

Comments of Pacific Gas & Electric Company Primary Frequency Response – Phase 2 Working Group #1

Submitted by		Company	Date Submitted
Josh Arnold J2A2@pge.com 415-973-1273	CB Hall cbh7@pge.com 415-973-7064	Pacific Gas & Electric	March 20, 2017

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to submit comments on the California ISO’s Primary Frequency Response (PFR) phase 2 working group #1, which was held on February 9th, 2017. Working with the ISO and other stakeholders, PG&E will continue to strive for high standards of grid reliability at an affordable cost for its customers.

A. ANNUAL FORWARD PROCUREMENT

A1. PG&E Encourages the ISO to Evaluate the Capability of Resources to Supply PFR

PG&E suggests that the ISO explore establishing a process to evaluate the PFR capability within the ISO system in the year-ahead time frame (on an annual basis) working with resources required to provide PFR.¹ At a high-level, this analysis would allow the ISO to understand the capability (or legitimate lack of capability, per official ISO exemptions) of resources interconnected to the ISO grid. With this information in hand, the ISO would ideally be able to evaluate whether it has enough capability to meet its estimated needs for complying with NERC BAL-003-1, and directionally whether additional measures or procurement are warranted.

A2. PG&E Encourages the ISO to Evaluate Mechanisms for the Procurement of Additional Capability through a Competitive Solicitation

If the ISO finds (through its year-ahead evaluation) that it will likely be short of PFR capability, PG&E suggests that the ISO conduct a competitive solicitation for transferred frequency response (as it did for the 2017 NERC compliance year) and look at additional options to minimize the cost of meeting the reliability needs. For example, the ISO could explore options where resources without an obligation to provide PFR could bid against the external balancing authorities. If such non-required resources can offer PFR capability at a cost that is lower than what the ISO would have to pay for transferred frequency response, then such resources could be awarded a one-time capability payment. Such a payment could allow existing asynchronous resources to install the smart inverters and other equipment necessary to provide PFR, which they would then be obligated to provide.

¹ By required resources, PG&E is referring to those resources that are obligated to provide PFR, per the CAISO tariff.

B. DAY-AHEAD AND REAL-TIME MARKETS

B1. PG&E Supports the Consideration of a Market Constraint for PFR Capacity

PG&E supports (conceptually) the ISO reserving available capacity (upward and downward) in its market optimization to ensure that resources can respond during a system disturbance, enabling the ISO to meet its NERC obligation. PG&E suggests that only those resources that have been identified as PFR-capable would be eligible for such capacity awards. At a high level, PG&E also supports compensating such resources for the opportunity cost of making such capacity available, assuming that such capacity is procured on a least-cost basis.

B2. PG&E Encourages the ISO to Carefully Consider the Implications of a New Constraint

While PG&E supports the exploration of a market constraint for frequency response capacity, we encourage the ISO to take enough time to explore the nuances and implications of such a change to its markets, with robust documentation of the market formulations, simulations and testing. In addition, PG&E asks the following questions:

- Should frequency response capacity be reserved in the day-ahead and real-time markets, or is the real-time market sufficient?
- How exactly will the ISO translate its NERC BAL-003-1 compliance requirement (expressed in MW / 0.1 Hz) into a capacity target (expressed in MWs)? Will the capacity target change by time of day, by day of week, and/or by month of year?
- If the ISO has to commit resources in order to satisfy the frequency response capacity constraint, will there be a significant increase in bid cost recovery uplift? Will there be implications for use-limited resources?
- Since NERC will measure CAISO frequency response based on performance within the CAISO balancing authority, how will the ISO factor in the external resources that are being dispatched by the CAISO via the EIM?

C. PHYSICAL RESPONSE DURING SYSTEM FREQUENCY DEVIATION

C1. PG&E is Hesitant to Support a Payment for the Physical Response of Resources

PG&E is hesitant to support compensating resources for the actual (physical) response during a system frequency deviation. PG&E is hesitant for three reasons:

1. While such a payment might make sense in theory, it may be too impractical, because it would require sophisticated, expensive metering that many resources do not have. If the response cannot be measured, it is hard to argue that it should be compensated.
2. Physical PFR lasts for less than a minute after a system disturbance, and such disturbances only occur on the magnitude of 25 times per year. In other words, we are talking about a small amount of actual energy being provided.
3. Per the ISO tariff, resources are required to provide PFR.

C2. PG&E Supports Allocating Penalties to Non-Performing Resources

In the unlikely event that the ISO fails to meet its NERC compliance obligation and is accordingly fined, PG&E suggests that any non-compliance penalties should be allocated to those resources that were required to provide frequency response but failed to perform. In order to determine which resources failed to perform, the ISO might have to conduct an audit after the fact.