

Stakeholder Comments Template

Submitted by	Company	Date Submitted
Bonnie Blair bblair@thompsoncoburn.com 202-585-6905	Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (“Six Cities”)	August 20, 2014

Please use this template to provide your comments on the presentation and discussion from the stakeholder meeting held on August 13, 2014.

Submit comments to EnergyStorage@caiso.com

[Comments are due August 20, 2014 by 5:00pm](#)

The presentation discussed during the August 13, 2014 stakeholder meeting may be found at:

<http://www.caiso.com/Documents/AgendaPresentation-EnergyStorageInterconnection.pdf>

Please provide your comments in each of the topic areas listed below.

[Applying the GIDAP to Cluster 7 energy storage projects](#)

The ISO invites stakeholders to comment on the framework developed under existing GIDAP rules for accommodating Queue Cluster 7 energy storage interconnection requests (see slide 7 and slides 11-18) and its future application to subsequent queue clusters.

Comments: The Six Cities generally support treating storage projects as generators for both aspects of their operation (*i.e.*, charging and discharging). However, as discussed below, storage resources that seek qualification as Flexible RA resources should be studied for the charging mode during peak periods and for the discharging mode during partial peak periods.

Are changes to the GIDAP needed?

Given the framework developed under existing GIDAP rules for accommodating energy storage interconnection requests (i.e., without requiring modification to the GIDAP tariff), the ISO invites stakeholders to comment on whether changes to the GIDAP tariff are still needed. Stakeholders are asked to be specific and describe any changes they believe are needed despite this framework and explain why they are needed. (see slide 9)

Comments: At this time, the Six Cities have not identified any changes to the GIDAP tariff necessary to accommodate interconnection of energy storage facilities.

Resource Adequacy

The ISO invites stakeholders to comment on whether they favor “unbundling” flexible capacity from system/local capacity as a means of facilitating energy storage in California and explain why or why not. (see slides 22-30)

Comments: The Six Cities support further consideration of unbundling flexible capacity from system/local capacity. Energy storage resources have the potential ability to offer exceptional value in addressing the operational challenges resulting from integration of variable energy resources. Operating patterns for energy storage resources that can provide the greatest flexibility benefits may be significantly different from operating patterns that would maximize system or local capacity available during peak load conditions. Allowing energy storage resources to elect qualification as “Flexibility Only” RA, as System/Local RA, or as System/Local/Flexible RA will allow energy storage resources to tailor interconnection arrangements so as to enhance the economic value of the projects and potentially expand the flexible attributes available to the ISO.

Realizing the benefits to the ISO’s markets from allowing such unbundling, however, will require rigorous adherence to the cost causation principle in identifying and assigning the costs associated with interconnection and deliverability of energy storage resources based on the requested qualifications and operating options. Developers of energy storage resources and purchasers of the output or attributes of such resources must receive accurate and transparent price signals reflecting the full costs of the interconnection facilities required to accommodate different operating patterns for such resources. Moreover, the location of energy storage resources may have a significant impact on the types of facilities required to support the interconnection. Accurate and transparent price signals also are necessary to encourage development of energy storage resources at locations that will enhance overall efficiency of the grid.

Is a “charging deliverability assessment” needed?

The ISO invites stakeholders to comment on whether a test is needed to ensure that a storage resource is able to fully charge during each 24-hour day in order to be able to discharge to provide its full RA value. If you believe such a test is needed, how would you propose such a test be performed? Please be specific. (see slide 31)

Comments: Tests should be conducted to confirm that an energy storage resource is able to fully charge at least once during each 24-hour day in order for that resource to qualify to provide RA. The Six Cities disagree with the ISO’s suggestion at slide 31 of the August 13, 2014 presentation that an energy storage resource’s ability to charge is analogous to a conventional generator’s ability to obtain fuel and, therefore, outside the scope of interconnection analysis. As other stakeholders commented during the August 13th meeting, an energy storage resource’s ability to charge both depends upon and affects the transmission grid, unlike fuel delivery arrangements for conventional generators.

The nature of the required tests should depend on the type of RA for which the resource desires to qualify. If the resource requests qualification to provide Flexible RA, then the ISO should test for ability to charge during peak hours. Charging during peak hours would be necessary to support the operational pattern described at slide 26 of the August 13th presentation to raise the “belly of the duck” by charging during the afternoon “gross” load peak and then to support the upward ramp by discharging during the late afternoon/early evening partial peak period. For energy storage resources that wish to qualify for system/local RA, it should be sufficient to confirm that the resource can charge fully during off-peak periods (provided it can hold the charge until the following peak).

Other issues

The ISO invites stakeholders to comment on any other issues within the scope of this energy storage interconnection initiative.

Comments: The Six Cities do not have any additional comments at this time.