

## Hybrid Resources Initiative: Straw Proposal

Submitted by	Organization	Date Submitted
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### 1. Terms and Definitions

Please provide your organization's feedback on the proposed terminology and definitions as described in the revised straw proposal.

As described in its prior comments<sup>1</sup>, SCE generally supports the CAISO's terminology and definitions and is encouraged by the inclusion in scope of co-located resources (CLRs)<sup>2</sup>. SCE notes that, in regards to CLRs, the CAISO should consider the scenarios, especially concerning metering, where resources participate through different SCs. There is substantial complication to the CAISO-presented scenarios that has not been considered if CLR components were to participate through different SCs.

### 2. Forecasting

Please provide your organization's feedback on the forecasting topic as described in the straw proposal.

SCE requests clarification from the CAISO on the proposed treatment. Specifically, SCE requests that the CAISO opine on the differences between when only a net-to-grid (NTG) forecast is available versus when both the NTG and VER forecasts are available. As the NTG forecast is the information on the HR's behavior, what does the CAISO intend to use the VER component forecast for, given that the CAISO's position is that the VER component is insufficient to determine net HR behavior?

### 3. Markets and Systems

Please provide your organization's feedback on the markets and systems topic as described in the revised straw proposal.

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<sup>1</sup> <http://www.aiso.com/InitiativeDocuments/SCEComments-HybridResourcesStrawProposal.pdf>

<sup>2</sup> <http://www.aiso.com/InitiativeDocuments/RevisedStrawProposal-HybridResources.pdf>

SCE requests the CAISO elaborate on the requirements and process details, including deliverability, for colocated resources. How does the CAISO envision setting up of the interconnection deliverability constraint with CLRs? Does the CAISO envision changes to the interconnection process?

SCE appreciates the CAISO's proposal on the interconnection constraint recognizing the formulaic difference for multiple generating and storage resources co-located at a point, rather than assuming a single of each type of resource. SCE also supports the CAISO's decision to develop an interconnection constraint rather than rely on treatment of special cases of existing constraints, to avoid potential complications at a later stage. SCE is concerned that given the participation of storage resources in ancillary service (AS) provision, any proposal that precludes their participation in such provision is suboptimal. Hence, SCE does not support the 'scaled down energy-only' option of the interconnection constraint if it does not allow AS provision for affected CLRs.

#### **4. Ancillary Services**

Please provide your organization's feedback on the ancillary services topic as described in the revised straw proposal.

SCE requests the CAISO opine on how AS provision would be implemented if, for a CLR, there are two (or more) SCs and each resource plans to sell AS.

#### **5. Metering and Telemetry**

Please provide your organization's feedback on the metering and telemetry topic as described in the revised straw proposal.

SCE requests that the CAISO opine on the differences between a CLR using two meters (using M2, M3 net to proxy for M1) to participate versus three meters<sup>3</sup>. How many LMPs will there be for co-located resources? SCE can envision a scenario with one LMP for the two resources but the net of the two resources' outputs at the M1 meter requiring a second LMP. How are losses accounted for? Which SC would be responsible for the cost of the third meter (thereby also being the receiver for the settlements statements)?

SCE requests that the CAISO provide a more detailed explanation of how the settlements netting process would work for the M1 meter, including any BCR implications.

SCE does not have a policy statement, it is merely trying to understand the differences and implications of the two configurations.

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<sup>3</sup> Page 44. <http://www.caiso.com/InitiativeDocuments/Presentation-HybridResourcesRevisedStrawProposal.pdf>

SCE also requests the CAISO confirm the following understanding of CLR participation. Consider a VER and storage co-located, with a single SC – thus, a CLR with a VER and a storage component. The participation of the VER is independent of the participation of the storage and any coordinated charging of the storage solely depends on (a) each resource's bids submitted by the SC (b) market prices. Thus, the SOC level of the storage is also solely dependent on that resource's bids and the market prices. It is possible to have a scenario where the VER charges the storage until the storage is full and then continues to supply the grid, even in the presence of negative market prices as long as the VER's bid price is more negative than the market price. Can the CAISO confirm this understanding and opine as needed? Namely, can the CAISO opine as to how the SOC will be used when coordinating awards between the two resources?

Assuming the understanding above is correct, SCE requests the CAISO opine on the following scenarios:

- i. The SC is trying to coordinate both CLR components and both the VER and storage components of a CLR have economic DA awards for supply and charge, respectively. In RT, during the award interval, the storage component reaches full SOC. What is the SC's responsibility in such a scenario (such as, reporting responsibility, etc.) that allows the VER component to continue to supply to the grid? What happens to the remaining power supplied by the VER component during the remainder of the interval? What are the settlements impacts to the SC?
- ii. Assume now that the SC is not coordinating the two components but that the market price is negative and the VER supply bid is uneconomic. The storage component is providing Regulation Up. Would the storage Regulation Up provision be impacted by the negative prices and by the fact that the CAISO expects no supply from the VER, given that both resources are at the same POI?
- iii. Can the CAISO provide a scenario example of when the VER component and the storage component for the CLR are both supplying to the grid and there is oversupply? What happens when both resources have the same bid price? SCE appreciates specific details the CAISO can provide in regards to how each resource's output would be determined by each resource's bid price, and by any other determinants.

## **6. Resource Adequacy**

Please provide your organization's position on the Resource Adequacy topic as described in the revised straw proposal.

SCE generally supports the CAISO proposal to adopt the approach in recent CPUC PD as an interim approach should the PD be adopted. As the CAISO's definition and terms may not be exactly same as those from CPUC, there may be additional

scenarios that should be further evaluated, such as how the RA value of CLRs, when those resources are subject to ITC charging constraint, will be determined. SCE recommends that this and other issues should be appropriately addressed in the CPUC RA proceeding (R.19-11-009).

**Additional comments**

Please offer any other feedback your organization would like to provide on the Hybrid Resources Initiative.