

CAISO 2018/19 Transmission Plan: Stakeholder Comments

Submitted by	Company	Date Submitted
Sandeep Arora (sarora@lspower.com) (925) 201 5252	LS Power Development, LLC	10/05/18

LS Power appreciates the opportunity to submit comments on CAISO's 2018/19 Transmission Planning process.

(1) PG&E Bulk System Reliability issues:

CAISO staff presented several reliability issues for the Bulk system in the Northern California area. These issues are (a) thermal overloads of several 500 kV transmission lines and transformers for several Category B and C contingencies (b) High/Low System voltages under System Normal and Contingency conditions (c) Low voltages in Transient stability runs due to stalling of induction motor load and High Voltages in Diablo retirement cases.

Thermal Overloads:

For thermal overloads, CAISO's current recommendation is to reduce flows on COI and Path 26 and/or Generation re-dispatch. While these may be effective short term Operating solutions, these should not be used as long term Planning solutions. Implementing Operating solutions may resolve the reliability need but reducing COI and Path 26 flows to below their path rating prevents economic/low carbon energy imports to serve California load, which shows up as congestion cost that increases ratepayer burden. As CAISO prepares its final recommendations for addressing these issues, it should consider transmission solutions to resolve not only High/Low voltage issues but also thermal overload issues. LS Power's previously proposed Southwest Intertie Project North (SWIP North) is potentially one such long term transmission solution that can address several thermal overloads. SWIP North is comprised of a 500 kV transmission line from Midpoint substation to Robinson Summit substation. This line in conjunction with the One Nevada Transmission Line (ON Line), the jointly owned LS Power/NV Energy 500 kV line from Robinson Summit to Harry Allen, and the Harry Allen to Eldorado 500 kV line (currently under construction by LS Power affiliate DesertLink) provides a parallel path to COI and Path 26. This significantly offsets flows on these interfaces, by approximately 300 to 400 MW based on power flow studies conducted by LS Power. LS Power studied the effectiveness of SWIP North to address the Bulk system issues identified by CAISO staff in prior Transmission Planning cycles¹ and based on these studies SWIP North was very effective in alleviating and resolving several Category B and C overloads.

¹ See "Bulk System Reliability Issues" section of LS Power comments for 2014 TPP: <http://www.caiso.com/Documents/LSPComments2014-2015TPPStakeholderMeetingPreliminaryReliabilityResultsPTOProposedSolution.pdf>

Voltage Issues:

For the voltage issues identified by CAISO under System Normal & Contingency conditions and also under Transient Stability runs, LS Power recommends that CAISO re-run the studies by including SWIP North as a transmission solution. While SWIP North may not resolve the high voltage issues, it should help address the low voltage issues both under post transient and stability scenarios.

(2) Economic Study Assumptions

As LS Power has commented in last few Transmission Planning cycles, the economic model for quantifying Pacific AC Intertie (PACI) & Nevada-Oregon Border (NOB) congestion needs to be improved such that it correctly captures the congestion that routinely takes place across these interfaces. Rather than repeating its prior comments, LS Power is referencing² comments that it filed earlier this year for 2018/19 Study Plan. To the best of LS Power's knowledge these modelling improvements have not been included in the economic model to be used for 2018/19 Transmission Planning Economic Studies. CAISO staff did make reference at the Sep 21, 2018 Stakeholder meeting that it is continuing to investigate Day Ahead COI congestion. While LS Power appreciates CAISO's efforts on this, it requests that CAISO provide more information on what it is investigating and whether it is planning to include any modelling enhancements so this congestion can be correctly captured in Economic Studies. Unless modelling enhancements are included, study findings for this year will yet again fail to correctly capture this important congestion issue.

(3) Increased Capabilities for Transfers of Low Carbon Electricity between the Pacific Northwest and California

As reported at the Sep 21, 2018 Stakeholder meeting, CAISO is currently performing both near-term (2023) and longer-term (2028) assessments for this study. The near-term assessment is focused on finding minor upgrades that can improve COI transfer capability from 4800 MW to 5100 MW in North to South direction and Longer-term assessment will look at the production cost simulation (economic) benefits of further improving transfer capability between Pacific Northwest and California by installing green field projects. As LS Power previously commented, this new study cannot provide accurate results without properly capturing the economic congestion that takes place on the PACI/NOB interfaces in the base model for the Study. If modelling enhancements are not implemented, results of this study, especially the longer-term assessment will look no different than Economic Study results from last few Transmission Planning cycles.

² LS Power comments on modelling recommendations to capture PACI & NOB congestion as filed in March 2018 for CAISO 2018/19 Study Plan:

<http://www.caiso.com/Documents/LSPower-EconomicStudyRequest-Draft2018-2019StudyPlan.pdf>

Additionally, COI path rating is 4800 MW in North to South direction but operating nomograms typically do not allow these transfers due to transmission constraints. Improving the Path transfer capability to 5100 MW but still being restricted by today's operating nomograms will not provide desired benefits. LS Power believes that this study should provide a comprehensive evaluation that collectively addresses all issues at this interface including the inherent need to alleviate the documented congestion. Further, as CAISO performs this study it should take a holistic approach in reviewing options for improving transfer capability between the Pacific Northwest & California. While some options may offer short term limited benefits and others may offer long term reliability, economic and policy benefits, all of this should be considered as CAISO concludes its recommendations on the study. Greenfield projects such as SWIP North, which LS Power has submitted for economic evaluation in the past TPP cycles and 2018/19 TPP should be considered as a solution for improving the transfer capability. SWIP North reduces COI & Path 26 flows by ~300 MW or more, based on the WECC Path Rating study work conducted by LS Power. Further, based on CAISO's analysis done under the Transmission Planning Process, CAISO found that SWIP North reduces congestion hours on COI by 39%.

(4) Interregional Planning Studies

At the Stakeholder meeting, CAISO provided an update on the ongoing Interregional Planning work and based on this LS Power understands that CAISO is performing economic analysis for SWIP North project. We recommend that as part of this analysis, CAISO also quantify the benefits of GHG reductions resulting from SWIP North. SWIP North will make available 1000 MW of new transmission capacity to CAISO that will enable the regional grid to operate more efficiently and source additional low carbon resources to serve California load resulting in reduced GHG emissions. CAISO's past analyses have primarily been focused on production cost savings, however in addition to these savings, reduction in GHG is also a key benefit and it should be quantified.

LS Power thanks CAISO for the opportunity to provide these comments.