

**CAISO 2015-2016 TPP
Draft Study Plan February 23, 2015 Stakeholder Meeting
Stakeholder Comments**

Submitted by	Company	Date Submitted
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TGP appreciates the opportunity to comment on CAISO's 2015-2016 TPP Draft Study Plan Stakeholder Meeting held February 23, 2015. We look forward to working with the CAISO staff and provide any additional data required to support the CAISO TPP studies, including path rating studies.

Section 8. Economic Planning Study

TGP requests the CAISO to include the Bishop Area Reconfiguration in the 2015-2016 TPP study cycle.

Bishop Area Reconfiguration Study

The transmission system in the Bishop, CA area within Southern California Edison's ("SCE") system has historically been subject to local congestion, voltage instability concerns, and operating conditions with very high system voltages. SCE manages these issues today via one or more RAS schemes that drop local generation to operate the system in a safe and reliable condition. Further, these local issues have prevented integration of even modest levels of new renewable generation.

TGP, through its affiliate owns and operates the 212-mile long 230 kV radial Dixie Valley generator tie-line ("DV Line") that provides the interconnection between TGP's 60 (MW) small power production geothermal qualifying facility, located in Churchill County, Nevada, and SCE's Control Substation, located near Bishop, CA. Along its mostly north-south path, the DV Line crosses NV Energy's ("NVE") 230 kV Austin-Carson Lake transmission line ("ACL Line") approximately 35 miles ESE of Fallon, NV and two lines run parallel for 15 miles.

The proposed Bishop Area Reconfiguration, detailed below, provides several systems benefits:

Eliminates Local Congestion –

The new interchange substation allows a controlled new outlet for local generation in the Bishop area and provides a means to operate the system reliably without curtailing local generation, most of which are renewable and contribute to state RPS goals. Further, the upgrades allow the local generation to operate without curtailment during periods of extended maintenance outages on the SCE transmission system.

Mitigates Voltage Issues –

The reconfigured system mitigates the voltage instability problem under contingency conditions and does so without the need to drop local generation. In addition, the historical high operating voltages in SCE's local transmission would be addressed and have a positive impact on the life of existing transmission assets.

Enables New Renewables –

The reconfigured system opens transmission capacity in the local area enabling new renewable generation, both base load and intermittent. Further, if higher new local renewable resources are desired, the upgrade enables further expansion of transmission capacity via optimized use of existing SCE’s transmission easements at a much lower cost than otherwise could be implemented today.

Provides Alternate Load Service Path –

The reconfigured system provides an alternate path to serve load in the Bishop area and enables the opportunity, if needed, to revamp the ageing existing transmission and also supports increasing the existing system voltage (from 115 kV to 230 kV) while using SCE’s existing transmission easements.

TGP proposes to reconfigure the system to Loop-In the DV and ACL Lines and build a new CAISO-NVE interchange substation. The substation would include a 100 MVA phase shifter to control the flow between CAISO and NVE. The radial DV Line would be split in two: a 51-mile radial gen-tie portion that connects generator to the CAISO bus at the new substation and a 161-mile transmission portion that connects the new substation to SCE’s Control substation.

TGP’s analysis indicates that the proposed upgrade, if approved in the 2015-2016 TPP cycle, can be completed by the summer of 2019 with potential for schedule advancement, if needed, with budget estimate of under \$18 million, including new redundant communications facilities.

