

**TANC COMMENTS**  
**ON THE CAISO'S 2017-2018 TRANSMISSION PLANNING PROCESS**  
**NOVEMBER 30, 2017**

The Transmission Agency of Northern California (TANC) appreciates this opportunity to provide comments on the California Independent System Operator's (CAISO) 2017-2018 Transmission Plan November 16, 2017 Stakeholder Meeting to discuss projects under \$50 million for approval, cancellation of projects after a review of need, and the congestion results of the economic studies. TANC's primary concern is for the protection of and the maximization of the transfer capability on the California-Oregon Intertie (COI) or Path 66. For the past several years, TANC has made comments, posed questions, and proposed modelling enhancements to the manner in which the CAISO's TPP performs its economic modelling related to the COI. This remains a major and significant concern to TANC. We believe that maximizing transfer capability between the Pacific Northwest and California should be a priority, and our concern is that the current and historic CAISO approach, in the TPP, not only fails to promote maximizing this critical path but actually further curtails regional exchanges, rather than address underlying issues on PG&E's northern California grid. For example, in this TPP the CAISO has recommended cancelling or reducing the scope of two projects that TANC is concerned will have a deleterious effect on the COI transfer capabilities. Finally, we note that the South of Palermo project (a project that would facilitate maximizing the COI transfer capabilities), was approved 6 years ago and is still many years away from planned operation. The CAISO transmission plan continuously fails to provide solutions to maximize the capabilities of the key transmission path into California from the Pacific Northwest and, as a result, California ends up relying on more carbon intensive resources and more expensive energy.

**COI Modeling**

During the 2016-2017 Transmission Planning Cycle, the CAISO improved its modelling of the COI operation by including some historic planned outages as provided by the members of the Owner's Coordinating Operating Agreement (OCA) of which TANC belongs. While an improvement, TANC noted that these improvements still insufficiently modelled the actual operational capabilities of the COI as evidenced by historic capacity levels and congestion (Table 1). In the stakeholder meeting it was confirmed that this planning cycle used the same outage data from 2016-2017 and unsurprisingly came up with similar results of just \$760,000 in congestion costs over just 32 hours. From 2012-2016, actual congestion at Malin has cost an average of over \$59 million per year and on average occurred 2,605 hours per year. In 2017 congestion on the COI through October cost \$57.6 million and had occurred for 2,241 hours.

**TABLE 1**

Year	Congestion Costs (\$million)	Number of congested hours	Average COI Capacity when less than 4,800 MW	Number of hours COI Capacity less than 4,800 MW
2012	\$84.66	3,682	3,377	7,619
2013	\$33.59	1,827	3,640	6,813
2014	\$90.54	2,424	3,614	6,013
2015	\$37.68	2,303	4,176	5,365
2016	\$51.14	2,791	3,987	5,677
<i>Average 2011-2016</i>	<i>\$59.50</i>	<i>2,605</i>	<i>3,757</i>	<i>6,297</i>
2017 through Q3	\$57.60	2,241	3,488	5,590

The CAISO has been unable to forecast realistic congestion numbers for the COI, and it appears that this is because the CAISO continues to model the COI at 4,800 for all but a limited number of hours per year even though the information in Table 1 shows that, on average, the COI transfer capacity was limited over 2,600 hours per year. This leads to congestion forecasts that are vastly underestimating the likely congestion costs on the COI. By underestimating the cost of congestion on the COI the CAISO is hindering its ability to find economic solutions that could potentially save millions of dollars and improve the number of hours that the COI can be better utilized. TANC continues to be willing to work with the CAISO in improving its modeling so that transmission congestion on COI is more accurately forecast, and to find solutions which would increase the numbers of hours per year that the transfer capability of the COI could be maximized.

TANC highly recommends that the CAISO consider performing a ‘backcast’ analysis of COI flows to examine how close the CAISO’s models for limitations on imports on Path 66 have been to reality. We would recommend that the CAISO may wish to review the 2012-2013 and 2013-2014 TPP that forecast a total of zero (0) hours of congestion on Path 66 and 2017 and three (3) hours of congestion in 2018.

### **PG&E System**

TANC continues to be concerned over actions and inactions taken by the CAISO and PG&E to the underlying PG&E system that significantly prevent the COI from being utilized more effectively by lowering the operational capacity on the path. Specifically, in this planning cycle the CAISO is cancelling or changing the scope of two (2) PG&E projects, the Rio Oso-Atlantic 230-kV line project and the Rio Oso 230-kV voltage support project, which would assist to improve available capacity on the COI. Additionally, a very key project for supporting the capacity on the COTP, the South of Palermo project, has had its in-service date pushed off for years by PG&E. These projects do not just supply needed reliability benefits in the local area(s), but also help maintain and improve the import capabilities of the COI.

*Rio Oso Atlantic 230-kV Line Project and Rio Oso 230-kV Voltage Support*

The CAISO has determined that the Rio Oso-Atlantic 230-kV Line Project should be cancelled as it is no longer needed, to be replaced by upgrading the protection schemes and developing appropriate operating measures. This Project was also approved with the *South of Palermo* 11-kV Reinforcement Project to help meet several Central Valley reliability concerns. TANC understands that changed system conditions since then may have helped mitigate several reliability issues. However, it is unclear if the CAISO has considered the affect cancelling this project may have on the ability to maximize the COI and the downstream lines to deliver energy. TANC is concerned that the CAISO will use COI capacity limits to resolve issues that would have been resolved with this project.

Additionally, the Rio-Oso 230-kV Voltage Support Project has had a scope change that removes the need for a capacitor bank at the Atlantic Substation. TANC has similar concerns as noted above about this Project.

*South of Palermo 115-kV Reconductoring Project*

The South of Palermo Project is an approved Project by the CAISO which would, among other reliability benefits proposed by PG&E, assist in improving the transfer capacity of the COI. The project was first approved in the 2010-2011 Board Approved Transmission Plan with an in-service date of May 1, 2014. It was proposed by PG&E and approved by the CAISO as a reliability project at a cost of \$80-\$100 million. However, its planned in-service date has continued to slip such that in the 2015-2016 Transmission Plan the in-service date had been moved out to April 2022, without comment. It is noted that, in the 2016-2017 Transmission Plan the in-service date has been moved up to February 2022.