

Day-Ahead Sufficiency Draft Final Proposal

Stakeholder Meeting January 21, 2025

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Today's agenda

Time	Торіс	Presenters
9:00 - 9:05	Welcome + today's agenda	Christina Guimera
9:05 – 9:25	Initiative objectives and background	Hilary Staver
9:25 – 11:55 (10 minute break included)	 Processes to help the CAISO BA meet its day-ahead resource sufficiency evaluation (RSE) obligations Advisory RSE results and complementary information Accounting for reliability demand response resources and other DR resources Accounting for strategic reliability reserve resources Curing remaining upward RSE shortfalls using existing CAISO authority Incentives for tagging day-ahead imports 	Hilary Staver Danny Johnson
11:55 – 12:00	Wrap-Up + next steps	Christina Guimera



CAISO Policy Initiative Stakeholder Process





Initiative Objectives and Background



Background on Resource Sufficiency Evaluation, applied to CAISO BAA

The day-ahead RSE will test whether the CAISO BAA has sufficient resources to meet its own obligations, prior to engaging in day-ahead transfers with other EDAM BAAs

RSE Obligations			٦				_					_								-R			-	ble S		-			
 Demand forecast (accounts for load- modifying DR) Imbalance reserve requirements Ancillary services requirements High priority exports 	 Conducted at 10am, prior to day-ahead market Evaluates RSE obligations against available RSE- eligible supply offered into the day-ahead market Uses full variable energy resource (VER) forecast Unit commitment optimization across 24 hours, with pa transmission constraints 											and res to a Incl inte Incl and	ludes pseudo-tie resources d all CAISO BAA-located ources, unless contracted a non-CAISO EDAM BAA ludes forward-contracted ertie resources. ludes proxy DR resources d voluntarily submitted						ł ed A d										
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Day-Ahead Sufficiency Scope

- Ensuring the 9am advisory RSE results are meaningful to enable CAISO BA operators to take action if necessary
- Developing methodologies and rules to account for reliability demand response resources and strategic reserves in the day-ahead RSE
- Curing expected upward RSE shortfalls
- Incentives for tagging day-ahead imports



Advisory RSE Results and Complementary Information



Background on RSE timeline, applied to CAISO BA

Day-Ahead RSE Timeline

9am Advisory RSE

- Based on final demand forecast, imbalance reserve requirements and ancillary services requirements
- ✓ Uses final VER forecasts
- Includes supply offers submitted by 9 am
- ✓ Still time for the CAISO BAA to address shortfalls, if needed
- Does not reflect supply offers and bids submitted after 9am, potentially failing to reflect required volumes from RA resources

Advisory RSE

CAISO Resource Adequacy

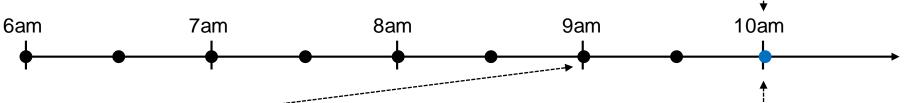
Day-ahead Market Closes (deadline for bids and offers)

- Must offer deadline
 ONEO hid insertion
- CAISO bid-insertion



Background on RSE timeline, applied to CAISO BAA

Day-Ahead RSE Timeline



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How big of an issue is this? What portion of RA capacity submits offers after 9am? See the following slide for an example month

Advisory RSE

Binding RSE



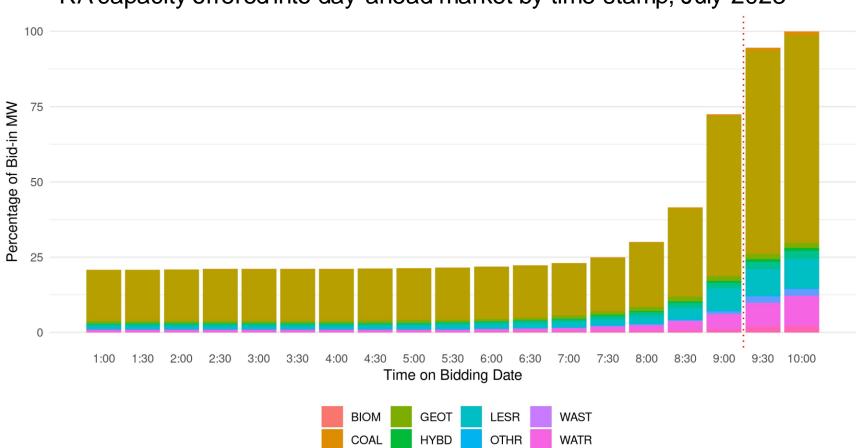
Day-ahead Market Closes (deadline for bids and offers)

CAISO Resource Adequacy

Must offer deadline

CAISO bid-insertion

What portion of RA capacity submits offers after 9am?



IMP

GAS

SOLR

WIND

RA capacity offered into day-ahead market by time stamp, July 2023



Proposal: Making the 9am advisory RSE results more meaningful

- The CAISO encourages, but does not require, resource SCs to submit all day-ahead offers by 9am to inform advisory RSE results. SCs will be able to modify these day-ahead offers until 10am.
- 2. CAISO BA operators will utilize a variety of existing tools and processes to determine the likelihood of a shortfall, including:
 - 1. Day-ahead market results from the previous day
 - 2. The readiness alert process
 - 3. CAISO BA operator offline tools for estimating unoffered RA



Accounting for Reliability Demand Response Resources



Introduction: Reliability Demand Response Resources (RDRRs)

Relevant Characteristics

- RDRRs are RA resources and are managed by CPUCjurisdictional investor-owned utilities (IOUs)
- RDRRs are supply-side resources required to submit real-time offers, but such offers may only be released into the ISO's realtime market in conjunction with a CAISO declared transmission emergency, energy emergency alert (EEA) watch, or other EEA notice
 - Resources are intended for emergency use to ensure reliable operations
- RDRRs may voluntarily submit day-ahead offers. If submitted, this supply will be counted in the day-ahead RSE through these offers.



Proposal: Accounting for unoffered RDRRs in the day-ahead RSE

If at 9 am CAISO BA operators expect an upward RSE shortfall:

- Based on 9am advisory RSE results
- Net of expected MWs from RA resources ٠
- Adjusted for expected high priority export volumes (if needed) ٠

And

If CAISO BA operators expect EEA conditions in real-time

Then CAISO BA operators will reduce the CAISO BA's RSE obligation in the appropriate hours by an amount equal to or less than the quantity of available RDRR capacity that has not voluntarily submitted a day-ahead offer as of 9 am.

Within availability constraints, the amount of RDRR capacity included and the RSE ٠ hours to which it is applied will be at the discretion of the CAISO BA operators

Then CAISO BA operators will reduce the CAISO BA's residual unit commitment (RUC) procurement target by an amount equal to the RSE reduction quantity

Analysis has shown that day-ahead market results do not forgo the need to utilize RDRR in the real-time market. The CAISO BA is not proposing to modify load bidding rules in the IFM.



Counting demand response in the CAISO BA's day-ahead RSE

Resource Type	Day-ahead RSE Eligibility
Proxy Demand Resources	PDR shown as RA have a must offer obligation to submit day-ahead supply bids and are RSE-eligible. Non-RAPDR will be reflected in the RSE through bids into the day-ahead market.
Load- modifying Demand Response	Load-modifying DR is reflected as a reduction to CAISO BA day-ahead demand forecast when it has been communicated to the CAISO in the pre-day-ahead time frame as certain to be curtailed the day-of by the load serving entity.



Accounting for Strategic Reliability Reserve Resources



Introduction: Electricity Supply Strategic Reliability Reserve Program (ESSRRP)

Relevant Characteristics

- The ESSRRP was established in 2022 to support grid reliability during extreme events
- The ESSRRP currently includes currently includes 2,886.8 MW of long-start resources and 192.7 MW of short-start resources
- Long-start ESSRRP resources are all located in the CAISO BA and are committed multiple days in advance if needed
- Short-start ESSRRP resources will not be committed before the day-ahead market and will not submit day-ahead offers. Instead, they may submit real-time offers when a California BAA declares an EEA Watch or more severe EEA condition.



Proposal: Accounting for ESSRRP Resources in the day-ahead RSE

Long-start ESSRRP resources

- If online and meeting operational requirements, will be included in the RSE
- Counted for host BAA's RSE supply (CAISO)

Short-start ESSRRP resources

• Will not be included in the RSE



Curing Remaining Upward RSE Shortfalls



An EDAM RSE shortfall may be indicative of a risk to reliability in the coming day

- Upon EDAM go-live the CAISO BA will use its existing Exceptional Dispatch (ED) authority to address any underlying reliability issues potentially informed by the EDAM RSE
 - EDAM RSE outcomes will serve as one input into CAISO BA operator decision making around pre day-ahead market EDs
- The CAISO BA will not attempt to cure expected downward RSE shortfalls



Remaining in the WEIM RSE Pool: Incentives for Tagging Day-Ahead Imports



Background: WEIM RSE pool and tagging requirements

- EDAM BAAs that pass the day-ahead RSE will be grouped together and evaluated as a pool for the WEIM RSE
- To remain in the pool, non-source specific imports relied upon to meet the EDAM BAA RSE must meet tagging requirements to provide confidence that this supply will ultimately be available to serve load.
- Scheduling coordinators will have until 5 hours before the start of the operating hour to submit e-tags and/or resupply (i.e., replace the un-tagged imports with other firm schedules or physical resources offered into the real-time market). This ability to resupply acts as a cure to un-tagged imports
- EDAM BAAs that fail to meet these tagging requirements and do not resupply will be removed from the pool, thereby foregoing potential diversity benefits of the WEIM RSE pool



Proposal: Incentives for Tagging Day-Ahead Imports

The CAISO BA is not proposing to develop any additional incentives for tagging day-ahead imports at this time.

• The CAISO BA will monitor e-tagging compliance at EDAM go-live to see if additional incentives are needed.



Proposed schedule

 Comments on the Draft Final Proposal due by February 4, 2025



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