California ISO

Stakeholder Comments Template

Day-Ahead Market Enhancements (DAME) Initiative

This template has been created for submission of stakeholder comments on the revised straw proposal that was published on June 8, 2020. Materials related to this initiative can be found on the ISO website 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 July 6, 2020.

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

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

PG&E continues to support CAISO's effort to develop mechanisms to improve Day Ahead Market (DAM) efficiency and reliability. PG&E supports the direction of the current proposal's market formulation and believes that the 3-pass solution should offer the most efficient market process and best augment grid reliability.

While believing that the proposed market formulation design conceptually could entail more optimal dispatch results with lower cost and less external intervention from market operations, PG&E requests that CAISO provides more details and addresses the concerns listed below.

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

1. Updated market formulation:

PG&E supports the direction of the proposed market formulation, referred to as Option 3, among all the three options raised in the stakeholder meetings on June 15th and 17th (*i.e.*, (1) IFM + RUC + Imbalanced Reserves; (2) to reinstate market formulations in last round DAME straw proposal; (3) the 3-pass formulation in the current proposal.)

PG&E believes that co-optimizing energy (EN) and reliability capacity (RCU/RCD) can improve the DAM efficiency by reducing the external intervention from operators and entailing more optimal dispatch schedules, in comparison to the sequential structure of the current DAM (*i.e.*, IFM+RUC). In addition, PG&E believes that properly uncoupling of EN and RC products could resolve the inconsistency of LMP induced under REN (in the last round proposal) as well as settlement issues related to CRRs.

However, the current proposal lacks sufficient technical details for stakeholders to estimate the benefits and examine the problems induced from the market formulation. Therefore, PG&E requests that CAISO provides:

- A full technical appendix with all constraints, price formation, and justifications for approximations in the market formulation in the next proposal.

  This is important for stakeholders to understand the impacts on dispatch schedules and prices. For example, on page 36 of June 15th meeting's slides, it is not clear how much change of RC and Imbalance Reserves (IR) may take place the FRU and FRP deployment scenarios; An extra constraint seems to be necessary to confine the dispatch schedule in the last path to deviate from the optimal results in the first pass.

- Examples that quantify the benefits induced from the proposed formulation in comparison to current sequential DA market structure (*i.e.*, option (1)), and an interactive example for the proposed market formulation.

2. Accounting for energy offer cost in upward capacity procurement:

PG&E understands the purpose of the Real-Time energy offer cost cap is to incentive high cost resources to increase their capacity offers and thus decreases chance those resources will be awarded , while also allowing the DAM to optimize for the most economic selection of resources and reflecting their cost fairly. However, we request that the CAISO clarify a few questions based on the example below:

Assume the Energy Offer Cap (EOC) is 150($/MW) in the Real-Time Market (RTM).

Unit 1 ($/MW)	**Unit 2 ($/MW)**
Capacity: 40 (MW) RA Capacity: 30 MW Cost: $50/MWh EN bid in DAM: 0-30MW at $60 RCU bid in DAM: 0-30MW at $55 Spin bid in DAM: 0-30MW at $5 EN award in DAM: 20 MW at $175 RCU award in DAM: 10 MW at $60 Spin award in DAM: 0 MW awarded	Capacity: 40 (MW) RA Capacity: 30 MW Cost: $50/MWh EN bid in DAM: 0-30MW at $60 RCU bid in DAM: 0-30MW at $55 Spin bid in DAM: 0-30MW at $5 EN award in DAM: 20 MW at $175 RCU award in DAM: 0 MW awarded Spin award in DAM: 10 MW at $5

1. **Value of EOC**.
    i. Will the EOC be announced to all resources before they submit their bids in DAM? If so, how does CAISO plan to forecast the value of EOC, in particular when (a) supply is tight and the power balance constraint has to be relaxed; and/or (b) the cost of certain resources is unexpectedly high.
    ii. Will CAISO ensure that EOC is greater than the DA clearing price? In the example above, since the EOC, per our assumption, is less than the DA clearing price, *i.e.*, less than 175($/MW), we are concerned that this price/bid separation might have unintended negative impacts on the Real-Time market clearing process such as….

2. **Bidding rules**. For the above two units, they will submit bids representing the resource's full possible capacity for each product (*i.e.*, EN, RCU, IRU, and Spin). Please confirm the bids do not need to sum to less than the resources capacity (*i.e.*, EN Capacity Bid + RCU Capacity Bid + IRU Capacity Bid + Spin Capacity Bid< = 40MW);

3. **Application of the EOC.** On page 44 of the June 15th meeting's slides, it reads "to have a real time energy offer cap for resources awarded RCU and IRU." Our interpretation is that the EOC only applies to the awarded RCU and/or IRU, which becomes Must-Offer-Obligation (MOO) energy in RTM. That is, 10MW of Unit 1 will be capped to 150($/MW) in RTM, while the other 10MW of Unit 1 and 20WM of Unit 2 can submit bids up to 1000($/MW) and are not subject to the EOC.

   Our interpretation, if correct, leads to the concerns of the effectiveness and fairness of the proposed EOC mechanism, as detailed below.

   The proposed EOC will give rise to a difficulty with respect to a resource receiving both DA energy and DA RCU/IRU awards in its real time bidding. If the offer cap on the 10 MW of RCU awarded on Unit 1, in our example above, is capped at $150, but if the remainder of the real time energy bid is priced above $150, say at $1000, the real time bid would take the form (0-10MW, $150/MW), (10-40MW, $1000/MW). In effect, the bid would offer to DEC from its DA award of 10 MW at $150 or below, and capacity above the DA award would be offered at $1000. In the event that RT prices realize at above $150, the bid's RCU/IRU will be cleared at that RT price, thus violating the stated intention of the offer cap while adhering to the offer cap rule.

   Therefore, we request the CAISO to further consider the market usage of the proposed EOC versus the proposed EOC's intent.

3. Variable energy resources:

PG&E has no comment at this point.

4. Market power mitigation for reliability capacity and imbalance reserves:

PG&E supports CAISO's effort of developing effective market power mitigation measures, which considers impact of RC and IR products. However, the current proposal does not provide sufficient

details for stakeholders to understand the mitigation process and to determine its market impact. We request CAISO address the following questions in the next proposal:

1. How will the proposed mitigation process interplay with the system and local market power mitigation in RTM?

2. What is the composition of the mitigation pools? Will pivotal suppliers be identified (a) separately in the pools of EN, RC, and IR, or (b) in one pool, wherein the total MW of EN, RC, and IR is used to identify a pivotal supplier? And in the former case, how to incorporate the impact of the other products on the energy price?

3. Is the proposed mitigation compatible with current FRP refinement proposal? How would it impact the FRP scheduling in RTM?

4. Would the proposed mitigation also apply to non-resource specific intertie bids and, if so, how would such bids be identified for possible mitigation?

In addition, we request that CAISO to provide a technical appendix defining the triggers, formulations for the pivotal supplier identification, and mitigated prices in the mitigation process, as well as examples under the proposed DAM structure.

5. Please include additional comments including considerations for other possible solutions or concerns to any of the above topics:

PG&E supports the CAISO's initial thoughts on settlement cost allocation processes, but requests the next proposal provide additional details regarding the following items:

1. The introduction of a clear no-pay process for both RCU/RCD and IRU/IRD capacities to account for conditions where an awarded resource cannot or does not bid into the Real-Time market, per the associated MOO.
2. Further evaluation of potential Tier 1 cost allocation rate maximums, for initial RCU/IRU and RCD/IRD capacity cost recovery.
3. Clarification on bid cost recovery market associations for situations where a resource is awarded capacity only in the DAM, or where a DAM energy commitment is reset by Real-Time market dispatches and/or curtailments. PG&E is especially concerned about the possible reduction of appropriate resource start-up costs in situations where a fast start resource's Day Ahead commitment period is shortened by subsequent Real-Time market adjustments.