

Comments on Transmission Service and Market Scheduling Priorities Initiative Phase 1 Draft Final Proposal

Department of Market Monitoring

January 11, 2022

Summary

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *Transmission Service and Market Scheduling Priorities Initiative – Phase 1 Draft Final Proposal*.¹

DMM supports the ISO's proposal to extend current interim wheeling through scheduling priorities to prevent reversion to wheeling through scheduling priorities in place before summer 2021. However, we note that the interim scheduling priorities implemented in summer 2021 may still leave the CAISO balancing authority area (BAA) exposed to reliability risk should the quantity of high priority wheeling through transactions exceed the amount of available transfer capacity.

DMM also supports the proposed technological enhancements to the SIBR system to improve transparency of available non-RA capacity on resources designated to support PT exports, the proposed tariff changes to clarify the requirements for PT exports supported by variable energy resources (VERs), and the ISO's proposal to maintain current e-tagging requirements.

On the issue of underproduction by resources supporting PT exports, DMM believes the CAISO BAA could reduce reliability risk associated with extreme system conditions by adopting a standard similar to that of other BAAs. As DMM understands, such a standard would not apply as standard practice, or when the resource was simply under-producing due to economic dispatch. However, this standard would reserve the right for CAISO to curtail PT exports if necessary as a last resort to avoid load curtailment, only when the designated supporting resource is physically incapable of supporting the associated real-time PT export.

For the long-term transmission reservation framework that is the focus of the second phase of this initiative, DMM continues to support an approach that ensures consistent access to high priority transmission on the CAISO grid to meet the needs of CAISO native load, as well as the needs of non-CAISO load serving entities who may depend on CAISO transmission. DMM supports the ISO's proposed approach to developing this framework which considers these elements, as well as additional important details such as congestion revenue rights (CRRs), details of a rate structure, and specific transmission products to be offered.

¹ *Transmission Service and Market Scheduling Priorities – Phase 1 Draft Final Proposal*, California ISO, December 10, 2021: <http://www.caiso.com/InitiativeDocuments/DraftFinalProposal-TransmissionService-MarketSchedulingPriorities.pdf>

Comments

I. Proposal – market scheduling priorities

A. Wheeling through scheduling priorities

DMM supports the ISO’s proposal to extend interim wheeling through scheduling priorities implemented in summer 2021

DMM supports the ISO’s proposal to extend current wheeling through scheduling priorities implemented in summer 2021 to prevent reversion to wheeling through scheduling priorities in place before 2021. Extension of current scheduling priorities to 2024 appears reasonable, given the significant effort involved in developing and implementing a new transmission reservation framework, and to provide some regulatory certainty over the next couple of years.

Although the scheduling priorities established in summer 2021 for PT wheeling through transactions are an improvement over previous scheduling priorities, these scheduling priorities still leave the CAISO BAA exposed to reliability risk. Current scheduling priorities for PT wheeling through transactions are determined without considering how much – if any - excess transmission may be available beyond that needed to meet the needs of CAISO load. This can lead to allocation of transmission to PT wheel transactions where there is potentially no excess transmission to allocate beyond that needed to meet CAISO load under tight supply conditions. DMM’s understanding is that other balancing areas in the west will provide wheel transactions firm rights only to transmission that has been determined to be in excess of what may be needed to meet the balancing area’s native load and other existing firm uses.

DMM recognizes that there could be significant complexities to implementing even a simplified transmission framework by summer 2022. However, DMM notes that by forgoing the development of a simplified near-term process that clearly establishes the amount of excess transmission that is available to support PT wheel transactions, the CAISO BAA faces ongoing reliability risk associated with potential over-allocation of CAISO transmission.

B. High priority export enhancements

DMM supports the proposed Scheduling Infrastructure and Business Rules (SIBR) system enhancements to improve transparency of instantaneous non-RA capacity available to support PT exports, but further enhancements are warranted

The ISO proposes two technological enhancements to the SIBR system to improve transparency of instantaneous non-RA capacity available to support PT exports:

- 1) Provide the scheduling coordinator for a designated resource with the ability to view the instantaneous non-RA capacity of the resource, and

- 2) Provide scheduling coordinators submitting PT export schedules with a notification warning when they submit PT export schedules that exceed the non-RA capacity of the supporting resource.

DMM supports these proposed enhancements as transparency enhancements that should further promote submission of PT export schedules that align with the instantaneous non-RA generating capability of the designated resources. The CAISO tariff requires that scheduling coordinators, for the designated supporting resource and the PT export, may only designate a resource, or allow the resource to be designated, if the resource is expected to have sufficient available capacity to support the export throughout the entire hour. The ISO's proposed SIBR enhancements can help ensure full information is available to all involved scheduling coordinators when forming expectations of designated resource availability.

In previous comments, DMM noted that the increased visibility may be most useful to account for partial capacity de-rates or updated VER forecasts affecting real-time non-RA capacity availability.² However, the ISO states the following in a footnote of the Draft Final Proposal:

However, consistent with current functionality, SIBR does not use outage information to calculate non-RA capacity, to the extent the resource is under a partial outage. If the resource is under an outage, the Scheduling Coordinator for the resource should submit an energy bid which is consistent with the availability of the resource, so that SIBR can derive the non-RA capacity for the resource.³

Although the SIBR system does not directly consume outage information to calculate non-RA capacity, DMM understands that outage and de-rate information is consumed by the Customer Interface for Resource Adequacy (CIRA) system. The CIRA system identifies the allocation of de-rates across RA and non-RA capacity, in accordance with rules established in the Market Enhancements for Summer 2021 Readiness initiative. DMM requests that the ISO clarify the role that available RA and non-RA capacity, as calculated in CIRA, play in determining non-RA available export capacity in SIBR.

If non-RA capacity calculated in CIRA considering de-rate and outage information is accurately reflected in SIBR non-RA capacity, the ISO's proposed transparency enhancements would help to communicate more accurate instantaneous availability of non-RA capacity that could support PT exports.

If non-RA capacity calculated in CIRA considering de-rate and outage information is not reflected in SIBR – as indicated in the ISO's footnote cited above – and resource de-rate and outage information is not otherwise considered in the SIBR calculation of non-RA available

² *Comments on External Load Forward Scheduling Rights Initiative*, Department of Market Monitoring, September 30, 2021: <http://www.caiso.com/Documents/DMM-Comments-on-External-Load-Forward-Scheduling-Rights-Initiative-Issue-Paper-Sep-30-2021.pdf>

³ Phase 1 Draft Final Proposal, pg. 14, footnote 13

export capacity, DMM suggests the ISO consider a SIBR enhancement that would allow outage and de-rate information to be reflected in the SIBR calculation of non-RA eligible export capacity. This enhancement would improve the effectiveness of the ISO's proposed transparency enhancements for scheduling coordinators submitting PT exports. This would also allow SIBR validation rules to use outage data directly to deprioritize PT export schedules to LPT when the supporting resource is de-rated and does not have sufficient non-RA capacity available to support the PT export rather than relying on submitted bids to reflect de-rated capacity used to calculate non-RA eligible export capacity.

Should the ISO elect not to incorporate de-rate and outage information in the calculation of non-RA eligible export capacity and rely only on bid submission of the supporting resource to reflect de-rates in the calculation of non-RA capacity, this may leave the ISO exposed to reliability risk under extreme system conditions. If a resource supporting a PT export is de-rated but does not accurately reflect its availability in submitted bids, and there is no SIBR validation to prevent the de-rated capacity from supporting a PT export, DMM views this scenario as one where the ISO could benefit from reserving the right to curtail such PT exports in emergency conditions, if needed, to avoid shedding CAISO load.

C. Underproduction of resources supporting PT exports

Rule changes for VERs supporting PT exports will significantly limit the extent to which outdated and potentially inaccurate VER forecasts can support real-time PT export schedules

The ISO proposes tariff changes to clarify the requirements for PT exports supported by variable energy resources (VERs). The proposed changes state that if the forecasted output of a VER supporting a PT export changes prior to real-time market close such that the VER can no longer support the initial PT export schedule quantity, the scheduling coordinator of the PT export must update the PT export schedule to an amount the VER can support based on the most recent forecast. DMM supports this change as it addresses a shortcoming in existing tariff language that allows an outdated and potentially inaccurate VER forecast at the real-time market bid submission deadline to support real-time PT export schedules.

The ISO's proposed changes limit real-time PT exports supported by VERs to the quantity of the most recent real-time VER output forecast available before real-time bids must be finalized, instead of allowing a PT export real-time self-schedule submitted hours or a day in advance to be supported by a VER forecast available when the PT export schedule was submitted.⁴

Although some forecast error will persist between the time real-time bids are submitted and the real-time operating interval, the last available VER forecast before real-time bids must be

⁴ Consistent with current tariff rules, for a given hour, the PT export schedule is limited to the lowest of the 15-minute VER forecasts within the hour.

finalized should be a much closer representation of the actual VER output capability in real-time than a VER forecast that is hours or a day old. This enhancement will reduce the risk that the ISO may support significant quantities of PT export schedules with CAISO RA capacity under emergency conditions when the supporting VER resources are only able to produce quantities significantly less than their accepted real-time PT export schedules.

CAISO may realize reliability benefits similar to other BAAs by reserving the right to curtail PT exports when the designated resource is physically unavailable to support the export

In the Phase 1 Draft Final Proposal, the ISO also addresses the subject of underproduction by resources supporting PT exports. The ISO states that it declines to adopt a proposal to reduce PT exports before CAISO load under extreme system conditions when the designated resource is under-producing.

i. Underproduction is different than being physically unavailable

DMM agrees with the ISO that it would be inappropriate to reduce PT export schedules purely on the basis that the supporting resource is producing less than the PT export schedule. In a market environment such as the CAISO, generation resources are dispatched economically. While a resource designated to support a PT export may be fully available and have bids in the market, the resource may not be the most economic option for dispatch in a given interval, and therefore may have a market schedule and corresponding output below the level of the associated PT export.

While it may not be appropriate for the ISO to reduce PT exports when the designated supporting resource under-produces due solely to economic market dispatch instructions, underproduction in this scenario is different than underproduction that occurs because the designated resource is physically incapable of producing up to the quantity of the PT export.

In earlier comments on the External Load Forward Scheduling Rights Initiative Issue Paper, DMM recommended that the ISO establish provisions that would allow curtailment of PT exports before CAISO load when availability or production capability of the designated supporting resource is observed to be less than the quantity of the associated PT export.⁵ This recommendation was not to apply as standard practice, but to be reserved for the most extreme system conditions as a measure to avoid dropping CAISO load when capacity designated to support a PT export is physically unavailable.

⁵ *Comments on External Load Forward Scheduling Rights Initiative Issue Paper*, Department of Market Monitoring, September 30, 2021: <http://www.caiso.com/Documents/DMM-Comments-on-External-Load-Forward-Scheduling-Rights-Initiative-Issue-Paper-Sep-30-2021.pdf>

DMM appreciates that in the case of VER resources, the risk of VER production capability being significantly below the accepted real-time PT export schedule is substantially reduced by the ISO's proposed changes that require PT export schedules to be updated to reflect the most recent VER forecast before the close of the real-time market. For a variety of reasons however, situations may continue to occur such that a generating resource supporting PT exports is ultimately physically unable to generate at a level that would support associated PT exports.⁶ These are the situations in which DMM recommended the ISO reserve the right to curtail the PT export schedule under the most extreme system conditions, where the only alternative is to curtail CAISO load.

ii. Exports are supported by imbalance energy and reserves under normal operating conditions

DMM understands that it is the operating practice of other BAAs to provide imbalance energy service to transmission customers, as prescribed by their respective open access transmission tariff (OATT), and to support export schedules for a period of time from BAA contingency reserves to cover real-time forced outages of generating resources associated with export schedules. These practices are aligned with the practices of CAISO, which supports all PT and LPT export schedules in a similar manner under normal operating conditions.

The circumstances under which it may be appropriate to curtail PT export schedules associated with unavailable designated supporting capacity are not normal operating conditions. These are among the most extreme system conditions, where available energy supply is very tight and contingency reserves are being met by arming load. In these most extreme conditions, relying on contingency reserves to support an export schedule backed by an unavailable designated resource has potential to result in shedding CAISO load.

iii. Other BAAs appear to reserve the right to curtail exports backed by generation that is physically unavailable, even if not standard practice to do so; CAISO should adopt a similar standard to other BAAs

DMM understands that other BAAs in the west may not, as standard practice, curtail exports of transmission customers, even when the supporting generation resource is unavailable to produce at the level of the scheduled export. However, DMM also understands that the OATTs and/or operating agreements of other BAAs make exports of transmission customers in those BAAs *subject to* curtailment under these conditions. This provision appears to reserve the right for the BAA to curtail the export in emergency conditions to avoid shedding native load when the supporting generator is unavailable, imbalance energy is unavailable to continue to supporting the export, and operating reserves have been exhausted.

⁶ For example: significant VER forecast error, errors or inaccuracies in generation outage reporting, or communication challenges between counterparties may result in a designated resource being physically unavailable to produce at the level of the PT export schedule.

DMM believes that the CAISO BAA could reduce reliability risk associated with extreme system conditions by adopting a standard similar to that of other BAAs. Such a standard, even if not common practice, would allow CAISO to curtail PT exports if necessary as a last resort to avoid load curtailment only when the designated supporting resource is physically incapable of supporting the associated real-time PT export.

iv. Enhanced notification for resources supporting PT exports could provide further assurance that PT export schedules align with the latest expected availability of the designated resource

DMM appreciates the ISO's clarification of current notification practices, that scheduling coordinators of designated resources receive notification when their resource is designated to support a PT export. As the ISO notes, upon notification that the resource has been designated to support a PT export, the scheduling coordinator of the resource is required to notify the ISO if it does not have a reasonable expectation to be available to support the PT export. This initial notification by the ISO, and the required notification by the scheduling coordinator if unavailable, is an important step toward ensuring that the designated resource will be available as expected.⁷

Should the ISO automatically notify scheduling coordinators of designated resources throughout the operating day until real-time bids are finalized (e.g., hourly) that their resource continues to be designated for a PT export, the requirement with each notification update to inform the ISO, if expected to be unavailable, could provide further assurance that PT export schedules align with the latest expected availability of the designated resource.

D. Curtailment timing and tagging requirements

DMM supports maintaining current e-tagging requirements

DMM supports the ISO's proposal to maintain current e-tagging requirements. As noted by the ISO in the External Load Forward Scheduling Rights Initiative Issue Paper, requiring day-ahead e-tags for PT wheels and RA import transactions has implications beyond the scope of this initiative, particularly on the RA program and RA imports.⁸

In addition to the concerns stated by the ISO in the Issue Paper, requiring day-ahead e-tags for PT wheel and RA import transactions to have higher curtailment priority than resources without day-ahead e-tags may have reliability implications for the CAISO BAA. Priorities established on the basis of day-ahead e-tags could lead to PT wheel transactions displacing CAISO imports without a day-ahead e-tag that may be needed to serve CAISO load. These potential impacts

⁷ CAISO tariff section 30.5.1(aa)

⁸ *External Load Forward Scheduling Rights Initiative Issue Paper*, California ISO, August 31, 2021, p 20:
<http://www.caiso.com/InitiativeDocuments/IssuePaper-ExternalLoadForwardSchedulingRightsProcess.pdf>

would be greatest on days when CAISO most needs imports, which may align with days that PT wheel volume is at peak levels.

Finally, a day-ahead tagging requirement could disadvantage scheduling coordinators who do not have consistent access to transmission on a day-ahead basis (e.g., through long-term firm service) between the generation source and CAISO. This requirement could provide a substantial competitive benefit to those entities who control large amounts of generation and long-term firm transmission service linking the generation to CAISO.

II. Phase 2: Long-Term Framework for Establishing Scheduling Priorities

A. Considerations of a transmission reservation process

DMM supports the ISO's proposed approach to developing a long-term framework for establishing scheduling priorities

DMM continues to support an approach to CAISO transmission access that ensures consistent access to high priority transmission on the CAISO grid to meet the needs of CAISO native load, as well as the needs of non-CAISO load serving entities who may depend on CAISO transmission.

DMM suggests several market design changes as important elements to a long term transmission access framework:

- Create a transmission study process that occurs with appropriate frequency to evaluate requests for short and long-term access to high-priority transmission on the CAISO grid, as well as to facilitate an upgrade process for entities seeking long-term access where there is insufficient available transfer capacity (ATC).
- Explicitly account for the needs of CAISO native load and revise the CAISO tariff to allow for a Capacity Benefit Margin (CBM) greater than zero.
- Define specific transmission products and develop a compensation framework for both short-term and long-term high priority transmission service reservations.

The Draft Final Proposal outlines an approach that considers all of these elements, as well as additional details such as congestion revenue rights (CRRs), details of rate structure, and the transition to a new framework.

Through stakeholder working group 1, the ISO and stakeholders discussed ATC calculation practices by BAAs around the west. This discussion brought to light a range of practices and assumptions employed to calculate ATC, and highlighted that the ISO will need to carefully consider all assumptions on load forecasts and other ATC inputs while accounting for CAISO load needs. The specific components to include in an ATC calculation, and how those

components will be calculated, will be highly dependent on these assumptions. Very conservative assumptions on one part of the ATC calculation may reduce need to include highly conservative assumptions on a different component of the calculation.

DMM supports the ISO's direction in considering a transmission reservation framework that appropriately accounts for all of the stated elements. DMM also supports an approach where transmission reservation priority on one system is independent of scheduling priority held on a neighboring system, analogous to the rules of other BAAs operating under an OATT framework. The direction of the ISO's approach appears likely to lead to a robust framework that would be consistent with open access principles, and aligned with the Federal Energy Regulatory Commission (FERC) approved practices of other BAAs and several other ISO/RTO markets.⁹

⁹ *External Load Forward Scheduling Rights Initiative Issue Paper* - Section 5.3, California ISO, August 31, 2021: <http://www.caiso.com/InitiativeDocuments/IssuePaper-ExternalLoadForwardSchedulingRightsProcess.pdf>