#### Stakeholder Comments Template

#### CAISO Revised Transmission Planning Standards

#### Please submit comments to regionaltransmission@caiso.com

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SCE appreciates the opportunity to provide comments on the CAISO's April 11, 2014 stakeholder meeting and the CAISO Straw Proposal "Revision to ISO Transmission Planning Standards" dated April 4, 2014 ("Straw Proposal"). Overall, SCE supports the CAISO's effort to review certain aspects of the CAISO Planning Standards and develop necessary changes to address changes in the NERC Transmission Planning (TPL) standards. However, particularly with regard to Category C load shedding, SCE believes that it is necessary to ensure that sufficient time is provided to complete a detailed analysis before proposals are presented to the CAISO Board for approval. In addition, it is important to consider both the reliability and potential cost implications associated with potential revisions to CAISO Planning Standards.

In particular, SCE recommends that additional research be performed and data gathered to allow for 1) a detailed analysis of population density used in transmission planning (e.g., Figure 1 in the Straw Proposal) and 2) a more refined and granular analysis and justification to address non-consequential load shedding for Category C contingencies.

SCE is very interested in working with the CAISO and believes that it is important to ensure sufficient time is provided for this stakeholder process to allow additional research on various census data. Detailed comments are provided below.

### I. <u>Category C Load Shedding</u>

The Straw Proposal states that the CAISO is intending to provide further clarity in the CAISO Planning Standards regarding when load shedding through Special Protection Systems ("SPSs") is considered an acceptable means to address planning needs for Category C contingencies. In particular, the CAISO intends to not rely on high-density urban load shedding as a long term planning solution for Category C contingencies. The Straw Proposal states that the CAISO's approach of avoiding urban load shedding in high density areas is consistent with the general approaches of the other ISOs and RTOs.

SCE supports the CAISO's initiative to examine what criteria changes may be necessary to the current practice of using load-dropping SPSs for Category C contingencies. However, much more time and thought will need to be put toward such an initiative, particularly given the potential cost implications related to lost import capacity and transmission upgrades. For example, the Straw Proposal defines a "high density urban load" area as "an area with population

over 1,000 people per square mile."<sup>1</sup> The Straw Proposal also considers population density on a countywide basis.<sup>2</sup> SCE believes that more analysis is needed to define an urban load area, including consideration of a more granular definition than countywide (e.g., city or zip code). A more granular definition will likely lead to a higher density level or other load considerations than that of 1,000 people per square mile.<sup>3</sup>

The United States Census Bureau, for example, describes population density as a function of census tracts and blocks. Thresholds for population densities are not necessarily used to generally describe whole counties. There are a considerable amount of census blocks in San Diego County, with many well below and some well above 1,000 people per square mile. Additionally, *Urbanized Areas* are defined as densely developed territories that contain at least 50,000 people. Given that there are numerous other possible interpretations of statistically "dense" locations, more analysis should be performed, especially given the importance of the issue at hand.

SCE is willing to support such additional analyses, but believes that the amount of time required to perform such analyses is greater than provided in the Straw Proposal's draft schedule. SCE recommends that the CAISO revise its Board presentation until November to allow at least another month in the stakeholder process.

Also, SCE recommends that the CAISO allow time for the stakeholder process to develop criteria that meets the CAISO's goals and considers options based on stakeholder feedback. Given that, it would be best if the CAISO considers the formal revision for the load shed standard to be implemented in the 2015-16 transmission planning cycle.

## Transfer Capability Needs to Be Defined

SCE supports the CAISO's proposal to exclude mechanisms that are in place to enable transfer capability of major transmission paths across California and the West to access lower cost generation.

As described in Section 3.3 of the CAISO Straw Proposal, system planning is characterized by broader geographical size, with greater transmission import capability and most often with resources that can be procured at lower cost than in local area resources.<sup>4</sup> Reliance on non-consequential load drop for double contingencies is used to increase the transfer capability of major transmission paths across California and the West to the benefit of all and with rather rare occurrences of outages. For the reasons described above, the CAISO is not proposing to eliminate existing system-wide SPS schemes that include some non-consequential load dropping for common corridor double contingency events.

SCE appreciates the CAISO including the exclusion described above for SPS's that support an ability to import more power. It appears that a number of existing SPSs in SCE's area would meet this exclusion. However, this CAISO proposal needs to be better defined so that it can be

<sup>&</sup>lt;sup>1</sup> Straw Proposal at 6.

<sup>&</sup>lt;sup>2</sup> Straw Proposal at 5.

<sup>&</sup>lt;sup>3</sup> See for instance: http://www.usa.com/rank/california-state--population-density--zip-code-rank.htm

<sup>&</sup>lt;sup>4</sup> Straw Proposal at 7.

determined which existing SPSs would be allowed to continue in operation under the new planning standard.

## Economic Off-Ramp Should be Developed for Low Likelihood Events

Regardless of the specific standards adopted regarding urban load shedding, there should be an economic impracticality test applied by the CAISO to avoid pursuit of high-cost transmission upgrades that have low overall value to the customers who pay for these upgrades. In a value of service study conducted in 2000, SCE estimated the cost of a four hour summer weekday outage across its service area as between \$378 and \$944 million. While these are large figures, the likelihood of triggering a SPS in a particular year is typically very small and would typically affect a limited number of customers. The key point is that value of service can be quantified, and used to perform a general assessment as to whether it is appropriate to rely on SPSs to address contingencies with low probability of occurrence when the cost of upgrades is significant. The CAISO standard should include a provision to allow SPSs in urban areas where it is economically impractical to pursue transmission upgrades.

## II. Extreme Events Mitigation for San Francisco Peninsula Area

To better understand the CAISO's reasoning in proposing the San Francisco system as a unique area for Extreme Event analysis and potential implications on reliability for all electricity users in the CAISO footprint, SCE request the CAISO to provide the following:

- a. Objective criteria to determine unique Extreme Event study areas in the CAISO footprint (e.g. earth quake probability threshold and/or post Extreme Event restoration duration time).
- b. Guidelines to determine the accepted level of system performance under Extreme Events (e.g. Category C system performance where load shed is permitted to stabilize the system or Category B where load shed is not permitted).

# III. Updating to NERC Transmission Planning Standards (TPL)

SCE requests that the CAISO consider implementing the changes that are codified and adopted in this stakeholder process all at the same time, starting in the 2015-16 transmission planning cycle.