

NRG Energy, Inc.'s Comments on the Straw Proposal for Flexible Ramping Product

Submitted By	Company	Date
Brian Theaker	NRG Energy, Inc. ("NRG")	November 14, 2011

NRG supports the development of market products that meet the CAISO's operational needs, and submits these comments on the November 1, 2011 Flexible Ramping Products ("FRP") Straw Proposal (FRPSP).

- The CAISO intends to procure FRP in both the day-ahead and RTPD (FRPSP at 5). NRG supports procuring FRP in both time frames as needed. The CAISO currently procures all of its forecast ancillary service needs in the day-ahead time frame, and NRG expects that this practice would continue with FRP, so that RTPD procurement of FRP would be limited to incremental FRP requirements that arise after the day-ahead market (e.g., change in conditions, or the forced outage of resources previously committed to provide FRP). While the CAISO offers that there needs to be additional discussion about day-ahead procurement of FRP (November 7 presentation at slide 13), full procurement of FRP requirements in the day-ahead market should be the starting place for those discussions.
- FRP is a five-minute product. (FRPSP at 7). NRG supports this principle.
- FRP will consist of separate up and down products (FRPSP at 7). NRG supports this principle.
- No substitution between FRP and regulation or operating reserve products. (FRPSP at 10). The CAISO has noted that there needs to be additional discussion about the interplay between non-contingent reserves and FRP (November 7 presentation at slide 13). To NRG, FRP and non-contingent spinning reserves would be perfect substitutes if they were both ten-minute products (FRP is proposed to be a five-minute product). NRG looks forward to further discussion on this topic.
- The FRP constraint can be relaxed at a penalty price. (FRPSP at 10) NRG does not oppose this, but offers that the CAISO's inability to procure the required amount of FRP should trigger some form of scarcity pricing (i.e., set a high price).
- FRP will not be used except to handle RTD uncertainties. (FRPSP at 12). This seems completely consistent with the CAISO's position that there is no substitution between FRP and other ancillary service products. FRP capacity could and should be used in the event of emergency, but the conditions under which it could be used for an emergency should be specified as precisely and clearly as possible.
- Cost allocation. The CAISO's cost allocation proposal – to charge the costs of an ancillary-service like product to certain parties based on their behavior – is an interesting idea. It is a significant departure from how the CAISO recovers the costs of other ancillary services, and should

provoke discussion.

Given that FRP is intended to provide sufficient capacity to account for uncertainties that arise between the RPTD and RTD, NRG perceives that FRP procurement targets may be initially set by an estimate of that uncertainty, but ultimately could be derived from a historical assessment of the RTPD-RTD uncertainty.

While FRP will be procured based on a future estimate or a historical calculation of uncertainty, the FRP costs will be allocated to an amount of deviations that may or may not reflect the estimate or calculation of uncertainty. As an example, assume the deviations that give rise to uncertainty in Month 1 amount to an hourly amount of "X". At the start of Month 2, the CAISO adjusts its hourly FRP targets to begin procuring X (or 2X, whatever FRP target provides the CAISO with the desired level of confidence that it will have sufficient capacity to cover the uncertainty). However, in Month 2, the average amount of deviation is only 0.5X. As a result, the FRP rates paid by the Month 2 deviations will be disproportionately high. Unless the Month 1 and Month 2 deviations are of similar magnitude, allocating the FRP procurement costs based on the Month 1 deviations to the deviations in Month 2 will inequitably benefit or burden the parties who had deviations in Month 2.

If the total deviations do not vary much from month to month, the FRP rates should be stable. If the deviations do vary substantially from month to month, allocating procurement costs to deviations may not be the feedback loop the CAISO expects it to be. The CAISO has just restructured its GMC to try to provide greater certainty around costs. While allocating procurement costs to deviations may align with cost-causation principles (the inevitable lag between procurement targets and the deviations that will bear the procurement costs notwithstanding), the CAISO's cost allocation proposal introduces the possibility of a charge that may not be predictable. While it is not known what the levels of this cost will be, perhaps the CAISO should consider some way to stabilize the rate that will be charged to deviations. A two-tier rate, with stable rates for deviations (that could be revised on an annual or semi-annual basis) and the balance spread to metered demand, might be considered.

If FRP costs are to be allocated based on deviations from schedule or dispatch instruction, FRP costs will be allocated to generators that suffer real-time forced outages. Right now the costs of operating reserves, which help the CAISO manage forced outages, are not allocated to generators that suffer forced outages. Instead, these costs are allocated to demand under the reasonable theory that demand is the ultimate beneficiary of reliable power supply. NRG is NOT advocating that operating reserve costs should be allocated to resources that cause the CAISO to deploy energy from those reserves. Doing so would add a huge unmanageable risk to providing power to the CAISO. However, depending on the costs of procuring FRP, allocating the FRP costs – if the risk of huge allocation due to a small pool of deviations can be mitigated – may encourage resources to take steps to reduce the uncertainty they introduce into CAISO operations. As the CAISO has noted, allocating the costs of variability is a complex topic that

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will warrant considerable discussion.

- The CAISO will post daily the month-to-date (1) total cost of FRP; (2) MWh deviations subject to being allocated FRP costs; (3) the per MWh rate of deviations. NRG supports providing this information, but believes posting additional information would benefit the market. That additional information should include (1) hourly procurement targets for, and hourly actual procurement of, FRP; (2) the hourly cost of FRP procurement; and (3) the hourly MCP for the FRP.