Memorandum

To: ISO Board of Governors

From: Eric Hildebrandt, Executive Director, Market Monitoring

Date: March 17, 2021

Re: **Department of Market Monitoring update**

This memorandum does not require Board action.

EXECUTIVE SUMMARY

This memo provides comments by the Department of Market Monitoring (DMM) on two proposals being presented to the Board for approval.

- Market enhancements for summer 2021
- Resource adequacy enhancements phase 1

DMM supports both of these proposals, which represent significant improvements in the current market design.

MARKET ENHANCEMENTS FOR SUMMER 2021

DMM appreciates the ISO's efforts to facilitate as much discussion as possible given the accelerated timelines needed to develop enhancements that can be implemented in summer 2021. DMM submitted detailed comments as part of this stakeholder process.[1]

EIM resource sufficiency tests

DMM supports the proposed changes to the EIM capacity test. These changes will make the capacity test more accurate and should reduce the number of instances in which the CAISO balancing area passes the capacity test when insufficient capacity is actually available. DMM understands that due to the complexity of these issues and the compressed timeframe for the summer readiness initiative, the ISO is constrained to making limited changes to the capacity test at this time.

DMM supports the ISO and stakeholders exploring broader changes to the design that could more effectively deter balancing areas from leaning on each other while still enabling the

[1] *Comments on market enhancements for summer 2021,* DMM, February 26, 2021. http://www.caiso.com/Documents/DMMComments-on-Market-Enhancements-for-Summer-2021-Readiness-Draft-Final-Proposal-Feb26-2021.pdf

efficiency of inter-balancing area trades. DMM supports the ISO starting a separate initiative as soon as feasible to consider more comprehensive changes to the EIM resource sufficiency tests.

Import and export market incentives during tight system conditions

DMM supports the ISO proposal to compensate hourly block import bids clearing the hour ahead scheduling process at the maximum of each resource's bid or fifteen-minute market price during very tight system conditions. This enhanced compensation should effectively address market participant concerns that real-time hourly block imports will not offer power to the ISO during tight system conditions because of the risk that market revenues will not meet their offer price.

In practice, hourly block schedules tended to receive higher payments at fifteen-minute market prices than they would have if they had been paid the hour-ahead scheduling process prices over the third quarter of last year. However, there is some risk that 15-minute prices can be lower than an import resource's accepted bid price in the hourly process.

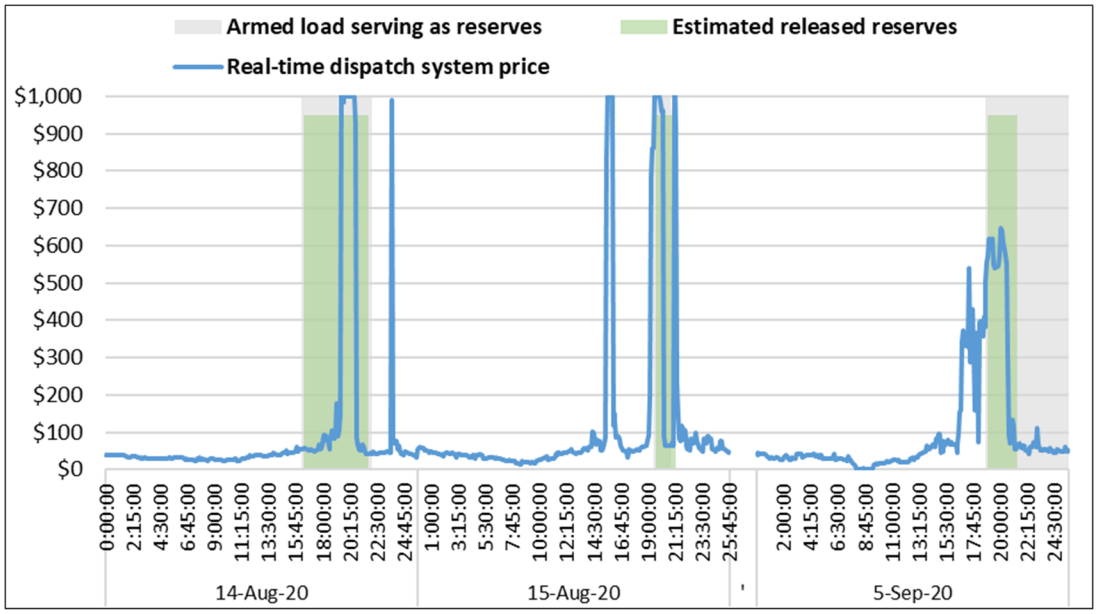
Since the proposal removes the risk that imports could get paid below their offer price in any given hour during tight system conditions, the ISO proposal should provide sufficient protection to incent hourly block imports to offer to the ISO during these tight system conditions. Ensuring hourly block imports receive at least their offer price on an hourly basis under very tight system conditions avoids issues with netting bid cost recovery over the day. This settlement is also similar to how manually dispatched imports are settled.

Short-term scarcity pricing enhancements

Under the ISO's proposal, when the ISO arms load (i.e. prepares to shed load in a controlled manner if needed) to serve as operating reserves and then releases generation that was serving as reserves into the energy supply stack, the ISO will set the bid price of the reserves added to the energy supply stack at the energy bid cap. DMM supports this proposal as a way of helping to ensure that prices are relatively high when system conditions are extremely tight, such that controlled dropping of load needs to be relied upon for operating reserve. This proposal is an extension of how contingency only reserves are priced when these resources are called upon to provide energy.

Figure 1 shows DMM's estimate of the periods where load was armed as reserves and generation capacity was released into the market. DMM estimates that the proposed policy would have been in effect for over eight hours over these three days.

Figure 1. Arming load serving as reserves and released generation reserves August and September, 2020



Reliability demand response resource dispatch and real-time price impacts

DMM supports all of the ISO's proposed reliability demand response resource modeling enhancements. The ISO proposes to allow reliability demand response resources to register as 60-minute or 15-minute dispatchable, rather than just 5-minute dispatchable. The ISO also proposes to allow the hour-ahead and 15-minute markets to economically dispatch reliability demand response resources, and to include manual and economic reliability demand response resource dispatches in the hour-ahead and 15-minute market solutions.

During periods when reliability demand response resources are deployed, these enhancements should increase the efficiency of the real-time markets' solutions. The proposal to add the expected load curtailment from reliability demand response resource dispatches onto the load forecast in each market should help to prevent the dispatches from inappropriately suppressing market prices.

System market power mitigation

The ISO no longer plans to move forward with system market power mitigation for summer 2021. Given this decision, DMM recommends that for summer 2021, the ISO develop a highly simplified form of system market power mitigation that could be implemented quickly through emergency filing if needed.

Such an approach could rely on a greatly simplified trigger to test for and establish the presence of uncompetitive system conditions (e.g. based on net load level or forecasted supply/demand conditions). Under these conditions, mitigation could be implemented by inserting an estimate of marginal cost for all ISO resources. For example, this approach

could utilize the default energy bids currently used in local market power mitigation plus some configurable margin or adder.

This type of approach would not be intended as a long-term approach to system market power mitigation, but would provide a valuable tool for the ISO in case significant system market power conditions materialize this summer.

RESOURCE ADEQUACY ENHANCEMENTS PHASE 1

Planned outage process enhancements

The ISO proposes to require all resource adequacy resources taking planned outages to provide substitute capacity starting in summer 2021. DMM is not certain that the potential benefits of the proposal will outweigh the potential risks and costs the proposal could create. However, given that the ISO and CPUC staff believe that this interim policy will be beneficial overall for reliability, DMM will defer to their judgment and supports this proposal.

On one hand, the proposal may create stronger incentives for resource owners that are planning maintenance far in advance of the outage date to try to procure substitute capacity farther in advance. On the other hand, DMM has some concern that the proposal may increase incentives for suppliers to delay reporting intended maintenance outages to the ISO in the planned outage timeframe in situations where suppliers cannot find reasonably priced substitute capacity. DMM believes the proposal could also increase incentives for suppliers to withhold excess capacity from bilateral markets in order to reserve it for their own unforeseen maintenance needs. Therefore, the proposal could further tighten bilateral resource adequacy markets, making it more difficult for suppliers to find reasonably priced substitute capacity for important maintenance outages.

DMM looks forward to working with the ISO and stakeholders on a longer term proposal under the resource adequacy enhancements phase 2 initiative which could address these issues.

Minimum state of charge proposal for storage resources

DMM does not oppose the ISO's revised proposal for utilizing a minimum state of charge constraint for energy storage resources. The ISO has pared this proposal down significantly, so that the functionality would only be used on days with residual unit commitment infeasibilities. On these limited days, operators would also have the option to eliminate the minimum stage of charge requirements in real-time. DMM's understanding is that in the absence of this proposal, operators would still have the authority to effectuate the exact same outcomes through less transparent manual dispatches.

DMM continues to recommend that the ISO continue to seek ways to improve their processes for issuing exceptional dispatches to storage resources for this summer and to address shortcomings in current processes that DMM identified in prior comments on the

resource adequacy enhancements initiative.[2]

Backstop procurement for energy deficiencies in local areas

DMM supports the ISO expanding its backstop capacity procurement mechanism authority to ensure that local capacity resources can meet energy needs in local areas and sub-areas. While DMM supports the ISO extending its backstop procurement authority under this proposal, DMM suggests that the ISO continue to work on developing new cost allocation rules for capacity procurement mechanism designations issued to address energy deficiencies.

[2] *Comments on resource adequacy enhancements draft final proposal – phase 1*, DMM, January 21, 2021, pp. 8-10: http://www.caiso.com/Documents/DMMCommentsonResourceAdequacyEnhancementsDraftFinalProposalPhase1-Jan212021.pdf