

Pacific Gas and Electric Company Stakeholder Comments

Submitted By		Company	Date Submitted
CB Hall cbh7@pge.com (415) 973-7064	John Newton jans@pge.com (415) 973-1609	Pacific Gas and Electric Company ("PG&E")	November 17, 2016

PG&E appreciates the opportunity to comment on the CAISO's Revised Draft 2017 Stakeholder Initiatives Catalog ("Catalog") and Draft 2017 Policy Roadmap ("Policy Roadmap"). PG&E values the Catalog process as a primary forum to suggest initiative-based solutions for grid reliability, customer cost and market efficiency issues. PG&E strongly supports the work the CAISO is doing and its focus on reliability, renewables integration, regional expansion, distributed energy resources, and energy storage. With that in mind, PG&E offers the following comments aimed at enhancing market efficiency and fairness for all market participants and maintaining the affordability of critical electricity service to customers.

A. PG&E recommends that the CRR Revenue Sufficiency discretionary initiative be added to the CAISO's Policy Roadmap for 2017

CRR Revenue Sufficiency

PG&E continues to be concerned by the large sums of CRR revenue inadequacy that have occurred over recent years (for example: \$200 million in 2014 and \$98 million in 2015). The expansion of CAISO's market could further exacerbate this issue, as modeling transmission availability and arrangements throughout the West in a month-ahead or year-ahead timeline will likely be challenging. PG&E is not alone in its thinking, as the CAISO's Department of Market Monitoring (DMM) has also urged the CAISO to address the CRR revenue inadequacy problem. CAISO should also consider merging the "CRR Revenue Sufficiency" and "CRR Auction Efficiency" initiatives (since the two are highly related and interdependent) and take on this topic in 2017. We note that the DMM has recommended that the CAISO launch a stakeholder initiative to explore removing the CRR auction and replacing it with a market for CRRs based on bids submitted by entities willing to buy or sell CRRs. As part of this overall effort, PG&E also supports the CAISO's proposal to analyze the economic impact of transmission outages.

B. PG&E suggests expanding the scope of the ESDER 3 and RSI 3 initiatives

Energy Storage and Distributed Energy Resources – Phase 3

PG&E recommends that the CAISO address three important topics as part of the ESDER – phase 3 initiative: (1) interconnection assessment of storage chargeability; (2) intraday utilization of NGR resources; and (3) a placeholder for any carry-over ESDER Phase 2 topics.

1. Interconnection assessment of storage chargeability

PG&E requests that the CAISO consider whether changes are necessary to the interconnection process to further address chargeability, as this will provide assurance of a project's ability to charge (and therefore discharge) when needed (and valued) by the wholesale market. Without assurance of a project's ability to charge, it will be difficult for load-serving entities to make storage procurement decisions—especially important as more storage projects come online.

2. Intraday utilization of NGR resources

PG&E supports the CAISO's plan to launch a third phase of ESDER and to continue working on NGR-related topics. More specifically, PG&E suggests that the CAISO consider a new daily NGR capacity bid, allowing the CAISO to

select some NGR resources for REM-like optimization. However, the CAISO's utilization would not be limited to regulation. The utilization would include CAISO's selection (optimization) of charging energy, discharging energy, ancillary services and flex ramping needs across all markets and dispatch cycles. The NGR capacity would effectively be turned over to the CAISO for the operating day (based on a single, daily capacity bid) to increase overall market and system efficiency, with the expectation that the use of the NGR would respect the Master File limits and subject to returning the NGR at the end of the day to the same state of charge as at the beginning of the day.

3. Placeholder for Carry-Over of ESDER Phase 2 Topics

PG&E recommends that issues that may require further attention from ESDER Phase 2 be addressed in Phase 3. This could include implementation details associated with the straw proposals associated with the Load Consuming Working Group and the Baseline Analysis Working Group. For example, the implementation details for PDR enhancements (i.e., load consumption and frequency regulation). Furthermore, issues that are cross-scoped with the CPUC's Energy Storage OIR, such as multiple use applications and station power, may require further attention. For the reason identified, the CAISO should keep a placeholder for further attention in Phase 3 as needed.

Reliability Services Initiative – Phase 3

PG&E requests that the CAISO (as part of its Reliability Services initiative phase 3) make changes to the capacity procurement mechanism ("CPM") competitive solicitation process ("CSP") to increase the volume of capacity offered into the CSP. For example, the length of CSP designations (60 days for local designations) and CAISO's broad authority to extend designations (an additional 60 days for Exceptional Dispatch CPM per 43A.3.6 or "for the expected duration of the CPM Significant Event" for a Significant Event CPM per 43A.3.5) are not consistent with the way RA product is transacted in the bilateral market and creates risks for LSEs managing an RA portfolio. PG&E is concerned that this limits the quantity and quality of resources offered into the CPM CSP and available to CAISO to address reliability needs. There are several simple fixes that would address these concerns, but PG&E believes the benefit to the CPM CSP would be substantial.

C. PG&E wants to emphasize the near-term importance of the following discretionary initiatives:

While PG&E does not propose changes to the ranking of the following initiatives, it is important to consider the near-term importance of these discretionary initiatives:

Flexible Ramping Product Enhancements

PG&E supports the DMM's request to continue enhancing the design of the Flexible Ramping Product. More specifically, PG&E encourages the CAISO to explore extending FRP into the day-ahead market, allowing the CAISO to better commit slower-start flexible resources in the day-ahead time frame. By committing slower-start flexible resources in the day-ahead time frame, the CAISO would make available the faster-start flexible resources to respond in real-time, obviating the need for additional Flexible RA.

Review of Convergence Bidding Uplift Allocation

Convergence bidders today can profit from differences between the day-ahead and real-time modeling of transmission constraints and drive up Real Time Imbalance Offset ("RTIO") costs. By assigning such costs solely to physical demand, the current cost allocation methodology provided a perverse incentive for virtual bidders to take advantage of these modeling issues. PG&E continues to strongly support the DMM's proposal to allocate a portion of RTIO costs back to Convergence Bidders who received revenues funded in part by such uplifts.

Marginal Loss Surplus ("MLS") Allocation Approaches

As additional balancing authority areas are gearing up to join the CAISO as full participating transmission owners, PG&E believes the CAISO should modify the methodology for allocating marginal loss surplus. More specifically, PG&E recommends that the CAISO develop processes that allocate marginal loss surplus first to the specific region (i.e., CAISO

v. PACW v. PACE, etc.) where such surplus was generated, before allocating to metered demand in each region. PG&E strongly encourages the CAISO to launch this initiative in advance of the CAISO becoming a regional entity.

FMM Block Scheduling of DR Resources

PG&E thanks the CAISO for adding this important topic to the Catalog. This initiative would address deficiencies in the dispatch of Reliability Demand Response Resources in the CAISO real-time markets. Demand Response programs used to address CAISO system emergencies are required to be bid into the CAISO real-time markets beginning on May 1, 2017. These programs have salient characteristics that cannot be captured in the five minute dispatch process, where they are currently expected to be dispatched to curtail load.

FERC Competitive Transmission Conference

PG&E appreciates the CAISO acknowledgement that any FERC orders following the recent FERC technical conference on competitive transmission requiring tariff changes would be a non-discretionary initiative for the CAISO. Therefore, PG&E understands CAISO's decision not to include as a discretionary initiative responding to the FERC technical conference on competitive transmission.

D. Multi-Segment Ancillary Services Bidding should not be removed from the Catalog

Multi-Segment Ancillary Services Bidding

While CAISO already considers cost separation from energy costs and their different output levels, PG&E perceives a significant unrealized benefit from this proposed initiative. Allowing scheduling coordinators to offer ancillary services in a way that more accurately reflects the variable costs of the resources providing the output would improve market efficiency and reduce costs for market participants. PG&E requests that the CAISO retain this initiative in the Catalog.

E. The need for the following initiatives is not entirely clear

- Export Charges
- Management of EIM Imbalance Settlement for Bilateral Schedule Changes
- Donation by Third Party for Transmission Capacity Available for EIM Transfers

For the following initiatives, PG&E suggests the following the Policy Roadmap criteria:

Initiative	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefits	Market Participant Implementation (\$ + resources)	ISO Implementation (\$ + resources)	Total Feasibility	Total Score
Export Charges	0	0	0	0	7*	7*	14*	14
Donation by Third Party for Transmission Capacity Available for EIM Transfers	3	3	3	9	7*	7*	14*	23

*PG&E declines to take a position on the feasibility of undertaking these initiatives.

Export Charges

PG&E requests that the CAISO explain why it might be necessary to exempt exports (real-time and/or day-ahead) from transmission access and measured demand uplift charges.

Donation by Third Party for Transmission Capacity Available for EIM Transfers

PG&E simply requests more information on this initiative, as the current description does not fully justify the need.

F. PG&E recommends that the following initiatives be removed from the catalog, or that their ranking be adjusted as follows:

- Allowing Convergence Bidding at CRR Sub-Load Aggregation Points
- Implement Point-to-Point Convergence Bids
- Regulation Service RT Energy Make Whole Settlement

Initiative	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefits	Market Participant Implementation (\$ + resources)	ISO Implementation (\$ + resources)	Total Feasibility	Total Score
Allowing Convergence Bidding at CRR Sub-Load Aggregation Points	0	0	0	0	7*	7*	14*	14
Implement Point-to-Point Convergence Bids	0	0	0	0	7*	7*	14*	14
Regulation Service RT Energy Make Whole Settlement	0	0	0	0	7*	7*	14*	14

*PG&E declines to take a position on the feasibility of undertaking these initiatives.

**PG&E anticipates high implementation costs associated with this initiative, and very limited benefits.

Allowing Convergence Bidding at CRR Sub-Load Aggregation Points

PG&E believes that the market efficiency benefits of this initiative are not clear. However, the result of this initiative would appear to create opportunities for some market participants to exploit limitations in the market and system model.

Implement Point-to-Point Convergence Bids

As PG&E has previously stated in past Catalog cycles, there are no clear reliability or market efficiency benefits to be gained from implementing point-to-point convergence bids. Instead, this initiative could lead to high uplift costs: offsetting virtual bids have often been used to exploit modeling differences between day ahead and real-time market models. PG&E recommends that the CAISO remove this initiative from the Catalog.

Regulation Service RT Energy Make Whole Settlement

While PG&E understands the logic behind this initiative, we nevertheless believe that this will create unnecessary complexity that will outweigh the benefits. Furthermore, scheduling coordinators can today embed expected costs in regulation capacity and mileage bids – obviating the need for this initiative.