

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. Submissions are requested by close of business on **August 18, 2017**.

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

The "Presentation" referred to in the comments below is the CAISO's presentation for the August 2, 2017 Working Group Meeting.¹

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

Assessment of Operational Needs. In its assessment of operational needs, the CAISO should consider and provide reliable guidance to such issues as:

- Which operating performance metrics (e.g. CPS and DCS performance) are inviolable and which are not?
- To what extent can variable energy resource curtailment address the CAISO's operational needs?
- Is flexibility truly a "system" characteristic (i.e., the location of the flexible resources does not matter)?

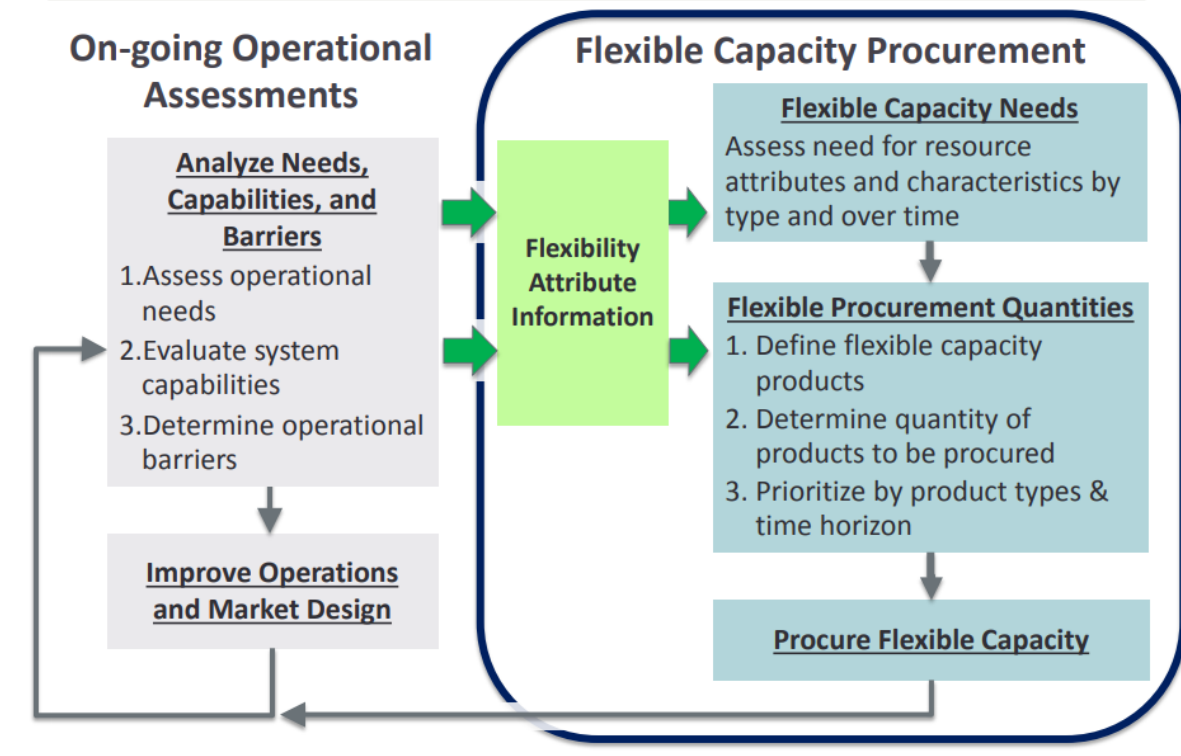
The CAISO should also consider that most, if not all, of the steam turbine fleet will not exist after the two coming waves of once-through-cooling compliance deadlines.

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

¹ http://www.caiso.com/Documents/Agenda_Presentation_FlexibleResourceAdequacyCriteria_MustOfferObligations.pdf

The graphic below, from Slide 5 of the Brattle Group presentation for the August 2, 2017 Working Group call, presents the proposed framework for analysis and procurement design:

Integrated Operational & Procurement Framework



NRG's comments on this proposed framework are:

- As noted above, key inputs into steps (1) (Assess operational needs) and (2) Evaluate system capabilities) include:
 - Which operating performance metrics (e.g. CPS and DCS performance) are inviolable and which are not?
 - To what extent can variable energy resource curtailment address the CAISO's operational needs?
 - The flexible capacity needs assessment (the top box in the right hand column under Flexible Capacity Procurement) should focus on operational attributes independent of the technology that will provide those attributes.
 - The product types defined in step 3 of "Flexible Procurement Quantities" must be designed to be stable and durable over a considerable time horizon.
3. Proposed flexibility metrics and any additional metrics that you believe the CAISO should consider.

The metric for measuring flexibility should consider a resource's ability to:

- change output over a defined period of time (including its speed of response over a short period of time)
- sustain that change in output for a defined period of time
- respond to instructions to change output that could either be issued in a predefined window or at any time (including such things as start-up time)
- avoid exacerbating challenging grid operational conditions

4. Plan to move the flexible capacity initiative forward.

At the working group meeting, the CAISO offered this path forward (from the August 2, 2017 FRACMOO2 Working Group Meeting Presentation (“Presentation”), slide 5):

- Re-focus CAISO efforts on developing flexible capacity requirements aligned with operational needs
 - Develop an analytical approach to supporting proposed solutions
- Draft Final Proposal planned by end of the year
 - Provide proposal for CPUC consideration
 - Target implementation for 2020 RA compliance year
- Bring resulting policy to ISO Board summer 2018

The CAISO’s proposed path forward is a rational approach, though NRG questions whether the CAISO can achieve the hyper-aggressive goal of developing a draft final proposal by the end of 2017.

While NRG has its doubts about the CAISO’s aggressive schedule, given that the CPUC has determined that the development of a durable flexible capacity paradigm is a necessary prerequisite for the consideration of multi-year forward Resource Adequacy requirements, NRG urges the CAISO to press forward expeditiously with FRACMOO2. FRACMOO2 should and must lay the groundwork for the development of a manageable set of stable and durable flexible capacity products. This, in turn, should and must lead to the development of longer-term contracting products that will effectively and efficiently preserve the existing conventional resources that, increasingly, are being shown (e.g., the preliminary IRP results) to be needed to secure a cost-effective and reliable transition to a low-carbon future.

Redefining “net load”. The CAISO, on slide 28 of the Presentation, offers that the CAISO could redefine net load – currently defined as “load – wind – solar” as “load minus inflexible capacity.” The usefulness of this path forward will depend on a clear understanding of what constitutes “inflexible capacity”. Variable resources need not be considered “inflexible”. They can provide flexibility under the right contract structure – for example, a structure that does not provide irresistible economic incentives to generate energy regardless of other considerations.

5. Any other comments.

Relationship of FRACMOO2 to “RA Reform”. It is difficult to imagine the “RA Reform”² and FRACMOO2 initiatives being conducted in parallel and in isolation. Moreover, the CAISO acknowledges that a “new RA assessment methodology” is required, as noted in the Presentation, slide 30:

² See CAISO May 16, 2017 Market Performance and Planning presentation at Slide 87.

A new RA assessment methodology is needed to evaluate the interaction of the fleet to meet the needs of the transforming grid

- Ensure there is sufficient capacity & energy 8760 hrs/yr
- Satisfy all operational needs all hours of the year
- Consider the interactions of the RA fleet and its attributes across the year
- Properly account for resource use-limitations in the context of the transforming grid

NRG requests the CAISO clarify how the FRACMOO2 effort will align and interact with the “RA Reform” effort the CAISO has indicated will launch later this year.