

ED14-SDGE 06/23/2015 Partial Response 2
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 14 Dated June 9, 2015
ED14-SDGE Questions 1-8



Q#	Summary of SDG&E Response Submittals	Confidential	PENDING Status
1-8	06/11/15 – Submittal 1: Q3 06/23/15 – Submittal 2: Q1, Q2, Q4 – Q8	Attachment ED14 – Q6(d)	Pending: None

Q#	Source Ref	Description/Data needed	SDGE Response
1	Data Request #10, Q10; California ISO response to Data Request (see attached)	<p>Provide (i) preliminary engineering for the Mission—Peñasquitos 230 kV Transmission Line with the Proposed Project and (ii) preliminary engineering and construction methods for the Mission—Peñasquitos 230 kV Transmission Line in the absence of the Proposed Project.</p> <p>The CPUC requested information about the location and construction methods for the Mission—Peñasquitos 230 kV Project in Data Request #10 dated April 8, 2015. This information was requested specifically to evaluate the relationship between the potential impacts of the Proposed Project and the future Mission—Peñasquitos Project. SDG&E provided the following response to this data request:</p> <p><i>“The CAISO just approved the Mission-Penasquitos 230 kV Project in March 2015, in its final 2014-15 Transmission Plan. As such, this future project has not been evaluated by SDG&E and no design information is available.</i></p> <p><i>As part of SDG&E’s evaluation in the future of the proposed project, SDG&E would determine project feasibility, construction timing and potential design alternatives.”</i></p> <p>Subsequent to SDG&E’s response, the CPUC requested information from California Independent System Operator Corporation (CAISO) on the location of the Mission—Peñasquitos 230 kV transmission line, as evaluated in the 2014-15 Transmission Plan. CAISO’s response is provided as an attachment to this Data Request. CAISO’s response clarified that it approved creation of a new Mission-</p>	<p>Yes, the proposed Penasquitos-Mission (PQ-MS) 230 kV project could be constructed without the Sycamore-Penasquitos (SX-PQ) project already in place. Note that the CAISO, in its response to the CPUC’s data request, also stated that both of these projects are necessary in order to obtain the required level of system reliability. SDG&E is currently developing a proposed plan of service for the PQ-MS project and has not determined the final route, system configuration, etc. A significant amount of load-flow study, engineering, and route development remain to be completed, and there is a possibility that the final plan of service will look significantly different than was initially proposed by the CAISO.</p> <p>The option of locating Mission – Penasquitos in a different corridor such as TL23013 has the following limitations (refer to the preliminary cross sections in Attachment ED14 – Q1):</p> <ul style="list-style-type: none"> • Adding a 230kV circuit between Mission and Tecolote Junction will require significant amount of Engineering and planning since there are no vacant positions between these two locations. • Additional ROW may need to be acquired to add a new structure line in this corridor. Bundling of TL23013 appears feasible between Tecolote Junction and Penasquitos Substation; however, detailed Engineering and Planning analysis will need to be completed to confirm.

ED14-SDGE 06/23/2015 Partial Response 2
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 14 Dated June 9, 2015
ED14-SDGE Questions 1-8

Q#	Source Ref	Description/Data needed	SDGE Response
		<p>Peñasquitos 230 kV circuit by building a new 230 kV section to access Peñasquitos 230 kV substation from Peñasquitos Junction and by using the 10-mile Southern portion of TL23001 from Mission Substation to Peñasquitos Junction. CAISO’s response explained that an important factor in its selection of this project was “the opportunity to reconfigure the 10-mile southern section of TL23001 from Mission Substation to Peñasquitos, which becomes possible after the CAISO’s previously approved Sycamore Canyon- Peñasquitos 230 kV project is placed in service in 2017.”</p> <p>The response also states:</p> <p><i>”Use of the 10-mile portion of TL23001 in the Mission- Penasquitos Project is enabled by the reconfiguration of the line as a part of the Sycamore Canyon-Pensaquitos 230 kV project. SDG&E’s design for the ultimate buildout of the Sycamore-Penasquitos project included segmenting the 35-mile 230 kV Mission-San Luis Rey line (TL23001) into three portions (Northern/Central/Southern).”</i></p> <p>Please clarify whether the Mission—Peñasquitos 230 kV Project, including reconfiguration of the 10-mile southern section of TL23001, would be possible absent construction of the Sycamore Canyon- Peñasquitos 230 kV project. Assuming the Mission—Peñasquitos 230 kV Project would be possible, describe and provide preliminary engineering to show how SDG&E would construct the Mission—Peñasquitos 230 kV Project in the absence of the Proposed Project. Could the Mission—Peñasquitos 230 kV line be located on existing structures in a different transmission corridor, such as the 23013 transmission line corridor as described in response to Data Request 10? Also provide preliminary engineering to show how SDG&E would construct the Mission—Peñasquitos 230 kV Project with the Proposed Project in service.</p>	
2	Data Request #10, Q10	<p>When does SDG&E expect to file a CPCN Application with the CPUC for the Mission—Peñasquitos 230 kV Project? Provide all documentation submitted by SDG&E to CAISO on the Mission—Peñasquitos Project.</p>	<p>See the response to Q1. Any potential application for the proposed MS-PQ project would be filed once the plan of service is defined and approved by the CAISO. Also note that depending on the final plan of service, a CPCN may not be required.</p> <p>Attached below, please find an e-mail request from the California ISO (CAISO) dated October 9, 2014, for cost and scope information for several transmission mitigations proposed by the CAISO, including the MS-</p>

ED14-SDGE 06/23/2015 Partial Response 2
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 14 Dated June 9, 2015
ED14-SDGE Questions 1-8

Q#	Source Ref	Description/Data needed	SDGE Response
			<p>PQ 230 kV line. The CAISO requested that SDG&E provide this information in the same format as the data provided for projects proposed by SDG&E.</p>  <p>Email from Frank Chen to Fidel Castro</p> <p>Attached below please find the cost estimate and scope information for the MS-PQ 230 KV line provided to the CAISO by SDG&E:</p>  <p>MS-PQ.zip</p>
3	System Alternative	<p>Provide a copy of SDG&E's easement with MCAS Miramar for the Sycamore—Mission transmission corridor. Describe the operating and physical restrictions of the easement (i.e., pole heights, width of easement). Provide the easement and summary of restrictions by Thursday, June 11, 2015.</p>	<p><i>Response provided on June 11, 2015.</i></p>

ED14-SDGE 06/23/2015 Partial Response 2
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 14 Dated June 9, 2015
ED14-SDGE Questions 1-8

Q#	Source Ref	Description/Data needed	SDGE Response
4	System Alternative	<p>Assess the feasibility of (i) adding a structure with a 230 kV circuit to the existing Sycamore—Mission easement with MCAS Miramar and (ii) rebuilding the wood structures on the eastern side of the easement with 230 kV structures supporting a new 230 kV line and the existing power lines. If it is not feasible to either rebuild the existing line or construct a new 230 kV line on new structures, provide drawings and information to support SDG&E’s feasibility assessment. If it is feasible to either add a new 230 kV circuit within the easement or to rebuild the existing wood poles with a 230 kV structure in the easement, provide preliminary engineering for the feasible option of adding a Sycamore—Mission 230 kV line. If both options for a Sycamore—Mission 230 kV line are determined to be feasible, provide preliminary for a rebuilt Sycamore—Mission 230 kV line. At a minimum, the preliminary engineering will need to include a typical structure type and heights, conductor type and size as well as expected pole locations.</p>	<p>As discussed in the testimony of SDG&E witness Jontry, the CAISO 2012-2013 transmission plan identified "Construct[ion of] a Sycamore-Penasquitos 230 kV transmission line" [Aug. 6 2014, testimony of Jontry at p. 7 line 10] as necessary in order to meet reliability criteria. The alternative as described in Q4 of this data request would install a 230 kV line between Sycamore Canyon and Mission substations. This is not electrically equivalent to the approved CAISO project and would not be as effective at mitigating the identified system issues. Penasquitos Substation is located very close to the San Diego load center (as discussed extensively by witness Jontry in his Aug. 6, 2014 testimony at pages 9-10) and the intent of the SX-PQ project is to directly connect the import gateway at Sycamore Canyon with the load center at Penasquitos. Pursuant to Paragraph 9 of the Memorandum of Understanding between the CAISO and CPUC on the CAISO Planning Process, see Appendix A to J. Jontry August Testimony, the Category 1 transmission projects, including SX-PQ, are to proceed directly to the CPCN siting process. While a reasonable range of alternatives to connect SDG&E’s Sycamore Canyon and Penasquitos substations is appropriate, a different electric project, which does not connect those substations, would be inconsistent with the MOU.</p> <p>This alternative would require a new 230 kV structure line from Sycamore to Mission to accommodate the third SX-MS line. It appears that there is not enough ROW from SX to Fanita Junction, (approximately 4 miles) so this option is not feasible with the current ROW and therefore additional land rights would need to be obtained. Cross sections created during the feasibility analysis are included as Attachment ED14- Q4. Please note these are conceptual in nature and detailed review of this option has not been completed based on response above.</p>
5	System Alternative	<p>Provide information on the existing pole/structure types and transmission and power lines located in the Sycamore—Mission corridor. What are the heights of the existing structures and poles?</p>	<p>See response to Q4 and associated attachments. Heights have been provided for all existing structures that SDG&E had readily available.</p>
6	Data Request #2 and #3	<p>Provide an update on coordination with Kilroy Development, including any records of correspondence, regarding use of the Torrey Santa Fe staging yard.</p>	<p>A copy of the latest correspondence with Kilroy Development has been included as Attachment ED14 – Q6(a). As shown in the correspondence, SDG&E has not received any new information on the potential use of the Kilroy property for temporary constructions staging activities.</p> <p>As part of SDG&E’s ongoing effort to identify and secure permission to consider staging yards, SDG&E has had additional discussions with the Poway Unified School District concerning potential use of their property locate at the corner of Carmel Valley Road and Camino Del Sur (refer to Attachment ED14 – Q6(b). Within the boundary of the subject property, SDG&E has preliminarily identified a portion of area that could potentially be used as a staging yard while avoiding more natural habitats. Preliminary Biological and Cultural resource evaluations have been included as Attachments ED14 – Q6(c) and ED14-Q6(d), respectively. Note that Attachment ED14 – Q6(d) is CONFIDENTIAL. Attachment ED14- Q6(e) contains documentation of SDG&E’s permission from the Poway Unified School District to access and survey this property.</p>
7	System	<p>Provide preliminary engineering for a single loop-in of a</p>	<p>As discussed in the testimony of SDG&E witness Jontry, the CAISO 2012-2013 transmission plan identified "Construct[ion of] a Sycamore-Penasquitos 230 kV transmission line" [Aug. 6 2014, testimony of Jontry at</p>

ED14-SDGE 06/23/2015 Partial Response 2
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 14 Dated June 9, 2015
ED14-SDGE Questions 1-8

Q#	Source Ref	Description/Data needed	SDGE Response
	Alternative	<p>Mission—San Luis Rey 230 kV Line from Peñasquitos Junction to Peñasquitos Substation as an alternative to the Proposed Project.</p>	<p>p. 7 line 10] as necessary in order to meet reliability criteria. The alternative as described in Q7 of this data request would reconfigure one of the 230 kV lines between San Luis Rey and Mission substations to form two two-terminal lines, from San Luis Rey-Penasquitos and Penasquitos-Mission. This is not electrically equivalent to the approved CAISO project and would not be as effective at mitigating the identified system issues. Penasquitos Substation is located very close to the San Diego load center (as discussed extensively by witness Jontry in his Aug. 6, 2014 testimony at pages 9-10) and the intent of the SX-PQ project is to directly connect the import gateway at Sycamore Canyon with the load center at Penasquitos. In contrast, in the absence of generation at SONGS, San Luis Rey is no longer a major import gateway or strong source under normal system conditions, and therefore doesn't provide an effective injection of power into the load sink at Penasquitos. This alternative would not provide any additional outlet capability at Sycamore Canyon and does not connect the load center at Penasquitos to any significant import gateway. Pursuant to Paragraph 9 of the Memorandum of Understanding between the CAISO and CPUC on the CAISO Planning Process, see Appendix A to J. Jontry August Testimony, the Category 1 transmission projects, including SX-PQ, are to proceed directly to the CPCN siting process. While a reasonable range of alternatives to connect SDG&E's Sycamore Canyon and Penasquitos substations is appropriate, a different electric project, which does not connect those substations, would be inconsistent with the MOU.</p> <p>Cross sections (between PQ Junction and PQ Substation) created during the feasibility analysis have been included as Attachment ED14 – Q7. Please note these are conceptual in nature and detailed review of this option has not been completed based on the response above. Physically, this alternative has 2 sub alternatives:</p> <ol style="list-style-type: none"> 1. Three sets of structures all overhead – Q7A. Under this alternative the 230kV loop-in lines would be installed on new 230kV poles and the existing 69kV lines would be relocated to new structures along the southern portion of the ROW thus creating 3 overhead structure lines in the corridor (refer to attached cross sections). 2. Three sets of structures overhead to P48, 2 sets of structures from P48 to PQ with the two existing 69kV lines underground from P48 to PQ – Q7B. Under this alternative, the existing 69kV lines would transition to an underground position near Structure P48, thus resulting on only two overhead structure lines between Structure P48 and the Penasquitos Substation (refer to attached cross sections). <p>The option of adding a 3rd structure line in this corridor (from the Penasquitos Junction to the Penasquitos Substation) would also create additional impacts within the undeveloped (southern) portion of the corridor, most of which is located within in the coastal zone. This alternative would require additional earthwork in order to install new poles and create access roads and/or extensions in order to create the 3rd structure line.</p>

ED14-SDGE 06/23/2015 Partial Response 2
A.14-04-011 SXPQ 230kV Transmission Line CPCN Project
Energy Division Data Request 14 Dated June 9, 2015
ED14-SDGE Questions 1-8

Q#	Source Ref	Description/Data needed	SDGE Response
8	System Alternative	<p>Provide preliminary engineering for one loop-in of a Mission—San Luis Rey Line from Peñasquitos Junction to Peñasquitos Substation as an alternative to the Proposed Project, and a new Mission—Peñasquitos 230 kV Line in the configuration described by the CAISO (from Peñasquitos Junction to Peñasquitos Substation).</p>	<p>As discussed in the testimony of SDG&E witness Jontry, the CAISO 2012-2013 transmission plan identified "Construct[ion of] a Sycamore-Penasquitos 230 kV transmission line" [Aug. 6 2014, testimony of Jontry at p. 7 line 10] as necessary in order to meet reliability criteria. The alternative as described in Q8 of this data request would reconfigure one of the 230 kV lines between San Luis Rey and Mission substations to form two two-terminal lines, from San Luis Rey-Penasquitos and Penasquitos-Mission, and add a second new Penasquitos-Mission line. This is not electrically equivalent to the approved CAISO project and would not be as effective at mitigating the identified system issues. Penasquitos Substation is located very close to the San Diego load center (as discussed extensively by witness Jontry in his Aug. 6, 2014 testimony at pages 9-10) and the intent of the SX-PQ project is to directly connect the import gateway at Sycamore Canyon with the load center at Penasquitos. In contrast, in the absence of generation at SONGS, San Luis Rey is no longer a major import gateway or strong source under normal system conditions, and therefore doesn't provide an effective injection of power into the load sink at Penasquitos. This alternative would not provide any additional outlet capability at Sycamore Canyon and does not connect the load center at Penasquitos to any significant import gateway. Pursuant to Paragraph 9 of the Memorandum of Understanding between the CAISO and CPUC on the CAISO Planning Process, see Appendix A to J. Jontry August Testimony, the Category 1 transmission projects, including SX-PQ, are to proceed directly to the CPCN siting process. While a reasonable range of alternatives to connect SDG&E's Sycamore Canyon and Penasquitos substations is appropriate, a different electric project, which does not connect those substations, would be inconsistent with the MOU.</p> <p>From the description provided by ED, the final configuration of this alternative would consist of the following:</p> <ol style="list-style-type: none"> 1) One San Luis Rey-Mission 230 kV line (existing line 23001 or 23004) 2) One San Luis Rey-PQ line (a reconfigured 23001 or 23004) 3) Two PQ-Mission lines (one reconfigured 23001 or 23004 and a new line on a new tower line) <p>This alternative would require a new 230 kV structure line from PQ to Mission to accommodate the second PQ-MS line. It appears that there is not enough ROW from PQ Junction to Mission so this option is not feasible with the current ROW and therefore additional land rights would need to be obtained. Cross sections created during the feasibility analysis are included as Attachment ED14 – Q8 and show the area between Penasquitos Junction and the Penasquitos Substation. Please note these are conceptual in nature and detailed review of this option has not been completed based on response above. As stated within the response to Question 7 above, two sub-alternatives exist for the segment between Penasquitos Junction and Penasquitos Substation: 1) all lines in an overhead position, and 2) locating the 69kV lines in an underground position following structure P48.</p> <p>The option of adding a 3rd structure line in this corridor would also create additional impacts in the undeveloped area of the corridor, most of which is in the coastal zone. This alternative would require additional earthwork in order to install new poles and create access roads and/or extensions in order to create the 3rd structure line.</p>