BAMx Comments on the 2019-20 Transmission Planning Process Preliminary Reliability Assessment Results and PTO Request Window Submissions

The Bay Area Municipal Transmission group (BAMx)[1] appreciates the opportunity to comment during the development of the 2019-20 Transmission Plan. The comments and questions below address the material presented at the CAISO Stakeholder meeting on September 25-26, 2019.

PTO Request Window Project Applications

PG&E's Proposed Projects

Wilson-Oro Loma 115kV Line Reconductoring[2]

The scope of PG&E's proposed Wilson-Oro Loma 115kV Line Reconductoring project is to reconductor about 9 miles between Wilson and El Nido substations. The cost estimate provided for the project is $11.3-$22.7 million. The driver for the Wilson-Oro Loma 115kV Line Reconductoring Project are *P2* type contingencies at the Panoche substation that cause the Panoche end of Panoche-Oro Loma circuit to open without a fault. These contingency events cause all of the load normally served by the Wilson-Oro Loma circuit to be served only from the Wilson side and therefore overload the Wilson-Oro Loma 115kV circuit. The *P2* contingencies driving the project are fairly low-probability type of contingencies, so the proposed project is unlikely to provide a significant increase in reliability. Moreover, as identified in the CAISO preliminary assessment[3], the Wilson-Oro Loma 115kV Line Reconductoring project would fail to mitigate the voltage issues at Oro Loma 115kV substation associated with the same *P2* contingencies.

Instead of the Wilson-Oro-Loma 115 kV Line Reconductoring project, BAMx encourages the CAISO to consider evaluating an operating solution to radialize the circuit at Oro Loma 115kV substation during peak times by either splitting the Oro Loma substation or opening either Oro Loma-El Nido or Oro Loma-DFS 115kV segments. This would cause only some load to be automatically picked up following the critical *P2* contingency at Panoche 115kV substation and therefore could prevent the identified overload. Additionally, moving some of the load via distribution ties could also resolve the identified overloads.

Northern Oakland Area Reinforcement Proposal

[1] BAMx consists of City of Palo Alto Utilities and City of Santa Clara, Silicon Valley Power.
[2] PG&E's 2019 Request Window Proposals, September 26, 2019, pp. 8-11.
[3] 2019-2020 ISO Reliability Assessment - Preliminary Study Results for the ***PG&E Greater Fresno*** area, August 15, 2019, Page 15 of 24.

During the September 26th Stakeholder Meeting, PG&E presented its *Northern Oakland Area Reinforcement* Proposal to address the long-term reliability deficiencies in the northern Oakland area. BAMx understands the need to develop a long term plan to serve the Oakland area, but thinks alternatives to the one proposed by PG&E in this year's request window need to be identified and studied prior to approval of the PG&E proposal.

SDG&E's Proposed Projects

SDG&E has proposed three (3) major high voltage transmission upgrades in this TPP cycle. They are a new 230kV Bay Boulevard-Silvergate transmission line, a new 230kV Encina-San Luis Rey #2 transmission line, and new 230kV Phase Shifting Transformers (PSTs) at Suncrest. In order to help the stakeholders better understand the need and drivers for the projects, SDG&E should provide additional information on the identified overloads that the proposed projects are meant to mitigate. SDG&E should also provide additional information including the power flow cases and the year that shows the identified overloads. For instance, it is not clear whether the power flow cases used by SDG&E are the Summer Peak cases or Sensitivity cases. Additionally, as explained in more detail below, in many cases it is hard to identify any correlation between the CAISO's preliminary assessment results and the identified contingency overloads that serve as drivers for some of the SDG&E's Request Window Applications.

SDG&E's Proposed Bay Blvd-Silvergate Transmission Line

The scope of SDG&E's proposed Bay Boulevard-Silvergate Transmission Line is to "*Add a second 230 kV line from Bay Blvd to Silvergate with a minimum rating of 912/1176 MVA to mitigate a new NERC thermal violation*".[4] Per SDG&E's September 26th presentation, the identified driver for the project is a 106% overload on Silvergate-Bay Boulevard 230kV for the loss of TL23071 Sycamore-Penasquitos 230kV. However, CAISO's preliminary assessment results do not identify any *P1* overloads whatsoever on the Silvergate-Bay Boulevard 230kV circuit.[5]

It seems that the only overloads, in the CAISO's preliminary assessment, identified on the Silvergate-Bay Boulevard 230kV circuit are for *P6 (N-1-1)* contingencies and are observed within the sensitivity cases. Therefore, it is unclear under which conditions a *P1* on the Sycamore-Penasquitos (SX-PQ) 230kV circuit would cause an overload on Silvergate-Bay Boulevard (SG-BB) 230kV. BAMx performed an independent power flow analysis using the 2029 SDG&E Summer Peak Case and found that a P1 contingency scenario entailing the loss of the TL23071 (SX-PQ) results in a loading of only 79% on the TL23026 (SG-BB) line.

[4] 2019 SDG&E Grid Assessment Results, CAISO Stakeholder Meeting, September 25-26, 2019, slide #9.
[5] 2019-2020 ISO Reliability Assessment - Preliminary Study Results for the SDG&E area, August 15, 2019, Page 1 of 7.

Therefore, BAMx would request that the CAISO provide additional information on the contingencies driving the need for the project to the stakeholders before the project is approved.

SDG&E's Proposed TL230XX New 230kV Encina-San Luis Rey #2

The scope of SDG&E's proposed Encina-San Luis Rey #2 Circuit is to construct a new third 230kV circuit between Encina and San Luis Rey 230kV stations. The identified driver for the project is "*loss of TL230003 (Encina-San Luis Rey) loads TL23011 (Encina-San Luis-Escondido) to 106%-120% of its rating limit*".[6] SDG&E does not provide any additional information under which study years and scenarios these overloads were observed. Furthermore, CAISO's preliminary results do not show any identified overloads on the Encina-San Luis 230kV circuits for any contingency types. BAMx's independent power flow analysis using the 2029 Summer Peak SDG&E case confirmed the CAISO's findings. Therefore, BAMx would request that the CAISO provide additional information on the contingencies driving the need for the project to the stakeholders before the project is approved.

SDG&E's New 230kV Phase Shifting Transformers (PST) at Suncrest

SDG&E proposes to install new 230kV Phase Shifting Transformers (PSTs) at the Suncrest substation. The primary drivers for the project identified in the SDG&E's September 26th presentation were "reliability and economic issues on the Suncrest path".[7] However, no economic analysis was presented in order to support the claim of economic issues driving the need for the project. Additionally, the *P6 (N-1-1)* overload on the TL23054 and TL23055 230kV lines from Sycamore Canyon to Suncrest could potentially be mitigated by the CAISO's congestion management as well as the existing operating procedure (SDG&E SOP, i.e., GIP2005). It also appears that SDG&E has not fully evaluated potential transmission alternatives, such as preferred resources and energy storage. Very little supporting information has been provided to date in order to justify the capital investment associated with the proposed project. Therefore, BAMx would encourage the CAISO to refrain from approving this project until a more complete evaluation of the transmission alternatives is performed.

Potential Alternatives for Economic LCR Assessment

BAMx appreciates the CAISO's significant efforts on the LCR Reduction study included in the 2018-2019 Transmission Plan. BAMx found these informational studies to be very helpful in reviewing the options to maintain local reliability. We endorse the CAISO's comprehensive approach that not only considers (i) the reliability benefits of competing mitigation solutions including transmission and storage resources, but also assesses (ii) the production benefits and (iii) the local capacity benefits. We request that demand-side options, such as slow demand

[6] 2019 SDG&E Grid Assessment Results, CAISO Stakeholder Meeting, September 25-26, 2019, slide #10.
[7] 2019 SDG&E Grid Assessment Results, CAISO Stakeholder Meeting, September 25-26, 2019, slides #11-14.

response, also be considered in all areas where such measures would address the identified reliability constraints. We also request that the CAISO provide consistent consideration for all LCR reduction alternatives across all LCR areas and subareas (14-17) to be studied this year.

Conclusion

BAMx appreciates the opportunity to comment on the 2019-20 Transmission Plan Reliability Assessment Results and the PTO Request window submissions and acknowledges the significant effort of the CAISO and PTO staffs to develop this material.

If you have any questions concerning these comments, please contact Paulo Apolinario (papolinario@svpower.com or (408) 615-6630).