



Will Speer
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Neil Millar
Executive Director, Infrastructure Development
California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630

RE: TL23027 and TL23028 Smart Wires Power Guardian Proposed Solution

Dear Neil:

Through an off-cycle California Independent System Operator (CAISO) Transmission Planning Process (TPP) review during the first quarter of 2017, San Diego Gas and Electric (SDG&E) and CAISO acknowledged potential adverse power flows on either one of SDG&E's 230 kV transmission lines from Mission to Old Town Substation (TL23027) and Mission to Old Town to Silvergate Substation (TL23028). These potential adverse power flows are anticipated to occur on one transmission line for the outage of the other if SDG&E's approved Sycamore Penasquitos 230 kV Transmission Line Project (SX-PQ) encounters construction delays beyond June 2018 and there are inadequate generation resources in Carlsbad, California under projected Summer 2018 system loading conditions.

SDG&E and Smart Wires developed and proposed to CAISO the installation of a scalable, short-term, re-deployable, and low-cost solution consisting of an array of Smart Wires Power Guardians in a Smart Bank configuration at a cost of \$6M to \$12M and an in-service date of June 1, 2018. The installation of the Power Guardian devices would allow the operator to manipulate transmission line reactance in real time to divert power flows from TL23027 and TL23028 to other transmission lines in the area under appropriate system conditions.

Upon further review by the SDG&E engineering team, in order to deliver the proposed Smart Wires solution, which leverages a relatively nascent technology that SDG&E has no former experience deploying, the team has determined that additional qualification activities should also be considered in the overall project timeline. For example, SDG&E has determined that the Smart Bank may be subject to seismic qualifications as found in IEEE Standard 693-2005. SDG&E believes that in order to electrically and seismically validate the 230 kV Smart Bank technology, incorporate it into a detailed design, and complete construction activities, the SDG&E team would require more than the twelve (12) month window available.

SDG&E has concerns that this scope and timing puts the installation of a Smart Bank solution by June 1 2018 at risk. Further, SDG&E has determined that if a Smart Bank scope were to be considered by the California Public Utilities Commission (CPUC) as a mitigating project connected to SX-PQ, a re-

evaluation of SX-PQ by the CPUC would be required pursuant to the California Environmental Quality Act (CEQA) in the form of a subsequent or supplemental Environmental Impact Report (Public Resources Code Section 21166) further risking SX-PQ's in-service date of June 1, 2018.

Ultimately, while SDG&E believes that the proposed Smart Wires solution would adequately address the potential TL23027 and TL23028 overload risk, if in-service by June 2018, we do not believe we are currently positioned to achieve such a target for the reasons expressed above. We will continue to work with CAISO to evaluate other alternatives.

SDG&E appreciates CAISO's consideration of this matter and if you have any questions, please do not hesitate to contact me.

Respectfully,



Will Speer
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cc: Ed Randolph
Molly Sterkel
Michele Kito
Billy Blattner
Jonathan Woldemariam
Andee McCoy