

Transmission Agency of Northern California
Comments on CAISO's 2020-2021 Transmission Planning Process
October 8, 2020

The Transmission Agency of Northern California ("TANC") appreciates this opportunity to provide comments on the California Independent System Operator Corporation's ("CAISO") 2020-2021 Transmission Planning Process ("TPP") Preliminary Reliability Assessment Results and Proposed Mitigations as presented at stakeholder meetings on September 23-24, 2020.

TANC, through its members, is the primary owner of the California-Oregon Transmission Project ("COTP") and a party to the Federal Energy Regulatory Commission ("FERC") jurisdictional California-Oregon Intertie ("COI") Owners Coordinated Operations Agreement and the COI Path Operator Agreement (both as amended and referred to as governing agreements). As set forth in the agreements, TANC and the other COI owners jointly monitor planned projects that may adversely impact the transfer capability of COI and provide guidance to the CAISO for the operation of COI towards the common goal of optimizing COI transfer capability. TANC is pleased with the coordination of the CAISO in the California Operations Studies Sub-Committee, where alongside the other COI owners substantial improvement to the operation of COI have been achieved. Some of these improvements were made as a result of implementing more effective tools in the control room, but others were made to overcome recent challenges driven by changes in the resource fleet and impacts driven by climate change.

TANC's primary focus related to the TPP is to protect and maximize the transfer capability in both directions of the COTP and the COI (also known as Path 66) consistent with the various applicable governing agreements.

Maintaining high transfer capability on COI has become more important in recent years to the Balancing Authorities in northern California and the Pacific Northwest. The need for dependable and high import capability was evident in California during the late summer and early fall of 2020 when there were several incidents of deficiencies in available resources in California. Although some customers lost power, many did not because of the power that was able to be imported from neighboring regions including the Pacific Northwest. This need was also evident in March of 2019 when an extended cold front hit the Pacific Northwest following a dry rainy season. With the seasonally light load in California, COI was used to send needed power to the Pacific Northwest as the region managed the challenges of limited available resources.

The need for maintaining high transfer capability on COI will continue to be important in the future as the percentage of variable energy resources in the resource fleet continues to grow, more dispatchable and baseload generation retires, and new challenges arise driven by climate change. To meet the future needs of the system, TANC believes the CAISO should undertake proactive transmission planning efforts to maintain and enhance the transfer capacity ratings of the COI. TANC (along with its members) supports a more proactive approach and is open to future coordination efforts with the CAISO and other regional entities with the common goal of improving the bi-directional transfer capability of COI to better meet current and future needs of the region.

TANC's comments fall into two categories. First, TANC provides specific comments on the technical studies pertaining to the Pacific Gas and Electric Company ("PG&E") Bulk System Study. Second, TANC provides more general comments and recommendations for the ongoing TPP economic studies.

TANC's technical studies comments are as follows:

- 1. While the relocation of the STATCOM increases the need to operate a remedial action scheme ("RAS"), TANC supports the STATCOM project.** In all peak load cases with COI transfers north-to-south ("N-S") an overload resulted on the Round Mountain-Table Mountain 500-kV transmission line following the outage of the adjacent Round Mountain-Table Mountain 500-kV transmission line. In the 2025 and 2030 peak load cases, and with the inclusion of the Round Mountain STATCOM, the resulting overload on the adjacent line is exacerbated when the outage location is north of the Round Mountain STATCOM station. To mitigate this reliability issue, the CAISO proposes (as it has in the past) to bypass the series capacitors on a Round Mountain-Table Mountain 500-kV line due to overloads on the line which shifts flow to the COTP and other parallel electrical paths until flows can be reduced through import curtailments. As in previous transmission planning cycles, TANC supports the implementation of the recommended RAS as it allows for increased COI N-S transfers during typical operating conditions and during conditions with planned maintenance outages on the 500-kV system south of the California-Oregon border. However, with the changed location of the Round Mountain STATCOM in the 2020-2021 TPP studies it is clear the need for the RAS is even greater than noted in past studies to mitigate the system impacts caused by the STATCOM at its new location. TANC supports efforts to better locate the STATCOM or consider options that do not increase the need for RAS actions if feasible.
- 2. TANC supports reactive additions to PG&E's system.** As in previous TPP cycles, the CAISO is recommending dynamic reactive support projects be installed at Round Mountain and Gates to mitigate the low voltage and high voltage concerns resulting on the 500-kV system. TANC agrees with the CAISO's conclusions and supports the two recommended projects. Although the Round Mountain STATCOM will require some minor new RAS, the two projects will add the needed voltage support to the 500-kV system in the coming years with the expected changes in available resources.
- 3. TANC supports further study to reduce COI export limitations.** In the off-peak studies with COI transfers south-to-north ("S-N"), an overload results on the Olinda 500/230-kV transformer following the loss of the Round Mountain 500/230-kV transformer, and vice versa. The proposed mitigation for these overloads is to reduce COI S-N flows and/or redispatch generation. TANC agrees with the mitigation options for the near-term horizon but recommends that the CAISO investigate a potential long-term solution that will not require the limits to the transfer capability between California and the Pacific Northwest. As the Western markets continue to evolve and California adds significantly more renewable energy (primarily solar), being able to export excess generation will become a greater priority. TANC is studying COI export capability in its 2020 Annual Assessment and would welcome coordinated study efforts with the CAISO to explore COI export improvements.

TANC's economic studies comments are as follow:

1. **TANC appreciates the CAISO's economic study improvements, but more coordination is needed.** COI overload mitigation action for thermal limitations on the bulk system has for years relied primarily on curtailing imports to operate within the adjusted seasonal COI nomogram rather than making fixes to improve the transfer capability of the system. TANC is encouraged by the reactive support additions as noted above and encourages study of additional fixes to increase the usability of the existing system. TANC recognizes that the CAISO has made efforts to better recognize limitations associated with transmission outages. Scheduled and unplanned outages are major sources of limitations that will likely contribute to increased renewable curtailments in future years or exacerbate supply shortages at any time. TANC continues to monitor actual congestion compared to that forecasted by the CAISO and will seek to identify improvements in economic studies to more accurately forecast future congestion. TANC encourages the CAISO to monitor and explore potential congestion forecast improvements and work with stakeholders in such efforts.

The August 14 and 15, 2020 rotating outages on the CAISO's system demonstrate that the needs of the system are changing and how key the COI is to California. In mid-August every MW available for import reduced the amount of MW of load that needed to be curtailed. TANC encourages the CAISO to take a careful look at the assumptions being used in the CAISO's reliability and economic studies to ensure that those studies capture the current needs of the system. TANC believes that there is a pressing need for transmission expansion, and as the resource mix in California and the West continues to evolve the importance and use of interstate transmission will increase. TANC believes it is imperative that future economic analyses reflect a realistic amount of congestion on Path 66. At a minimum, analyses should not reflect a decrease in congestion compared to real market performance unless there is consensus among stakeholders that such a paradigm is likely. TANC believes it is critical for the CAISO to look for every opportunity to maximize the existing transfer capability of the COI and identify when new incremental capability would be beneficial using accurate forecasts of congestion exposure that reflect the benefits of system improvements.