



Stakeholder Comments Template

Hybrid Resources Initiative: Straw Proposal

This template has been created for submission of stakeholder comments on the **Hybrid Resources Initiative, Straw Proposal** that was held on October 3, 2019. The meeting material and other information related to this initiative may be found on the initiative webpage at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/HybridResources.aspx>

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on October 21, 2019.

| Submitted by | Organization | Date Submitted |
|-----------------------------------|--|-------------------------|
| <i>Irene Moosen, 415-587-7343</i> | <i>California Community Choice Association¹</i> | <i>October 21, 2019</i> |

Please provide your organization's comments on the following topics and indicate your organization's position on the topics below (Support, Support with caveats, Oppose, or Oppose with caveats). Please provide examples and support for your positions in your responses as applicable.

California Community Choice Association (CalCCA) appreciates the opportunity to comment on the Hybrid Resources Initiative, Straw Proposal ("Straw Proposal") discussed during the October 3, 2019 stakeholder meeting. CalCCA members are pursuing hybrid resources and are keenly interested in developing rules to facilitate efficient utilization of these resources.

1. Hybrid Resource Definition

Please provide your organization's feedback on the Hybrid Resource Definition as described in the straw proposal.

¹ California Community Choice Association represents local government Community Choice Aggregation electricity providers in California members, including Apple Valley Choice Energy, CleanPowerSF, Clean Power Alliance, East Bay Community Energy, King City Community Power, Lancaster Choice Energy, MCE, Monterey Bay Community Power, Peninsula Clean Energy, Pico Rivera Innovative Municipal Energy, Pioneer Community Energy, Rancho Mirage Energy Authority, Redwood Coast Energy Authority, San Jacinto Power, San Jose Clean Energy, Silicon Valley Clean Energy, Solana Energy Alliance, Sonoma Clean Power, Valley Clean Energy.

CAISO is proposing to distinguish hybrid resources from other co-located resources based on whether the resources participate in the CAISO markets using a single Resource ID or multiple Resource IDs:

“Hybrid Resources are a combination of multiple generation technologies that are physically and electronically controlled by a single owner/operator and Scheduling Coordinator and behind a single point of interconnection (“POI”) that participates in the CAISO markets as a single resource with a single market resource ID.” [Straw Proposal at p. 7]

Resources with a single Resource ID will be considered Hybrid Resources, while resources with multiple Resource IDs will be considered Co-located Resources. CalCCA supports this definition, though it does have comments about CAISO’s proposed forecasting and metering requirements associated with each type of resource, as described further below.

2. Hybrid Resources Business Drivers and Use Cases

Please provide your organization’s feedback on the Hybrid Resources Business Drivers and Use Cases described in the straw proposal.

CalCCA agrees that the use cases for Hybrid Resources and Co-located Resources may overlap. Because of this, it is important to ensure that both configurations can be accommodated and that any differential treatment be applied only where necessary. For example, CalCCA urges CAISO not to limit Co-located Resource storage charging only from the grid; that is, allow Co-located Resource VER charging as described in Section 4 below. Similarly, given appropriate metering, CAISO should allow Hybrid Resources to be charged from the grid to the extent desired by each project operator so that project and grid operations can be optimized.

CalCCA members are pursuing both Hybrid Resources and Co-located Resources to meet a variety of business uses, including time shifting of generation to meet loads during more valuable periods (e.g., during the post-peak hours when solar generation drops and net loads increase). Their ability to utilize these resources to respond to changing market conditions and grid operational needs will be affected by the policies implemented as a result of this initiative. CalCCA urges the CAISO to ensure that the adopted rules are flexible so that the value of the combined resources can be maximized.

3. Forecasting

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

CAISO is proposing to provide forecasting only for Co-located Variable Energy Resources (VER), and to not provide forecasting for Hybrid Resources. While CalCCA appreciates that with a single Resource ID it might not be possible for CAISO to accurately forecast combined Hybrid Resource production, CalCCA urges CAISO to

consider providing forecasting services, as requested by the resource's Scheduling Coordinator, for the VER component of the Hybrid Resource, as long as appropriate metering and meteorologic data were provided to the CAISO and the resource paid the VER forecast fee. Doing so would allow the Hybrid Resource owner to benefit from the CAISO's access to specialized VER forecasting expertise, while the CAISO would benefit from access to more data to improve its forecasting, improved operational situational awareness, and broader sharing of forecasting costs. The resource owner could incorporate the CAISO forecast information into its combined forecast for the Hybrid Resource (or use its own VER forecast), which it would provide to CAISO for CAISO to use, in conjunction with storage State of Charge, to develop the upper economic limit for dispatch targets.

CalCCA urges CAISO to identify in more detail what its concerns may be about potential "strategic use" of the Hybrid Resource forecast, any potential adverse consequences for the CAISO markets, potential mitigation measures, and alternative approaches for determining Hybrid Resource potential that could address the CAISO's strategic use concerns. For example, if CAISO had VER resource visibility and access either to its own or a certified VER forecast, along with storage state of charge visibility, would CAISO still have strategic use concerns?

4. Markets and Systems

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

CalCCA supports using the Hybrid Resource forecast (or potentially the resource's Bid, as suggested by PG&E) to establish the upper economic limit for the resource.

For Co-located Resources, CalCCA supports CAISO's proposal to limit the combined output to the Point of Interconnection rights.

CalCCA urges CAISO to consider developing functionality to allow Co-located storage resources to be charged, either partially or exclusively, from the Co-located VER resource, perhaps via a Self-Schedule from the VER resource and corresponding storage resource Self-Scheduling and Bidding. This would allow the Co-located Resource owner to mitigate inverter and POI limitations, maximize preferred resource production, optimize ITC value, and continue to participate in the Eligible Intermittent Resource program, while providing CAISO with access to any net VER output and the storage output. CalCCA believes that there may be valid reasons for a resource owner to prefer a single Resource ID (Hybrid Resource) or multiple Resource IDs (Co-located Resource), However, both VER charging and/or grid charging should be allowed for both Hybrid Resource and Co-located resource configurations pursuant to preferences expressed in the Resource Bids.

5. Ancillary Services

Please provide your organization's feedback on the ancillary services topic as described in the straw proposal. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

For the VER portion of both Hybrid Resources and Co-located Resources, CalCCA supports the use of the VER forecast to determine the potential Ancillary Services Capacity from VER resources. This can then be used in conjunction with the storage resource state of charge, to determine the A/S potential for Hybrid Resources.

6. Metering and Telemetry

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

CalCCA urges CAISO to continue to facilitate certification of DC meters to provide the greatest amount of flexibility and enhanced visibility of the various components of Hybrid Resources and Co-located Resources.

CalCCA supports CAISO's efforts to ensure that the available metering configurations will allow CAISO to report RPS production accurately.

7. Resource Adequacy

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

CalCCA supports CAISO's proposed interim methodology for setting Hybrid Resource RA Net Qualifying Capability using the VER Effective Load Carrying Capacity (ELCC) plus Storage NQC, subject to deliverability and interconnection POI rights. This interim approach would treat Hybrid Resources and Co-Located Resources similarly for purposes of RA NQC, which would reflect underlying physical capabilities of similar Hybrid and Co-located resources.

Some parties at the October 3 stakeholder meeting argued that it isn't possible to get the full VER output plus the full storage output. CalCCA disagrees. As an engineering matter, it is entirely possible to obtain the full output of both the VER resource (which itself can be excess of the ELCC) and the storage resource during the periods when both resources are needed. The ELCC approach significantly already discounts the VER resource capabilities and doesn't consider how VER resources will be operated in conjunction with storage resources. CalCCA believes that CAISO's proposal is appropriate as an interim measure. Any modifications can be made to reflect real-world experience. If supported by data identifying significant differences between the performance of Hybrid Resources and Co-located Resources, CAISO could propose treating these resources differently.

CalCCA supports having separate Must Offer Obligations (MOO) for Co-located Resources. For Hybrid Resources, CalCCA supports CAISO's proposal for the MOO to be based on the self-provided, combined resource forecast.

Additional comments

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