Rebecca Giles
Regulatory Case Manager
San Diego Gas and Electric Company
8330 Century Park Court
San Diego, CA 92123-1530

January 22, 2016

Reg.12-10/A.14-04-011
SDG&E Sycamore-Penasquitos
230kV Transmission Line CPCN

Sent Via Electronic Mail Only

Billie Blanchard
Project Manager
Energy Division, CEQA Unit
505 Van Ness Avenue
San Francisco, CA 94102-3298

Re: SXPQ ED21-SDGE Response: Question 21.

Dear Ms. Blanchard:

Attached is SDG&E's Response to ED's Data Request 21 issued on January 22, 2015, Question 21. This completes the utilities' response to this data request.

If you have any questions or require additional information, please feel free to contact me by phone: (858) 636-6876 or e-mail: *RGiles@semprautilities.com.*

Sincerely,

Signed

Rebecca Giles
Regulatory Case Manager

Enclosures

cc:

Allen Trial – SDG&E
Elizabeth Cason - SDG&E
Bradley Carter – SDG&E
Central Files – SDG&E
Richard Raushenbush – SDG&E
Christopher Myers - ORA
Jeff Thomas – Panorama Environmental Consulting
Susanne Heim – Panorama Environmental Consulting
Mary Jo Borak – CPUC Infrastructure Permitting and CEQA
Molly Sterkel - CPUC Infrastructure Planning and Permitting
Darryl Gruen - ORA

ED21 SDGE 01/22/2016 Response
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 21 Dated January 13, 2016 Q 1

Q#	Reference Source, Page #	Data Need	SDG&E Response
1	DR#18, Item 2	An EIR must describe and analyze the impacts of the "no project" alternative to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project (CEQA Guidelines Section 15126.6(e)). If the Proposed Project or an alternative were not approved, SDG&E is still required to meet NERC planning criteria for system reliability. The CPUC understands that the No Project Alternative does not meet all of the objectives of the Proposed Project. SDG&E identified in their response to Data Request #18 a set of actions that could be included in a No Project scenario. The CPUC requests further clarification on the need for the actions identified by SDG&E as part of a No Project Alternative scenario as it is understood that time has passed since the approval of the 2012/13 Transmission Plan and that system conditions may have changed and other projects that have been approved may help mitigate particular reliability issues. Please address the following specific questions regarding the No Project Alternative: 1. Would it be possible to install an SPS instead of a 2nd Mission-Bay Boulevard 230-kV line? If not, why? 2. Would it be possible install an SPS instead of upgrading the Mission-Miguel 230 kV lines 1 &2? If not, why? 3. Would the upgrade to the Artesian-Bernardo 69-kV lines be addressed by the approved Artesian 230/69-kV Sub and loopin? Is this upgrade specific to the No Project Alternative or would this upgrade be implemented even if the Proposed Project or an alternative were approved? 4. Would the upgrade to the Bernardo-Felicita Tap-Felicita 69-kV lines be addressed as part of the Chicarita 69-kV conversion project? Could an SPS at Rancho Carmel	SDG&E appreciates Energy Division's recognition that SDG&E's response to Data Request #18 provided a set of actions that could be included in a No Project scenario. SDG&E emphasizes that the identified projects are not, in fact, a complete alternative to the Proposed Project in that they do not mitigate all identified NERC reliability issues. As previously stated in the response to ED DR18 Q2, "SDG&E has not identified a No Project alternative that would meet all applicable NERC reliability criteria and meet all of the objectives of the Proposed Project, as described in the Draft EIR. However, SDG&E identified numerous additional mitigations that would likely be required in a No Project scenario based upon a powerflow analysis prepared as part of SDG&E's Rebuttal Testimony. Please refer to SDG&E Rebuttal Testimony, dated January 30, 2015, pg. 32, Table 6, for additional information concerning these upgrades." With that clarification in mind, SDG&E responds to the data request as follows: 1. SDG&E has not proposed to build a Mission-Bay Boulevard 230 kV line. Assuming the question intended to refer to a second Miguel-Bay Boulevard line, the answer is no, a SPS is not an acceptable alternative to a second Miguel-Bay Boulevard 230 kV line. Based on the powerflow study performed for and underlying SDG&E's January 30, 2015 Rebuttal Testimony, the overloads on the Miguel-Bay Boulevard line are caused by Category B contingencies (now Category P1 under the currently effective TPL-001-4) so non-consequential loss of load is not allowed as a long-term mitigation under NERC or CAISO planning criteria[1]. Tripping of generation or opening of lines or breakers is

[1] Footnote 12 of the currently-applicable NERC TPL-001-4 standard allows Transmission Planners to use Non-Consequential Load Loss in the Near-Term Transmission Planning Horizon as part of a Corrective Action Plan to remove overloads caused by a P1 (Category B) Contingency. It does not extend to the

Q#	Reference Source, Page #	Data Need	SDG&E Response
		address the overload on the line in lieu of reconductoring the line? If not, why?	permitted as a long-term mitigation so long as it does not shed load (i.e., cause non-consequential load loss). However, these mitigations are not effective for this violation. Tripping of generation at Otay Mesa would leave insufficient generation in the San Diego load center to reliably serve load under a G-1/N-1 scenario for loss of PEN generation. Tripping the overloaded element would result in overloads on other remaining elements which could result in cascading outages. 2. No, a SPS is not an acceptable alternative to reconductoring Mission-Miguel 230 kV #1 and #2. Based on the powerflow study performed for and underlying SDG&E's January 30, 2015 Rebuttal Testimony, the overloads on these lines are caused by Category B (now Category P1 under the currently effective TPL-001-4) contingencies so non- consequential loss of load is not allowed as a long-term mitigation under NERC or CAISO planning criteria[2]. Tripping of generation or opening of lines or breakers is permitted as a long-term mitigation so long as it does not shed load (i.e., cause non-consequential load loss). However, these mitigations are not effective for this violation. Tripping of generation at Otay Mesa would leave insufficient generation in the San Diego load center to reliably serve load under a G-1/N-1 scenario for loss of PEN generation. Tripping the overloaded element would result in overloads on other remaining elements

Long Term Transmission Planning Horizon. Under the NERC Glossary of Terms, "Near-Term Transmission Planning Horizon" is defined as "The transmission planning period that covers Year One through five." The current CAISO planning standards (effective April 1, 2015) provide the following interpretation of Footnote 12 on page 17: "The shedding of Non-Consequential load following P1, P2-1 and P3 contingencies on the Bulk Electric System of the ISO Controlled Grid is not considered appropriate in meeting the performance requirements. In the near-term planning horizon, the requirements of Footnote 12 may be applied until the long-term mitigation plans are in-service. In the near-term transmission planning horizon, the non-consequential load loss will be limited to 75 MW and has to meet the conditions specified in Attachment 1 of TPL-001-4" [emphasis added]. Note that both the CPUC and CAISO use a 10-year planning horizon for new transmission projects.

[2] Ibid

Q#	Reference Source, Page #	Data Need	SDG&E Response
			and lead to cascading outages. 3. The plan of service for the Artesian 230 kV substation project is still under development and will be subject to regulatory approval by the CPUC. However, based on the powerflow study performed for and underlying SDG&E's January 30, 2015 Rebuttal Testimony, the required rating for Artesian-Bernardo 69 kV line under a theoretical "No Project" alternative would likely exceed the rating required for the Artesian 230 kV plan of service. 4. There is no CAISO-approved plan to convert the 138 kV Chicarita substation to 69 kV. As the CPUC is aware, the Chicarita 69 kV conversion was evaluated by the CAISO as an alternative to the Artesian 230 kV project, but was rejected. Based on the powerflow study performed for and underlying SDG&E's January 30, 2015 Rebuttal Testimony, the overloads on the Bernardo-Felicita Tap-Felicita 69 kV line are caused by Category B (now Category P1 under the currently effective TPL-001-4) contingencies so non- consequential loss of load is not allowed as a long-term mitigation under NERC or CAISO planning criteria[3]. Tripping of generation or opening of lines or breakers at Rancho Carmel as part of an SPS is permitted as a long-term mitigation so long as it does not shed load (i.e., cause non-consequential load loss. However, these mitigations are not effective for this violation – there is no effective generation tripping available and opening the bus or line breakers at Rancho Carmel will not significantly affect the flow on the Bernardo-Felicita path.

[3] Ibid