Memorandum

To: ISO Board of Governors

From: Eric Hildebrandt, Executive Director, Market Monitoring

Date: November 12, 2020

Re: **Department of Market Monitoring Comments**

This memorandum does not require Board action.

EXECUTIVE SUMMARY

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

- Hybrid resources
- Pseudo-ties of shared resources
- Variable operations and maintenance cost review

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

Hybrid resources

DMM supports the ISO's Hybrid Resources Final Proposal. DMM views the ISO's proposed hybrid resources model as a reasonable initial framework to incorporate new resource technologies that combine storage with generation. DMM understands that the primary purpose for this resource modeling option is to ensure that solar and wind resources continue to be eligible for remaining investment tax credits. A hybrid resource model could also improve operational efficiencies in cases when there are significant interactions between different resources sited at the same location which cannot be efficiently captured through the co-located resources modeling option.

As noted in DMM's comments throughout the stakeholder process, DMM believes hybrid resources should be subject to local market power mitigation.[1] The ISO has acknowledged the potential for hybrid resources to exercise market power or otherwise play a role in setting market prices under non-competitive conditions. All units choosing

[1] *Comments on Hybrid Resources Final Proposal*, Department of Market Monitoring, October 30, 2020. http://www.caiso.com/Documents/DMMComments-HybridResourcesPhase2FinalProposal-Oct302020.pdf

the co-located resources model — which are similarly situated to units choosing the hybrid model in the ISO market — will be subject to local market power mitigation. The ISO has committed to developing local market power mitigation measures for hybrid model resources in the Hybrid Resources Evolution initiative in 2021.[2]

DMM supports the requirements for hybrid model resource operators to submit all data required to fully assess the operational capabilities of the resource, including meteorological and forecast data, storage component state-of-charge data, and the high sustainable limit. These data will provide maximum transparency to dynamic limits submitted by scheduling coordinators. DMM recommends that the ISO consider using these data to automate dynamic limits for hybrid model resources as part of the planned Hybrid Resources Evolution initiative.

Pseudo-ties of shared resources

This initiative proposes to allow the entity or entities controlling a resource to model a single resource as if it is actually two or more separate resources. The proposal would allow each separately modeled "share" of the single physical resource to be modeled as being in a different balancing authority area (BAA) than the other shares of the same resource. Allowing different types of new resource sharing arrangements is expected to encourage greater participation in Western EIM and ISO markets.

During the stakeholder process, DMM expressed concerns and recommendations related to the potential for a resource owner to inflate their bid cost recovery payments or to create inequitable allocation of bid cost recovery between balancing areas.[3] However, the final proposal effectively addresses these concerns. Therefore, DMM supports the final proposal.

Under the final proposal, the market schedules and bid cost recovery that each participant (or share of a resource) receives will be determined by the details of how each share will split the single physical resource's telemetry, metered output, minimum load level, minimum load costs, start-up costs and maximum output level. This discretion will surely be valuable for allowing an owner(s) to work with the ISO on modeling complex arrangements to share non-standard resources between balancing areas. Allowing limited or no discretion in how resource attributes will be shared could unnecessarily impede participation in Western EIM and ISO markets.

However, this discretion also makes it almost impossible to predict all potential sharing and modeling arrangements that could be used to inflate bid cost recovery payments or inequitably allocate bid cost recovery to one participant or balancing area rather than

[2] *2021 Three-Year Policy Initiative Roadmap and Annual Plan*, pg. 18, Market Infrastructure and Policy, California ISO. September 30, 2020. http://www.caiso.com/Documents/2021DraftPolicyInitiativesRoadmap.pdf

[3] *Comments on Pseudo-Ties of Shared Resources Final Proposal and Revised Tariff Language*, Department of Market Monitoring, September 22, 2020 http://www.caiso.com/Documents/DMMCommentsonPseudo-TiesofSharedResourcesFinalProposalandDraftTariffLanguage-Sep222020.pdf

the other. There are likely to be some strategies that could be employed in combination with sharing protocols to inflate bid cost recovery or to inequitably allocate bid cost recovery amongst balancing areas or between different entities within one balancing area.

DMM understands that eliminating discretion and flexibility to develop new sharing protocols at this time could inefficiently impede EIM and ISO market participation. DMM expects that existing bid cost recovery mitigation measures, such as those designed in 2012, should be applied and effectively mitigate many potential bid cost recovery issues.[4] However, even without any intent to circumvent mitigation measures or game bid cost recovery payments, new sharing arrangements could result in inequitable bid cost recovery payments to some participants which must ultimately be allocated to other entities or balancing areas. These inequities may not be apparent until after these new sharing arrangements are fully implemented.

To address this scenario, the ISO added the following important provision to the final proposal:

> CAISO may revoke or modify the shared pseudo-tie arrangement if there is evidence of owner(s) using the shared resource allocation protocol or SQMD plan to exploit the bid-cost recovery mechanism to benefit the resource owner(s) or to inequitably allocate bid cost recovery between BAAs.

DMM believes this provision creates a reasonable mechanism for remedying problematic sharing protocols while providing the flexibility that the ISO and market participants may need to model complex sharing arrangements. Therefore, DMM supports the ISO's final proposal.

Variable Operations and Maintenance Cost Review

DMM supports the ISO's proposal as an improvement in rules for reviewing and determining variable operating costs ($/MWh) and maintenance costs ($/MWh, $/start or $/run hour), which can be included in cost-based bids and in commitment cost bid caps for startup and minimum load bid costs. The ISO's proposal includes two key enhancements in market rules and processes.

- First, the proposal more clearly defines which types of operating and maintenance costs can be included in cost-based bids and the specific bid components in which these cost can be included (e.g. variable O&M, startup or minimum load bid costs).

- Second, the proposal establishes default values for major maintenance costs which can be included in startup and minimum load bids for different technology types.

[4] *Bid Cost Recovery Mitigation Measures Third Revised Draft Final Proposal*, CAISO, November 26, 2012: http://www.caiso.com/Documents/ThirdRevisedDraftFinalProposal_BidCostRecoveryMitigationMeasuresNov26_2012.pdf

Currently, generators must submit cost data for major maintenance costs that can be included in startup and minimum load bids on a case-by-case basis for each generating unit. DMM is responsible for reviewing this cost information and working with participants to develop final major maintenance cost adders, which must then be approved by the ISO. This is referred to as the *negotiated option* for establishing major maintenance cost adders.

The number of resources and amount of capacity which currently have major maintenance adders which must be determined and updated on a unit-by-unit basis includes the following:

- In the ISO, 127 gas-fired resources with over 25 GW of capacity (or 78 percent of total gas-fired capacity) have customized major maintenance adders under the negotiated option.

- In the energy imbalance market, more than 100 resources with over 20 GW of capacity (or 81 percent of gas-fired capacity) have customized major maintenance adders.

- Over 30 hydro resources in the energy imbalance market with over 5.3 GW of capacity (or about 63 percent of total hydro capacity) have major maintenance adders under the negotiated option.

The new default values for major maintenance cost adders will reduce the administrative burden on participants, DMM and the ISO by providing a much more administratively efficient option and process for these participants.

The ISO worked closely with stakeholders on this issue though an extended stakeholder process. DMM believes the ISO's final proposal is highly responsive to stakeholder input, while also reflecting extensive analysis of actual cost data available to the ISO. To the extent some participants believe the final default values being proposed are not sufficient to reflect the variable or maintenance costs of their resources, these participants can continue to use the current process for developing cost-based values for each unit on a case-by-case basis.

DMM expects that many – if not most – resources will opt to use the new default values for major maintenance costs that can be included in start-up and minimum load bids. However, in the event that a large portion of resources do not choose to utilize the new default values and can justify costs in excess of these default values, the initial default values can be re-examined and refined as appropriate. DMM will track and report the portion of resources selecting the new default values, and will recommend any changes to the ISO that DMM believes are warranted after new values have been implemented.