Pacific Gas & Electric appreciates the opportunity to participate in the Convergence Bidding stakeholder process and to submit comments regarding the October 9, 2008 Issue Papers and the October 16, 2008 CAISO presentation.

Section 1 – MAP Program Update

1. Are you interested in Joint Application Development (JAD) sessions for test scenario development for element of MAP, like Convergence Bidding?

   Yes, PG&E is interested in JAD sessions for test scenario development.

2. If you are interested, what is your availability to participate?

   With appropriate notice, PG&E should be able to fully participate.

3. What high level test scenarios would you propose for Convergence Bidding?

   - Testing of software to create and submit convergence bids and receive awards.
   - Testing of new settlement codes.
   - Testing of Convergence Bidding (CB) on IFM, RUC and RT uplift charges.
   - Testing of market protections to prevent market manipulation related to CB.

4. Additional comments?

   In the stakeholder session SCE expressed serious concerns regarding the possible incompatibility of CB with RUC. Although it is unclear to PG&E if these concerns are warranted, we ask the CAISO to work with SCE to fully understand SCE’s concerns and report out on this issue at the next stakeholder session.

Section 2 – Resource IDs for Convergence Bidding

1. Of the options presented in the white paper, are there any that are completely unworkable for you?

   PG&E has not had an opportunity to review the ID options with our system development team since they are focused on MRTU go-live development. In general, PG&E supports an approach that minimizes the Scheduling Coordinator (SC) burden in creating convergence bids.
2. Do you have a preference among the options presented?

PG&E suggests that the CAISO survey the eastern ISOs to see how they have addressed the CB ID issue and evaluate how well these approaches have worked. Additionally, it is our understanding that the CAISO is developing a fix regarding the resource ID limitation. PG&E would like to see a CAISO recommendation and a follow-up discussion with stakeholders after the suggested survey is completed and the CAISO has a better understanding of the new software flexibility afforded by the pending ID fix.

3. Other comments?

There was some discussion at the stakeholder meeting regarding what the certification requirements would be for a Convergence Bidding SC and how the requirements would differ compared to an SC of physical schedules. PG&E seeks clarification on this point.

Section 3 – Cost Allocation for IFM, RUC and RTM Bid Cost Recovery Uplift Charges

1. Do you have any comments generally about cost allocation for virtual bids, or specifically about the discussion on IFM and RUC uplift charges for virtual bids?

**PG&E is not supportive of the CAISO's two threshold tests used to determine whether IFM and RUC Tier 1 uplifts are allocated to convergence bids.**

A primary observation we made of the examples presented by SCE and WPTF is how the modeled impact of CB on total uplift cost is dependent on the underlying model assumptions, especially the uplift cost curves for IFM and RUC and the relationship between the two curves. This observation only reinforces the point we made in our March 7, 2008 comments that there is no way to fully assess all of the market impacts of virtual bids, including the impact on BCR, except by running the market with and without virtual bids. This point is made quite well in SCE's graphical example of the impact of a virtual demand bid on the market clearing price for load (slide 10). In this example, the virtual demand drives the clearing price sharply higher yet has only a limited effect on the cleared quantity.

Short of doing a full re-optimization, the actual price and BCR impacts of a virtual transaction cannot be known, and it seems that the most equitable allocation of uplift cost would be based on a methodology that simply treats virtual transaction the same as physical transactions. Therefore, PG&E is not supportive of the CAISO's two threshold tests for CB uplift allocation:

- **IFM Tier 1 Uplift allocated to virtual demand only in the case where physical demand plus virtual demand exceeds the CAISO Forecast.**
- **RUC Tier 1 Uplift allocated to virtual supply only in the case where the net virtual supply is positive.**
2. Issue Paper on Two-Tier Real-Time Bid Cost Recovery Uplift

A) Do you have a preference among the options reviewed in the issue paper?

- Option 1 – Each SCs need for inc or dec energy across their portfolio if aligned with the total system need for inc or dec energy would determine allocation for Tier 1 Real-Time uplift. This includes both virtual supply and virtual demand.

- Option 2 – Allocation for Tier 1 Uplift for each SC would be based on Net Negative Uninstructed Deviation and net Virtual Supply.

PG&E is supportive of the CAISO’s efforts to address the issue of real-time uplift cost allocation to convergence bids before CB is implemented in Release 1A and to accelerate the development of a two-tier real-time bid cost recovery uplift.

At this time PG&E cannot make a strong recommendation regarding the two proposed options. We do make the simple observation that both PJM and the NE ISO are using a methodology that appears similar to Option 1. However, it seems to us that the best way, in fact the only way, to make this decision is with empirical market data. The CAISO should be able to design test scenarios that assess which option most reasonably allocates real-time uplift costs. The CAISO does not need to wait for the market to open to conduct these tests but should be able to accomplish this in a "sandbox" version of the market with dummy inputs. PG&E would welcome the opportunity to work with the CAISO and other stakeholders to develop specific scenario configurations to test these options.

B) Do you have other thoughts on how costs should be allocated in Tier 1 for Real-Time uplift?

Nothing at this time.

C) Do you have a preference on what the denominator should be for the calculation of the Real-Time Tier 1 purchase rate?

- Absolute Value of Real-Time instructed incs and decs
- Instructed incs only
- Net of instructed incs and decs

PG&E’s reaction to this question is similar to our answer to Question A. The reasonableness of the denominator options should be assessed through some market run experimentation. We strongly recommend the CAISO take the time to do this analysis. As we also stated above, the CAISO does not need to wait for the market to open to conduct these tests but should be able to accomplish this in a "sandbox" version of the market with dummy inputs. And, PG&E would welcome the opportunity to work with the CAISO and other stakeholders to develop specific scenario configurations to test these options.

4. Additional comments?

Nothing at this time.