

CAISO 2016/17 Draft Transmission Plan: Stakeholder Comments

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LS Power appreciates the opportunity to provide comments on the CAISO 2016/17 Draft Transmission Plan. The following comments are related to the Economic Studies Section of the Plan.

COI vs PACI/COTP modelling:

We commend the CAISO staff for making good enhancements in this year's planning cycle to model COI congestion; however, much more work needs to be done in the next planning cycle on this front. While the modelling enhancements did lead to a modest increase in COI congestion from the baseline study (\$0.84 mm with enhancements vs \$0.44 mm without), the quantified congestion is a mere fraction of the actual congestion that has routinely been reported in CAISO DMM reports over the last few years¹. We understand that the historical congestion is not expected to perfectly align with the forecasted congestion for a 10-year out case, but we believe the primary reason for the misalignment is not the difference in time frame but it is the way congestion is quantified in the study vs. how it occurs and gets quantified for CAISO DMM reporting. More details on this in the following paragraphs.

In the last few transmission cycles, CAISO has been studying COI congestion by modeling the three 500 kV lines that comprise the COI path with a Total Transfer Capacity (TTC) of 4,800 MW (and de-rated as driven by operating nomogram). Two of these 500 kV lines are owned by California IOUs and operated by CAISO. This path is known as the Pacific AC Intertie (PACI), with a TTC of approximately 3,200 MW. The third line, also known as the COTP line, is owned by members of Transmission Authority of Northern California (TANC) and operated by Balancing Authority of Northern California (BANC). This line has a TTC of approximately 1,600 MW. A significant portion of this TTC is reserved for native use by TANC members and the rest becomes available for use by third parties and TANC members for market transactions with other entities, including CAISO.

We understand that while CAISO conducts its production cost simulation that incorporates a representation of the transmission system across WECC, the simulations used to evaluate

¹ PACI congestion was noted to be \$62 mm in 2013, \$147 mm in 2014, \$50 mm in 2015

transmission needs for CAISO does not reflect the realities associated with the way actual transmission is used by various entities, particularly those that directly affect the amount of power that can be scheduled across various interties and paths. For instance, in the TEPPC case used for transmission planning, CAISO does not assume any hurdle rate for energy to flow out of the Malin HUB to CAISO or BANC system, while CAISO assumes that there is a \$2.53/MWhr hurdle rate for energy to flow from BANC to CAISO. Such simulation methodology would automatically force a portion of the power flowing to CAISO from Malin and Captain Jack to flow through the COTP into CAISO.

There is a significant inconsistency and disconnect between the simulated outcome and the real life experience. In reality, the power scheduled at PACI and COTP should be scheduled independently, and the capacity that is reserved for TANC use should not be available to flow into CAISO through COTP without incurring a wheel-through hurdle charge. This reality should be modelled in the production cost simulation runs, perhaps by modeling hurdle rates as charges on transactions between balancing authority areas rather than physical flows, as appropriate to mimic this.

Further the PACI and COTP path limits should be separately enforced in the production cost simulation runs. Again, in real life experience, the transmission congestion that occurs appears to be mainly associated with scheduling limits and thus, we believe the CAISO's simulation should reflect such reality -by setting specific constraints that reflect the realities of how entities schedule across the transmission system, and appropriate costs to move schedules between interties.

We believe that CAISO could improve its modeling capabilities to reflect the real system conditions. If modelled correctly, congestion on the PACI interface will likely be similar to historical PACI congestion that has been noted by CAISO's DMM for the last several years. We understand that the tool CAISO currently uses may not be adequate for accounting for scheduling constraints such as those over the PACI path. We encourage CAISO to investigate either the use of new tools or make enhancements to its existing tool such that this scheduling constraint can be modeled and congestion calculated accurately.

LS Power recommends that the CAISO incorporate simulation of contract path transaction and market scheduling limits to more realistically capture the transaction costs and congestion charges actually faced by bilateral transactions and market operations.