



Chair David Olsen
Vice Chair Mary Leslie
Governor Ashutosh Bhagwat
Governor Severin Borenstein
Governor Angelina Galiteva

RE: Hybrid Resources Initiative, Phase 1

Dear Chair Olsen, Vice Chair Leslie, and Governors Bhagwat, Borenstein, and Galiteva:

We are writing this letter on behalf of the Large-scale Solar Association (LSA) and the Solar Energy Industries Association (SEIA), who together represent some of the largest renewable-energy developers in California markets. Current development work includes multiple projects combining solar generation with energy storage; those projects will be developed under Co-located and Hybrid Resource configurations, and some will become operational as soon as this year.

LSA and SEIA have been active participants in the CAISO's Hybrid Resources initiative, including multiple comment submissions for the Phase 1 topics before you at the July 22 meeting. LSA and SEIA support overall the elements included in the Phase 1 proposal.

LSA and SEIA also want to convey acceptance of a CAISO management compromise regarding an important stakeholder proposal for Co-located Resources that will be addressed in Phase 2. This proposal would allow limited flexibility for storage Resource IDs to lower output to accommodate unscheduled increases in real-time VER Resource ID production, to avoid curtailment of that valuable renewable energy.

The proposal, and some concerns about how it is characterized in the CAISO management presentation, are described below.

Storage Resource ID flexibility proposal

LSA, SEIA, and others have supported, in several sets of comments in the stakeholder process, a proposal that, as stated on slide 6 of the CAISO management presentation, would "allow storage resources to deviate from dispatch." Though the presentation today does not state this, the proposal is intended to avoid potential renewable-energy curtailments, without the need for changes in CAISO market software or settlements.

CAISO rules already allow stand-alone VERs to produce above their scheduled/dispatched level in real time under most conditions; the CAISO reduces output from other resources to accommodate the extra energy. Similarly, Hybrid Resources – including VER-storage combinations – can reduce storage injections in real time (or switch to charging mode) to accommodate this additional renewable energy within the Point of Interconnection (POI) limit, so the additional renewable energy need not be curtailed.

This proposal would give Co-located Resources the same flexibility, allowing the storage Resource ID to deviate from Dispatch Instructions only to the extent needed to accommodate the additional renewable-energy production. Reliability would not be jeopardized, because:

- The CAISO will have complete real-time visibility through telemetry of any deviations by the two resources;
- No supply shortfalls would result from the lower storage Resource ID injection, because the combined energy injected into the grid by the two resources would be exactly the same; and
- There would be no increased chance of the storage Resource ID being unavailable when needed later for Energy (or Ancillary Services, once they are allowed to provide them), because the storage State of Charge (SOC) would actually be higher than otherwise.

This flexibility would go a long way toward making Co-located Resource configurations – which CAISO management has stated it prefers for mixed-fuel resources over Hybrid Resource configurations – attractive to resource owners and off-takers.

No additional software would be needed, because settlements for both the VER and storage Resource IDs would reflect any deviations in the same manner as they do today.

CAISO management did not favor this proposal in the stakeholder process, which is why the proposal (and the additional details management is now seeking about this concept) are not included your package for this meeting. However, in subsequent discussions, to its credit, management agreed that this proposal can be workable and has promised to consider it in Phase 2 of this initiative, which is otherwise devoted to Hybrid Resource issues.

LSA and SEIA very much appreciate CAISO management’s outreach efforts, and its commitment to pursue the proposal in Phase 2. While we are disappointed that this proposal is not included in Phase 1, we are satisfied by management’s representations that this new timeline would allow for implementation in early 2021, i.e., with only a slight delay.

Clarifications

LSA and SEIA strongly disagree with the characterizations of the stakeholder proposal in the Management presentation. Contrary to statements there, this proposal would not:

- **“Preclude Ancillary Services awards” or cause other operational problems.** As described above, this proposal would not jeopardize reliability, since total energy output would remain the same, storage SOC would be enhanced, and the CAISO system will have full visibility for any deviations by the applicable resources.

Moreover, LSA and SEIA note that Hybrid Resources with the exact same storage flexibility can provide Ancillary Services immediately upon Commercial Operation under current rules (i.e., well before Fall 2021). Thus, there should be no additional concerns with giving Co-located Resources this flexibility, after Ancillary-Service provision is allowed for Co-located Resources starting in Fall 2021.

- **Require “significant new functionality needed if the energy is settled as instructed energy vs. uninstructed energy.”** LSA/SEIA and others promoting this idea have made it clear that the energy deviations would be settled as uninstructed energy, as already provided in current CAISO software, i.e., no modifications are needed.

Conclusion

Again, we thank CAISO management for continuing consideration of the stakeholder proposal described above. We look forward to working with CAISO management and with other stakeholders on this proposal in Phase 2.

Sincerely,

Shannon Eddy

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