

ED15-SDGE 07/06/2015 Partial Response 1
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 15 Dated June 26, 2015
ED15-SDGE Questions 1, 3-5

Q#	Summary of SDG&E Response Submittals	Confidential	PENDING Status
1-5	07/06/15 – Submittal 1: Q1, Q3 – Q5	None.	Pending: Q2

Q#	Source Ref	Description/Data needed	SDGE Response Please indicate IF response is CONFIDENTIAL Attachments MUST be appropriately marked confidential.
1	Data Request #14, Q4 and Q5	<p>Provide the following additional information regarding the Sycamore-Mission transmission corridor:</p> <ol style="list-style-type: none"> 1) Identify the voltages of all existing lines located in the Sycamore-Mission corridor. 2) Identify whether or not TL 13821 and TL 13828 could be bundled together between the Sycamore Substation and Fanita Junction. 3) Identify whether or not TL13821 can be placed on a new structure in the middle of the right of way (ROW) between the existing TSP and lattice tower to make a position available for a new 230-kV line on the existing TSP. 4) In the MS-SX Section 4 (Proposed), confirm if it is feasible to swap the new 230-kV position with the existing TL13821 position. If not feasible, explain why. 5) In the MS-SX Section 1, is it possible to relocate TL671 in a split phase arrangement on steel pole, similar to the one used for TL663, 35 feet left of the TSP supporting TL23023 and install the new 230 kV line on the existing steel lattice tower? If this arrangement results in clearance issues to TL619 can this be resolved by also placing TL619 on a steel pole, similar to the one used for TL663, 35 feet left of the LST? 	<p>SDG&E has reviewed the questions and is providing the following responses based on conceptual desktop review of existing corridors to provide timely responses. A substantial amount of detailed engineering analysis and calculations will be required to confirm the responses provided to this data request.</p> <ol style="list-style-type: none"> 1.1. The voltage of the circuits is included in the names of the lines listed on the exhibits. The first 3 characters of each circuit name indicate the voltage for 138kV and 230kV circuits and the circuits starting with 6 are all 69kV circuits. Cross sections of existing corridors have been updated with the voltage information additionally for clarity. (Refer Attachment 1) 1.2. No, the bundling of TL13821 and TL13828 is not feasible. TL13821 and TL13828 are two separate power lines that terminate at two different substations. Bundling these two separate lines together would create a configuration that would significantly reduce the electric system reliability, and is therefore unacceptable. 1.3. Based on preliminary review, the concept of placing the TL13821 in the middle of the right of way (ROW) is not feasible due to clearance constraints. SDG&E’s typical practice is to have at least 65 feet between 230kV and 138kV structure centerlines in order to maintain and provide safe working clearances to crews. Please refer to the table in response 4 (below) for more information on clearances required between circuits. 1.4. The option of placing the new 230kV at TL13821 position is not feasible since the poles are not designed to accommodate 230kV phase spacing requirements. The existing poles would have to be replaced with taller poles with increased phase spacing and considerable adjustments would need to take place inside the substation to ensure proper rack positions are available for connection without any clearance violations. 1.5. No, it is not feasible to place the new 230kV circuit on the existing lattice towers since these were not designed to accommodate 230kV lines and do not have the required electrical phase spacing. Though it may be feasible to place TL617 on a separate split bundled pole line

ED15-SDGE 07/06/2015 Partial Response 1
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 15 Dated June 26, 2015
ED15-SDGE Questions 1, 3-5

Q#	Source Ref	Description/Data needed	SDGE Response Please indicate IF response is CONFIDENTIAL Attachments MUST be appropriately marked confidential.
			<p>similar to TL663, the existing TL618 would need to be relocated to be on a new pole line shared with TL619 and the lattice towers would need to be replaced with new taller structures. The rearrangement may cause more impacts at the terminals as well and this has not been reviewed at this stage. An exhibit is shown with details of the conceptual design as currently proposed by CPUC (Refer Attachment ED15-Q1(a)).</p> <p>Also, it has come to SDG&E's attention that the previously proposed Mission to Sycamore sections 2 and 3 did not reflect the need for the lattice towers to be replaced based on 230kV phase separation requirements. Please see revised exhibits for the Mission to Sycamore section attached to this data request response (Refer Attachment ED15 - Q1(b)).</p>
2	Data Request #14, Q1	Describe and provide preliminary engineering to show how SDG&E would construct the Mission—Peñasquitos 230-kV Project following the Mission-San Luis Rey line corridor north to the approximately location of the Miramar Wholesale Nurseries and then heading east along an existing power line corridor to connect to the TL23013 corridor north of Miramar Wholesale Nurseries above Governor Drive and east of Interstate 805.	<i>Response pending clarification from CPUC (requested by SDG&E on July 1, 2015).</i>
3	Data Request #14, Q1	In the MS-OT-PQ Section 1, identify whether or not TL670 can be placed on a new structure in the middle of the right of way (ROW) between the existing TSP to make a position available for a new 230-kV line on the existing TSP.	<p>The option of placing the new 230kV at TL670 position is not feasible since most of the existing poles are not designed for 230kV phase spacing requirements. The existing poles would have to be replaced with taller poles with increased phase spacing and considerable adjustments would need to take place inside the substation to ensure proper rack positions are available for this rearrangement without any clearance violations.</p> <p>The option of placing the TL670 in the middle of the ROW between the existing structures appears infeasible without relocation of existing structures further apart or acquisition of additional ROW. Therefore, an additional structure cannot be placed within the existing ROW as proposed while maintaining safe working clearances. Please refer to clearances outlined in response to question 4 below.</p>
4	Data Request #14, Q4	Provide the minimum line/structure separation standards for 138-kV, 230-kV, and 69-kV lines located adjacent to 230-kV lines/structures. Furthermore, provide the minimum distance required between 138 kV and 230-kV	Refer to Table Q4 below.

ED15-SDGE 07/06/2015 Partial Response 1
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 15 Dated June 26, 2015
ED15-SDGE Questions 1, 3-5

Q#	Source Ref	Description/Data needed	SDGE Response Please indicate IF response is CONFIDENTIAL Attachments MUST be appropriately marked confidential.
		lines/structures and the overhead transmission edge of ROW.	
5	N/A	Identify the reason for stringing bundled wire on the east side of existing structures in Segment C of the Proposed Project as there is no readily apparent purpose for this associated with the electrical system.	Bundling the wire on the east side of Segment C preserves the ampacity between the Mission and San Luis Rey Substations once TL23001 and TL23004 are consolidated to make room for the new SX-PQ 230kV transmission line.

Table Q4: Minimum Line/Structure Separation Standards

Clearance To/From	69kV	138kV	230kV	Comments
230kV	35 feet ¹	65 feet	65 feet	The clearance listed is between centerlines of Structures. Clearances listed are the minimum required clearances typically used by SDG&E to meet OSHA and General Order 95 clearances while allowing safe working/ operational clearance to maintenance and or construction personnel. However, the actual clearances in a corridor between structure centerlines will ultimately be dictated by the structure heights and configurations.
Edge Of ROW	N/A	9 feet	9 feet	The clearance listed is from the conductor to Edge of ROW and is applicable at 60Deg, 6PSF wind conditions and includes SDG&E buffer of 3 feet.

1. This 35-foot clearance only applies to existing facilities that are not designed for higher ultimate configurations. It would be 65 feet if the 69kV structures are proposed to be designed for 138kV or higher voltages.