BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local and Flexible Procurement Obligations for the 2019 and 2020 Compliance Years.	Rulemaking 17-09-020

REPLY COMMENTS OF THE DEPARTMENT OF MARKET MONITORING
OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

The Department of Market Monitoring ("DMM") of the California Independent System Operator Corporation ("CAISO") submits these reply comments on the Commission's *Ruling Seeking Comment on Clarification to Resource Adequacy Import Rules* filed July 3, 2019 ("Ruling").

CAISO Analysis of Resource Adequacy Imports

In opening comments on the Commission's Ruling, numerous entities[1] cited statistics and conclusions on non-delivery of RA import capacity put forth by the CAISO in its *Resource Adequacy Enhancements Revised Straw Proposal.*[2] These statistics and conclusions from the CAISO's straw proposal were cited as evidence indicating that the Commission should not make significant revisions to rules regarding RA imports aimed at increasing the reliability and amount of RA imports that are actually available and scheduled in the CAISO's markets.

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[1] *See comments on Ruling by*: Morgan Stanley Capital Group Inc. (p. 12), Bonneville Power Administration (p. 2), *Public Generating Pool* (p. 3), CalCCA (p. 4), SDG&E (pp. 3-4).

[2] *Resource Adequacy Enhancements Revised Straw Proposal*, California ISO, July 1, 2019, pp. 42-43: http://www.caiso.com/Documents/RevisedStrawProposal-ResourceAdequacyEnhancements.pdf

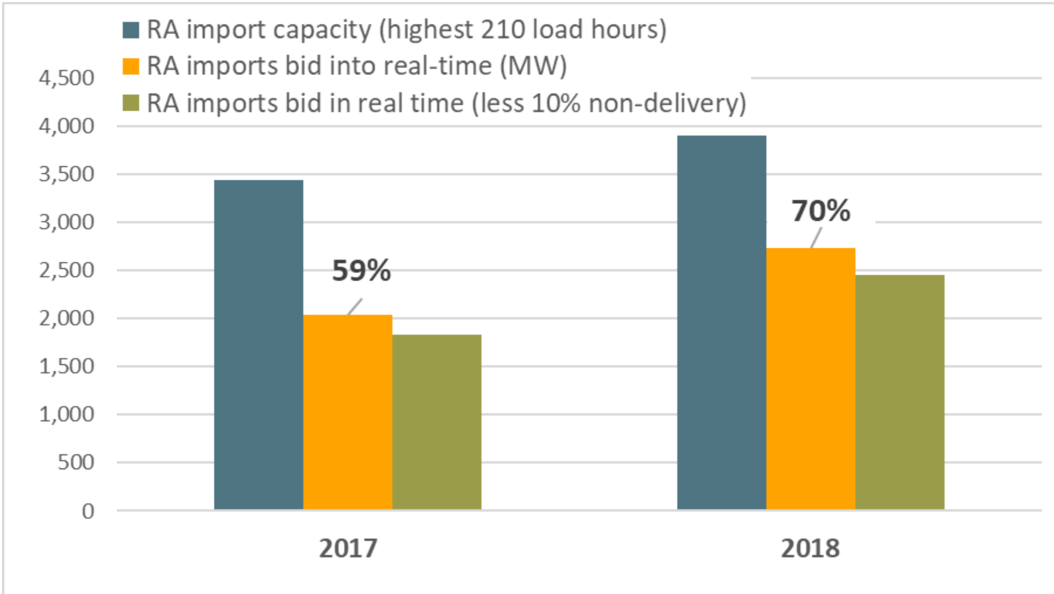
However, DMM believes the statistics and conclusions from the CAISO's straw proposal being cited are flawed and have been misrepresented by numerous commenters in the context of this Ruling. The CAISO's statistics measure the "non-delivery" of RA imports based only on the amount of RA imports that are cleared in the CAISO real-time market which are not then actually delivered (i.e. not e-tagged). The issue regarding the availability of RA imports that has been raised by DMM is different. DMM's concerns involve the fact that RA imports can simply bid at or near the $1,000/MWh bid cap in the day-ahead market to ensure they are not accepted, and then have no obligation to offer the supply into the real-time market.

The CAISO's statistics on RA imports only consider RA imports that cleared in the real-time market, and completely ignore the large portion of RA imports that do not clear the day-ahead market and therefore are not bid into the real-time market. Again, DMM's concern is that the portion of RA import capacity that is actually available is significantly limited by the fact that RA capacity that does not clear the day-ahead market is not even offered into the real-time market.

Information on the portion of RA imports which do not clear the day-ahead market and are therefore not offered in the real-time market during the 210 hours with the highest system load is reported each year in DMM's *Annual Report on Market Issues and Performance.*[3] As illustrated in Figure 1 (yellow bars), these data show that during high load hours, only 59 percent to 70 percent of RA imports were offered in the real-time market in 2017 and 2018.

[3] *2018 Annual Report on Market Issues and Performance*, DMM, Table 10.1, p. 234. *2017 Annual Report on Market Issues and Performance*, DMM, Table 10.1, p. 229.

Figure 1. Portion of Total Resource Adequacy Imports Offered in Real-time Market during 210 Highest Load Hours



In addition, not all of the RA imports that offered and cleared in the real-time are actually delivered. As stated in the CAISO's *Straw Proposal*, the maximum non-delivery of RA imports that are scheduled or cleared in the real-time averages approximately 10 percent.[4] Thus, while 59 percent to 70 percent of RA imports may be offered in the real-time market, CAISO operators may only be able to count on 90% of these RA imports to be delivered in the real-time market if dispatched. Based on these data, a net total of only about 53 percent to 63 percent of RA imports may actually be deliverable in the real-time market (as shown by the green bars in Figure 1).[5]

Thus, DMM does not believe the statistics and conclusions in the CAISO straw paper cited by numerous commenters support the assertion that the availability of RA

[4] *Resource Adequacy Enhancements Revised Straw Proposal*, pp. 42-43.

[5] 59% x 90% = 53% and 70% x 90% = 63%.

imports under current market rules is not a concern. Given the increasing role that RA imports are likely to play in CAISO system reliability and market competitiveness, DMM recommends further consideration of options by the CPUC, CAISO and stakeholders that would increase the supply and availability of energy from RA imports beyond the day-ahead market into real-time.

Such options need not be an all-hours must-offer for all RA imports, such as exists in other RTO/ISOs. Options might include mechanisms to increase the amount of RA imports clearing the day-ahead market under tight supply conditions or high load uncertainty, and/or a more targeted means of ensuring sufficient RA imports are offered into real-time through the CAISO's residual unit commitment process. Options may also involve a combination of rules for RA imports established by the CPUC as well as modification to the CAISO tariff.

Incorporating Strike Price, Offer Cap and/or Financial Energy Hedges in RA Import Contracts

Both SCE and PG&E suggest consideration of a negotiated strike price or offer cap within import resource adequacy contracts as a means to effectuate more certain delivery of energy from import resources.[6] DMM agrees that a negotiated strike price or offer cap at which energy will be delivered could effectuate increased delivery of import capacity to the CAISO while avoiding potential market inefficiencies introduced by requiring actual delivery of firm energy irrespective of price.

Including a strike price provision in import RA contracts could also mitigate DMM's concerns that import supply could simply bid at or near the bid cap in the day-ahead market to avoid any further supply obligation, and could increase the extent to which

[6] See comments on Ruling by PG&E (p. 3) and SCE (p. 2).

import capacity is backed by actual physical power. If the CPUC adopts the idea of a negotiated strike price for import RA contracts, DMM believes the commission should strongly consider specifying that the bidding and delivery obligation apply through real-time. A real-time obligation would strengthen incentives for import RA to bid marginal cost in both the day-ahead and real-time markets and for the supplier to back the RA by an actual physical resource dedicated to serving CAISO load. Another option would be to specify a strike price that is low enough to be expected to clear the day ahead market in hours when needed to help ensure reliability and competitive market prices.

CAISO recommends that the CPUC "consider requiring resource adequacy import contracts be coupled with an energy hedging arrangement such as an energy contract-for-differences."[7] DMM supports considering such requirements in addition to the strike price provision discussed above. DMM appreciates that it may be difficult to define rules for contract-for-differences for RA imports that the CPUC could enforce on all of its jurisdictional LSEs. However, DMM agrees with CAISO that such requirements would "better ensure that resource adequacy imports are used and useful." In addition to mitigating LSE energy spot market exposure to high prices, this kind of requirement could significantly increase incentives for suppliers to back import RA with actual physical resources and to bid the import RA into CAISO at those resources' marginal costs.

[7] See comments on Ruling by CAISO (p. 3).

Respectfully submitted,

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