

Comments of Pacific Gas and Electric Company on the 2016-2017 Transmission Planning Process (TPP) Draft Study Plan

Submitted by	Company	Date Submitted
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Comments

Pacific Gas and Electric Company (PG&E) offers the following comments on the California Independent System Operator’s (CAISO) Draft Study Plan in the 2016-2017 TPP, which was issued on February 22, 2016 and discussed in the Stakeholder Meeting on February 29, 2016. PG&E’s comments below are organized with reference to the relevant section headers within the Study Plan (noted in Italics; proposed new/additional studies are denoted by underlined titles).

4.8.2 Demand Response

PG&E notes that the CAISO has proposed a revision to its Reliability Requirements Business Practice Manual (PRR 854) to require a 20-minute dispatch requirement for demand response resources that are not sufficiently available for pre-dispatch. This proposed requirement is unresolved, with PRR 854 under appeal at the CAISO and being litigated at the CPUC in Rulemaking 14-10-010. Furthermore, the Unified Planning Assumptions make no mention of how frequently a DR resource must be dispatchable to be exempt from the CAISO’s proposed 20-minute dispatchability requirement. If the CAISO decides to apply a 20-minute dispatch requirement to demand response, it should address whether those demand response programs not counted as “first contingency” in the Unified Planning Assumptions are sufficiently available for pre-dispatch before discounting their value in the TPP.

4.9 Major Path Flows and Interchange

For major path flows in the long term horizon, PG&E may not be able to attain a flow of 4000 MW on Path 26 for the summer peak case due to many large units retiring for OTC or other reasons. Diablo Canyon being modeled off-line in the 10th year of the base case will further compound this issue. The CAISO, SCE, and PG&E will need to coordinate to ensure that study assumptions are consistent and minimize any gaps.

4.11.2 Sensitivity Studies

The NERC TPL-001-4 reliability standard requires two near term peak sensitivity cases and one near term off-peak sensitivity case. In the Draft Study Plan, the CAISO has selected only one near term sensitivity case and five long term sensitivity cases. PG&E recommends the CAISO move some of the long term sensitivity scenarios to the near term horizon.

Oakland Study

PG&E appreciates the CAISO's undertaking, as part of the 2015-2016 TPP cycle, a sensitivity assessment of the reliability needs of the East Bay area as it relates to reliance on local aging generation. These studies identified a number of issues caused by the absence of the generation and local SPSs, as well as potential options for addressing these issues. PG&E requests the CAISO outline the process and next steps for finalizing the reliability studies for this area as well as the development of a long term solution to address the identified concerns.

5 Local Capacity Requirement (LCR) Assessment

To the extent that energy storage is considered in meeting LCR needs, PG&E generally supports addressing energy storage charging capability to help mitigate chargeability risks. As PG&E has stated in its comments on the draft 2016 Stakeholder Initiatives Catalog¹, PG&E is concerned that the current interconnection study process does not provide sufficient clarity as to the potential restrictions on chargeability. The lack of clarity on the chargeability of the energy storage project presents a significant commercial challenge to PG&E's storage procurement activities. PG&E would appreciate any information the CAISO can provide about potential chargeability limitations in the transmission constrained regions within the CAISO's footprint. If the TPP is not the venue for such a study, PG&E would ask the CAISO to address this concern in the appropriate initiative or setting.

6 Policy Driven 33% RPS Transmission Plan Analysis

At this time, PG&E does not take issue with the use of a 33% RPS base case portfolio. However, as stated in prior comments, PG&E does not believe there is a requirement that all generation procured to meet RPS targets needs to be fully deliverable. Partially deliverable and energy only contracts are currently a viable option for some renewable resources. PG&E encourages the CAISO to continue to work closely with the CPUC and the CEC to clarify the intended state policies for the level of deliverability for resources within its portfolios.

¹ Comments of Pacific Gas & Electric Company CAISO 2016 Stakeholder Initiatives Catalog and Roadmap, p. 2
<http://www.caiso.com/Documents/PG-CommentsDraft2016StakeholderInitiativesCatalog.pdf>

Additionally, PG&E recommends that the CAISO consider a 43.3 percent RPS² sensitivity case, not for the purpose of authorizing investment, but as a sensitivity case to provide indicative results, and to begin to lay the groundwork, for future TPP cycles, where transmission investment needed to support the increased Senate Bill (SB) 350 RPS targets will have to be addressed. PG&E notes that this 43.3 percent RPS sensitivity case would allow for consideration of how potential increases in energy only and out of state resources might affect future TPP cycles. Accordingly, PG&E recommends that the CAISO perform indicative deliverability studies (with the appropriate mix of energy only and deliverable resources), as well as reliability studies, for the sensitivity case, consistent with previous TPP cycles.

7.1 50% Renewable Energy Goal for 2030

PG&E supports the CAISO's undertaking of the 50% Renewable Energy Special Study and believes the Special Study will provide useful information regarding the possible procurement of Energy Only and out-of-state renewables. Last year's Special Study (completed as part of the 2015-2016 TPP) was a useful first step in evaluating Energy Only resources, but the CASIO should now start to address the practical implications of what Energy Only procurement would mean for the TPP and GIDAP processes. Rather than simply assessing the amount of curtailment and congestion, the Special Study should seek to lay the framework for how mitigations might be identified in future TPP or GIDAP cluster studies that would help alleviate congestion and curtailment. The Special Study should consider how a study process in future studies might identify actual transmission upgrades for approval in either the TPP or GIDAP. For example, the CAISO should consider how they might address the sub-transmission congestion issues identified in last year's study and in particular how upgrades that relieve sub-transmission congestion issues might be identified and approved.

Furthermore, based on the information included in the Draft Study Plan it appears that one of the objectives of this study is to estimate the amount of congestion-related curtailment. In order to properly capture the impact of curtailment, PG&E recommends that the economic models used in identifying congestion-related curtailment should be enhanced to include network constraints (normal and under outage conditions) to more accurately replicate potential market constraints.

7.2 Frequency Response Assessment

PG&E supports CAISO's continued focus on improving the modelling assumptions to further evaluate the impacts of over-generation and frequency response in the next TPP cycle. As demonstrated in the CAISO 2015-2016 TPP assessments, there is significant interaction between CAISO resources and WECC-wide resources for providing frequency response to the

² Based on a 2026 study year with an interpolation of a path to 50% RPS by 2030.

interconnected system. Therefore, given the nature of this issue and the need to work with other WECC entities, PG&E recommends that CAISO work closely with WECC on the next phase of this matter or form a joint study group that includes neighboring Planning Authorities to develop and validate models for use in the frequency response assessment studies. The involvement of the WECC and other entities in this study group will ensure that the assumption about resources in the neighboring systems represents a likely future system condition with higher WECC-wide renewable penetration and the potential of reduction in coal-fired generation.

7.3 Gas - Electric Reliability

PG&E recommends that the CAISO should clearly identify the criteria used for identifying local areas for Gas-Electric reliability assessment and include the names of the local areas that will be included in the 2016-2017 TPP for Gas-Electric Reliability assessment.

7.4 Economic Early Retirement of Gas Generation Assessment

PG&E supports the CAISO's effort to evaluate the potential for economic early retirement of gas generation as a result of increasing levels of renewable generation interconnection to the grid. This assessment is a key aspect of future resource need assessment and should therefore be comprehensive and include:

- An economic assessment of the net revenue of individual resources (e.g., projecting the energy, ancillary services, and RA revenues and then netting out variable and fixed costs of operating the plant)
- Any impact of early retirement on the ability of the system to meet the NERC/WECC/CAISO planning standards

PG&E understands that as a part of the CAISO 2016-2017 TPP, CAISO is planning to develop a methodology for this study and would like to better understand and be part of the process to develop and review input data, assumptions, and methods.

Additional Special Study Requests

1. Local Area Generation Requirements

Minimum conventional generation requirements for large load centers may be needed to ensure the system has enough frequency response, voltage regulation, VAR support, inertia and other electrical attributes to assure a stable and reliable system. The periods of particular concern are the periods of high renewable penetration and high hydro production when the system is stressed by over-generation conditions and conventional resources may be not be economically dispatched. PG&E would like to recommend studies to evaluate any minimum

conventional generation requirement for the large load centers, e.g. the San Francisco Bay Area.

Additionally, PG&E requests two economic studies based on a 33% RPS and a 50% RPS be included as part of the CAISO 2016-2017 TPP:

2. Path 15 Study

PG&E requests that the CAISO conduct an economic assessment of Path 15 based on both a 33% RPS and a 50% RPS. It is proposed that the assessment consider production costs and potential costs to integrate renewable resources that cannot be absorbed within the CAISO-controlled grid without and with Path 15 upgrades. It is suggested that south-to-north studies evaluate dry-year hydro-generation conditions in Northern California and the Northwest. Depending on the assessment results, such upgrades might be designed to achieve a Path 15 rating increase of about 300 MW to 1000 MW.

For example, a 300 MW increase might be achieved with the Tesla/Tracy-Los Banos upgrade and relatively minor upgrades in the Gates and Arco areas. And a 1000 MW increase might be achieved with the Tesla/Tracy-Los Banos upgrade and upgrades of the Gates-Midway 500 kV and perhaps the Los Banos-Gates 500 kV.

3. Path 26 Study

PG&E requests that the CAISO conduct an economic assessment of Path 26 based on both a 33% RPS and a 50% RPS. It is proposed that the assessment consider production costs and potential costs to integrate renewable resources that cannot be absorbed within the CAISO-controlled grid without and with Path 26 upgrades. It is suggested that the north-to-south assessment evaluate wet-year hydro-generations conditions in Northern California and the Northwest.

To the extent Path 26 is congested in this study, PG&E suggests consideration of a Midway-Vincent 500 kV line, a Midway-Vincent 230 kV line, Big Creek-Helms interconnection or other alternatives as indicated by production simulation and power flow studies.