Alameda Municipal Power Comments on the 2017-18 Transmission Planning Process Preliminary Reliability Assessment Results and PTO Request Window Submissions

Alameda Municipal Power (AMP) appreciates the opportunity to comment during the development of the 2017-18 Transmission Plan. The comments and questions below address focus on the Oakland Reliability Proposal (Proposal) presentation made by PG&E at the CAISO Stakeholder meeting on September 21-22, 2017.

Issue Summary

The existing Downtown/West Oakland Area is made up of two sub-areas, each fed by separate 115 kV networks. Each sub-area is primarily fed from Moraga Substation, though with support from Sobrante Substation in the northern sub-area and Eastshore Substation in the South sub-area. The stations served in each of these sub-areas are identified in Table 1. AMP's Cartwright Substation is normally served from PG&E Station C and AMP's Jenny Substation from PG&E Station J, so AMP has load served from each of the sub-areas. AMP also has the ability to transfer load so that all load is temporarily served from either Stations C or J, however this is an unreliable operational state as a single contingency can black out all the service to the island.

Table 1

Sub-area	Northern	Southern
Stations	Stations K, X, D, C, L, Cartwright (AMP) Port of Oakland and Schnitzer Steel)	Stations L, J, Edes, Grant, Jenny(AMP).

To meet the Planning Standards, the northern sub-area depends on aging local generation and Special Protection Systems (SPSs) that drop load. The southern area, while not dependent on local generation, does also have a SPS to drop load. For the northern sub-area SPSs, AMP load is the *only* load at risk of being dropped. For the southern sub-area, AMP was initially the only load to be dropped, though this SPS was recently modified to add three PG&E loads such that each of the four loads would be rotated into the SPS.

The CAISO Planning Standards were recently revised to no longer allow the long-term reliance on load dropping to meet the Planning Standards in high density urban areas such as Oakland. Also, both the Dynegy CTs and NCPA CTs will have reached their 40-year planning life within the TPP planning horizon.

AMP has experienced a number of operating issues with the existing SPS and load transfer arrangements that have reduced the reliability of service specifically to the AMP load. AMP

anticipates that this expected loss of local generation will further adversely impact the quality of service that AMP receives and has repeatedly requested that a long-term transmission plan be developed to reliably serve the East Bay area.

In the 2011-12 Transmission Planning cycle, the CAISO approved PG&E's proposed East Shore - Oakland J 115 kV Reconductoring Project with a forecast completion date of May 2015. With this upgrade, the CAISO and PG&E assert that the southern area will comply with the Planning Standards without reliance on a load dropping SPS. This project has been repeatedly delayed and is currently forecasted to be complete in 2021.

PG&E's Oakland Reliability Proposal

At the September 22 Stakeholder Meeting, PG&E presented its Oakland Reliability Proposal to address the reliability deficiencies in the northern sub-area. The Proposal includes limited transmission upgrades (circuit breaker additions in Moraga and Station X substations and rerating the Moraga-Station K 115 kV circuits). The remainder of the reliability need is to be met by Distributed Energy Resources (DERs) such as additional Energy Efficiency (EE), Distributed Generation (DG) and Energy Storage (ES) as well as post-contingency transferring of AMP load from Station C to Station J.

AMP's Concern

While AMP generally supports the consideration of using local resources to help mitigate the CAISO and PG&E's rapidly increasing Transmission Access Charge costs, AMP has many concerns with the Proposal. Foremost, the PG&E Proposal disadvantages municipal wholesale customers in Alameda and at the Port of Oakland from a reliability perspective, relative to PG&E's own retail customers.

1. AMP would carry a disproportionate share (100%) of the proposed operational load transfers. Such transfers place the AMP load at risk during the initial transfer process, following the transfer by having AMP reduced to a single source, and during the transfer to return the service to its normal configuration. This initial transfer must be done with no warning and completed with 30 minutes.[1] AMP is not aware of any other transmission planning effort that relies on a customer transferring load in the middle of contingency as meeting transmission reliability planning criteria. While PG&E and AMP have a working draft of an operating agreement to allow for such actions to take place, the agreement was not created in the context of addressing transmission planning requirements, nor has PG&E created procedures as to how this load transfer would be accomplished during an emergency or practiced how this would be accomplished.

[1] Presumably this 30 minute window also includes problem identification by PG&E and the CAISO, solution identification from the portfolio of options proposed by PG&E, communication with AMP, switching by AMP, and verification by PG&E and CAISO. Therefore the time available to AMP from time of initial notification to perform the switching is expected to be much less than 30 minutes.

2. There has been no assurance that either the proposed project or the East Shore - Oakland J 115 kV Reconductoring Project will result in the removal of the SPS equipment. Discussions with PG&E have suggested that such equipment may remain in place as a "safety net." This concerns AMP in that the mere presence of a SPS requires regular testing and maintenance, which historically has created reliability issues experienced primarily by AMP. Secondly, the need to maintain such equipment as a safety net indicates a lack of confidence in the veracity of the Proposal. Again, these SPSs disproportionate impact the service to AMP and under the CAISO Planning Standards should be removed.
3. The current proposal lacks critical operational detail as to how the Proposal would be implemented. While PG&E proposes a portfolio of options to reduce the critical facility loading, AMP is concerned that, as the most rapid and easily implemented solution, the tendency will be to call on load transfers first. This again would place disproportionate burden on AMP to mitigate this PG&E transmission reliability deficiency.
4. AMP lacks the operational visibility into the PG&E system to understand when it may be at risk for operator action or even at risk of load interruption. This lack of situational awareness makes AMP unnecessarily exposed to the need for sudden action and endangers the efficacy of the Proposal's dependence on AMP load transfers.
5. The Proposal lacks mandatory quarterly reporting on the performance of all non-traditional Proposal components. Such reporting should include, but not limited to:
    a. Specific identification of the preferred set of resources that will be used to implement the Proposal and attestations that the supporting contracts have been executed
    b. Completion status of operational procedures associated with each preferred resource needed to implement the Proposal
    c. Performance reporting
        i. The frequency of preferred resource use to address transmission contingencies serving the sub-area.
        ii. Numbers of successful and failed deployments
        iii. Hours and magnitude of emergency overload conditions incurred
        iv. Customer load hours interrupted due to failures of preferred resources or failures of operational practices developed as part of the Proposal. Note: customer loads should be calculated as the number of customers within Alameda, the Port of Oakland and Schnitzer Steel.
    d. Procurement status of the front of the meter preferred resources that will be used in the Proposal
    e. Development of a project schedule that identifies the removal of all SPSs associated with the sub-areas, along with an attestation that the SPSs have been removed

f. Development of a critical path back up plan that identifies how design, permitting and construction will be accomplished by 2022 in the event the experimental Proposal is terminated based on preferred resource cost (making the project uneconomic) or unavailability, thus rendering the Proposal infeasible.

In addition to the above concerns on the reliance on AMP load transfers and AMP load dropping, AMP has additional concerns such as:

1. Lack of a coherent publically available substation design criteria. NCPA has filed an order 890 complaint against PG&E because some 60% of PG&E's transmission projects, where costs are recovered through the CAISO TAC charge, were not undergoing any type of external stakeholder review. While efforts to develop a transmission planning process for these projects is still in development, AMP understands that NCPA staff remain concerned that substation design criteria for rehabilitation projects being performed outside of the CAISO TPP are significantly upgraded over what PG&E has proposed in this project, providing greater reliability and resiliency for PG&E's retail customers as opposed to what has been proposed here for PG&E's municipal wholesale customers.
2. AMP is concerned that the load forecast driving the quantity of Preferred Resources procured is understated. PG&E has indicated that it expects the load served from Stations L and C to peak in 2022 and decline thereafter. Considering only the non-PG&E load within this sub-area, one needs to look no further than vast amount of undeveloped ex-military property, or to the types of energy uses/transportation electrification potential at the Port of Oakland to be concerned that the PG&E load forecast has not fully considered the load potential of these non-PG&E loads.
3. The Project's preferred portfolio contains extremely ambitious DG and EE targets. The preferred portfolio relies on base case DG and EE increases of approximately 25-30 MW installed during the next 5-year period *over and above* the targets built into the base load forecast. In addition, with the launch of the Alameda County CCA, East Bay Clean Energy, it is unclear who will have ultimate responsibility to achieve these results and as such PG&E should not be making commitments at this time.

AMP Position on the PG&E's Oakland Reliability Proposal

While AMP generally encourages efforts to mitigate the rising pressure on the TAC, AMP questions the wisdom of PG&E's initial effort of such an experimental program in a critical area of high visibility. Because of the above-mentioned deficiencies and disproportionate reliability burden that would be placed on AMP compared to other customers in the area, AMP cannot support the Oakland Clean Energy Proposal as currently described with all of the attendant uncertainty surrounding both the composition of the preferred resources and operational procedures that will be required to make the project work.

AMP recommends that the CAISO reject this project in favor of a project that will provide appropriate Transmission Service reliability and resiliency levels to the municipal wholesale customers in the Downtown/West Oakland Area.

If you have any questions concerning these comments, please contact
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