



# Comments of Pacific Gas and Electric Company

## On Flexible Ramping Product Second Revised Draft Final Proposal

Submitted by		Company	Date Submitted
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### I. Introduction

Pacific Gas & Electric (“PG&E”) offers these comments regarding the California Independent System Operator’s (CAISO) Flexible Ramping Product (FRP) Second Revised Draft Final Proposal<sup>1</sup> and related plans to defer further FRP designs until after the CAISO advances its FERC Order 764 Compliance plan, likely by mid-2013.

PG&E supports the temporary pause in design activities and also offers some stakeholder process suggestions for consideration. PG&E also supports the CAISO’s proposal to not have participants bid FRP in Real-Time (RT).

### II. PG&E Comments

#### 1. A Temporary Pause in the Stakeholder Process Will Improve the End Result

PG&E supports the CAISO’s plan to delay further FRP designs until after development of a FERC Order 764 Compliance plan. Since Order 764 changes may be significant, the delay ensures FRP designs will work with the going-forward scheduling protocols, designs, and market rules for all resources, including Variable Energy Resources.

Delay also allows information from the Flexible Ramping Constraint (FRC) to further inform FRP designs. The CAISO will have approximately six months of post cost-allocation FRC settlement data that it can analyze and present to stakeholders when it reinitiates the FRP stakeholder process in mid-2013. The FRC data will help CAISO and its participants better understand the effectiveness of this type of product, the effects of cost-allocation based on

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<sup>1</sup> Summarized at the end of these comments

cost-causation for ramping needs, and the impact of locational constraints on ramping capacity.

## **2. PG&E Supports No FRP Bids in Real-Time**

PG&E agrees with views of Market Surveillance Committee (MSC) members and CAISO staff that costs of providing FRP in Real-Time bids by participants would not reflect actual costs incurred by participants in providing FRP.

As PG&E understands it, the only costs that a participant could experience if its capacity were reserved to provide FRP would be a potential opportunity cost of not having its capacity dispatched to sell energy into the RT market. This “in-market” opportunity cost is calculated and considered by the optimization software when it optimally schedules the RT market. Consequently, the clearing price for FRP would consider such costs without the need for participants to bid them. Furthermore, participants essentially incur no other opportunity costs in providing FRP in the RT Market because RT Market participants do not have time to schedule transfers out of CAISO should the CAISO not accept an energy offer from a resource.<sup>2</sup> A bid cost could not reflect variable operating costs of providing ramp such as costs of “wear and tear” since CAISO could ramp the resource to produce energy without having such ramp bid costs included in the total cost calculation under the proposed design. Consequently, such bid costs cannot reflect ramping costs.

By eliminating unnecessary costs, the FRP design provides a more accurate signal for ramping capacity and can enhance market efficiency at reduced costs.

## **3. The FRP Design Needs to Clearly Address Key Design Elements**

PG&E recommends the CAISO solidify or expand its scope for FRP design to include the following features which warrant consideration based on either complexity or potential efficiency gains.

- **Rules for the deliverability of real-ramp energy that is potentially provided by FRP need clarification.** Since FRP acts as a capacity product, PG&E remains unclear as to how the optimization ensures that transmission capacity will be available for deploying FRP capacity, aka deliverability, in future intervals. As the real ramp feature proposes to treat much of the system’s ramping service as FRP capacity, the design may need to reasonably ensure “deliverability” as defined herein.<sup>3</sup>
- **Successful design of the integrated Day-Ahead Market (iDAM) will require sufficient time for consideration.** PG&E looks forward to continued collaboration with

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<sup>2</sup> In Day-Ahead Markets, participants have opportunities to sell electricity products to other markets, theoretically creating potential for opportunity costs not reflected in a market clearing price based solely on marginal cost-based energy bids

<sup>3</sup> Under current structures, deliverability is reasonably ensured through energy schedules.

the CAISO to develop a prudent design for iDAM. Such a process will take time and further development of key design features. An example of a key design feature is whether the iDAM's real-ramp need will be based on schedules to meet bid-in demand or on reliability schedules to meet RUC demand, i.e., CAISO forecast of CAISO Demand. As part of the design process, PG&E asks that the CAISO to provide the stylized mathematical formulations for the iDAM as the proposal evolves. PG&E also recommends the CAISO anticipate and plan for a lengthy design process. PG&E supports the idea of further technical workshops on this front, potentially before FRP designs are resumed.

- **Analysis of the FRP drivers should continue to inform cost-allocation.** The CAISO rightly notes that FRP cost-allocation amongst suppliers based on deltas in the deviations may create perverse incentives. Such deltas in uninstructed imbalance energy (UIE), however, are likely to be used for the initial allocation of costs to the supply category. PG&E continues to consider the effects of a gross versus a delta deviation-based cost-allocation approach and requests the CAISO provide for further discussion on this, or an alternative, design facet.

### III. Summary of 2<sup>nd</sup> Revised Draft Final Proposal<sup>4</sup>

The 2<sup>nd</sup> Revised Draft Final Proposal introduced the CAISO's plan to temporarily suspend the FRP initiative until it establishes its FERC Order 764 Compliance Plan (15-minute scheduling). The CAISO plans to resume and finalize its FRP design in mid-2013.

The 2<sup>nd</sup> Revised Draft Final Proposal also explains several narrow technical changes to the design. These changes include:

- No FRP bid submittal in RT. Instead, only the opportunity cost of foregoing energy sales in RT will be used to produce a clearing price. The Market Surveillance Committee saw logic for this change which will reduce unnecessary RT costs.
- Eliminate a set of rules to keep FRP bids below Regulation bids and to allow Regulation capability to be cleared to provide FRP. These rules sought to ensure market prices and selection for FRP was reasonable, but the CAISO now believes a suite of other design features should suffice while limiting rule complexity and product-interplay issues.

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<sup>4</sup> <http://www.caiso.com/Documents/SecondRevisedDraftFinalProposal-FlexibleRampingProduct.pdf>