

Stakeholder Comments

**Commitment Cost Enhancements Phase 2, Revised Straw Proposal
Issued December 22, 2014**

Submitted by	Company	Date Submitted
Lisa Olson eolson@semprautilities.com 858-650-6182	San Diego Gas & Electric	January 13, 2015

SDG&E appreciates the opportunity to comment on CAISO's Commitment Cost Enhancements Phase 2 Revised Straw Proposal. Many good updates were outlined including using the natural gas price index for the model as well as more clarity on the start-up and transition costs.

SDG&E requests CAISO present opportunity cost model results from various methods mentioned in the straw proposal. This will ensure the most robust method is used to derive opportunity costs for use-limited resources at the technical workshop coming up at the end of the month. This would include examples for opportunity cost calculation for start-up limitations, run time limitations or energy generation limitations. SDG&E is not convinced 'one' single future interval of lost profit is the most accurate measurement for the opportunity cost adder. CAISO presents, and SDG&E supports, the notion of testing a method similar to the aforementioned but looking at the opportunity cost as averaged between one less future interval, the second less future interval and the third less future interval. It will be good to see some test results for discussion. We believe the technical workshop an appropriate place to demonstrate which method most robust.

SDG&E believes scheduling coordinators (SCs) can submit their own capacity opportunity cost for use-limited units. However, if this is the case, the CAISO must have a stringent validation method to ensure SC provided commitment costs are reasonable. There is value in consistency and the CAISO performing all opportunity cost calculations.

The CAISO is changing the definition of use-limited capacity. This stakeholder forum provides the opportunity to address a growing concern SDG&E has with contract start limitations which are more restrictive than environmental permits. Historically, fast start combustion turbines (CTs) were built as the best (lowest cost) solution for:

- 1) Covering the planning reserve margin
- 2) Providing a resource for the highest few percent of the load duration curve to avoid running other slow starting units that have long minimum run times
- 3) Covering outages in other generation
- 4) Providing fast response for contingencies to maintain reliability

In the past, a couple hundred starts a year were generally thought to be more than adequate to cover these uses. The environmental permits were structured to cover #1 (higher than expected load growth) and #3 (unexpected long-term outages). Both of these items would result in many more run hours but only a few additional starts. All of this information was used as the basis for creating power purchase agreements (PPAs) for CTs.

However, the tremendous increase in variable energy resources (VERs) has placed additional, new burdens on CTs:

- 5) Covering the constant, unknown fluctuations in output (primarily from wind)
- 6) Covering steep short-duration net-load ramps (primarily from solar) without an over-generation burden

SDG&E has observed that CTs may have to start two or more times a day to address the increased use of VERs, and these additional starts are not restricted only to days with high load or outages. Thus, CTs could be deployed most days of the year. SDG&E has already experienced reaching the maximum number of start limits allowed under contract and expects this concern to get worse as more VERs are added to the system. The output of VERs lessens the duration, or run time, CTs are needed for #2 and #3 (reflected in the growing over-generation problem). The increased number of starts for #5 and #6 generally do not have a long duration. Thus, in total, little if any additional pressure is being put on the existing CTs' environmental limitations.

Running out of CT contractual starts is not just an economic issue associated with missed energy value, availability charges and replacement costs. All of the CTs concerning SDG&E and affected by contractual limitation of starts are Local Capacity Resources (LCRs). Losing these resources potentially could cause reliability problems particularly for concern #4, noted above (and the CAISO and SDG&E are looking into the reliability issue). Also, RA rules at both the CPUC and CAISO were not developed to address losing a LCR for a contractual start limitation.

Until now, this stakeholder initiative has focused on capacity with operational limitations or restrictions of several types, but not for contractual reasons. SDG&E urges the CAISO not to ignore contractual limitations and, with other stakeholders, consider how this particular type of limitation can be better planned for and factored into the CAISO's dispatch protocols. Failing to address this concern could lead to:

- 1) Possible reliability problems for the Local San Diego area
- 2) Higher LMPs at the end of the year (when these resources are out of starts) that are not offset by lower LMPs (when started at lower cost times) causing market inefficiency and higher costs for all load
- 3) Additional replacement costs and availability charges for SDG&E's customers
- 4) Problems with the CPUC/CAISO process for CAM CTs

SDG&E recommends the CAISO address and resolve this contractual starts limitations issue in this initiative to maintain market efficiency and avoid possible reliability problems.