

**COMMENTS OF THE STAFF OF THE CALIFORNIA
PUBLIC UTILITIES COMMISSION**

**ON THE DRAFT 2016-2017 TRANSMISSION PLAN
FOLLOWING THE FEBRUARY 17, 2017 STAKEHOLDER MEETING**

March 7, 2017

Introduction

The Staff of the California Public Utilities Commission (“CPUC Staff”) appreciates this opportunity to provide comments on the Draft 2016-2017 Transmission Plan (“Draft Plan”) posted January 31 and discussed at the February 17 stakeholder meeting. Our comments address the following topics.

1. The CPUC is requesting a more detailed discussion under Section 2.5.9 (Review of Previously Approved PG&E Projects) of what is meant by the statements “until the ISO completes the reviews” and “all development activities are recommended to be put on hold until a review is complete” so that there can be more adequate planning for project filings at the CPUC.
2. CPUC Staff requests greater transparency when presenting cost estimates of reliability projects. While it is understood only capital costs are presented by the CAISO, approved projects regularly result in significantly higher costs than what is estimated in the TPP.
3. The CAISO posted its final 2021 LCR study, but did not provide stakeholders with an opportunity to comment on a draft version of this study, consistent with past practice and with requirements for an open and transparent stakeholder process.
4. The CAISO should revise its final 2021 LCR study to clarify that the 326 MW need in the Santa Clara sub-area is premised on the retirement of the Ellwood generating facility and should indicate that the need is only 253MW assuming that Ellwood is operating.
5. The CAISO Should Revise its Gas/Electric Coordination Special Study based on recently available information.
6. The CAISO should clearly explain why the local area needs have increased in the San Diego area.
7. CPUC Staff commends the CAISO for the continued practice of assessment, holding for review, and cancellation of previously approved transmission projects deemed no longer needed under declining load forecasts. Staff encourages the continuation of the review

process for all load areas, as well as transparency of maintenance cost implications of cancelling utility projects.

8. CPUC Staff notes that there is no change in the finding of need for the Martin 230kV Bus Extension project, which originated from the CAISO's 2014-2015 Transmission Plan. Staff believes this project may trigger a complex permitting process, and the CAISO may wish to reaffirm the continued determination of need of the project, especially in light of ongoing transmission and load changes, as well as the cost and benefit on any alternatives. The Ravenswood- Cooley Landing 115kV Reconductoring project is also a topic of CPUC concern for similar reasons.
 9. The CAISO should continue to engage with the CPUC and other stakeholders on clear documentation of alterations to inputs and study methodologies used when using the CPUC's and CEC's planning inputs for sensitivity cases in the TPP.
 10. CPUC Staff Commends the CAISO for the clear documentation of "No AAEE" and "No BTM- PV" Sensitivity results in the appendices of the Draft 2016-2017 TPP. Staff also thanks CAISO staff for present and future coordination in the 50% Special Study effort.
- 1. The CPUC is requesting a more detailed discussion under Section 2.5.9 (Review of Previously Approved PG&E Projects) of what is meant by the statements "until the ISO completes the reviews" and "all development activities are recommended to be put on hold until a review is complete" to enable more adequate planning for project filings at the CPUC.***

In the Draft 16/17 Transmission Plan, the ISO has indicated at section 2.5.9 that they conducted a separate and standalone review of a number of low voltage transmission projects in the PG&E service territory that were mainly load forecast driven, and whose approvals date back several years in order to assess their possible cancellation. Based on this assessment, the ISO is recommending that 13 projects be cancelled; four projects not be filed at the CPUC ***until the ISO completes the reviews***; and all development activities on 11 projects ***be put on hold until a review is complete***. The CPUC is pleased to see that the CAISO has continued the practice of reviewing previously approved projects with the most up-to-date load forecasts for assessing continued need. However, as the ISO and PG&E are aware, the CPUC has a lengthy licensing process for CPCNs and PTCs involving contracting with environmental consultants prior to filing (at least a six-month process, preparing the appropriate CEQA documentation, and conducting a general proceeding for a CPUC decision). The language in the Draft TPP Section 2.5.9 addressing the ISO's project review process is vague and lacks the necessary specificity for the CPUC to anticipate project filings both in terms of filing dates and the number of projects.

The ISO should provide more details on the review processes used for evaluations of the projects held, with major milestones for the reviews communicated as early as possible so that the CPUC can have a better understanding of which projects will be moved forward and when they will be filed with the CPUC.

2. CPUC Staff requests greater transparency when presenting cost estimates of reliability projects. While it is understood only capital costs are presented by the CAISO, approved projects regularly result in significantly higher costs than what is estimated in the TPP.

CPUC Staff request greater transparency in cost estimations for reliability projects. While the cost estimates at the planning level are limited to capital costs, it is misleading upon review when final project costs are often much higher. For multiple projects, there seems to be a large jump in cost estimates provided in the Transmission Plan to when the utilities file the projects' applications to completion of the project. Some examples include (but are far from limited to) the following:

- a) **Tehachapi Renewable Transmission Project:** When it was first approved in the 2007 Transmission Plan, the cost estimation was approximately \$1.8 billion. Currently, the estimation as provided by SCE in their 2016 Q4 AB970 Report is within the range of \$2.3 to \$2.4 billion. This is an approximately \$550 million rise in cost, which is a 30% increase since CAISO approval.
- b) **Ocean Ranch Substation:** When the project was first discussed in the 2014-15 Transmission Plan, the cost estimation was approximately \$34 million. When the project was discussed in the 2015-16 Transmission Plan, which no longer included reconductoring of a line from San Luis Rey Substation and two loop-ins, the cost estimation was within the range of \$25 to \$30 million. Currently, the estimation as provided by SDG&E in their Application for a Permit to Construct is \$72.4 million. Therefore, the current cost estimation is over two times greater than the estimation originally given for the project when it had a greater scope.
- c) **Estrella Substation:** When the project was first approved in the 2013-14 Transmission Plan, the cost estimation was within the range of \$35 to \$45 million. Currently, the cost estimation as provided by PG&E in their 2017 Q1 AB970 Report is confidential, but the cost figure is significantly higher. It should also be noted that it is unclear if the current

cost estimation includes the NEET components or strictly includes the PG&E components of the project.

In order to further conduct full and reasonable transmission planning, CPUC staff believes it to be imperative to be aware and transparent of the cost differences to project completion. Costs presented should be clear that they are fluid, incomplete estimations provided by the utilities that are subject to increase. Ideally, costs should be more reflective of future changes and account for costs past only capital costs.

3. The CAISO posted its final 2021 LCR study, but did not provide stakeholders with an opportunity to comment on a draft version of this study, consistent with past practice and with requirements for an open and transparent stakeholder process.

Energy Division staff encourage the CAISO to repost the final study as a draft, take comments, and issue a final version only after this process is complete. In addition, Energy Division staff encourages CAISO to ensure that stakeholders are provided with an opportunity to comment on the local studies in a draft form on an on-going basis in the future.

4. The CAISO should revise its final 2021 LCR study to clarify that the 326 MW need in the Santa Clara sub-area is premised on the retirement of the Ellwood generating facility and should indicate that the need is only 253MW assuming that Ellwood is operating.

In its “Final 2021 Long-Term Local Capacity Technical Report,” CAISO states that the Santa Clara sub-area need is 326 MW:

“The most critical contingency is the loss of the Pardee- Santa Clara 230 kV line followed by the loss of Moorpark – Santa Clara 230 kV #1 and #2 lines, which would cause voltage collapse. This limiting contingency establishes a local capacity need of 326 MW (includes 91 MW QF generation, 5 MW of battery storage and 2 MW of preferred [sic] resources) as the minimum capacity necessary for reliable load serving capability within this sub-area.” (Final 2021 LCR Study, p. 89).

However, in its presentation on this study February 17, 2017, CAISO indicates that the need is 253 MW (with Ellwood) and 326 MW (without Ellwood), as shown in CAISO’s presentation slide below. Energy Division staff believe that CAISO should update its “Final” 2021 LCR study to explain this assumption, otherwise it could be mistakenly assumed that the need is 326

MW in all circumstances. Moreover, CAISO should clearly explain in its study, why the need changes depending on whether Ellwood is assumed in the study and not (i.e., why the need is not constant, irrespective of available resources).

Big Creek/Ventura Area

Big Creek/Ventura sub-area needs:

2021 Santa Clara: 253 MW (with Ellwood), 326 MW (without Ellwood)

2026 Santa Clara: 253 MW (with Ellwood), 326 MW (without Ellwood)

Contingency: Pardee-Santa Clara and Moorpark-Santa Clara #1&2 230 kV lines

Limiting component: Voltage instability

Notes: Ellwood generation project is under consideration by the CPUC for long-term local capacity procurement for Application No. 14-11-016

Changes: No changes between the two years

2021 Moorpark: 536 MW

2026 Moorpark: 536 MW

Contingency: Moorpark-Pardee #3 and Moorpark-Pardee #1 & 2 230 kV lines

Limiting component: Voltage instability

Changes: No changes between the two years



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5. The CAISO Should Revise its Gas/Electric Coordination Special Study based on recently available information.

Energy Division staff believe that CAISO should update its assumptions based on recently available information. In the Draft TPP study, CAISO indicates that it did not take into account the Energy Division's "Aliso Canyon Working Gas Inventory, Production Capacity, Injection Capacity and Well Availability Report – Revised Report" (see Draft TPP, p. 228, fn. 96).

Energy Division staff believe that tightened balancing requirements, which reduce the curtailment by 150 MMcf per day, should be included in the TPP analysis. The Energy Division report states:

"A key summer mitigation measure was to tighten the mismatch between the amount of gas that noncore customers use and the amount they bring in on a given day.... Operating experience suggests that tightening balancing can eliminate the mismatch during the summer

of 150 MMcf. Eliminating the mismatch (essentially increasing supply by 150 MMcf) directly reduces the amount of the original curtailment identified in the four Summer Technical Assessment scenarios. Accounting for the reduction allows Scenario 2 to be solved without the use of Aliso. It also reduces the amount needed to solve for Scenario 4, and by default, Scenario 3.¹

Taking the tighter balancing rules into account would reduce line 1 on both Tables 6.3-2 and 6.3-3 and would reduce the potential estimated customer impact to only Scenario 4 (i.e., with Aliso out of service and a also a storage and gas pipeline also out of service).

6. *The CAISO should clearly explain why the local area needs have increased in the San Diego area.*

The local need in the San Diego/Imperial Valley (IV) area increases by considerable amounts in the 2021 and 2026 timeframe, as highlighted in the table below. This table shows the historical local capacity need, as well as results from the mid- and long-term studies and illustrates that for 2021 and 2026, the local needs in the San Diego increase dramatically in 2021 (4,357 MW) from 2020 (2,868 MW). While this may be the result of moving the need from the LA Basin to San Diego, this should be thoroughly explained. The large increase in the San Diego local requirement is concerning given the trends in load forecasts (see 2016 v. 2021) and the significant transmission investments that have been made in the southern California area generally and the San Diego area in particular. In addition, the CAISO should consider combining these two areas and providing effectiveness factors, rather than drawing a bright line between the need in LA and San Diego.

¹ <http://cpuc.ca.gov/aliso/>

	LCR Need			1-in-10 Load Forecast					
	San Diego or SD/IV	LA Basin	SD & LA Combined	San Diego	LA Basin	SD & LA Combined	Notes		
	Based on San Diego Local Area								
2006	2,620	8,127	10,747	4,578	18,839	23,417			
2007	2,781	8,843	11,624	4,742	18,809	23,551			
2008	2,919	10,130	13,049	4,873	19,648	24,521			
2009	3,113	9,728	12,841	5,052	19,836	24,888			
2010	3,200	9,735	12,935	5,127	20,058	25,185			
2011	3,146	10,589	13,735	5,036	20,223	25,259			
2012	2,849	10,865	13,714	4,844	19,931	24,775			
2013	2,938	10,295	13,233	5,114	19,460	24,574			
	Based on San Diego/ IV LCR Area								
2014	3,605	10,430	14,035	5,200	19,694	24,894	3,394	San Diego Sub-Area	
2015	3,910	9,097	13,007	5,407	19,970	25,377	3,103	San Diego Sub-Area	
2016	3,112	8,887	11,999	5,283	20,168	25,451	2,850	San Diego/IV Sub-Area	
2017	3,570	7,368	10,938	4,840	18,890	23,730	2,915	San Diego Sub-Area	
2018									
2019	3,160	9,119	12,279	5,538	20,506	26,044	2,508	San Diego Sub-Area	
2020	2,868	9,229	12,097	5,412	20,764	26,176	2,868	San Diego Sub-Area	
2021	4,357	6,898	11,255	4,980	19,506	24,486	2,514	San Diego Sub-Area	
2022									
2023									
2024									
2025	4,868	7,346	12,214	5,394	22,376	27,770			
2026	4,649	7,234	11,883	5,307	19,243	24,550	2,807	San Diego Sub-Area	

7. CPUC Staff commends the CAISO for the continued practice of assessment, holding for review, and cancellation of previously approved transmission projects deemed no longer needed under declining load forecasts. Staff encourages the continuation of the review process for all load areas, as well as transparency of maintenance cost implications of cancelling utility projects.

CPUC staff appreciates the CAISO’s continued effort to analyze current need for previously approved transmission projects in PG&E’s service territory. Staff notes that the standards for cancellation are considerably high- The CAISO used a value of 0 Behind the Meter PV to simulate peak shift, while assuming 0 AAEE on a 2016 transmission system elevated to 2026 load levels. This evaluation should be conducted periodically for all load areas and service territories, in light of significant policy driven changes. The CPUC generally supports this level of rigorous reliability testing, which ensures cancelled projects are less likely to re-appear with potentially higher costs in subsequent transmission plans.

As mentioned in Comment #1, Staff requests the CAISO provide updates on projects held for additional study and re-scoping as soon as such information is available. The ISO should seek as much collaboration as is feasible with Commission staff in the development and siting of re-scoped reliability recommendations to minimize potential permitting litigation issues after projects have been filed.

Additionally, for any projects that have been canceled in the 2016-17 Transmission Plan and in any future transmission plans, the CAISO should be clarify whether or not the projects encompassed any needed maintenance as identified by the utilities. It is understood that utilities coordinate with the CAISO consolidate maintenance projects with reliability projects. The CPUC requests the CAISO note whether this has occurred with any canceled projects, so that the CPUC is kept aware that some aspects may still need to be carried out under maintenance needs. This improves process transparency in terms of identifying that certain projects may not be canceled in their entirety, but may in fact lead to the need for other maintenance projects, which are still subject to accruing costs.

8. CPUC Staff notes that there is no change in the finding of need for PG&E's Martin 230kV Bus Extension project, or Ravenswood- Cooley Landing 115kV Reconductoring project.

Staff believes the Martin project may trigger a complex permitting process, and the Applicant has not yet filed for at the CPUC. Given the magnitude of the project and the length of time between CAISO approval and Applicant filing at the CPUC, the CAISO may want to consider whether there is any new information pertaining to the continued need for the project. As the CAISO authorization for the project ages without an ensuing application from PG&E, so does the load forecast assumptions under which the project was approved. When PG&E files a CPCN for the construction of the Martin project, expected by staff in September 2017, CAISO staff may be interested in providing information to the proceeding pertaining to the continued need for the project, as well as the continued preference for this particular transmission solution above other alternatives, given the now dated information about costs and benefits of the project. The CPUC raises this issue in case the CAISO can provide that confirmation in this year's TPP.

The Ravenswood- Cooley Landing Reconductoring project was proposed in PG&E's 2010 Electric Transmission Grid Expansion Plan, which then appears as approved in the CAISO's 2012-2013 Transmission Plan. In PG&E's initial proposal, the project online date is 2013. In the 2012-13 TPP, the online date is May 2016. CPUC Staff notes that the online date has again been pushed back to May of 2021, which means the project will be coming online more than 10 years after its initial study. Staff recommends the CAISO reexamine the load and system assumptions that contributed to the finding of need for this project in the upcoming Transmission Planning Process.

9. The CAISO should continue to engage with the CPUC and other stakeholders on clear documentation of alterations to inputs and study methodologies used when translating the CPUC's and CEC's planning inputs into use for sensitivity cases in the TPP.

Reliability assessments are an integral part of stakeholder participation in the Transmission Planning process, and therefore must be presented in a clear and accessible manner. The CAISO should identify key snapshot conditions which produced a reliability need in any given area. The study scenario conditions should be supplied "up front", with clear footnotes directing stakeholders to documentation of the details of the particular base case(s) and sensitivities which created a need for the project being presented. This format should then be applied consistently across all regions/load areas, for ease of stakeholder access and understanding.

The clear documentation of changes and assumptions made from state agency planning inputs in the Transmission Planning Process will reduce time and effort spent on litigation of projects after Transmission Plan approval. Improved alignment on transmission planning assumptions also has the added benefit of the CPUC being able to more closely align with the CAISO in presenting a unified California front at WECC in the development of the Anchor Data Set (ADS). The ADS will use data directly from CAISO and the other planning regions' transmission plans, which makes CPUC/CAISO process alignment on the discussion and vetting of inputs all the more important.

In addition, the alignment of study scenario assumptions and clearly defined modifications to base cases will be increasingly important when the CPUC's IRP provides policy preferred

portfolios in upcoming TPP cycles. The provision of new portfolios and assumptions from IRP reflecting the state's GHG emissions reduction goals is likely to create a significant uptick in policy driven projects presented to stakeholders and the CAISO board for approval. It is imperative that CAISO and CPUC staff coordinate the implementation of a clear system of documenting study scenario assumptions which drive new projects before the completion of the first IRP.

10. CPUC Staff Commends the CAISO for the clear documentation of “No AAEE” and “No BTM- PV” Sensitivity results in the appendices of the Draft 2016-2017 TPP. Staff also thanks CAISO staff for present and future coordination in the 50% Special Study effort.

CPUC Staff appreciates the continued documentation of “0 AAEE” and “0 BTM PV” sensitivity results in Appendix C of the Draft TPP, and encourage the CAISO to continue the practice of updating these significant and useful results in each study cycle. CPUC staff also commends CAISO for its work on the 50% RPS Special Study, and looks forward to continued staff collaboration in the analysis of the 50% study and other special studies, to maximize the expediency and inter-agency value of study results.

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