



## 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](mailto:initiativecomments@caiso.com). Submissions are requested by close of business on October 21, 2019.

Submitted by	Organization	Date Submitted
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**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.**

WPTF appreciates the opportunity to provide comments on the Hybrid Resource Straw Proposal.

#### 1. Hybrid Resource Definition

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

WPTF supports the CAISO's proposed definition and believes this makes it much easier to talk about the different needs between true Hybrids and co-location.

#### 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.

WPTF believes CAISO left out the most important use case for hybrids and co-located resources – its own. The entire western grid is experiencing tight capacity conditions and both the CPUC and CAISO are predicting a 2,000 to 5,000 MW shortage of net peak capacity beginning in 2021. Given that new resources take three years to go through the interconnection queue, there are limited options on how to access additional capacity. One of the best ways to get additional capacity on the grid is to better utilize existing solar and wind interconnections by pairing the resources with storage. In fact, there is likely no faster, cheaper, or greener way to meet the predicted system net load peak shortage than adding 4-hour storage to an existing interconnection that is at present, often *completely unused during the very time it is needed most*.

WPTF encourages the CAISO to prioritize short-term rule changes that can be made via BPM and process changes to enable this capacity to come online quickly and in a reasonable manner. That is, to focus on items that will get the CAISO what it needs in terms of reliability rather than minor improvements in the optimization. WPTF agrees with the CAISO's remaining list but believes these should be considered after the state's reliability needs.

### 3. Forecasting

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

While the general forecasting proposal seems reasonable, WPTF asks the CAISO to clarify what it means by a "viewed by the CAISO as a dispatchable generator." (Page 12) Does this mean only renewables that are fully dispatchable every 5-minutes are eligible? It is our understanding that about 40% of existing wind and solar is still non-dispatchable either physically or contractually. Does the CAISO intend to exclude these resources from becoming part of a hybrid resource?

Additionally, WPTF notes that the data provided on page 14 does not match what the CAISO provides stakeholders monthly on average real-time forecast error, which seems odd.

### 4. Markets and Systems

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

**Incorporating Hybrid Resource Forecasts into Market Processes:** Resources are optimized by the CAISO market via a "participation model" – these are set structures for different resource types. The CAISO appears to be proposing to use the Variable Energy Resource (VER) participation model, but this may not enable adequate functionality to allow the storage resource to charge from the grid. WPTF asks that the CAISO consider how a Hybrid resource will be able to use the NGR model – the only model that allows for a negative Pmin – and either provide its own forecast or enable telemetry to allow the CAISO to forecast the variable energy resource piece and add this to the storage upper economic limit each hour. If a resource has to provide their own forecast, already they will

have to meter their VER separately from the storage. There is no other way to get an accurate forecast. Thus, from the CAISO and participants perspective, it may be beneficial to allow the CAISO to provide the forecast and enable systems that are set up to add the discharge portion of the storage resource. WPTF admits this is simpler to say than do, but things like outage cards and accurate accounting will be a challenge no matter which entity provides the forecast.

**WPTF Interim Proposal for Interconnection Rights Constraint (Two or more Resource IDs):** WPTF strongly objects to the characterization of this section. Common practice for co-located resources is to install a locking mechanism such that energy will never flow in excess of the interconnection rights, thus the Pmax issue falls squarely within CAISO market rules. The BPM and tariff clearly compel Scheduling Coordinators and the Masterfile to accurately reflect a resource's Pmax based on design capabilities. The fact that the New Resource Implementation (NRI) process or CAISO operators object to this does not mean the CAISO may waive their own tariff requirements. If the CAISO is going to allow over-sizing (which it already does) then they must allow the Pmax to reflect the actual design capability of the resources.

Thus, WPTF proposes the following - the CAISO already has a requirement that co-located resources must not bid above their interconnection value within the Generator Management BPM in section 6.5.3. although this is not very clear. WPTF proposes the CAISO clarify this requirement to restrict hourly aggregate energy offers to the interconnection value. This means the market will never receive offers the resources cannot individually provide over the interconnection. If the CAISO is concerned about forecast error for the VER, we will note that this is no different than today when a VER may or may not show up due to forecast error and this has unintended consequences on the grid that are resolved through regulation. The storage resource's state-of-charge will be visible the CAISO optimization, which will use updated information in the 5-minute optimization – just like any other storage resource.

One issue brought up in the Straw Proposal was the potential for operators to try and exceptionally dispatch resources above their offers up to their Pmax. WPTF notes that operators do not try and dispatch renewable resources above their offers as this would typically be a futile exercise. Likewise, operators are unlikely to try and exceptionally dispatch storage resources to their Pmax as there is no guarantee battery has sufficient charge to dispatch to Pmax. Thus, WPTF does not believe exceptional dispatches should practically be a concern.

Another potential issue brought up in the Straw Proposal for co-located resources with Pmax's above the interconnection value was the potential for "double counting" in that the QC value for the two resources may be higher than the interconnection value. WPTF does not believe this is an issue. The QC for individual resources frequently can exceed interconnection values. That is the point of the CAISO's annual deliverability study to determine a resource's Net Qualifying Capacity (NQC). Thus, WPTF supports the CAISO proposal to split the capacity values by scheduling coordinator preference during the NQC list process.

## 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)

WPTF has no comments at this time.

## 6. Metering and Telemetry

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

WPTF has no comments at this time.

## 7. Resource Adequacy

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

Please see response to section 4. Additionally, WPTF supports a must-offer obligation for Hybrid resources to be equal to the percent of VER forecast sold as RA plus storage RA value.

## Additional comments

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