![California ISO]

Stakeholder Comments Template

Flexible Ramping Product Refinements Initiative

This template has been created for submission of stakeholder comments on the draft final proposal and technical documents that were published on May 8, 2020. These materials can be found on the initiative webpage at:
http://www.caiso.com/StakeholderProcesses/Flexible-ramping-product-refinements.

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on June 2, 2020.

Submitted by	Organization	Date Submitted
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Please provide your organization's overall position on the FRPR draft final proposal:

☐ Support
x Support w/ caveats
☐ Oppose
☐ Oppose w/ caveats
☐ No position

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

1. **Proxy Demand Response Eligibility:**

   SCE supports the CAISO's proposal of a 60-minute default dispatch rate for proxy demand response resources. Self-selection of the proxy demand response resource dispatch rate by Scheduling Coordinators is an appropriate approach to declaring the eligibility of the resource's dispatch capability to supply the flexible ramping product (FRP). Since 5-minute dispatchability is required of resources to be eligible for FRP awards the 60-minute default dispatch rate averts the award of FRP to resources incapable of the required performance.

2. **Ramp Management between fifteen-minute market and real-time dispatch:**

   SCE supports retention of the FRP requirements as a ramp management strategy. This strategy will ensure availability of the procured FRP capacity as the market runs transition from the buffer to the advisory interval during the FMM run and thereafter followed by the RTD run. The benefit of this ramp management strategy should not be undermined by poor forecasts of the FRP requirement when over-procurement occurs since FRP costs are borne ultimately by load and variable energy resources.

3. **Minimum Flexible Ramping Product Requirement for BAA:**

   Given the historical information presented by the CAISO for the individual BAAs, the proposed 60% minimum requirement seems reasonable for circumstances when the BAA accounts for more than 60 per cent of FRP requirement. SCE supports this minimum requirement condition. Should there be additional information in the future that warrants a change in the proposed percentage, such data and any associated change should be reviewed and vetted thoroughly with the stakeholders.

4. **Nodal Procurement:**

   Since the market clearing price for FRP is based on the opportunity cost of energy rather than explicit offer prices for the supply of FRP, there will be an increase in locational marginal prices (LMP) if no excess supply exists at prevailing energy LMP with any FRP procurement. In addition, the effect of increased energy LMP will be observed particularly at the nodes in constrained areas. SCE asks the CAISO to confirm the accuracy of this expectation. In addition, SCE asks the CAISO to clarify whether the loss and congestion components associated with locational marginal prices will arise when constraint relaxation is deployed during supply scarcity of FRP.

5. **FRP Demand Curve and Scarcity Pricing:**

   SCE seeks clarification whether FRP constraint relaxation solely depends on the likelihood of power balance constraint relaxation when no additional FRP procurement is possible thereby triggering scarcity pricing; and, whether the probability of relaxation of the FRP constraint can be triggered as a result of a nodal constraint within a balancing authority area such that relaxation of the power balance constraint may become necessary.

6. Calculating FRP Requirements:

SCE requests confirmation from the CAISO whether the performance metrics – coverage, closeness, requirement and exceedance - are standard performance measures of performance or fit of the quantile regression. While SCE accepts inclusions of the nominal and quadratic values of the variables as covariates in the regression as suitable, SCE encourages the CAISO to investigate incorporation of an autoregressive form of the model to determine whether model fit improvements may result. SCE acknowledges the improvement in fit relative to the histogram approach when the quantile regression model is used.

7. Additional comments: