Comments of the California Energy Storage Alliance on the June 6, 2022 Stakeholder Call Regarding On-Peak Generation Deliverability Study Generation Dispatch Assumptions

Submitted by	Organization	Date Submitted
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1. Introduction & Summary

CESA greatly appreciates the ISO holding the June 6, 2022 stakeholder call to assess and update the on-peak generation deliverability study generation dispatch assumptions. With energy storage being a dispatchable resource and the majority of their deployments being energy-limited in nature (*i.e.*, 4 hours), it is important to reassess our core assumptions around how energy storage should be modeled in these deliverability studies. Especially in light of the California Public Utilities Commission's (CPUC) proposed adoption of slice-of-day (SOD) reforms, the ISO should launch a new initiative tasked with developing comprehensive reforms that fit within these new constructs where energy storage resources can be shown across different periods of the day. In addition, the deliverability reform initiative should consider: (1) the appropriateness of n-2 contingency assumptions in all cases; (2) the location of storage resources; (2) how to incorporate long-duration energy storage (LDES) resources and how assumptions may need to differ; and (3) how behind-the-meter (BTM) storage aggregations can be considered in these studies when accounting for the fact that their export capacity is more likely to be consumed by local loads than to be delivered to the bulk power system.

Overall, CESA is directionally supportive of the proposed changes to the level of storage dispatch relative to their maximum capacity, which is more consistent with expected storage behavior during the High System Need (HSN) and Secondary System Need (HSN) Scenarios, respectively. These changes to more realistically assume storage dispatch during the SSN period will have the intended effect of having more deliverability available for storage and other resources, which is critically needed in today's situation of capacity shortages. Yet still, CESA believes that the ISO's proposed revisions warrant revision, as discussed further below.

2. Comments

The periods for the HSN and SSN scenarios should be maintained at Hour 14-17 and Hour 18-22, respectively.

The ISO utilizes the recently-published 2022 Summer Assessment in determining the hours where the system faces resource shortages. Based on resource production data

for three capacity-challenged days in 2021, the ISO proposed to shift Hour 18 into the SSN period instead of the HSN period. However, looking at the same data on the number of scenarios where minimum unloaded capacity margin (MUCM) is 6% or less, the critical hour of need is clearly Hour 19 (156 scenarios), followed by Hour 20 (60), Hour 18 (37), and Hour 28 (28). Including Hour 18 in the SSN window does not make sense since it is more appropriately included in the HSN window as immediately preceding the critical Hour 19 and has higher level of insufficient operating reserves compared to Hour 21. With Hour 22 also presenting no resource shortage risk, it is more reason to include Hour 18 in the HSN window to cover the four most critical hours – Hours 18, 19, 20, and 21. After all, the HSN is intended to represent when the capacity shortage is most likely to occur, which the 2022 Summer Assessment clearly shows to be Hours 18-22.

The storage dispatch assumptions in the SSN window should be between 0-40% for the near-term deliverability studies and 0% for the long-term deliverability studies.

Considering that the vast majority of energy storage being four hours in duration, we add that the dispatch assumptions for energy storage at 100% of capacity level in the HSN scenario would make it physically impossible for it to also be dispatched during the Hour 14-17 SSN window. Rather, storage would be mostly charging during the SSN window, such that the storage amount for the SSN should be significantly reduced from 100% of the maximum storage capability (status quo) to 0% or close to it. At minimum, in maintaining the Hour 14-17 SSN window and in using the 2022 Summer Assessment data presented at the June 6, 2022 stakeholder call (Slides 14-16), the ISO should use an assumption of 40% of the maximum storage capability for the near-term SSN study. However, for the long-term deliverability studies, the ISO's 2026 and 2030 resource portfolio analyses show that Hour 17 does not pose much risk from a MUCM perspective (Slides 19-20). If we were to extrapolate the storage dispatch curve, it would presumably reach zero or close to it, again supporting how the ISO's proposal to include Hour 18 in the SSN to be in error.

Clarifications should be provided on how the proposed changes to the dispatch assumptions in the deliverability studies will impact transfers between existing solar and storage additions.

CESA echoes stakeholder questions about how changed solar assumptions could impact the amount that can be transferred from solar to battery when it comes to deliverability transfers.

Clarifications are sought on how SSN deliverability does not impact qualifying capacity (QC) or effective load carrying capacity (ELCC) numbers.

CESA requests that CAISO clarify that the proposed storage SSN deliverability study numbers will not impact QC or ELCC values for energy storage. Given the general education further needed on deliverability studies, CESA believes that the CAISO can dispel any confusion on the matter by clarifying that the SSN deliverability studies are intended to assess the expected discharge of energy storage resources in specific hours of concern, with energy storage able to discharge up to 100% of its installed capacity to meet real-time needs.

3. Conclusion

CESA appreciates the opportunity to submit these comments and we look forward to continued participation in this initiative. We reiterate our recommendation to launch a deliverability reform initiative, as well as the need to continuously monitor and update modeling assumptions as load conditions and resource additions change more frequently over time. We look forward to continued collaboration with the ISO and other stakeholders.