

# FRP Technical Appendix

## *Working Group*

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### **Summary:**

Calpine appreciates that time and energy devoted by the ISO staff to explain the technical details of the Flexible Ramping Product. We believe that we have a much better understanding of the calculation of requirements and the construction of the demand curves.

In this document, we comment on only a couple matters although our disappointment in the design is manifest. The elimination of Day-Ahead procurement and value-based bidding are two significant shortcomings of the current proposal.

### **Extending the Demand Curve**

The presentation highlighted a new proposal for acquisition of the forecast net demand variation. Past proposals indicated that the ISO would acquire sufficient ramping to meet the net demand *variation*, but allow the demand curve to determine how much, if any, of the net demand *uncertainty* would be acquired. The ISO now proposes to allow the demand curve to influence procurement of all ramping capability, including the net demand variability.

As discussed in the meeting, this change draws a couple questions that should be addressed in any future proposals, such as:

- A description of how FRP prices and LMPs interact when the ISO chooses to procure no, or a smaller amount of the net demand variation.
- How the “bins” of the demand curve histogram will be constructed. As we understand, the last bin (the bin that includes zero procurement of net demand *uncertainty*) will be used to set the demand curve for the net demand *variation*. Therefore the construction (i.e., what probability range is used) will have a significant impact on FRP procurement and clearing prices.

7/1/2015

**Settlement**

While we eschew complexity, we believe that the proposal to deem FRU/FRD as unavailable because of uninstructed energy oversimplifies settlements. In fact, UIE does not conclusively displace ramping capability, particularly when there is uncommitted range. As such, Calpine supports the second option for settlement – in which the full range of a resource is evaluated before deeming FRU/FRD as unavailable.

Thanks