# CAISO 2019/20 TPP Study Plan: Stakeholder Comments

| Submitted by | Company | Date Submitted |
|---|---|---|
| Sandeep Arora (sarora@lspower.com)<br>(925) 201 5252 | LS Power Development, LLC | 3/14/19 |

LS Power appreciates the opportunity to provide comments on the CAISO 2019/20 Draft Study Plan. Our comments are limited to Economic & Policy Studies for 2019/20 TPP.

**Economic Study Request & Economic Project Submission**

LS Power is hereby submitting an economic study request to CAISO for the 2019/20 Transmission Plan. The request is to study Day Ahead scheduling congestion at CAISO's intertie interfaces with the Pacific Northwest, namely the California Oregon Intertie (COI), Pacific AC Intertie (PACI) and Nevada-Oregon Border (NOB). In addition to this request, LS Power is also hereby submitting its Southwest Intertie Project North (SWIP-North) as an Economic project, to be modelled as a 1000 MW path of new transmission capacity between Idaho Power (Midpoint) and CAISO (Harry Allen[1]), free of any wheeling charges. As a parallel path to existing major CAISO interties; COI, PACI, and NOB, SWIP-North provides an alternate path for economic energy from the Pacific Northwest into California, in addition to providing policy benefits for reducing GHG emissions and accessing out-of-state renewables.

For the past four planning cycles, LS Power has registered its concern that CAISO's economic studies performed for the Transmission Planning Process (TPP) consistently fail to capture the tens to hundreds of million $'s in annual congestion costs along the PACI and NOB interfaces, and therefore the TPP consistently fails to identify economic benefits of the SWIP-North project. Since 2011, actual PACI and NOB congestion per CAISO DMM reports has been in the range of $50 mm to $145 mm per year. This contrasts with the less than $1mm of annual congestion predicted in CAISO planning studies for the COI path[2].

Rather than rehashing our recommendations in detail similar to comments we have previously submitted, we are providing a brief summary of our recommendations on these issues below.

[1] CAISO's Harry Allen to Eldorado 500 kV Transmission line is under construction and scheduled to go in service in 2020.

[2] California Oregon Intertie (COI) comprises of three transmission lines that have a combined flow limit of 4800 MW N-S. CAISO TPP studies enforce this flow limit and capture any congestion on this path. In the Day Ahead scheduling world, congestion is witnessed across the Pacific AC Intertie (PACI) and Nevada-Oregon Border (NOB) scheduling interfaces. PACI is a subset of COI and has a scheduling limit of 3200 MW which represents scheduling rights of CAISO member entities on COI path. NOB is the scheduling interface for Pacific DC Intertie. It is rated at 3220 MW N-S and the transmission capacity is allocated between CAISO member entities and LADWP.

Details on these recommendations can be found within comments LS Power previously filed for 2018/19 Draft Study Plan[3] and for 2018/19 Draft Transmission Plan[4]

(1) CAISO should provide a timeline by when it expects to conclude whether additional transmission capacity on existing PACI, NOB transmission paths can be made available in the Day Ahead market. This work was taken up by CAISO in the 2018/19 TPP; however there is no information on when CAISO expects to complete it.

(2) CAISO's congestion analysis for PACI, NOB, COI paths needs to take a completely different approach this year. CAISO should also study and quantify financial congestion on these paths in addition to physical congestion that it has been quantifying over the last few planning cycles.

(3) CAISO should investigate whether its Production cost simulation tool is suitable for capturing financial congestion. CAISO should investigate improving its existing tool or should make use of a different tool so it can correctly capture financial congestion.

(4) For the SWIP-North economic study, CAISO should calculate all benefits of a 1000 MW transmission capacity from Midpoint to Harry Allen, free of any wheeling charges. In prior planning cycles, CAISO has only quantified production cost savings but in the 2019/20 TPP CAISO should capture these additional benefits to CAISO ratepayers:

   (a) Financial benefits of improving Day Ahead scheduling capability and thereby alleviating existing Day Ahead financial congestion that is common place for CAISO's PACI, COI, NOB paths

   (b) GHG reductions and associated savings to CAISO

   (c) Load Diversity & Flexible Reserve Capacity savings

   (d) Renewable Capital cost savings.

   A project such as SWIP-North improves transfer capabilities in/out of CAISO from several neighboring Balancing Authority Areas (BAAs) and hence will provide these benefits. These benefits are typically not captured as part of the TEAM methodology that CAISO uses for its production cost simulation studies. CAISO should conduct separate analyses to quantify these additional benefits.

(5) For the SWIP-North economic study CAISO should ensure that the existing transmission path from Robinson Summit to Harry Allen ("ON Line") is limited to 1000 MW in the base case and is increased to 2000 MW only in the case with SWIP-North. As described below, SWIP-North will not only create a new 2000 MW path from Midpoint to Robinson Summit but a few terminal upgrades associated with the entire build out of SWIP will also increase transmission capacity of ON Line from 1000 to 2000 MW. A total of 1000 MW of transmission capacity from Midpoint to Harry Allen is offered for CAISO use as part of this economic study request. This will effectively move CAISO's BAA boundary station to Midpoint.

(6) LS Power is aware of other out of state transmission projects that are in development. A few of these projects, such as Boardman to Hemingway and Gateway West, compliment benefits of SWIP-North. While CAISO may choose to study a few scenarios that combine SWIP-North with

[3] LS Power comments filed for CAISO Draft Study Plan in 2018/19 TPP can be found at: http://www.caiso.com/Documents/LSPower-EconomicStudyRequest-Draft2018-2019StudyPlan.pdf

[4] LS Power comments filed for CAISO Draft Transmission Plan in 2018/19 TPP can be found at: http://www.caiso.com/Documents/LSPowerComments-Draft2018-2019TransmissionPlan.pdf

one or more of these projects, this Economic Study requests evaluation of SWIP-North as a standalone project.

SWIP-North Project

SWIP-North is comprised of a 500 kV transmission line from Midpoint substation to Robinson Summit substation. Additional details of SWIP-North are included in the submission of SWIP-North as an Interregional Transmission Project in March 2018 under the 2018/19 TPP. After SWIP-North is built, LS Power's affiliate will attain approximately 1000 MW of new[5] transmission capacity that will become available on the existing 500 kV transmission line that connects Robinson Summit to Harry Allen substation ("ON Line"), as per the Transmission Use and Capacity Exchange Agreement ("TUA") among LS Power affiliates and NV Energy, which is further described below. LS Power hereby proposes this new additional ~1000 MW capacity to be dedicated for CAISO use. In addition, the new 500 kV line from Harry Allen to Eldorado was approved by CAISO to be in-service by 2020. Upon completion of the Harry Allen to Eldorado project, Harry Allen will be a CAISO delivery point. Hence, if SWIP-North was selected by CAISO, CAISO will have access to a complete 500 kV path from Midpoint to Eldorado, approximately 575 miles.

Pursuant to the TUA with NV Energy, once SWIP-North is built there would be an exchange of capacity between LS Power affiliates and NV Energy. Upon completion of SWIP-North, NV Energy would get a share of the capacity between Midpoint and Robinson Summit and LS Power affiliate Great Basin Transmission would get a share of capacity between Robinson Summit and Harry Allen, without either party having to pay any amount to the other. As a result of this capacity exchange, LS Power's affiliate would have bidirectional transmission capacity on the entire path from Midpoint to Harry Allen, estimated at approximately 1000 MW. Therefore, LS Power's economic study request is that CAISO study the benefits of approximately 1000 MW of bidirectional transmission capacity between Midpoint and Harry Allen, which would be available to the CAISO market upon completion of construction of SWIP-North.

**Proposed Policy & Inter Regional Studies**

CAISO will conduct its policy-driven transmission assessment using base and sensitivity portfolios provided by the CPUC. The base portfolio will correspond to a statewide electric sector GHG reduction target of 42 MMT by 2030, while the sensitivity will correspond to a 32 MMT. At the Stakeholder meeting for the Draft Study Plan, CAISO stated that while the CPUC portfolios may contain out-of-state resources, the CAISO will not assess the need for out-of-state transmission nor will it reassess the previously submitted interregional transmission projects. CAISO proposes that it will only study the impact of out-of-state (OOS) resources by assuming injection points at CAISO boundary stations and only analyzing the impact of these injections to in-state CAISO transmission system. LS Power strongly disagrees with this CAISO proposal. We believe this approach is at odds with the expectation of CPUC's IRP process and will only provide limited insights to stakeholders, if any.

[5] The Robinson Summit to Harry Allen 500 kV line is currently limited to ~975 MW of transmission capacity. Building SWIP North will increase transmission capacity of this line by ~1000 MW, which will be available to LS Power's affiliate and can be dedicated for CAISO use.

CPUC's 2017-18 IRP study showed significant benefits of out of state transmission which is why CPUC recommended inclusion of OOS transmission as a Policy Sensitivity study in CAISO's 2019/20 Transmission Plan. If CAISO's policy studies only look at in-state impacts of OOS renewables then a critical piece will be missed to determine how OOS renewables get delivered to CAISO boundaries.

We recommend that CAISO's policy studies include a comparison of active OOS transmission projects and make recommendations on viability and benefits of each project. A few attributes we offer here for consideration for comparing OOS transmission projects are: (1) Earliest possible In Service Date, (2) Capital Cost on a $/MW basis, (3) Permitting status, (4) Ability to bring renewables into California from one or more OOS locations. In addition, any Economic and/or Reliability benefits these projects can bring to CAISO should also be considered. We recommend that this exercise be done in conjunction with CPUC's 2019-20 IRP proceeding. This analysis will help stakeholders understand merits of OOS renewables with new transmission and will help guide policy makers at CAISO and CPUC make important decisions on OOS transmission. Any transmission projects that standout as part of this analysis as candidates that can provide multiple benefits should be considered as "least regrets" transmission solutions. Investment decisions for these least regrets transmission solutions should be made in a timely manner to ensure projects can be built to meet state policy goals.

LS Power thanks CAISO for the opportunity to provide these comments and looks forward to working with CAISO staff for 2019-20 TPP.