

Stakeholder Comments Template

Flexible Resource Adequacy Criteria and Must Offer Obligation - Phase 2 Straw Proposal

Submitted by	Company	Date Submitted
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This template has been created for submission of stakeholder comments on the straw proposal for the Flexible Resource Adequacy Criteria and Must Offer Obligation - Phase 2 that was posted on December 11, 2015. The straw proposal and other information related to this initiative may be found at: <http://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleResourceAdequacyCriteria-MustOfferObligations.aspx>.

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on **January 6, 2016**.

If you are interested in providing written comments, please organize your comments into one or more of the categories listed below.

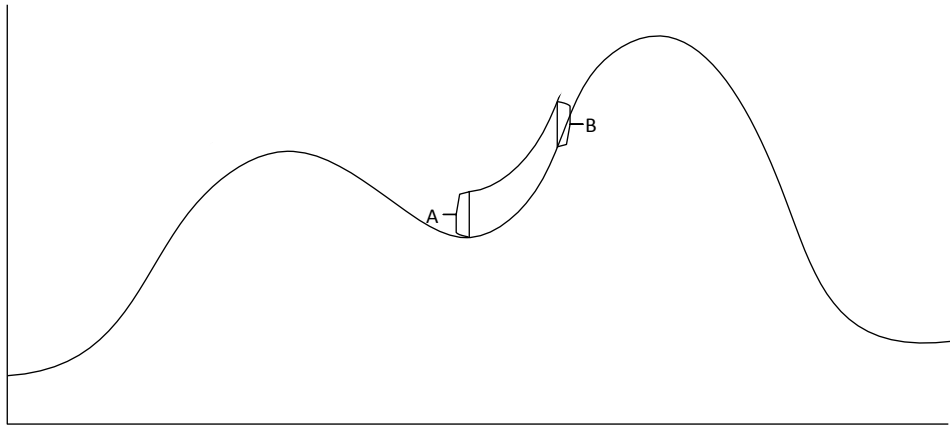
1. Provision of flexible capacity by import or export resources,

Flexible capacity should not be limited to only resource specific imports. Any import resource capable of providing flexible capacity should be allowed to provide flexible capacity. RA availability incentive mechanism (RAAIM) should incentivize offering such resources. However, ISO should explore possibility of developing measures that will prevent double counting of resource backing non-resource specific resource. Firm energy requirement may be unnecessary; RAAIM incentives should deter pulling supply from CAISO BAA.

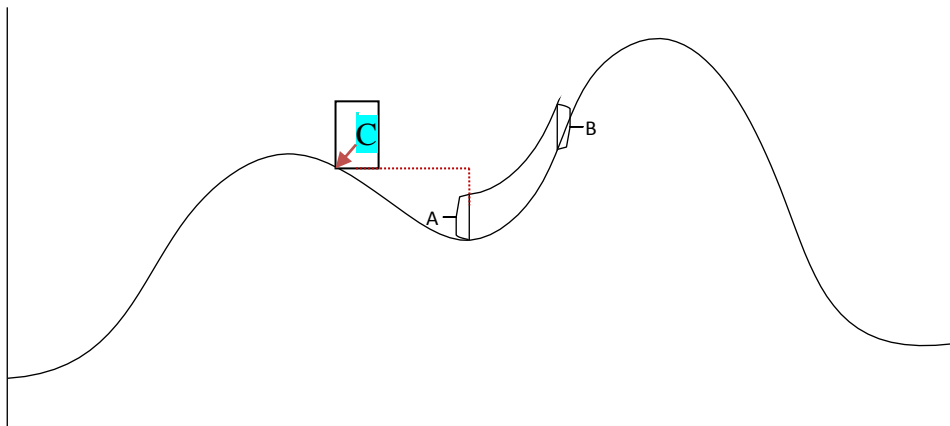
With regard to the allocation of measured demand charges to export providing RA, any resource providing supply should be credited such as waiving charges to measured demand. This should apply to all such demand resources including participating load providing supply.

2. Flexible capacity from pumped-storage hydro model

The straw proposal provides an example, as shown on the figure below, describing how a pumped storage load's charging at point A discretely and generation's discharging discretely at point B has net zero effect on the net load ramp. For this reason, ISO proposes not to provide an effective flexible capacity (EFC) for pumping load that is subject to discrete dispatches to reduce pumping from point A to B.



Logically, the charging would start at point C and start to discharge at point A, as shown below. The pumped storage resource would start charging at point C when “oversupply” condition starts and start discharging at Point A helping the ramping needs. Ideally a pumped storage resource would be helping the grid for both ramp up and ramp down needs.



ISO does not consider ramp down product in RA needs as a part of the proposal; rather, it considers market enhancements as a solution. Based on the projected net load curve, the ramp down need is crucial and to rely on the spot market may not ensure that the ramp down capacity is available when needed by the ISO, especially during the oversupply conditions. Shallower the duck belly, greater is the need for ramp down capacity. CDWR believes that established ramp down capacity needs can be met by demand response resources including participating loads. Discretely turning on a participating load at point C and turning off at A will have the same effect as charging function of a pumped storage model. Ideally, ramp down capacity RA need would incentivize demand response. If ramp down capacity need is not established for RA, the issue CDWR has been raising that a participating load should be allowed to bid to consume energy in real time to mitigate oversupply is relevant, as a part of the market solution. ISO should consider making changes to allow participating load to bid in

the real time (increases to load) which can compete with other resources with lower bid floors and minimize curtailment of renewable generation resources. If bidding is not allowed in real time, then out of market mechanism should be considered for participating load to mitigate oversupply situation with appropriate incentives which may include, but not limited to, waiver of metered demand charges.

3. Merchant Variable Energy Resources

ISO believes the quantity is too small for allocating flexible RA requirement to merchant VERS. ISO may establish a threshold beyond which ISO should allocate flexible RA to such entities. Otherwise, merchant VERS will take a free ride and cause cost shifts to LSEs. At a minimum, ISO should provide a report to market participants clarifying the impact of such resources on flexible capacity needs and allocations.

4. Allocating negative contributions to flexible capacity requirements

CDWR strongly supports this proposal; this will incentivize demand response and also minimize the need for flexible capacity resources¹. ISO should build a mechanism that will allow LSEs to transfer the credits similar to import capability allocation transfer.

5. Resource adequacy showing requirements for small LSEs

If there is a significant number of such LSEs, they could cause considerable amount of capacity needs in aggregate. Does ISO procure such capacity needs? How is the cost allocated?

6. Other.

i) Addressing downward flexibility needs:

In this regard, the straw proposal states, “ISO proposes an initial plan of action focused on addressing downward flexibility needs in day-ahead and real-time markets, as well as conducting education and outreach. ISO plans to pursue enhancements to the ISO’s market design to incentivize procurement of resources with the right attributes that can help mitigate operational challenges by lowering bid floor, reassessing current self-scheduling priorities, and extending short term unit commitment horizon.

Although the ISO believes that ensuring flexible capacity is available to the ISO day- ahead and real-time markets through RA procurement will help mitigate the frequency and magnitude of, or even avoid, oversupply events, proper incentives in the day-ahead and real-time markets will also help the ISO manage oversupply. Out-of-market dispatches and curtailing self-scheduled resources will remain potential solutions to address oversupply situations. However, deferring large quantities of oversupply to day-ahead and real-time markets may lead to reliability challenges and non-market based solutions in the long run.

Although the ISO initial commitment was to assess opportunities for imports to provide flexible capacity, with the ISO has identified an opportunity for imports to provide flexible capacity, as well. For example, cleared export bids can help increase the net load in the middle of the day

¹ <http://www.caiso.com/Documents/CDWRComments-FLexibleRACriteriaMustOfferObligation-WorkingGroup.pdf>

(just like charging a NGR storage resource). Therefore, the ISO is exploring the potential for exports to provide flexible capacity.”

Enhancement should include a PL bidding in RTM for mitigating “oversupply” as described in the bullet 2 above.

ISO should consider establishing ramp down capacity requirement, or at least, run the studies each year along with the ramp up capacity needs. Such reports would form the basis for making a RA requirement in future for ramp down capacity and also the after the fact assessment of oversupply mitigation during the year.

ii) Participating Load issues:

RSI 1 deferred participating load provisions to RSI 2. RSI 2 deferred the issue to FRAC MOO 2 stakeholder process.

Following was a portion of CDWR’s comment²:

An excerpt from January 22, 2015 Draft Final proposal on Reliability Services:

“6.14.5. Participating Load that is also pumping load

Participating load that is also pumping load will be exempt from the availability incentive mechanism due to their unique must-offer requirement that requires real-time energy offers only if the resource receives a DA AS schedule. This cannot be accommodated in the availability incentive mechanism framework.”

“CDWR understands that the exemption will continue under RSI-Phase 2. Just as the unique must offer requirement is associated with a participating load, substitution and planned outage replacement that are applied to a generating resource does not fit a participating load resource and its functional model. There is a need to revisit participating load model and determine whether planned outage and forced outages are applicable at all, compared to a generating resource. CDWR currently does not report outages on participating load pseudo gen; non-spin offer schedule is dependent on the Day Ahead Demand schedule and energy bid in the real time is dependent on the Day Ahead non-spin award. If the demand is absent, there will be no offer schedule. Therefore, substitution and replacement as applied to generating resources should not apply to participating load pseudo gen.”

CDWR’s position continues with regard to above comment as it was deferred to FRAC MOO Phase 2.

In addition, ISO should consider discrete dispatch of a participating load to provide flexible capacity, as it can be a valuable flexible capacity resource, as described in the bullet 2 above. ISO should clarify what works and what does not with the existing participating load functional model in providing flexible capacity, and changes that may be needed to make it eligible to provide flexible capacity. ISO should consider out of market procurements for PL

² <http://www.caiso.com/Documents/CDWRComments-ReliabilityServicesPhase2-StrawProposal.pdf>

resources that are capable of mitigating the oversupply and ramps needs thru bi-lateral agreements.