Comments on the Frequency Response Phase 2 – Issue Paper

Department of Market Monitoring
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The California ISO Department of Market Monitoring (DMM) appreciates the opportunity to comment on the ISO's Frequency Response Phase 2 Issue Paper (Issue Paper).[1] DMM also appreciates the ISO's continued efforts on frequency response. The Issue Paper clearly decribes the relationship and differences between primary frequency response and existing ancillary services. The Issue Paper also explains how the NERC's BAL-003-1 standard applies to the ISO. DMM believes a couple of points could use more clarity.

Clarify definition of "sufficient frequency response"

The Issue Paper provides an in depth discussion of NERC's BAL-003-1 frequency response standard. Under the BAL-003 standard, NERC measures a median frequency response for selected cases over an annual period. The ISO also indicates the spot markets (day-ahead and real-time markets) could be modified to ensure *sufficient* available frequency response. However, the BAL-003 annual compliance period does not align with the spot market intervals. The spot markets procure services over an hourly or smaller trade interval.

Given this difference, the Issue Paper is not clear about what the frequency response needs are.

- Does the ISO see a need to meet the BAL-003 standard on an annual basis only?
- Or does the ISO see a need to translate the BAL-003 standard into an interval level requirement?
- Or does the ISO see a need for interval level requirements apart from the BAL-003 standard?

A clear definition of what constitutes *sufficient frequency response* would be helpful. With a clear definition, the ISO and stakeholders could more easily consider what potential market design and policy changes could efficiently meet the frequency response needs that the ISO intends to address through this initiative.

[1] See *Frequency Response Phase 2 – Issue Paper*, December 15, 2016: http://www.caiso.com/Documents/IssuePaper_FrequencyResponsePhase2.pdf

Spot market prices should reflect spot market marginal costs

The Issue Paper asserts that it is desirable to develop a market design that creates “price signals that incentivize capital investments” to increase frequency response capability. It is not clear if the prices being referred to by the ISO are for a potential longer term frequency response capability market or for a potential product in the ISO spot markets.

DMM disagrees that the ISO’s goal should be to seek to create spot market prices that incent capital investments. Short run marginal costs determine the spot prices. Any capital costs already incurred are sunk and non-marginal. Any capital costs not incurred are not an available choice in the current spot market. Spot market prices should incent efficient scheduling of the spot market products given current market conditions.

Moreover, the market design adopted by the ISO and the state of California over the last decade is based on a resource adequacy approach that recognizes this concept. Capital investments are not expected to be made based solely on spot market prices.

Thus, DMM recommends that the ISO clarify what is intended by this design principle. If the ISO intends to seek to achieve the capital investment that might be needed for frequency response capability through the ISO spot markets, DMM recommends further discussion of this key design principle.