

**COMMENTS OF THE STAFF OF THE CALIFORNIA PUBLIC UTILITIES COMMISSION REGARDING  
THE 2021-2022 TRANSMISSION PLANNING PROCESS UNIFIED PLANNING ASSUMPTIONS AND  
STUDY PLAN FOLLOWING THE FEBRUARY 25, 2021 STAKEHOLDER MEETING**

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**March 11, 2021**

The Staff of the California Public Utilities Commission (“CPUC Staff”) appreciates this opportunity to provide comments on the 2021-2022 TPP Draft Unified Planning Assumptions and Study Plan discussed at the February 25, 2021 stakeholder meeting hosted by the California Independent System Operator (CAISO).

Our comments include specific requests for the CAISO which are italicized.

**1) Overview of the generation and storage portfolios**

CPUC Staff notes that key attributes of these resource portfolios being analyzed for this 2021-2022 Transmission Planning Process (TPP) have not been part of previous TPP cycles:

- Commission approval to convey these portfolios to the CAISO’s TPP process. This has ensured these portfolios have been vetted publicly and that party comments have been considered. The imprimatur of the Commission’s decision also carries the clear understanding that CAISO staff recommendations that arise from its analysis of the portfolios may lead to CAISO Board authorization of transmission development.
- Extensive mapping of generation resources, including the largest amount of battery storage ever studied within the TPP process as well as detailed methodology<sup>1</sup> by which these resources are linked to specific locations.
- Considerably higher amounts of renewable and storage resources compared with the portfolios studied in previous TPP cycles, as highlighted in CAISO’s presentation (slides # 50-57).

**2) Consideration of out-of-state resources**

In the CAISO’s presentation on February 25, 2021, CAISO staff noted injection of MWs from wind resources outside the CAISO, which are assumed in the CPUC’s base and policy-driven portfolios, will be studied separately at the Palo Verde and Eldorado substations. This analysis will assess the transmission implications inside CAISO resulting from potential procurement of these potential out-of-state (OOS) resources.

CPUC Staff is curious whether the CAISO might consider conducting a special or “other” study to analyze the external transmission needed to deliver the MWs from these OOS resources to

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<sup>1</sup> [Methodology for Resource-to-Busbar Mapping & Assumptions for the 2021-2022 TPP](#), January 2020

the CAISO system. We recognize limitations on the CAISO's workload, and we would encourage the CAISO to limit the scope of such a special study and to utilize previous interregional project studies, if possible. CPUC Staff would find this analysis of the infrastructure required to deliver OOS resources to be extremely helpful.

- *We encourage the CAISO's review of possible opportunities for such an informational study of transmission needs outside the CAISO system, whether it might be conducted solely by the CAISO or jointly with another agency.*

### **3) Consider enhancing the interregional transmission process**

The CAISO participates in a unique inter-regional transmission coordination process that meets FERC Order 1000 requirements, but the last two 2-year cycles have resulted in zero projects being brought forward to the second phase of analysis or approval. We encourage the CAISO to consider ways to enhance this process so that a broader range of benefits are considered within the analysis. The interregional coordination process should result in approval of projects that benefit California by enabling out of state resources identified within the IRP process.

CPUC Staff notes the publication recently of two significant reports<sup>2</sup> promoting expansion of interregional transmission.

- *The CAISO should begin considering new concepts for interregional coordination in anticipation of possible FERC initiatives to expand transmission or enhance Order 1000 interregional processes.*

### **4) Wildfire Mitigation Assessment**

CPUC Staff appreciates the CAISO's assessment of wildfire risks to transmission facilities in southern California. This follows the similar assessment of wildfire risks in the PG&E area.

The CAISO noted this study will include the modeling of scenarios for de-energizing transmission lines in High Fire Risk Areas (HFRA) to record the expected loss of load, assess power flow system performance and determine the amount of load reduction needed to continue reliable operations after each scenario. The CAISO will then develop mitigation options to identify critical facilities that could significantly reduce load loss if excluded from PSPS events. The CAISO may also consider new upgrades to mitigate wildfire risk.

- *At a future stakeholder meeting, CPUC encourages the CAISO to provide more detail on the criteria for developing new upgrades based upon this wildfire risk assessment.*

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<sup>2</sup> [Transmission Planning for 100% Electricity](#), Energy Systems Integration Group (February 2021) and [Planning for the Future: FERC's Opportunity to Spur More Cost-Effective Transmission Infrastructure](#), Americans for a Clean Energy Grid (January 2021)

## 5) Potential Mitigations to Transmission Constraints

Section 2.8.1 of the Study Plan discusses the CAISO's analysis of potential mitigations to transmission constraints using demand response, energy efficiency, renewables and storage.

This section notes the methodology for use of these preferred resources as potential mitigation, which is explained in a 2013 White Paper. The 2017 evaluation of local capacity solutions for the Moorpark area in the LA Basis is cited as an example of this approach.

- *It might be relevant to update this section by including recent examples from the 2020-2021 TPP where the CAISO identified storage as a mitigation options, which resulted in two previously identified transmission upgrades being put on hold.*

Also, Section 2.8.1 of the draft Study Plan suggests that “in some situations the storage could be approved as a transmission asset” though the footnote explains that the CAISO's “SATA” stakeholder engagement remains on hold.

- *Can the CAISO clarify with greater detail how and when the CAISO might consider storage as a transmission asset for the purposes of this TPP?*

Also, in the CAISO's presentation on February 25, 2021, CAISO staff summarized (on slide #42) the possible “Corrective Action Plans” for mitigating reliability issues. The CAISO noted that it coordinates with Participating Transmission Owners and other Market Participants in seeking the lowest cost alternative to mitigate identified reliability issues.

- *Approximately how many existing and planned Remedial Action Schemes (RAS) will the CAISO include in this TPP analysis?*
- *Can the CAISO provide a list of existing or planned RAS on the Market Participant Portal?*

## 6) Modeling assumptions for generation

In Section 2.7.1 of the draft Study Plan, the CAISO identifies three levels for modeling new generation for the 1-year operating case, the 2-5-year planning cases and the 6-10-year planning cases.

- Level 1 – under construction with in-service date identified (for years 1-5 study cases)
- Level 2 – PPA with regulatory approval but not under construction (for year 5 study case)
- Level 3 – planned resources in the CPUC's IRP portfolios (or for 6-10 years with applicable in-service dates)

In the CAISO's presentation on February 25, 2021, CAISO staff noted these levels of modeling assumptions for generation have been consolidated “while keeping the original intent” of the assumptions made in previous TPP cycles.

CPUC Staff seeks better understanding of these modeling assumptions for new generation.

- *Does this change in the classification of levels have material impact on the analysis of the CPUC base case portfolio?*

## **7) Schedule for the 2021 – 2022 TPP planning cycle**

Per Table 1.1-1 in the draft Study Plan, the CAISO will post the preliminary assessment of the policy driven and economic planning study results on November 15, 2021. CPUC Staff understand that this follows the typical TPP schedule. However, we want to note that by that date CPUC staff will likely have finished mapping resources to busbars for the base case resource portfolio for the 2022-2023 TPP. This mapping must be completed in the fall time period in order to then move through the CPUC's formal proceeding to allow for party comment and adoption by the Commission in time for the transmittal of the portfolios in February of 2022. CPUC Staff would not be able to incorporate the preliminary policy-driven results in the busbar mapping process if CAISO posts these TPP results in November.

- *CPUC Staff is interested in coordinating with CAISO to understand what flexibility exists to produce results earlier so that the CPUC can utilize the information to inform the portfolios transmitted to CAISO for the next TPP.*

## **8) Backlog on Transmission Upgrades**

CPUC Staff understands there are a large backlog of projects authorized in prior TPPs and not yet under construction by PTOs.

- *CPUC Staff encourages the CAISO to consider some prioritization and transparency into the transmission upgrade queue to assist planners tracking delays and project changes.*