Comments on the Revised Straw Proposal

for Flexible Ramping Product Refinements

Name of Submitter	Name of Organization	Date of Submission
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SCE appreciates the opportunity to provide comments on the Revised Straw Proposal presented by the CAISO on March 23, 2020. SCE acknowledges the CAISO's decision to set the default time interval at 60 minutes for proxy demand resources. This decision requires Scheduling Coordinators to self-select the ramp capability of their proxy demand resources if those resources are to be eligible for awards of the flexible ramping product.

In addition, SCE supports the minimum procurement requirement introduced by the CAISO for BAAs. It improves the deliverability of energy from the awards when the demand forecast uncertainty materializes in the real-time market. Also, SCE notes that although the CAISO intends to enforce transmission constraints at the boundary of each balancing authority area (BAA), and the intertie transmission and scheduling limits within the optimization model, residual vulnerability will remain for the delivery of the flexible ramping product when acute internal constraints exist within the BAA despite the minimum procurement requirement imposed for each BAA. Given the CAISO's view of the scarcity pricing mechanism and its appropriate design, the unresolved vulnerability within BAAs is expected to be reflected in the locational marginal prices obtained from the co-optimization model for energy, ancillary services and FRP awards.

SCE also appreciates the proposed alignment for the enforcement of all scheduling and intertie transmission and scheduling limits and physical transmission constraints including the base case and contingency constraints in the original optimization problem with the deployment scenarios for the procurement of flexible ramping up and flexible ramping down in the real-time market. This decision preserves consistency within the co-optimization environments for modeling the boundaries of the BAA networks and their transfer capability to other BAAs.

The Revised Straw Proposal introduces many new elements to the initiative for which SCE seeks additional clarification of the following areas within the proposal:

- The counterintuitive economic reasoning behind increases in the demand for the flexible ramping product as the flexible ramping product's price increases within the example provided within the presentation. Unless the prices reflect the willingness to supply the flexible ramping product rather than the willingness to buy the product, the reasoning becomes irrelevant to the principle being demonstrated by the example. The expectation is that as demand for flexible ramping up or down increases, the associated price for the demand must be declining while on the supply side of the market as increases in demand are satisfied by supply at higher prices, price must continue to rise to higher levels to induce additional supply until supply is exhausted thereafter leading to the trigger of penalty pricing by way of relaxation of the power balance constraint within the co-optimization problem.

- Distribution of the flexible ramping requirement among energy transfer system resources within individual BAAs uses a proportional distribution of the surplus FRP that the BAA has. The proportional distribution is based on the ratio of the BAA's demand forecast to the total demand forecast for all BAAs and is intended to reflect the demand elasticity for FRP within the BAA. When applied to the flexible ramping surplus capacity, albeit negative or positive within the BAA, this proportion reflects the BAA's capability to share its resources with neighboring BAAs or in the case of the deficient BAA, a potential call on the resources of BAAs with surplus capacity. SCE wishes the CAISO to elaborate on its thinking about this approach and its alignment with the use of a demand curve to be developed for the procurement of FRP. Will the demand curve reflect the procurement for the CAISO BAA only with a separate demand curve for the EIM footprint? Or, will the demand curve represent the aggregate FRP requirement for the CAISO BAA and all EIM BAAs? Further, will the product of each BAA's proportion of the demand forecast and the shift factors at the individual nodes in the BAA where FRP is procured have any likely relationship to approximate changes in FRP demand along the FRP demand curve given the enforcement of transfer limits between BAAs and the reference made within the proposal to the flexible ramping up and down surplus capacity as the demand elasticity proxy for FRP within the BAA?
- Will the decision to simplify formulation of the transmission constraints in the deployment scenarios result in shift factors that transmit the effects of marginal losses indirectly to the marginal energy and congestion components of the FRP and/or energy prices during price formation on account of the elimination of the marginal loss component for FRP prices? Since the nodal energy flows are adjusted by the nodal loss penalty factor to account for losses, the expectation should be that the locational marginal energy prices will incorporate some effect of losses indirectly. Is this a correct interpretation of the relationships within the co-optimization model?
- How will the FRP procurement costs for BAAs that passed the flexible ramping product sufficiency test be treated as a group despite the shift factor differences among the BAAs? While the FRP procurement cost allocation for BAAs that failed the FRP resource sufficiency test are directly determined from the co-optimization, a similar conclusion cannot be drawn for those BAAs that passed the test given the group procurement strategy applied within the optimization formulation that results in the same price for all BAAs that passed the test.