

PG&E's Stakeholder Comments

Subject: Straw Proposal on Multi-Stage Generating Unit Modeling

Submitted by	Company	Date Submitted
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Pacific Gas & Electric Company (PG&E) appreciates the opportunity to participate in the Multi-Stage Generating Unit Modeling stakeholder process and to submit comments regarding the February 17, 2009 Straw Proposal.

In general, PG&E is supportive of the initiative's objective of more accurately incorporating the operating parameters of multi-stage generating units so that the units will be economically and feasibly dispatched. However, as described in these comments, the Straw Proposal raises several important areas of concern which PG&E requests be addressed by the CAISO. Moreover, given the number of identified fundamental market issues posed by the Straw Proposal, PG&E recommends the CAISO issue another draft proposal and conduct an additional stakeholder session before presenting the Final Proposal to the Board of Governors. PG&E also requests that the DMM and the MSC provide comments regarding the design.

- 1. The proposed design for multi-stage generating unit modeling would enable Participants to bid in the multiple configurations of multi-stage units into the Integrated Forward Market (IFM). At most one configuration can be chosen by the IFM, and that configuration would then be locked for the Real Time Market (RTM). Please elaborate on any issues foreseen with locking the configuration passed to the RTM. (Specific examples or scenarios would be helpful.)**

PG&E Does Not Support. Locking the IFM configuration in the RTM may lead to unintended high prices and generation scarcity and appears to be a serious design flaw. It is easy to imagine a situation in which the RTM load is higher than the Day-Ahead Market load, but because multi-stage units are locked in lower capacity configuration from the IFM, needed capacity is not available to the CAISO through "normal" RTM market processes. This has the potential to lead to higher prices and scarcity.

Additionally, the limitation of locking the single configuration throughout the RTM hour is unnecessarily limiting the full capabilities of many multi-stage generating units. For example, PG&E's Helms facility can sequentially turn on one, two or three generators or pumps within an hour. Treating Helms as a multi-stage generating unit under the current proposal would disallow such real-time flexibility.

Finally, this proposal appears to be in conflict with the MRTU Tariff 40.6.3.

Short Start Units and Dynamic System Resources, unless a Dynamic System Resource is demonstrated to be incapable of meeting the definition of a Short Start Unit based on physical operating characteristics, that supply Resource Adequacy Capacity not committed under Section 40.6.1, and therefore are subject to Section 40.6.2, and Use-Limited Resources subject to Section 40.6.4 to the extent consistent with their applicable use plan, must submit Economic Bids or Self-Schedules for the Resource Adequacy Capacity into the Real-Time Market.

A multi-stage unit with a chosen IFM configuration representing partial RA capacity will be unable to satisfy the requirement to fully submit its RA capacity into the RTM.

PG&E strongly recommends that the CAISO reconsider the design to provide the RTM with all additional configuration flexibility and address the identified issues which may lead to unintended high prices and scarcity

- 2. The issue of Resource Adequacy (RA) Must Offer (MO) requirements were discussed on the Conference Call on February 25, 2009. The ISO is considering including in its proposed design the requirement that multi-stage units subject to RA MO requirements would need to bid into the IFM at least one configuration that would fulfill the unit's full RA MO obligation. If no configuration is chosen by the IFM, the units would need to submit a configuration into the RTM that would fulfill the RA MO obligation.**

The Proposed Modification Is Incomplete. We agree that both IFM and RTM MO requirements need to be addressed in the design. However, all market requirements need to be carefully considered. Although the proposal does not discuss RUC, by proposing to limit the RTM configuration to that established in the IFM, this seems to suggest (or require) that RUC commitment is limited to this one configuration as well (as representing the only "allowable" RTM dispatch configuration). This undue limiting of available capacity into RUC could create reliability concerns and may also result in high RUC prices. For example, consider the situation in which a multi-stage unit has a configuration chosen in the DA market that represents only a portion of its RA capacity. What configuration is considered in the RUC market? Is it the partial RA capacity configuration or the full RA capacity configuration? How could a full capacity configuration be considered in the RUC market, if the RT market is locked into the partial RA capacity configuration?

We see the proposal as potentially leading to higher RUC prices and scarcity. The must-offer considerations in the all of the markets (DA, RUC, and RT) need to be carefully analyzed together, and downstream market implications need to be examined. It is not clear to us that this analysis has been done.

- 3. Reporting outages and de-rates of units into the Scheduling and Logging for the ISO of California (SLIC) software will be somewhat more complex for multi-stage units. Two options include the following:**

- **Submit outages/de-rates at the unit level, and make any changes necessary to ramp rates within the configuration-level bids.**
- **Submit outages/de-rates at the configuration level for all configurations impacted by a generating unit, and make any ramp rate changes within the SLIC ticket.**

The IFM and RTM bids for configurations affected by the outages/de-rates should reflect the changes in ramp rates and capacity. Please comment on these options and provide your preference, or any additional suggestions.

More Information Is Needed. PG&E requests the CAISO provide more description and detail of these alternatives so we can better understand the implications and provide a more thoughtful response. The first option seems simpler, but we do not fully understand the process. For example, how would the CAISO translate an outage notification provided at a unit level into limitations for each of the configurations (some situations would not effect all configurations, others seemingly could).

4. Additional Issues

In addition to the responses to the CAISO's questions, PG&E would also like to offer two additional comments.

PG&E Request Helms Be Included For Multi-Stage Modeling. It appears that the Helms Pump-Storage Units would not qualify for Multi-Stage Modeling treatment. This conclusion is based on the assertion on page two of the Straw Proposal which states, "At this time, the proposal for changes to modeling multi-stage units will be applied only to those units that have specified Forbidden Operating Regions in the Master File." The Helms units do not have Forbidden Regions specified in the Master File, and, therefore, would be excluded from Multi-Stage Modeling.

This exclusion will preclude PG&E the requested and necessary bidding flexibility it seeks for these units. It is not clear what obstacles are preventing the CAISO from implementing Multi-Stage Modeling flexibility for units such as Helms. We will send additional detail regarding Helms to the CAISO in a separate email and would welcome the opportunity to discuss the issue further.

Preserve Forbidden Region Functionality. PG&E requests that the CAISO commit to preserving the Forbidden Region functionality even after the implementation of Multi-Stage Modeling. This functionality is critical for the safe operation of PG&E hydro units.

5. Conclusion

PG&E believes that the impacts of the Straw Proposal have not been fully explored. The design seems to have one foot in the current MRTU market and one foot in a more-fully-optimized, multi-stage-modeled market. We are concerned that the CAISO is rushing the development of a design that will only marginally capture a portion of the value presented by multi-stage units while creating a potential environment for reliability problems, higher prices, and scarcity. We prefer that the CAISO takes the time it needs to fully consider the design implications and work through all of the technical issues.

Given the number of identified fundamental market issues posed by the Straw Proposal, PG&E recommends the CAISO issue another draft proposal and conduct an additional stakeholder session before presenting the Final Proposal to the Board of Governors. PG&E also requests that the DMM and the MSC provide comments regarding the design.