

BAMx Comments on the CAISO 2020-21 Transmission Planning Process **Draft Study Plan**

The Bay Area Municipal Transmission group (BAMx)¹ appreciates the opportunity to comment on the California Independent System Operator (CAISO) Draft 2020-21 Transmission Planning Process (TPP) Unified Planning Assumption and Study Plan (Study Plan). The comments and questions below address the Study Plan posted on February 21, 2020, and as discussed during the February 28, 2020 stakeholder meeting. We continue to see positive enhancements being made to each year's plan and look forward to continuing to work with the CAISO to continuously improve the planning process.

Similar to what we have observed in the previous planning cycle, there continues to be much uncertainty in the current planning environment. While system loads are forecast to decline and the time of peak demand is shifting, major issues are also being discussed including (1) what is the impact of the purposeful interruption/clearing of transmission lines that leads to the interruption of load (2) State policy to reduce the use of gas-fired resources which can cause early economic retirement, (3) increasing potential for storage development to fulfill a system-wide resource need, and (4) the impacts of efforts in transportation electrification - and these issues are only just starting to come into view. In such a changing environment, maintaining flexibility and careful consideration of long-term investments is critical.

Urgent Need for a Comprehensive Wildfire Impacts Analysis

The California IOUs are utilizing Public Safety Power Shutoff (PSPS) procedures as a preventive measure in order to keep the powerlines from causing additional wildfires. When asked at a California Public Utility Commission (CPUC) meeting in October 2019, PG&E stated it could take ten years before such outages are “really ratcheted down significantly” and therefore are likely to happen throughout the planning horizon. BAMx would urge the CAISO to conduct planning studies on transmission-related PSPS events in advance of the 2020 fire season. We urge the CAISO to include PSPS planning studies in its 2020-2021 transmission planning cycle which provides a well-established process for stakeholder engagement, review and feedback. Although the CAISO indicates they study extreme events as part of their normal planning process, they usually do not share results of these analyses with stakeholders. So those potentially impacted by these extreme events are not sufficiently informed. Any critical infrastructure information used in the studies could also be protected by the CAISO's confidentiality and security arrangements as was done in the CAISO's San Francisco Peninsula Extreme Event Analysis.

A good way to truly understand the full scope of impacts that can result from temporary (?) de-energization of transmission lines is to conduct studies based on likely de-energization scenarios. We understand the IOUs conduct planning studies just before an actual PSPS event to guide their actions. However, “just-in-time” studies are simply reactionary in nature and are ineffective in

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actuating large-scale improvements. While wildfire transmission risk assessment may be non-traditional in the CAISO's TPP, the CAISO is in a unique position to provide the leadership, knowledge and stakeholder process to accomplish this needed work. Coordination and collaboration on studies of this type would have far-reaching benefits and further the State's objective of preparing for and mitigation of the adverse impacts of catastrophic wildfires.

BAMx Supports Evaluating the Storage Potential

With a large amount of energy storage expected to interconnect to the CAISO network within the foreseeable future, it is very important to identify locations where these storage resources will provide the most cost-effective siting by taking into account the reliability needs of the CAISO operated transmission system. The storage projects will require a large amount of capital investment. The simplest ways for the developers to interconnect storage projects may be in the proximity of the existing generation. These locations might not coincide with locations where the storage could provide the most benefits, such as reducing the need for new transmission, LCR reduction, etc. It is critical that, in addition to providing the updated zonal transmission capability estimates, the CAISO needs to play a key role in helping the CPUC and the California Energy Commission (CEC) in identifying appropriate locations and types of storage resources.

BAMx supports the study of storage as a potential LCR reduction mechanism. Through such studies, the CAISO should be able to determine where the local storage challenges are, and how much storage can be sited in certain local areas and sub-areas taking into account any charging restrictions.

BAMx Supports not using the full Capital Cost of Storage when considering it as a Potential Mitigation Option

CAISO notes the resource mix shown in the CPUC base portfolio includes 1,157 MW of 1.3-hour storage and up to 1,000 MW of 4-hour storage. However, the CPUC staff has not mapped the generic storage resources to specific locations for the base portfolio and therefore the CAISO intends to consider these resources as potential mitigation options for reliability needs identified in the TPP.

As recommended by both the CPUC and the CAISO, BAMx supports studying the use of storage as a mitigation measure without including the full capital cost. As reflected in the Commission-provided base portfolio, the Load Serving Entities (LSEs) are expected to procure a very large amount of storage to serve the system resource needs. We assume that at least a part of that procurement will be in local areas and sub-areas. Since the LSEs are expected to bear the cost of such procurement, there is no need to consider its full capital cost while comparing it with other mitigation alternatives. Having said that, BAMx understands that the CAISO should include the incremental costs² associated with the candidate energy storage options.

² One example of the incremental cost is the additional cost incurred for siting the storage in a particular local area versus locating it elsewhere.

BAMx Supports Mapping of Energy Storage in the Sensitivity Portfolios

Identifying the proper storage locations and types of storage could maximize the economic benefits from each storage resource by minimizing the additional network upgrades required to incorporate storage and renewable resources. During the February Stakeholder call the CAISO has notified the stakeholders that the “CPUC staff is in the process of mapping generic storage to specific locations for the sensitivity portfolios.”³ BAMx encourages the CAISO to work with the CPUC staff in order to identify the most optimal storage locations for each sensitivity portfolio.

Verify the Transmission Project Needed to Accommodate OOS Wind

CAISO has indicated that the policy-driven sensitivity portfolio #1 based upon the reference system portfolio in the CPUC 2019-2020 Integrated Resource Planning (IRP) process includes ~600 MW of Out-Of-State (OOS) wind resources.⁴ It is not clear if these wind resources require new transmission or whether such could be accommodated on existing transmission. BAMx requests the CAISO to provide additional information on how these wind resources will be accommodated and modeled as part of the policy-driven sensitivity portfolio #1. We believe the CAISO has correctly indicated that new transmission to accommodate OOS resources should be part of the CPUC IRP process. Please clarify what the CAISO assumptions are with respect to this 600 MW of OOS wind resources.

Identify Maintenance Projects

During the 2019-2020 TPP cycle, the CAISO has identified maintenance projects as mitigation measures for various thermal violations⁵. These maintenance projects do not go through the traditional CAISO approval process; however, it would be beneficial for stakeholders and market participants to be aware of all modifications regardless of whether they resolve an identified network violation. BAMx suggests the CAISO include a single table or other means of identifying all maintenance projects that involve changes to the CAISO operated transmission system.

Conclusion

BAMx appreciates the opportunity to comment on the draft Study Plan. BAMx would also like to acknowledge the significant effort of the CAISO staff in developing the Study Plan to date, as well as the CAISO staff’s willingness to work with the stakeholders in the process of developing the Study Plan. We hope to work with the CAISO staff to continue to improve and enhance the 2020-2021 Transmission Plan.

³ Policy-driven Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2019, p.17.

⁴ Policy-driven Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2019, p.10.

⁵ 2019-2020 ISO Transmission Plan, January 31, 2020, Appendix B-Draft Transmission Plan -Page B-76, Table 2.5-

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