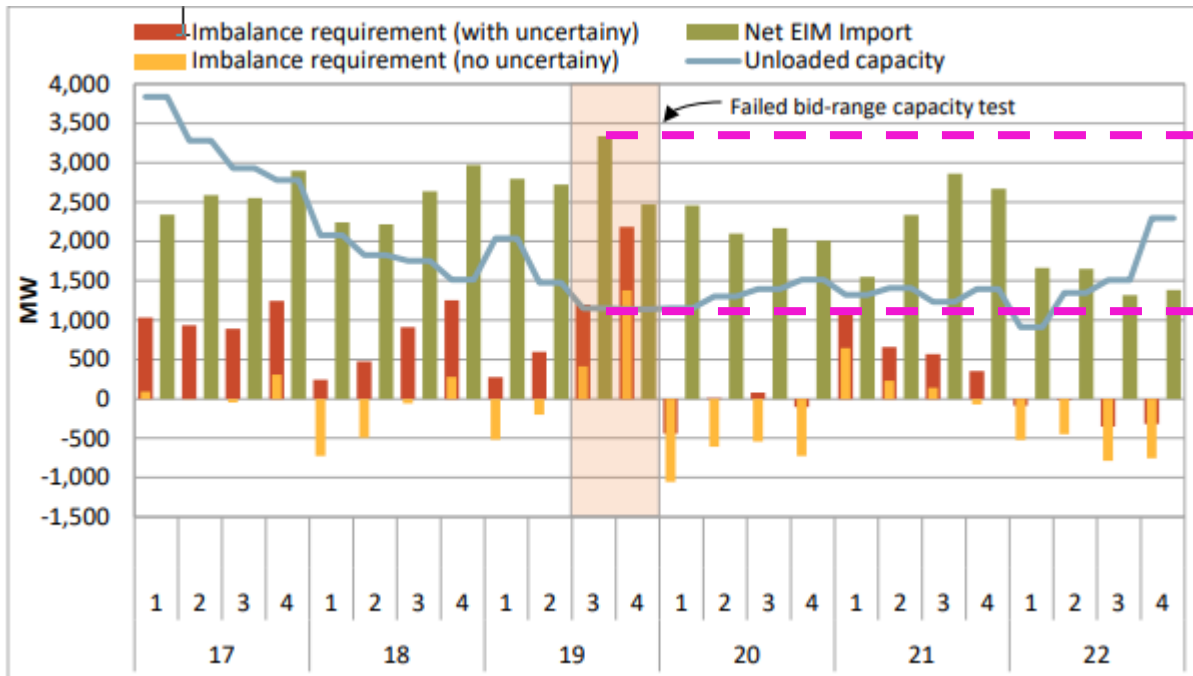
CAISO through HASP can clear exports based on access to advisory EIM transfers

- Should these transfers be added to the CAISO requirement?
- If not, what is the best way to limit the exports, that are enabled by EIM transfers, which get added to the CAISO RSE requirements?
 - Reduce CAISO requirements by HASP exports in excess of what clears RUC?
 - How would the CAISO create a counterfactual to determine the volume of exports to exclude?
- This interaction potentially explains the EIM transfers in excess of CAISO residual unloaded generation

Exports on July 9 were significant and CAISO market cleared real-time exports (self schedules and economic)



Current reporting does not explicitly highlight the market interactions that inform the test requirements



- CAISO had ~4100 MW of HASP cleared exports beyond what cleared RUC that as added to its requirement
 - Before assuming the highlighted difference is “leaning”, self-scheduled HASP exports that may have been supported by EIM transfers need to be considered

Load conformance is a market tool the CAISO uses to secure additional supply and flexibility in the real time market

- The RSE should test for forecast demand and export obligations; load conformance drives outcomes similar to what EIM entities can obtain through the bilateral and base scheduling process
 - Committing additional generation
 - Contracting additional bilateral hourly supply
- The RSE is not designed as a reliability check. A system operators ability to obtain additional supply margin, or increase ancillary services capacity/flexibility should not impair EIM participation

Recent analysis shows that load conformance can result in additional incremental EIM transfers

- These transfers represent only a portion of the load conformance in the RTPD runs
- EIM transfers only benefit the CAISO to the extent that they unload resources internal to the CAISO BAA in the reference interval for determining flex requirements
 - Analysis showed the re-dispatch of internal BAA resources reduced the CAISO's net flexibility when considering internal resources
- The CAISO is open to adding load conformance that leads to EIM transfers that cure actual supply/flexibility insufficiency, but is wary of making the test less accurate
 - Can increase spurious failures
 - Adding load conformance without also addressing HASP market interactions may inappropriately disadvantage the CAISO

Option 1 – Calculate and add the effect of load conformance

- Add additional flexible up requirements based upon the correlation of load conformance to additional EIM transfers on tight supply days
- Calculate correlation on hour immediately proceeding and during all Energy Emergency Alerts (EEAs) during 2020-2021 (α)
- Multiply α *reference interval load conformance; add to upward ramp sufficiency requirement
- To avoid spurious failures, only perform during expected tight system conditions
 - What is the best proxy of these conditions? Not clearing full export quantity in the previous day's RUC?
 - What is a proxy of a tight system condition external to the CAISO?

Option 1 – Add effect of load conformance

Advantages

- Attempts to account for load conformance's impact on unloading internal capacity to pass flexible ramp sufficiency test

Disadvantages

- Small sample size may not be predictive of future conditions
- Can lead to spurious failures during tight system conditions; limits EIM benefits to all participants while creating reliability risk

Unknown whether Summer 2022 implementation is feasible

Option 2 – Add RTD load conformance to flexible ramp up requirement

- Average RTD load conformance over previous period of time and add to the upward flexibility requirement
- Would this requirement be applied all the time, or only during forecast stressed system conditions?

Option 2 – Add RTD load conformance to flexible ramp up requirement

Advantages

- Representative of the actual load conformance that is used in the real-time dispatch

Disadvantages

- Can lead to spurious failures during tight system conditions
- This conformance is not reflective of the reference interval that impacts a BAA's ability to potentially and inadvertently pass the flexible ramping sufficiency test
- Does not capture leaning on capacity to address potential uncertainty; to the extent it does not materialize by RTD

Unknown whether Summer 2022 implementation is feasible

Option 3 – Do not add load conformance to any RSE requirements as part of Phase 1

- July 9 analysis confirms that it is possible that load conformance can lead to additional EIM transfers, however the dispatch to internal CAISO resources limited CAISO's flexibility by a greater amount than what was created by conformance
 - Delaying consideration until phase 2 will provide CAISO the opportunity to perform additional analysis with a larger dataset, to the extent there is stakeholder consensus to add load conformance
 - Would allow for CAISO to address load conformance with changes that ensure test is capturing CAISO's actual obligations
- Proposal to limit incremental EIM transfers during certain emergency actions provides backstop for erroneous passing of the test

Option 3 – Do not add load conformance to any RSE requirements as part of Phase 1

Advantages

- Does not inappropriately disadvantage the CAISO in passing the RSE
- Does not create the potential for spurious failures during stressed system conditions; which increases EIM efficiency
- Allows consideration of load conformance to be paired with financial consequences for failure of the RSE

Disadvantages

- When CAISO is near capacity deficient, EIM transfers can help the CAISO pass the flexible ramp sufficiency test. This outcome would be possible during the summer of 2022

Other proposed changes in the revised draft final proposal

- Make MW quantity crediting through STUC horizon configurable and account for daily starts
- Remove proposed penalties for demand response misuse
 - Continue existing paradigm for base schedule validation
- Suspend net load uncertainty from the capacity test under existing FERC provision
- Suspend the inertia uncertainty adder from capacity test
 - Revise calculation as part of phase 2
- Expanding emergency actions that lock incremental transfers to include the direction of system wide operating voltage reductions for the purpose of reducing power consumption