Comments of Pacific Gas and Electric Company on the Draft CAISO 2012-2013 Transmission Plan and February 11, 2013 Stakeholder Meeting

Submitted by	Company	Date Submitted
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Comments

Pacific Gas and Electric Company (PG&E) values the opportunity to participate in the annual Transmission Planning Process. PG&E submits these comments on the Draft 2012-2013 Transmission Plan and February 11, 2013 stakeholder meeting. We look forward to continued participation in the process, and appreciate the significant work that the CAISO staff put into developing this year's draft Transmission Plan.

PG&E's comments are broken into two sections. The first section provides an overview of PG&E's comments on the Nuclear Generation Backup Plan Studies, for which detailed comments are attached in Appendix A. The Second section provides PG&E's detailed comments on all others sections of the Transmission Plan and stakeholder meeting.

Nuclear Generation Backup Plan Studies

PG&E appreciates the CAISO's efforts on Nuclear Generation backup plan studies. The CAISO's study results are consistent with the requirement set forth in the PG&E-CAISO Nuclear Plant Interface Coordination Agreement for Diablo Canyon Power Plant (DCPP) that the transmission system is and will continue to be designed to withstand the loss of both DCPP units.

PG&E respectfully submits the following comments and request for changes to Nuclear Generation Backup Plan Study report (Executive Summary and Section 3.5):

- While Section 3.5 of the Plan includes details of the study assumptions and the need for a more complete assessment, the Executive Summary section does not capture the need for additional studies beyond transmission planning reliability study. PG&E requests that a short description of the need for additional studies be included in the Executive summary. Please refer to Appendix A for PG&E's suggested addition to Executive Summary section.

- Since the objective of the CAISO study was to evaluate the potential transmission reliability concerns in the absence of DCPP, PG&E requests the CAISO to remove the

reference to the "utilities' relicensing assessments" as an objective of the study (refer to Section 3.5.1 of the Plan). Studies required to support DCPP relicensing efforts are outside the scope for the CAISO's studies.

The proposed changes to address the above comments are included in Appendix A of this document.

Draft Transmission Plan

PG&E's comments below are organized to reflect the organization of the transmission plan for the convenience of the CAISO and other stakeholders; however, the order of comments is not necessarily reflective of their order of importance.

Chapter 2: Reliability Assessment – Study Assumptions, Methodology and Results

2.5.4.3: Central Valley Area Assessment and Recommendations

Lockeford-Lodi Area 230kV Development

PG&E agrees with the CAISO's reliability assessment and the need for a project in the Lockeford-Lodi 60 kV area to address reliability concerns. However, PG&E does not support the proposed plan of service detailed in the Draft 2012-2013 Transmission Plan.

As referred to in the Draft 2012-2013 Transmission Plan, the "PG&E Lockeford-Lodi Area Study: Alternative 2" project submittal by the City of Lodi includes the following scope:

1. Construct a 230 kV Double Circuit Transmission Line from Eight Mile substation to Lockeford substation;
2. Construct a new 230 kV bus at Industrial substation and loop one of the new Eight Mile-Lockeford 230 kV lines into this bus.

This alternative would tie the Eight Mile and Lockeford 230 kV systems together and would require a thorough analysis of steady state and transient stability issues.

Additionally, the CAISO refers to a PG&E submitted Special Protection Scheme (SPS) project on page 64 of the draft Transmission Plan. As PG&E has not formally submitted any SPS projects for this, please clarify what SPS project the CAISO is concurring with.

PG&E Preferred Alternative to the CAISO Recommended Proposal

On a conceptual basis, PG&E prefers the option to install two new 230 kV circuits from Lockeford Substation to Industrial (see Figure 1 below). This is a more straight forward solution to the identified reliability concerns.

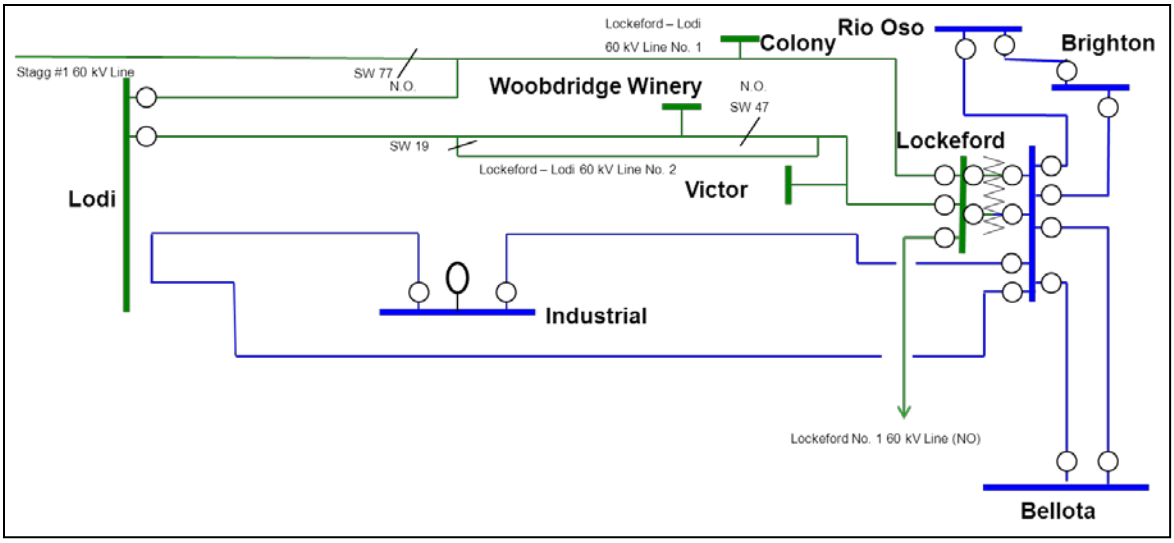

Figure 1: PG&E Preferred Alternative for the Lockeford-Lodi Area 230 kV Development

By serving the Industrial substation from one source, Lockeford Substation, this alternative eliminates PG&Es concerns with tying the Eight Mile and Lockeford 230 kV substations.

General Electric Positive Sequence Load Flow (GE-PSLF) modeling data for this conceptual alternative is available upon request.

Mosher 60 kV Transmission

The Hammer-Country Club 60 kV Line serves approximately 14,000 customers, or 70 MW, in San Joaquin County of Stockton Division. This line feeds the majority of these customers radially through UOP, Mettler, and Mosher Substations. Mosher Substation alone serves approximately 12,000 customers, or 55 MW.

An outage of the Hammer-Country Club 60 kV line, a NERC Category B contingency, would result in the interruption of all 12,000 customer served at Mosher Substation. PG&E's proposed Mosher 60 kV Transmission Project would create a second circuit to improve service reliability.

The scope of work for this project is:

- Reconductor 11.5 miles of the Lockeford No. 1 – 60 kV Line
- Add two circuit breakers and SCADA at Mosher
- Operate Mosher circuit breaker to Lockeford normally open and automatically restore substation following Hammer-Country Club 60 kV Line outage

While this project was not included in the Draft 2012-2013 Transmission Plan, in accordance with the CAISO's Transmission Planning Standard section 6 item 3, PG&E provided Benefit to Cost Ratio (BCR) calculations for this projects which

exceeded 1.0 BCR. PG&E recommends that the CAISO approve this project in the 2012-2013 Transmission Plan to improve reliability to Mosher substation.

Valley Springs No.1 60 kV Line Reconductoring

The Valley Springs No. 1 60 kV Line is located in Calaveras County, Stockton Division. This line normally serves New Hogan Powerhouse and Corral distribution substation. It also serves Linden distribution substation following an outage of the Weber – Mormon Jct 60 kV Line. Including Linden, the Valley Springs No. 1 60 kV Line serves approximately 40 MW, or 8,600 customers.

When Linden Substation is being served by the Valley Springs No. 1 60 kV Line, the line will be overloaded by 137%. The Valley Springs No. 1 60 kV Line Reconductoring project would increase the line capability and eliminate the overload.

The scope of work for this project is:

- Reconductor 12.8 miles of the Valley Springs No. 1 60 kV Line from Valley Springs to Corral

While this project was not included in the Draft 2012-2013 Transmission Plan, PG&E recommends that the CAISO approve this project in the 2012-2013 Transmission Plan to improve reliability to Linden substation.

2.5.5.3: Greater Bay Area Assessment and Recommendations

San Francisco Peninsula Reliability Concerns

The San Francisco Peninsula reliability concerns identified by the CAISO are inclusive of the entire City and County of San Francisco, not just "in supply to the downtown San Francisco area". PG&E requests that the CAISO revise this paragraph accordingly.

To mitigate reliability concerns in the San Francisco Peninsula area PG&E submitted the Moraga-Potrero 230 kV Line project in the 2012 request window. PG&E supports the CAISO's intention to continue to assess the risk and consequences of an extreme event on the San Francisco Peninsula. PG&E urges the CAISO to engage stakeholders and complete the necessary assessment including PG&E's proposed Moraga-Potrero 230 kV Line Project proposal as part of this 2012-2013 Transmission Planning Process (TPP).

Trans Bay Cable Dead Bus Energization Project

PG&E supports the Trans Bay Cable Dead Bus Energization project as described in the draft Transmission Plan. However, this project alone is inadequate to fully restore all customers in the City and County of San Francisco following an extreme event. PG&E believes its proposed Moraga-Potrero 230 kV Line project is needed to provide a total solution.

City of Palo Alto Supply

The City of Palo Alto supply reliability concerns have not been resolved in the draft Transmission Plan. PG&E understands the CAISO is waiting on additional "pertinent information" to complete its analysis. PG&E urges the CAISO to complete its analysis as soon as possible to allow the necessary upgrades to be permitted and constructed in time to meet NERC reliability standards.

Amazon A100 Data Center

PG&E understands the CAISO concurs with PG&E's proposed Amazon A100 Data Center project to connect a PG&E customer. PG&E urges the CAISO to indicate its concurrence in the 2012-2013 Transmission Plan.

2.5.6.3: Greater Fresno Area Assessment and Recommendations

Kearney-Kerman 70 kV Line Re-conductor

The Kearney-Kerman 70 kV line is located in Fresno County, and primarily serves Kerman substation which serves about 6,300 customers.

While this project was not included in the Draft 2012-2013 Transmission Plan, the Kearney-Kerman 70 kV line reconductor project is needed to reliably serve customers at Kerman Substation.

The scope of work for this project is:

- Reconductor 11 miles of the Kearney-Kerman 70 kV Line

PG&E recommends that the CAISO approve this project in the 2012-2013 Transmission Plan to improve reliability to Kerman substation.

Chapter 3: Special Reliability Studies and Results

3.3: Central California Study

PG&E supports the CAISO's proposed solutions to address system reliability for the Greater Fresno Area and provide local and statewide economic and policy driven benefits.

PG&E also recommends further study in the 2013-2014 planning cycle to evaluate the potential economic benefit of constructing the Gates-Gregg 230 kV line with both circuits initially strung versus the proposed single circuit.

Chapter 4: Policy Driven Need Assessment

4.2.5: Southern PG&E Policy Driven Deliverability Assessment Results and Mitigations

PG&E appreciates the CAISO management's intent to approve policy driven mitigation elements costing less than $50 million following the February 11, 2013 stakeholder meeting, and the CAISO's continued work to better integrate the generator interconnection and transmission planning processes for the benefits of California's

ratepayers. We respectfully encourage the CAISO to use its best efforts to provide updated interconnection study results to interconnection customers as quickly as possible due to the approval of these policy driven elements.

Appendix A: PG&E Comments on the Nuclear Generation Backup Plan Studies

Executive Summary

PG&E requests the following paragraph be added to the Executive Summary Section (Before the Conclusion and Recommendation Section on page 13):

Since these studies included evaluations for potential transmission reliability concerns, other studies beyond grid reliability assessment would be needed to provide a more complete assessment and would include asset valuations, environmental impacts of green-house gas emissions, compliance with AB 32, impacts on flexible generation requirements, least-cost best fit replacement options, generation planning reserve margin, market price impacts, customer electricity rate impacts and impacts to natural gas systems for replacement generation. These issues are outside the scope of the ISO's transmission planning reliability study.

Section 3.5

PG&E requests the following modifications to Section 3.5:

3.5.1 Background (3rd paragraph of section, p. 152)

As part of the 2012-2013 transmission planning cycle, two studies related to the nuclear generation backup plan were performed. One addressed the extended outage scenario at DCPP and SONGS for an intermediate time frame (2017-2018). The other considered the reliability concerns and potential mitigation options in the long term (i.e., 2022 time frame). The mid-term study is considered contingency planning for future unplanned long-term outages. The study addressed a request from the CEC 2011 IEPR. The study also incorporates once-through cooling policy implications for generating units that have compliance schedules up to the intermediate 2018 and longer 2022 time frame. The mitigation measures focus on actions that are reasonably implementable by summer 2018. ~~*The long-term study (2022) was undertaken as part of the utilities' relicensing assessments.*~~ *The study related to DCPP absence focuses on grid reliability implications for northern California and ISO overall. The study related to SONGS absence focuses on grid reliability implications for southern California and ISO overall. The combined DCPP and SONGS absence studies also focused on the grid reliability assessment for the ISO bulk transmission system.*

3.5.2 Qualifications for the Grid Assessment Studies (First paragraph of section, p. 152)

The studies included evaluations for potential transmission reliability concerns and potential mitigation options. These studies are not intended as the basis for ~~*are not sufficient to base*~~ *a decision to keep or retire the two nuclear generating power plants.*

Other studies beyond grid reliability assessments would be needed to provide a more complete assessment and would include asset valuations, environmental impacts of green-house gas emissions, compliance with AB 32, impacts on flexible generation requirements, least-cost best fit replacement options, generation planning reserve margin, market price impacts, customer electricity rate impacts and impacts to natural gas systems for replacement generation. These issues are outside the scope of the ISO's ~~not addressed in this~~ transmission planning reliability study.

3.5.5.1 Study Results and Discussion - Conclusions for Grid Reliability Assessment of Diablo Canyon Absence Scenarios (First paragraph, p.162)

The absence of the DCPP appears not to have negative impact on the reliability of the ISO transmission system with the assumption that there is sufficient generation within the ISO controlled grid to meet transmission planning standards ~~renewable generation resources would develop according to the CPUC portfolios~~.

This is consistent with the requirement set forth in the PG&E-CAISO Nuclear Plant Interface Coordination Agreement for DCPP that the transmission system is and will continue to be designed to withstand the loss of both DCPP units.