



Stakeholder Comments Template

Day-Ahead Market Enhancements (DAME) Phase 1 Initiative

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:

Summary of Recommendations

1. The CAISO should analyze and provide the costs and benefits of its proposal changes.
2. The CAISO should clarify the cost impacts of its proposed new products on California ratepayers.
3. The CAISO should clarify how it will calculate default bids and use that information to estimate the potential reliability capacity costs that should be recovered through the day-ahead market (DAM) rather than future resource adequacy (RA) contracts.
4. The CAISO should clarify whether reliability capacity awards can be granted to variable energy resources (VERs) that do not submit economic bids and, if a bid is not submitted, whether the VER can subsequently choose not to participate in the real-time market (RTM)
5. The CAISO should clarify how congestion revenue rights (CRRs) will change under the proposed day-ahead market enhancements (DAME).

6. The CAISO should clarify if the reliability energy (REN) market will settle on an hourly, fifteen, or five-minute schedule, in order to limit potential pricing loopholes between markets.
7. The CAISO should clarify if CRRs will be offered to participants in the Energy Imbalance Market (EIM).
8. The CAISO should explain why it proposes to include CRRs as a REN product.

Discussion

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

The California Independent System Operator (CAISO) is proposing enhancements to the DAM to schedule resources to meet the CAISO's load forecast and address the uncertainty of real-time net load.¹ The CAISO is proposing new market products for DAM co-optimization to replace the existing residual unit DAM co-optimization.² The Public Advocates Office requests that CAISO analyze the benefits of implementing the CAISO's new proposed changes - Reliability Energy (REN); Reliability Capacity Up/Down (RCU/RCD); Imbalance Reserves Up/Down (IRU/IRD); and Corrective Capacity Up/Down (CCU/CCD) to the DAM. In addition, Public Advocates Office requests that the CAISO provide an analysis of the costs to implement the CAISO's proposed changes to the DAM. In an earlier phase of this stakeholder initiative, the CAISO proposed to schedule the DAM in fifteen-minute intervals to address the granularity difference between the existing one-hour intervals of the DAM compared to the fifteen-minute intervals of the RTM.³ However, the CAISO abandoned this proposal because it found that implementation costs and settlement changes would outweigh the financial gains of a fifteen-minute schedule. In addition, the CAISO's simulation of a fifteen-minute DAM was unable to run in a reasonable amount of time. The CAISO should analyze the costs of its current proposal to avoid similar last-minute revelations that the costs of implementing its proposal will outweigh any benefits.

¹ DAME Straw Proposal, p. 4.

² DAME Straw Proposal, p. 4.

³ DAME Straw Proposal, p. 6.

Additionally, the CAISO should clarify the cost impacts of these new products on California ratepayers. The CAISO stated that, if its proposal is adopted, it would expect resource owners to reflect the costs for reliability capacity through their bids for RCU/RCD (which will be paid through the market), rather than incorporating these costs in RA contracts (which are paid by the ratepayers of the load-serving entity contracting for the RA). However, current contracts are unlikely to be changed to reflect the impact of reliability capacity procurement through the CAISO market. At this point, it is unclear what the value of those reliability capacity costs would be or how those costs could be removed from current or future RA contracts. It is also unclear why a generator would willingly re-negotiate a contract that would reduce overall payments (new capacity payments from the market as well as existing contracted capacity payments) to the generator.

The CAISO states that to achieve local market power mitigation for reliability capacity bids, it would need to develop default bids that represent the capacity availability costs.⁴ The CAISO should clarify how it will calculate default bids and use that information to estimate the potential reliability capacity costs that should be recovered through the reliability capacity products rather than future RA contracts. Without this information, ratepayers would pay twice for capacity through the CAISO's proposal: once through RA contracts and again through the CAISO market for the reliability capacity products.

2. Settlement and cost allocations.

The Public Advocates does not have comments on this proposal at this time.

3. Bidding rules and offer obligations.

The Public Advocates does not have comments on this proposal at this time.

⁴ DAME Straw Proposal, p. 33.

4. Scheduling rules for variable energy resources (VERs).

The CAISO should clarify the language of its proposal on whether VERs that do not bid into the DAM will receive a reliability capacity award. In one section of the proposal, the CAISO states:

“If a variable energy resource does not submit a bid, the market optimization will use the system operator forecast to schedule reliability energy. Because the energy schedule and the reliability schedule are not equal, this would otherwise result in a reliability capacity up award equal to the system operator forecast. The award would be paid the reliability energy price but would also be subject to the reliability capacity up real-time must offer obligation. The CAISO does not believe it would be appropriate to subject a resource that did not want to participate in the day-ahead market to a real-time must offer obligation. Therefore, the *CAISO proposes to not pay a resource that does not bid into the day-ahead market for its reliability capacity up award*, so it is not forced to participate in the real-time market. *Since the resource will not be paid for reliability capacity up, the cost allocation to load will likewise be reduced.*”⁵

The language implies that the CAISO’s market optimization could result in a resource receiving an RCU award even when the resource does not bid into the DAM. The CAISO then states that the resource would simply not be paid so it is not forced to participate in the RTM, implying that the RCU award will not actually be provided. Additionally, the associated cost allocation to load would be reduced. If this interpretation is correct, the CAISO could make a DAM reliability capacity award that would not be fulfilled, potentially resulting in a reliability capacity shortage in the real-time market.

However, the language quoted above conflicts with subsequent language in the straw proposal that states “(o)nly variable energy resources that submit economic bids will be scheduled to provide reliability capacity or imbalance reserves. If a VER is awarded reliability capacity or imbalance reserves, the resource will have the same real-time bidding obligations as other resources.”⁶ The CAISO should clarify its proposal to explain whether DAM reliability capacity awards can be granted to VERs that do not submit economic bids and, if a bid is not submitted, whether the VER can subsequently not participate in the real-time market.

⁵ DAME Straw Proposal, pp. 25-26. (Emphasis added)

⁶ DAME Straw Proposal, p. 26.

5. Deliverability approach for reliability capacity and imbalance reserves.

The Public Advocates does not have comments on this proposal at this time.

6. Approach for congestion revenue rights.

The CAISO should clarify how CRRs will change under the DAME. Currently, CRRs are financial instruments intended to hedge against anticipated marginal price increases associated with serving load and are purchased on a transmission constraint between a source and a sink in the DAM.⁷ As an integrated forward market product (IFM),⁸ part of the value of a CRR is based on the direction of congestion in the IFM.⁹ As part of the proposed DAME, the CAISO will combine the IFM and the residual unit commitment (RUC) market into the REN.¹⁰ The REN is constructed as a single DAM that will co-optimize various products “to provide flexible capacity for use in the real-time market to meet net load imbalances.”¹¹

CAISO suggests that the new REN product will affect CRRs in a few ways. Namely, the REN, acting as a single DAM, will create new constraints¹² available to bind in the DAM,¹³ and “will collect congestion revenues on the energy portion of the reliability energy schedule and imbalance reserve deployment scenarios”¹⁴ when those scenarios cause a constraint to bind. Accordingly,

⁷ DAME Straw Proposal, p. 29.

⁸ “Congestion revenue rights are CAISO forward market products that hedge day-ahead market congestion costs.” DAME Straw Proposal, p. 29.

⁹ “CRR Holders will be paid or charged for Congestion costs depending on the type of CRRs held by the CRR Holder, the direction of Congestion as measured through the IFM, and the LMP as calculated in the IFM. CRRs will be funded through the revenues associated with the IFM Congestion Charge, CRR Charges, and the CRR Balancing Account. The CRR Payments and CRR Charges will be settled first on daily basis for each Settlement Period of the DAM.” *California Independent System Operator Corporation Fifth Replacement Tariff*, Section 11, November 1, 2018, p. 13.

¹⁰ DAME Straw Proposal, p. 41.

¹¹ DAME Straw Proposal, p. 41.

¹² “The day-ahead market enhancements proposal introduces nine new categories of constraints that can be binding in the day-ahead market. When any of these new constraints bind in the day-ahead market, the market will collect congestion revenues on the energy portion of the reliability energy schedule and imbalance reserve deployment scenarios, which will include a cost contribution from imbalance reserves and reliability capacity products.” DAME Straw Proposal, p. 30.

¹³ DAME Straw Proposal, p. 30.

¹⁴ DAME Straw Proposal, p. 30.

CRRs holders will be paid for both the physical and financial energy flows between a source and a sink.¹⁵ Therefore, CRRs will only settle if the CAISO collects congestion revenues on a binding constraint in the DAM.¹⁶

Currently, the CAISO DAM is settled on an hourly basis, and the RTM is settled on an hourly, fifteen, or five-minute basis.¹⁷ The CAISO should clarify on what basis the REN market will settle. While the type of scheduling and settlement will affect all potential REN products, for CRRs, the implications could be enormous. For example, the CAISO acknowledges that IFM prices are consistently higher than real-time prices, which can lead to price suppression in the RTM.¹⁸ Should this pattern hold when the IFM is consolidated into the REN, without market specification of minutes, the already-existing mismatch between DAM prices and real-time prices could be exacerbated. Furthermore, the CRR market is subject to historic manipulation, with ratepayer losses totaling over \$800 million¹⁹ before the CAISO implemented changes in 2019. Accordingly, the CAISO should clarify if the REN market will settle on hourly, fifteen, or five-minute schedule, in order to limit potential pricing loopholes between markets.

Additionally, because the CAISO is proposing to include energy imbalances in the REN product, the CAISO should clarify if CRRs will be offered to participants in the Energy Imbalance Market (EIM). Presently the EIM is dispatched in the RTM to meet energy imbalances as they immediately occur in the CAISO system and is available to meet energy demand within the

¹⁵ “In summary, congestion revenue rights will pay the holder the congestion revenue between the source and sink associated with: Financial energy flows, including physical supply, scheduled load, and virtual supply/demand; Physical energy flows from physical supply meeting the CAISO demand forecast; Physical flows from physical supply and deployed IRU for meeting the CAISO demand forecast plus the upward uncertainty requirement; and Physical flows from physical supply and deployed IRD for meeting the CAISO demand forecast minus the downward uncertainty requirement.” DAME Straw Proposal, p. 32.

¹⁶ “The market will only settle congestion revenue rights to the extent that it receives congestion revenues on associated binding constraints in the day-ahead market.” DAME Straw Proposal, p. 32.

¹⁷ Business Practice Manual (BPM) for Market Operations, Version 64, Revision Date: January 29, 2020, p. 26.

¹⁸ DAME Straw Proposal, p. 42.

¹⁹ “From 2009 to 2018, the California ISO’s auction for congestion revenue rights (CRRs) resulted in a net loss of over \$800 million for transmission ratepayers.” *Report on results of 2019 congestion revenue rights auction*, CAISO Department of Market Monitoring, January 27, 2020, p. 1.

CAISO service territory.²⁰ Under the new DAME proposal, EIM dispatches would be integrated under the REN for a single optimized dispatch.²¹ Additionally, in the CAISO's concurrent Extended Day-Ahead Market (EDAM) proposal, the CAISO is proposing to expand the DAM footprint to all participants in the EIM, rather than just the CAISO service territory.²² This could have potentially significant implications for the CRR market. For example, CRRs settle on the congestion price on a binding constraint in the DAM, as mentioned above. However, if the EDAM proposal is approved, would California ratepayers be financially responsible for binding constraints that are offered in the REN imbalance market that are not within the CAISO's service territory? The CAISO has not yet answered this important question in the DAME or EDAM Stakeholder Processes. The CAISO should clarify:

- If CRRs will be offered outside of the CAISO's service territory,
- If California ratepayers will be financially responsible for constraints outside of the CAISO's service territory,
- If surpluses on each constraint will be allocated back to measured demand²³ (as is currently the case since 2019), or if surpluses on constraints outside of the CAISO's service territory will be allocated back to market participants (as is currently the case at inerties).²⁴

Finally, the CAISO is proposing to include CRRs as part of their REN product, which is a reliability product.²⁵ However, CRRs have no influence on REN; they are forward market financial instruments that only exist to hedge against anticipated rapid price fluctuations that arise from congestion costs between a source and a sink in the RTM. CRRs have no influence over the flow of electricity between a source and a sink. The amount of electricity flowing through a system to meet demand is a question of reliability, but the prices themselves are not. Therefore, it is unclear why the CAISO proposes to include CRRs as a system reliability product when CRRs do not

²⁰ BPA_for_Energy Imbalance Market, Version 18, Revision Date: November 20, 2019, pp. 11-12.

²¹ "The new day-ahead market design will also be used as the foundation for extending the day-ahead market to Energy Imbalance Market (EIM) participants outside of the CAISO balancing authority area, which is just starting the stakeholder initiative process. Imbalance reserves allow the sharing of the diversity benefit from optimizing and pooling loads and resource variability over a larger market footprint and will be an important element of the extended day-ahead market's (EDAM's) resource sufficiency evaluation." DAME Straw Proposal, p. 5.

²² Extending the Day-Ahead Market to EIM Entities, Issue Paper, October 10, 2019, p. 3.

²³ *Congestion Revenue Rights Auction Efficiency Track 1B Draft Final Proposal*, the CAISO, May 11, 2018.

²⁴ CAISO EDAM workshop presentation, February 12, 2020, slide 51.

²⁵ DAME Straw Proposal, p. 41.

necessarily ensure reliability. The CAISO should explain why it proposes to include CRRs as a REN product.

7. Approach for local market power mitigation.

The Public Advocates does not have comments on this proposal at this time.

8. Regression approach to determine the imbalance reserve requirement.

The Public Advocates does not have comments on this proposal at this time.

9. Additional comments:

The Public Advocates does not have comments on this proposal at this time.