

BAMx Comments on the 2016-17 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 2016-17 Transmission Plan. The comments and questions below address the material presented at the CAISO Stakeholder meeting on September 21-22, 2016.

CAISO Reliability Assessment Results

BAMx continues to be very interested in the studies of overlapping outages on the Tesla-Metcalf-Moss Landing-Los Banos 500 kV loop. The potential mitigation identified is to increase the dispatch generation in the Moss Landing/San Jose area. Such dependence on local generation, some of which is market based generation currently without a long term Power Purchase Agreements (PPA), should be considered in the Economic Early Retirement of Gas Fired Generation Special Study. BAMx recommends that the amount of local generation required to maintain local reliability be coordinated with the CPUC Long Term Procurement Process and that both the permit and commercial status of the Moss Landing units be monitored closely. The outcome of the local procurement activities and the OTC compliance progress then must inform future transmission planning cycles. Consideration should be given for developing contingency plans, including execution of PPAs, in the event generation upon which the system depends for local reliability announces that it may potentially exit the market.

It is encouraging to see that the only transmission issues attributable to the future retirement of the Diablo Canyon Nuclear Generating Station are high voltages in the Diablo Canyon area. Though it was not discussed during the stakeholder meeting, BAMx notes that there are 500 kV and 230 kV reactors at Gates and Midway substations. These reactors were an important operational tool in managing the 500 kV voltages in the southern system when the Pacific AC Intertie was built in the late 1960s until Diablo Canyon became operational in 1985. The assessment should make full utilization of the available reactive resources in the area. An additional potential mitigation may be to disconnect the Diablo-Midway No. 2 500 kV circuit, subject to additional study of the resultant system performance. If a circuit can be removed, it could potentially be repurposed as a 230 kV circuit to lower the cost of the Midway-Andrew Project, which includes a new 230 kV circuit from Midway to the coastal area for which the estimated project cost has escalated above \$500 million.

PTO Request Window Project Applications

¹ BAMx consists of City of Palo Alto Utilities and City of Santa Clara, Silicon Valley Power.

PG&E Request Window Submission: Placer 115 kV Area Voltage Support

PG&E has proposed a +100/-200 MVAR Static VAR Compensator (SVC) to be installed at Placer 115 kV substation to address high voltages during minimum load periods and low voltages during low hydroelectric generation conditions. Further justification is needed as to why a less expensive mechanically switched device would not adequately address the voltage issues at lower cost.

PG&E Request Window Submission: Caltrain Electrification Project

In response to an interconnection request for two Caltrain Traction Power stations, PG&E has proposed interconnection and substation rebuilds for East Grand 115 kV and FMC 115 kV. In both cases, PG&E has proposed that the station be rebuilt in a breaker-and-a-half (BAAH) configuration. With the twin 115 kV circuits from the nearby Caltrain stations, the value of the extra redundancy and expense of a BAAH design is unclear and appears to build redundancy on top of redundancy. Further justification is needed to support the costlier design for these lower voltage facilities. Also to what extent are Network Upgrades associated with the second service be classified as Special Facilities under PG&E Electric Rule 2? The proposed use of Gas Insulated Switchgear (GIS) at the FMC also needs further explanation, especially in light of the potential to utilize an alternative breaker arrangement.

SCE Request Window Submission: Tehachapi and Big Creek Corridor Area

Both this and last year's assessment investigated potential reliability issues in the Big Creek Corridor associated with low hydroelectric generation in the Big Creek system. In the last TPP cycle, SCE proposed a set of four Thyristor Controlled Series Reactors (TCSRs), one on each of the 230 kV lines to optimize the flow within the conductor ratings, with an estimated cost of \$135 million. In this cycle, SCE has given notice that they will re-conductor the lines to resolve G.O. 95 clearance safety issues. While the re-conducting will not replace all the equipment necessary to increase the capacity of the lines, an incremental investment of \$6 million will allow an increase of 62%. While BAMx supports maintaining the safety of the transmission system, we are concerned that SCE had not identified this safety issue prior to proposing the TCSRs in the previous planning cycle.

We note from SCE's 2018 General Rate Case application at the CPUC that SCE plans to spend over \$240 million under their Transmission Line Rating Remediation (TLRR) to address clearance issues on the 230 kV lines north of Magunden Substation. At such a high capital cost this remediation, BAMx questions whether there may be lower cost alternatives and requests the CAISO to consider the total TAC impact of any proposed solutions to the issues in the Big Creek Corridor.

SDG&E Request Window Submission: Add 2nd Sycamore Canyon 230/138 kV Transformer Bank

SDG&E proposes to install a second 2nd Sycamore Canyon 230/138 kV Transformer Bank to address alleged 2017 Category P0 and 2018 Category P1 overloads. However, the preliminary Reliability Assessment Results for the SDG&E area do not show any P0 or P1 overloads on this transformer and no concerns were identified for this transformer in the CAISO presentation. Given these discrepancies and the 812 MW reduction in the load forecast for the San Diego area from the last planning cycle, this project should not be approved.

SDG&E Request Window Submission: Old Town -Mission 230 kV Lines Reconductoring

This project proposes to reconductor the Mission-Old Town and Mission-Old Town Tap 230 kV lines to address N-1-1 overloads in the event of a delay in the Sycamore-Penasquitos 230 kV line. The preliminary Reliability Assessment Results for the SDG&E area shows a modest overload of less than 2% for this contingency that no longer appears once the Second Miguel-Bay Blvd 230 kV line is in service.² The recommendation in the assessment of relying on short term operating procedures is a much more reasonable mitigation for a small, short-term overload that would only occur under low probability events.

SDG&E Request Window Submission: New Pala 230 kV Substation Loop-In

SDG&E proposes to install a 230/70 substation to address a G-2 event coupled with a N-1-1 for an estimated cost of \$20 million to \$30 million. This represents an extreme event that is significantly beyond the level of service required in the Planning Standards. The generation, Orange Grove Energy Center, is a two unit, 96 MW plant that came on-line in 2010. SDG&E has not presented any information concerning the risk of the plant being unavailable for operation and SDG&E's justification in the stakeholder meeting was an assertion that it is not SDG&E practice to rely on local generation. BAMx questions whether such an assertion is reasonable in that reliability to the entire San Diego County is dependent on local generation.³ Without significant further support as to why SDG&E cannot rely on these local units for both local and SDG&E system support, this project should not be approved.

SDG&E Request Window Submission: Renewable Energy Express

This SDG&E project would convert a portion of the 500 kV Southwest Powerlink (SWPL) to a three-terminal HVDC system at a project cost of \$1 billion. SDG&E's objective of the project would be to reduce congestion, increase the SDG&E import capability and reduce SDG&E Local Capacity Resource (LCR) requirement. No economic analysis has been presented to support the value of reducing the local generation requirement and nothing of this scope has been identified

² The Second Miguel-Bay Blvd 230 kV line was approved in the 2015-2016 TPP in part to relieve the loading on these very lines that SDG&E now proposes to reconductor. CEC Staff's presentation of its Local Capacity Annual Assessment Tool (LCAAT) indicated a long-term need for all the generation in the San Diego area.

as needed for reliability mitigation in the preliminary Reliability Assessment Results for the SDG&E area. In fact, we would have concerns that importing 3,000 MW over this project would create new reliability issues for P7 contingencies involving the bipole DC line outage in both the San Diego and SCE areas. Such a project is more properly considered in the CAISO Order 1000 process where the project can be considered along with other alternatives as to the benefits of increasing the CAISO import capability or considered by way of the CPUC portfolios for the 50% RPS, when they become available.

SDG&E Request Window Submission: TL23022 & TL23023 Reconductor (Mission -Miguel)

The SDG&E proposal to reconductor the two Mission-Miguel 230 kV circuits was submitted in a prior planning cycle and presented again in this planning cycle. In support of this proposal, SDG&E cites a number of alleged NERC Planning Standard violations. However, none of these violations are supported by the preliminary Reliability Assessment Results by the CAISO for the SDG&E area. Given these discrepancies and the 812 MW reduction in the load forecast for the San Diego area from the last planning cycle, this project has not been justified and therefore should not be approved.

SDG&E Request Window Submission: New Miramar GT 230 kV Substation Loop-In

This project proposal is to install a new 230/69 kV substation to eliminate a Local Capacity Reliability requirement. While SDG&E identifies that the maintenance cost on the CTs is \$1 million/year, there is no support for these costs nor do they appear to be sufficient to justify a \$28 million capital expenditure for electric transmission improvements. Furthermore, given the presentation of the CEC LCAAT, it is unclear whether these units would be shut down in absence of a LCR requirement. Therefore, this project should not be approved without a clearer demonstration that the economic benefits exceed the total project cost.

Special Studies

Review of Approved Projects

The increasing CAISO TAC rates continue to be an on-going concern. Therefore, BAMx is highly encouraged by the CAISO's efforts to review previously approved projects. While the significantly reduced load forecast is a major driver of this effort, the review should consider a broad range of drivers and not be limited to load forecast impacts. For example, re-assessment of currently approved transmission projects should also focus on those projects that are designed to provide a level of reliability that exceeds Federal, Regional and CAISO requirements in non-urban areas. In such cases, before the project moves forward there should be quantified affirmation that the reliability benefits exceed the project costs.

Conclusion

BAMx appreciates the opportunity to comment on the 2016-17 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
Joyce Kinnear (408-615-6656 and JKinnear@SantaClaraCA.gov)