

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Reforms and Refinements, and Establish Forward Resource Adequacy Procurement Obligations.

Rulemaking 21-10-002
(Filed October 7, 2021)

**COMMENTS ON PHASE 3 OF THE IMPLEMENTATION TRACK
BY 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 comments on the proposals made by the Energy Division (ED) and the California Community Choice Association (CalCCA) as part of Phase 3 of the Implementation Track of this Rulemaking.¹

I. Demand Response Resources

DMM supports Energy Division’s proposal to remove the planning reserve margin, and transmission and distribution gross-ups for demand response capacity values.

As noted in recent DMM reports, the PRM adder and T&D gross-ups have resulted in resource adequacy values that over-estimate the availability of demand response capacity.² During high load days in the summer of 2022, bid-in capacity from CPUC-

¹ Energy Division Proposals for Proceeding R.21-10-002, January 20, 2023:
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M501/K407/501407493.PDF>

CalCCA’s Proposals in Response to Assigned Commissioner’s Amended Scoping Memo and Ruling, January 20, 2023:
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M501/K418/501418731.PDF>

² DMM Report on Demand Response Issues and Performance 2022, pp. 9-10.
<http://www.aiso.com/Documents/Demand-Response-Issues-and-Performance-2022-Report-Feb14-2023.pdf>

jurisdictional demand response resources averaged only about 67 percent of their credited resource adequacy value (including the PRM and T&D gross ups).

DMM supported the CPUC previously removing the 6 percent of the planning reserve margin (PRM) associated with operating reserves and ancillary services. DMM agrees with the CAISO regarding the removal of the remaining 9 percent associated with load forecast error and forced outages, due to lack of evidence that supply side demand response reduces these issues.³

DMM also supports the proposal to remove the transmission and distribution (T&D) gross-ups, absent compelling evidence to the contrary.⁴ The removal of T&D gross-ups will make treatment of demand response resources similar to that of other distributed energy resources.⁵

DMM agrees that incorporating test results in capacity awards would help the CPUC improve reliability of demand response resources.

DMM agrees that incorporating test results in capacity awards would be a useful tool for the CPUC to improve reliability of demand response resources by incentivizing resources to provide accurate capacity estimates and perform better when dispatched.

DMM has observed that the performance of demand response resources fall short of their dispatch instructions. As noted in prior DMM reports, must-offer obligations and Resource Adequacy Availability Incentive Mechanism (RAAIM) penalties may incentivize supply plan demand response to bid into the market. However, the lack of penalties associated with performance may explain why supply plan demand response resources only curtail around 50 percent of their scheduled load reduction on high load

³ Track 4 Proposals of the California Independent System Operator Corporation, p. 9-10. <http://www.caiso.com/Documents/Jan28-2021-Track-4-Proposals-ResourceAdequacyProgram-R1911009.pdf>

⁴ Qualifying Capacity of Supply Side Demand Response Working Group Final Report, p. 47. [California Energy Commission : Docket Log](#)

⁵ CAISO Reply Comments on Track 4 Proposals and Working Group Report, p. 6. [Microsoft Word - 2021-03-26_ReplyComments_Track-4_Proposals_WorkingGroupReport \(caiso.com\)](#)

days.⁶ DMM has suggested implementing a performance-based penalty to ensure resources with must-offer obligations not only bid in their capacity but also fulfill their scheduled load curtailment.

As DMM understands the proposal, testing could be done during hours in which the market dispatches demand response resources. The potential for performance during market dispatches to affect resources' capacity awards would better incentivize demand response resources to fulfill their scheduled load curtailments. Resources that consistently fail to fully deliver their scheduled load curtailments should have their capacity award lowered to better reflect the actual amount of resource adequacy capacity the resource can provide.

DMM supports the proposal to prohibit demand response resources from taking fatigue outages on days when the ISO declares a Flex Alert, issues a Grid Warning, or the Governor's office issues an Emergency notice.

DMM's understands that the Energy Division's proposal would require demand response resources be available at least 3 days a week and all days with Flex Alerts, Grid Warnings, or Governor-Issued Emergency Notices, and the proposal will remove the ability for demand response resources to take fatigue outages on days with any of these designations.⁷

DMM supports increasing the availability of demand response resources on days with tight system conditions. While DMM acknowledges demand response resources may become fatigued after consecutive days of dispatch, these resources can still reflect this fatigue by bidding in at a lower capacity. Because demand response resources cannot take partial outages, this proposal could potentially increase the supply from demand response resources during peak conditions. Instead of taking the full resource on

⁶ DMM Report on Demand Response Issues and Performance, 2022, p. 17.

⁷ Tariff Section 40.8.1.13 states a resource must have the ability to be dispatched for at least three consecutive days. Demand response resources are able to take outages for fatigue after these three consecutive days.

outage, resources would have an incentive to bid in whatever capacity they have available.

DMM agrees that reliability demand response resources should not be dispatched before or instead of proxy demand response resources.

Reliability demand response resources may be dispatched before or instead of proxy demand response resources in at least two situations: (1) when long-start proxy demand response resources are not scheduled in the day-ahead market and are therefore not available in the real-time market, or (2) when proxy demand response bid prices exceed reliability demand response bid prices in the real-time market.

To address the issue of long-start resources, DMM has recommended the CAISO consider the removal of the exemption of long-start demand response resources in the residual unit commitment process (RUC). This would allow the market to make these resources available in the real-time if supply cleared in the day-ahead market falls short of operator-adjusted forecasted load.⁸

In the real-time market, proxy demand response bid prices can only exceed reliability demand response bid prices under rare situations when the CAISO is in an Energy Emergency Alert (EEA) 2 and the \$1,000/MWh bid cap is in place. This is because reliability demand response resources (beyond what is scheduled in the day-ahead market) can only be offered in the real-time market during EEA 2 situations. During most EEA 2 situations, the \$2,000/MWh bid cap is in place instead of the \$1,000/MWh bid cap.⁹ Under these conditions, real-time reliability demand response bids must be \$1,900/MWh or higher. However, proxy demand response bids may only bid over \$1,000/MWh if they submit a reference level change request and this request is

⁸ Making adjustments in RUC is one of the ways ISO market operators can procure additional capacity when there are concerns about supply shortages in tight conditions. See DMM's Q3 Report, p. 84-85. <http://www.caiso.com/Documents/2022-Third-Quarter-Report-Market-Issues-Performance-2022-12-14.pdf>

⁹ In 2022, there were 16 hours when the ISO was in an EEA 2. In only two of those hours, the real-time bid cap was \$1,000/MWh. The bid cap was \$2,000/MWh in the other 14 hours.

approved.¹⁰ Thus, in practice, the conditions for proxy demand response bids to exceed reliability demand response bids in the real-time market have been very limited.

Nevertheless, DMM believes it is reasonable to address this possibility with a \$949/MWh bid-cap for proxy demand response resources. DMM cautions against setting the proxy demand response bid cap too low since the marginal cost of these resources is unclear. In addition, because these resources are use-limited, an inefficiently low bid cap could lead to market dispatches in milder conditions that result in some proxy demand response capacity being fatigued during hours when market conditions are tighter.

II. Import Resource Adequacy

Energy Division's proposal that the load serving entity must be the scheduling coordinator for non-resource specific RA imports

Energy Division's Proposal 7 would require that the load serving entity must be the scheduling coordinator for non-resource specific resource adequacy imports.¹¹ Energy Division explains that this would make it easier for Commission staff to assess penalties on jurisdictional load serving entities that fail to meet the requirements for these resource adequacy imports.

DMM appreciates the importance of Commission staff being able to associate a single jurisdictional load serving entity with each non-resource specific RA import resource bidding into the CAISO market. However, requiring each load serving entity to be its own scheduling coordinator may create unnecessary costs on jurisdictional load serving entities. DMM suggests that the Energy Division and stakeholders consider alternatives that would be less costly but which could still allow CPUC staff to associate a single load serving entity with each import RA resource.

¹⁰ No proxy demand resources submitted a reference level change request to bid over \$1,000/MWh in 2022.

¹¹ Energy Division Proposal for Proceeding R.21-10-002, January 20, 2023, p. 37. <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M501/K407/501407493.PDF>

For example, the Commission could require that each non-resource specific RA import resource bidding into CAISO markets have a unique identifier for a single jurisdictional load serving entity directly embedded into its CAISO resource ID. Alternatively, the Commission could require that each load serving entity have its own scheduling coordinator ID that the third party scheduling coordinator could only use for imports under contract to the one jurisdictional load serving entity.

Energy Division’s request that the Commission consider replacing current requirement for non-specific imports to bid below \$0/MWh with an “energy must-flow requirement”

In its Proposal 7, the Energy Division also requests the Commission consider replacing the current requirement for non-resource specific RA imports to bid at or below \$0/MWh with an “energy must-flow requirement”.¹² The intent of this proposal is “to ensure that the energy contracts are not speculative and, thus, to ensure that the reliability of the grid is maintained”.¹³

To help DMM and other stakeholders assess this proposal, DMM asks that Energy Division provide more clarity on the details of what an “energy must-flow requirement” would entail. DMM’s understanding is that this would require the import RA to self-schedule into CAISO markets. It is not clear if Energy Division is also proposing to require non-source specific import RA contracts to have increased incentives for the supplier to actually deliver the energy when the import receives a market award from CAISO.

Replacing the requirement for import RA to bid at or below \$0/MWh with a requirement to self-schedule may not by itself significantly increase incentives for the supplier to reliably deliver the import RA energy when the import receives a CAISO market award. Under the current requirement for import RA to bid at or below \$0/MWh in CAISO’s day-ahead market, suppliers can expect RA import bids to receive a CAISO market award in

¹² Energy Division Proposal for Proceeding R.21-10-002, January 20, 2023, p. 37: <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M501/K407/501407493.PDF>

¹³ Ibid. p. 37.

most availability assessment hours. More importantly, suppliers can expect import bids to clear the CAISO day-ahead market during hours in which it may be difficult for the supplier to find and buy energy in bilateral electricity markets after CAISO's day-ahead market runs. This is because the clearing price at the supplier's CAISO day-ahead market import bid node should be significantly above \$0/MWh in hours when supply is scarce in bilateral electricity markets.

So, under current rules, suppliers know that RA imports will receive a CAISO market schedule under tight supply conditions. Therefore, these current rules already cause suppliers to weigh the cost of having reliable resources committed to supporting its import schedule into CAISO against the consequences of not actually tagging and delivering RA imports to the CAISO. DMM does not expect that replacing the current \$0/MWh bid requirement with a self-schedule requirement would increase incentives for suppliers to contract with a dedicated physical resource, or with a more reliable physical resource, to help ensure delivery of RA imports in tight conditions when the supplier may not be able to buy power from bilateral electricity markets.

It is not clear to DMM exactly how strongly current CPUC contract rules may incentivize suppliers of import RA to actually deliver imports to CAISO when an import receives a CAISO market schedule. For example, DMM's understanding is that Decision 05-10-042 clarified that by 2009, for an import contract to count as RA, it had to be an "Import Energy Product with operating reserves" and that it could not "be curtailed for economic reasons."¹⁴ Furthermore, that decision clarified that by 2009 "bilateral agreements that provide energy, capacity, or ancillary service products without reference to a specific unit or resource backing the obligation...should not count for purposes of RAR showings".¹⁵ This formulation of a must-flow requirement did not prevent some import

¹⁴ CPUC opinion on resource adequacy requirements, Decision 05-10-042 in Rulemaking 04-04-003, October 27, 2005, p. 67:
https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/50731.PDF

¹⁵ Ibid. pp. 59-60 and 104.

RA suppliers from relying on bilateral electricity spot market purchases to fulfill RA import schedules.

DMM appreciates the goal of reducing the potential for “speculative” energy contracts and incentivizing non-source specific import RA to contract with a resource or pool of resources committed to serving the CAISO balancing area in tight system conditions. However, DMM suggests it may be useful to have more transparent discussions and clarifications of how current CPUC rules create incentives for suppliers to tag and deliver import RA in tight conditions when the import has a CAISO schedule. This discussion should include the scenario of an “energy must-flow requirement” where all non-source specific import RA has to self-schedule into CAISO markets. It may be appropriate to consider these incentives and any potential adjustments to them when designing and evaluating more details of a potential “energy must-flow requirement.”

CalCCA’s proposal to allow non-specific imports to bid above \$0/MWh

As explained above, DMM believes a requirement for non-source specific import RA resources to bid at or below \$0/MWh can be as effective as a self-schedule requirement for incentivizing the supplier to contract with a physical resource to help ensure delivery during tight system conditions. Furthermore, DMM continues to support the CPUC requiring an import RA bid cap during availability assessment hours that is sufficiently low to incentivize the supplier to contract in advance for supply committed to deliver to CAISO.¹⁶ These CPUC rules have significantly reduced concerns that import RA capacity can receive capacity payments while providing no real benefits in terms of either system reliability or market competitiveness.

However, DMM believes an appropriately designed import RA bid cap above \$0/MWh such as that proposed by CalCCA could maintain similar incentives for physical resource procurement as a self-schedule or \$0/MWh bid requirement. CalCCA suggests a dynamic import RA bid cap set based on the approximate marginal cost of a typical gas plant each day. With this type of approach, suppliers would still expect to receive a

¹⁶ DMM comments on Track 1 Proposals in R.19-11-009, March 6, 2020, p 9-11:
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M328/K860/328860728.PDF>

CAISO import schedule except during hours when bilateral electricity spot market prices are relatively low, and would certainly expect to receive a CAISO schedule on days when conditions are so tight that they might not be able to buy power from bilateral electricity markets. Thus, DMM believes an appropriately low import RA bid cap could provide many of the same reliability benefits as the current \$0/MWh bid requirement or self-schedule requirement.

Meanwhile, increasing the import RA bid cap above \$0/MWh as suggested by CalCCA could provide the benefit of increasing the overall efficiency of CAISO market schedules. With this approach, suppliers of RA imports could be expected to bid at the lower of (1) marginal cost of the physical resource backing the import RA, (2) bilateral electricity spot market prices, or (3) the RA import bid cap. These RA imports would not clear the CAISO market in periods when CAISO market prices were less than these bid prices. This would allow more expensive resources that would have produced power outside of CAISO to support the import RA schedule to be displaced by a less expensive resource within CAISO. This increased efficiency could presumably be passed along to load serving entities through lower resource adequacy contract costs.

With this approach, it could be important to maintain a real-time must-offer obligation for RA imports, to ensure these imports are available when real-time market conditions are much different than in the day-ahead market.

In conclusion, DMM is not proposing a particular bid cap, and these comments should not be construed as support for any particular bid cap over \$0/MWh proposed by CalCCA.¹⁷ However, we believe there could be value in considering an import RA bid cap over \$0/MWh that is designed to be sufficiently low so that import RA suppliers can still expect to frequently receive CAISO import schedules.

¹⁷ See CalCCA's presentation at the R.21-10-002 Workshop on Proposals for Implementation Track Phase 3, February 8, 2023, p 104-110: <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/resource-adequacy-homepage/r21-10-002/r2110002-slide-deck-for-implementation-track-phase-3.pdf>

Energy Division proposal on granting resource adequacy capacity based on available transfer capacity or maximum import capability

In Proposal 8, the Energy Division proposes that if a CPUC jurisdictional entity is able to acquire Available Transmission Capacity (ATC), the entity be allowed to pair the ATC with RA imports to meet RA requirements.¹⁸ This proposal seems reasonable. CAISO proposes to determine ATC as transmission capacity on each intertie that is not needed to meet native CAISO load. If each CAISO load serving entity can obtain the maximum import capability (MIC) that it needs to support its import RA contracts, CAISO LSEs should not attempt to purchase ATC. However, if CAISO has either not reserved sufficient transmission to meet native CAISO load needs or the MIC design somehow inhibits a CAISO LSE from procuring the MIC it needs, a CAISO LSE may need to purchase ATC in order to ensure its import RA can be delivered into CAISO. ATC should therefore be able to serve as a replacement for MIC in meeting import RA requirements.

Energy Division proposes that in the alternate, the Commission could consider removing the MIC requirement for RA imports.¹⁹ DMM cautions against removing the MIC requirement for RA imports without much more careful consideration of the potential benefits that a properly designed maximum import capability and allocation process could provide. DMM understands that CAISO's MIC design may undervalue the amount of imports that can be delivered to CAISO in critical conditions, and the MIC allocation design may prevent LSEs from getting MIC at the interties at which they need it. DMM continues to recommend that CAISO consider important improvements to its MIC design.²⁰ However, MIC plays an important role in limiting import RA to a quantity that the transmission system outside of CAISO could feasibly deliver to CAISO's border. Removing the MIC requirement for import RA could necessitate the development of

¹⁸ Energy Division Proposal for Proceeding R.21-10-002, January 20, 2023, p. 38: <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M501/K407/501407493.PDF>

¹⁹ Ibid. p. 38.

²⁰ DMM comments to CAISO on MIC Enhancements Revised Straw Proposal, August 25th, 2021: <http://www.caiso.com/Documents/DMM-Comments-on-Maximum-Import-Capability-Enhancements-Revised-Straw-Proposal-Aug-25-2021.pdf>

other rules to help ensure the CAISO BA is not counting on more import RA than can get to CAISO's borders. Therefore, DMM cautions against removing the MIC requirement.

III. Conclusion

DMM appreciates the opportunity to provide comments on Phase 3 of the Implementation Track.

Respectfully submitted

By: /s/ Ryan Kurlinski

Eric Hildebrandt, Ph.D.
Executive Director, Market Monitoring
Ryan Kurlinski
Sr. Manager, Market Monitoring
Nicole Mundt, Ph.D.
Market Monitor
Ben Dawson, Ph.D.
Market Monitor
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: 916-608-7150
Email: rkurlinski@caiso.com

Dated: February 24, 2023