California ISO
Shaping a Renewed Future

Stakeholder Comments Template

Flexible Resource Adequacy Criteria and Must-Offer Obligation Straw Proposal, July 25, 2013

Submitted by	Company	Date Submitted
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Calpine does not support many of the changes to this version of the straw proposal. In particular, Calpine objects to the technology-specific must-offer requirements for preferred and use-limited resources proposed in section 7.1. The CAISO went to great lengths to standardize RA performance requirements through the development of the Standardized Capacity Product. It now would undo that good work by creating special and weaker performance requirements for at least five classes of resources, including use-limited resources, long-start resources, DR, storage, and renewables. While Calpine recognizes the potential for different types of resources to satisfy flexible capacity requirements, Calpine believes that to the extent that certain resources are not subject to the same performance requirements as non-use limited, non-long start, thermal generation, such resources should not count the same towards flexible capacity procurement requirements and/or the use of such resources to satisfy flexible capacity procurement requirements should be capped, just as the use of energy-limited resources to fulfill current RA requirements is limited by the Maximum Cumulative Capacity buckets. If the counting of resources with differentiated performance requirements is not adjusted accordingly, resources with relatively weak performance requirements could be overcompensated and, conversely, resources with the most rigorous performance requirements could be undercompensated.

One possible approach to adjusting how resources that cannot comply with the full flexible RA must-offer count towards flexible RA procurement requirements is de-rating such resources to reflect the number of hours in a month in which they are actually available and have sufficient energy to satisfy flexible capacity requirements. For example, suppose that there are 510 hours—17 hours per day for 30 days—in a month during which the must-offer obligation would apply to non-use-limited thermal resources. A DR resource, for example, that is only available during a four hour window on weekdays, i.e., 80 hours per month, would count, 80/510 of its nominal capacity towards flexible capacity procurement requirements. For the purposes of assessing performance incentives, its availability would be assessed over all 510 must-offer hours but it would only incur availability penalties/receive availability incentives to the extent that its availability fell short of/exceeded 80/510. (Its capacity might be further de-rated to account for energy limits.)

This approach is described in more detail below. In addition, these comments address the flexible capacity availability incentive mechanism.

1. The ISO has proposed a process by which an annual flexible capacity requirement assessment would be conducted. Please provide any comments or questions your organization has regarding this proposed process.

Calpine has no comments at this time on the process for developing flexible capacity procurement requirements.

2. The ISO has outlined a methodology to allocate flexible capacity requirements to LRAs. It is based on one possible measurement of the proportion of the system flexible capacity requirement to each LRA and calculated as the cumulative contribution of the LRA's jurisdictional LSE's contribution to the ISO's largest 3-hour net load ramp each month. Please provide comments regarding the equity and efficiency of the ISO proposed allocation. Please provide specific alternative 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. Over the course of a day or month, any of the identified contributors to the change in the net load curve may be positive or negative. How should the ISO account for the overall variability of a contributor over the month (i.e. how to account for the fact that some resources reduce the net load ramp at one time, but increase it at others)?

    b. What measurement or allocation factor should the ISO use to determine an LRA's contribution to the change in load component of the flexible capacity requirement?

    c. Does your organization have any additional comments or recommendations regarding the allocation of flexible capacity requirements?

Calpine has no specific recommendations at this time with respect to the allocation of flexible capacity procurement requirements. Calpine generally supports an allocation that is proportional to the contribution of an LSE's portfolio of load and resources to net load ramps.

3. The ISO has proposed must-offer obligations for various types of resources. Please provide comments and recommendations regarding the ISO's proposed must-offer obligations for the following resources types:

    a. Resources not identified as use-limited

Calpine does not object to the proposed flexible capacity must-offer obligation for non-use-limited resources, but believes that either other resources should be subject to the same must-offer obligation, other resources should count less than their full EFC towards flexible capacity procurement requirements, and/or the use of resources subject to less stringent must-offer obligations to satisfy flexible capacity procurement requirements should be capped, just as the use of energy-limited resources to satisfy generic RA requirements is capped by the Maximum Cumulative Capacity buckets.

    b. Use-limited resources

Calpine does not generally object to reliance on use-limited resources to satisfy flexible capacity procurement requirements, but to the extent that use-limited resources are not available to provide a threshold amount of energy, their EFC should be de-rated and/or reliance on use-limited resources to satisfy flexible capacity procurement requirements should be capped. For example, there seems to be limited agreement that six hours per day of energy is sufficient for hydro to count towards flexible capacity procurement requirements. The EFC of other resources without the same amount of supporting energy could be de-rated to reflect energy limits, e.g., a DR program that could be dispatched a maximum of 16 hours in a month relative to the 180 hour (30 days and 6 hours of energy per day) threshold for hydro might count at 16/180 of its nominal capacity towards flexible capacity procurement requirements.

1. Please provide specific comments regarding the ISO's four step proposal that would allow resources with start limitations to include the opportunity costs in the resource's start-up cost.

Both with respect to the flexible RA must-offer obligation and more broadly, Calpine favors market rule provisions to facilitate the inclusion of opportunity costs in offers. Calpine has several resources for which limits on starts are increasingly likely to bind as the resources cycle more due to deeper penetrations of renewables and other factors. Clear mechanisms to reflect such limits in offers are likely to become increasingly important.

2. Please provide information on any use-limitations that have not been addressed and how the ISO could account for them.

c. Hydro Resources

d. Specialized must-offer obligations (please also include any recommended changes for the duration or timing of the proposed must-offer obligation):

1. Demand response resources

As discussed above, to the extent that DR is only available to provide upward flexibility during a subset of hours, either its EFC should be de-rated and/or the use of DR to satisfy flexible capacity procurement requirements should be capped. In addition, if it is energy-limited, the EFC of DR should be further de-rated to account for the fact that it cannot perform during all of the hours during which it is "available."

2. Storage resources

Calpine is not opposed to counting storage towards flexible capacity procurement requirements if it can satisfy the threshold requirements of the flexible RA product as currently defined, i.e., to the extent that it can meet three hour ramps. Calpine does not support the proposal to allow storage to comply with the flexible RA must-offer obligation by offering and/or providing regulation. It is unclear how the provision of regulation assists the CAISO in satisfying three hour ramps. If the CAISO intends to procure regulation-capable capacity through forward capacity products, it should do so explicitly rather than by creating an exception for storage in the must-offer obligation for the three-hour ramping product.

3. Variable energy resources

As with other availability- and use-limited resources, if VER curtailments are available only during a subset of hours, either their EFC should be de-rated and/or the use of VER curtailments to satisfy flexible capacity procurement requirements should be capped.

In addition, it is unclear how VER curtailments meet the currently proposed flexible RA product definition. Would only curtailments that could be realized and sustained over a three hour period count towards flexible capacity procurement requirements? How do VER curtailments provide upward flexibility? Are VER curtailments qualitatively different from price-responsive increases in load or storage charging that might have the same impact on net load shapes? Does the CAISO intend to propose similarly special must-offer obligations for these other resources that actually increase net load but flatten net load ramps?

4. The ISO has proposed to include a 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.

Calpine generally supports the expansion of CPM to cure deficiencies in flexible capacity procurement.

5. The ISO is not proposing to use bid validation rules to enforce must-offer obligations. Instead, the ISO is proposing a flexible capacity availability incentive mechanism. Please provide comments on the following aspects of the flexible capacity availability incentive mechanism:

    a. The proposed evaluation mechanism/formula

        1. The formula used to calculate compliance

        2. How to account for the potential interaction between the flexible capacity availability incentive mechanism and the existing availability incentive mechanism (Standard Capacity Product)

Suppliers should not be punished excessively, i.e., at a multiple of the cost to procure a replacement resource, when a resource is unavailable due to a forced outage. SCP and flexible capacity availability incentive mechanism penalties could be excessive to the extent that they overlap. The potential overlap is complicated by the fact that the two mechanisms would cover different but not mutually exclusive sets of hours, i.e., the flexible capacity availability incentive mechanism would cover the 5 AM to 10 PM period of every day while SCP covers 1 PM to 6 PM on non-holiday weekdays in the summer and 4 to 9 PM on non-holiday weekdays in non-summer months.

There are at least two potential approaches to address the overlap: First, the penalties could be mutually exclusive so that resources sold as flexible capacity would be subject only to the flexible capacity availability incentive mechanism and not SCP incentives. Under this approach, the CPM price might constitute an appropriate basis for flexible capacity availability incentive payments because it reasonably reflects the cost of a substitute resource. (If the Joint Reliability Framework is implemented, prices from the associated clearing price auctions (RSAs) might constitute an appropriate basis for incentive payments.)

Another potential approach is to assume that the current CPM price that is the basis for SCP penalties reflects the cost of a resource that is able to satisfy both generic RA performance requirements during SCP availability assessment hours as well as comply with the expanded must-offer during the hours covered by the enhanced flexible capacity must-offer obligation. If, under this approach, availability in each hour were deemed equally important, hourly penalties would be inversely proportional to the greater number of flexible RA must-offer hours (510 hours in a 30 day month) rather than the smaller number of SCP availability assessment hours (100 hours in a month with 20 non-holiday weekdays). The failure to comply with either must-offer would subject a resource to penalties of $0.011/kW-hour, i.e., the current CPM price of $5.625/kW-month normalized by the 510 hours of the flexible RA must-offer, outside of any performance dead-bands. One potential problem with this approach is that a generic RA resource that fails to perform in every SCP availability assessment hour in a month would be at risk for less than the full cost of a replacement resource, i.e., it could lose at most 100 hours * $0.011/kW-hour, i.e., $1.10/kW-month rather than the full CPM price of $5.625/kW-month.

b. The use of a monthly target flexible capacity availability value

    1. Is the 2.5% dead band appropriate?

    2. Is the prevailing flexible capacity backstop price the appropriate charge for those resource that fall below 2.5% of monthly target flexible capacity availability value? If not, what is the appropriate charge? Why?

c. Please also include comments regarding issues the ISO must consider as part of the evaluation mechanism that are not discussed in this proposal.

6. Are there any additional comments your organization wishes to make at this time?

Calpine continues to object to the full counting of long-start resources, i.e., resources that cannot be started within the operating day, towards flexible capacity procurement requirements. Calpine supports option 1 of 7.1.3, i.e., not counting resources that cannot start within the operating day towards flexible capacity procurement requirements (or at least de-rating the flexible capacity of long-start resources).

In the event that the CAISO adopts option 2, counts long-start resources fully towards flexible capacity procurement requirements, and considers the flexible RA must-offer obligation for such resources satisfied for a day if they are offered in the IFM and not committed, then Calpine requests that the CAISO clarify and explain Example 6 of the Second Revised Straw Proposal, i.e., that the CAISO would weight availability in the IFM more heavily in the calculation of availability for resources for which the real-time must-offer obligation is waived.