



Comments of Pacific Gas & Electric Company Flexible Resource Adequacy Criteria and Must-Offer Obligation - Phase 2 – 2nd Working Group Meeting

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) appreciates the opportunity to participate in the Flexible Resource Adequacy Criteria and Must Offer Obligations – Phase 2 Working Group and to submit comments regarding the August 18, 2015 2nd Working Group meeting.

PG&E would like to reiterate that we recognize that over-generation is a concern today, and the likelihood of over-generation will only increase in the future as more renewables come on line. In addressing these concerns, however, we recommend this working group focus on defining the problems and the host of possible solutions before focusing on potentially costly and complicated resource adequacy changes or restrictions on self-scheduling.

In summary, PG&E recommends the following:

- In light of insufficient evidence that self-scheduling restrictions are necessary to meet the future needs of the CAISO, PG&E continues to oppose the CAISO’s proposal to restrict self-scheduling. The issues the proposal addresses are ill-defined and the proposal has the potential to lead to costly procurement decisions.
 - PG&E has reached two conclusions based on SCE’s proposal.
 - Neither SCE nor the CAISO has made a compelling argument that the CAISO needs shorter ramp duration capacity than the current 3 hour product.
 - PG&E does agree with SCE that the Pmin burden extends beyond the scope of Resource Adequacy, and that the CAISO and stakeholders must evaluate the appropriate incentives to reduce the impact of Pmin energy.
1. In light of insufficient evidence that self-scheduling restrictions are necessary to meet the future needs of the CAISO, PG&E continues to oppose the CAISO’s proposal to restrict self-scheduling. The issues the proposal addresses are ill-defined and the proposal has the potential to lead to costly procurement decisions.

The CAISO indicated during the 2nd working group meeting that there is not enough evidence to show that the risk of over-generation has reached a sufficient magnitude to be able to see its effects in today's energy markets. In fact, despite significant increases in renewable generation over the past year (maximum hourly wind and solar output peaked at 9,861 MWh in 2015 compared to 8,755 MWh in 2014 driven primarily by significant increases in solar generation), the CAISO has not demonstrated any increase in over-generation events or risks over the same time period. A better understanding how the grid has continued to operate reliably despite these increases in intermittent generation, particularly mid-day intermittent generation, would be instructive. These lessons could provide stakeholders with a better understanding of the future risks faced by the CAISO market as intermittent generation increases. For example, is this continued success due to recent hydro conditions, changes in CAISO procedures and rules, increased renewable curtailment, or are market prices influencing the bids of existing resources? A presentation made by the CAISO during the Market Performance and Planning Forum on May 20th, 2015 may be a good representation that the economic bidding of renewable energy has been a significant factor in reducing over-generation risk¹.

The CAISO has chosen an increase in negative prices as a proxy for an increase in over-generation risk; however, negative prices also serve as an incentive for existing resources to offer increased flexibility (e.g., real-time bidding capabilities for renewable resources, shaping of self-schedules). PG&E disagrees that negative prices necessarily signal impending reliability problems from over-generation as defined by the CAISO tariff. Further, market design changes designed to facilitate the integration of renewable resources such as the introduction of the 15-minute market and the expansion of the CAISO real-time market through the EIM likely contributed to the reliable integration of these resources.

In light of insufficient evidence that self-scheduling restrictions are necessary to meet the future needs of the CAISO, PG&E continues to oppose the CAISO's proposal to restrict self-scheduling. The issues the proposal addresses are ill-defined and the proposal has the potential to lead to costly procurement decisions. The third working group meeting should focus on identifying both the drivers of and market features that may mitigate the potential risk of over-generation.

2. PG&E has reached two conclusions based on SCE's proposal.

- a. Neither SCE nor the CAISO has made a compelling argument that the CAISO needs shorter ramp duration capacity than the current 3 hour product.
- b. PG&E does agree with SCE that the Pmin burden extends beyond the scope of Resource Adequacy, and that the CAISO and stakeholders must evaluate the appropriate incentives to reduce the impact of Pmin energy.

¹ Slides 23 and 24 of presentation, which can be found at:

http://www.caiso.com/Documents/Agenda_MarketPerformance-PlanningForum_May20_2015.pdf

While PG&E appreciates SCE for providing an alternative to CAISO's proposal, PG&E is not prepared to support it at this time. However, based on this proposal, PG&E has reached two conclusions. First, neither SCE nor the CAISO has made a compelling argument that the CAISO needs shorter ramp duration capacity than the current 3 hour product. More evidence is needed regarding the exact nature of the shorter ramp duration need, and that the proposed solution is the better than other solutions to meet that need.

Second, PG&E does agree with SCE that the Pmin burden extends beyond the scope of Resource Adequacy and that the CAISO and stakeholders must evaluate the appropriate incentives to reduce the impact of Pmin energy. Further analysis showing periods of forecasted Control Performance Standard (CPS1), Balancing Authority Ace Limit (BAAL), and Disturbance Control Standard (DCS) violations would be helpful to understand which incentives would provide the greatest impact to future reliability.