California ISO

Stakeholder Comments Template

Day-Ahead Market Enhancements Phase 1 Initiative

This template has been created for submission of stakeholder comments on the straw proposal that was published on February 7, 2020. The proposal, February 10, 2020 Stakeholder meeting presentation, March 5, 2020 Stakeholder call presentation, and other information related to this initiative may be found on the initiative webpage at: http://www.caiso.com/StakeholderProcesses/Day-ahead-market-enhancements

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on March 26, 2019.

Submitted by	Organization	Date Submitted
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Please provide your organization's overall position on the DAME straw proposal:

- ☐ Support
- ☒ Support w/ caveats
- ☐ Oppose
- ☐ Oppose w/ caveats
- ☐ No position

Please provide written comments on each of the straw proposal topics listed below:

1. **New day-ahead market products, including reliability energy, reliability capacity, and imbalance reserves.**

CDWR understands that all resources (except RA resources that have specific bidding obligations) can opt out of bidding for reliability capacity, imbalance reserves, and corrective capacity (Page 26). CAISO states that the difference between a resource's energy (EN) schedule and reliability energy (REN) schedule will be designated as a reliability capacity up (RCU) or reliability capacity down (RCD) award in the day-ahead market and will result in an obligation to provide economic energy bids in the real-time market (Page 4). Can CAISO please confirm that any generating resource that only provides self-schedules in the day-ahead market will not be subject to the real-time must offer obligation? In other words, for generators that self-schedule in the day-ahead market, their EN and REN schedules will always be the same.

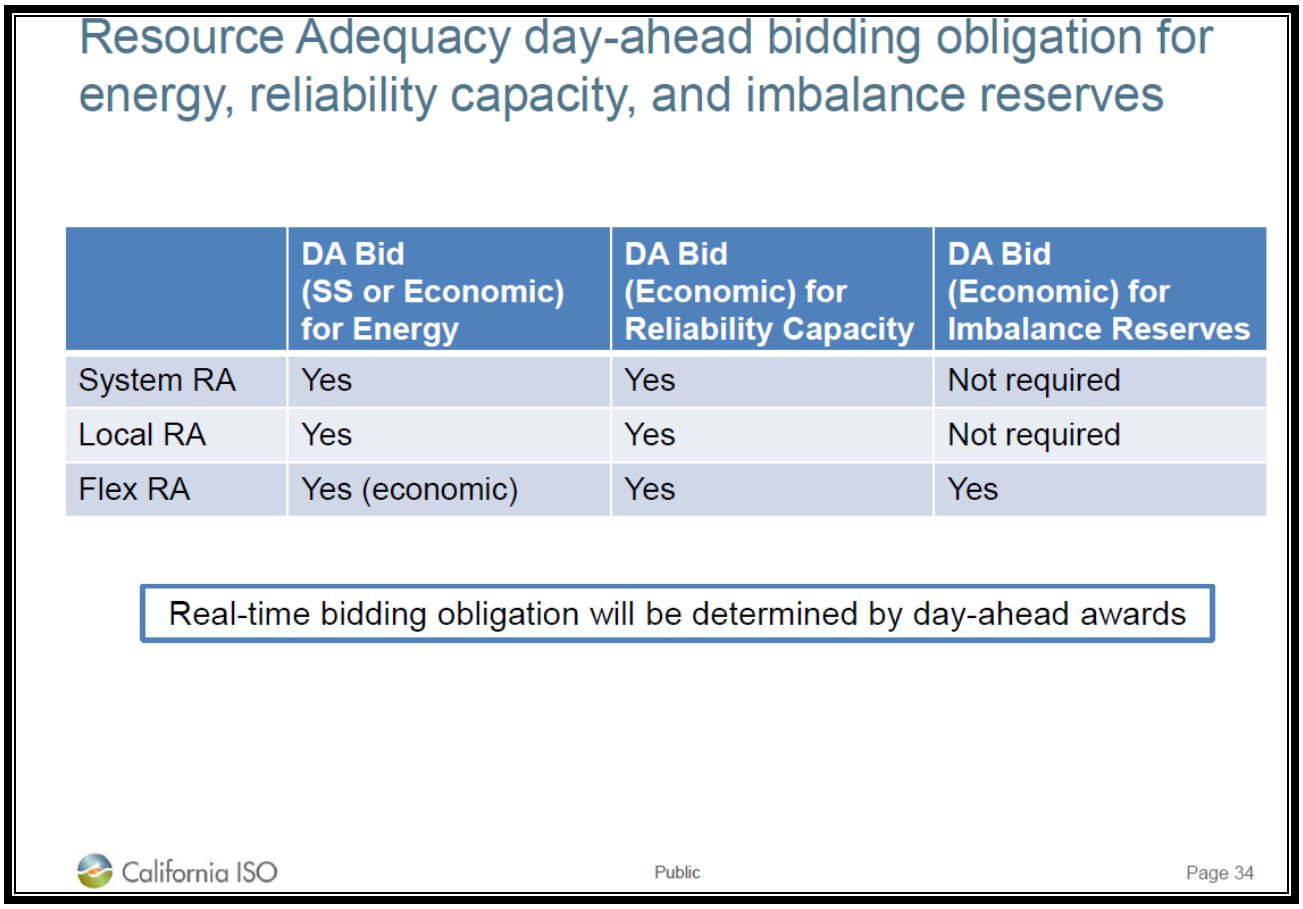
2. Settlement and cost allocations.

CAISO proposes to recover the uplift costs of reliability capacity up/down and imbalance reserves up/down through a two-tier cost allocation methodology (Page 28). CAISO specifically notes that reliability capacity up/down "will be allocated through the tier allocation similar to the residual unit commitment cost allocation in the existing market" (Page 16). Can the CAISO please provide cost allocation examples to demonstrate how virtual supply, virtual demand, load (under and over scheduled), and metered demand will be allocated costs? Can the CAISO please explain how the examples follow its Cost Allocation Principles[1]?

3. Bidding rules and offer obligations.

CAISO presentation on 2/10, slide #34 indicates that RA capacity must be subject to the requirement to offer day ahead (DA) bid for Energy (self-schedule or economic bid), DA economic bid for Reliability Capacity(RCU/RCD), and DA economic bid for Imbalance Reserves (IR) according to whether the resource adequacy (RA) capacity is generic or flexible as shown in the slide below.

[1] http://www.caiso.com/Documents/DraftFinalProposal-CostAllocationGuidingPrinciples.pdf



Resource Adequacy day-ahead bidding obligation for energy, reliability capacity, and imbalance reserves

	DA Bid (SS or Economic) for Energy	DA Bid (Economic) for Reliability Capacity	DA Bid (Economic) for Imbalance Reserves
System RA	Yes	Yes	Not required
Local RA	Yes	Yes	Not required
Flex RA	Yes (economic)	Yes	Yes

Real-time bidding obligation will be determined by day-ahead awards

CDWR would like to seek clarification on the following questions:

a) PL model limitation: Currently, a participating load (PL) that provides generic RA is modeled as an extended non-participating load which allows for bidding non-spin in the DA market and requires real time (RTM) energy bid for load drop for the portion of DA non-spin award. The extended non-participating load model may not allow bidding DA bid for energy drop and DA economic bid for RC for a PL resource. If a PL resource cannot offer DA bid for energy and DA bid for RC, will the PL resource be disqualified from providing RA capacity? If not, how will the PL resource be accommodated to meet the DA offer requirements with the extended non-participating load model that is being used to schedule a PL resource?

b) RA MOO on DA products: The presentation slides #14 and #15 indicate that there will be a number of DA products, as shown in the slide below:

Summary of proposed, planned, and existing day-ahead market products (1 of 2)

Title	Acronym	Purpose	Eligibility	Status
Energy	EN	Energy schedules cleared to meet bid-in demand	All resources	Existing
Reliability Energy	REN	Physical resources cleared to meet the load forecast	60-minute dispatchable physical resources, award based on 60-minute ramp capability	Proposed
Reliability Capacity, Up	RCU	Incremental capacity procured to meet the positive difference between the load forecast and cleared demand	As above	Proposed
Reliability Capacity, Down	RCD	Decremental capacity procured to meet the negative difference between load forecast and cleared demand	As above	Proposed
Imbalance Reserves, Up	IRU	Incremental capacity procured relative to the load forecast to meet the upward uncertainty requirement	15-minute dispatchable physical resources, award based on 15-minute ramp capability	Proposed
Imbalance Reserves, Down	IRD	Decremental capacity procured relative to the load forecast to meet the downward uncertainty requirement	As above	Proposed

Title	Acronym	Purpose	Eligibility	Status
Ancillary Services	AS	Incremental capacity procured and reserved to meet real-time regulation and contingency reserve requirements	Resources certified to provide the respective service	Existing
Corrective Capacity, Up	CCU	Incremental capacity procured and reserved for corrective action after specific corrective transmission contingencies	All 5-minute dispatchable resources, award based on 20-minute ramp capability	Planned
Corrective Capacity, Down	CCD	Decremental capacity procured and reserved for corrective action after specific corrective transmission contingencies	As above	Planned

Slide #34 indicates RA must offer obligation (RA MOO) is applicable to the DA products (EN, RCU, RCD, IRU, IRD) based on the type of RA capacity (generic or flexible). CDWR seeks clarification whether RA MOO excludes REN, AS, CCU, and CCD.

c) RA MOO examples in both DA and RTM: it would be extremely helpful to understand the DA and RTM RA MOO if examples are provided for different type of resources (short start, long start, hydro, PL resource, VERs etc.) and for different type of RA

capacity (generic and flexible). The examples should include the required DA products (planned and existing) as shown above, subject to RA MOO.

d) Confusion on Residual Unit Commitment (RUC) being replaced by REN: Currently, RUC is the capacity equivalent to the difference between CAISO forecast of CAISO demand (CFCD) and the cleared bid in demand. However, REN (thought to be replacing RUC) overlaps cleared bid in demand and is not incremental to the cleared bid in demand. CDWR seeks clarification why overlapping with "EN" is needed compared to the RUC which is incremental to the cleared bid in demand. REN as described is a physical capacity in the cleared bid in demand. To ensure that REN is a physical capacity, will overlapping of REN only with the virtual schedule (in the cleared bid in demand) meet the CAISO reliability requirement? For example, using the following formula may eliminate unnecessary overlapping of REN on physical capacity from EN:

   REN = CFCD – (EN – Virtual schedules)

4. **Scheduling rules for variable energy resources.**

   DWR has no comments at this time.

5. **Deliverability approach for reliability capacity and imbalance reserves.**

   DWR has no comments at this time.

6. **Approach for congestion revenue rights.**

   Before implementation it would be helpful to have a detailed analysis on the financial impacts of this change for CRR holders and assessment of what impact, if any, the virtual supply and demand may have on the Reliability Energy product requirements.

7. **Approach for local market power mitigation.**

   DWR has no comments at this time.

8. **Regression approach to determine the imbalance reserve requirement.**

   DWR has no comments at this time.

9. **Additional comments:**