



California ISO

Extended Day Ahead Market  
Working Group 1 Weekly Report

Supply Commitment and Resource Sufficiency  
Week 2 Report  
1/10/22 – 1/14/22

## Progress Tracker

Topic	Schedule
<b>Core Design Decision</b>	
Resources qualifying	Discussed 1/12; in progress
Expected granularity and detail	Discussed 1/10&12; 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; in progress
<b>EDAM RSE Components</b>	
Capacity Test	Reviewed concepts 1/12
Ramp Capability Test	Reviewed concepts 1/12
Test Constraints	
Inputs	
<b>EDAM RSE</b>	
Resource Counting Rules	Discussed 1/12; in progress
Failure Consequences	
EDAM to EIM RSE	
<b>Interaction with Western RA Programs and Reserve Sharing Groups</b>	
Reserve Sharing	
RA Programs	

## Weekly Discussion

January 10

**Scope Items Discussed:** 45 day ahead advisory showing and Resource Sufficiency Evaluation

**Presenters:** Danny Johnson - CAISO

### Discussion

After reviewing the discussions and accomplishments of week 1, the 45 day ahead advisory showing topic was reviewed again. The purpose of this showing was revisited and stated to provide the CAISO a preliminary look at how the BAAs were planning to meet their respective obligations, give an advanced look and an opportunity to resolve potential issues such as double counting. A question regarding whether a diversity credit concept would be considered was asked and answered with response that the diversity credit concept was not considered because this is more valuable closer to the operating day. There was also discussion around defining market operation versus grid operation functions and establishing justification for 45 day ahead advisory for EDAM. Given the number of questions, the 45 day ahead advisory showing topic was referred back to the entities involved with the original proposal for further details with an action item to bring additional information back at a future meeting when ready.

At this point, discussion turned to the Resource Sufficiency Evaluation purpose following a review of the concepts by Danny Johnson of the CAISO. Comments and questions included the following areas: RSE intention, suggestion the assessment must be hourly not monthly or daily, and further concerns were expressed regarding potential overlap between the market and grid operator. Clarifications were provided that the 45 day ahead advisory was intended to be monthly and the RSE was intended to be hourly. There were a number of suggestions including: the RSE should include a deliverability test for internal resources, BAA to BAA transfers and external resources, an expectation of CRR modeling and allocation, and discussion of the interplay between the EDAM and real time markets. To the extent necessary, these topics will be added to the list to be covered in future meetings. Further questions and comments included physical schedule and bids versus bi-lateral trade, whether full load and supply participates, counting rules, and how to ensure inputs to test supply and demand. A response stated the RSE is required to ensure that supply is sufficient and economic equity is maintained among the participating entities. There were also suggestions to include provisions to account for diversity benefits and to include the RSE benefits in the RSE purpose slides.

The focus of the meeting turned to discussion of the resource sufficiency scope topics starting with advisory screens. After a few unrelated questions, there was discussion regarding the number and timing of the advisory runs, also known referred to as screens. There were a number of suggestions including: a single submission and single result along with a need to identify consequence for failing before determining timing and cure period; multiple submissions with the first at 2 days ahead, and a second several hours before EDAM before the binding screen; a simple process with a 6:00 am and 9:00 am screens; and an on demand screen. There was a question and concern regard the duration of the RSE because this may impact the frequency and timing of the process and details of inputs and results. The CAISO response was the screen would be completed in a matter of seconds because the design is a simple comparison of supply and demand considering latest outage information and bucket 1 transfers

without a deliverability check. This was followed by a suggestion to document the details for review. Comments on the suggested options suggested any screen two days in advance should be in the afternoon to ensure information is available, a caution against too many runs because it creates more work, any transmission check should be 6:00-9:00am given transmission is frozen at 9:00am, and uncertainty requirement makes the calculation dynamic and complicates the on-demand concept. There was a question regarding what cure would look like for the advisory screens and what that would mean for each BAA. For any indication of insufficiency, the CAISO or other BAA would need to develop individual responses. This is not a topic for this work group to consider.

Discussion progressed to granularity and detail regarding the demand forecast. Questions include whether there should be alternatives to the CAISO forecast. While it is important to use the most accurate forecast possible, it is also important to give the BAA some certainty. Comments included suggestion that if the forecast is only CAISO then the design needs to consider the accuracy and require a check; however, there was also a suggestion an alternative should be offered. Design acknowledges the forecast needs to be accurate and any alternative forecast would need incentives to ensure accuracy.

**Conclusion:**

Discussion on the 45 day ahead advisory showing resulted in placement of the topic on hold and an action item for the proposing entities to prepare additional details and bring them back to this work group when they are ready. The work group completed some discussion of the details of the RSE with regard to the number and timing of the screens. Also began discussing the details regarding the forecast. Both of these topics will require further discussion.

## January 12

Scope Items Discussed: EDAM Resource Sufficiency Evaluation

Presenters: George Angelidis - CAISO

### **Discussion:**

After covering the objectives for the meeting and a quick review of Monday's meeting, discussion returned to the RSE advisory topic. The consensus was while there were several suggestions, no clear options were apparent. Advisory options include some combination of the following: 2-day ahead, 6am, 9am, and/or on demand screens. Comments included: suggestion to poll for preferred options, suggestion to perform advisory screen sometime between 6-9am day ahead, preference not to perform 2-day advance run but not sooner than afternoon, and a preference for the idea of on demand screen to allow participant to check status 2 day ahead or day ahead with forecast frozen at 6am. Questions were posed regarding: intent to measure demand and uncertainty, benefits of the advisory, and consequences of failing the screen. These questions were followed by suggestions to document a proposal for review. While discussion on Monday seemed to focus on suggestions for multiple advisory screens, the on-demand option with a forecast fixed in time seemed to carry the day. During this discussion a question regarding the status of the 45 day ahead advisory showing was answered that entities involved in the original proposal have been assigned to develop details and bring additional details back to the work group. There were further comments as follows: that the advisory intent is to provide EDAM entity time to cure if short, a suggestion to include consideration of a diversity benefit, the RSE should be based on hourly load forecast assessment, and an idea to perform an energy test in lieu of requiring hourly capacity test.

George Angelidis then presented guiding principles for the EDAM Resource Sufficiency Evaluation (RSE) to review the RSE purpose discussed in the previous meetings. These concepts included: EDAM entity submits physical bids and schedules for hourly demand plus uncertainty, plus hourly ancillary services, plus cumulative demand and uncertainty variation hour to hour; BAA requirements adjusted by bilateral energy/capacity transfers on bucket 1 transmission (this replaces the diversity benefits concept used in EIM); after passing the RSE, economic displacement takes place in the IFM/RUC. Questions were presented on following topics: whether RSE is just a check or power flow, what if bids are not simultaneously feasible, and how transfers are considered. The intent is to make sure the resources are feasible. Reviewed hourly capacity test concepts which include considering ramp up and down requirements, contingency reserve requirements and imbalance reserve up and down requirements. The concepts for the cumulative ramp capability test were also discussed to check feasibility of meeting cumulative ramps up and down starting from both lowest and highest points. There were questions regarding how to account for the ancillary service requirement changes in market. There is not a dynamic tool to address so the BAA determines ahead of time and is responsible for setting the ancillary service requirements in EDAM and to provide adjustments in real time. RUC uses same ancillary service values as IFM. There was a question regarding the transfer details answered by a statement that transfers are established using registered information and submitted in market to reflect obligation and commitments of the transfers. The reaction was a comment that this just creates more questions and further suggestion to have the concepts documented. To address these questions, there was a suggestion to present previous older materials put together by EIM entities. All entities were encouraged to prepare and provide any valuable presentations. A comment that the cumulative ramp

capability test could deviate based on forecast versus actual brought clarification that this is covered in the uncertainty calculation.

Discussion moved on to specific resource capability considerations slide review and further discussion on the granularity and forecast topics. Questions were raised regarding whether uncertainty should be considered, whether EDAM entities would procure AS in EDAM and with regard to leaning whether the BAA or LSE should be responsible for the RSE test. There was agreement the policy needs to consider these questions and a suggestion that assumptions and limitations on gas system and difference between gas day and EDAM timeline also need to be considered. The question regarding the RSE be either an LSE or BAA test was responded to with clarification and apparent consensus that the test be at the BAA level. Alternative views were invited for presentation at a later meeting if any entity desires to present an alternative view. Further discussion on the leaning topic included comments regarding whether the question of leaning is reliability or economic, and that there is no difference as both lead to the same result. There were also further supporting comments that the RSE test at the BAA level would be the best approach because this allows the BAA an opportunity to resolve short/long positions within the BAA.

Discussion transitioned to the RSE qualification with details to cover resource qualification and counting rules. Resources should be as modeled in the BAA while resources external to the BAA are handled with bucket 1 transfers. There was a discussion regarding whether capacity should be considered at Pmax rather than NQC and whether RA status should be considered. A response suggested that resources are only considered for bids submitted. The meeting concluded with a summary.

**Conclusion:**

Discussion of advisory screens suggested an on-demand option with a forecast based on fixed time such as 6:00 am is garnering the best support while there also seemed to be a desire for details to be documented before entities are willing to fully support an option. The 45 day ahead advisory topic was clarified to be on hold pending proposing entities to develop further details and bring back to the work group when ready. The group also made progress with detailed discussions on forecast and resource qualification topics; although both require further discussion and documentation in future meetings. Entities are welcome to offer presentation on related topic areas to contribute to the work group.