



California ISO

Extended Day Ahead Market  
Working Group 1 Weekly Report

Supply Commitment and Resource Sufficiency

Week 9 Report

2/28/22 – 3/4/22

## Progress Tracker

Topic	Schedule
<b>Core Design Decision</b>	
Resources qualifying	Discussed 1/12,19,21,24,26, 2/14,16,23; in progress
Expected granularity and detail	Discussed 1/10,12,19,21,31, 2/7,14,16,23; in progress
Ancillary Services requirement	Discussed 1/12; in progress
<b>Transfer Reliability</b>	
Reliability and confidence in EDAM transfers	
<b>RSE Advisory Showing</b>	
Characteristics of 45 day ahead advisory showing	Discussed 1/5&10; on hold
<b>RSE Timing</b>	
Timing of conducting the EDAM RSE	Discussed 1/10,12, 2/16,23,25,28, 3/2; in progress
<b>EDAM RSE Components</b>	
Capacity Test	Reviewed concepts 1/12
Ramp Capability Test	Reviewed concepts 1/12
Test Constraints	Discussed 2/7, 14, 25
Inputs	Discussed 2/7, 14, 25
<b>EDAM RSE</b>	
Resource Qualification Rules	Discussed 1/12,19,21,24,26,31, 2/7,14,16; in progress
Failure Consequences	Discussed 2/16, 23; in progress
EDAM to EIM RSE	
<b>Interaction with Western RA Programs and Reserve Sharing Groups</b>	
Reserve Sharing	
RA Programs	

## Weekly Discussion

February 28

**Scope Items Discussed:** Convergence Bidding and RUC in EDAM Design

**Presenters:** James Friedrich and George Angelidis

### Discussion

The objective of the meeting was stated to continue the convergence bidding (CB) review started in the previous meeting on Friday, February 25 and then to review residual unit commitment (RUC) to the extended day ahead market (EDAM) design. The CB process review continued with description of convergence bidding in which virtual demand bids represent a commitment to buy at the day ahead price and liquidate at the 15-minute price while virtual supply bids represent a commitment to sell at the day ahead price and liquidate at the 15-minute price. The presentation also covered how convergence bids affect the physical market, a summary of convergence bidding features, the benefits to participants and the market, and additional requirements. Questions and comments regarding the convergence bidding topic included: a request for more information about “position limits”, which generally limit virtual bid quantities to the physical capabilities of the eligible locations; an inquiry regarding how virtual bids mitigate an outage, accompanied with reply the award is liquidated in the real time market in the opposite direction to provide a hedge; a request for comment regarding use as potential hedge for congestion risk, which was confirmed as another hedging use by submission of paired bids across the congestion interface. The meeting presentation then transitioned to RUC in the EDAM design that included the EDAM pass sequence, resource sufficiency evaluation (RSE), integrated forward market (IFM), market power mitigation (MPM) for IFM, RUC, and MPM for RUC. Questions and comments on the EDAM overview presentation included: market results need for RSE to which the response stated only the intent and bucket 1 transmission is needed; non-CAISO BAAs to self-schedule ancillary service (A/S) would lead to no co-optimization of energy and A/S was confirmed with additional clarification that the EDAM BAA must provide sufficient capacity and imbalance reserves; regarding constraint enforcement in the RSE, all constraints enforced except transmission; regarding daily energy limits applicable to hydro, this capability will be available to all resource types including gas resources; as to whether CB is proposed to be applicable to EDAM, this is a question for stakeholders to consider and entities were invited to present their perspectives; the premise uses the proposed day ahead market enhancement design; request for a mechanism to cover both hourly and daily gas limitation was confirmed that daily energy limit is the proposed mechanism currently; RUC confirmed not to be a mechanism to cure RSE deficiencies, rather the only cure is to increase bids submitted in the day ahead market; concern expressed regarding transmission capacity withholding; and a comment transmission used in RUC would be compensated. The meeting ended with a commitment to continue the EDAM design and the question regarding inclusion of RUC/CB during the next meeting.

### Conclusion:

The convergence bidding overview presentation was completed and EDAM design review presentation was partially completed along with discussion of both of these topics. There were outstanding questions remaining at the meeting end as well as responses pending from stakeholders to share their specific views regarding the inclusion of RUC and/or CB in the EDAM design. As a result, the EDAM design and application of RUC/CB discussion will continue in the next meeting.

March 2, 2022

**Scope Items Discussed:** Residual Unit Commitment (RUC) in EDAM Design and RUC Transfer Examples

**Presenters:** George Angelidis and James Friedrich

### **Discussion**

At the beginning of the meeting, stakeholders were asked to consider sharing their positions regarding inclusion of the residual unit commitment (RUC) and convergence bidding (CB) processes in the Extended Day Ahead Market (EDAM) at the end of the day's presentations. Then Work Group 1 continued with the presentation in progress from the Monday, February 28<sup>th</sup> meeting regarding application of the residual unit commitment (RUC) process in the EDAM design. The completion of this presentation covered the functions RUC provides in the overall day ahead market process, including capacity awards to close the gap between bid-in demand and forecast demand, commitment of extra-long-start resources; and then explained the support RUC provides to the EDAM resource sufficiency evaluation (RSE), including procuring reliability capacity for Western Energy Imbalance Market (WEIM) not scheduled in the integrated forward market (IFM), along with the ability to maintain power balance constraints for issues not identified in the EDAM RSE. Participants must make all IFM capacity available to RUC in order to provide the best ability to pass the WEIM RSE. Comments and questions on this portion of the meeting included: a preference for an IFM design that clears all the products needed by the market; an inquiry for the demand forecast used in RUC was responded with the same one used in the EDAM RSE; response to question the RSE only purpose is to establish Balancing Authority Area (BAA) is sufficient; RUC capacity is declared through the RUC process based on the bids submitted; regarding potential to adjust the forecast after the RSE and before RUC, there may be operator driven adjustments; concerning price signals sent by bid-in demand in IFM versus forecast demand in RUC, there is no impact because the capacity is decoupled from the IFM energy schedules; RUC is a capacity market which included a minimum bid amount for demand prior to the introduction of virtual bidding; all organized markets execute separate IFM and RUC processes and all energy submitted in IFM must also be bid into RUC. The meeting then moved to the presentation of RUC transfer examples which depicted several simple RUC scenarios with and without RUC transfers alongside virtual bidding as well. Comments and questions on this presentation included: concerns of potential for gaming due to RUC clearing a different amount than the demand forecast which received a request to send in examples of the concerns to be properly considered and answered; and regarding question of payment for transfers, this is accomplished through existing RUC cost allocation methodology. The meeting ended with request of stakeholders to share their perspectives with regard to the inclusion of RUC and CB into the EDAM design and this request was met with more questions about the workings of RUC and CB including: the detailed components of RUC such as imbalance reserves, flexible ramping and interrelationships; functioning of virtual bidding BAA to BAA and potential asymmetries make need for CB unclear; and others suggesting need for more details regarding the interaction and dependencies between RUC and CB. The meeting closed with commitment to return to the discussion on the consequences for failure in the next meeting.

### **Conclusion:**

The work group completed the review of the RUC in EDAM and RUC Transfer Examples presentations and attempted to gather comments regarding the inclusion of RUC and CB in the EDAM design.

Stakeholders had more questions on function and interactions of RUC and CB. The group plans to return to the consequences for failure discussion next week.