Stakeholder Comments Template

Submitted by	Company	Date Submitted
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SCE appreciates the opportunity to comment on the CAISO's FRAC MOO – Phase 2 Supplemental Issue Paper. SCE is supportive of a portion of the identified enhancements and encourages the CAISO to continue developing them. The enhancements SCE supports at this time relate to following topics:

- Cycle time and flexible capacity qualifications
- Most significant net load ramps occur on weekends or holiday weekdays
- There is currently no means in place for the ISO to assess the likelihood that the flexible RA showings will adequately meet all ramping needs

While SCE supports the initial scope of enhancements identified above, SCE is concerned that the other enhancements are based on insufficient data and analysis. Enhancements to FRAC MOO should be based on actual demonstrated deficiencies of the current product. SCE discusses these concerns in more detail below.

Identified opportunity for enhancing flexible capacity product

1. Ramping speed
    a. Large single hour net load ramps

Comments:

SCE agrees with the ISO that the flexible RA fleet needs to be sufficient to meet single hour ramps. However, SCE does not believe the data presented by the ISO is sufficient to justify the conclusion that "To address hourly and multi-hourly ramps of the magnitudes identified above, the ISO would need to commit slow ramping resources well in advance of the net load ramps. These dispatches will result in either over-supply or frequent and voluminous wind and solar curtailment." SCE requests that the CAISO demonstrate that there are too many long start

resources to meet single hour ramps given all the market tools that the CAISO has at their disposal. The data presented in this section, that single hour ramps can be large in magnitude, does not lead to the conclusion that there are too many long start resources.

Furthermore, SCE is uncertain that the single hour ramp data presented by the CAISO is that much more substantial than the three hour ramp need. After converting the August 2019 ramp requirements to a comparable metric, the one hour ramp (6,990 MW, or 117 MW/min) is only slightly more demanding than the three hour ramp (15,781 MW, or 88 MW/min). The one hour ramp requires roughly 30% more speed (i.e. MW/min) than the three hour ramp which, while not insignificant, is not necessarily large enough to require product definition changes. For these reasons, SCE continues to believe that the best way to address single hour ramps is through an assessment check of portfolios rather than through changes to the product definition. The single hour ramp needs should continue to be naturally met through the procurement of a three hour product.

b. The transition from low net loads to steep ramps

Comments:

SCE believes that the transition issue between low net loads and steep ramps needs to be studied in the context of all CAISO market tools rather than by just looking at the flexible RA product. In addition to the flexible RA fleet, the transition issue should also consider the CAISO's ability to curtail resources, export energy to other areas (including the increased export capability as the Energy Imbalance Market is expanded), the incentives provided by market signals (including potential negative prices during periods of low net loads), and other potential tools at the CAISO's disposal. SCE believes the best course of action is for the CAISO to demonstrate how the low net loads and steep ramps manifest in actual system deficiencies given the current tools the CAISO has at its disposal.

c. Intra-hour variability

Comments:

SCE agrees that the flexible RA fleet should be sufficient to meet short duration, fast ramps. In order to identify if enhancements are needed to the current Flexible RA product, the CAISO needs to demonstrate that current product definition will result in a flexible RA fleet that is insufficient in meeting these short duration ramps. Currently, the supplemental issue paper identifies that the variability of net load could be as high as 17,500 MW. There is no demonstration that the variability could not be met using the current flexible RA product.

2. Cycle time and flexible capacity qualifications

   Comments:

SCE supports the CAISO studying the option to use a resource's full cycle time (minimum down time, start time, and shut down time) to determine the start requirements for Base flexibility category resources. This could be an improvement over the current option of using only the minimum downtime.

3. High minimum operating levels from both RA and flexible RA

   Comments:

As stated for other items above, SCE believes that the CAISO needs to demonstrate actual system deficiencies resulting from potential high minimum operating levels. Additionally, SCE believes that any study of this topic needs to include all market tools CAISO has at its disposal. For example, if a requirement on PMin levels is placed on the flexible RA fleet, it would not prevent any resource from self-scheduling their PMin as a generic RA or non-RA resources.

4. Most significant net load ramps occur on weekends or holiday weekdays

   Comments:

If the highest net load ramps are occurring on weekends and holiday weekdays, it is reasonable to consider requiring all flexible RA resources to be available on weekends and holiday weekdays.

5. Significant quantities of long start resources may limit the ISO's ability to address real-time flexibility needs

   Comments:

In this section, the CAISO identifies that long start resources being shown as Flexible RA are being dispatched 25% of the time in the day ahead market. Because this limits the amount of flexible RA capacity available in the real time market, the CAISO states that "It is prudent to determine if there is a need to limit the quantity of long-start resources that can be provided in flexible RA showing." SCE is concerned about this conclusion because the data presented by the CAISO doesn't reveal if there is any problem with the current flexible RA definition.

First, each RA resources is not expected to be dispatched every day. The RA requirements are designed such that there is enough capacity to meet the most stringent needs within a month.

So while some resources may be dispatched frequently, other RA resources may only be needed during certain days within a month.

Second, not dispatching RA resources in the day ahead market could be the result of the day ahead market working like it is supposed to. If two resources are economically bid into the CAISO market and both meet the same system need, the CAISO should dispatch the resource that is more economic. The dispatch of resources is not based on whether a resource is shown for RA or not. The lack of day ahead dispatch awards for some flexible RA resources could be a result of a competitive market and not an issue with the product definition.

6. There is currently no means in place for the ISO to assess the likelihood that the flexible RA showings will adequately meet all ramping needs
   Comments:

SCE supports the development of a Flexible RA assessment and has presented on it in the past[1]. A large amount of work is needed to determine what an appropriate assessment test entails and SCE looks forward to contributing to this effort.

[1] The Supplemental Issue Paper links to an SCE presentation at: http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442451586