

Comments of PacifiCorp and NV Energy on the Day-Ahead Market Enhancements

Revised Straw Proposal

PacifiCorp, Nevada Power d/b/a NV Energy and Sierra Pacific Power d/b/a NV Energy (NV Energy) appreciate the opportunity to comment on the California Independent System Operator's (CAISO) Day-Ahead market Enhancements Initiative (DAME). As previously noted in the Joint Comments that PacifiCorp and NV Energy were a party to in this initiative, we believe that the CAISO's current proposal (Revised Straw Proposal) to enhance its existing financially binding day-ahead energy market in a manner that enables the CAISO BAA to ensure reliability and establish physical market design elements is key to the success of extending the day-ahead market across the West. In that regard, PacifiCorp and NV Energy are generally supportive of the CAISO's current proposal, as revised in the workshop on day two, with additional questions and considerations relative to how it might work in the Extended Day-ahead Market (EDAM).

With regard to the CAISO's revisions in the current proposal, PacifiCorp and NV Energy are supportive of removing the Reliability Energy product (REN), as well as utilizing a single market run for settlement of energy and capacity. However, PacifiCorp and NV Energy do have concerns that the capacity cost plus energy cost in the real-time market associated with imbalance reserves and reliability capacity up will be inefficient if the CAISO does not take into consideration the fact that real-time energy dispatches, which convert the capacity products to energy, are likely to occur with predictability and regularity in the real-time market. Provided in more detail below, PacifiCorp and NV Energy would like the CAISO to explore how it might take into consideration these real-time market dispatches on capacity to make sure its market awards are the most efficient for reliability capacity and imbalance reserves.

Reliability and Market Efficiency

PacifiCorp and NV Energy agree that the proposed imbalance reserve product is greatly needed to respond to imbalances in the real-time market for changes in weather, outages and forecast inaccuracies. PacifiCorp, which also has balancing authority area responsibilities, currently incorporates an imbalance reserve requirement into its day-ahead setup due to the significant amount of wind and solar resources located within its balancing area. PacifiCorp and NV Energy agree that planning for the reserves on a day-ahead basis is more efficient, as it allows the real-time operator to more effectively manage the day-ahead uncertainty without having to make large bi-lateral transactions. Additionally, and perhaps more importantly, planning for reserves on a day-ahead basis also ensures that resource commitment decisions will be made in the same timeframe. A large part of PacifiCorp's fleet of resources includes gas resources of varying sizes, efficiencies, start-up times, minimum on and off times, etc. If PacifiCorp did not include the imbalance reserves in its day-ahead position, which may necessitate the commitment of a gas facility, that gas plant would be unavailable in real-time due to gas nomination and storage constraints. Consequently, going into an EDAM, it will be important for PacifiCorp to have an assurance that the solution provided by the market will avoid the need for a load serving entity to self-schedule or commit resources in order to ensure reliability in real-time, which would result in less optimal market results. The interest in ensuring optimal market results is also why PacifiCorp supports the CAISO's proposal to have an initial market run for reliability capacity that is needed relative to the net load forecast and for imbalance reserves, and then use that commitment as an input into the subsequent market run for energy.

A clarifying question on the unit commitment relative to the first pass, is if a resource is awarded an imbalance reserve schedule in the day-ahead market, does that resulting commitment in the day-ahead market include minimum load costs and the subsequent energy award at minimum load? It would be problematic for PacifiCorp to have uncertainty of dispatch on the entire capacity of a combined cycle unit, for example, due to the fact that it would need to nominate gas on a day-ahead basis with the anticipation that some of the resource's upward imbalance reserve capacity award will be converted to energy in the real-time market. Some indication of potential energy dispatch in the real-time market would be needed to adequately nominate gas on a day-ahead basis for an upward imbalance reserve award. PacifiCorp requests assurance that the CAISO has given significant consideration to the potential restrictions that gas nominations will present in its awards for imbalance reserves and reliability capacity, but PacifiCorp would like to better understand how those fuel constraints might be managed in the real-time market if, for example, there is also a cost cap on the bid and a self-scheduling restriction related to these products.

NV Energy has similar requirements as a balancing authority area and has similar operational needs with respect to setting up its fleet for next day operations, including the deployment of use-limited peaking units. Gas nominations are of critical importance as will the need to recognize intra-day imbalances given the company's significant expansion of renewable resources.

Energy Offer Cost in Upward Capacity Procurement

The CAISO acknowledges that an optimal solution for capacity awards would be to award the resource with the lowest underlying energy cost because it would be most cost-effective if needed in real-time. PacifiCorp and NV Energy are concerned that the current proposal does not go far enough to take into consideration the likelihood that the capacity will be utilized for energy in the real-time market and that the current proposal is instead considering the capacity in a similar manner as it would for a contingency reserve product. As proposed, the upward reliability capacity product would account for the difference between cleared demand and forecasted demand. However, the forecasted demand is the CAISO's 50th percentile (P50) expectation and, as such, it is appropriate to assume that procured upward reliability capacity will be dispatched as energy in real-time. This energy dispatch is an expected energy schedule. While the CAISO has proposed to place a real-time offer cap for resources awarded capacity, PacifiCorp and NV Energy are concerned that the optimization may not yet be adequately configured to provide the capacity awards to the most cost effective resources without consideration of an expected energy schedule in the real-time market. This expected energy schedule should incorporate the procured upward reliability capacity as referenced above. For example, if the optimization assumed that all of the difference between cleared demand and forecasted demand materialized (as upward reliability capacity) as an energy need in real-time, would it provide a different day-ahead solution as compared to the current proposal? How would the incorporation of a mechanism which contemplates the expectation that all reliability capacity will be needed in real-time as energy, impact this issue? PacifiCorp encountered this issue with its internal day-ahead solution, in that the optimization PacifiCorp was utilizing dispatched a cost-effective resource for holding reserves (total net power costs were at a minimum relative to alternatives), however, when the reserves were utilized in real-time for energy it produced a sub-optimal solution relative to alternative day-ahead solutions.

While the CAISO proposal attempts to best minimize the costs realized in the various markets subject to policy considerations, PacifiCorp and NV Energy would like the CAISO to explore additional solutions potentially utilizing iterative market passes that could better co-optimize energy and capacity. Also, if a corresponding energy bid is required with an imbalance reserve bid or reliability capacity bid, and assuming co-optimization of capacity and energy as described above, could the real-time bid be capped at the day-ahead energy bid?

Next Steps

As previously stated, PacifiCorp and NV Energy are supportive of the CAISO's current proposal for the DAME, with additional considerations and clarification of the co-optimization of energy and capacity for imbalance reserves and gas nomination constraints relative to that product. It is an improvement over the day-ahead market as it is currently operated. Adoption of the proposal would allow the CAISO to proceed with these incremental benefits while continuing the further discussion in the context of EDAM.

As an alternative, PacifiCorp and NV Energy would also be supportive of the CAISO adopting only the imbalance reserve products for the DAME and continuing to utilize the RUC run for reliability. Moving the discussion related to the co-optimization of the IFM and the RUC to the EDAM stakeholder initiative would potentially eliminate the need to revisit certain of the decisions in the DAME as they potentially pertain to the EDAM.

As always, PacifiCorp and NV Energy appreciate the CAISO's challenging position of managing the multitude of stakeholders' comments and suggestions and the balancing of those interests in its proposals.