

Submitted By	Company	Date Submitted
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NRG submits these comments on the CAISO's February 7, 2014 Draft Final Flexible Resource Adequacy Criteria and Must-Offer Obligation (FRACMOO) Proposal.

NRG commends the CAISO for its work on these issues. It is unlikely that the CAISO and market participants will get everything with regards to this new consideration (the need for flexibility) right on the first try. Nevertheless, it is important to move forward with implementing these requirements so that we will have a better chance of getting things right when the need for flexibility actually affects procurement.

Regulation Management Option for Energy Storage. NRG has repeatedly questioned how short energy-duration storage participating in the regulation energy market can provide a flexibility service associated with a three-hour time frame. The CAISO's other option for storage to provide flexibility – the full flexibility option – proposes to measure a storage resource's Effective Flexible Capacity on the basis of the MW output the storage resource can deliver after three hours of discharge at a constantly increasing discharge rate.¹ This option, unlike the regulation energy management option, acknowledges and incorporates the three-hour basis of the flexibility requirements. When flexibility requirements are once again decomposed into different time periods – max ramp, load following and regulation – then the regulation energy management option would be a reasonable fit for the shortest-duration flexibility requirement. Until then, deeming regulation energy management storage resources to meet the three-hour flexibility requirements remains an ill fit.

Bounds for error term. The CAISO requests feedback on appropriate bounds for the error term and what actions to take if the bounds on the error term are exceeded. NRG offers that it is not useful to opine on bounds for the error term. Rather, to the extent that the CAISO's formula does not reflect the CAISO's operational needs, the CAISO and market participants are better served by understanding the nature of the difference between the flexibility requirement produced by the formula and the CAISO's flexibility needs, including how those needs are determined, with the intent of adjusting the requirements formula.

Deferring the implementation of the Standard Flexible Capacity Product and Opportunity Cost Adders. NRG supports this.

Flexibility Categories. NRG supports reducing the number of flexibility categories to three as the CAISO has proposed. NRG offers the following questions and comments about the proposed categories:

- In months in which there is not much load variation and the peak ramps are of similar size (e.g., December) – should the limit on Category 3 resources be even smaller? If Category 3 resources are intended to help cover the "super" ramps in a given month, if the ramp sizes are all similar, relying on Category 3 resources to help meet the "super" ramps seems questionable.
- Do widely varying Category 2 and Category 1 categories make sense? The CPUC has proposed fixed monthly percentages for its three resource categories; the CAISO has indicated that it

¹ Draft Final Proposal at 38.

considered fixed percentages but did not adopt fixed percentages because the flexibility requirements vary from month to month, so fixed percentages would not keep the flexibility requirements from varying month to month.

The reality may be that, with the maximum flexibility need (December) only one-third of the total RA requirement, tweaking the individual flexibility category percentages may have no effect. NRG looks forward to the CAISO publishing aggregate information regarding how the flexibility requirements were met through each flexibility category; this data should show how important the category limits are (or aren't).