



Comments of the California Energy Storage Alliance on the Hybrid Resources Second Revised Straw Proposal

Submitted by	Organization	Date Submitted
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(Support, Support with caveats, Oppose, or Oppose with caveats).

1. Terms and Definitions

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

CESA supports the terms and definitions employed by the ISO in the Second Revised Straw Proposal for this initiative.

2. Market Interaction for Hybrid Resources

Please provide your organization's feedback on the market interaction for hybrid resources proposal, as described within the second revised straw proposal.

CESA supports the proposed dynamic limit tool as it would ensure the issuance of feasible dispatch instructions by the ISO. Furthermore, CESA is supportive of the ISO's decision to not track the state of charge (SOC) of hybrid resources, thus providing added flexibility for operators in managing their resource and bids. Nevertheless, CESA is concerned about the ISO's intention to model hybrid resources as non-generating resources (NGRs) on a universal basis.

On page 10 of the Second Revised Straw Proposal, the ISO notes that modeling and interconnection requirements will not be applied in a universal manner to all cases. More specifically, the ISO states that "if a gas resource undergoes plant augmentation and adds a relatively small battery to the resource [...] the ISO may choose to continue modelling such a resource as a gas resource." CESA agrees with this statement, as it shows the operational and economic benefits of hybridization while acknowledging its effects are dependent on the underlying generating technology and the amount of storage added. The same logic should apply to hybrid resources where a VER generating asset adds a small fraction of energy storage. In such cases, maintaining the VER classification for resources that add only add a small

amount of energy storage relative to the size of the generating asset would support “better behaved” VERs which could minimize the potential for uninstructed imbalance energy (UIE). Having this flexibility would allow a wider array of hybrid resources to come online and provide distinct value for the ISO; such as curtailment minimization, more predictable VER output, and energy arbitrage.

3. Point-of-Interconnection (POI) Constraint for Co-Located Resources

Please provide your organization’s feedback on the POI constraint for co-located resources proposal, as described within the second revised straw proposal.

CESA supports the clarification made by the ISO in the Addendum issued on May 13, 2020, regarding the scheduling coordinator (SC) requirement for co-located resources. A single SC requirement for all the assets would be overly restrictive and would hinder the economic viability of projects that have been meticulously brokered by several parties. CESA appreciates the ISO’s swift response to this issue.

4. Metering

Please provide your organization’s feedback on the metering topic, as described within the second revised straw proposal.

CESA supports the ISO’s proposal on metering; nonetheless, CESA would appreciate if the ISO includes a diagram similar to the one presented on page 12 of the Second Revised Straw Proposal that would illustrate the metering requirements for AC-paired hybrid and co-located resources. While CESA understands that part of the economic and technical advantages of pairing assets as hybrid or co-located resources depends on having a DC linkage, we believe that in order to minimize the potential for non-compliance the ISO should issue diagrams for both configurations.

5. Resource Adequacy

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

CESA partially supports the ISO’s proposal on Resource Adequacy issues for hybrid resources. CESA understands the complexity faced by the ISO in coming up with a structure that harmonizes several moving pieces scattered across a number of proceedings at the California Public Utilities Commission (CPUC) and initiatives at the ISO. Nevertheless, as it currently stands, CESA believes more work needs to be done to ensure the clarity and feasibility of this proposal.

CESA is concerned with the use of outage cards to notify the ISO that a hybrid resource must stay “off-market” to charge and fulfill further bidding obligations. Hybrid developers and operators are well positioned to manage the operational complexities associated with RA compliance, but it is essential that the ISO clarify the effects of the use of outage cards on unforced capacity (UCAP) calculations. During the meeting held on May 7, 2020, the ISO did not offer clarification on this matter, commenting that

it will be addressed in the RA Enhancements Initiative. This response provides little certainty to operators and investors seeking to estimate the revenues and potential penalties their assets could incur.

CESA is also concerned of the interplay between potential RAAIM penalties derived from a hybrid resource's inability to comply with its must-offer obligations (MOOs), even when it has been dispatched "optimally" by the ISO. Given the limitations related to energy availability, it would be optimal for the ISO to take advantage of the charge contained in the hybrid resource's storage component and dispatch it during AAH. This, in turn, could lead to a premature depletion of the storage's state of charge, which according to the ISO would result in RAAIM penalties and, as discussed above, a potential derate of the resource. This result shows the counterintuitive relationship between optimal dispatch and RAAIM penalties that hybrid VER-based resources would face – an outcome that must be revised by the ISO before finalizing this proposal.

Given these issues, the ISO should continue to evaluate this proposal. Since the ISO has moved to apply a 24-by-7 MOO structure for all resources, CESA believes it should thoroughly consider software and operational upgrades that could minimize this contradiction between market dispatch and MOOs. To this effect, CESA recommends the ISO consider extending the optimization horizon of the real-time market software. This could result in a better understanding of the trade-offs associated with energy shifting and market dispatch. Considering the ISO's interconnection queue currently includes over 24 GW of hybrid resources, CESA considers investing in these computational upgrades is warranted as they would greatly improve the ISO's ability to manage hybrid resources and ensure the reliable operation of the electric grid.