Stakeholder Comments – LS Power

Submitted by	Company	Date Submitted
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Please use this template to provide your comments on the ESDER Phase 2 stakeholder initiative Straw Proposal posted on May 24 and as supplemented by the presentation and discussion during the stakeholder web conference held on May 31.

Submit comments to InitiativeComments@CAISO.com

Comments are due June 9, 2016 by 5:00pm

The Straw Proposal posted on May 24 and the presentation discussed during the May 31 stakeholder web conference may be found on the ESDER Phase 2 webpage.

Please provide your comments on the Straw Proposal topics listed below and any additional comments you wish to provide using this template.

NGR enhancements

The CAISO is proposing to explore two areas of possible NGR enhancement: (1) represent use limitations in the NGR model and (2) represent dynamic ramping in the NGR model.

The CAISO is requesting stakeholders provide comments in each of these two areas.

Comments:

We support the CAISO in representing use limitations in the NGR model, and encourage the CAISO to implement these limitations as a reference to MWh energy throughput, not

referencing a certain number of "cycles". The definition of cycles is not clear in the battery industry, varying somewhat across manufacturers and product lines, and will likely cause confusion.

While representing dynamic changes that are a function of State of Charge (SOC) is important, focusing on Ramp Rates alone appears shortsighted, and is unlikely to be the most valuable of the SOC based dynamic parameters that could be explored.

Instead, LS Power suggests that CAISO consider changes in the NGR model that allow an NGR to represent multiple power configurations and bid stacks. Specifically, the behavior of many energy storage resource types that will use the NGR model may be very different across the range of State of Charge, and the NGR model should allow for power limits (Pmax and Pmin) and bid stacks (price/output offer levels) to be altered in the Real Time Market as a pre-defined function of the telemetered State of Charge. This will provide much needed flexibility in constructing the wholesale market offers for NGRs utilizing different energy storage technologies, and will result in more accurate representation of costs and capabilities, as well as enhanced performance due to the potential for reducing the frequency of infeasible market awards and dispatches.

Demand response enhancements

Two stakeholder-led work groups are up and running within ESDER 2 to explore two areas of potential demand response enhancement:

- Baseline Analysis Working Group – Explore additional baselines to assess the performance of PDR when application of the current approved 10-in-10 baseline methodology is sufficiently inaccurate.
- Load Consumption Working Group – Explore the ability for PDR to consume load based on an ISO dispatch, including the ability for PDR to provide regulation service.

The CAISO is requesting stakeholders provide comments in each of these two areas.

Comments:

No comments at this time.

Multiple-use applications

The ISO has not yet identified specific MUA issues or topics that require treatment in ESDER 2. The ISO proposes to continue its collaboration with the CPUC in this topic area through CPUC

Rulemaking 15-03-011. If an issue is identified that should be addressed within ESDER 2 the ISO can amend the scope and develop a response.

The ISO is requesting stakeholders provide comments on this topic area as well as this proposed approach.

Comments:

No comments at this time.

Distinction between charging energy and station power

The ISO proposes to seek Board approval in two ways:

- To revise the ISO tariff definition of station power to exclude explicitly charging energy (and any associated efficiency losses); and
- Permit the ISO to revise its tariff later to be consistent with IOU tariffs, as needed, in the event that they revise their station power rates.

The CAISO is requesting stakeholders provide comments on this proposed approach.

Comments:

The rate treatment of station power is an issue of critical importance for energy storage. Today there is a lack of clarity on how storage station power should be treated, the result of which is energy storage projects receiving worse treatment than is the case for thermal generation. The ISO should explicitly exclude charging energy and associated efficiency losses from the definition of Station Power as planned. Critically however, the other change needed in the Tariff is to explicitly permit netting of station power against output (positive or negative, i.e. Charging) when the system is online in the market.

This issue has a far larger impact on storage project finances than the definition of "Station Power" itself. The gray area surrounding permitted netting in the Tariff is currently resulting in discriminatory treatment of storage compared to other resource types in the contracts that energy storage providers are signing with the IOUs. This situation must be clarified soon in the CAISO Tariff, with the appropriate guidance and input from the CPUC.

CAISO should move quickly to make it clear that energy storage is allowed to net their station power from output across their whole range of operation, just as conventional thermal assets net their station power from output while generating. This treatment is consistent and fair with the treatment of any conventional power plant using renewable or fossil fuel technology.

Other comments

Please provide any additional comments not associated with the topics above.

Comments:

No additional comments at this time.