

December Monthly Meeting

Thad LeVar

Bonnie Lamond

Woori Lee

Teleconference

December 9, 2022

Agenda

- **Welcome Remarks and Announcements** – *BOSR Chair LeVar*
- **Resource Sufficiency Evaluation Update**– *Woori Lee, WIEB*
 - WEIM RSE
 - EDAM RSE
- **Governance Update** – *Commissioner Tawney, BOSR Representative on the GRC*
- **Next Steps and 2023 Outlook**- *Bonnie Lamond, WIEB*



Resource Sufficiency Evaluation Update

Woori Lee

Wholesale Electricity Market Analyst

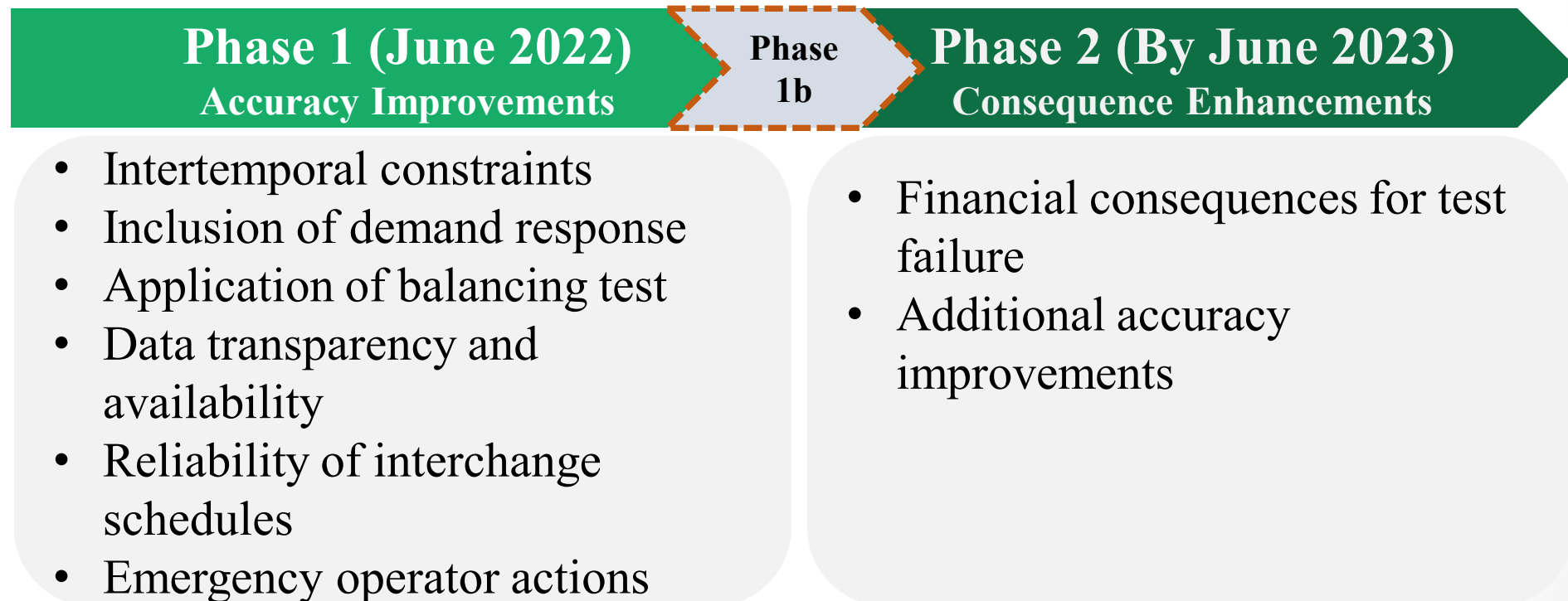


WEIM RSE Phase 2 Initiative

Initiative Update

WEIM RSE Phased Approach

- CAISO proposed a two phased approach to the WEIM RSE Enhancement Initiative to cover comprehensive topics.



WEIM RSE Phase 1

BOSR Comments

- Highlighted fundamental four principles of RSE:

1. **Prioritize Accuracy:** The accuracy of the RSE is paramount to achieving the intended purpose of the EIM RSE, ensuring participants have sufficient capacity and ramping capability prior to enjoying the benefits of the EIM.
2. **Improve Transparency:** Transparency plays a significant role in ensuring that the EIM RSE design is accurate, effective and consistently applied. Providing granular data and regular reporting is necessary to improve transparency.
3. **Impartial Application:** Implementation of the RSE and the consequences for failure should be applied impartially to all EIM Entities to support market efficiency and reliability.
4. **Expedite Enhancements to Failure Consequences:** The consequences of failing the RSE should provide appropriate economic incentives for the BAs to acquire sufficient resource capacity and ramping capability.

WEIM RSE Phase 1 Achievements

- ✓ Revised counting rules for supply made available to the real-time market
- ✓ Ensured the reference point used for flexible ramping sufficiency requirement calculation reflected actual operating conditions
- ✓ Expanded framework for demand response participation
- ✓ Suspended inertia uncertainty adder
- ✓ Revised balancing test revenue allocation
- ✓ Increased transparency relating to the WEIM RSE

WEIM RSE Phase 2 Final Proposal Summary

- **In phase 2 of the initiative, CAISO attempted to improve accuracy of the RSE and incorporate energy assistance. The followings were proposed:**
 1. The introduction of an **energy assistance** option as an alternative consequence for failure of the RSE.
 2. Uncertainty adder in the capacity test
 - For the net-load uncertainty, the quantile regression methodology to calculate net-load uncertainty from the Flexible Ramping Products Refinements initiative will be applied.
 - For the inertia uncertainty adder, the proposal is to permanently remove it from the capacity test.
 3. Treatment of load conformance
 - Do not include load conformance in the capacity and flexibility test.
 4. The removal of day-of low priority exports that are potentially supported by EIM transfer imports from the CAISO's RSE obligation.

WEIM RSE Phase 2

Failure Consequences – Energy Assistance

- **If a BAA has elected to utilize assistance energy, the BAA can receive WEIM energy transfers when it fails the WEIM RSE.**

Current Failure Consequences: (Physical Consequences)

- Limits additional transfers in the WEIM.
- Transfer energy up to the amount from the last passed run or the base scheduled transfer amount if greater

Energy Assistance

- The failed BAA pays an after-the-fact or “ex-post” surcharge for WEIM assistance energy transfers.
 - Either \$1,000/MWh or \$2,000/MWh
- Ex-post price will be applied to the minimum of the quantity of capacity or flexible ramping sufficiency failure or the dynamic WEIM transfers that are tagged.
- The proposal is to sunset this assistance energy design no later than December 31, 2025.



EDAM Initiative

RSE Update

EDAM RSE

BOSR Comments (Sep. 2022)

- The BOSR supports counting WSPP Schedule-C contracts in the EDAM RSE, as proposed in the Revised Straw Proposal.
- The BOSR supports the CAISO's proposal that all non-source specific forward supply contracts (e.g., WSPP Schedule-C contracts) be e-tagged within three hours following the publication of the day-ahead market results.
- The BOSR presents potential options to assess a higher penalty than the proposed maximum of the Mid-C or Palo Verde price.
 - Our first alternative would **apply a high enough multiplier** to the maximum of the Mid-C or Palo Verde price.
 - Our second alternative would use the CAISO **soft bid cap price** (currently \$1,000 per MWh) instead of the maximum of the Mid-C or Palo Verde price.

EDAM RSE

Failure Consequences Evolution

- **CAISO proposed a financial consequences structure where capacity shortfalls can be cured by the EDAM market through an administrative surcharge.**

Straw Proposal

Hurdle rate during stressed system conditions.

BAs can opt for a

- physical transfer limit; or
- hurdle rate in the market clearing process.
 - The hurdle rate will be a **bid cap of \$2,000/MWh**

Revised Straw Proposal

Administrative surcharge during all periods.

- Administrative surcharge:
 - **Max (Mid-C or Palo Verde hub price of 16-hour block on-peak product)**
- Application:
 - $\text{Max (failure short fall) * Max (Mid- C, Palo Verde 16-hour day-ahead product) * 16}$

Final Proposal

Three tiers of varying administrative surcharges.

- Different multipliers will be applied to the surcharge.
- Base surcharge:
 - **Max (Mid-C or Palo Verde 16-hour block product)**

EDAM RSE Final Proposal

Financial Consequences

- Administrative surcharge that will be applied for the failure will vary upon the size of the EDAM RSE deficiency.

Tier 1

No Consequences

RSE failure up to the higher of 10MW or the forecast error associated with each BAA's upward imbalance reserve requirement.

Tier 2

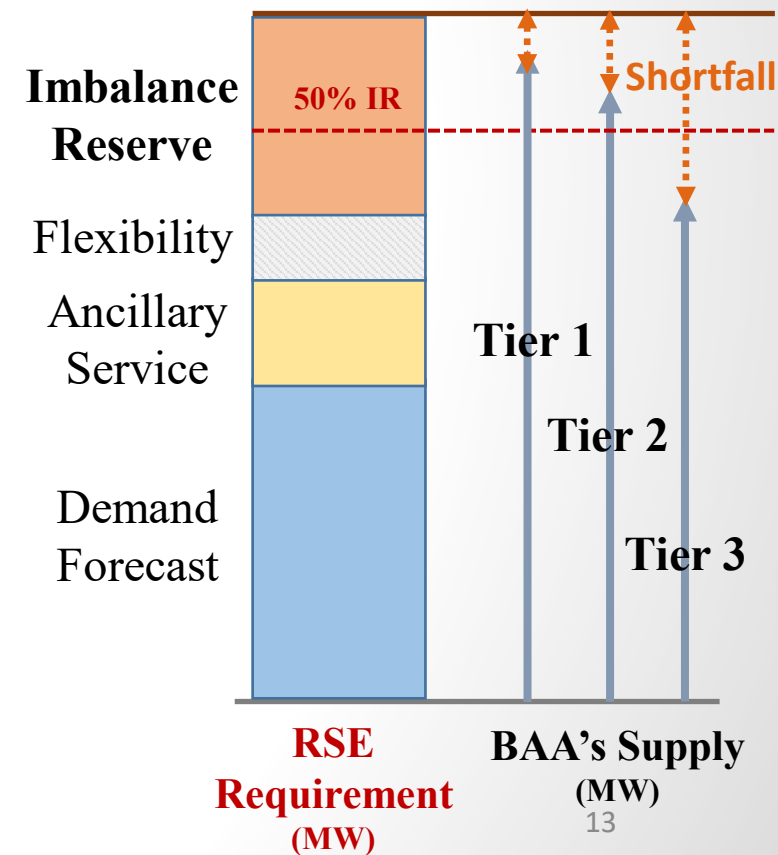
Surcharge X 1.25

Failed RSE shortage does not exceed 50% of imbalance reserve requirement.

Tier 3

Surcharge X 2

Failed RSE shortfall is greater than 50% of imbalance reserve requirement



EDAM RSE Draft Final Proposal

Financial Consequences

- Introducing financial consequences for the failure will expand diversity benefits of the EDAM by allowing failed BAA to utilize supply surplus in the market
- The administrative surcharge is set to ensure that the EDAM provides a comparable option to address next day capacity needs, mirroring the existing bilateral markets
- Tiered structure provides scaled penalties depending on the severity of the failure
 - By applying multiplier, the penalty price becomes higher than the bilateral hub price
- Repeated failures will have a prospective 1% adder applied to Tiers 2 and 3 multipliers for each day over a rolling period



Governance Update

Commissioner Tawney
BOSR Representative on the GRC



Issue	GRC Recommendation
Delegation of Authority	Maintain joint authority construct
Definition of Joint Authority	Any tariff rule applicable to the WEIM/EDAM Entity BAAs, WEIM/EDAM Entities, or other market participants within the WEIM/EDAM Entity BAAs, in their capacity as participants in the WEIM/EDAM. Includes any tariff rule for the DAM or RTM that directly establishes or changes the formation of any LMPs for a product that is common to the overall WEIM or EDAM markets
Advisory Authority	Enhanced to include the following elements in cases where the GB advises the Board not to adopt a proposal: 1) The input must be provided and discussed in joint general session; and 2) If the Board gives approval to file the proposal with FERC, the GB would have the right to hire outside counsel to prepare a written statement of its opposition that will be submitted to FERC
Size and Composition	Remains at five members; when considering reappointment of the GB, the NC should consider whether doing so fits with the enhanced responsibilities associated with the EDAM; management should arrange for a study in 2023 to evaluate compensation
Stakeholder Engagement	Maintain current framework; recommend use of working groups when the complexity of initiative merit the extra work; under the policy roadmap process, RIF to host a roundtable discussion of sector representatives
Amend CAISO Bylaws	Amend the Bylaws to clarify that, consistent with its corporate purpose and status as a nonprofit public benefit corporation, CAISO will weigh the interests of all stakeholders in the footprint; amend the Bylaws to add same obligation for individual members of the Board of Governors
Timing	EDAM governance proposal should become effective once FERC has conclusively accepted the CAISO's section 205 filing for the market design

Governance Update

- Joint authority definition:

“The WEIM/EDAM Governing Body will have joint authority with the Board of Governors to approve or reject a proposal to change or establish a tariff rule applicable to the WEIM/EDAM Entity balancing authority areas, WEIM/EDAM Entities, or other market participants within the WEIM/EDAM Entity balancing authority areas, in their capacity as participants in the WEIM/EDAM. The WEIM/EDAM Governing Body will also have joint authority with the Board of Governors to approve or reject a proposal to change or establish any tariff rule for the day-ahead or real-time markets that directly establishes or changes the formation of any locational marginal price(s) for a product that is common to the overall WEIM or EDAM markets. The scope of this joint authority excludes, without limitation, any other proposals to change or establish tariff rule(s) applicable only to the CAISO balancing authority area or to the CAISO-controlled grid.”

- Note: For avoidance of doubt, the joint authority definition set forth above does not include measures, such as parameters or constraints, the ISO may use to ensure reliable operation within its balancing authority area.”

Governance Update

- Advisory authority definition:

“The WEIM/EDAM Governing Body may provide advisory input over proposals to change or establish tariff rules that would apply to the real-time and/or day-ahead market but are not within the scope of joint authority.”
- The existing advisory input process would be enhanced to include the following elements in cases where Governing Body advises the Board not to adopt a proposal:
 - The input must be provided and discussed in joint general session of both bodies; and
 - If the Board gives approval to file the proposal with FERC, the Governing Body would have the right to hire outside counsel or other independent assistance to prepare a written statement of its opposition that will be submitted to FERC in the proceeding in which the CAISO makes its tariff filing.



Next Steps

Bonnie Lamond

Program Manager - Wholesale Electricity Markets

EDAM Market Design

Next Steps

Date	Milestone
December 7, 2022	EDAM final proposal
December 13, 2022	WEIM Governing Body meeting
December 14, 2022	WEIM Governing Body and ISO Board briefing
January 13, 2023	BOSR monthly meeting
January 16, 2023	BOSR staff to circulate comments to BOSR members
January 24, 2023	BOSR comments to Governing Body
January 31, 2023	WEIM Governing Body meeting
February 1, 2023	ISO Board and WEIM Governing Body decision

EDAM Governance

Next Steps

Date	Milestone
December 7, 2022	EDAM governance draft final proposal posted
December 14, 2022	WEIM Governing Body and ISO Board meeting
January 9, 2023	GRC public meeting
January 13, 2023	BOSR monthly meeting
January 16, 2023	BOSR staff to circulate comments to BOSR members
January 24, 2023	BOSR comments to Governing Body
January 31, 2023	WEIM Governing Body meeting
February 1, 2023	Joint Authority decision

2023 Outlook

- Day-Ahead Market Enhancements (Advisory, Joint Authority*)
- Extended Day-Ahead Market (Joint Authority)
- Price Formation (Joint Authority)
- Resource Adequacy Enhancements Phase 2 (Advisory)
- Transmission Service and Market Scheduling Priorities Phase 2 (Advisory)

*Decisional classification under review

Upcoming Meetings

BOSR Monthly Meeting

Friday, January 13, 2023 at 10:00 AM MDT / 9:00 AM PDT