California ISO

Stakeholder Comments Template

Resource Adequacy Enhancements

This template has been created for submission of stakeholder comments on the Resource Adequacy Enhancements third revised straw proposal that was published on December 20, 2019. 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 **January 27, 2020**.

Submitted by	Organization	Date Submitted
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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 5.1. Please explain your rationale and include examples if applicable.

Boston Energy provides the following comments on individual sections of the system RA portion of the third revised straw proposal.

Resource UCAP Determination

Boston Energy request the CAISO update its proposal to clearly describe how the UCAP value will be determined for resources whose NQC is not just a reflection of a resources Pmax (i.e. CHP resources and net scheduled generators). Such resource types have their NQC adjusted to account for host load requirements and need to be recognized and accounted for when determining a UCAP value.

Resource Supply Plan Requirements

Boston Energy seeks clarity from the ISO what will be required to be reported on the annual and monthly resource supply plan. Will the CAISO require Scheduling Coordinators to report the amount of RA being show for a given resource in NQC terms or UCAP terms? Boston Energy notes that previous iterations of the proposal indicated that NQC would still be shown but slide 53 of the day 1 presentation says UCAP will be required to be shown. Also, Boston Energy asks the ISO to clarify the same value reported on the supply plans will be the same value being

reported/bid (CPM CSP) in the any post monthly supply plan RA showing requirements (POSO or CPM CSP).

Elimination of Forced Outage Replacement and RAAIM Application for Forced Outages
Given the ISO proposal to move to a UCAP methodology, Boston Energy supports the ISO's proposal to eliminate the option for forced outage replacement and the assessment of the RAAIM penalty for forced outages. Applying a RAAIM penalty for forced outage would be a double penalty assessed to a resource given the same resource would also take a UCAP hit for future periods.

Bid Insertion for RA Resources
Boston Energy asks the ISO to provide more details on the specific bid insertion logic the CAISO will implement for NGR resources and how the energy bid curve will be developed given that CAISO currently doesn't have a default energy bid methodology for NGR resources. Also, we ask the CAISO to clarify if the bid insertion rules will also apply for certified ancillary service products and if so, how will the bids be constructed?

Planned Outage Substitution Options
Boston Energy appreciates the CAISO listening to stakeholders and proposing changes to the current POSO process. Boston Energy has reviewed both options and asks the CAISO to consider a different approach where the ISO perform a reliability assessment upon receiving planned outage request from resources and either approve the planned outage if reliability margins are sufficient or work with the resource to reschedule the planned outage to a time where it can be accommodated by the ISO. This approach seems similar to what is contemplated under the short-term opportunity outage type referenced in the paper but would apply to all planned outages. Such an upfront planned outage reliability assessment approach similar to what is conducted in the Eastern ISOs would provide greater certainty for resources and avoid the needed for complex and challenging substitution rules.

Operationalizing Storage
Boston Energy strongly opposes the CAISO proposal for introducing a real-time state of charge constraint on storage resources that have day-ahead energy awards. Such a constraint is purely artificial and inconsistent with the fundamental market design principles CAISO's market has been built on over the years. CAISO's markets are setup as a three-settlement system. Where **all** resources will settle day-ahead schedule deviations at the FMM price and all FMM schedule deviations at the 5-minute real-time price. This fundamental concept would continue to apply to all resource except energy storage. Assertions made at the two-day stakeholder workshop that energy storage resources don't understand the CAISO market design or aren't sophisticated enough to quantify the energy risks of having to buy back a day-ahead or FMM energy schedule at the 5-minute real-time price seems disingenuous.

We view such a constraint as discriminatory and ultimately resulting in reducing the flexibility and value of energy storage resources in the market. As an example, why wouldn't the ISO apply the same constraint to a traditional gas peaker which has a multiple start per day limit. Such a resource could in theory receive a day-head energy award for certain evening hours but operate in prior hours due to real-time pricing events. Given the resource limitation such real-time market outcomes would make the resource unable to meet its day-ahead schedule for the evening hours.

This proposed constraint will take away much needed flexibility from the ISO. The ISO paper incorrectly assumes that reliability is only needed in hours when the day-ahead market schedules energy storage resources for energy. Why does the ISO assume that no reliability events will occur during hours when energy storage resources don't have day-ahead energy schedules? Why does the ISO assume that every hour an energy storage resource has a day-ahead schedule

is a reliability event? Contrary to the ISO's characterization, we feel restricting the discharge capability of an energy storage resource could create reliability issue rather than solve them as the proposal is trying to address. What will the ISO do if a reliability event occurs outside of an energy storage resources day-ahead energy schedule hour, and the ISO artificially restricts the energy storage resource from responding? Exceptional dispatch and out of market actions should not be the answer.

Further, the storage market is still evolving and implementing this constraint will place significant downward pressure on the market value of storage. Instead, the ISO should be developing market design enhancements to increase the market value of these resources. Artificially restricting an energy storage resource to respond to real-time price signals is counterintuitive and will result in decreasing energy market value to energy storage resources and ultimately increasing CAISO overall cost to meet system needs. The speed, accuracy, and flexibility of energy storage resource should be viewed favorably by the ISO and valued, not restricted and discouraged.

In addition, given that the majority of energy storage resource are being procured through various long-term procurement process the proposal to implement a real-time energy constraint creates uncertainty and potential financial harm to resources who have already contracted with LSEs. These resources and those currently participating in the IRP System RA procurements all have to make assumptions on expected CAISO market revenues to provide the LSE's with a least cost best fit option. The introduction of this energy constraint has significant negative impacts on the assumptions made by developers regarding energy market revenues and is something the ISO needs to really consider before imposing artificial constraints on resource that restricts their ability to maximum energy market revenues from the CAISO markets.

Last, Boston Energy supports the public comments made by CESA and WPTF at the two-day RA Workshop in opposition to this proposal. WPTF's comments regarding the ESDER4 proposal to allow energy storage resource to provide the ISO with an optional end of hour SOC parameter is a major market enhancement that we feel should address the ISO's concerns. We don't see why the ISO would then need to add an additional constraint on top of the constraint that is being developed as part of ESDER 4. We actual believe that the ISO's proposal here would negate the improvements of the end of hour parameter being developed in ESDER4.

2. Flexible Resource Adequacy

Please provide your organization's feedback on the Flexible Resource Adequacy topic as described in section 5.2. Please explain your rationale and include examples if applicable.

Boston Energy has no comments at this time.

3. Local Resource Adequacy

Please provide your organization's feedback on the Local Resource Adequacy topic as described in section 5.3. Please explain your rationale and include examples if applicable.

Boston Energy has no comments at this time.

4. Backstop Capacity Procurement Provisions

Please provide your organization's feedback on the Backstop Capacity Procurement Provisions topic as described in section 5.4. Please explain your rationale and include examples if applicable.

Boston Energy has no comments at this time.

Additional comments

Please offer any other feedback your organization would like to provide on the Resource Adequacy Enhancements third revised straw proposal.

Boston Energy has no additional comments at this time.