



## Extended Day-Ahead Market Working Group 1: *Supply Commitment and Resource Sufficiency Evaluation*

### *Resource Sufficiency Evaluation details*

Facilitator: Mark Richardson

Scribe: Bob Kott

March 14<sup>th</sup>, 2022

Meeting Cadence: Mondays and Wednesdays, 1 – 3 p.m.

# Agenda:

<b>Time:</b>	<b>Topic:</b>	<b>Presenter:</b>
1:00 – 1:05	Welcome/introductions	Kristina Osborne
1:05 – 2:30	Continue Examples on Confidence in EDAM Transfers	Bobby Olsen
2:30 – 2:50	EDAM Transfer considerations	Danny Johnson
2:50 – 2:55	Recap of Discussion	Bob Kott
2:55 – 3:00	Upcoming topics	Mark Richardson

## Reminders:

- These collaborative working groups are intended to foster open dialogue and sharing of ideas and perspectives
- Please raise your hand if you have a question or comment at any time during the meeting and the facilitator will call on you
  - Please start by stating your name and affiliation
- Meetings are recorded and video files posted on corresponding working group webpages
- Stakeholders are welcome to present perspectives at these meetings
  - Please submit a request to present using the link located on the EDAM Resources slide at the end of this presentation

# SRP Examples



California ISO

# Confidence in EDAM Transfers

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# Confidence in EDAM Transfers

- Through the extension of the day ahead market, participating entities will be relying on EDAM transfers reliably serve load.
  - Portion of EDAM optimization benefits is avoiding commitment of generating units to serve load.
  - Confidence in transfer impacts ability to realize resource commitment benefits
- High confidence in EDAM transfers incentivizes participation, maximizing efficiency and derivation of mutual benefits across the EDAM footprint.
- A robust sufficiency test and day ahead market design helps ensure load and uncertainty are covered to enable firm energy transfers.

# Key Considerations Throughout Discussion

- What is the level of confidence of the receiving EDAM BAA in transfers clearing the DA market, that these will continue to be supported under stressed conditions?
- How is supply secured to serve native load used in concert with EDAM market transfers?
- If there is common ground on ensuring that EDAM transfers are high confidence, what is the interplay with components of the DA market design to ensure this high confidence?

# Ensuring transfers are reliable is a prerequisite for EDAM benefits to be realized – Day Ahead

- In the Day-Ahead the design will
  - IFM procures imbalance reserves to cover the 95<sup>th</sup> percentile of uncertainty
  - RUC procures reliability capacity to cover the difference between physical supply clearing IFM and the demand forecast
  - Imbalance reserves and reliability capacity have a must-offer obligation in WEIM
  - All EDAM BAAs pass the EDAM RSE and the WEIM RSE



## Ensuring transfers are reliable is a prerequisite for EDAM benefits to be realized – Real Time

- In WEIM the design will serve to
  - Contingency reserves are deployed to cover outages
  - Uncertainty materializes beyond the 95<sup>th</sup> percentile coincidentally in all EIM BAAs (highly improbable)
  - All reliability capacity, imbalance reserves, and new supply bids are dispatched and all transfers are re-optimized
  - WEIM needs to relax the power balance constraint prompting Operator actions for emergency conditions

# DAME enhancements account for the majority of uncertainty that can materialize between day-ahead and real-time

- Day-ahead market enhancements (IRU) ensures supply sufficiency can meet upward uncertainty to a 97.5 confidence level
  - What is the risk associated with 2.5% uncertainty materializing with no additional supply materializing in RT? Materializing coincidentally across the EDAM footprint?
  - Uncertainty relating to hydro forecast is not a component of the uncertainty calculation
  - No accounting for uncertainty relating to generation outages
- What is the impact of the CAISO's proposal to procure imbalance reserves through graduated penalty prices?

# How/whether to account for diversity benefit within the EDAM footprint

- Should imbalance reserve procurement be adjusted?
  - How is this translated to the WEIM?
- Could it be accounted for through testing the EDAM BAA footprint as a whole in WEIM RSE for resource sufficiency?
  - To the extent upward uncertainty beyond the 97.5<sup>th</sup> percentile does not occur simultaneously, residual capacity can be used to address other types of uncertainty that can arise (outage and hydro)

# Are there additional opportunities to leverage EDAM to increase reliability going into real-time

- Should prioritization be given to EDAM transfers over exports to non-EDAM BAA cleared from the EDAM (not backed by specific pre-identified resources)?
  - This would be an extension of the CAISO LPT framework. This can help address uncertainty that can arise between day-ahead and real-time.
- What are the rules for occurrence of non-credible contingencies between day-ahead and real-time (N-1-2, N-3, etc...) due to events such as fires?

# Check In

- Continue discussion on Failure Consequences
- Start discussion on Certainty and Confidence of EDAM Transfers
- Walk-through examples
- Next Steps
  - Continue discussion on Certainty and Confidence of EDAM Transfers

# Questions?

# EDAM Resources

- List of [\*Common EDAM design principles and concepts\*](#)
- Initiative and working webpages:
  - EDAM initiative webpage:  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-day-ahead-market>
  - Working Group 1 webpage:  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-Day-Ahead-Market-Working-Group-1-Supply-Commitment-Resource-Sufficiency-Evaluation>
    - The working group webpages include meeting materials, initial scope items, and weekly summary reports
- Please submit EDAM WG inquiries and/or requests to present at <https://www.surveymonkey.com/r/EDAMWG-Inquiries>
  - Presentations due 5 business days prior to the meeting where they are scheduled to present, if time allows
- [Register](#) for working groups to help the ISO gauge interest and facilitate communication throughout process.
- Nov 30, 2021 Day-Ahead Market Overview Training: <https://youtu.be/lbXRsfVbCg>