



Stakeholder Comments Template

Resource Adequacy Enhancements

This template has been created for submission of stakeholder comments on the Resource Adequacy Enhancements fifth revised straw proposal that was published on July 7, 2020. The proposal, stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at:

<http://www.caiso.com/StakeholderProcesses/Resource-Adequacy-Enhancements>

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on **August 7, 2020**.

Submitted by	Organization	Date Submitted
<i>Dan Thompson (847) 477-3579</i>	<i>Terra-Gen</i>	<i>August 7, 2020</i>

Please provide your organization's overall position on the RA Enhancements fifth revised straw proposal:

- Support
- Support w/ caveats
- Oppose
- Oppose w/ caveats
- No position

Please provide your organization's comments on the following issues and questions.

1. System Resource Adequacy

Please provide your organization's feedback on the System Resource Adequacy topic as described in section 4.1. Please explain your rationale and include examples if applicable.

- a. Please provide your organization's feedback on the Determining System RA Requirements topic as described in section 4.1.1. Please explain your rationale and include examples if applicable.

- i. Please provide your organization's feedback on the modifications for UCAP counting rules for storage resources as described in section 4.1.2. Please explain your rationale and include examples if applicable.

Terra-Gen does not support the CAISO's proposal to consider the use of an EOH SOC parameter as equivalent to a forced or urgent outage. Stakeholders spent a year in the ESDER initiative developing this tool as a way for storage resources to manage the real-time optimization's limited forward looking timeframe. The real-time market is unable to schedule storage resource's limited availability in either the charge or discharge direction because it cannot fully look out between the lowest cost and highest cost periods of the day.

The EOH SOC parameter as originally contemplated will allow a storage resource to both take advantage of unforeseen pricing events and ensure the CAISO charges the resource even if the real-time optimization cannot look out far enough to see sufficiently high enough prices to justify charging the resource at its bid-in charge offer. As most storage resources are likely to have resource adequacy associated with them, potentially penalizing storage for using this parameter through the UCAP calculation will mitigate the usefulness of this tool to almost zero.

Terra-Gen asks the CAISO first allow storage resources to come onto the grid and use this tool and after a period of time assess whether the tool is preventing the most efficient use of the resource from an RA perspective. Terra-Gen believes that storage resources as a pure arbitrage product have every reason to bid and use the EOH SOC tool as a way to be available when the CAISO needs the resources to be available the most and there is no reason to penalize a resource's RA for using a tool that should increase storage availability during high-need hours, not reduce it.

- b. Please provide your organization's feedback on the Operationalizing Storage Resources topic as described in section 4.1.7. Please explain your rationale and include examples if applicable.

Terra-Gen does not support the minimum charge requirement and believes the implementation of this constraint will reduce reliability rather than increase it. Storage's best use-case is to meet real-time needs. The day-ahead market is intended to set-up resources for forcecasted real-time needs. This constraint solely ensures storage resources has a schedule that can meet their day-ahead schedule based on a forecast of when they will be most needed in real-time. Real-time prices indicate when storage is most needed in real-time. It is unreasonable to constrain storage from discharging if the peak happens to be earlier than forecasted simply to ensure the resource can still generate in an hour later on when it is no longer needed.

Terra-Gen again asks the CAISO to first allow storage resources to participate in the market and observe whether there are issue before introducing constraints that are guaranteed to prevent storage from capturing their maximum arbitrage value

whenever the CAISO day-ahead forecast does not align with real-time needs. Terra-Gen also notes this constraint would prevent storage resources – which are the fastest responding in the fleet – from addressing possible reliability events due to cloud cover or unplanned outages. There are likely other ways to address any potential issues that the CAISO may have with storage managing their own charge and discharge in real-time, but storage is a new technology type and needs to gain experience before the CAISO puts in place such draconian constraints.