

Stakeholder Comments Template

**Flexible Resource Adequacy Criteria and Must-Offer Obligation
Revised Straw Proposal, June 13, 2013**

Submitted by	Company	Date Submitted
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This template is for submission of stakeholder comments on the topics listed below, covered in the Flexible Resource Adequacy Criteria and Must-Offer Obligation revised straw proposal on June 13, 2013, and issues discussed during the stakeholder meeting on June 19, 2013.

Please submit your comments below where indicated. Your comments on any aspect of this initiative are welcome. If you provide a preferred approach for a particular topic, your comments will be most useful if you provide the reasons and business case.

Please submit comments (in MS Word) to fcp@caiso.com no later than the close of business on June 26, 2013.

Calpine welcomes the opportunity to comment on the revised straw proposal. Calpine's primary concerns about the proposal are its continued reliance on flawed resource counting rules that discriminate against and discourage cost-effective upgrades to existing combined cycles. In addition, Calpine notes that while the proposal addresses how use limits for flexible capacity resources might be managed in the IFM and real-time markets, it does not address counting rules for use-limited resources. Even if a use-limited resource can comply mechanically with the enhanced must-offer for flexible capacity proposed by the CAISO, it may not provide the same reliability benefit as a resource with fewer use limits. Further analysis of how various use-limited resources should count towards flexible capacity procurement requirements is warranted either in this stakeholder process or in parallel proceedings at the CPUC (and other LRAs).

1. The ISO has outlined the a methodology to allocate flexible capacity requirements to LSE SC based one possible measurement of the proportion of the system flexible capacity requirement to each LSE SC based on its contribution to the ISO's largest 3 hour net-load ramp change each month. Please provide comment regarding the equity and efficiency of the ISO proposed allocation. Please provide specific allocation formulas when possible. The ISO will give greater consideration to specific allocation proposals than conceptual/theoretical ones. Also please provide information regarding any data

the ISO would need to collect to utilize a proposed allocation methodology. Specifically,

- a. Has the ISO identified the core components for allocation? Are more needed? If so, what additional components should be considered and how should ISO consider them? Are fewer needed? If so, what should the ISO include?
- b. Has the ISO used the right allocation factors for the identified components (i.e. load ratio share, percent of total capacity contracted)? If additional or fewer components should be considered as identified in 1a, above, please provide specific allocations factors for these components.
- c. Does your organization have any additional comments or recommendations regarding the allocation of flexible capacity requirements?

Calpine generally supports the allocation of flexibility and other reliability-related costs to the loads and resources that cause the costs. Calpine notes that the CAISO's proposed cost allocation methodology provides no means of allocating flexible capacity costs to resources that are not under contract and/or scheduled by an LSE SC. While such resources may be rare or non-existent currently, for the sake of completeness and because such resources may become more common in the future as contracts expire, the CAISO may want to address such resources in their proposal.

2. The ISO believes that there are either tools in place or under development to manage a resource's use-limitations while still be subject to economic bid must offer obligation. The ISO, consistent with the CPUC's RA proposed decision, will require hydro resources to be able to provide a minimum of 6 hours of energy at Pmax to be eligible to provide flexible capacity. However, some resources, including demand response and storage resources may have use limitations that may do not fit well within these mechanisms.
 - a. Please provide comments regarding what use-limitations are currently managed by existing or proposed ISO tools and what must-offer obligation should apply to these resources.
 - b. Should the ISO consider other minimum energy or run time limits for other types of use limited resources to be eligible to provide flexible capacity? If so, what should these limits be? Why?

Calpine believes that resources should be counted similarly towards flexible capacity procurement requirements to the extent that they provide similar reliability benefits. The

reliability benefit of a capacity resource is generally related to the extent that it can provide *energy* in periods in which capacity is scarce, i.e., in periods in which the system operator might be forced to curtail load involuntarily and/or violate reliability criteria, such as those developed by NERC and WECC. Determining the frequency of capacity scarcity associated with the large ramps that flexible capacity procurement requirements are designed to address requires detailed modeling, such as the modeling that E3 is developing for Track 2 of the LTPP.¹ Such modeling may reveal that a resource must be able to provide energy for six hours each day, as has been proposed for hydro, in order to address every possible instance of capacity scarcity. Regardless of what the analysis demonstrates, all resources should be held to the same standard and resources that are only able to provide energy in a more limited set of hours potentially should count less towards flexible capacity requirements.²

3. The ISO is assessing how bid validation rules could work for flexible capacity resources that are subject to an economic bid must offer obligation. The ISO provided two examples of bid validation rules and potential interpretations. Please provide comments regarding how the ISO should address each of these examples and any others that may need to be considered.
4. The ISO currently has a tool in place that allows for a resource to include the opportunity costs associated with run-limitations into the default energy bid. The ISO is considering a similar mechanism to allow resources with annual or monthly start limitations to include the opportunity costs of start-up in the resource's start-up and minimum load costs. Please provide comments on how the ISO should consider the opportunity costs for start limitations and how that opportunity cost should be calculated.
5. The ISO is proposing that all flexible capacity resources should be required to submit economic bids between 5:00 am and 10:00 pm. Please provide comments regarding this proposed must-offer obligation. Please connect to the response to this question to any responses to questions **Error! Reference source not found.** or 5 as appropriate.

¹ For example, see slide 2 of http://www.cpuc.ca.gov/NR/rdonlyres/832CD6B9-1AC6-4DAD-A20D-575C3278A202/0/E3_REFLEX_CPUC_20130522.pdf.

² Modeling the ability of a use-limited resource to produce energy during periods of potential capacity scarcity generally involves simulated dispatch against a set of prices and market conditions. Such simulated dispatches and approximations thereof have been used to assess the cost-effectiveness of demand response programs. For example, see the discussion of the "A Factor" beginning on p. 23 of <http://www.cpuc.ca.gov/NR/rdonlyres/7D2FEDB9-4FD6-4CCB-B88F-DC190DFE9AFA/0/Protocolsfinal.DOC>. The CPUC's DR cost-effectiveness methodology also accounts for the fact that DR programs that require day-ahead notification are less likely to be able to provide energy under scarcity conditions that only materialize during the operating day. As Calpine has suggested in previous comments, the flexible capacity of long-start units should be adjusted downwards similarly to reflect their inability to respond to such conditions.

6. The ISO has proposed to include backstop procurement provision that would allow the ISO to procure flexible capacity resources to cure deficiencies in LSE SC flexible capacity showings. Please provide comments regarding the ISO's flexible capacity backstop procurement proposal.
7. Are there any additional comments your organization wished to make at this time?

Calpine continues to object to the CAISO's proposed flexible capacity counting rules. As Calpine has articulated in previous comments in this stakeholder process³ as well as in the RA proceeding,⁴ the 90-minute cold start threshold is arbitrary and may discourage low cost upgrades that significantly shorten start times, but may not reduce them below 90 minutes. In addition, the reliance on cold start times to calculate the flexible capacity of CCGTs is inconsistent with the manner in which CCGTs operate. The vast majority of CCGT starts are warm or hot.⁵

In addition, with respect to section 6.1.3 of the revised straw proposal, the section that addresses long-start units, as articulated above in footnote 2 and previous comments, Calpine believes that the flexible capacity of long-start units should be de-rated to reflect the fact that they may be unable to respond to capacity scarcity conditions that are not anticipated in the day-ahead time frame. The CAISO's first option for addressing long-start units, i.e., do not allow them to count towards flexible capacity requirements, is closer to Calpine's recommended approach than the option that the revised straw proposal endorses, i.e., consider the flexible capacity must-offer of a long-start unit fulfilled for an operating day if it is not committed in the IFM.

³ <http://www.aiso.com/Documents/CalpineComments-FlexibleResourceAdequacyCriteria-MustOfferObligations-StrawProposal.pdf>

⁴ <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M064/K207/64207304.PDF>

⁵ Ibid., p. 5.