SDG&E Edits & Comments to the CAISO2013-2014 Transmission Plans

1) In the past, ISO typically limited its reliability study only to the compliance of NERC, WECC, and CAISO reliability criteria, and approved projects only to the extent of mitigating Category B violations if there is no generation re-dispatch available. In the 2013/2014 planning cycle, ISO staff looked beyond the minimum reliability criteria requirement and took into account: i) the possibility of loss of critical / major loads and the corresponding value of service; ii) the cost and operational constraints associated with re-dispatch of generation; iii) the possibility that a single major improvement may mitigate the need for multiple small or incremental upgrades, avoid the risk of making multiple upgrades to the same facilities, and result in a net savings to ratepayers. The kind long-term, big picture vision in transmission planning arena is much needed in the environment of post-SONGS and looming OTC retirement, and SDG&E applauds CAISO's timely move in the right direction.
2) SDG&E's reliability study demonstrated that post-SONGS and OTC retirement, the San Diego in-basin generation need is 1470MW (**without** the long term transmission solution); or 620MW (**with** the long term transmission solution). Recent CPUC LTPP track 4 Proposed Decision allows SDG&E to procure up to 500MW of new conventional generation, which is below the bare minimum even assuming the long term transmission solution in service by year 2023. ISO deferred the approval on the long term transmission solution to a future planning cycle. Given the long lead time for permitting and constructing any major transmission projects, SDG&E urges ISO investigate the long term transmission solution with a sense of urgency and expedite the approval process.
3) ISO draft transmission plan prescribes a June 2018 in-service date for San Luis Rey Synchronous Condensers. This is based on the assumption that other reactive support projects within this area will be installed by 2015/2016 time frame. In light of the potential delay of the SONGS Mesa reactive support project due to land issues outside of SDG&E's control, SDG&E recommends ISO advancing the in-service date of San Luis Rey Synchronous Condensers to June 2016 to ensure the reliability criteria compliance.
4) With regards to the Suncrest reactive support project:
    a. ISO draft transmission plan main report recommends for approval of Suncrest 300 Mvar SVC. However, Appendix F "Description and Functional Specifications for Transmission Facilities Eligible for Competitive Solicitation" indicates the technology type "can be one of the following types of devices: SVC (Static VAR Compensator), STATCOM (Static Synchronous Compensator), or Synchronous Condenser". To avoid confusion, SDG&E suggests ISO revise the main report and refer to this project in a

more generic term as “300MVAR of dynamic reactive support at Suncrest 230kV bus”.

b. ISO draft transmission plan identifies this project as one of the five facilities that are eligible for competitive solicitation. SDG&E would argue this is a substation voltage control equipment for that would most logically be installed within the existing substation fence line, therefore should not be a candidate for competitive solicitation. Putting a straightforward substation voltage equipment project through the competitive solicitation process, is <u>not</u> in the spirit of FERC Orders 890 and 1000 which encourage the competitive bidding of transmission projects **to reduce the transmission congestion**, and will only prolong the process and incur un-necessary cost to the rate payers.

5) ISO draft transmission plan main report recommends for approval the reliability project Miguel 500 kV Voltage Support: Install up to 375 MVAR of reactive support (i.e., shunt capacitors) at Miguel substation. Preliminary investigation by SDG&E’s staff indicates the installation of 375 MVAR shunt capacitors while retaining the existing 500kV reactors at Miguel will require extensive site preparation (grading and fence modification) and therefore become costly. SDG&E proposes to install a synchronous condenser of similar size instead, which will provide continuous dynamic reactive support, enable the removal of the existing 500kV reactors and can be installed within the existing fence line (minimal civil construction due to smaller footprint). The overall cost for either option will be nearly the same.
6) ISO draft transmission plan identifies Imperial Valley generation Deliverability Constraint due to the reduction in emergency rating for the Suncrest-Sycamore-230 kV lines (TL23054 and TL23055). The initial as-build line ratings issued for these two lines were calculated by Sunrise consultants and included specific assumptions, which accounted for the different environmental conditions of the regions the lines traversed. SDG&E has since reevaluated these assumptions and has determined that they remain applicable to the 500kV line segments, but they are not applicable to the 230kV line segments of the Sunrise Powerlink lines. Recalculating the overhead line ratings using TE-0144 assumptions yields the emergency ratings are being raised, from 1089MVA up to 1183MVA.
7) On the last paragraph of page 196 of the 2013-2014 ISO Transmission Plan, the Imperial Valley Deliverability Constraint section states “With SONGS retired and the new Suncrest-Sycamore 230 kV emergency line ratings no renewable generation can be accommodated in the Imperial zone until considering the reliability mitigations being proposed in this transmission plan” can the CAISO clarify in this section of the report that the deliverability analysis is relevant only to the year 2023. The way the deliverability section is written, it is easy to reach the apparently erroneous conclusion that all deliverability out of the Imperial Valley was lost upon the retirement of SONGS.

8) Will the CAISO be willing to perform an extra interim deliverability analysis for five years out for the future Transmission Plans Reports? This would be helpful in showing how quickly deliverability out of the Imperial Valley is eroding.
9) See table 1 below:

Table 1: Comments to Report

Pg. 195, Section 4.3.3 SDG&E Are Policy Driven Deliverability Assessment Results and Mitigations, Table 4.3-21
Comments Not sure of CAISO rating used. This is going to be a problem. If post contingency uses our 1176 MVAR then we need to start working on ratings based on wind speed of 2ft/sec.
Pg. 195, Section 4.3.3 SDG&E Are Policy Driven Deliverability Assessment Results and Mitigations, Table 4.3-23
Comments SDG&E recommends to add 3rd Transformer
Pg. 196, Section 4.3.3 SDG&E Are Policy Driven Deliverability Assessment Results and Mitigations
"One option to mitigate overloads on the Sycamore-Suncrest 230 kV lines is to build a <u>new Suncrest-Las Coches 230 kV line</u>; however, with alternative, and upgrade to the Ocotillo-Suncrest 500 kV series capacitor and terminal equipment may also be needed. **Comments** Series cap and terminal equipment should be cheap. SDG&E recommends a third circuit out of SCR.
Pg. 196, Section 4.3.3 SDG&E Are Policy Driven Deliverability Assessment Results and Mitigations
Last Paragraph **Comments** SDG&E recommends a 500kV line that bypasses import cut plane and injects generation north of SCR.
Pg. 221, 5.6.2 Scope of high-priority studies, Table 5.6-3
Comments Why are SDGE congestion costs so low compared to identified reliability and policy driven study problems?