Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide your comments on the Issue Paper and Straw Proposal posted on July 30, 2015 and as supplemented by the presentation and discussion during the stakeholder web conference held on August 6, 2015.

Submit comments to InitiativeComments@caiso.com

Comments are due August 18, 2015 by 5:00pm

All documents for the energy storage and distributed energy resources (ESDER) initiative, including the July 30, 2015 Issue Paper and Straw Proposal and the presentation discussed during the August 6, 2015 stakeholder web conference, are available on the webpage for the ESDER initiative at: http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage_AggregatedDistributedEnergyResources.aspx

Non-generator resources (NGR) enhancements

Please provide your comments in each of the four areas of proposed NGR enhancement.

CLECA comments that its interest is in the enhancement of NGR to allow load to either increase or decrease as demand response, which may or may not involve the use of storage. It is clear that load increases could be useful at times of over-generation. It is also clear that load could be ramped up or down to offset ramps associated with the output of intermittent renewable generation. It is CLECA's current understanding that PDR and RDRR will not be modified to allow for a load-increasing option, but will instead only allow for load reductions. Thus, NGR or some other CAISO resource must be modified to allow load as demand response to increase and decrease. The CAISO has not developed NDR-DDR, which was supposed to have been a

product for dispatchable demand response. However, even that proposed product, as first discussed in 2012, would have only allowed load to decrease, not increase. Since NGR-DDR has not been defined as in scope for 2015, there does not appear to be any load-increasing option available. The CAISO has not indicated whether such an option would be in scope for 2016, but we would encourage its addition.

As we understand it, the NGR limited energy storage resource (NGR-LESR) cannot realistically be applied to demand unless it includes storage which can be installed behind the facility meter, is deemed as CAISO demand response where there is no export across the facility meter, and does not require an interconnection agreement.

1. Update documentation on NGR to capture material and clarifications compiled for April education forums.

Comments: Please provide documentation as to how NGR could allow load to decrease and increase as needed to provide ramping capability or to address over-generation conditions when storage is not present.

2. Clarify how ISO uses state of charge (SOC) in market optimization.

Comments: none

3. Evaluate initial SOC as a submitted parameter in the day-ahead market.

Comments: none

4. Evaluate option to not provide energy limits or have the ISO co-optimize an NGR based on state of charge.

Comments: none

PDR/RDRR enhancements – alternative baseline methodologies

Please provide your comments in each of the two areas of proposed enhancement.

CLECA supports the CAISO's proposed principles that any baseline change should meet the requirements of accuracy, auditability, ease of implementation, and compliance with NAESB standards.

CLECA begins by pointing out that the Issue Paper contains a statement that may be misleading. It states that the Type 1 baseline uses a 10-in-10 non-event day methodology as described in

section 4.13.4.1 of the tariff. It then says that a +/- 20% adjustment is allowed to the baseline. (p. 16) It is CLECA's understanding that the 20% adjustment is not "allowed" but required by the software, so that unlike retail DR, where the adjustment is optional, and can range from zero to up to 40% for some DR programs, the adjustment is not optional under the CAISO's systems.

1. Develop meter generator output (MGO) as a new ISO baseline methodology.

Comments:

Meter generator output (MGO) is a baseline option that should be added to existing CAISO baselines. However, this baseline option could apply under multiple circumstances (use cases) that would include load alone participating in demand response, or load with behind the meter (BTM) on-site generation, storage, or both. In addition, the BTM generation might or might not be engaged in net energy metering (NEM). To date the discussion of MGO has been dominated by storage-related applications, but there are other options. Rather than attempting to accommodate a large number of use cases, the baseline methodology should focus on basic functionality first. Two key issues are 1) what is being metered and 2) what baseline is applicable, if any. The methodology should be clear about what is being metered and where, particularly where there are both BTM generation and storage present. It is our understanding that only the 10-in-10 baseline is currently available until the CAISO considers custom baselines. Based on the straw proposal, we infer that custom baselines will not be considered in 2015.

In addition, there is an issue of how the utilities and the CAISO address NEM for baseline calculations. The report of the Supply Integration Working Group created in the CPUC's DR Rulemaking (R, 13-09-011) found:

> "Finally, at the May 28 working group meeting, there was a discussion of a difference in how the utilities and the CAISO would calculate the performance of customers doing net energy metering with onsite solar distributed generation and participating in wholesale DR. It was stated that the utilities set grid exports to zero since they are not DR, whereas the CAISO, in establishing its resource baseline, includes exported energy. This results in different CAISO and CPUC baseline calculations. The working group has not had time to consider this issue in any detail but suggests that there be a forum for discussing how to determine the performance of customers with onsite generation engaged in net energy metering and DR. The working group also notes that the Joint Utilities Tier 3 advice letter to implement the demand response auction mechanism raised a concern about this issue under "Customer Participation Limitations".[10] Some members of the working group suggest that a solution needs to be identified that would treat the solar portion of a NEM export correctly for retail consideration while allowing any demand curtailment to be treated as load only for the purposes of wholesale demand response.

[10] Advice Letter 4618-E for PG&E, 3208-E for SCE, and 2729-E for SDG&E, filed April 20,

2015." (Supply Integration DR Working Group Report, June 30, 2015, p. 16)

Any differences should be fully vetted and resolved.

2. Develop additional detail regarding the "ISO Type 2" baseline methodology (i.e., provision of statistically derived meter data) and document that in the appropriate BPMs.

Comments:

There are at least two areas where the use of this methodology would be beneficial. Both would require a population providing DR that is stratified to provide statistically significant results.

Currently, the ISO Type 2 baseline methodology is permitted where there is no interval meter data. Interval meter data for customers of investor-owned utilities will be universally available very soon. However, even so, the data do not necessarily meet CAISO settlement requirements for SQMD in all cases, due to the intervals in which the data are recorded, VEE'd, and stored. It would be advantageous if statistical sampling were permitted where interval meter data is available but the granularity is insufficient to meet CAISO requirements. Thus the words "interval data" would be taken to mean "interval data at the required level of granularity." How would this change be useful? To provide an example, currently interval meter data for residential customers is available only on a 60-minute basis, which is only permitted for settlement for day-ahead energy. Data at a 15-minute or a more granular level is required for participation in real-time or ancillary services markets. If 15-minute data were available for some subset of residential customers (a matter currently before the California Public Utilities Commission), statistical sampling would allow these data, based on appropriately stratified and statistically significant samples, to be used to settle DR with participation by larger numbers of residential customers.

As another example, currently 15-minute data, divided by three, may be used for 5-minute settlement for real-time energy and ancillary services. It may be that 5-minute data would be more precise for certain products, such as those providing ramping. Since currently data for non-residential customers is only available on a 15-minute basis, a suitably representative sample of customers with 5-minute data might provide a more accurate approximation of the 5-minute output for settlement purposes.

Where there is statistical sampling permitted, there remains the issue of which entity will use the sample data to perform the calculations to use the baseline for settlement purposes. There has been discussion of whether the calculations should be performed as part of the CAISO's settlement systems or whether they would be performed by the demand response provider's scheduling coordinator and uploaded to the CAISO for settlement, subject to audit rights. This matter must be resolved in cooperation with the development of the CAISO's new DR-related location, registration, baselines, performance and compliance, and settlement systems.

Non-resource adequacy multiple use applications

Please provide your comments on each of the two non-RA scenarios the ISO has proposed to address.

Also, the ISO strongly encourages stakeholders to ***identify and describe use cases*** under each scenario (including diagrams of the configurations contemplated for these use cases), and specific issues not covered in these scenarios that should be addressed in this initiative.

1. Type 1: Resource provides services to the distribution system and participates in the ISO market. Question 1 – How do we manage conflicting real-time needs or dispatches by the distribution utility and the ISO? Question 2 – If distribution system and ISO needs are aligned, and the resource's actions meet the needs of both, is there a concern about the resource being paid twice for the same performance? Under what situations is double payment a concern? How should we address this concern? Question 3 – Should any restrictions be on a DER aggregation or the sub-resources of a DER aggregation providing distribution-level services? Would the distribution utility ever call upon a multi-pricing node DER aggregation to address a local distribution problem?

Comments: none at this time

2. Type 2: Resource provides services to end-use customers and participates in the ISO market. The ISO has identified the following three sub-types (are there others?): (a) DER installed behind the customer meter, such that flow across the customer meter is always net load; (b) DER installed behind customer meter, such that flow across the customer meter can be net load or net injection at different time; and (c) DER installed on the utility side of the meter, may provide service to end-use customers and participate in wholesale market.

Comments: none at this time