



2017-18 Transmission Planning Process – Draft Plan Comments

Submitted by	Company	Date Submitted
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PG&E appreciates the opportunity to provide comments in response to the Draft 2017-2018 CAISO Transmission Plan Report (Draft Plan) posted on February 1, 2018 and discussed at the stakeholder meeting on February 8, 2018. PG&E commends the CAISO Staff for its hard work in completing this report. PG&E recognizes the substantial efforts in developing the many components of the 2017-2018 Transmission Plan particularly around the continued review of previously approved projects, evaluation of new project proposals and economic studies. Below are several comments that address specific components in the Draft Plan.

PG&E Local Areas (Chapter 2.5)

Humboldt

Bridgeville- Garberville #2 115 kV line -- In reviewing the scope identified by the CAISO, the cost presented does not include a portion for “reconductoring 3.81 miles of the Humboldt – Rio Dell Jct line from Tower 11/4 –to- 15/5 (Eel River Jct to Newburg)”. Accounting for this additional element, the cost for the revised scope should be updated to \$72M with an expected in-service date of 2025. With such high cost and timeline for this revised alternative as well as the original project, PG&E recommends a further and more comprehensive evaluation of this project to identify other, potentially more cost-effective options to comprehensively mitigate the reliability issues in this local area.

Central Valley Area

Vaca-Davis Voltage conversion Project – PG&E requests CAISO to please specify what 115 kV lines should be re-rated in the Davis area as a result of this project being re-scoped. In addition, due to the potential need for permits/agency approvals, PG&E expects an in-service date of 2023.

Greater Bay Area

Morgan Hill Reinforcement Project -- PG&E agrees with the re-scoping of this project to rebuild Metcalf-Green Valley 115 kV into the Green Valley - Morgan Hill 115 kV Line. However, this project may trigger the need for a Permit to Construct from the CPUC. Should a PTC be required, PG&E will not be able to meet a May 2021 in-service date. An in-service date of May 2023 would be expected.

Oakland Clean Energy Initiative (OCEI) -- PG&E appreciates the CAISO’s recommendation to approve PG&E’s OCEI proposal, including transmission upgrades, in-front-of-the-meter energy storage, and procurement of



additional preferred resources via a competitive solicitation. PG&E believes this innovative portfolio solution will cost-effectively address local reliability needs in the Oakland area and should, once all solutions are in place, allow for the termination of the Reliability Must-Run (RMR) Agreement and orderly retirement of the aging Dynege-Vistra Oakland Power Plant.

PG&E continues to review with Alameda Municipal Power (AMP) and the Northern California Power Agency (NCPA) the Operating Agreement (OA) that allows for use of the Alameda load transfer for meeting local area contingencies. We look forward to addressing AMP and NCPA's needs in a mutually agreeable fashion.

SVP's Request Window Submittal for NRS-Scott No. 2 115 kV Line Reconductor -- PG&E agrees with the reliability need for the NRS-Scott No. 2 115 kV Line Reconductoring, but notes that its inclusion for approval in the Plan should not predetermine the Participating Transmission Owner's cost responsibility for the project. The party responsible for the costs of the project is in dispute and depends upon the resolution of issues in an active FERC proceeding (Docket No. ER17-1735-000, ER17-1750-000).

In October, Silicon Valley Power (SVP) submitted a request to the CAISO that proposed reconductoring the NRS-Scott No. 2 115 kV Line. Their submittal proposed expanding the scope of the NRS-Scott No. 1 Line Reconductoring Project to also include the No. 2 Line, since several outage contingencies studied in the 2017-2018 Transmission Planning Process assessment showed overloads on the No. 2 Line.

The CAISO's Appendix B discusses their assessment results on the NRS-Scott No. 2 Line: "Category P3 contingency overloads were identified on the NRS-Scott #2 115 kV line in all summer peak cases and sensitivity studies."

PG&E's system assessment studies also showed overloads on the NRS-Scott No. 2 Line, and PG&E agrees that there is a need to reconductor the No. 2 Line as recommended by SVP in their request window submittal. The reason why the 2017-2018 assessment studies are now showing potential overloads on the No. 2 Line in all summer peak cases is that this year's assessment base cases modeled SVP's current project to upgrade equipment at NRS, which will allow bus-sectionalizing circuit breaker 392 at NRS to operate in a normally closed position. With circuit breaker 392 normally closed, the loadings on the No. 2 Line increase, and overloads for several contingencies now appear.

Base cases in past assessment studies did not model this current project. Circuit breaker 392 was modeled as normally open, which results in significantly lower loadings on the No. 2 Line, and no overloads show up for these same contingencies.

Greater Fresno Area

Oro Loma 70 kV Area Reinforcement -- It appears there is an error on the "current estimated cost" for original scope in the Draft Plan. PG&E requests that CAISO please update the estimate to \$167M. In addition, due to the potential need for permits/agency approvals, PG&E expects an in-service date of 2024.

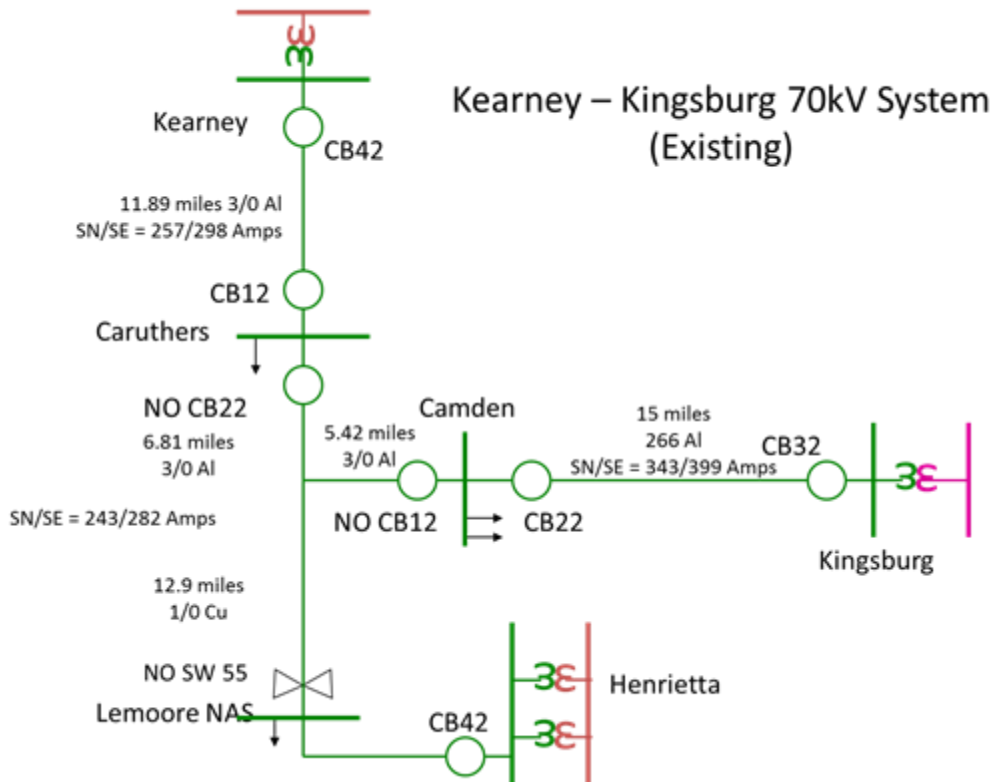
Wilson 115 kV Area Reinforcement -- Please clarify the "current estimated cost" for the original scope shown for this project in the Draft Plan to reflect the amount in the stakeholder presentation which is \$91M.



Kearney - Caruthers 70 kV Line Reconductor -- PG&E recommends changing the recommendation on the Kearney - Caruthers 70 kV Line Reconductoring project to “Proceed as originally approved”. Although the 2017 Re-assessment study did not identify overloads on this line, real time normal overloads have been observed in the years 2016 and 2017 (three instances in 2016 and two instances in 2017). These overloads were from Kearney to Caruthers during summer conditions and under normal system topology which means Caruthers CB 22 is closed to energize the Caruthers – Lemoore NAS – Camden 70 kV line with open points at Camden CB 12 and Lemoore NAS SW 55 (see the single line diagram below). Under this normal configuration the Kearney – Caruthers 70 kV line only serves the load at Caruthers substation. This potential normal loading condition is a limitation in real time operations which puts load at risk and it does not allow any operation flexibility during peak demand conditions for operators particularly if load at Camden or Lemoore also needs to be served during outage or clearance conditions.

In addition to the continuous potential for normal overloads, PG&E has a contractual obligation to serve customer load at Lemoore NAS from the Kearney – Caruthers line as an alternate feed whenever the primary feed from Henrietta is not available. In order to fulfill this contractual obligation, the Kearney–Caruthers 70 kV line needs to be upgraded.

Given the above real time normal overload and operational issues, as well as the contractual obligation, PG&E recommends proceeding with the original scope of the Kearney - Caruthers 70 kV Line Reconductoring project and requests CAISO to change the status to “Proceed” in the final Transmission Plan.





Kern Area

Midway-Temblor 115 kV Line Reconductor and Voltage Support – PG&E requests CAISO to please update the in-service date for this project from 2019 to 2022.

Central Coast and Los Padres Area

PG&E urges the CAISO to complete its evaluation of the projects in this area during this planning cycle in order for these projects to continue moving forward and to avoid further delays, specifically:

Midway-Andrew Project -- The reliability constraints in the area will persist until the project is placed into service. Therefore, PG&E recommends restarting the project in 2018, but with a revised scope that includes installation of a new 230/115 kV substation “similar to the Andrews Substation in the original scope”. The new substation could be located on PG&E-owned property near the repurposed DCPD-Midway 500 kV line corridor, as well as near the Morro Bay-Mesa 230 kV Lines. This project scope will minimize new transmission line installation and focus on reconductoring existing lines. This solution would avoid the cost and schedule delays associated with permitting and constructing new transmission lines associated with the scope option to upgrade the Mesa Substation.

The project hold/delay PG&E has already experienced in 2017 has pushed the forecasted in-service date from June 2025 to December 2025. Delaying the start of the project another year will result in a further delay of the in-service date to December 2027 (assumes a March 2019 restart). By delaying the start of the project another year, the Los Padres southern transmission area will remain vulnerable to the reliability constraints mentioned in the Draft Plan.

If the CAISO approves the revised scope in the 2017/2018 TPP the project could avoid the schedule delays associated with permitting the project.

In addition, starting the revised scope now will save an estimated \$12.6M, \$5M in project work that would have to be re-done and another \$7.6M in AFUDC incurred by the project hold and permitting durations. In 2017, the project incurred AFUDC charges of \$840,000. In 2018, the AFUDC is \$1.7M, with the remainder of \$5.06 realized in the two-year delay of the in-service date. The cost of price escalation due to another year on hold has not been determined but will add to the overall costs.

Finally, the range of the current cost estimate in the TPP shows \$215M to \$215M, this should indicate \$205M to \$215M. The addition of the \$12.6M discussed above would bring the new project total to \$218M to \$228M.

Diablo Canyon Voltage Support Project -- With the planned retirement of Diablo Canyon Power Plant (DCPP), the 230 kV switchyard at DCPP is expected to be removed after the units retire. PG&E has recommended moving the new SVC installation location from DCPP 230 kV switchyard to Mesa 230 kV. Locating the SVC at Mesa 230 kV is as effective in providing support to Diablo Canyon 230 kV voltage requirements and from a long term perspective, locating the SVC at Mesa Substation also enables better local area voltage control and regulation. PG&E requests CAISO to approve the new location for this voltage support project.



California High Speed Train Project Load Interconnection

PG&E thanks the CAISO for its review of this load interconnection which affects a large area in the PG&E system. In regards to the CAISO's recommendation of changing the Point of Interconnection (POI) of CHSR Site 4 from Spring Substation to Morgan Hills substation, PG&E would like to clarify that Spring Substation was not the proposed POI for Site 4. The proposal for CHSR Site 4 was to connect into Spring – Llagas 115 kV Line (currently known as Morgan Hills – Llagas 115 kV Line) through a new two bay BAAH switching station. The only non-material change needed in the transmission plan is to update the name of the line being looped into CHSR Site 4 switching station to Morgan Hills – Llagas 115 kV Line. The CHSR interconnection has no impact on the Morgan Hill Reinforcement project and its revised scope.

Economic Driven Projects (Chapter 4)

South Bay –Moss Landing Sub-area Local Capacity Requirements -- PG&E agrees with the CAISO analysis and recommendations in the Economic Section of the Draft Plan with regards to the South Bay-Moss Landing Sub-area Local Capacity Requirements. PG&E agrees that the implementation of the various network upgrades discussed, which include facility re-rates and new economic projects, will help to substantially reduce local capacity needs in the South Bay-Moss Landing Sub-Area. Once approved, PG&E will move expeditiously to implement these projects and will keep CAISO apprised of the progress.