Transmission Agency of Northern California
P.O. Box 15129 Sacramento, CA 95851-0129 (916) 852-1673

Stakeholder Comments

2021-2022 Transmission Planning Process Stakeholder Meeting February 25, 2021

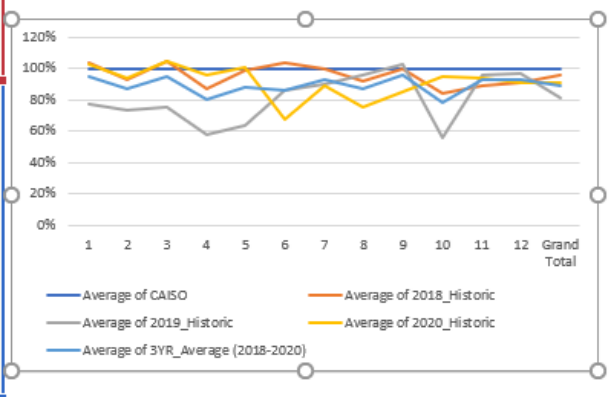
Submitted by	Organization	Date Submitted
Keith Johnson kjohnson@tanc.us (916) 631-3291	Transmission Agency of Northern California	March 11, 2021

The Transmission Agency of Northern California ("TANC") appreciates this opportunity to provide comments on the California Independent System Operator's ("CAISO") draft study plan for the 2021-2022 Transmission Planning Process ("TPP"), which was presented at a stakeholder meeting on February 25, 2021. TANC's primary focus is to preserve and maximize the bi-directional transfer capability of the California-Oregon Transmission Project and the California-Oregon Intertie ("COI") consistent with the various applicable governing agreements. TANC's comments focus on the CAISO's proposed economic studies.

1. ***The CAISO should use historic total transfer capability data when modeling* the California-Oregon Intertie*.***

   Over the last several years there have been significant improvements in how the COI path is modeled in the CAISO's production cost model ("PCM") to account for typical derates that occur due to maintenance outages north and south of the California Oregon border. However, the COI total transfer capability ("TTC") limits modeled in the CAISO PCM are still high when compared to actual historic COI TTC limits. TANC has compared the values the CAISO used in its PCM to the actual COI TTC that has occurred over the past three years. The two figures below compare the average monthly COI TTC modeled in the CAISO PCM to the average actual monthly COI TTC that occurred over the past three years. The COI TTC modeled in the CAISO PCM is close to that occurring in 2018, which is an improvement to the model. However, when compared to the three-year average, the COI TTC modeled in the CAISO PCM still appears high. This would be most significant during the hotter months when the demand in California remains high and the solar resources become unavailable.

Month	Average of CAISO	Average of 2018_Historic	Average of 2019_Historic	Average of 2020_Historic	Average of 3YR_Average (2018-2020)
1	100%	104%	77%	102%	94%
2	100%	93%	73%	94%	87%
3	100%	104%	75%	104%	95%
4	100%	87%	58%	95%	80%
5	100%	99%	63%	101%	88%
6	100%	104%	86%	68%	86%
7	100%	99%	90%	89%	93%
8	100%	91%	95%	75%	87%
9	100%	100%	102%	85%	96%
10	100%	84%	56%	95%	78%
11	100%	89%	95%	94%	93%
12	100%	90%	97%	91%	93%
Grand Total	100%	96%	81%	91%	89%



Transmission Agency of Northern California
P.O. Box 15129 Sacramento, CA 95851-0129 (916) 852-1673

Understandably, this is a complex problem due to the variable nature of the maintenance outages and the degree that outages might impact the COI TTC. To simplify the problem while also achieving a practical model for COI, TANC suggests that the CAISO use an average of historic COI TTC data when modeling COI starting from 2018. This would provide a more accurate model for COI while also accounting for the improvements made in operations since 2018 by the CAISO's operations group. A similar methodology might also be used for other paths for import and export capability of the CAISO's system. TANC notes that due to the aging conditions of the 500-kV lines and equipment, and its own planning for future work, outages for replacement and maintenance work can be expected to increase in the next 10-year period compared to recent experience.

2. ***The CAISO's planning and operations groups should review projects where production cost model studies do not fully assess the economic benefits.***

   The CAISO's PCM does not adequately assess the benefits of projects that improve the COI TTC under outage conditions. In the past, projects identified in the CAISO's reliability studies that would significantly improve the COI TTC under maintenance outage conditions have been determined to have low economic benefits. For example, the PCM study of the Round Mountain-Table Mountain Remedial Action Scheme indicated a low economic benefit under normal operating conditions even though the Remedial Action Scheme would improve the COI TTC during most maintenance outages located in Northern California. The economic benefits of improving COI TTC during outage conditions are not captured in the production cost simulation because the assumptions for COI TTC are fixed and do not reflect the economic benefits from the improved transfer capability under outage conditions. It is unclear how the benefits of such projects could be accurately modeled in the PCM studies and it might be beyond the current software capabilities. TANC suggests that the CAISO's planning and operations groups consider alternative approaches to identify the economic benefits of such projects. With a better understanding of the hard to quantify benefits of such projects, the CAISO may be able to identify beneficial projects that might otherwise be missed.

3. ***The CAISO should use a scenario with a more conservative load forecast in the production cost model studies.***

   The CAISO's reliability studies model either 1-in-5 (Bulk System Studies) or 1-in-10 (Local Area Studies) weather years. The PCM for the economic studies uses a 1-in-2 weather year and a mid-demand baseline with a mid-Additional Achievable Energy Efficiency savings load forecast. With recent concerns pertaining to available resources during the warmer months, TANC suggests that the CASIO use a scenario that includes a more conservative load forecast in the PCM such as a 1-in-5 weather year that is used in the Bulk System reliability studies. This would test the sensitivity of the study results to load forecast variation and address potential impacts of climate change.

TANC thanks the CAISO for the opportunity to provide these comments and looks forward to working with the CAISO on the 2021-2022 TPP.