Submitted by	Company	Date Submitted
Sandeep Arora	LS Power	02.21.18

Stakeholder Comments Template



Please use this template to provide your comments on the FRACMOO Phase 2 stakeholder initiative Revised Draft Framework Proposal posted on January 31, 2018.

Submit comments to InitiativeComments@CAISO.com

Comments are due February 21, 2018 by 5:00pm

The Revised Draft Framework Proposal posted on January 31, 2018 and the presentation discussed during the February 7, 2018 stakeholder web conference may be found on the <u>FRACMOO</u> webpage.

Please provide your comments on the Revised Draft Framework Proposal topics listed below and any additional comments you wish to provide using this template.

The ISO is in the process of updating the data provided in the Revised Draft Framework Proposal. The ISO will include additional observations for 2016 and 2017. Additionally, the ISO will estimate the impacts of 15-minute IFM scheduling. The ISO will release this updated analysis as soon as possible.

Identification of ramping and uncertainty needs

The ISO has identified two drivers of flexible capacity needs: General Ramping needs and uncertainty. The ISO also demonstrated how these drivers related to operational needs.

Comments:

LS Power supports CAISO's identification of the two drivers and the proposal to create products that can help address these needs. A sufficient supply of Flexible Capacity with fast response

should be identified and acquires such that CAISO will not have to rely on Regulation reserves to meet ramping needs which is not only an uneconomic solution but also decreases grid reliability and creates NERC compliance risk for CAISO.

Definition of products

The ISO has outlined the need for three different flexible RA products: Day-ahead load shaping, a 15-minute product, and a 5-minute product.

Comments:

LS Power supports CAISO's proposal of product definition.

Quantification of the flexible capacity needs

The ISO has provided data regarding observed levels of uncertainty, in addition to previous discussions of net load ramps.

Comments:

The additional data provided is helpful in further reinforcing the need for flexible capacity products.

Eligibility criteria and must offer obligations

The ISO has identified a preliminary list of resource characteristics and attributes that could be considered for resource eligibility to provide each product. Additionally, the ISO is considering new counting rules for VERs that are willing to bid into the ISO markets.

Comments:

CAISO is proposing 60 min start up time as eligibility criteria for meeting five minute and fifteen minute needs. CAISO's rationale for using 60 min is that this would allow CAISO to commit resources in RTUC process. While the 60 min startup requirement should provide more real time flexibility to CAISO than it gets today this still may not be enough flexibility in resolving the 5 min & 15 min needs. Ideally, in order to meet the 5 minute and 15 minute needs, CAISO will get more flexibility if resources providing this product are already online and synced to the grid or have the capability to be started very close to when the optimization for the binding interval starts. For instance, optimization for the RTD binding interval starts 7.5 min before the interval. Starting resources much sooner than the start of the relevant RTD interval could cause additional over supply issues for which CAISO may need to procure more flexible capacity. If a resource can seamlessly increase/decrease its output in response to the 5 min needs that should be an optimal solution rather than committing resources 60 minutes ahead. LS Power

proposes that CAISO revise the proposed 60 minute start time eligibility criteria to 10 min start time.

Equitable allocation of flexible capacity needs

The ISO has proposed a methodology for equitable allocation of flexible capacity requirements. The ISO seeks comments on this proposed methodology, as well as any alternative methodologies.

Comments:

No comment

<u>Other</u>

Please provide any comments not addressed above, including comments on process or scope of the FRACMOO2 initiative, here.

Comments:

LS Power supports the CAISO proposal of unbundling EFC and NQC and performing separate Deliverability studies to correctly allocate these two attributes. More details on this should be flushed out in next iteration of CAISO proposal.