

## **2016-2017 Transmission Planning Process (TPP) Special Study on Slow Response Local Capacity Resources**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
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PG&E provides the following comments on the preliminary results of the CAISO’s Slow Response Local Capacity Resources Special Study, presented at the CAISO Transmission Planning Process (TPP) stakeholder meeting held September 21-22, 2016, and further elaborated in the joint CPUC-CAISO Workshop held on October 3, 2016.

The purpose of these efforts is to establish a coordinated process and set forth criteria for slow response resources to meet CAISO local capacity requirements and qualify for CPUC jurisdictional local Resource Adequacy (RA). At issue are the operational requirements for timely response to a local (N-1) contingency, in order to allow CAISO flexibility to restore the system to a secure state in the event of a subsequent (N-1-1) contingency. While some resources are able to respond in time to meet the CAISO’s operational time horizon<sup>1</sup>, there is a potentially large pool of resources that may only be able to respond if notified or dispatched on a longer lead time basis. The current process seeks to clarify the operating characteristics that are necessary for slow response resources to be dispatched on a pre N-1 contingency basis in order to meet local area needs.

### Schedule and Timing Issues

During the workshop, the CAISO represented that its objective is to establish a process and have it in place in time for the CPUC’s 2018 RA year. PG&E respectfully submits that this timetable is overly optimistic. Given the multitude and complexity of regulatory processes underway at both the CAISO and CPUC, it is not possible or advisable to drive this subject to a rapid conclusion. The CAISO started the 2017 Local Capacity Requirements (LCR) process with a market notice on October 15, 2015, and stakeholder meeting on October 29, 2015.

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<sup>1</sup> For the current discussion, it is not important whether the required lead time is 20 minutes (allowing CAISO 10 minutes for communication and verification of resource dispatch) or 30 minutes (the NERC requirement). PG&E notes that this is still a matter of contention for some stakeholders.

Consequently, if the past is any indication of the future, the 2018 LCR process should begin in the next three weeks. Given the time necessary for the LCR process, modifying the 2018 LCR process for the inclusion of the proposed changes is likely to lead to error and inaccuracies. PG&E believes it is more important to get this done right than to get it done quickly.

Further, results from the study plan presented by the IOUs and the CAISO suggest that at current levels slow response demand response resources generally have sufficient availability to be called by the CAISO on a pre-contingency basis if needed. Based on this finding, there is no pressing need to change the existing CPUC RA counting rules with respect to slow response demand response resources.

The CPUC is currently considering multiple changes to both the structure of the IOU demand response portfolios and the IOU RA procurement regime in open proceedings R.14-10-010 (Resource Adequacy) and R.13-09-011 (Demand Response). Any change to the counting conventions for demand response as an RA resource will have to be considered in the context of other changes scoped in the R.14-10-010 proceeding, including the ELCC methodology for counting of wind and solar resources, the durable definition of flexibility, and potential multi-year forward RA obligations.

Moreover, PG&E notes that local RA requirements of the IOUs are currently met based on annual showings where the same resource must be shown in all 12 months of the year. This may result in a general tendency to overstate monthly local area RA requirements in local areas where loads vary significantly based on seasonal characteristics. PG&E suggests that rather than taking on the slow response demand response criteria issues as an isolated issue, it would be more productive to review and update the overall study framework for local area needs to more accurately meet monthly local requirements.

PG&E is also concerned with the enforcement of the doctrine of “resource neutrality.” The CPUC and CAISO must assure that all resources counting for a particular requirement (e.g. local RA) can meet the standards that are required to satisfy the requirement.

Once an initial process is established for pre-contingency resources to qualify to meet CAISO local capacity requirements, PG&E notes that it will also be necessary for stakeholders to agree on when to revisit the assumptions used to define demand response resources that are included in the LCR technical study, as load profiles and local network conditions evolve. The study should be revisited routinely as a part of the CAISO’s annual LCR study process.

### Area/Sub-Area Definitions

One of the challenges uncovered during development of the preliminary technical studies is the mismatch between the demand response resource breakdown by IOU Distribution Area (used



to map demand response resources) and the Local Capacity Areas (LCA), as defined periodically, based on power flow analysis by the ISO. PG&E hopes that the recurring study process will include a consistent methodology mapping the LCAs with the utility demand response data to ensure accurate alignment between these two data sources. It is important for achieving the local reliability objective that the demand response resources that are shown for local requirements are, in fact, located electrically within the LCA of concern (which may vary, depending on the specific CAISO contingency scenario that triggers the LCR deficiency).

For PG&E's service area, there are limited demand response resources in LCA sub-areas and Local RA procurement is conducted only at the overall local area level. Therefore, PG&E did not conduct any study at the LCA sub-area level in its initial technical study. PG&E reserves the option to conduct sub-area studies, as needed, in the future.

### Technical Study Methodology

During the Workshop, each of the IOUs presented results using a common simple study methodology, developed for expediency rather than accuracy. This methodology takes a historical load shape (based on an average of 3-5 recent years' data) and scales up the entire shape to fit a single forecast 1-in-10 year peak. This uniform "scaling" method likely overstates the actual number and duration of event calls that would be expected in any actual load year containing a 1-in-10 peak. This is because a single extreme peak event is only likely to be correlated with higher loads in the adjacent hours and days (e.g. during a summer heat wave) and is not predictive of an extreme high load occurring uniformly in every other period of the year.

By incorrectly overstating the loading conditions and number and duration of event calls, PG&E notes that the simple study methodology artificially restricts the degree to which demand response resources will be considered available to meet planning criteria (i.e. because the demand response resources will be forecast to exceed their use restrictions at a lower percentage of area peak than would actually occur).

Despite the above limitations in the study methodology, the preliminary results suggest that current levels of demand response resources should have sufficient availability to respond if called on a pre-contingency basis (e.g. when local area loads are projected to exceed the 1-in-10 year recurrence interval level). This should give the CAISO comfort with respect to the timing for developing a more detailed and accurate study methodology.

### Next Steps

PG&E believes the focus over the next few months should be to:



- Revise the current scaling methodology employed in the initial study plan so that it more accurately reflects the likelihood of resources being called pre-contingency in each local area.
- Develop the CAISO BPM language and other necessary operational tools and processes that will allow demand response resources to effectively respond on a pre-contingency basis for the purpose of mitigating local issues.
- Work with the CPUC staff to develop any necessary language, operational tools and process that will reflect the value of pre-contingency demand response resources in local RA showings of the IOUs.