

CAISO 2016/17 TPP Study Plan: Stakeholder Comments

Submitted by	Company	Date Submitted
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LS Power appreciates the opportunity to provide comments on the CAISO 2016/17 Draft Study Plan.

Economic Study Request:

LS Power is hereby submitting an economic study request to CAISO for the 2016/17 Transmission Plan. The request is to study congestion on CAISO's intertie interface with the Pacific Northwest and Path 26, an internal CAISO path, and evaluate the economic benefits of the transmission solution proposed below.

CAISO's Transmission Planning studies in several previous cycles have shown congestion on the California Oregon Intertie (COI) interface and Path 26, although not significant. As LS Power has previously noted in comments submitted under last year's cycle, the amount of congestion shown in the CAISO studies is very small as compared to the real time congestion on this path as shown in CAISO's OASIS and Market Update reports¹. LS Power believes that certain modelling enhancements to the economic study models may be necessary to be able to investigate these discrepancies. Some of the discrepancies may be related to the use of hurdle rates in the TEPPC common case (for transfers from Pacific Northwest into California) that do not reflect economics of flows in real time. These hurdle rates should be examined and corrected, as appropriate. Further, the economic study model may not be able to accurately reflect the dynamic path limit on COI, which CAISO should look into implementing in studies to be done under this year's cycle.

LS Power also requests CAISO to study the Southwest Intertie Project - North ("SWIP North") as an economic solution. SWIP North is comprised of a single circuit 500 kV transmission line from Midpoint substation (in Idaho) to Robinson Summit substation (in Nevada). To enhance this economic solution, an LS Power affiliate owns available transmission capacity on a 500 kV transmission line that connects Robinson Summit to Harry Allen ("ON Line"), which could be dedicated to CAISO. In addition, a new 500 kV line between Harry Allen & Eldorado substations was recently approved by the CAISO Board and is to be in service by 2020. Hence, if SWIP North were to be built, CAISO could have access to a complete path from Midpoint to Eldorado. Under the Transmission Use and Capacity Exchange Agreement among affiliates of LS Power and NV Energy, once SWIP North is built

¹ See CAISO Department of Market Monitoring (DMM) 2013 Annual Report, page 178, Section 8.2 at: <http://www.caiso.com/Documents/2013AnnualReport-MarketIssue-Performance.pdf>

there would be an exchange of capacity such that NV Energy would get a share of the capacity between Midpoint and Robinson Summit and LS Power would get a share of capacity between Robinson Summit and Harry Allen, without either party having to pay any additional amount to the other. As a result of this capacity exchange, each party would have bidirectional transmission capacity on the entire path from Midpoint to Harry Allen. 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 is what LS Power will have, and will be available to the CAISO market upon completion of construction of SWIP North.

In addition to the economic benefits that CAISO calculates from production cost simulation studies, CAISO should also estimate Capacity Benefits from SWIP North. Adding SWIP North relieves certain reliability and economic constraints related to imports across CAISO's California Oregon Intertie (COI) path. This translates into incremental import capability into CAISO that should add to the net benefits attributed to SWIP North.

SWIP North also offers policy benefits by allowing out of state renewables (including Wyoming Wind) to meet the new California 50% RPS targets. Benefits of providing California ratepayer access to lower cost Wind energy from out of state through the proposed SWIP North line should be analyzed. In addition to being a lower cost solution for California 50% RPS, as shown in previous studies, out of state wind also provides geographical diversity benefits to California. SWIP North will enable this geographical diversity to the incremental RPS build out which will help reduce locational aspects of congestion caused by over generation.

In addition to the economic and policy benefits, SWIP North also brings reliability and grid security benefits to California and the entire WECC region. SWIP North is a major 500 kV WECC path that parallels several major WECC paths in North to South direction. Adding this new path not only relieves loadings on the existing WECC paths but also provide grid security benefits. SWIP North has the potential to reduce (if not eliminate) the impact of triggering WECC NE/SE separation scheme, that breaks WECC into two systems, under certain contingency conditions. This can potentially prevent major black out in California, which leads to economic and societal benefits. These benefits are typically not captured for internal CAISO transmission projects, but for a major WECC project such as SWIP North, these benefits should be quantified.

Interregional Transmission Projects:

CAISO proposed in the Draft Study Plan that it will review Interregional Transmission Projects (ITP), if any submitted, during the 2016/17 Transmission Plan. We support CAISO in doing so and have the following suggestions to offer on the ITP evaluation process. As currently written in the Draft Study Plan CAISO states that "...if the interregional transmission project could potentially meet a regional need more cost-effectively and efficiently as a regional transmission solution. Based on the ISO's initial assessment of ITP benefits, the ISO will determine whether to further evaluate the project during the next planning cycle...."

We recommend that CAISO review all benefits of ITPs, rather than only comparing these projects with regional projects and recommending for further review if these projects are more cost effective and efficient than the regional projects. ITPs, by their nature, connect two or more Planning Regions and typically enhance transfer capability between the regions. Improving transfer capability

between regions offers a wide variety of benefits, including but not limited to reliability benefits, economic benefits, policy benefits, geographical diversity benefits and grid security benefits. We believe that all these benefits should be carefully evaluated when reviewing an ITP. While an ITP may not be the most cost effective solution as compared to a small regional transmission solution that solves a localized regional need, the vast array of benefits that an ITP can offers should be diligently considered rather than testing its cost effectiveness and efficiency against a regional solution.

Modelling enhancements for 2016/17 cycle:

As noted by CAISO in the Draft 2015/16 Transmission Plan, modelling enhancements to the TEPPC 2026 Common case will likely be needed to correctly account for intertie congestion and the benefits of an ITP such as SWIP North. In particular, here are the areas that we would recommend CAISO to investigate and implement modelling enhancements for the 2016/17 cycle:

- (1) In the TEPPC 2026 Common Case improve hydro modeling and correctly account for the interaction between North California Hydro, and the dynamic real time COI path limit (which is usually below the max 4800 MW N-S limit)
- (2) Enhance the ABB Grid view model such that it can support contract path modeling to capture the scheduling path the SWIP North project brings – including 1000 MW “hurdle free” scheduling rights from Midpoint to Harry Allen
- (3) Adjust the wheeling charges between Pacific Northwest and California, as needed , to accurately transactions on COI path
- (4) Adjust the wheeling charges in the TEPPC 2026 common case such that that no hurdle rates are applied to the 1000 MW bi-directional transfer of energy from Midpoint to Harry Allen from SWIP North.

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