

Stakeholder Comments Template

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.

Comments:

Introduction

PG&E appreciates the opportunity to comment on the CAISO's Energy Storage and Distributed Energy Resources (ESDER) Phase 2 Straw Proposal.

PG&E agrees with the CAISO's focus in Phase 2 on enhancements to the NGR model and to Demand Response models (PDR/RDRR), addressing use limitations and including load consumption and regulation, respectively. Regarding PDR/RDRR, PG&E is concerned that modifications to current baseline methodologies for frequently dispatched resources create the possibility for double compensation. PG&E is an active participant in the baseline working groups and will continue to support those efforts to define an appropriate baseline or limited set of baselines.

With respect to multiple-use applications (MUAs), PG&E continues to support the CAISO's efforts to address multiple-use application and station power issues in coordination with the CPUC, via the ongoing Energy Storage Order Instituting Rulemaking (R.15-03-011). PG&E is an active participant in the CPUC's energy storage proceeding, and has submitted comments in that venue. PG&E supports the CPUC and CAISO's efforts to define use cases, so that the agencies and stakeholders can ultimately address compensation, metering, billing and operational issues associated with multiple uses.

Regarding station power – which, in the context of ESDER, applies only to storage not actively managing retail load – PG&E supports a station power definition for storage that is consistent with the definition for conventional resources, with the addition that the load that is used in the charging process should not be considered station power.

PG&E will await the launch of the separate stakeholder initiative to comment substantively on the CAISO's proposal to review the rules for load subject to the transmission access charge (TAC).

PG&E provides more detailed comments on each of the Phase 2 issues below.

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:

PG&E supports adding daily throughput and cycle limitations as the highest priority use limitation functionality. While the CAISO discussed daily limits on cycling, the CAISO should implement a daily discharge MWh limitation. This parameter should be a biddable parameter, similar to available daily hydro energy use limits. Bidders should be able to represent limitations as physical use limits, and not necessarily opportunity costs, which can otherwise lead to undue CAISO dispatch with the inherent uncertainties associated with projected and actual market prices/results. PG&E expects that market participants will use daily MWh limitations to manage annual limits, so the daily discharge MWh is more critical than daily cycle limitation of opportunity cost based annual limits. Additionally, there is some overlap with Station Power. To the extent that Station Power is measured through the CAISO meter, if such Station Power is not de minimis, the CAISO state of charge (SOC) calculation should not incorporate this Station Power as charging energy since this would introduce errors/inaccuracies to the SOC calculations and to the resulting market awards/dispatches. Such Station Power parameters should be made available to the CAISO's NGR model (either through the Master File and/or as a daily bid parameter).

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:

Baseline Analysis Working Group Issues

This Baseline Analysis Working Group (BAWG) established three sub-working groups that include: 1) Settlements for Traditional Demand Response, 2) Settlements for Frequently Dispatched (FD) Resources, and 3) a Control Group. PG&E has concerns that the scope of the FD sub-group has been too narrowly limited. At the kick-off meeting on May 11th, the CAISO stressed that customized baselines were off the table. Later, at the May 20th meeting, the scope was further limited by the CAISO in its caveat that a Metering Generator Output (MGO) methodology could not be mandated (e.g., in cases where there are insufficient non-event days). These CAISO-imposed limitations may hamper the ability to identify an optimal methodology.

With the aforementioned procedural observation, PG&E views the sub-group's task of determining baselines when there are frequent dispatches of the storage device (Section 3.2.2.4), as including an accounting of retail load shifting into a baseline. If non-event days are used to determine a baseline and the customer shifts load on a daily basis as driven by retail rates, then those non-event days should presumably include a daily load shift, even though there is no wholesale market participation on those days. As a result, the current ISO Type 1 or ISO Type 2 baseline methodologies may be adequate.

Load Consumption Working Group Issues

PG&E generally supports the expansion of PDR to include a load increasing function along with the possibility of regulation. These changes will assist energy storage devices and other DERs to respond to changing system needs. However, PG&E has concerns with a daily load shifting PDR product applied to a BTM storage device that is already conducting similar load shifting for a customer, driven by retail rates. PG&E notes that the California utilities are already responding

to changing system needs through retail rate structures, as demonstrated by PG&E's new evening time of use (TOU) rates and matinee pricing under CPUC R.13-12-011.¹ Since retail rate structures are intended to generally reflect system needs, PG&E would consider a BTM storage customer that is shifting energy daily to arbitrage retail rates and responding to a daily PDR product with the same action to be double compensation.

If a PDR baseline were to include a typical load shape that assumes daily retail rate-driven load shifting, and could measure daytime load consumption or evening discharge as *additional* to this daily retail load shift, e.g. by using a 10-in-10 baseline, then PG&E may be amenable to a daily load shifting product through PDR. PG&E also notes that a baseline that includes a daily load shift action would ensure that CAISO is receiving a bid that is truly incremental to actions that a customer would have otherwise taken.

While it may be necessary and appropriate to change retail rates over time to more closely match the cost to serve a customer (thus more closely matching system prices), it is not appropriate to substitute a wholesale commodity charge in lieu of a retail commodity charge² if the energy will eventually serve a retail end-use need. PG&E supports the notion in Section 3.2.1.1.4 that the wholesale compensation in a load consumption scenario does not need to offset a retail price, because that same energy may be dispatched later to serve a retail need, which would likely render further bill savings for the customer. PG&E supports the notion that storage customers will weigh trade-offs between retail bill impacts and wholesale market opportunities.

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:

PG&E supports the CAISO's proposal to align the timing of the MUA rules with the development of R.15-03-011 (Energy Storage Rulemaking). PG&E looks forward to working with stakeholders to develop these rules.

¹ See E-TOU A and E-TOU B: <http://www.pge.com/en/myhome/saveenergymoney/plans/tou/index.page>

² Section 3.2.1.1.3

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:

Station power should be defined consistently with how it currently is defined for conventional resources, with the addition that the load that is employed in the charging process, including that portion of the load that cannot be returned to the system, should not be considered station power and is appropriately treated as a component of the wholesale market transaction.

The proposal that all load “essential” to charging should be part of the wholesale transaction is inconsistent with how station power is currently treated for conventional resources, and should be rejected. PG&E notes that discussion of station power in ESDER applies only to storage not actively managing retail load. Thus far, it has not been essential that storage actively managing retail load requires a station power carve out, since charging energy of these devices thus far has not warranted a wholesale rate, which would create a differentiating need for station power. Finally, to the extent that Station Power is measured through the CAISO meter, if such Station Power is not de minimis, it should be a biddable parameter. The CAISO state of charge calculation should not incorporate this Station Power as charging energy.

Other comments

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

Comments:

No additional comments at this time.