California ISO

Stakeholder Comments Template
Day-Ahead Market Enhancements Initiative

Submitted by	Organization	Date Submitted
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1. At this time, does your organization support moving forward with **Option 1: Financial**, **Option 2: Financial + Forecast**, or **undecided**. Provide supportive comments (in favor of, or in opposition to) below.

Please double click on check box below to select your position:

Option 1:	**Option 2:**
☐ Support ☐ Support with caveats ☒ Oppose ☐ Undecided	☐ Support ☒ Support with caveats ☐ Oppose ☐ Undecided

Option 1: Financial

- Co-optimizes bid-in demand, ancillary services and imbalance reserves
- Imbalance reserves cover historical uncertainty between IFM cleared net load and FMM net load
- Exceptional dispatch if IFM clears inconsistent with operational needs

Please provide comments to explain your position on option #1:

PGP does not support Option #1 because Option #1 does not co-optimize reliability capacity with energy and other reserves products, nor does it provide a workable design for extending the CAISO's Day-Ahead Market to EIM Entities (EDAM).

Option #1 leads to an inefficient dispatch of resources and an increase in total production costs. By treating virtual supply and VER supply comparably to firm energy supply that is bundled with capacity, the market solution under Option #1 does not include the cost of additional reliability capacity needed to replace virtual supply or any portion of VER supply that is not available in the real-time market. This can result in firm physical supply with a lower overall cost being displaced by virtual supply that requires incremental, and potentially more costly, reliability capacity procurement. The outcome is an inefficient dispatch solution, which increases total production costs.

Option #1 leads to discriminatory compensation for the same service. With procurement of energy and flexibility separate from capacity, firm physical supply that reduces the need for reliability capacity is treated the same as virtual supply that requires additional reliability capacity to be procured through out-of-market actions. Resources

providing reliability capacity and/or flexibility in the sequential process are compensated through side payments, whereas firm energy resources dispatched in the initial energy market run (which also provide reliability capacity) are not compensated for the same capacity they provide.

Option #1 does not support the extension of CAISO's day-ahead market to EIM Entities. In a voluntary EDAM framework, entities outside of California maintain their NERC responsibilities and are responsible for operating their BAAs reliably. EIM Entities today plan their resources and commit units on a day-ahead basis to ensure sufficient resources are available to reliably meet real-time needs. To transition to EDAM and potentially de-commit units day-ahead to rely on EDAM transactions, EIM Entities will need assurance that the supply they are relying on is certain and can be counted on to perform. EDAM Entities cannot rely on virtual supply or uncertain VER schedules determined by bids to meet their operational needs. And procuring reliability capacity through exceptional dispatch is not a workable solution for EDAM Entities.

Further, it is unclear how out of market actions, such as exceptional dispatch, will be used to ensure sufficient supply in an EDAM Entity's BAA, considering that the reliability capacity has to be deliverable to that EDAM Entity's load. As CAISO is not the BA operator outside of the CAISO BAA, CAISO does not have dispatch control over resources outside of its jurisdiction. PGP requests more information regarding how procurement of reliability capacity through exceptional dispatch would work for EDAM Entities.

Option 2: Financial + Forecast

- Co-optimizes bid-in demand, ISO reliability capacity, ancillary services and imbalance reserves
- Imbalance reserves cover historical uncertainty between ISO's day-ahead net load forecast and FMM net load
- Reliability capacity covers differences between ISO net load and cleared net load
- Exceptional dispatch if IFM/RUC clears inconsistent with operational needs

Please provide comments to explain your position on option #2:

PGP strongly supports the co-optimization of energy, capacity and flexibility proposed in Option #2 but believes further refinements are needed.

Option #2 allows the market solution to make efficient tradeoffs between energy, capacity, and flexibility and reduces total production costs. Option #2 recognizes the reliability capacity provided by firm energy resources and makes efficient tradeoffs between physical and virtual supply, choosing the least-cost solution and lowering overall production costs. Incorporating reliability capacity into the energy market optimization allows firm energy resources to be comparably compensated for the capacity they provide.

If CAISO extends its day-ahead market to EIM Entities, a single integrated day-ahead market design is needed. As noted earlier, EDAM Entities will need assurance that sufficient physical energy commitments are made day-ahead to reliably

meet load and relying on exceptional dispatch to achieve this outcome is not an acceptable solution.

While Option #2 provides significant improvement over the status quo, PGP believes Option #2 can be greatly improved by further distinguishing resources' specific energy, capacity and flexibility attributes. As currently proposed, Option #2 does not distinguish between firm energy and non-firm energy or uncertain VER supply. Additionally, Option #2 does not distinguish between external firm supply that procures balancing reserves from the source BAA and VER supply internal to the CAISO BAA that requires additional imbalance reserves. PGP believes more discussion is needed around the attributes provided by each resource and how to ensure fair and appropriate compensation is provided to all resources that provide the same attributes.

Please offer any other feedback your organization would like to provide on presentation materials and discussion for August 13, 2019 Day-Ahead Market Enhancements stakeholder working group meeting.

Comments:

PGP thanks CAISO for providing the relationships between the Day-Ahead Market Enhancements and other CAISO efforts and initiatives. PGP also appreciates the additional discussion on the imbalance reserves product and market formulation options. As the enhancements proposed in DAME are foundational to EDAM, it is critical that the proposals consider how they might be implemented in an EDAM context and not solely for the CAISO BAA.

PGP recommends CAISO hold workshops that allow BAAs external to CAISO to share their perspectives on how the enhancements and options proposed in DAME would impact their current day-ahead operations and what things need to be considered if CAISO were to extend their day-ahead market to those BAAs. PGP remains concerned that the discussions to date have been too focused on the needs of CAISO's BAA and have not considered how the market formulation options proposed relate to the needs of external BAAs. PGP believes the DAME discussions will benefit greatly from hearing broader perspective and input on the workability of the options for the broader region.

Lastly, regarding the procurement target for imbalance reserves, PGP appreciates the additional analysis provided by the CAISO regarding the uncertainty observed between the day-ahead and real-time market. In the August 13th stakeholder meeting, CAISO suggested setting the procurement target for imbalance reserves to cover a P95 level of uncertainty, while other stakeholders questioned if this amount was too much. PGP notes that setting a procurement target for imbalance reserve needs must also be considered in the context of EDAM. Just like in the EIM, an EDAM Entity, along with the CAISO BAA, will need to have sufficient resources, INC/DEC range and flexible ramping capability to meet its own needs prior to the day-ahead market run to avoid leaning on other EDAM Entities for its energy and capacity needs. The procurement target for imbalance reserves not only sets the level of uncertainty needs that will be covered by the imbalance reserve product, but also sets the resource sufficiency requirements that prevent EDAM Entities and CAISO from leaning. As such, PGP encourages CAISO to

also consider the level of imbalance reserves BAAs outside of California are holding out today, how they are determined, and what procurement target is workable for those external BAAs.

[i] PGP represents eleven consumer-owned utilities in Washington and Oregon that own almost 8,000 MW of generation, approximately 7,000 MW of which is hydro and over 97% of which is carbon free. Four of the PGP members operate their own balancing authority areas (BAAs), while the remaining members have service territories within the Bonneville Power Administration's (BPA) BAA. As a group, PGP members also purchase over 45 percent of BPA's preference power.