Comments of Pacific Gas and Electric Company

Flexible Ramping Product – 1st Straw Proposal

Submitted by		Company	Date Submitted
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Pacific Gas & Electric (PG&E) appreciates the opportunity to participate in the stakeholder process for the CAISO's Flexible Ramping Product Initiative and to submit comments regarding the CAISO's proposal as outlined in its November 1, 2011 Straw Proposal.

PG&E supports the high-level objective of creating a Flexible Ramping Product. However, in these comments, PG&E can only provide limited feedback since key design elements are not fully developed in the Straw Proposal. Because the proposal is only partially developed, a large amount of stakeholder energy both at the meeting and in comments is focused on what is missing. This is reflected in our comments as PG&E asks the CAISO to address major issues not discussed in the Straw Proposal, including procurement in the Day-Ahead market, the interaction with non-contingent reserves, Bid Cost Recovery, rescission provisions, and details on the cost allocation.

As expressed before, PG&E is concerned that the CAISO has put forth an overly ambitious timeline to complete the design of this non-trivial product. Moreover, given the FERC directive on Pay-for-Performance Regulation, it may make sense to slow the work on this initiative to address the FERC-mandated initiative.

1. Summary of Straw Proposal

As directed by the CAISO Board of Governors in August 2011, the Flexible Ramping Product will extend the already approved flexi-ramp constraint to create an actual product to ensure sufficient ramping capability is available in Real-Time (RT) and that resources are appropriately compensated for providing the service. The flexi-ramp constraint recently approved by the Board only addresses the upward ramping capacity, yet with large amounts of renewable generation coming on-line, studies indicate that over-generation is likely to occur, and this will result in the need for rapid downward ramping capability. Further, the short-term flexible ramping constraint does not allow for the Day-Ahead (DA) procurement of flexible capacity, and does not provide any opportunity for resources to bid their costs of providing flexible ramping capacity. The flexible ramping product is intended to correct these issues.

Below are the design elements of the CAISO's Flexible Ramping Product discussed in the Straw Proposal:

Product Characteristics

- Flexible ramping products will be procured in both the day-ahead market and RTPD
- Will be a 5-minute ramping product
- The flexible ramping consists of separate products in the upward and downward direction
- The market will accept bids on both products, which express the resources' willingness to provide flexible ramping, and the cost associated with this service

Compensation

- Flexible ramping products, energy schedules, and ancillary services are all linked together through the co-optimization
- Flexible ramping prices will equal the shadow price of the Flexible Ramping constraint

Cost Allocation

- Costs will be allocated to resources that cause the procurement of the flexible ramping product
- Cost allocation will use existing settlement and metering data
- Flexible Ramp Up costs will be allocated to negative deviations and Flexible Ramp Down costs will be allocated positive deviations
- The costs will be allocated to three buckets: 1) Load , 2) Supply deviations from hourly schedules (i.e. RT Self Schedules), and 3) Supply deviations from dispatch (i.e. resources responding to RTD)

2. Comments on Product Characteristics

In general, PG&E seeks more detail about the product characteristics. This includes details on how Flexible Ramping would be procured in the DA market, interaction with non-contingent reserves, and possible AS buyback. PG&E also asks the CAISO to explore ways to reduce the post RTPD uncertainty. Lastly, PG&E asks the CAISO to publish the RTPD prices when this initiative goes live.

CAISO Needs to Provide Details on DA Procurement, Including the Management of Resources to Ensure Flexible Ramping Capability is Maintained

It is currently unclear to PG&E how the CAISO intends to manage Flexible Ramping reserves procured in the DA market so the full capability is maintained throughout the hour in RT. For example, how will the CAISO ensure that a resource with a DA Flexible Ramping award and an economic RT bid is not dispatched to a level that prevents it from fulfilling its Flexible Ramping obligation? PG&E asks the CAISO to clarify this aspect of the design and provide details of how Flexible Ramping will be procured in the DA market in the Revised Straw Proposal.

More Detail is Needed Regarding Substitutability between Flexible Ramp and Non-Contingent Ancillary Service Products

PG&E agrees that the Flexible Ramping product should not be substitutable with contingent reserves. However, it may be beneficial to allow non-contingent reserves and Flexible Ramping to substitute for one another. This issue is especially pertinent because of the Enhanced Contingent/Non-Contingent Operating Reserve Management Initiative that will be implemented in Spring 2012. After this initiative is implemented, there should be more non-contingent reserves available for dispatch in the real-time market. Therefore, PG&E suggests that the Revised Straw Proposal contain a detailed discussion of the following items:

a. Substitution between the Flexible Ramping Product and non-contingent ancillary services,

b. How the Flexible Ramping Product will affect price cascading for all ancillary services, and

c. How the Flexible Ramping product will affect scarcity pricing.

Provide Clarification on Possible Buyback of AS in Real-Time

In the stakeholder discussion, the possibility of an Ancillary Services (AS) buyback mechanism was discussed. PG&E asks the CAISO to clarify its position of this part of the design and provide design details if this is a planned element of the design.

This Stakeholder Process Should Also Investigate Methods to Reduce Post RTPD Uncertainty

The Straw Proposal states that the Flexible Ramping Product is intended to cover uncertainty between the RTPD run and the associated RTD runs. Since this uncertainty will drive the requirement for Flexible Ramping, as well as any associated market costs, PG&E strongly encourages the CAISO to take all possible actions to reduce this uncertainty.

Today, there is 15 minutes between RTPD and the first RTD run, 20 minutes before the second, and 25 minutes before the third. These relatively long delays help to contribute to the post RTPD uncertainty. Taking steps to reduce this uncertainty may be more cost-effective than procuring Flexible Ramping. PG&E asks the CAISO to explore options to reduce the post RTPD uncertainty, including:

a. Advance the scheduling timeline such that resources can submit bids or self schedules closer to RTD. This would be especially useful to reduce the uncertainty associated with load and variable generation, and

b. Merge RTPD with the first RTD run.

RTPD Energy Prices Must Be Published to Ensure Transparency of Flexible Ramping Procurement

The CAISO intends to use RTPD shadow prices to calculate the value of procured Flexible Ramping capacity. PG&E asks the CAISO to publish the RTPD prices when Flexible Ramping goes live. Without this information, market participants will not have sufficient transparency into flexible ramping awards.

3. Comments on Compensation

PG&E seeks additional data on the likelihood of Flexible Ramping to be dispatched. This information would be used to determine the appropriateness of including opportunity cost related to energy in the price calculation. PG&E also asks the CAISO to include design elements addressing Bid Cost Recovery (BCR) and rescission of payment for nonperformance.

More Detail Needed on CAISO's Expectation of Dispatching Flexible Ramping Reserves

It would be helpful to understand how the CAISO envisions dispatching Flexible Ramping. Current AS products are dispatched on a limited basis, so including opportunity cost related to energy in the price calculation is justified. However, if Flexible Ramping capacity will be dispatched frequently, including opportunity costs related to energy may not be the correct compensation framework. Before PG&E can comment on the "Double Payment" question, PG&E needs to better understand the probability of dispatch of this capacity. PG&E requests that the CAISO provide historical data on this topic and some estimate of the probability of dispatch.

Include Flexible Ramping Product Revenues in the BCR Calculation

The Straw Proposal does not discuss the treatment of the Flexible Ramping Product payments with regard to BCR. It is PG&E's position that Flexible Ramping revenue should appropriately be included in the BCR calculation. To do otherwise would create a situation in which suppliers could receive excessive BCR payments, unfairly increasing the BCR uplift paid by load.

Implement a Rescission of a Payment Provision

Since Flexible Ramping is essentially an ancillary service, it should operate under similar tariff provisions as the other ancillary services, including a rescission of payment provision for resources that receive a Flexibility Ramping payment for capacity that is unavailable, non-dispatchable, or undelivered during the relevant RTD Interval. Not making this change could result in an unjust charge for capacity that was not available.

The success of the new product is partially dependent on incentives to respect CAISO instructions. Performance measures need to be defined so that the CAISO actually gets Flexible Ramping capability from its procurement, with no-pay and exclusion provisions applying to any resources that don't perform according to schedule.

4. Comments on Cost Allocation

PG&E Position on Cost Allocation Depends on the Details of the Allocation of the Procurement Target to the Cost Buckets

PG&E generally supports the principle of cost allocation based on cost causation, but it is not yet clear that the methodology presented in this Straw Proposal actually adheres to this principle. The underlying driver of the cost allocation will be how the CAISO allocates the procurement target to the three buckets. To the extent that the allocation to the buckets is justifiable and transparent, PG&E could support a multi-bucket approach such as that proposed in the Straw

Proposal. PG&E encourages the CAISO to provide significantly more detail on this important design element in the next paper. Additionally, once the product goes live, PG&E suggests that the CAISO calculate and publish the amount of Flexible Ramping requirements attributable to these buckets and the amount of Flexible Ramping cost actually allocated.