

**COMMENTS OF THE STAFF OF THE CALIFORNIA
PUBLIC UTILITIES COMMISSION
REGARDING PRELIMINARY RELIABILITY ASSESSMENT RESULTS AND OTHER
MATTERS PRESENTED AND DISCUSSED AT THE SEPTEMBER 21-22, 2017 CAISO
TRANSMISSION PLANNING PROCESS STAKEHOLDER MEETING**

October 15, 2017

Introduction

The Staff of the California Public Utilities Commission (“CPUC Staff”) appreciates this opportunity to provide comments on matters discussed at the California Independent System Operator’s (CAISO) 2017-18 Transmission Planning Process (TPP) meetings on September 21 and 22, 2017, addressing preliminary reliability assessment results, special studies, and Participating Transmission Owners’ (PTOs’) proposed solutions. Our comments address the following topics:

1. CPUC Staff commends the efforts of the CAISO transmission planning staff in their work to clarify the baseline assumptions which drive findings of reliability need, and the accompanying tables showing which sensitivities produce overloads above the baseline scenarios.
2. CPUC Staff appreciate the CAISO’s efforts to re-evaluate previously approved projects for their continued reliability need. CPUC Staff requests additional information regarding which baseline scenarios presented in the assumptions tables cause a continued reliability need.
3. The CAISO should coordinate with the CPUC ‘s environmental permitting team as closely as possible to keep CPUC environmental permitting staff aware of scoping updates to previously approved projects, which impacts .when consulting contracts for California Environmental Quality Act (CEQA) work should be procured.
4. CPUC Staff notice that the Vaca Dixon- Lakeville 230kV lines have resurfaced in this cycle’s reliability results after being cancelled last cycle. The CAISO should elaborate on the methodology used to determine that no behind the meter solar is available during the 2019 peak winter hours of 16:00-18:00 when approving a reliability solution for the area.
5. CPUC Staff support the proposal verbally requested at the stakeholder meeting to list the original TPP vintage in the presentation of assessments of previously approved projects not modeled in the base cases.

6. The CAISO did not present the Gates No. 2 Transformer in the list of Fresno area projects not modelled in the base cases. CPUC Staff requests clarification on why this project was not presented.
7. PTOs' proposals of new reliability driven transmission projects do not make clear the baseline assumptions which drove the PTOs' requests. When the CAISO studies the PTOs' requests, the baseline resource assumptions should be fully documented using the same load/modifier/generation table format the CAISO used for presentation of the preliminary reliability results.
8. CPUC Staff look forward to seeing the CAISO's analysis of PG&E's proposed Oakland area reliability projects making use of preferred resources in combination with transmission upgrades.
9. CPUC Staff appreciate the coordination taking place between PG&E, the CAISO, and the CHSRA in developing the transmission needs for the CA HSR Project. When the analysis of required network upgrades is completed, CPUC staff request that the CAISO indicate under which baseline scenarios a need was found for network upgrades.

1. CPUC Staff commends the efforts of the CAISO transmission planning staff in their work to clarify the baseline assumptions which drive findings of reliability need, and the accompanying tables showing which sensitivities produce overloads above the baseline scenarios.

CPUC Staff have been collaborating with CAISO staff over the past several months to develop a standard format for presentation of baseline and sensitivity assumptions, to better understand the drivers behind CAISO transmission recommendations. CPUC Staff also greatly appreciate the work of the CAISO staff to integrate the tables of assumed load/load modifiers and generation assumptions into the presentation of reliability results. Use of these tables allows stakeholders to quickly reference which base cases cause reliability needs, and the assumptions used therein. CPUC Staff also encourage the consistent usage of a single data template across regions and to consistently provide the table of sensitivity overloads at the end of each region's section. Lastly, the CPUC staff view the 2018-2019 Study plan as a next step in the implementation of planning data transparency; arraying the base case assumptions tables at the

beginning of the annual modeling exercise will allow stakeholders to track how data is updated over the course of the planning process.

- 2. CPUC Staff appreciate the CAISO's efforts to re-evaluate previously approved projects for their continued reliability need. CPUC Staff requests additional information regarding which baseline scenarios presented in the assumptions tables cause a continued reliability need.***

CPUC Staff again commend the CAISO for its diligent efforts to reexamine previously approved projects. Staff believes that removing the projects entirely from the base case, studying the effects, and potentially re-scoping or cancelling the project based on an updated assessment is a prudent strategy. When the CAISO is presenting the results of analysis of previously approved projects, CPUC Staff requests the CAISO clearly indicate for each project examined – which- baseline scenario of those outlined in the respective regional table was used to develop a preliminary conclusion. As an example, on Slide 32/289 of CAISO's Day 1 presentation, Ravenswood- Cooley Landing 115kV Reconductor is presented. The CAISO notes that “NERC Category P2, P6, and P7 thermal overloads in baseline”. It would be helpful to know exactly which baseline scenario is being referenced so stakeholders can easily refer back to the provided table to see the time frame in which an upgrade will be needed, and the resource assumptions which drove the need for mitigation.

- 3. The CAISO should coordinate with the CPUC's environmental permitting team as closely as possible, to keep CPUC staff aware of scoping updates to previously approved projects, which impacts when consulting contracts for California Environmental Quality Act (CEQA) work should be procured.***

In the presentation of reliability results, the ISO indicates that several projects held for re-scoping in last year's TPP cycle remain under review for further analysis of alternatives. Given the legal requirements of the CEQA environmental review process, it would be most beneficial for all parties involved if the CPUC's CEQA team were made aware of any scoping developments on the CAISO held projects as soon as they become available.

- 4. CPUC Staff notice that the Vaca Dixon- Lakeville 230kV lines have resurfaced in this cycle's reliability results after being cancelled last cycle. The CAISO should elaborate on the methodology used to determine that no behind the meter solar is available during the 2019 peak winter hours of 16:00-18:00 when approving a reliability solution for the area.***

On page 102 of the CAISO's board approved 2016-2017 Transmission Plan, the CAISO notes that the Vaca Dixon- Lakeville 230kV Reconductoring project has been cancelled "based on reliability and local capacity requirements and deliverability assessments". On slide 74 of CAISO's Day 1 presentations, the CAISO notes that upgrades to the same corridor may be needed in 2019 to mitigate NERC P2 and P6 overloads in the 2019 winter peak baseline scenario. Using the newly available table of load and load modifier assumptions, CPUC staff notes that the 2019 Winter Peak Baseline Scenario assumes 0 BTM-PV between the hours of 16:00 and 18:00. Staff requests the CAISO explain its reasoning and source for this assumption. In addition, could the ISO explain whether the assumption of no BTM- PV is a driving factor in finding a need for reliability mitigation, given a project in the area was cancelled due to lack of need in the previous cycle.

- 5. CPUC Staff support the proposal verbally requested at the stakeholder meeting to list the original TPP vintage in the presentation of assessments of previously approved projects not modeled in base cases.***

At the most recent stakeholder meeting, a participant requested that the analysis of previously approved projects being re-scoped indicate the original TPP approval vintage for each project being presented. This will help stakeholders to more efficiently analyze how shifting planning inputs used in previous TPPs compared with the current planning inputs affect findings of transmission need. CPUC staff support this request.

- 6. The CAISO did not present the Gates No. 2 Transformer in the list of Fresno area projects not modelled in the base cases. CPUC Staff requests clarification on why this project was not presented.***

CPUC Staff commends the CAISO on its detailed presentation of projects removed from the base case and re-examined based on updated load and resources data. However, CPUC staff note

that in the presentation of the Greater Fresno Area, projects were removed from the base case for additional analysis but were not documented in the presentation slides. CPUC staff is specifically interested in the documentation of the Gates No. 2 500/230kV Transformer, as the CPUC is aware of utility scale Solar PV projects in that area which are dependent on the transformer upgrade coming online for a full capacity deliverability date no later than 2022. The CAISO should make clear the status of the Gates transformer project (as well as the Kearney – Herndon 230kV line) to provide certainty to interested stakeholders, and explain why the projects were not presented even though they had been removed from the base cases.

- 7. PTOs' proposals of new reliability driven transmission projects do not make clear the baseline assumptions which drove the PTOs' requests. When the CAISO studies the PTOs' requests, the baseline resource assumptions should be fully documented using the same load/modifier/generation table format the CAISO used for presentation of the preliminary reliability results.***

The PTOs' presentations of proposed reliability solutions showed that the justifications for proposed transmission investments assumed a high load forecast by assuming a low level of AAEE, or did not provide forecast assumptions in their presentations. The load and generation assumptions used for these studies, including BTM PV output levels and CEC IEPR forecasts were not fully provided. It was also unclear whether the PTOs ran additional studies using the same assumptions as used in the CAISO's base scenarios, and what the results were. Thus, justification of proposed transmission investments requires additional clarity regarding what specific scenarios were studied and for what years. This could be achieved by documenting study scenarios/results in the same manner that the CAISO already did in their presentation of project re-scoping and reliability analysis, i.e. by providing the load and load modifiers, as well as generation tables when presenting the results of the CAISO's analysis. In future CAISO TPP cycles, PTOs should be required to document and provide study assumptions in the standardized table format for ease of stakeholder review.

- 8. CPUC Staff look forward to seeing CAISO's analysis of PG&E's proposed Oakland area reliability projects making use of preferred resources in combination with transmission upgrades***

CPUC Staff was encouraged by PG&E's use of a blend of preferred resource procurement in combination with transmission upgrades to mitigate a potential reliability issue if both Oakland area generators were out of operation. CPUC Staff look forward to discussions with PG&E and the ISO to better understand the risk of retirement and/or maintenance outage of the Oakland thermal generators which would necessitate reliability upgrades, as well as the time frame for when such upgrades would reasonably be needed in correlation with gas plant retirement.

9. CPUC Staff appreciate the coordination taking place between PG&E, The CAISO, and the CHSRA in developing the transmission needs for the CA HSR Project. When the analysis of required network upgrades is completed, CPUC staff request that the CAISO indicate under which baseline scenarios a need was found for network upgrades.

Staff appreciates the efforts of PG&E and the ISO to examine the extensive network upgrades that will be necessary to support both the California High Speed Rail Project (HSR). Staff requests that when the analysis of PG&E's proposed network reliability upgrades is conducted by the CAISO, the CAISO provide similar tables of load/modifier/generation assumptions used and to list alternatives considered to determine the appropriateness of the PG&E's proposed network upgrades. CPUC Staff will coordinate with SCE and SDG&E to conduct similar transmission planning exercises in future TPP cycles when more details of the HSR project have been established. In addition, CPUC Staff requests the CAISO clarify that the \$737 million cost estimate for CHSRA interconnection work at -30% to +50% equates to \$515.9 million to \$1.1 billion. The high-end cost estimate should be considered during the transmission planning process. The Caltrain interconnection cost estimates, when added with a similar error margin would equate to substantially higher potential costs. CPUC staff request that the CAISO ensure that the full scope of the necessary upgrades is analyzed and that cost allocation be addressed to identify which costs will be borne by ratepayers and which will be borne by CHSRA, and the reasons for such cost allocation.

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