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**COMMENTS OF THE PUBLIC ADVOCATES OFFICE ON THE CALIFORNIA
INDEPENDENT SYSTEM OPERATOR'S 2020-2021 TRANSMISSION PLANNING
PROCESS – NOVEMBER 17, 2020 PRESENTATIONS AND STAKEHOLDER
MEETING**

December 1, 2020

Introduction

The Public Advocates Office (Cal Advocates) at the California Public Utilities Commission (CPUC) is California's independent consumer advocate with a mandate to obtain the lowest possible rates for utility services consistent with safe and reliable service levels, and the state's environmental goals.¹ Cal Advocates submits comments and recommendations on the following topics that the California Independent System Operator (CAISO) presented in its 2020-2021 Transmission Planning Process (TPP) stakeholders meeting held on November 17, 2020:

Summary of Recommendations

1. The CAISO should provide the details on the battery storage capacity that it has mapped in the CPUC Policy-driven Base portfolio² to mitigate transmission issues. This data should be provided by renewable transmission zone and by local capacity areas (LCR) areas and sub-areas.
2. The CAISO should evaluate the lowest-cost solution, including battery storage, for all transmission projects currently on hold.
3. The CAISO should post the 2020-2021 TPP Request Window Applications on the CAISO's secured portal as soon as possible.
4. The Wildfire Impact Assessment should account for the effects of distribution circuit outages.

¹ California Public Utilities (Cal. Pub. Util.) Code § 309.5.

² CPUC Staff Report: Modeling Assumptions for the 2020-2021 Transmission Planning Process Release 1 (TPP Base Portfolios), ftp://ftp.cpuc.ca.gov/energy/modeling/Modeling_Assumptions_2020_2021_TPP-Report-Release1.pdf

Discussion

1. CAISO should provide comprehensive data when identifying battery storage as a transmission mitigation solution in the Base portfolio.

At the November 17th TPP stakeholder meeting, the CAISO provided an overview of its policy-driven transmission assessment.³ The CAISO utilized the CPUC's recommended storage mapping to model generic battery storage in the power flow cases study. For the CPUC Policy-driven Base portfolio, unlike the two sensitivity portfolios, the CPUC did not map generic battery storage (up to 2,157 MW/5,504 MWh) to specific locations and recommended that the CAISO apply the resource at locations where it can mitigate identified transmission issues. Although the CAISO provided the generic resource and battery storage mapping in the two Sensitivity portfolios, it did not provide any details of the storage resource mapping in the Base portfolio. Cal Advocates recommends the CAISO provide the details on the battery storage capacity the CAISO has mapped in the CPUC's Policy-driven Base portfolio to mitigate transmission issues. Specifically, the CAISO should provide this data by renewable transmission zone and by local capacity areas (LCR) areas and sub-areas.

2. The CAISO should evaluate the lowest-cost solution, including battery storage, for all the transmission projects that are currently on hold.

During the November 17th stakeholder meeting, the CAISO presented the analysis conducted on the following three (3) Pacific Gas & Electric Company (PG&E) projects that were previously placed on hold.⁴

1. Wheeler Ridge Junction Project (estimated capital cost of \$250-\$300 million);
2. Moraga-Sobrante Reconductoring Project (estimated capital cost of \$10-\$20 million); and
3. North of Mesa Project (estimated capital cost of \$114-\$144 million).

Cal Advocates supports the CAISO's proposed re-evaluation for these projects where the project need and/or estimated project cost have changed.

For the Wheeler Ridge Junction Project, the overloaded circuits and the reliability contingencies that were driving the need for the project have changed. Therefore, Cal Advocates recommends that the CAISO conduct additional analyses to determine if the Wheeler Ridge Junction Project continues to be the most cost-effective solution to mitigate the identified overloads on the system. CAISO should also evaluate low-cost solutions for the Moraga-Sobrante Reconductoring Project

For the North of Mesa Project, the CAISO should first evaluate whether the low-cost solution, such as the installation of 100 megawatt (MW) of Battery Energy Storage System (BESS) is

³ 2020-2021 TPP Policy-driven Assessment, 2020-2021 Transmission Planning Process Stakeholder Meeting November 17, 2020.

⁴ "2020-2021 TPP: PG&E On Hold Projects Status Update," 2020-2021 Transmission Planning Process Stakeholder Meeting, November 17, 2020.

adequate to meet the CAISO planning standards. Only when the standalone BESS solution is found to be inadequate should the CAISO explore incremental or alternative transmission mitigation solutions.

3. *The CAISO should post the details of the 2020-2021 TPP Request Window Applications on the CAISO secured portal as soon as possible.*

In each TPP cycle, the CAISO evaluates and considers alternative mitigation plan proposals submitted through the request window by Participating Transmission Owners (PTOs) and other interested parties. The CAISO's November 17th presentation included references to the transmission request window applications on several occasions, including the listing of the request window projects⁵ or candidate solutions like the Local Capacity Requirements Potential Reduction Study.⁶ As of November 25, 2020, the CAISO has not posted any Request Window Submissions for 2020-2021 TPP. Consequently, it is not possible for stakeholders to weigh-in on the need for these request window projects without having the opportunity to evaluate these projects. Therefore, it is recommended that the CAISO posts these original Request Window Submissions on the CAISO's secured TPP portal as soon as possible so stakeholders can review them.

4. *The Wildfire Impact Assessment should account for the effects of distribution circuit outages.*

In its October 8, 2020 comments filed in response to the September 24, 2020 CAISO TPP 2020-2021 stakeholder meeting, Cal Advocates raised the concern that the CAISO's Wildfire Impact Assessment suffered from serious flaws in the study design and scope.⁷ The most recent version of the CAISO's Wildfire Impact Assessment has improved, but has not addressed Cal Advocates' fundamental concern: any analysis of wildfire-related de-energization events must account for distribution-level shutoffs and the resulting load reductions.

The Wildfire Impact Assessment now includes a scenario that reflects PG&E's recent wildfire mitigation work.⁸ This scenario is based on the transmission lines shut off in the October 26, 2019 de-energization event, excluding transmission lines where PG&E has since performed mitigation. This is significantly more realistic than the scenarios presented previously.

However, the CAISO is still not accounting for the fact that wildfire-related de-energization events typically involve de-energizing distribution circuits, which results in lost load.

⁵ Introduction and Overview: Preliminary Reliability Assessment Results, 2020-2021 Transmission Planning Process Stakeholder Meeting, September 23-24, 2020, pp. 7-8.

⁶ Local Capacity Requirements Potential Reduction Study PG&E Area, 2020-2021 Transmission Planning Process Stakeholder Meeting, September 23-24, 2020, pp. 2-15.

⁷ Comments of the Public Advocates Office on the California Independent System Operator's 2020-2021 Transmission Planning Process – September 23-24, 2020 Presentations and Stakeholder Meetings, October 8, 2020.

⁸ TPP Wildfire Impact Assessment Results Update, 2020-2021 Transmission Planning Process Stakeholder Meeting, November 17, 2020. Presentation slides are not currently publicly available.

<http://www.caiso.com/Documents/Presentation-2020-2021TransmissionPlanningProcess-Nov172020.pdf>

Cal Advocates obtained data from PG&E on the load impacts of PG&E’s 2019 de-energization events. On average in these 2019 events, lost load was primarily (38 percent) associated with de-energization of distribution circuits due to local weather conditions. The next largest amount of lost load (33 percent) was from circuits that were affected by de-energizations at both the transmission and distribution levels. Only 29 percent of lost load was solely caused by de-energization of transmission lines.⁹

In addition to average data for 2019, Cal Advocates requested data on load impacts in PG&E’s two largest de-energization events in 2019. These two large events occurred on October 9-12, 2019 and on October 26-29, 2019. This data is summarized below in Table 1.

Table 1: Causes of Lost Customer Load			
Lost load by cause			
	Customer was de-energized due to:		
	De-energization of transmission lines	De-energization of local distribution circuit	Both distribution circuit and transmission line de-energized
Average of 2019 events	29 percent	38 percent	33 percent
October 9-12, 2019	20 percent	52 percent	28 percent
October 26-29, 2019	35 percent	29 percent	36 percent
Source: PG&E responses to Cal Advocates’ data request. ¹⁰			

Table 1 shows that transmission lines are not the predominant cause of customer outages in these events. Only 20 to 35 percent of lost load is solely attributable to the de-energization of transmission lines in fire weather conditions.

Based on this information, the design of the CAISO’s Wildfire Impact Assessment remains flawed. A more informative analysis of wildfire-related de-energization events must consider the most important consequence of these events: thousands of customers lose power when their electric utility shuts off the distribution circuit that serves their homes or businesses.

Conclusion

Cal Advocates recommends the CAISO should: 1) provide comprehensive data on identifying battery storage as transmission mitigation solutions in the Base portfolio; 2) evaluate the lowest cost solution, including battery storage, for all the transmission projects that are currently on hold;

⁹ Pacific Gas and Electric Company’s Response to Public Advocates Office Data Request CalAdvocates-NonCase-PGE-HB-09282020, Question 1.

¹⁰ Pacific Gas and Electric Company’s Response to Public Advocates Office Data Request CalAdvocates-NonCase-PGE-HB-09282020, Questions 1-3.

3) post the detailed 2020-2021 TPP Request Window Applications on the CAISO secured portal as soon as possible; and 4) the Wildfire Impact Assessment should account for the effects of distribution circuit outages.

If you have any questions regarding these comments, please contact Jerry Melcher at either Jerry.Melcher@cpuc.ca.gov or 415-703-1923.