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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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 July 25, 2013, and issues discussed during the stakeholder meeting on August 1, 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 August 15, 2013.

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.

   The CAISO's requirements assessment proposal is reasonable. NRG appreciates the CAISO providing timing details and agrees with conducting this process in parallel with the local capacity requirements assessment process.

   How the error term ε will be derived and used warrants additional discussion.

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)?

Stochastic techniques, which would consider the potential variations over a month, could be used to initially develop the forward allocation. In lieu of stochastic techniques, the contributing factor that creates the maximum demand for flexibility should be used.

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?

Same as above.

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

Not at this time.

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

The CAISO's proposal is reasonable. However, NRG remains concerned that a blanket prohibition on self-scheduling any flexible capacity could prove to be too restrictive. While NRG strongly supports mechanisms that encourage all market participants to submit economic bids and not to self-schedule, submitting self-schedules to deter adverse market outcomes or instructions is sometimes prudent and necessary.

Further discussion of the interaction of self-schedules is necessary. For example, will a unit with a start-up time greater than 90 minutes be allowed to self-schedule its minimum load output level and still provide flexibility above that level?

NRG hopes the CAISO will address any market performance issues that encourage market participants to self-schedule their resources to avoid adverse market outcomes.

b. Use-limited resources

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.

   The CAISO's proposed approach is reasonable. However, the success of using opportunity cost projections to effectively ration use will depend on the accuracy of the projections. While NRG does not have any specific recommendations for alternate approaches at this time, NRG supports the comments offered at the August 1 meeting that relying on opportunity cost projections as the sole means for rationing use imposes too much risk, especially if reaching use limits could cause the CAISO to impose non-availability penalties. NRG requests the CAISO consider exempting use-limited resources who have reached use limits from any such penalties.

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

   No comment.

c. Hydro Resources

No comment.

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

   NRG does not support different offering obligations for resources that are providing the same product (capacity that counts towards meeting monthly flexibility requirements).

   The CAISO's concern that DR resources may not be able to provide adequate flexibility if the underlying load is insufficient is a valid concern. However, the solution to this concern is not to allow DR to provide a discriminatorily inferior flexibility product by providing it with a different offering obligation. Instead, the solution is to ensure that there is sufficient load behind the DR to allow it to provide the flexibility it has offered.   One possible way to do this would be to allow DR to provide quantities of flexibility that vary hourly, and only to provide flexibility in those hours in which there is sufficient load to support the flexibility offered. While this would add complexity, it would reflect the operational realities associated with DR while avoiding the application of discriminatorily different offering obligations.

NRG does not understand how the CAISO's proposal to allow DR to offer into one of two shortened offering periods (6:00 AM to 11:00 AM and 4:00 PM to 9:00 PM) would ensure that there is sufficient load behind the DR to allow it to provide the flexibility offered.   Instead, the CAISO's proposal simply appears to be allowing DR to provide an inferior flexibility product that would still count the same towards meeting flexibility requirements.

2. Storage resources

Inasmuch as NRG does not support the CAISO's proposed flexibility offering obligation for DR resources, NRG does not support storage resources choosing the offering obligation proposed for DR resources as an option.

Further, NRG does not support the CAISO's proposal to allow certain kinds of storage resources to satisfy flexibility requirements by offering into the Regulation Energy Management (REM) market. The CAISO's proposed flexibility requirement is based on a three-hour period in which resources are expected to be able to ramp over, or fully ramp within and sustain the final output, within that three-hour period. Having non-pumped-storage storage resources provide flexibility by participating in the REM market – which provides for resources to be charged and discharged over a much shorter time frame than three hours - is not consistent with that design.   If hydro resources are required to provide energy over a six-hour period in order to qualify to provide flexibility, it is not clear how storage resources could provide the same flexibility product by participating in the REM market.

The proposed interim flexibility paradigm, simplified to a three-hour ramp, does not lend itself to trying to force-fit the square peg of storage into a round hole. When the flexibility paradigm is re-visited and re-scoped to cover the maximum ramp, load following, and regulation products, the CAISO should re-visit how storage resources count towards providing flexibility over the appropriate time horizon and in the appropriate market. Once that review is complete, the CAISO and market participants can then work to determine the nature of the offering obligation that attaches to those resources.

3. Variable energy resources

The CAISO's proposal for allowing variable resources to provide flexibility provides a reasonable platform for these resources. Unlike the CAISO's proposal for assigning a flexibility offering obligation to DR, the CAISO's proposal with regards to VERs reflects the reality that solar VER resources do not have the necessary output behind them to be able to provide flexibility during some hours of the day.

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.

No comment.

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

The CAISO's proposal to use an availability approach to encourage the submittal of economic bids for flexible capacity is an intriguing way to try to deal with the problems that could be created by inserting "default" economic bids on use-limited resources. However, inserting a bid that properly reflects opportunity cost as proposed by the CAISO if a resource owner fails to submit a bid reflects the opportunity costs would also ensure the resource is offered, but not in a way that would unduly jeopardize use limits. While creating "default" bids that reflect projected opportunity costs is not a panacea – whether bids that include projected opportunity cost will adequately ration the use of use-limited resources will depend on the accuracy of the projected opportunity costs - it may be a less complicated way to ensure that flexible capacity is economically offered than yet another complex system of penalties.

Referring to this as an "availability" mechanism does not align with the purpose of the mechanism, which is to ensure that the operators of resources that count towards flexibility requirements submit economic bids for that flexible capacity. A resource may be fully available even if a bid is not submitted for it. This should be referred to as an economic offering mechanism rather than an availability mechanism.

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

The interaction between SCP non-availability penalties and the proposed flexibility non-availability penalties should be more fully described and discussed. As NRG understands from the August 1 meeting, the CAISO is proposing that resources that are simultaneously providing both flexible capacity and RA capacity would not be subject to both Standard Capacity Product non-availability penalties and flexibility non-availability penalties for the same amount of capacity.

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

1. Is the 2.5% dead band appropriate?

This dead band value has the ostensible benefit of being the same dead band value as that used in the application of SCP non-availability penalties. However, whether this 2.5% dead band value is appropriate for this use can only be evaluated by examining distributions of SCP availabilities. NRG requests that the CAISO provide market participants with monthly distributions of SCP availabilities to allow market participants to evaluate whether this dead band is 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?

The prevailing backstop price provides reasonable short-term compensation for non-RA resources that meet RA requirements, considering (1) the very short-term nature of the compensation relative to the time frame over which a resource owner must incur costs to remain available to the CAISO and (2) the likelihood that any designation may not be for the full capacity of the unit. However, as a penalty price, and as the CAISO is well aware, the current CPM backstop price is well above the going price for system RA capacity and is likely well above even the going price for local RA capacity. This disparity imposes an asymmetrical risk for parties providing RA capacity, especially in a paradigm in which the CAISO severely restricts a resource owner's right substitute non-RA capacity to mitigate the forced outage risk. Apart from having two prices (one for short-term compensation and another for penalties), there is no "right" solution to this problem.

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?

No.