

**CAISO 2019-20 TPP Stakeholder Comments**  
**Submitted by Smart Wires**  
**2/21/20**

Smart Wires appreciates this opportunity to provide comments on the CAISO 2019-20 Draft Transmission Plan.

Smart Wires applauds CAISO Staff for the rigorous and reasoned analysis of Transmission Planning needs and solutions in the 2019-20 TPP draft report. Our specific comments and requests build on the conclusions found in the draft report and focus specifically on two additional opportunities for reducing CAISO ratepayer costs and achieving positive societal benefits in this 2019-20 TPP.

1. For the Greater Bay Area Contra Costa Sub-area Local Capacity Reduction Study, section 4.10.9: We are asking CAISO to recommend this year, in this 2019-20 TPP cycle, Smart Wires' proposed project to mitigate the Greater Bay Area Contra Costa Sub-area Tesla-Delta Switchyard 230 kV LCR constraint, contingent upon the results of the already underway 2021 LCR Study for the Contra Costa Sub-area. Smart Wires also requests that the CAISO adjust the capital cost estimate for the line reactance solution proposed, shown in table 4.10-23, to reflect the cost estimate previously submitted and to update the solutions B/C ratio accordingly in the final report.
2. For sections 2.4.5 and 2.4.6 of the draft report, regarding the COI reliability assessment, we are asking CAISO to:
  - a. Share with stakeholders the cost estimates for the recommended reliability mitigation measure of implementing an SPS to bypass series capacitors on the Round Mountain-Table Mountain 500 kV lines #1 and #2 upon the loss of one of these lines, and
  - b. Recognize that the recommended reliability mitigation measures as mentioned in Section 2.4.6, have economic implications and should be included in an economic evaluation along with all other proposals for alleviating COI overloads before implementation.

**1. Greater Bay Area Contra Costa Sub-area Local Capacity Reduction Study - Section 4.10.9 Final Draft Report**

We ask the CAISO to recommend Smart Wires' proposed solution for the Contra Costa Sub-area in the 2019-20 TPP final report, contingent upon the results of the 2021 LCR Study.

Smart Wires proposed a line reactance project in the 2019-20 TPP which the CAISO found could displace 1,275 MW of LCR in the Contra Costa Sub-area. In the draft TPP report, the CAISO calculated the benefit to cost ratio for this project using a total capital cost estimate of \$14.4M. However, Smart Wires believes this number was mistakenly utilized, as the capital cost estimate initially submitted was \$4 - \$5.4M. Upon re-calculating the BC ratio with the most conservative cost estimate of \$5.4M, and applying the scaling factor to convert to total capital cost per the TEAM, the BC ratios are found to be

2.1 and 3.9 based on NP26 and SP26 system capacity costs respectively. Smart Wires requests that the CAISO update the final TPP report to reflect these costs and the BC ratio accordingly.

Smart Wires also recognizes that the ongoing 2021 LCR Study will provide additional insight into the LCR requirements as CAISO stated on page 291 of the draft report. We anticipate the 2021 LCR study will, among other things, identify the number of MW of the Contra Costa Sub-area LCR that could be displaced by a near-term transmission solution.

Given that Smart Wires solutions are scalable in nature, and capacity requirements will evolve over time, we request that the CAISO consider scaling the solution as needed to provide the correctly sized impact when conducting the 2021 LCR assessment. For example, if the study concludes that only 500 MW of the potential 1275 MW LCR reduction is feasible when considering broader system needs, the Smart Wires solution can be scaled to meet that need and would still deliver a BC ratio above 1. In addition, if a reduced solution size is found to be optimal for current system needs, but future LCR studies show that additional capacity reductions in the sub area would benefit ratepayers, the deployment can also be readily scaled up as those needs materialize. Smart Wires stands ready to support an installation for as early as 2021 to ensure CAISO's ratepayers capture the benefits of this solution at the earliest date possible.

## **2. California-Oregon Intertie Reliability Assessment and Related Smart Wires Request Window Proposal, Sections 2.4.4 and 2.4.5**

Section 2.4.4, page 81 the CAISO states:

*“Although the ISO agrees that the proposed [Smart Wires] project can mitigate the identified overloads, there is not a reliability need for such project since the overload can be mitigated by bypassing series capacitors on the Round Mountain-Table Mountain 500 kV lines with contingencies, operating within the COI nomogram or by congestion management reducing generation in the area of overloads. This project could be submitted as a potential economic study request in the next transmission planning cycle.”*

Smart Wires will re-submit this project proposal as an Economic Study Request in the 2020-21 TPP. In the meantime, the report recommends implementation of an SPS that bypasses the Round Mountain-Table Mountain series capacitors and utilizing congestion management to mitigate the reported COI overloads. Since congestion management and SPS implementations come at a cost to ratepayers, Smart Wires requests that the CAISO:

- a. Share with stakeholders the cost estimates for the recommended reliability mitigation measure of implementing an SPS to bypass series capacitors on the Round Mountain-Table Mountain 500 kV lines #1 and #2, and
- b. Recognize that the recommended reliability mitigation measures as mentioned in Section 2.4.6, have economic implications and should be included in an economic evaluation along with all other proposals for alleviating COI overloads before implementation.

## Conclusions

In Summary, Smart Wires recommends that the CAISO final 2019-2020 TPP Report:

1. Recommend the Smart Wires' proposed solution for the Contra Costa Sub-area contingent upon the results of the 2021 LCR study,
2. Report the cost of the recommended SPS implementation for COI, and
3. Acknowledge in the report that the recommended COI mitigation measures have economic implications and should be compared to the other alternatives submitted in the 2020 – 2021 economic request window before implementation.

Smart Wires recognizes the large amount of work that goes into each TPP cycle and greatly appreciates CAISO's consideration of the comments outlined in this document. We thank you for this opportunity to comment and are ready to provide assistance should the CAISO need additional information about Smart Wires' proposals or comments.