



Day-Ahead Sufficiency Straw Proposal

Stakeholder Meeting
May 13, 2023

Reminders

- This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO's permission.
- If you need technical assistance during the meeting, please send a chat to the event producer.

Instructions for raising your hand to ask a question

- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon  located on the bottom of your screen.

Note: #2 only works if you dialed into the meeting.

- Please remember to state your name and affiliation before making your comment.
- You may also send your question via chat to either Christina Guimera or to all panelists.

Today's agenda

Time	Topic	Presenters
9:00 – 9:05	Welcome + today's agenda	Christina Guimera
9:05 – 9:25	Initiative objectives and background	Hilary Staver
9:25 – 11:40 <i>(10 minute break included)</i>	<p>Processes to help the CAISO BA meet its day-ahead resource sufficiency evaluation (RSE) obligations</p> <ul style="list-style-type: none"> • Advisory RSE results and complementary information • Accounting for reliability demand response resources • Accounting for strategic reliability reserve resources • Curing remaining upward RSE shortfalls, using existing CAISO authority 	Danny Johnson Hilary Staver
11:40 – 11:55	Remaining in the WEIM RSE Pool: Incentives for tagging day-ahead imports	Danny Johnson
11:55 – 12:00	Wrap-Up + next steps	Christina Guimera

CAISO Policy Initiative Stakeholder Process



This represents the typical process, and often stages of the process run in parallel.

We are here

Initiative Objectives and Background

Day-Ahead Sufficiency: objectives

- To help the CAISO prepare for its role as an extended day-ahead market (EDAM) participating balancing authority area (BAA).
- More specifically, to establish processes that will help the CAISO BA meet its day-ahead resource sufficiency evaluation (RSE) obligations

Note: the “Day-ahead Sufficiency” initiative replaces and renames track A2 of the EDAM ISO BAA participation rules initiative.

Background on Resource Sufficiency Evaluation, applied to CAISO BA

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

- Demand forecast (accounts for load-modifying DR)
- Imbalance reserve requirements
- Ancillary services requirements
- High priority exports to non-EDAM BAAs

Day-Ahead RSE

- Conducted at 10am, prior to day-ahead market
- Evaluates RSE obligations against available RSE-eligible supply offered into the day-ahead market
- Uses full VER forecast for VERs that submit offers
- Unit commitment optimization across 24 hours, with no transmission constraints

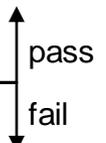
RSE-Eligible Supply

- Includes CAISO BAA-located resources, unless contracted with an EDAM BAA
- Includes forward-contracted intertie resources.
- Includes proxy DR resources and voluntarily submitted RDRRs

RSE Results

Relaxation quantities (MW)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Power balance and imbalance reserves constraint: up																								
Power balance and imbalance reserves constraint: down					The CAISO BAA will pass the RSE if the optimization can solve without relaxing any of the constraints in any of the hours.																			
Regulation reserves constraint: up																								
Regulation reserves constraint: down																								
Spinning reserves constraint: up																								
Non-spinning reserves constraint: up																								

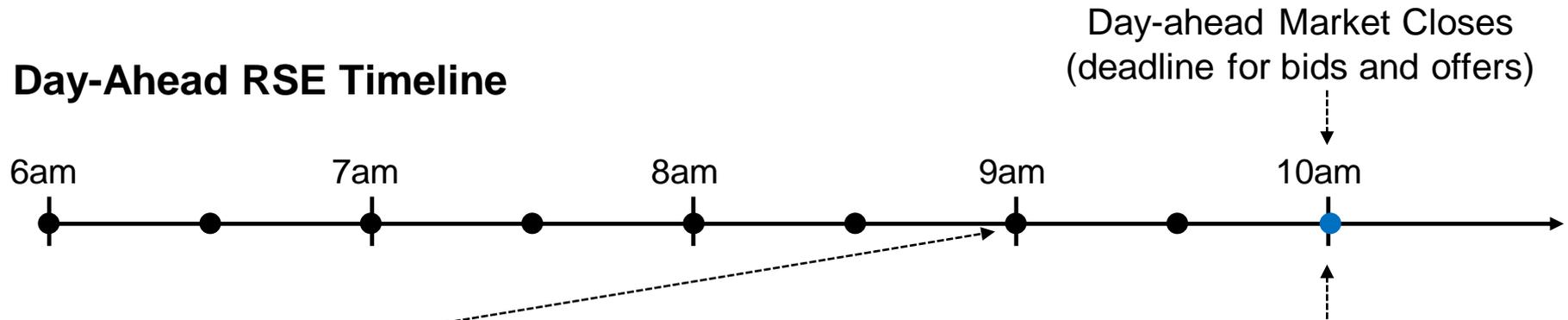
Potential RSE failure revenues



Potential RSE failure surcharges + potential loss of diversity benefits in the real-time market

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

CAISO Resource Adequacy

- Must offer deadline
- CAISO bid-insertion

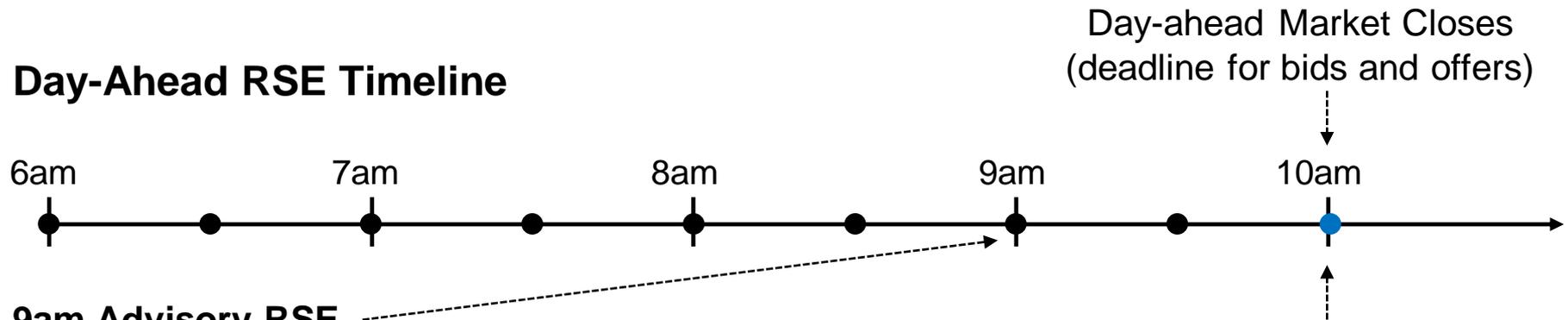
● Advisory RSE

● Binding RSE

Advisory RSE Results and Complementary Information

Background on RSE timeline, applied to CAISO BAA

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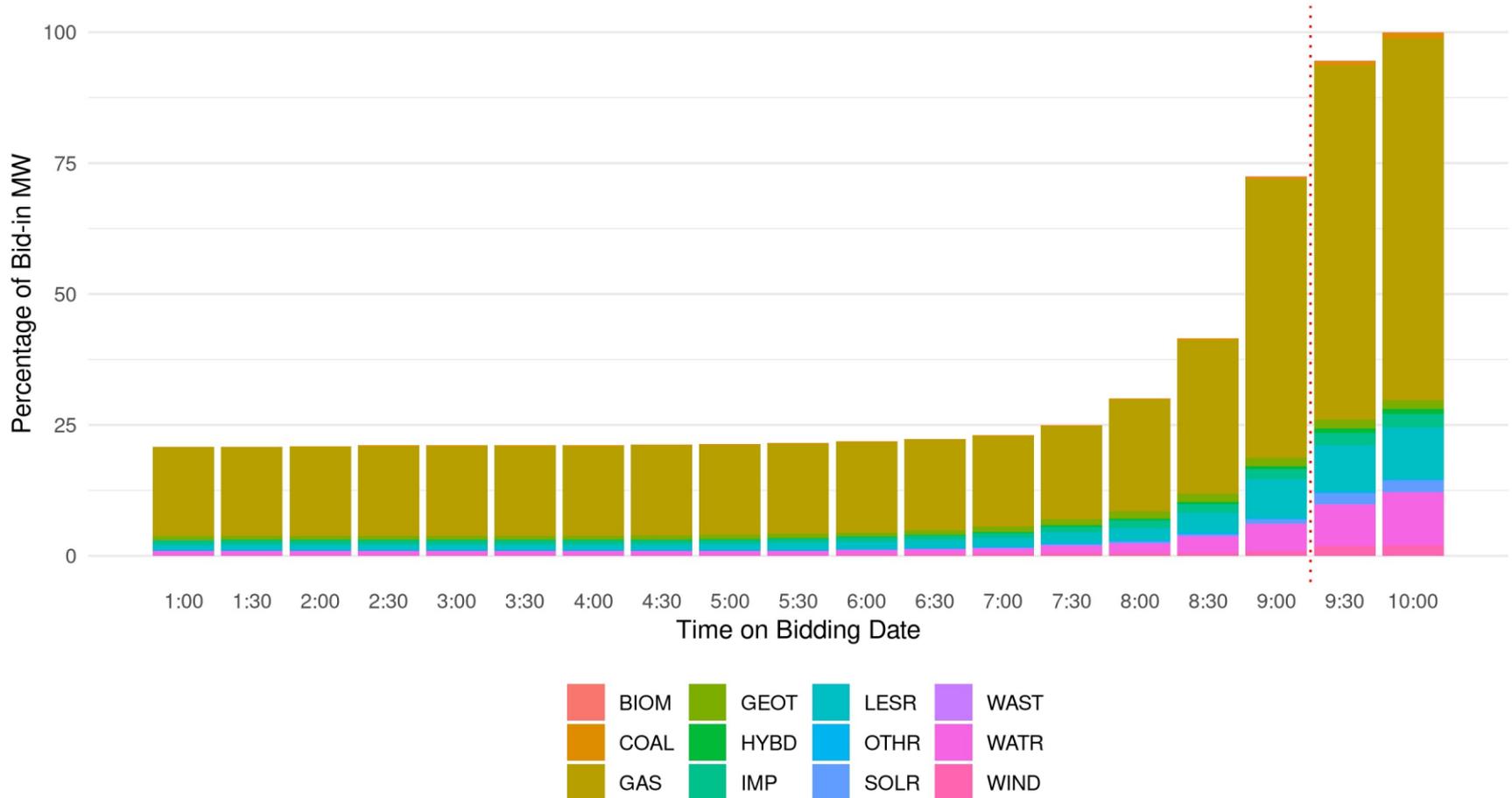
How big of an issue is this? What portion of RA capacity submits offers after 9am? See the following slide for an example month

● Advisory RSE

● Binding RSE

What portion of RA capacity submits offers after 9am?

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



CAISO Proposal to Enhance the 9 am Advisory RSE

1. RA resource scheduling coordinators (SCs) submit day-ahead offers by 9am, with ability to make updates until 10am
2. CAISO BA inserts bids for unoffered RA resources subject to bid-insertion rules at 9am. Ability for SCs to overwrite until 10am
3. CAISO BA submits advisory bids for unoffered RA resources NOT subject to bid-insertion rules at 9 am. Advisory bids used only in the advisory RSE and discarded by 10 am

Step 1: RA Resources for which bids have been submitted by 9 am

- RA resource scheduling coordinators (SCs) submit day-ahead offers by 9am
- SCs have the ability to make updates until 10 am, consistent with current practices
- The larger the percentage of the RA fleet SCs that submit bids by 9 am, the more accurate the 9 am advisory RSE will be

Step 2: RA Resources without bids subject to bid-insertion rules

- CAISO BA submits bids for RA resources subject to bid-insertion rules at 9 am
- Bids will be priced at the default energy bid*
- SCs can overwrite the bids any time before 10 am

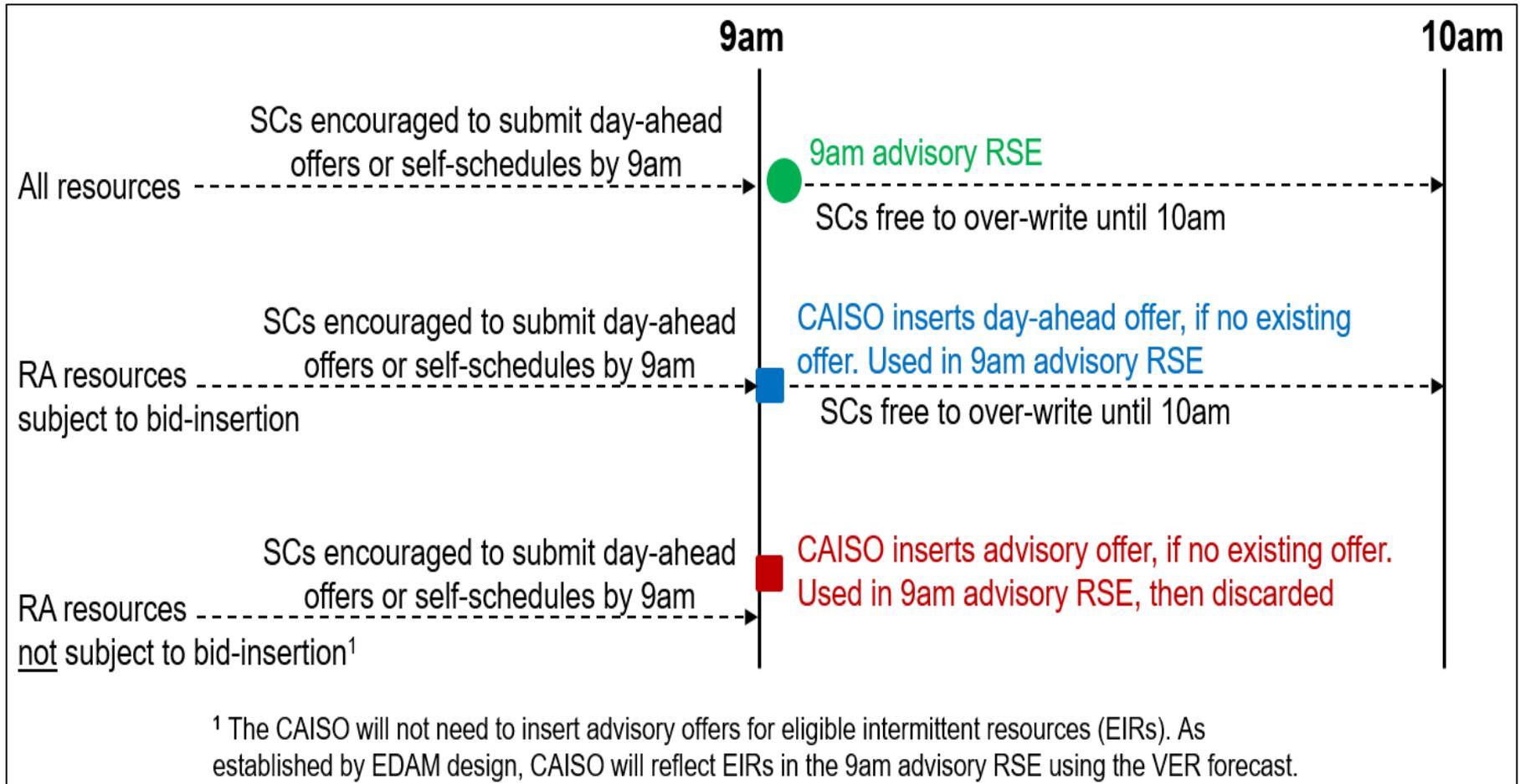
*Default energy bids, calculated by the CAISO for each resource, are an estimate of a resource's costs and used for local market power mitigation.

Step 3: RA Resources without bids NOT subject to bid-insertion rules

- CAISO BA submits advisory offers for RA resources not subject to bid-insertion rules at 10 am
 - This includes use-limited gas resources, hydroelectric resources, proxy demand resources, and non-generator resources (NGRs), including hybrid resources*
- Advisory offers will use a \$0 bid price and the resource's RA capacity
- Advisory offers will be used only for the advisory RSE at 9 am and discarded by 10 am

*For a detailed list of which specific RA resource types are not subject to bid-insertion rules, please refer to section 7.1.1 in the reliability requirements business practice manual.

Summary of CAISO proposal to enhance the CAISO BA 9 a.m. advisory RSE



Accounting for Reliability Demand Response Resources

Introduction: reliability demand response resources (RDRRs)

Relevant Characteristics

- RDRRs are supply-side demand response resources. Not reflected in the CAISO BAA's demand forecast
- RDRRs are RA resources and are managed by CPUC-jurisdictional investor-owned utilities (IOUs)
- RDRRs may voluntarily submit day-ahead offers. If submitted, this supply will be counted in the day-ahead RSE
- RDRRs are required to submit real-time offers, but such offers may only be released into the ISO's real-time market in conjunction with a CAISO declared transmission emergency, energy emergency alert (EEA) watch or other EEA notice

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

If the CAISO BAA at 9am expects an upward RSE shortfall in a particular hour

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

And

If the CAISO BAA is expecting EEA conditions in real-time

Then the CAISO BAA will reduce its RSE obligation for that hour by an amount equal to the minimum of (A,B), where:

A = the expected upward shortfall

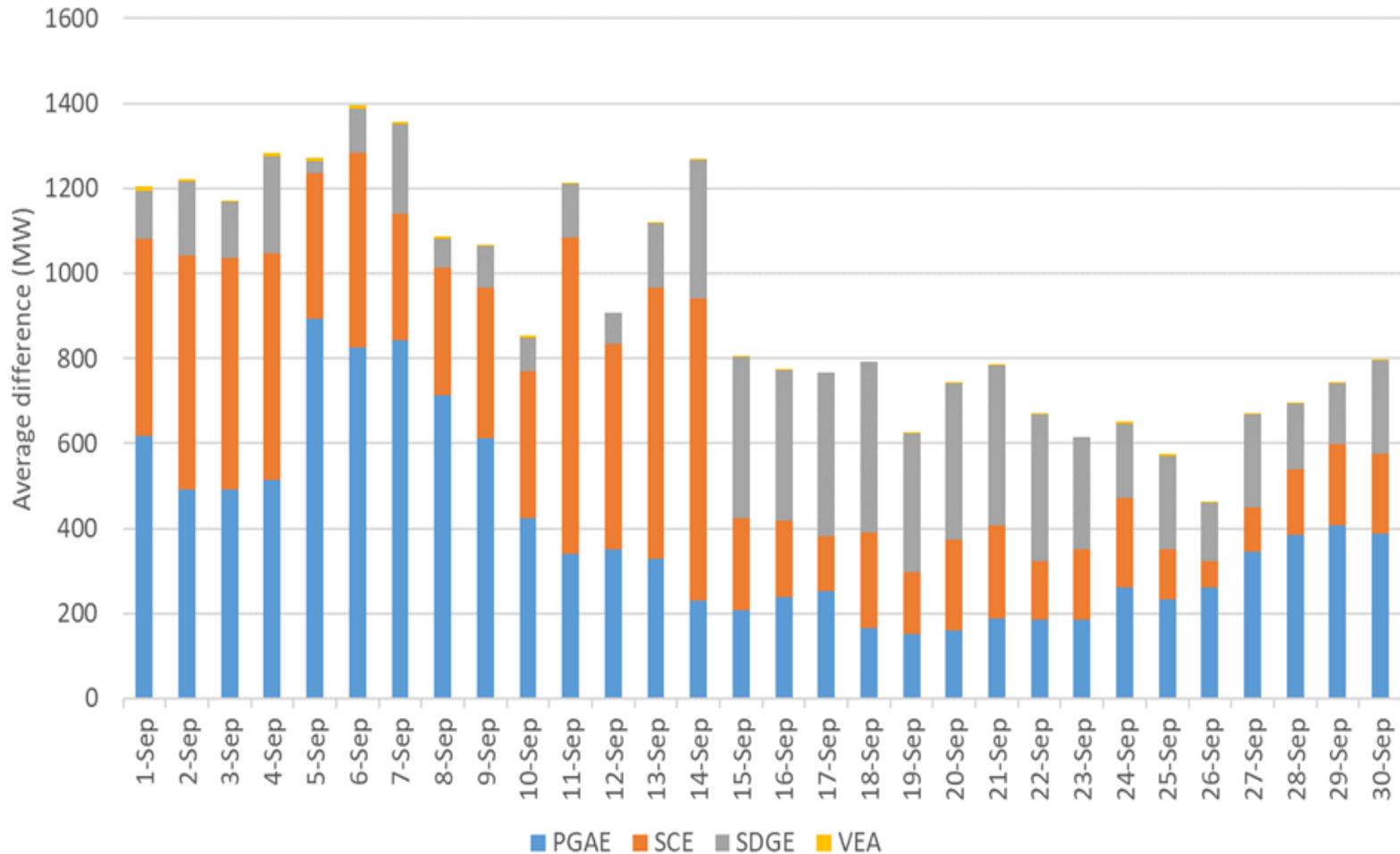
B = the quantity of available RDRR capacity that has not voluntarily submitted a day-ahead offers as of 9am

Then CAISO BAA will reduce its residual unit commitment (RUC) procurement target by an amount equal to the RSE reduction quantity

The CAISO is not proposing to modify load bidding rules in the IFM at this time as analysis shows load is systemically underbid during stressed system conditions during which RDRR may be used; will monitor

Load has historically been underbid in stressed system conditions

Average difference between bid-in demand and metered load (MW)*



*CAISO's Summer Market Performance Report for September 2022, Figure 31

Accounting for Strategic Reliability Reserve Resources

Introduction: strategic reliability reserve (SRR) resources

Relevant Characteristics

- The SRR was established in 2022 to support grid reliability during extreme events
- The SRR is expected to include 2,886.8 MW of long-start resources and 263.5 MW of short-start resources
- Long-start SRR resources are all located in the CAISO BA and are committed multiple days in advance, if needed. If committed, must submit day-ahead offers
- Short-start SRR 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 any California BAA declares an EEA Watch or more severe EEA condition.

Proposal: accounting for SRR resources

Long-start SRR resources

- If committed, must submit day-ahead offers
- If committed, will be included in the RSE
- Counted for host BAA's RSE supply (CAISO)

Short-start SRR resources

- Will not submit day-ahead offers
- Will not be included in the RSE

Curing Remaining Upward RSE Shortfalls

The CAISO proposes to utilize its existing exceptional dispatch authority to address potential capacity shortages identified by the RSE

- A significant projected EDAM RSE shortfall signifies that the CAISO BA does not have sufficient resources to meet its expected demand forecast, ancillary service and imbalance reserve requirement
- System operator action to obtain additional capacity is consistent with good utility practice should a BA assess an insufficiency in forward procured supply to meet projected needs
 - The EDAM RSE result is an additional tool that reveals next day reliability issues before the day-ahead market runs
 - Operator use of exceptional dispatch can proactively address reliability concerns and prevent a system emergency

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

Background: WEIM RSE pool and tagging requirements

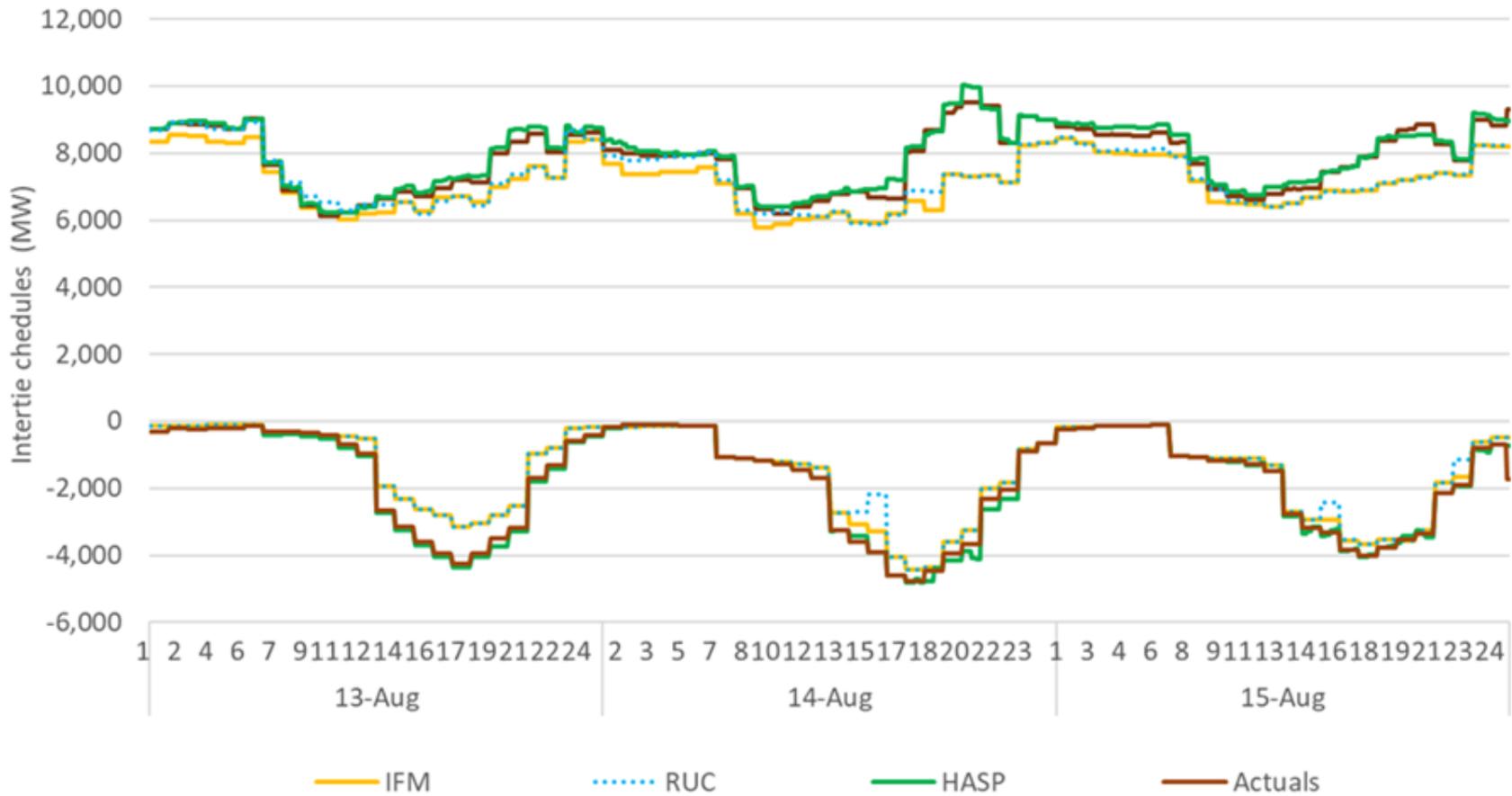
- EDAM BAAs that pass the day-ahead RSE will be grouped together and evaluated as a pool for the WEIM RSE
- To remain in the pool, non-source specific imports relied upon to meet the EDAM BAA RSE must meet tagging requirements to provide confidence that this supply will ultimately be available to serve 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: Monitor need for additional incentives for tagging day-ahead imports

- In the EDAM ISO BAA participation rules initiative, the CAISO Department of Market Monitoring (DMM) recommended that the CAISO develop incentives to ensure day-ahead imports into the CAISO BA are tagged by the EDAM deadline.
- Stakeholders did not identify this issue as a priority in comments on the Issue Paper
- Economy energy imports that receive day-ahead market schedules from the CAISO have proved highly reliable under the current tagging rules and incentives

Day-Ahead bid economy energy imports have performed well under stressed system conditions with current requirements

Day-Ahead and Real-Time Imports and Exports During August 13-15*



Next Steps

Next steps

- Comments on the straw proposal and stakeholder meeting are due by end of day **May 27, 2024**. Please submit your comments using the comment template available on the initiative webpage: <https://stakeholdercenter.caiso.com/StakeholderInitiatives/Day-ahead-sufficiency>
- If you have any questions, please contact isostakeholderaffairs@caiso.com

SAVE THE DATE |

2024 STAKEHOLDER SYMPOSIUM

OCT. 30, 2024
SACRAMENTO, CA

The California ISO Stakeholder Symposium will be held on Oct. 30, 2024 at the Safe Credit Union Convention Center in Sacramento, California.

A welcome reception for all attendees will be held the evening of Oct. 29.

Additional information, including event registration and sponsorship opportunities, will be provided in a future notice and on the ISO's website.

Please contact Symposium Registration at symposiumreg@caiso.com with any questions.

New training series: Resource Operations Readiness Training

Training Goal: to prepare customers in advance of summer to meet ISO expectations for successful resource management, especially during tight conditions.

These courses build on concepts shared during the May 1st Resource Interconnection Fair.

Resource Performance Expectations May 7th

- Dispatch/Operating instruction response
- Hybrid resource management
- Outage cards completion
- Flex Alerts/EEA response

Battery Performance Expectations May 15th

- Resource capabilities
- Correct Nature of Work
- Off-Grid Charging Indicator
- Physical management requirements

Managing Inertie Transactions May 16th

- Wheel-through concepts
- Export priority
- Tagging expectations
- Flex Alert/EEA

WEIM Resource Performance Expectations May 22nd

- Assistance Energy Transfer
- Demand Response process for WEIM

Register today at: <https://caiso.regfox.com/resource-operations-readiness-training-series>

Contact CustomerReadiness@caiso.com with questions.

Share this information with your staff!



A new **caiso.com** is coming in late May

Training sessions will be held on
May 23 from 9:00 a.m. – 10:00 a.m.
May 29 from 10:00 a.m. – 11:00 a.m.

Watch the Daily Briefing for details and
follow us on social media.