



## **Comments of Pacific Gas & Electric Company Flexible Resource Adequacy Criteria and Must-Offer Obligation - Phase 2 – 1<sup>st</sup> Working Group Meeting**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
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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 July 22, 2015 1<sup>st</sup> Working Group meeting.

PG&E believes that this working group process should allow for more collaboration than a traditional stakeholder initiative. With this in mind, setting a deadline to begin a stakeholder initiative in October is ambitious. Ensuring that the CAISO has clearly defined the problem and providing adequate time to vet potential solutions should be the key CAISO objective, even if completing this process requires postponing the start of the stakeholder initiative.

PG&E appreciates the CAISO's focus on the issues surrounding over-generation. 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:

- The CAISO should adequately demonstrate the underlying problems with its current market design before advancing specific market design changes. Exploring solutions without thoroughly identifying problems and implementing solutions without exploring alternatives will lead to excess costs (and could create additional problems). As such, PG&E does not believe the CAISO should prematurely explore limiting 'inflexible' resources in Resource Adequacy showings and limitations on self-scheduling in CAISO markets.

- The CAISO should use the Working Group process to ensure it has accurately identified the problem and discuss the range of solutions available to address the identified problem. Then the CAISO should look at the cost of solution alternatives and whether they create other unintended outcomes.
  - The CAISO should provide more evidence to show a growing likelihood of over-generation events. Evidence of growing negative prices is not sufficient as negative prices may be a natural outcome of supply/demand conditions but may not necessarily lead to over-generation if the resource bid pool is sufficient.
  - PG&E would like the CAISO to focus on flexible capacity from storage resources not using the NGR model and the potential flexible capacity impacts of merchant VERs or VERs contracted with entities outside of the CAISO's footprint.
1. The CAISO should adequately demonstrate the underlying problems with its current market design before advancing specific market design changes. Exploring solutions without thoroughly identifying problems and implementing solutions without exploring alternatives will lead to excess costs (and could create additional problems). As such, PG&E does not believe the CAISO should prematurely explore limiting 'inflexible' resources in Resource Adequacy showings and limitations on self-scheduling in CAISO markets.

During the 1<sup>st</sup> Working group meeting for the FRACMOO Phase 2 Stakeholder Initiative, the CAISO presented on its suggested changes to the existing RA construct. The CAISO's ideas presented at the 1<sup>st</sup> working group were incremental changes to address specific concerns the CAISO has identified. While PG&E appreciates the CAISO's attempt to keep changes to a minimum to limit complexity, PG&E is concerned that the CAISO is unduly advancing specific market design changes before the underlying problems have been adequately demonstrated. The CAISO has several levers it can pull to address the defined "PMin Burden" issue that the CAISO believes could lead to over-generation conditions. At this stage of the FRACMOO 2 initiative, PG&E opposes the CAISO's proposals to define and limit 'inflexible' resources in the CPUC forward RA showings, and PG&E opposes the CAISO's proposed limitations on non-RA self-scheduling in the CAISO markets. Additionally, without further evidence, PG&E does not support the CAISO seeking the ability to backstop for faster upward ramping requirements. Instead, PG&E recommends that the CAISO further define their operational requirements (driven by reliability needs) and only then consider the approaches and design changes that are best suited for these needs.

2. The CAISO should use the Working Group process to ensure it has accurately identified the problem and discuss the range of solutions available to address the identified problem. Then the CAISO should look at the cost of solution alternatives and whether they create other unintended outcomes.

PG&E believes the benefit of the Working Group is to be able to take a step back and review whether the current framework of the RA program makes sense considering the experience and the changes to CAISO market design witnessed in the past year as well as future changes that will increase the flexibility available to grid operators. For example, it is appropriate to re-visit the definition of net load based on the CAISO's identification of self-scheduling as contributing to the risk of future over-generation events. The current net load definition does not characterize the over-generation problem appropriately because it assumes all wind and solar is self-scheduled in the requirement calculation. The net load calculation could incorporate many other forms of self-scheduled resources in the requirement. This example highlights how a broader range of solutions might be considered if the Working Group could re-evaluate existing concepts rather than solely focus on incremental additions to existing rules.

Additionally, alternate and possibly more applicable solutions to the CAISO's problem statement have yet to be considered through the working group process. The CAISO should recognize the progress that has been made on a number of potential solutions to the integration of renewable resources, including the growth in participants in the Energy Imbalance Market and increasing incentive for real-time bidding through the lowering of the bid floor to \$-150/MWh. Future market design changes, such as the introduction of the flexible ramping product, may further increase available flexibility by incenting existing resources to offer additional flexibility into the market. This progress and the potential for other spot market changes to increase available flexibility should be reflected in the CAISO's review of the current framework of the RA program. Therefore, PG&E would like to the working group process to focus on two issues: 1) accurately defining the problem statement and 2) discuss the full range of solutions available to address the identified problem. The CAISO should then look at the cost of solution alternatives and whether they create other unintended outcomes.

3. The CAISO should provide more evidence to show a growing likelihood of over-generation events. Evidence of growing negative prices is not sufficient as negative prices may be a natural outcome of supply/demand conditions but may not necessarily lead to over-generation if the resource bid pool is sufficient.

The reliability metrics provided by the CAISO in its 1<sup>st</sup> working group meeting presentation to justify its conclusion that “Existing Tools will be insufficient to address more frequent and larger over-generation” are the increasing occurrence of negative prices.<sup>1</sup> As negative prices are a market signal to generators to curtail, this occurrence in itself is not necessarily an inefficient market outcome. Predictions of future over-generation events that the CAISO will not be able to manage under the current market design are necessary in order to justify moving forward on changing the RA framework.

Metrics that would be helpful to prove the CAISO’s premise include exceptional dispatches due to system over-generation conditions, as well as historical and forecasted Control Performance Standard (CPS1), Balancing Authority Ace Limit (BAAL), and Disturbance Control Standard (DCS) violations.<sup>2</sup>

PG&E also requests the CAISO evaluate whether violations are forecasted to occur due to an actual imbalance of generation and load assuming perfect foresight, as opposed to a missed forecast which resulted in improper commitment decisions. The CAISO should provide evidence that over-generation events will occur more often in the future under the current market design and RA rules in order to move forward with changing the current RA rules.

4. PG&E would like the CAISO to focus on flexible capacity from storage resources not using the NGR model and the potential flexible capacity impacts of merchant VERs or VERs contracted with entities outside of the CAISO’s footprint.

Two issues stated as within the FRACMOO2 scope were not discussed during the 1<sup>st</sup> working group. The CAISO did not address flexible capacity from storage resources not using the NGR model or the potential flexible capacity impacts of merchant VERs or VERs contracted with entities outside of the CAISO’s footprint in its 1<sup>st</sup> working group meeting presentation. These issues are more immediately in need of solutions or analysis as they relate to the current RA program and to the inconsistencies between CPUC and CAISO EFC counting rules. PG&E would like to encourage the CAISO to prioritize its solutions to these issues in its next working group while the preliminary work PG&E has requested to address the potential expansion of flexible requirements is developed.

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<sup>1</sup> Slide 21 of the CAISO’s “Flexible Resource Adequacy Criteria and Must-Offer Obligation – Phase 2” Presentation.

[http://www.caiso.com/Documents/Agenda\\_Presentation\\_FlexibleResourceAdequacyCriteria\\_MustOfferObligations\\_WorkingGroup.pdf](http://www.caiso.com/Documents/Agenda_Presentation_FlexibleResourceAdequacyCriteria_MustOfferObligations_WorkingGroup.pdf)

<sup>2</sup> These reliability metrics were referenced during a CAISO presentation to the Market Surveillance Committee on July 15, 2015. [http://www.caiso.com/Documents/Briefing\\_DuckCurve\\_CurrentSystemConditions-ISOPresentation-July2015.pdf](http://www.caiso.com/Documents/Briefing_DuckCurve_CurrentSystemConditions-ISOPresentation-July2015.pdf)