

**Center for Energy Efficiency and Renewable Technologies**  
**Comments on the CAISO Flexible Ramping Products**  
**Revised Straw Proposal**

Submitted by:	Company	Date Submitted
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The Center for Energy Efficiency and Renewable Technologies (CEERT) appreciates the opportunity to comment on the CAISO's Flexible Ramping Product Revised Straw Proposal. As Variable Energy Resource (VER) penetration continues to increase into the CAISO managed grid, CEERT recognizes the need to develop market based products to address the ramping requirements that such resources demand. We would like to address our comments here solely to the issue of cost allocation.

The primary purpose of allocating costs based on cost causation in competitive wholesale markets is to incentivize economically efficient behavior by market participants. For example, a generator in a competitive wholesale electricity market that is charged for operational reserves in proportion to its frequency of forced outages will be incentivized to maintain equipment in order to reduce such outages and related charges. Unfortunately, the current method of charging market participants for ancillary services such as contingency reserves and regulation is based on hourly energy consumption, which does not reflect the actual costs to the system nor does it incentivize these customers to reduce such costs. Despite the existence of these inefficient and inequitable cost shifts between participants in current wholesale electricity markets, arguments are being made for the elimination of subsidies as applied to Variable Energy Resources (VERs). The variability and uncertainty in the output of VERs result from fluctuations in weather patterns, imperfect forecasting and inefficient scheduling practices, and gives rise to the need for increased flexible balancing resources in order to maintain system reliability, including the flexible ramping product described within this revised straw proposal. However, given that fluctuations in the output is almost completely out of the control of the VER operator (forced outages are relatively rare for VERs as compared to conventional resources), charging VERs for these integration costs will not provide any viable incentive to minimize their need to procure such ancillary services, and will only serve as an additional transactional cost that must ultimately be paid by load.

CEERT would like to applaud the CAISO for modifying the cost allocation mechanism being proposed in this Flexible Ramping Product Revised Straw Proposal. Although the cost allocation mechanism contained within the prior straw proposal would have targeted all generation, given the output characteristics of VERs, it is likely that the majority of such costs would have been borne by VERs, essentially as a charge for behavior outside of their control. In addition, the manner in which the flexible ramping cost allocation would have been assessed **by resource** would have completely reduced any benefit of aggregation that tends to reduce the overall

variability of VER output when considered over large geographical regions. There is no doubt that the addition of VERs will increase system integration requirements, and in fact requires the development of specialized ancillary service products such as the one proposed here. However, CEERT believes that there is no rational basis upon which to charge a generator for system integration costs based on behavior outside of its control. Furthermore, any integration charges must be consistent across all generators. Given the nature of how costs are currently allocated for ancillary services, this would require a major modification of the current system.

CEERT also supports the current proposal to track the costs for procuring flexible ramping products in the day-ahead and real-time markets by buckets, additionally segmented by: (1) costs attributable to load, (2) cost attributable to inertia ramps, (3) costs attributable to deviations from hourly schedules, and (4) costs attributable to deviations from ISO dispatch. This information will provide transparency of flexible ramping procurement requirements and costs, and will be useful for further evaluation of these products.

CEERT is greatly encouraged by the cost allocation mechanism proposed by the CAISO for this new flexible ramping product, and believes it is not only just and reasonable but will also aid in the efficient procurement of VERs under California's existing Renewable Portfolio standard.