

# Stakeholder Comments Template

## FRACMOO 2 Stakeholder Working Group

This template has been created for submission of stakeholder comments on the FRACMOO 2 Working Group Call that was held on August 2, 2017. The working group presentations and other information related to this initiative may be found at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleResourceAdequacyCriteria-MustOfferObligations.aspx>

Submitted by	Company	Date Submitted
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Upon completion of this template, please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com). Submissions are requested by close of business on **August 18, 2017**.

Please provide your organization's comments on the following items:

Calpine generally supports the CAISO's proposal to align flexible capacity requirements with operational needs. Consistent with Calpine's comments on previous FRACMOO proposals, Calpine believes that this new focus should begin with the energy and AS markets. For example, to the extent that the CAISO is violating CPS1 standards, it should examine why it is failing to commit sufficient or sufficiently fast resources in its energy and AS markets. Are the required resources available to the CAISO but not committed? Could the CAISO ensure that available resources are actually used by increasing its procurement of regulation, Flexi-Ramp, or defining new products? Is compensation from the energy and AS markets sufficient to ensure that the flexible resources are the cheapest net cost, i.e., going forward costs net of energy and AS revenues, sources of *generic* RA capacity so that flexible resources are procured as RA even in the absence of explicit flexible capacity requirements? If not, why not? If the CAISO finds that even with appropriate procurement and compensation of energy and AS that it is still unable to meet operational flexibility challenges then it should target flexible capacity requirements at the resource characteristics that would enable it to do so.

### 1. Operational issues discussed during the working group related to flexible capacity needs.

The CAISO's presentation of operational issues provided useful additional information about the physical renewable integration challenges facing the CAISO. Calpine believes that it would be helpful to understand better how these challenges are mediated through CAISO markets. For example, when the CAISO experiences a failing CPS 1 score, is the CAISO exhausting available energy bids? Could it ensure the availability of more energy bids by setting Flexi-Ramp requirements differently? Is it relying on regulation for energy? Could it avoid CPS 1 violations by procuring and using additional regulation?

In addition, Calpine would like a better understanding of how close the CAISO has been to actual NERC violations and, if so, what the associated penalties might be. For example, while the CAISO presented data on instantaneous measures of CPS 1, CPS 1 violations are assessed on a rolling 12-month basis. Is the CAISO at risk for violating CPS 1 on a rolling 12-month basis? If so, what would the penalty be?

## 2. Proposed flexible capacity procurement framework presented by The Brattle Group.

Brattle's proposed framework consists of operational assessment and flexible capacity procurement components. With respect to the operational assessment component, as indicated above, Calpine strongly supports steps 3 and 4, i.e., identifying why capacity with certain desirable operating characteristics is not available in actual operations and considering changes to both energy and AS markets as well as RA capacity markets to make such capacity available (to the extent that it is economic).

With respect to flexible capacity procurement, Calpine suspects that it may be difficult to translate the results of the operational assessment into clearly defined flexible capacity products and procurement requirements, for all of the reasons that it has been difficult to move beyond the current three hour ramp flexible capacity product definition, including the following (1) There is not a clear link between the volume of flexible capacity procurement and reliability metrics. (In contrast, system RA requirements are tied to a planning reserve margin which is loosely tied to an LOLE standard and local RA requirements are tied to the need to withstand certain contingencies.) The CPS 1 and other violations documented by the CAISO are not equivalent to loss of load and potentially could be addressed by changes in operations rather than the procurement of additional or different capacity on a forward basis. (2) The operational flexibility of a specific resource is multi-dimensional and may depend on system conditions including what other resources are available. For example, the "Pmin burden" of a resource may not matter under high (net) load conditions in which the resource is likely to be committed above Pmin even when large ramps occur. In contrast, it may be more costly to access the flexible portion of a resource with a "Pmin burden," under low net load conditions when the associated Pmin energy may not be needed/economic. These complex interactions between resource characteristics and system conditions argue in favor of greater reliance on energy and AS markets rather than capacity markets to address operational flexibility issues because the sophisticated optimizations underlying energy and AS markets are designed to account for these interactions.

## 3. Proposed flexibility metrics and any additional metrics that you believe the CAISO should consider.

As indicated throughout these comments and in previous comments, Calpine believes that it would be helpful for the CAISO to understand better exactly how and when it is struggling to manage operational challenges. Such an analysis might include documenting when the CAISO exhausted available energy bids in the real-time market, the extent to which the CAISO leans on regulation to meet directional ramping requirements, and how constraints on the availability of

dispatchable resources to the real-time market might be addressed through the procurement of additional ancillary services.

#### 4. Plan to move the flexible capacity initiative forward.

Calpine generally supports CAISO's proposal to examine its operational requirements holistically. Calpine offers the following comments on some of the specific recommendations in CAISO's August 4<sup>th</sup> presentation:

On slide 29, CAISO indicates that it will consider "products" to address variability and uncertainty in different time frames. Calpine agrees that it is critical for the CAISO to consider what products it needs to operate reliably. It is unclear to Calpine, however, that the conclusion of this consideration will be that the CAISO needs more or different flexible forward *capacity* products. CAISO should at least remain open to various combinations of spot (energy and AS) and forward capacity solutions to address operational flexibility challenges.

Calpine is concerned about the RA assessment methodology described on slide 30. CAISO seems to be proposing to use production cost simulation to validate RA procurement. Calpine does not support such an approach. If flexible RA requirements are to be satisfied through markets, the product definitions and requirements need to be clear on an ex ante basis, i.e., before procurement occurs. (In contrast, slide 3 of the Brattle presentation suggests that an Operational Assessment would be used to inform product definitions and procurement requirements but not necessarily used to validate procurement after the fact.)

Calpine strongly supports the consideration of the types of energy and AS market changes contemplated on slide 31.

Calpine is confused by the schedule proposed on slide 32. Completing a draft final proposal this year seems ambitious and unnecessary if it is in fact CAISO's intent to have changes to flexible RA completed in the first half of 2019 so that they can be implemented for the 2020 RA year.

#### 5. Any other comments.