

- Page 10 Table 2, Summary of Needed Reliability Driven Transmission Projects in the ISO 2012-2013 Transmission Plan: ISO identified about \$1.343B of reliability based projects. Approximately \$1.168B of these projects, or 87% of the total projects identified in the Draft Plan, are located in PG&E's service territory. SCE has about \$75M or 5.5%, and SDGE \$100M or about 7.4%. Note that the actual recommended approvals for SDG&E only amount to \$28M as the \$100M total includes one synchronous condenser project (cost \$72M) that is "not recommended for approval" although identified as "needed". SDG&E does not question the need for the projects approved for the other PTO's; however, we do note that it's not clear what's "Needed" or "Not Needed" for reliability purposes.

The CAISO appears to approve some reliability projects on the basis of potential NERC Category C or D contingency violations, or to address the risk of consequential loss of load for Category C contingencies; those projects are summarized in Table 1 below:

Northern CA approved reliability projects		Cost Estimates Per table 7.2-1	TPL violation type	Report Page
Bulk power transmission projects to address Category C or Category D violations	Diablo Canyon Voltage Support Project	\$35M-45M	Category C (post contingency low voltage)	Page 88
	Monte Vista 230 kV Bus Upgrade	\$10M-15M	Category C	Page 68
	Midway-Andrew 230 kV Project	\$120M-150M	Category C (voltage)	Page 88
	Lockeford-Lodi Area 230 kV Development	\$80M-105M	Category C overload and Cat B voltage deviation at 60kV level ?	Page 63
	Trans Bay Cable Dead Bus Energization Project	\$20M-30M	Category D	Page 72
	Gregg-Herndon #2 230kV Circuit Breaker Upgrade	\$1M - \$2M	Category C	Page 77-78

Table 1 (cont'd)

Northern CA approved reliability projects	Cost Estimates Per table 7.2-1	TPL violation type	Report Page	Northern CA approved reliability projects
Bulk power transmission projects to address Involuntary Load Drop only	Arco #2 230/70kV	\$15M - \$19M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 76
	Kearney #2 230/70kV	\$32M - \$37M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 78
Underlying transmission projects to address Cat C violations	Potrero 115 kV Bus Upgrade	\$10M - \$15M	Category C	Page 69
	Northern Fresno 115kV Reinforcement	\$110M - \$190M	Category C, not clear if Category B violation is involved?	Page 80-81
Underlying transmission projects to address Involuntary Load Drop only	Ripon 115 kV New Line	\$10M - \$15M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 62
	Salado 115/60 kV Transformer Addition	\$15M - \$20M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 62
	Almaden 60 kV Shunt Capacitor	\$5M - \$10M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 70
	Christie 115/60 kV Transformer No. 2	\$12M - \$17M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 69-70
	Lockheed No. 1 115 kV Tap Reconductor	\$2M - \$3M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 71-72
	Stone 115 kV Back-tie Reconductor	\$3M - \$6M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 71
	Cressey-Gallo 115kV	\$15M - \$20M	Planning for New Transmission vs. Involuntary Load Interruption Standard	Page 77

However, several of SDG&E's reliability proposals to address NERC Category B or C violations or to address the consequential loss of load due to Category C contingencies were not approved, as summarized in Table 2 below:

Table 2				
SDG&E 69kV Reliability Projects NOT APPROVED		Cost Estimates Per RW submission packages	TPL violation type	SDG&E identified need date
Underlying transmission projects to address Category B Reliability Criteria violations	Metro Area 69kV Rebuild	\$25 – 33M	Multiple Category B overloads under peak, off peak. Generation re-dispatch will be needed at ALL TIMES, and not effective for one Cat B violation.	June, 2017/2022
	TL69XX San Luis Rey – Monserate: New Line	\$35-40M	Category B overload and additional Category C/D criteria violations	June, 2014
	TL600B: Clairemont – Clairemont Tap Reconductor	\$2 - \$3M	Category B overload	June, 2022
Underlying transmission projects to address Involuntary Load Drop	TL632A: Granite- Granite Tap Loop-In at Granite	\$19 - 24M	Approaching Category A limit(98% in 2017 for N-0) and serving more than 100MW of load with only 2 sources-- radialized for Category B, consequential loss of load for Category C.	June, 2015
	TL6906: Penasquitos- Miramar Loop-In at Mesa Rim	\$5 - 7M	Serving more than 100MW of load with only 2 sources-- radialized for Category B, consequential loss of load for Category C.	June, 2015

SDG&E is not making the claim that the projects in Table 1 are not necessary or desirable from a reliability point of view. On the contrary, the analysis underlying the need for these projects appears sound and is similar to what SDG&E views as “needed” for reliable operations. SDG&E would like CAISO to reconsider the projects listed in Table 2 and “approve” those projects based on the Category B and C violation they would mitigate.

2. The ISO has identified the Sycamore-Penasquitos (SX-PQ) 230 kV line as a mitigation for numerous thermal and voltage violations on a long list of affected facilities in the Reliability, Nuclear Back up, Policy, Deliverability, and LCR studies. This project was identified by the CAISO as an element of the “Least Regrets” transmission plan for a “no-SONGS” scenario. The CAISO has indicated that this project may be treated as a policy-driven project.

SDG&E’s position is that this project meets the four criteria for being a reliability project as defined in section 4.7.1 of the CAISO’s Transmission Planning Process document, to wit:

- a. It is a needed project to address multiple Category B violations across a wide range of study scenarios,
- b. The data bear out that it is needed, as documented by the CAISO’s own studies,
- c. It is clearly a technically feasible project (as discussed further below), and
- d. This project is cost-effective.

SDG&E proposed this project in the 2012/2013 Reliability Project Window and is committed to permitting and constructing this project with the goal of a 2017 in-service date. SDG&E wants to make several critical points about this project clear to the CAISO management and staff:

- a) SDG&E firmly believes that the SX-PQ line is a reliability project (albeit with significant policy and economic benefits), and should be approved as a reliability project instead of as a policy-driven project. Note that the SX-PQ line was approved by the CAISO as a reliability project as a part of the original plan of service for the Sunrise Powerlink in 2006.
- b) As noted above, SX-PQ will have policy and economic benefits. However, it’s important to note that previous CAISO studies did not indicate the need for this project in order to meet the 33% renewables goal by 2020. The need for this project, as currently identified, is driven by the possible unplanned early retirement of SONGS and the continued reliable operation of the transmission system.
- c) The SX-PQ project as submitted by SDG&E in the Reliability Project Window can be located on ROW that is currently 100% utility-owned. There will be little or no ROW obtained by SDG&E for this project.
- d) A significant portion of this project can be located on existing utility-owned structures (i.e. the portion between Sycamore Canyon substation and Chicarita Junction, representing about half of the total length of the new line).
- e) The SX-PQ line is a critical upgrade for a no-SONGS future; delays in approval and permitting are highly undesirable.

The critical need of this upgrade, coupled with the risk of a long-term no-SONGS scenario, and SDG&E’s inherent advantages of owning a clear ROW for the project, are particularly well suited for PTO construction as a reliability upgrade.

SDG&E notes that the CAISO does retain the option to approve separately and at a later date any of the mitigations not recommended for approval in the draft study findings.

3. Page 152, paragraph 2 - It appears that SDGE was not contributory to the 2011 or 2013 IERP?
4. As regards the SONGS Absence Study, could CAISO comment as to why, in terms of immediate southern California system criticality,
 - i. One reactive power support project, Diablo Canyon Voltage Support Project, was identified as needed and recommended to mitigate local voltage concerns,
 - ii. While only **considering** the Mid-Term Alternative #1 or #2 proposals?

Two SDG&E reactive support projects directly address SONGS related voltage stability concerns. The problem is with us today and there is no clear indication of the very near term NRC disposition. All sites for the listed SDG&E projects have been thoroughly researched and are in an advanced stage of design.

5. Page 166, SONGS Absence Study identified that for both Mid-term alternatives the dynamic reactive support at SONGS (or its proximity) and San Luis Rey Substations are in addition to the "Common mitigations" (Huntington Beach synchronous condensers and Sycamore-Penasquitos 230 kV transmission line). Page 189 however, indicated: "Given the uncertainty regarding the Huntington Beach synchronous condensers, the ISO has identified that an SVC located in the vicinity of SONGS would provide equivalent reactive support, and is also considering this option as a backup project to the Huntington Beach synchronous condenser project"--- what exactly does ISO envision the dynamic reactive support project at SONGS site to be?
6. Page 277, the draft report indicates overloads for ML-BB and OMEC-ML #1/#2. SDG&E suggests clarification of the following:
 - a. The line ratings used for the Bay Boulevard-Miguel 230 kV line (i.e. does this take into account the planned 1175 MVA normal/emergency ratings once the Bay Boulevard project is completed?)
 - b. Whether or not the reliability upgrades for the Product 2 generation (i.e. the OMEC-Tijuana series reactor) were included in the base case, or were considered as possible mitigations.
 - c. Is the CAISO considering a second Miguel-Bay Boulevard 230 kV line?

SDG&E also recommends consideration of the Imperial Valley Flow Control project as a potential mitigation.

7. Recently we learned that the pipeline for additional conventional generation inside the San Diego Import Cut-Plane (ICP) is quite thin. The CAISO is in essence indicating a need for more

generation as well (see page 277 as it relates to ML-BB or OMEC-ML #1/#2, or ML-MS #1/#2 and MS-OT thermal issues). All of this portends more congestion management in the future, thus impacts to consumer rates. In addition to thermal issues, in the Policy section we see more indications for additional dynamic reactive power support. SDG&E believes this indicates that there is a solid technical justification for approving at least one synchronous condenser installation.

8. Page 306, Chapter 5 Economic Planning Study, Table 5.5-3, Policy-driven network upgrades added to the database model: ISO included the Sycamore-Penasquitos 230 kV line as a “policy driven projects” in the base case network model for economic production cost simulation, although in earlier chapters ISO indicated this project was “not recommended for approval”? Given the significant congestion relief this project will provide for San Diego load area, a comparison of “pre-” and “post-” project production cost simulation would demonstrate additional economic benefits **on top of** all the reliability benefits.
9. Page 110, discussion of the San Diego import capability. The import capability across the San Diego Import Cut Plane (ICP) is stated here as 3400 MW. Note that powerflow study work supporting the need for the Sunrise Powerlink indicated that a simultaneous import capability of 4200 MW is feasible assuming a load shedding RAS is in place to mitigate the Category D N-2 contingency of Sunrise/SWPL, with both SONGS units in service. The G-1/N-1 import capability under similar conditions was established by the same load flow studies at 3500 MW following the worst G-1/N-1 contingency.
10. Section 3.2.2, Pg. 123 discussed the MIC available from IID; however, it is not clear if the system modeling for IID includes the “S” line upgrades or the IV-Dixieline 230 kV line.
11. Section 3.5.6, Pg. 163 discusses the assumptions of the no-SONGS study. It is not clear (but it is reasonable to assume) that all of the generation at Encina is included in the base case for this study.
12. Section 3.6, P. 194 discusses the review of existing SPS in the CAISO footprint. SDG&E would like to know if there are currently any operating SPS that shed load for N-1-1 Category C contingencies?
13. Table 4.1.3.3 – Pio Pico should be included in the list of conventional resource assumptions.
14. Table 4.1-7 – The list of IID upgrades in this table may not be sufficient to get to the MIC shown in section 3.2.2.

Additional minor corrections:

15. Table 2.8.1 – Ocotillo Express is a wind generator, not solar.
16. Pg. 168 – typo in title
17. Appendix G, regarding technical spec of the Sycamore-Penasquitos 230 kV Line, Functional Specifications: Overhead Line Construction- Minimum Continuous Ampacity Summer/ Winter should be 1175 MVA instead of 912 MVA.