

Comments on Flexible Ramping Product Refinements: Issue Paper and Straw Proposal

Department of Market Monitoring

December 5, 2019

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *Flexible Ramping Product Refinements Issue Paper and Straw Proposal* (Paper).¹

Overview

DMM supports the direction of the ISO's proposed improvements to the real-time flexible ramping product (RT FRP). The ISO's paper is an early stage proposal without specific formulations. More detailed formulations in upcoming papers would help stakeholders, including DMM, better understand the proposals.

DMM is concerned about one of the key shortcomings in the RT FRP design that the ISO is not addressing as part of any initiative: the limited time horizon of the FRP in the real-time market. The ISO has indicated it does not intend to extend the RT FRP uncertainty horizon beyond five minutes to address uncertainty in what the actual net load will be further out in time from the current interval.² DMM continues to recommend that the ISO work on designing an extension of the RT FRP uncertainty horizon as part of either the DAME or FRP Refinements initiatives. We expand on more specific comments below.

Comments

Extending flexible ramping products to longer time horizons

The current flexible ramping product is only designed to procure and price reserves to meet net load uncertainty up to five minutes from the current market interval. However, net load uncertainty several hours out into the future is also important to current dispatch decisions. As described in prior DMM reports and comments, during the key morning and evening ramping periods ISO operators routinely take significant out-of-market actions (such as upward load adjustments and exceptional dispatches) that free up or commit additional capacity to prepare for uncertain net load conditions much farther out than a 5-minute time horizon.³ Extending

¹ *Flexible Ramping Product Refinements Issue Paper and Straw Proposal*, California ISO, November 14, 2019: <http://www.caiso.com/InitiativeDocuments/IssuePaper-StrawProposal-FlexibleRampingProductRefinements.pdf>

² We use the term "uncertainty horizon" to refer to the length of time from the present interval for which RT FRP is designed to procure and hold ramp to address uncertainty in the net load forecast over that length of time.

³ *Q3 Report on Market Issues and Performance*, December 5, 2019, pp. 45-46, 87-88, 96-97 <http://www.caiso.com/Documents/2019ThirdQuarterReportonMarketIssuesandPerformance.pdf>

the flexible ramping product uncertainty horizon would allow the ISO to procure and price flexible reserves *in the market* to meet net load uncertainty beyond five minutes.

Extending the uncertainty horizon of flexible ramping products is not part of the ISO's current proposal. DMM does not think that the ISO's proposed improvements in the current paper should be delayed to work on an extended horizon product design. But DMM continues to think the ISO should consider extending real-time flexible ramping products to longer time horizons.⁴ As the ISO develops day-ahead flexible reserve products it will become more important to have real-time products to ensure that reserves procured in the day-ahead market are used effectively in the real-time markets.

Deliverability Enhancements

Accounting for transmission constraints through nodal procurement would significantly improve the effectiveness of procured flexible ramping reserves. A nodal procurement would provide more benefits than a zonal procurement. A more refined zonal procurement may be an improvement over the current balancing authority area requirements, but will still have the same underlying problem of not accounting for transmission constraints within the zones.

Depending on the final formulation, zonal procurement could also undercount how much flexible capacity in one region could respond to net load changes in another area if sufficient transmission is available. A nodal procurement would account for actual transmission availability and should be preferred over a zonal procurement.

The effectiveness of either a nodal or zonal procurement will depend on the final constraint and product formulations.

Proxy Demand Response Eligibility

Restricting procurement of flexible reserves to resources that are dispatchable within the real-time market intervals is necessary given the purpose of the flexible ramping products. Thus, any proxy demand response and other resources that are not dispatchable within the real-time market intervals should not be eligible to meet flexible ramping requirements.

Minimum FRP requirement for CAISO

DMM is unsure whether the "Minimum FRP Requirements" for the California ISO BAA will be needed depending on how the ISO enhances flexible ramping reserve deliverability. The

⁴ For example see: *DMM Comments on Extending the Day-Ahead Market to EIM Entities* November 22, 2019:

<http://www.caiso.com/InitiativeDocuments/DMMComments-ExtendedDay-AheadMarket-IssuePaper.pdf>

DMM Comments on Day-Ahead Market Enhancements June 20, 2019 Technical Workshop, July 24, 2019:

<http://www.caiso.com/InitiativeDocuments/DMMComments-Day-AheadMarketEnhancementsWorkshop-June20-2019.pdf>

Department of Market Monitoring 2018 Annual Report on Market Issues and Performance, May 2019, pp.23:

<http://www.caiso.com/Documents/2018AnnualReportonMarketIssuesandPerformance.pdf>

purpose of the Minimum Requirement is to ensure a portion of the flexible reserves is procured within the California ISO BAA so that it is “available for uncertainty that materializes in the CAISO balancing authority area.” The deliverability enhancements may make a Minimum FRP Requirement unnecessary and may require a reevaluation of the overall interaction of balancing authority area specific requirements and net import/export credits. More details on the deliverability constraint formulations will allow stakeholders to more carefully examine the need for Minimum Requirements.