

# Comments of Calpine Corporation On the CAISO's Flexible Ramping Products Straw Proposal

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Submitted by	Company	Date Submitted
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## Three Cheers for the CAISO!!

Calpine strongly supports the direction and substance of the Straw Proposal.

Particularly, Calpine applauds the CAISO's creation of a bid-based, co-optimized capacity product that is treated in most relevant ways like other substitutable reserve products (e.g. spin, non-spin, regulation).

The demand for a Flexible Ramping Product ("FRP") is pressing as the penetration of renewable energy increases each and every month. We are encouraged that the CAISO is committed to an expedited process to achieve a permanent solution which addresses ramping needs and secures the system in forward (day-ahead) markets.

Significantly, this product and its development timeline respond favorably to both the CAISO Board directive and Calpine's own comments which demand an elimination of the non-market-based flexible ramping constraint as soon as possible:

As such, we support implementation of the constraint on an *interim* basis for a period of time not to exceed that required to deliberately, but expeditiously devise and implement a final and integrated bid-based product (a process that has begun concurrently<sup>1</sup>). We anticipate that this time would be no more than 6 months.

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<sup>1</sup> As expressed in comments in RIMPR2, Calpine proposes that the ultimate design of this new capacity product be bid-based and co-optimized with energy, A/S and unit commitments in the forward (IFM) market. Just as with A/S, incremental capacity can be acquired through the RTPD runs.

## Do Not Allow Perfect Cost Allocation to the Enemy of a Good Proposal.

Without doubt, as the CAISO heard on the first teleconference, many parties will object to the allocation of the costs of FRP. Generally, Calpine will support an allocation that is based on cost causation, to the extent that reasonable and verifiable measures of cost incurrence can be identified.

Nonetheless, controversy over the allocation of costs should not deter the CAISO from an expedited implementation of the new product. It is unlikely that the CAISO will achieve consensus when market participant costs will increase (as is unavoidable with the development of a new product.)

Indeed, we encourage the CAISO to address cost allocation forcefully and aggressively over the next month. A targeted series of workshops should be held to solicit, evaluate and develop alternative allocation methodologies.

## Compensation Should be Structured Similar to Substitutes

As described by the CAISO, the FRP is a product that is very similar in several aspects to both non-contingent spin and regulation products. Calpine generally agrees, and therefore, believes that compensation mechanisms for FRP should reflect these similarities but also must recognize differences. In addition, Calpine observes, as did the MSC in their opinion on the Flexible Ramp Constraint, that the CAISO must rationalize current A/S markets (e.g., paying the same market clearing price for contingent and non-contingent spin) in the context of offering a new product.

Calpine supports the CAISO's initial proposal that prices for FRP be based on marginal bids and opportunity costs. Calpine acknowledges that the proposed FRP reserve is more likely to be dispatched than other reserves. But we are not yet convinced that this heightened expectation of FRP dispatch, by itself, is sufficient to support structural pricing differences with directly substitutable products.

Particularly, the expectation of dispatch at the time of FRP procurement will vary and may be a factor in opportunity cost calculations. Indeed, estimates in the RTPD timeframe of a resource's energy opportunity cost associated with providing FRP may overstate its true energy opportunity cost if indeed there is high certainty that the unit will be dispatched for energy. However, for capacity acquired in the DA market, long before FRP uncertainties are realized, energy-related opportunity costs are real and must be considered when preparing and evaluating offers to supply substitute products.

Absent an empirical characterization of the frequency and volume with which FRP reserves are likely to be dispatched, it is difficult to assess the scope of these issues. Calpine notes that in their opinion on the Flexi-Ramp constraint, the MSC observed:

...the market simulations conducted by the ISO show zero or very low flexiramp prices in most intervals...Because the constraints for flexiramp are similar in many respects to those for spinning reserve, while the amount of MWs involved is much less, we anticipate that the aggregate payments over time will be much less than for operating reserves.

If opportunity-cost based payments for FRP are likely to be low, then paying full opportunity costs is unlikely to lead to significant distortions.

### Specific Support for Aspects of the Proposal:

In the following we provide preliminary support for individual aspects of the Straw proposal

#### Implementation of FRP in RTPD *and* DA markets

The CAISO has provided information and examples on how the FRP would be incorporated into RTPD and RTD processes. Calpine supports implementation of a residual market in RTPD, but looks forward the CAISO's further description of the co-optimization of FRP with other products in the DA market.

In particular, we look forward to a discussion of forward procurement targets. In general Calpine supports a transparent method of identifying and posting of hourly quantities of FRP. Calpine supports DA acquisition of a quantity that ensures with high confidence that unanticipated errors can be addressed. Incremental procurement may also be needed in RTPD.

#### Substitution with Other the Products

The CAISO proposes that FRP may be substitutable with other reserves. Calpine suggests a cautious approach to substitution. In fact, the FRP is structurally similar to reserve-based products, but will have a different value based on the fact that FRP may be dispatched more frequently than contingency reserves.

Particularly, in both DA and RT, FRP should be procured separately from contingency reserves. FRP procurement should not be used to meet WECC contingency reserves requirements, but rather, should be acquired separately, and to achieve its intended purpose which is to secure the system and prepare for unanticipated variability.

### Unit Commitment Examples

The examples in the Straw Proposal all presume that units are already committed and on line. Calpine suggests that the CAISO develop an example of a unit that is committed as a result of RTPD. The example should demonstrate the incorporation of Start and No Load costs and should also identify BCR principles.

### Implementation in the Downward Direction Only

The Straw Proposal is focused on upward ramping examples (and shows downward restoration). These examples are fairly simple in concept (notwithstanding the extensive clarifying questions voiced on the first teleconference.) But Calpine understands that the FRP will also include constraints that procure downward ramping.

Downward ramping capability is straightforward for units that are on-line and have downward ramping capacity. However, the downward ramping constraint could also force a commitment of a new unit in order to allow downward ramping. Calpine suggests that the CAISO develop examples of how this outcome would be handled or avoided.

Thank You