

**Comments on Market Enhancements for Summer 2021 Readiness
Stakeholder Workshops
January 12-13, 2021**

Department of Market Monitoring

January 21, 2021

Summary

DMM appreciates the opportunity to comment on the ISO's Stakeholder Workshops regarding *Market Enhancements for Summer 2021 Readiness*.¹ These workshops provided extensive discussion on the subjects of export and load prioritization and EIM resource sufficiency evaluation tests. DMM supports the prioritization placed on the discussion and consideration of these topics by the ISO and stakeholders. DMM offers the comments below in response to the presentations and stakeholder discussion in the workshops on January 12 -13, 2021.

Export and load priorities

DMM views the establishment of a clear and consistent policy on export prioritization between the CAISO and other balancing authority areas as one of the most important outcomes of the Market Enhancements for Summer 2021 Readiness initiative.

As noted in the DMM's report on the extreme heat conditions of August and September 2020, there were "...relatively large volumes of exports in the day-ahead market that were not backed by imports being wheeled through or contracts with capacity within the CAISO." These non-backed exports were prioritized over CAISO load in real-time. Further, "These export schedules were not subsequently curtailed in real-time during hours when the CAISO [load] was curtailed."²

Stakeholder discussion suggests demand for firm energy day-ahead exports from CAISO, and other WECC BAAs. In the January 12 workshop, Idaho Power delivered a presentation in which they stated that this is standard for Idaho Power exports, and that the Idaho Power transmission operator or merchant will not curtail exports due to an energy shortage in the BAA. However, the process by which Idaho Power (and presumably other WECC BAAs operating in similar manner) exports come into existence is distinctly different than that of the CAISO market.

¹ *Market Enhancements for Summer 2021 Readiness*, California ISO, January 12-13, 2021:

<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Market-enhancements-for-summer-2021-readiness>

² *Report on system and market conditions, issues and performance: August and September 2020*, p2, California ISO Department of Market Monitoring, November, 24 2020:

<http://www.caiso.com/Documents/ReportonMarketConditionsIssuesandPerformanceAugustandSeptember2020-Nov242020.pdf>

As described in the January 12 presentation by Idaho Power, firm exports from the Idaho Power BAA generally originate from either:

- 1.) Day-ahead bilateral sales by the Idaho Power merchant, supported by capacity which it has already determined to be excess capacity, not needed to serve native load or meet reserve or real-time uncertainty needs, or
- 2.) From an Idaho Power transmission customer generator contracted with an outside entity.

In each of the above cases, energy is essentially sold with capacity for the quantity and duration of the sale. The entity making the sale has made the choice to relinquish control of that portion of capacity for the duration of the sale.

The origin of firm energy exports described by Idaho Power is different from the majority of exports originating from the CAISO day-ahead market. An export of energy scheduled in the CAISO market as a less-than price taker (LPT) self-schedule, or as the result of an economic bid, is not a sale supported by capacity that has been determined to be excess, nor is it a sale of energy from a generator whose capacity is contracted with an entity outside of CAISO.³ The CAISO Integrated Forward Market (IFM) portion of the day-ahead market has no process to determine anticipated excess capacity, and there is no implication by scheduling an LPT or economic export in the CAISO IFM that CAISO load has given up or relinquished access to any portion of CAISO Resource Adequacy (RA) capacity in real-time, should it be needed.

On September 5, 2020, the ISO made a business practice manual (BPM) change to prevent the passing of IFM export schedules deemed infeasible by the day-ahead residual unit commitment (RUC) to the real-time market. This change ensures that only IFM export schedules deemed feasible by RUC receive “day-ahead scheduling priority” in real-time, exceeding the real-time scheduling priority of CAISO load or other real-time export schedules. CAISO exports receiving “day-ahead scheduling priority” in real-time are more analogous to firm day-ahead exports from bilateral transactions in other WECC BAAs. While this revision is similar in spirit to the day-ahead excess capacity determination to support firm export sales described by Idaho Power, a transparency issue remains as participants scheduling CAISO day-ahead exports do not know firmness of energy prior to making the purchase.

Although there appears to be an expectation among WECC trading parties that exports from the CAISO day-ahead market represent firm energy, and the ISO appears to have a desire to support that expectation, the current CAISO day-ahead market and resource adequacy (RA) design generally does not support scheduling of firm day-ahead exports. Although some CAISO day-ahead exports may be essentially firm if deemed feasible by RUC, this is not known by participants or the CAISO IFM at the time the export is scheduled. CAISO day-ahead exports clearing as LPT self-schedules or on economic bids are more analogous to non-firm exports. Achieving a standard of firm CAISO day-ahead exports would require market design changes

³ CAISO exports associated with generation that is explicitly non-RA, and potentially contracted with entities outside of CAISO, can self-schedule at “price-taker” (PT) priority. PT self-scheduled exports have a scheduling priority equal to CAISO load.

that appropriately account for CAISO load's foregone access to a portion of RA capacity in real-time.

In the short term, explicitly adding additional uncertainty into RUC could support both CAISO reliability and firmness of RUC cleared exports passed to real-time by ensuring that day-ahead exports receiving high scheduling priority in real-time are highly likely to be sourced only from excess capacity. Including adjustments to demand in the HASP market could further increase reliability by accounting for uncertainty between the HASP market run and the time of power flow. These additional adjustments would help ensure that exports scheduled in real-time are also likely to be sourced only from excess real-time capacity not needed to meet CAISO load. This may be particularly important during times when other BAAs may be experiencing energy shortages and seeking energy to import in real-time.

In the context of the current CAISO market, these tools are the most analogous available tools to the type of day-ahead surplus capacity evaluation described by Idaho Power to support firm energy exports. However, an approach dependent on adjustments to RUC and real-time demand requirements could have undesirable consequences on the efficient operation of the CAISO day-ahead and real-time markets. Further, while this approach could improve CAISO reliability, it does not provide information on the firmness of day-ahead exports to market participants at the time of purchase.

Finally, if WECC trading parties collectively desire an environment where all exports that clear a BAA's day-ahead scheduling process are assumed firm, and if the ISO wishes to also conform to this standard, DMM encourages the ISO to reach out to each of the WECC BAAs to develop a consistent written policy formalizing a clear and equal standard across all BAAs. Formalizing this operating practice could improve certainty of reliability, rather than relying on reputational impacts or "good neighbor" operating practices.

EIM coordination and resource sufficiency test review

DMM supports review of the existing EIM resource sufficiency tests, and any necessary corrections to the existing calculation. Specifically, for summer 2021, DMM encourages the ISO to make the corrections to calculation errors identified in the ISO's January 13, 2021 stakeholder workshop presentation.⁴

Additional revisions to the resource sufficiency test may be warranted. However, DMM notes that the timeline for the summer readiness 2021 initiative is necessarily short, which may not allow adequate time for thorough review of substantive proposed changes. DMM encourages the ISO to proceed cautiously with any changes in the current initiative to minimize unintended consequences and lost market efficiency.

⁴ *Resource Sufficiency Evaluation*, California ISO, January 13, 2021: <http://www.caiso.com/InitiativeDocuments/Presentation-MarketEnhancements-Summer2021ReadinessJan13,2021Workshop.pdf>

In the January 13 workshop, Powerex gave a presentation in which they propose a “comprehensive capacity test” as a revised approach to the existing EIM bid capacity test.⁵ DMM appreciates the effort that Powerex put into developing a proposal. The capacity test proposed by Powerex introduces new financial implications of failing the test, increases the likelihood that a BAA would fail the test in a given interval, and seeks to create more accountability to the EIM Governing Body for repeated failures. Powerex states that the purpose of the proposed test is to support reliability by ensuring entities that are short do not lean on others, and to incentivize additional forward capacity procurement.

DMM supports exploring options that could result in a more accurate accounting of whether or not a balancing area has enough capacity to meet its load forecast. DMM also supports exploring alternative consequences to failing a test that may better disincent leaning on other BAAs. While Powerex’s proposed approach may have potential to increase incentives for LSEs in some BAAs to carry surplus capacity to meet extreme demand conditions, the approach has significant problems that may require a more extensive stakeholder process to work through.

Counting capacity in Powerex’s bid range capacity test proposal

First and foremost, Powerex proposes not to consider offline capacity in the bid range capacity test. This approach fails to consider that EIM import transfers in advisory intervals impact unit commitments in the real-time market. If EIM import transfers displace internal resource commitments in the short-term unit commitment (STUC) or RTPD commitment processes, the capacity from these resources would not be appropriately considered in Powerex’s proposed capacity test. Excluding resources whose commitment is displaced by advisory interval EIM import transfers does not appropriately consider that this capacity was procured and would have been available, but for EIM import transfers in advisory intervals.

Consequences of failing Powerex’s proposed bid range capacity test

Powerex proposes that when an EIM area or the CAISO fails the proposed capacity test, the EIM import transfer limit will be set to a 0 MW “deficiency transfer limit”. The proposal further states that the deficiency transfer limit may be relaxed to allow some level of EIM import transfers at a \$2000/MWh penalty price. The implications of failing the proposed capacity test could have a number of potential impacts:

- At a high level, the proposed approach appears to be a form of scarcity pricing. As noted in DMM’s comments on the January 6 Summer Readiness Stakeholder meeting, scarcity pricing is a complex policy issue that should be approached cautiously to avoid causing unintended outcomes.⁶

⁵ *EIM Resource Sufficiency – CAISO Summer 2021 Readiness Workshop*, Powerex, January 13, 2020: <http://www.caiso.com/InitiativeDocuments/PowerexPresentation-MarketEnhancements-Summer2021ReadinessJan13,2021Workshop.pdf.pdf>

⁶ *Summer 2021 Readiness Stakeholder Call – Comments by Department of Market Monitoring*, p. 2-3. January 14, 2021: <http://www.caiso.com/Documents/DMMCommentsonMarketEnhancementsSummer2021ReadinessJanuary6StakeholderCall.pdf>

- Limiting transfers between balancing areas when an area fails a resource sufficiency test will often decrease the overall efficiency of the EIM market dispatch. This problem exists under the current resource sufficiency test design, which limits transfers based on previous intervals' transfers. This problem will be exacerbated by Powerex's proposal which would result in all available generation over minimum load levels in the BA that failed a test being dispatched before the BA receives any EIM transfer imports sourced from potentially much less expensive generation. As DMM has suggested in the past, a more appropriate penalty for a BA failing a resource sufficiency test may be a capacity penalty assessed out of the market to the failing BA and paid to BAs that supplied capacity to cover the shortfall.
- Under Powerex's proposal, EIM Entities whose merchant generation arm serves third party load may sometimes benefit from failing the bid range capacity test. As described above, all available internal generation would be dispatched before any inexpensive imports could displace internal generation. If even just a small number of imported MWs is needed to meet the BA's load, the BA price would be set at \$2,000. If the EIM Entity load is served by generation from the merchant generation arm, the high prices would not have an adverse impact on the utility's net payments for imbalance power—load would pay \$2,000 but the company's own generation would get paid an offsetting \$2,000. However, the EIM Entity merchant generation arm would get paid \$2,000 for energy for which third party load would be charged \$2,000.
- Finally, the potential of \$2,000/MWh prices in CAISO under tight supply conditions would alter expectations of CAISO real-time system prices. This change in expectation of CAISO real-time prices would influence CAISO day-ahead price formation and, ultimately has potential to influence bilateral prices across the West.

Powerex also proposes reporting of capacity test failures to the EIM Governing Body. While not the specific reporting proposed by Powerex, DMM does routinely report on flexible ramping sufficiency test failures by EIM area.⁷ Further, DMM is available to support the EIM Governing Body as needed to provide additional market transparency.

The Powerex proposal may create stronger incentives for LSEs in some BAs to procure and offer additional capacity to the Western EIM market to avoid potential capacity test failures and more extreme energy prices. However, CAISO and stakeholders should carefully weigh the potential reliability gains of this or any proposed change with full consideration of the potential cost and efficiency impacts of making such changes.

⁷ See, for example: *Q2 2020 Report on Market Issues and Performance*, Department of Market Monitoring, p. 87, October 6, 2020: <http://www.caiso.com/Documents/2020SecondQuarterReportonMarketIssuesandPerformance-Oct62020.pdf>

Transparency of resource sufficiency tests

DMM further recommends that the ISO continue to improve transparency in the sufficiency test, both in terms of the formulas for calculating sufficiency test requirements and ramping capacity, as well as the data needed for these calculations. One specific area for improved transparency is in the ETSR limits used in the sufficiency test calculation. It is DMM's understanding that net import/export capability used in the sufficiency test requirement is calculated from *advisory* ETSR limits, which are not available on OASIS.

For example, in the January 13th presentation, the ISO calculated a total dynamic import ETSR limit of 11,980 MW for the CAISO BAA. This total reflects an import limit of 1,564 MW for the ETSR CISO_ELDORADO230_NEVP_I_EIMDYN.⁸ The 1,564 MW import limit for this ETSR reflects the advisory ETSR limit for hour-ending 18, however, the binding limit for this ETSR for hour-ending 18 (which is available on OASIS) is 797 MW. Improving transparency of the sufficiency test inputs and calculations may be beneficial to entities subject to the test, as well as to the broader market when assessing market outcomes.

⁸ Ibid., p. 35