



Comments of Pacific Gas and Electric Company Renewable Integration Phase 2 Discussion Paper

| Submitted by | | Company | Date Submitted |
|--------------|----------------|---------|----------------|
| Kurt Hansen | (415) 973-2948 | PG&E | April 29, 2011 |
| Ian Quirk | (415) 973-9798 | | |

Pacific Gas & Electric (PG&E) appreciates the opportunity to participate in the stakeholder process for the California Independent System Operator's (CAISO) Renewable Integration Initiative and to submit comments regarding the April 5, 2011 Phase 2 Discussion and Scoping Paper.

1. Overall Process for Renewable Integration Phase 2 Initiative

CAISO Process Proposal

The discussion and Scoping paper states that the CAISO seeks to develop a comprehensive framework or "roadmap" of market design changes needed for renewable integration by the end of 2011. The CAISO also wishes to identify specific market design changes or new market elements that could receive board approval by the end of 2011 or early 2012.

Comments of PG&E

Support CAISO's Plan to Develop a Complete Set of Renewable Integration Design Elements before Beginning Implementation, Rather Than Taking a Piecemeal Approach

PG&E supports the idea of creating a comprehensive roadmap of market design changes by the end of 2011, before any new products or market changes are pursued. We agree with the CAISO's preference to take a longer-term view and identify the most effective and robust solutions while taking into account the interactions between distinct market elements and rules. Any elements that make it into this roadmap must be driven by the operational needs determined through the 33% renewable study and the CPUC Long-term Procurement Plan.

PG&E Has Two Primary Expectations regarding the Creation of This Roadmap

In order to ensure a smooth stakeholder process, PG&E requests that the CAISO make the following commitments to market participants in the creation of this roadmap:

- *First: The CAISO Needs to Develop Realistic Timelines for activities or initiatives included in its roadmap.* Creating and sticking to realistic timelines is imperative to the efficient functioning of this stakeholder processes. Market Participants must have

the appropriate time to digest and give meaningful feedback on all potential market design changes. As evidenced by delays in the Renewable Integration Phase 1 timeline, the CAISO should expect many of the issues to be potentially controversial and require several drafts before they are finalized. Several other CAISO initiatives have also seen delays due to underestimating their complexity at the outset (Regulation Energy Management, Dynamic Transfers, Regulatory Must Run/Take, Load Granularity Refinements, etc.).

The CAISO will also need to build in adequate time to work with other balancing area authorities and the WECC where appropriate. Several of the proposed design changes may not be solely under the jurisdiction of CAISO. For instance, changing how ancillary service products are structured may cause instances where WECC reliability criteria require updating. Similarly, any attempts at intra-hour scheduling would necessitate close coordination with neighboring balancing authorities.

For these reasons, PG&E believes that it would be an overly ambitious goal to pursue a subset of the issues brought up in the roadmap by the end of 2011. It may, however, be possible to make a few small changes to solve immediate problems, such as alterations to the contingency elections for reserve products or completing implementation of the flexible ramping nomogram constraint.

- ***Second: All Proposed Enhancements Must Be Supported by a Cost/Benefit Analysis.*** Given our experience in the past, any change to the current design will likely require a significant amount of effort by both the CAISO and market participants to implement. Up to this point, initiatives that "increase market efficiency" have been pursued regardless of the cost they take to implement. Going forward, PG&E has a limited appetite to make such changes that are not supported by a cost/benefit analysis.

Now is the appropriate time for the CAISO to think through how a cost-benefit framework can be used for this and future initiatives. We understand that no such methodology exists, and we are open to dialogue on how it should be structured. At a minimum, it needs to consider not only CAISO's costs, but also the costs that would be incurred by market participants. Finally, in accordance with our first point, appropriate time must be allotted for in the roadmap to complete this cost/benefit analysis.

2. Scope of Topics to be Addressed in Phase 2

CAISO Proposal of Scope

In this Discussion Paper, the CAISO identifies roughly four main areas of possible market design changes to support Renewable Integration:

1. Changes to Scheduling and Settlements Systems
2. Identification and Allocation of Renewables Integration Costs
3. New or Modified Spot Market Products

4. Long-Term Capacity or Reserves Markets

Comments of PG&E

The Proposed Scope of Enhancements Appears to Be Comprehensive

In terms of possible market design enhancements, PG&E does not have any other elements to add to the list at this time. However, as mentioned in the previous section, the CAISO must use both cost/benefit analysis and the long-term need requirements to justify any changes to the current market design. Because both of these guiding principles are ill-defined at the moment, it would be beneficial to tackle the specifics of both before proceeding with a determination of what should or shouldn't be included in the roadmap.

Request Clarification Regarding the Proposed Enhancements That Appear to Be FERC Mandated within Three Years of MRTU Go Live

Based on our reading of the Discussion and Scoping Paper, some of the potential enhancements the CAISO is asking for input on are actually FERC mandated for implementation by April 1, 2012. Given that this roadmap will not be completed until early 2012, this does not appear to leave adequate time to complete implementation by the FERC deadline. PG&E requests that the CAISO address its plan for these elements and how it plans to communicate with FERC in the next paper.

The CAISO Must Work Closely with the CPUC on Any Changes to the Capacity Market

In this paper, the CAISO has brought up the concept of making significant changes to how capacity is procured by load serving entities. In California the CPUC has authority over resource adequacy issues, and any changes must go through a formal process at the CPUC. The CAISO should feel empowered to make recommendations on how capacity should be procured, but should not expect to codify any changes to that framework through this stakeholder process alone.

3. Prioritizing Efforts Within the Scope of Phase 2

CAISO Prioritization Proposal

The CAISO has not put forward a proposal of how this set of possible enhancements should be prioritized. Instead, they are looking for stakeholder feedback to guide the process.

Comments of PG&E

Highest Priority Should Be Given to Making Fixes to Immediate Problems, and Potentially Off-Ramping Them into Separate Initiatives

As indicated above, PG&E supports the development of a complete renewables design roadmap before beginning implementation, but is willing to make exceptions for elements that can help alleviate immediate and significant problems. For this category of initiatives, it might be more manageable to address them in a separate stakeholder process. PG&E recommends that this approach be taken for the following three market design enhancements:

1. Designing and implementing a long-term fix to the problem of diverging HASP-RTD prices and the associated uplift (RTIEO).
2. Implementation of the Flexible Ramping Nomogram (this would not include the design of a ramping product).
3. Ability to make hourly elections for Contingency-Only Reserves.

Second, Time Should Be Spent up Front Developing a Framework for Cost/Benefit Analysis and Determining How the 33% Study Results Will Be Incorporated into Determining Need

As noted throughout these comments, PG&E recommends that the CAISO use cost/benefit analysis and concrete demonstration of system needs to guide the development of any new products or market enhancements. However, the CAISO does not currently have a framework for doing either of these two things. With respect to cost/benefit analysis, the CAISO must find along with stakeholders a way to realistically incorporate market participant costs of implementation into their decision making process. With respect to need determination, it is not clear if the results of the 33% study will be immediately translatable into the development of new products. Clearly defining metrics to assess this need and how it may be satisfied through existing products will help guide this stakeholder process.

Third, the CAISO should develop a Realistic Roadmap

It is PG&E's expectation that this process will take most of the next one-two years and may be pursued on a parallel track with fixes to immediate problems and defining a cost/benefit framework. As noted above, this roadmap must be realistic and allow time for sufficient stakeholder vetting and collaboration with other regulating entities.

All Substantive Market Design Changes Should Be Addressed in the Following Order

After the CAISO has developed a comprehensive roadmap and thought through how cost/benefit analysis will be conducted, there will likely be a significant number of possible market design enhancements. Below, we have outlined what we believe to be a logical order in which to make these changes.

- ***Priority 1: Focus on Changes to Scheduling and Settlement Systems.*** PG&E has placed this high in the priority because it seems that this framework would be essential to designing any cost allocation or new products. If there are going to be wholesale changes to the market design, they should be done earlier rather than later.
- ***Priority 2: Allocation Framework for Integration Costs.*** PG&E generally supports cost allocation based on cost causation. Developing a renewable integration cost allocation framework should be done before any new products are created, because the costs to procure them inevitably flow through this methodology.
- ***Priority 3: New or Modified Spot Market Products.*** PG&E has placed the development of new products low in its priority list because we feel strongly that new products should not be pursued until the CAISO, CPUC, and market participants can agree on long-term system needs.

- ***Priority 4: Long-Term Capacity and Reserve Markets.*** Any changes to capacity or reserves markets will require significant interaction with the CPUC. PG&E does not want this highly controversial issue to slow down development of products within the authority of the CAISO, so we have recommended to address this issue only after all other integration solutions have been pursued.