DAME/EDAM/EDAM CAISO Balancing Authority Participation Rules

Markets Training Q&A

Details:
On August 18, 2025, California ISO conducted a markets training session covering the Day-Ahead Market Enhancements (DAME), Extended Day-Ahead Market (EDAM), and EDAM ISO Balancing Authority (BA) Participation Rules initiatives. During the session, participants raised several questions. This document captures those questions along with the corresponding responses.

1. **Question:** Do resources provide RC (Reliability Capacity) only for their own BAA?

   Answer: The default is for resources to serve their own BAA, though EDAM allows for flexibility through structured transfers and eligibility rules.

2. **Question:** For Resource Adequacy (RA) resources; can you confirm the Must Offer Obligation (MOO) applies for both products (Imbalance Reserve Up/Down, IRU/IRD)?

   Answer: See the Business Requirement Specifications (BRS) for DAME, Imbalance Reserve Up (IRU) and Imbalance Reserve Down (IRD) both have Must Offer Obligations (MOO) for Resource Adequacy (RA) resources (DAME-BRQ04040 & BRQ04060)

3. **Question:** If yes, does that MOO also apply to intermittent resources?

   Answer: Refer to Section 6.2, beginning on page 139, of the DAME Business Requirements Specifications document: https://www.caiso.com/Documents/BusinessRequirementsSpecificationv12Redline-Day-AheadMarketEnhancement.pdf. It does not get into the MOO details at the resource level but will likely be covered in the RA Business Practice Manual (BPM) when we reflect these new products in the MOO table. Variable Energy Resources (VERs) are eligible for these products, so I believe they will have a MOO (like VERS do today).

4. **Question:** What is the difference between imbalance reserves and the flex ramp product in the WEIM? Will the flex ramp tests and / or product go away for WEIM entities that participate in EDAM?

   Answer: Imbalance reserves are a day-ahead product introduced in EDAM to cover uncertainty between day-ahead and real-time forecasts, while the flex ramp product in WEIM operates in real-time to ensure sufficient ramping capability for short-term variability. Although EDAM adds imbalance reserves to the market, the flex ramp product and associated tests will continue to apply to WEIM entities participating in EDAM, as they remain essential for real-time reliability.

Together, these products provide complementary layers of flexibility across different timeframes.

5. **Question:** On slides 15-16, what is difference between dark blue and light blue EDAM Balancing Authority Areas (BAAs)?

   Answer: The color denotes different Western Energy Imbalance Market (WEIM) participation areas but is more of a general visual representation. You can get a more accurate map of EDAM entities on the Western Energy Markets webpage: https://www.westerneim.com/Pages/ExtendedDayAheadMarket.aspx.

6. **Question:** What does 'non-guaranteed resource' mean with respect to the confidence factor?

   Answer: In EDAM, a non-guaranteed resource refers to supply that has historically failed to deliver as expected, therefore receives a lower confidence factor when calculating the Net Import Transfer Constraint. This adjustment limits how much a BAA can rely on such imports to meet its reliability requirements.

7. **Question:** In various documents it states "Activation– May 1, 2026". Does that mean bids and awards for the two new products start on 4/30/2026 for 5/1/2026?

   Answer: Yes, it is for Trade Date (TD) May 01, 2026, so the Day-Ahead run on calendar day April 30, 2026, effective for Trade/Operating Day 05/01/26.

8. **Question:** Will the Locational Marginal Price (LMP) components still be available in Customer Market Results Interface (CMRI)?

   Answer: Correct

9. **Question:** Will there be a Must Offer Obligation (MOO) to get our bids submitted early enough to be included in the Resource Sufficiency Evaluation (RSE)?

   Answer: There are no changes to the MOO timelines or process -- we discussed the possibility of moving the deadline for bidding up to 09:00 but determined this be problematic. We will request bids before 09:00 and will have to do an estimation based upon known MOO status on missing bids.

10. **Question:** Are Resource Sufficiency Evaluation (RSE) preliminary bids based on Scheduling Infrastructure Business Rules (SIBR) and Outage Management System (OMS) too?

    Answer: SIBR submissions and outages are considered in the Day-Ahead RSE (DA-RSE); Yes, the RSE takes into account OMS (generation) outages, not transmission.

11. **Question:** So, there will no longer be base schedules in Real-Time (RT) for the Balancing Authority Areas (BAAs) of EDAM participants. Will that mean that all RT flows not scheduled in the EDAM will have imbalance impacts?

    Answer: Yes, there will no longer be RT base scheduling for EDAM entities which will mean an adjustment for your RT Operators who are used to base schedule changes, for instance at T-55 to pass the RT-RSE. One would have to create manual dispatches (or for CISO, exceptional dispatches).

12. **Question:** One last Resource Sufficiency Evaluation (RSE) question. Will results from the runs be made available publicly?

    Answer: Results will be made available for the Day-Ahead RSE (DA-RSE) in SIBR, CMRI and OASIS. The detailed DA-RSE results will be shared on CMRI (secured site) for each EDAM entity during the RSE runs from 06:00 to 10:00). The final pass/fail details will be posted on OASIS after the Day-Ahead results are published.

13. **Question:** Today, WEIM Entities hold out Ancillary Services (AS) via Base Schedule fields; will similar fields be introduced to the bidding strings?

    Answer: Yes, AS will be bid in and protected; the Market will not dispatch them. AS requirements will also be submitted; the entity sends the requirements, and self-schedules AS, to meet the requirements.

14. **Question:** So, we'll have a way to bid in and protect AS, but we also need to submit our requirement? Does the amount of AS requirement we submit need to match our actual requirements in accordance with the Reserve Sharing Group (RSG) or is it only a value to inform the Market of how much to hold back? The reason I ask is because we will likely have resources we use to count on reserves but will not be registered resources in the market.

    Answer: Yes. The Market (and the ISO) are not monitoring your AS requirements and performance. You have the Reliability Coordinator (RC) and NERC for that. For what you submit as AS requirements, the Resource Sufficiency Evaluation (RSE) will expect equal self-schedules.

15. **Question:** Will external Balancing Authority Area (BAA) Ancillary Service (AS) self-provision be at the resource level in day-ahead? (i.e., will it look like AS self-schedules for each service, such that total self-scheduled AS meets the EDAM BAA AS requirements)?

    Answer: By external AS, I'm assuming a resource not in the Market but providing AS to your BA. The Market does not need to know every external AS source, just if it is a market resource and you want to protect it. For example, if you are covering some AS with non-market demand response, that is not self-scheduled. You would reduce your AS requirement accordingly. You still have to submit the full details to your RC.

16. **Question:** How will the default availability bid be calculated?

    Answer: The default availability bid in EDAM will be calculated based on historical performance data and uncertainty metrics, ensuring resources are fairly compensated when they do not submit their own bids.

17. **Question:** Is it the case that all four types of TSRs might be set up in both directions across a given tie?

    Answer: Correct. The transfer location has more information than the intertie, it has from and to BAA, direction, and the intertie.

18. **Question:** Is the Resource ID (RES_ID) automatically generated?

    Answer: For RES_ID registered in Master File (MF), they are defined by EDAM entity in the Transfer Resource Definition template (TDT)

19. **Question:** Is the Type 1 Transfer System Resource (TSR) mainly to be used to fulfill bilaterial Power Purchase Agreement (PPA) contract with self-schedule bid?

    Answer: Yes, in EDAM, a Type 1 TSR is primarily intended to fulfill bilateral PPAs using self-schedule bids.

20. **Question:** Can the Scheduling Coordinator (SC) release rights both to and from the intertie?

    Answer: Yes, a release **to** the tie would indicate export rights; a release **from** would indicate import rights. Transfer System Rights (TSRs) are directional, so each TSR would have its own limit.

21. **Question:** Can a Scheduling Coordinator (SC) entity redirect its type 1 (firm Transfer System Resource, TSR) to another flow path? If yes, what does this look like?

    Answer: The Market doesn't validate the tag path; if the flow of the tag maps to the same TSR, it would not impact the schedule. If the tag path changes the transfer tie between two Balancing Authorities (BA), it can result in a Real-Time imbalance.

22. **Questions:** Isn't the self-schedule (SS) bid volume telling the CAISO that the generator doesn't want to/can't dispatch below that SS volume? Is this CAISO-created rule appropriate, even if the resource is still willing to ramp down in Real-Time (RT)? And if the EDAM Energy award on a unit is 100 MWs and the Physical Minimum (Pmin) is 50 (and no ancillary products are present – Imbalance Reserve Up/Down (IRU/IRD), Reliability Capacity (RCU/RCD), etc.), if we self-schedule at 100 MW, that signals to the CAISO/Market that the unit can't, or won't, go below 100 MWs. However, if the unit can ramp down, would it not be better to self-schedule at the Pmin so that the unit can be ramped down to the Pmin in WEIM?

    Answer: Self-schedules communicate to the CAISO that the resource is not economically dispatchable below that volume. It essentially locks in that MW level as a must-take quantity, meaning the Market won't optimize it downward unless reliability constraints or manual Operator actions intervene. So, if a unit enters a 100 MW self-schedule bid, the CAISO interprets that as the unit being unwilling or unable to go below 100 MW even if the unit technically can ramp down. From a market design perspective, CAISO's treatment of SS volumes is consistent with its goal of respecting resource self-determination while maintaining dispatch efficiency.

    If the unit has a Pmin of 50 MW and is technically capable of ramping down to that level, then self-scheduling at 50 MW would be more appropriate if the goal is to allow the CAISO to economically dispatch the unit down to its minimum operating level. This preserves flexibility in the WEIM and avoids artificially constraining the unit at a higher output level. It also aligns better with the principles of least-cost dispatch and system efficiency. Self-scheduling at Pmin allows the market to utilize the unit's full dispatchable range, improving overall system efficiency and responsiveness.

23. **Question:** Does reg overlap any of the other products?

    Answer: Yes, regulation can overlap with other products like imbalance reserves and energy in EDAM, as all are co-optimized in the market to ensure efficient dispatch and reliability. However, each product serves a distinct operational purpose, with regulation specifically targeting fine-tuned frequency control.

24. **Question:** In the Residual Unit Commitment (RUC) process, will Imbalance Reserve Up (IRU) awards be released before a Reliability Capacity Up (RCU) award? Will the IRU be released before a power balance constraint or export curtailment?

    Answer: In **Residual Unit Commitment (RUC)**, Imbalance Reserve Up/Down (IRU/IRD) awards are fixed and therefore not relaxed. The Reliability Capacity Up/Down (RCU/RCD) can be relaxed and are part of the power balance constraint (PBC) that includes fixed energy awards that are fixed from the Integrated Forward Market (IFM) pass. More specifically:

    The EDAM BAA power balance constraints in the RUC can be relaxed at a penalty by including Reliability Capacity shortfall and surplus variables as follows:

$$\sum_{i \in BAA_j} \frac{\left(\Delta RCU_{i,t} - \Delta RCD_{i,t}\right)}{LPF_{i,t}^{(RUC)}} + \Delta T_{j,t}^{(RCU)} + RCUS_{j,t} - RCDS_{j,t} = 0, \forall j \in EDAM \wedge t = 1,2,\ldots,T$$

Where the Reliability Capacity shortfall (*RCUS*) and surplus (*RCDS*) variables are assigned penalty costs in the objective function. To prevent transfers causing a power balance constraint relaxation in an EDAM BAA, the following constraints are enforced in the RUC:

$$\left.\begin{aligned} RCUS_{j,t}\left(T_{j,t}^{(RCU)} - \bar{T}_{j,t}\right) \le 0 \\ RCDS_{j,t}\left(T_{j,t}^{(RCU)} - \bar{T}_{j,t}\right) \ge 0 \end{aligned}\right\}, \forall j \in EDAM \wedge t = 1,2,\dots,T$$

These constraints will not allow a net export reliability capacity transfer above a reference to cause power balance shortfall, or a net import reliability capacity transfer below a reference to cause power balance surplus. The net transfer reference includes the energy and IRU/IRD net transfers from the IFM, as follows:

$$\bar{T}_{j,t} = T_{j,t}^{(RSE)} - T_{j,t}^{(EN)} - T_{j,t}^{(IRU)} + T_{j,t}^{(IRD)}, \forall j \in EDAM \wedge t = 1,2,\dots,T$$

Where positive IRD transfers reserve transfer capacity in the import direction.

In the **Integrated Forward Market (IFM)**, the Power Balance Constraint Relaxation in EDAM will include a constraint to ensure each EDAM entity meets its Balancing Authority Area requirements before supporting EDAM transfers. The constraint will not allow a simultaneous power balance constraint violation in the upward/downward direction with a net EDAM Transfer export/import beyond the net EDAM Transfer eligible for the EDAM Resource Sufficiency Evaluation.

The EDAM BAA power balance constraints in the IFM can be relaxed at a penalty by including energy supply shortfall and surplus variables.

Where the energy supply shortfall (*ENUS*) and surplus (*ENDS*) variables are assigned penalty costs in the objective function. To prevent transfers causing a power balance constraint relaxation in an EDAM BAA j interval t, the following constraints are enforced in the IFM:

$$\left.\begin{aligned} ENUS_{j,t}\left(T_{j,t}^{(EN)} - \bar{T}_{j,t}\right) \le 0 \\ ENDS_{j,t}\left(T_{j,t}^{(EN)} - \bar{T}_{j,t}\right) \ge 0 \end{aligned}\right\}, \forall j \in EDAM \wedge t = 1,2,\dots,T$$

These constraints will not allow a net export energy transfer ($T_{j,t}^{(EN)}$) above a reference ($\bar{T}_{j,t}$) to cause power balance shortfall, or a net import energy transfer below a reference to cause power balance surplus. The net transfer reference is the RSE-eligible net transfer ($T_{j,t}^{(RSE)}$), as follows:

$$\bar{T}_{j,t} = T_{j,t}^{(RSE)}, \forall j \in EDAM \wedge t = 1,2,\dots,T$$

Similar imbalance reserve balance relaxation constraints are not required in the IRU/IRD deployment scenarios because of the economic relaxation of the IRU/IRD requirements provided by the IRU/IRD surplus.

25. **Question:** On the developer site, is there a specific sample XML file for DAME? I only see one for EDAM (Sample_SubmitRawBidSet_EDAM.xml) posted 5/12/25.

    Answer: That includes DAME too. Please consider that a cumulative sample.

26. **Question:** will the Imbalance Reserve Up/Down (IRU/IRD) and Reliability Capacity Up/Down (RCU/RCD) max values be in the Master File (MF)?

    Answer: The Imbalance Reserve Up/Down (IRU/IRD) requirements will be posted daily. They are based on uncertain calculations and Balancing Authority Area (BAA) factors of wind/solar and load, which are also published. The Reliability Capacity Up/Down (RCU/RCD) requirements are the difference between what is clear in the financial Integrated Forward Market (IFM) and tomorrow's load forecast (which is the Residual Unit Commitment (RUC) hourly target).

    Field names are CERT_IRD_MW, CERT_IRU_MW, CERT_RCD_MW, CERT_RCU_MW. If the resource's CERT_IRD, CERT_IRU, CERT_RCD, and/or CERT_RCD flag is Y, the corresponding MW value field will be populated. For example, if CERT_IRU is Y, CERT_IRU_MW will be populated.

27. **Question:** So, the Imbalance Reserve Up/Down (IRU/IRD) and Reliability Capacity Up/Down (RCU/RCD) are not offered by resource into the Integrated Forward Market (IFM) via SIBR? Is the max quantity maximum that can be bid for a product by a resource - will that value be in the MF.

    Answer: Imbalance Reserve (IR) and Reliability Capacity (RC) are bid in products. The requirements set the target (its max) and the Market will not procure more than these each hour.