Stakeholder Comments Template

Submitted by	Company	Date Submitted
Dinesh Salem-Natarajan (dsn@terra-genpower.com, 858-764-3744)	Terra-Gen Power	08/21/2014

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:

Terra-Gen commends the CAISO for developing a framework that is within the existing GIDAP rules for energy storage projects already in the queue.

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:
>
> The Terra-Gen anticipates that some minor changes to the GIDAP rule or BPM may be needed to accommodate the technology spectrum for the energy storage projects.
>
> Comments/ issues raised during the stakeholder meeting point to concerns related to energy storage projects being stranded (for day to day operations) due to unmitigated overloads that may occur when energy storage projects operate in the charging mode.
>
> Specific to the charging mode of the energy storage projects, not all energy storage technologies have the ability to freely operate between 0 MW and full charging load MW. The CAISO needs to distinguish energy storage projects based on the flexibility of their charging mode when identifying the need for system reliability upgrades to mitigate any charging mode overloads.
>
> Energy storage projects with flexible charging mode can mitigate these overloads by operating at a lower charging load (per CAISO congestion management). While the duration to fully replenish the stored energy will be longer, these energy storage projects are less likely to be stranded for next day operation.
>
> Energy storage projects with inflexible charging mode, however, can only mitigate charging mode overloads by not charging and thus risk being stranded for next day operation. In order to avoid the risk of these energy storage projects being stranded, any charging mode overloads caused by energy storage projects with inflexible charging mode may have to be resolved by implementing infrastructure upgrades.
>
> Terra-Gen requests CAISO to evaluate if the existing GIDAP rules or BPM accommodate the need to identify and assign upgrade cost responsibility (to resolve charging mode overloads) to only energy storage projects with inflexible charging mode.

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:

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:

Other issues

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

    Comments: