October 8, 2020

Silicon Valley Power Comments on the 2020-2021 Transmission Planning Process Preliminary Reliability Assessment Results and PTO Request Window Submissions

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The City of Santa Clara *dba* Silicon Valley Power (SVP) appreciates the opportunity to comment during the development of the 2020-2021 Transmission Plan. SVP has reviewed the results of the CAISO reliability assessment for the SVP/San Jose areas and noted the lack of any mitigations suggested by the CAISO and the lack of Request Window proposals by PG&E[1] for this particular area. The CAISO assessment shows a P5 overload on the Los Esteros-Silicon Switching Station 230 kV line as early as 2025 using the baseline scenario.[2] We also note that the CAISO assessment shows a P1 loading of 100% on the Los Esteros-Nortech 115 kV Line with the loss of SSS-NRS 230 kV under the baseline scenario.[3] In addition, if we consider the outage of SVP's internal DVR generation, i.e., a P3 contingency, it would result in a significant overload on the Los Esteros-Nortech 115 kV Line. Similarly, the CAISO has identified "Continue to Monitor Future Load Forecast" or "Sensitivity only" as mitigation measures for several baseline and SVP high load sensitivity scenario overloads. However, such solutions are not appropriate or adequate for serving the dramatically growing SVP loads.

SVP believes some long-term solutions should be developed now for the area. Past history shows it often takes significant time to complete approved projects. In SVP's comments on the 2020-2021 TPP Study Plan, dated February 28, 2020, we provided a table identifying examples of PG&E

[1] PG&E's 2020 Request Window Proposals, September 24, 2020, CAISO 2020-2021 Transmission Planning Process.
[2] 2010-2021 ISO Reliability Assessment - Preliminary Study Results for the PG&E Greater Bay area, August 14, 2020, Page 4 of 22, and San Jose Division –Results Summary, Greater Bay Area Preliminary Reliability Assessment Results, Abhishek Singh, 2020-21 Transmission Planning Process Stakeholder Meeting, September 23-24, 2020, Page 13.
[3] 2010-2021 ISO Reliability Assessment - Preliminary Study Results for the PG&E Greater Bay area, August 14, 2020, Page 4 of 22, and San Jose Division –Results Summary, Greater Bay Area Preliminary Reliability Assessment Results, Abhishek Singh, 2020-21 Transmission Planning Process Stakeholder Meeting, September 23-24, 2020, Page 13.

projects with long implementation lead times in the range of 6 to 15 years. We believe it is important to timely develop and approve a plan to relieve the overloads delineated above.

The number of overloads increases substantially and begin even sooner in the sensitivity cases. SVP believes that the results of the SVP High Load sensitivity case should be thoroughly considered in developing a plan of service for the area. SVP load growth projections are primarily driven by large scale data center block loads that do not follow the CEC load models. SVP is concerned with the adopted CEC forecast not accurately representing SVP's load growth. SVP's load growth includes CEC approved small generator exemptions granted to hyper-scale data centers in SVP's service territory. These new data centers are in construction and will be coming online between 2021 and 2025 with new loads totaling to more than 700MW as shown in Table 1 below. Note that the adopted CEC 1-in-10 peak load for SVP in the year 2025 is 672MW, while SVP's actual 2020 peak load is 592MW, year-to-date. SVP is currently working with the CEC's Energy Assessments Division on its demand forecast process to ensure that the CEC's forecast accurately captures future demand growth in the SVP area.

Table 1: New SVP Data Center Loads: 2021-2025

	Substation	Substation Status	Transmission Voltage	Project Status	CEC (small power plant exception) Permitted	Requested Capacity (MW)	Permitted Capacity (MW)	Service Date
1	Mathew	Existing	60kV	In Construction	N/A	47	50	Q1-21
2	Fairview Bank 3	Existing	60kV	In Construction	N/A	30	30	Q2-21
3	Parker Bank 3	Existing	60kV	In Construction	Yes	99	99	Q4-21
4	Oaks Jct	New	60kV	In Construction	N/A	27	27	Q1-22
5	San Tomas Jct	New	60kV	In Construction	Yes	99	99	Q3-22
6	Memorex Jct	New	60kV	Planning	-	99	90	Q2-23
7	Stender Way Jct	New	60kV	Design	N/A	48	48	Q1-23
8	Freedom Circle Jct	New	60kV	Planning	Yes	49	99	Q2-23
9	Laurelwood	New	60kV	Planning	Yes	49	99	Q1-23
10	Martin Ave Jct	New	60kV	Planning	@ CEC	125	96.5	Q2-23
11	Pacific	New	60kV	Study	-	99	0	
12	Bowers Ave Jct	New	60kV	Study	-	99	0	
					Sum	**870**	**737.5**	

In summary, SVP believes there is a strong potential to exceed the forecast shown not only in the baseline scenario, but also in the SVP High Load scenario for the 2020-2021 TPP. The necessity to plan for projects to alleviate future overloads projected in the base cases and sensitivity cases is critical given the timing of these new loads. SVP is concerned that even if CAISO starts to develop mitigation plans to mitigate the above-mentioned overloads on the current planning cycle, the required transmission upgrades may not be built in time to reliably serve the expected future loads in the Santa Clara/San Jose load area. Since any reinforcement of the transmission in the SVP/San Jose area will probably take significant time to construct, it is critical for CAISO and PG&E to develop mitigation plans in the current planning cycle.

SVP appreciates the opportunity to comment on the 2020-2021 Transmission Plan Reliability Assessment Results and acknowledges the significant effort of the CAISO and PG&E staffs to develop this material.

If you have any questions concerning these comments, please contact Albert Saenz at ASAENZ@santaclaraca.gov.