



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

RE: Hybrid Resources Initiative, Phase 2

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

We are writing 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 projects include significant numbers of solar-storage combined resources, many scheduled to come on-line in the near future.

LSA and SEIA have been active participants in the Hybrid Resources Initiative, including multiple rounds of comment submittals. LSA and SEIA support most of the Phase 2 proposal but have serious concerns about just one part of one element.

That element is implementation of “storage flexibility” for Co-located Resources (CLRs). CLRs are mixed-fuel resources with separate Resource IDs for different technologies (e.g., Variable Energy Resources (VERs) vs. storage). CLRs Resource IDs will schedule and settle separately in CAISO markets while sharing an overall Point of Interconnection (POI) output limit.

As you may recall, CAISO Management accepted in Phase 1 a stakeholder proposal to allow storage CLRs to reduce output to accommodate unscheduled increases in real-time VER CLR production, to avoid curtailment of that additional renewable energy. The additional VER output above schedule does not violate CAISO rules, and the proposal would change those rules so the accommodating storage CLR deviation from schedule is also not a violation.

CAISO Management committed to developing the proposal further in Phase 2 and proposed there several conditions for exercise of this storage flexibility. LSA and SEIA do not disagree with most of those conditions but strongly oppose one in particular.

Specifically, the CAISO proposal would prohibit storage CLRs from exercising this storage flexibility in any hours when they are providing Ancillary Services (A/S). This blanket restriction could have significant adverse consequences for CAISO markets, i.e.:

- **Would completely undercut the objective of the storage flexibility.** Energy storage resources are particularly well suited to provide A/S, but this condition would prevent them from exercising the storage flexibility – and preventing curtailment of their renewable energy – in any hour when they receive an A/S award.
- **Could deprive the CAISO from accessing a source of valuable A/S.** Some storage CLR's might even refrain from A/S certification to avoid loss of the storage flexibility.
- **Is completely unnecessary.** CAISO management has cited concerns about A/S impairment without the proposed restriction. However, LSA and SEIA have submitted numerous examples in their comments in this initiative of situations where the storage flexibility could be exercised by a storage CLR without impairing its ability to provide A/S. Below are several relatively simple examples for your consideration.

PROJECT MEASURE	RESOURCE 1 – no A/S		RESOURCE 2 – A/S Up*		RESOURCE 3 – Reg Down	
	VER MW	STORAGE MW	VER MW	STORAGE MW	VER MW	STORAGE MW
POI Limit	100		100		100	
MW capacity	100	50	100	50	100	50
Schedule – Energy	60	40	70	30	50	50
Schedule – A/S	-	-	-	20	-	10
RT Output	70	30	80	20	90	10
Deviation	+10	-10	+10	-10	+40	-40
Resulting A/S capability (same as schedule)	-	-	-	20	-	10
A/S deficiency	-	-	-	0	-	0

* Regulation Up, Spinning Reserve, or Non-Spinning Reserve.

Certainly, it is possible that the storage CLR deviations to accommodate additional VER output could impair ability to comply with A/S awards, just like schedule deviations by any stand-alone storage facility (or any resource providing A/S). LSA/SEIA's alternative would treat storage CLR's like any other A/S resource, i.e., hold the resource operator responsible for ensuring that the resource can meet its A/S award, or incur penalties for non-compliance.

We thank CAISO management for accepting the storage flexibility proposal but ask that this one feature – disqualification of a storage CLR providing A/S from using it – be changed. Instead of the proposed broad prohibition, this condition should be revised to simply say that exercise of the storage flexibility cannot be used to the extent that it would impair storage CLR ability to comply with A/S awards.

Sincerely,

Shannon Eddy

Shannon Eddy
Executive Director
Large-scale Solar Association



Rick Umoff
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