



Comments of Pacific Gas & Electric Company

Reactive Power Requirements and Financial Compensation Technical Working Group

Submitted by		Company	Date Submitted
Anja Gilbert	(415) 973-1255	PG&E	May 6, 2015
Allan Yue	(415) 973-1497		

Pacific Gas and Electric Company (PG&E) offers these comments on the Reactive Power Requirements and Financial Compensation Technical Working Group meeting held on April 22, 2015. PG&E appreciates and acknowledges the work done by the CAISO to engage stakeholders prior to the publication of its updated issue paper on this stakeholder initiative. In summary, PG&E:

1. Supports the technical and operational requirements as well as applying the requirements on a going-forward basis.
2. Requests further information to understand the reliability and/or efficiency benefits of financial compensation or cost allocation in the initiative.
3. Requests that CAISO make the generator ID, not the point of interconnection (POI), the point of compliance for providing reactive support and controlling voltage schedules.
4. Recommends that only CAISO, in coordination with a participating transmission owner (PTO), be able to set droop settings or voltage schedules.

1. PG&E supports the proposed reactive power requirements for asynchronous resources.

Given the increasing displacement of synchronous resources by asynchronous resources, PG&E believes that having adequate amounts of reactive power supply and absorption capability is necessary to maintain a safe and reliable grid.

PG&E agrees with CAISO's recommendation to apply these reactive power requirements on a going forward basis for new resources that go through the interconnection process. PG&E also supports requiring projects that repower, as defined by the Generator Management Business Practice Manual and go through the interconnection process, also meet these requirements.

2. PG&E requests further information to understand the reliability and/or efficiency benefits of financial compensation or cost allocation in the initiative.

Summary of CAISO Presentation:

CAISO provided limited details of the financial compensation piece, as the workshop was centered on the technical requirements. However, PG&E understands CAISO is proposing compensation for capability, compensation for the opportunity cost of providing reactive power and a cost of service for resources not providing or absorbing reactive power.

PG&E Comments:

PG&E would like a better understanding of the scope and magnitude of the problem CAISO seeks to address by including financial compensation in this initiative and why the issues around compensation are not sufficiently addressed through bi-lateral contracts. It is unclear how including financial compensation in this initiative will improve grid reliability and market efficiency without substantially increasing CAISO and market participant implementation costs. PG&E recommends that CAISO justify including financial compensation in its forthcoming issue paper and include implementation costs. PG&E acknowledges that CAISO's financial compensation proposal is not fully formed, but PG&E is concerned that a financial compensation component that is not fully vetted could result in increased costs without significant benefits.

PG&E believes that meeting the reactive power requirements generally should be considered a cost of doing business for any resource that chooses to interconnect into CAISO's grid, and as such CAISO's current methods for compensating renewable resources is reasonable. Under the current system, resources interconnecting to the system are required to meet voltage schedules set forth by their Participating Transmission Owners (PTOs), and there is no additional compensation or cost allocation for resources that meet minimum reactive power requirements and provide or absorb reactive power. Interconnecting generators have clear expectations of the costs associated with being dispatched on the grid associated with providing reactive power. The existing compensation for exceptionally dispatched events also allows for a reasonable compensation for the opportunity cost of modifying its real power output to provide additional voltage support.

In line with existing cost causation principles, costs associated for the reactive power supply and absorption capability should be allocated to the resources that are causing the need. This is a cost that should not be borne entirely by load, considering CAISO has acknowledged the need for reactive power is due in part to asynchronous resources that do not provide reactive power supply or absorption capability. PG&E requests that to the degree CAISO proposes to add additional compensation mechanisms, CAISO should also propose associated costs allocation methodologies based on costs causation.

- 3. PG&E believes that this single resource ID requirement for multiple generators at the POI is unworkable and proposes that a more streamlined approach to ensure compliance would be for CAISO to utilize a generator ID for sending dispatch signals.**

Summary of CAISO Presentation:

Under the generation projects slide the CAISO indicates that generating projects connected at a single POI can meet reactive power requirements collectively, but must be dispatched under a single resource ID.

PG&E Comments:

PG&E believes that this single resource ID requirement for multiple generators at the POI is unworkable. Instead, PG&E proposes that a more streamlined approach to ensure compliance would be for CAISO to utilize a generator ID for sending dispatch signals. PG&E currently does not have a way to separate dispatch signals from the POI to each generator to understand which generator responded and should receive the resulting revenue, as dispatches and settlements are specific to the resource ID at the POI.

- 4. As only the system operator has full visibility into the system and where reactive power requirements are needed, PG&E believes that only CAISO should be able to modify or set either droop settings or voltage schedules in coordination with a participating transmission owner.**

Summary of CAISO Presentation:

The discussion during the technical conference during GE's presentation alluded to setting the droop settings and voltage schedules by either the transmission provider or by the scheduling coordinator.

PG&E Comments:

As only the system operator has full visibility into the system and where reactive power requirements are needed, PG&E believes that only CAISO should be able to modify or set either droop settings or voltage schedules in coordination with a participating transmission owner. This is also in alignment with the CAISO tariff (Article 9.6.3) which states that compensation is provided when, "CAISO requests the Interconnection Customer to operate its Electric Generating Unit outside the range specified in Article 9.6.1."