

Flexible Resource Adequacy and Must Offer Obligation – Phase 2 Supplemental Issue Paper: Expanding the Scope of the Initiative

**Department of Market Monitoring
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The Department of Market Monitoring (DMM) appreciates this opportunity to comment on the Flexible Resource Adequacy and Must Offer Obligation – Phase 2 Supplemental Issue paper. This supplemental issue paper proposes adding restrictions to qualifications for each of three categories of flexible resource adequacy capacity. The impetus for adding these restrictions is a concern that the current flexible resource adequacy design may be inadequate to meet the ISO’s forecasted flexible capacity needs.

The ISO’s recent stakeholder initiatives catalog process has highlighted that the ISO has limited staff and technological resources to undertake all the various potential new and existing initiatives of high interest to the ISO and stakeholders. Although the restrictions proposed in the Supplemental Issue paper may bridge some of the gap between the ISO’s forecasted flexible capacity needs and current requirements, DMM recommends that the ISO focus its limited staff time and resources on beginning to design a durable flexible capacity resource adequacy product rather than making incremental changes as part of another interim solution. Doing this will require a reevaluation of the design of both flexible resource adequacy requirements and must offer obligations.

Flexible resource adequacy was designed to supplement system and local resource adequacy capacity as the ISO seeks to maintain reliability in the context of evolving system needs, particularly the expected increased penetration of renewable resources. As stated in the revised draft final proposal for phase 1 of this initiative, the ISO’s goal is “ensuring that there is sufficient flexible capacity to address the added variability and uncertainty of variable energy resources.”¹

The current flexible resource adequacy requirement does not address this variability or uncertainty directly. Instead, it is set at the forecasted maximum contiguous three-hour net load ramp plus a contingency factor. Defining net load as the difference between load and the sum of solar and wind generation and defining the challenge to reliability as a requirement to meet a three hour net load ramp was a direct response to the issues posed by renewable integration as understood at the time.

The ISO now has over two years of experience with existing flexible capacity requirements and the rapid growth of both utility scale solar and wind generation as

¹ *Flexible Resource Adequacy Criteria and Must-Offer Obligation Revised Draft Final Proposal*, p 2.
<http://www.caiso.com/Documents/RevisedDraftFinalProposal-FlexibleRACriteriaMustOfferObligation-Clean.pdf>

well as behind the meter solar. This provides the ISO sufficient basis to reevaluate whether meeting a projected three hour net load ramp addresses reliability needs for flexible capacity. The ISO's supplemental issue paper on this topic states that the ISO is "exploring tools that it can use to assess the effectiveness of the flexible capacity showings".² The ISO's supplemental issue paper notes several specific gaps between current must offer requirements and flexibility requirements, including the need to meet single hour load ramp (vs ramping needs over a longer three hour period) and the fact that the biggest net load ramps often occur on weekends.

DMM suggests that the ISO reassess the design of both flexible resource adequacy requirements and must offer obligations based on the proposed analysis of the efficacy of the current design. Rather than stakeholder and adopt piecemeal changes to an existing design through revised qualification requirements, DMM suggests that the ISO define a set of flexible resource adequacy must offer obligations consistent with a clearly identified flexibility reliability requirement. Although doing so would require additional time in this stakeholder process, a single realignment of both flexible requirements and must offer obligations to the ISO's need to address the variability and uncertainty of renewable production would be more efficient than repeated rounds of flexible capacity qualification redefinitions.

The interim flexible resource adequacy capacity product exists to fill a perceived gap in the resource adequacy capacity available to the ISO, adding procurement of flexible capacity to procurement of local and system resource adequacy capacity. The interim definition in place today and maintained in this proposal defines that gap as a requirement to meet projected net load ramping, which is not equivalent to meeting requirements created by uncertainty and variability of renewable generation.

As noted by multiple participants in both the CPUC's rulemaking proceeding³ and this ISO process, the ISO's need for flexibility may be more precisely described by identifying the uncertainty and variability that requires resolution to maintain reliability. Ramping is one way to meet changes in net load in real-time, but a clearer definition of the flexible capacity requirement is needed if the ISO intends to design a durable set of requirements and must offer obligations to the procurement of the flexible capacity necessary to maintain reliability.

The definition of durable flexible resource adequacy capacity product requirements and must offer obligations could be clarified to address the uncertainty that was part of the basis for their creation. One of the challenges to reliability posed by the integration of renewables is that ramping needs can change unexpectedly between markets for the same dispatch intervals, due in part to renewable volatility. The ISO's markets have

² *Flexible Resource Adequacy Criteria and Must Offer Obligation – Phase 2 Supplemental Issue Paper: Expanding the Scope of the Initiative*; <http://www.caiso.com/Documents/SupplementalIssuePaper-FlexibleResourceAdequacyCriteria-MustOfferObligationPhase2.pdf>, p. 15.

³ See comments submitted in Rulemaking 14-10-010: Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local and Flexible Procurement Obligations for the 2016 and 2017 Compliance Years.

incorporated payments to capacity available to meet this challenge between intervals in the real-time: the flexible ramping product.

There appears to be support among stakeholders within this process to redesign a durable flexible resource adequacy construct around the need to meet uncertainty that appears between day-ahead and real-time. Capacity capable of resolving this uncertainty would need to be available for dispatch in the real-time, not fully committed in the day-ahead or subject to operational restrictions preventing its dispatch in real-time to resolve unexpected ramp due to renewable volatility. The ISO should adopt a definition of the flexible resource adequacy requirement more closely identified with challenges to reliability. From this requirement will flow the definition of the must offer obligations and the qualifications for resources capable of meeting that must offer obligation.