Comments of Pacific Gas and Electric Company
CAISO Transmission Planning Standards
Final Draft Proposal

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide comments on the California Independent System Operator's (CAISO) Revision to ISO Transmission Planning Standard Final Draft Proposal, dated June 16, 2014. In the comments below, PG&E addresses the main elements of the policy paper as well as the corresponding revisions to the planning standards included in Attachment 1 to the policy paper.

1. San Francisco Peninsula Extreme Event Reliability Standard

PG&E strongly supports the CAISO's proposed Extreme Event Reliability Standard as drafted in Section 7 of the CAISO Planning Standards. Codifying this new reliability standard is particularly important given the significant loss of load that could potentially result in the SF Peninsula area due to possible extreme events, such as major seismic events, third-party actions, and co-located facility failures. PG&E views the CAISO's adoption of the new standard as a critical step towards improving the resiliency of the Bulk Electric System (BES) for purposes of maintaining reliable electric service to customers in San Francisco and in San Mateo County following an extreme event. This new reliability standard explicitly acknowledges the limitation that exists in the NERC planning standards with respect to the development of extreme event mitigation and requires the CAISO to assess the need for corrective action plans, including transmission solutions that address the risk of extreme events specifically in the SF Peninsula area. PG&E supports this approach.

PG&E has reviewed the incremental changes that the CAISO made to its proposal relative to the Revised Draft Proposal, dated May 28, 2014, and is supportive of the revisions. In particular, PG&E supports the revised structure of the standard as the well as the inclusion of the new provision to Section 7 that allows other areas of the grid to be considered, on a case-by-case basis, for extreme event mitigation. As stated above, PG&E continues to strongly support the proposed SF Peninsula Extreme Event Reliability Standard, which is now set forth in new Section 7.1. PG&E believes Section 7.1 appropriately identifies the set of characteristics that are unique to the SF Peninsula and that justify the need for this new standard. Further, these characteristics are consistent with the detailed description of risk factors specific to the SF Peninsula area that is included in Appendix D (San Francisco Peninsula Extreme Event Reliability Assessment) of the Final 2013-2014 Transmission Plan.

Importantly, the last paragraph of Section 7.1 includes a provision acknowledging that because of the unique characteristics of the SF Peninsula a "credible basis" exists for considering corrective action plans to mitigate extreme events. PG&E agrees with that statement and believes it is well supported based on the information presented in Appendix D.

With respect to the study work that the CAISO has initiated to assess extreme event reliability issues in the SF Peninsula area, PG&E appreciates and supports this analytic work. The study process began during the 2012-2013 transmission planning cycle and continued through the 2013-2014 planning cycle with the development of Appendix D to the 2013-2014 transmission plan. As the CAISO made clear during the June 4, 2014 stakeholder call and again during the July 28, 2014, stakeholder call, the CAISO is continuing the assessment of potential mitigation for extreme events as part of the 2014-2015 planning process and will engage stakeholders on the findings of its mitigation assessment during the current TPP cycle. PG&E recognizes that extreme event contingency analysis for the SF Peninsula area is a complicated undertaking, hence the three planning cycles worth of study, and looks forward to continuing to work with the CAISO to complete the necessary analysis during the current planning process.

2. Non-Consequential Load Loss for TPL-001-04 P1-P7 Contingencies

PG&E is generally supportive of the revisions that the CAISO incorporated into its Final Draft Proposal to codify the acceptable uses of load shedding as mitigation for P1-P7 contingencies in local area and system-wide long-term planning. The new content that has been added to Section VI identifying the five High Density Urban Load Areas (HDULA) where non-consequential load dropping is not permitted as long-term mitigation as well as the inclusion of links to U.S. Census Bureau maps illustrating the geographic boundaries of each identified HDULA are improvements over the previous two policy proposals. While PG&E is generally supportive of the revisions made to the Final Draft Proposal, PG&E believes additional clarifications/refinements are needed prior to CAISO Management requesting approval by the Board of Governors. PG&E requests clarifications of the following items:

A. The interplay between the interpretation of Footnote 12 of TPL-001-04 on page 19 of the proposed standard and the provisions of Section 6.1on page 7 concerning the acceptable uses of load shedding is not clear.

   In Section 6.1 the CAISO states:

> For local area long-term planning, the ISO does not allow non-consequential load dropping in high density urban load areas in lieu of expanding transmission or local resource capability to mitigate NERC TPL-001-4 standard P1-P7 contingencies and impacts on the 115 kV or higher voltage systems.
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> - In the near term during short-term planning, where allowed by NERC standards, SPS which drops load, including high density urban load, may be used to bridge the gap between real-time operations and the time when system reinforcements are built.
> - In considering if load shedding, where allowed by NERC standards, is a viable mitigation in either the short-term, or the long-term for local areas that would

not call upon high density urban load, case-by-case assessments need to be considered.

The above excerpt can be interpreted to mean that load shedding, where allowed by NERC standards, may be permitted by CAISO as long-term mitigation in non-HDULAs. Meanwhile, the wording of the CAISO's interpretation of Footnote 12 of TPL-001-04 in Section VII, Interpretations of Terms from the NERC Reliability Standards and WECC Regional Criteria, implies that load dropping as long-term mitigation for P1, P2-1, and P3 contingencies is not acceptable under any circumstances, regardless of whether the criteria violation is in a HDULA, in a non-HDULA or in a non-local area. Given that Section 6.1 appears to allow load dropping as acceptable mitigation in the long-term in non-HDULAs, PG&E believes the interplay between Section 6.1 and the CAISO's Footnote 12 interpretation needs to be clarified with respect to permitted load shedding. Likewise, the interplay between Section 6.2 (System-Wide Long Term Planning) and the Footnote 12 interpretation also requires clarification.

Additionally, PG&E seeks clarification as to whether the CAISO's Footnote 12 interpretation regarding permitted load shedding for P1, P2-1 and P3 contingencies is more stringent or restrictive than the actual Footnote 12 from Table 1 of TPL-001-04. PG&E notes that Footnote 12 from Table 1 states that "In limited circumstances, Non-Consequential Load Loss may be needed throughout the planning horizon to ensure that BES performance requirements are met." Given that NERC permits some load dropping "throughout the planning horizon" for P1, P2-1, and P3 contingencies and recognizing that the CAISO's Footnote 12 interpretation speaks to limited load shedding only on an interim basis, there appears to be conflict between the NERC and CAISO provisions.

B. Clarification is needed regarding permitted/non-permitted load dropping at voltages less than 115 kV.

The excerpt above from Section 6.1provides that load dropping in HDULAs is not allowed in local area long-term planning to mitigate impacts on the 115 kV or higher voltage systems. Similar language regarding impacts on the 115 kV and above transmission system is found in Section 6.2 for system-wide planning where load dropping is allowed consistent with NERC TPL-001-04. As currently drafted, the standard does not explicitly address whether load shedding to mitigate impacts on the CAISO controlled transmission system at voltages less than 115 kV is permitted in HDULAs, non-HDULAs, or at the system-wide level. PG&E believes the requirements of the NERC standard would apply where the proposed standard does not explicitly address the issue.

C. Sections 6.1 and 6.2 refer to Special Protection Schemes (SPS) that drop load. Is it the CAISO's intent to only allow non-consequential load dropping if it is through an SPS?

D. Section 6.2, which allows for "some" non-consequential load dropping system-wide as mitigation for P1-P7 contingencies, is captioned "System Wide Long-Term Planning." Is it the CAISO's intent to limit the application of this particular provision of the CAISO

Planning Standards to long-term system planning? What is the CAISO's policy for load dropping at the system-wide level as short-term mitigation?

E. The Footnote 12 interpretation on Page 19 of the standard includes a typo that should be corrected. The word "single" should be deleted in the first sentence given that P3 is a multiple contingency criterion.

> **Footnote 12 of TPL-001-4 Interpretation and Applicable Timeline:** The shedding of Non-Consequential load following the ~~single~~ contingencies of P1, P2-1 and P3 on the Bulk Electric System of the ISO Controlled Grid is not considered appropriate in meeting the performance requirements.

F. The planning standards should include capitalized terms found in the NERC glossary of terms in instances where the CAISO is intending to use NERC defined terms. For example, Section 6.1 includes the phrases "near term" and "long-term." Such phrases should be capitalized if the CAISO is referring to NERC defined terms. Where it is not intended, PG&E suggests that alternative language be used to avoid confusion with NERC defined terms.

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