PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

September 3, 2015

Ryan Stevenson
Regulatory Policy & Affairs
Southern California Edison
8631 Rush Street, General Office 4 - G10O
Rosemead, CA 91770

Re: Data Request on SCE West of Devers Upgrade Project Draft EIR/EIS
CPUC Application No. A.13-10-020

Dear Mr. Stevenson:

The California Public Utilities Commission's (CPUC) Energy Division received a data request from SCE with questions on the Phased Build Alternative presented in the Draft EIR/EIS, published on August 7, 2015.

The attached pages present the SCE requests and our responses to each request. This response will be shared with the CPUC's service list for the proceeding and will be posted on the CEQA project website. Any questions on this information should be directed to me at (415) 703-2068.

Sincerely,

Billie Blanchard

Billie Blanchard
Project Manager for West of Devers Upgrade Project
Energy Division CEQA Unit

Attachment

cc: Mary Jo Borak, CPUC Supervisor CEQA Unit
Molly Sterkel, CPUC Program Manager
Greg Heiden, CPUC Legal Division
Cleveland Lee, ORA
Christopher Meyers, ORA
Delphine Hou, CAISO
Tom Dougherty, CAISO
John Kalish, Bureau of Land Management
Frank McMenimen, Bureau of Land Management
Susan Lee & Hedy Koczwara, Aspen Environmental Group
Service List for Proceeding A.13-10-020 (by email; see list on following page)

Service List - A.13-10-020

Name		Title	Company	Representing
LAURA	RENGER	ATTORNEY	SOUTHERN CALIFORNIA EDISON COMPANY	Southern California Edison Co.
MICHAEL	DAY		GOODIN MACBRIDE SQUERI & DAY LLP	Palen Solar Holdings
LISA A.	COTTLE	ATTORNEY AT LAW	WINSTON & STRAWN LLP	NextEra Energy Resources, LLC
RACHEL	GOLD	POLICY DIRECTOR	LARGE-SCALE SOLAR ASSOCIATION	
UDI	HELMAN		HELMAN ANALYTICS	
JIM	KOBUS	RESEARCH	MORGAN STANLEY	
AMIE	JAMIESON	SR. ATTORNEY	NEXTERA ENERGY REOSURCES, LLC	
LUIS ALBERTO	GARCIA ALONSO		ABENGOA SOLAR LLC	
JEFF	SALAZAR		SOUTHERN CALIFORNIA GAS COMPANY	
STEVEN	HRUBY		SOUTHERN CALIFORNIA GAS COMPANY	
CASE	ADMINISTRATIO N		SOUTHERN CALIFORNIA EDISON COMPANY	
MARC T.	CAMPOPIANO		LATHAM & WATKINS LLP	
AUSTIN M.	YANG	DEPUTY CITY ATTORNEY	CITY AND COUNTY OF SAN FRANCISCO	
MATTHEW	FREEDMAN		THE UTILITY REFORM NETWORK	
JOHN L.	CLARK	ATTORNEY AT LAW	GOODIN, MACBRIDE, SQUERI & DAY LLP	
NANCY	SARACINO		CROWELL & MORING CALIFORNIA ENERGY MARKETS	
WILLIAM	PETER		PACIFIC GAS AND ELECTRIC COMPANY	
ALEXEY	ORKIN		FLYNN RESOURCE CONSULTANTS INC.	
BARRY R.	FLYNN		FLYNN RESOURCE CONSULTANTS, INC.	
PUSHKAR G.	WAGLE	SENIOR CONSULTANT	FLYNN RESOURCE CONSULTANTS INC.	
KERRY	HATTEVIK	REG. DIR.- WEST GOVERNMENTAL AFFAIRS	NEXT ERA ENERGY RESOURCES LLC	
CLAY	JENSEN		BRIGHTSOURCE ENERGY	
MATT	STUCKY		ABENGOA SOLAR	
TANDY	MCMANNES		ABENGOA SOLAR LLC	
TIMOTHY	MCMAHON		ABENGOA SOLAR LLC	

Attachment 1: Responses to SCE Data Requests on Draft EIR/EIS

West of Devers Upgrade Project

SCE Request #1: Please provide GIS data for the Tower Relocation Alternative, more specifically the data related to figures AP-5-3 (a-h).

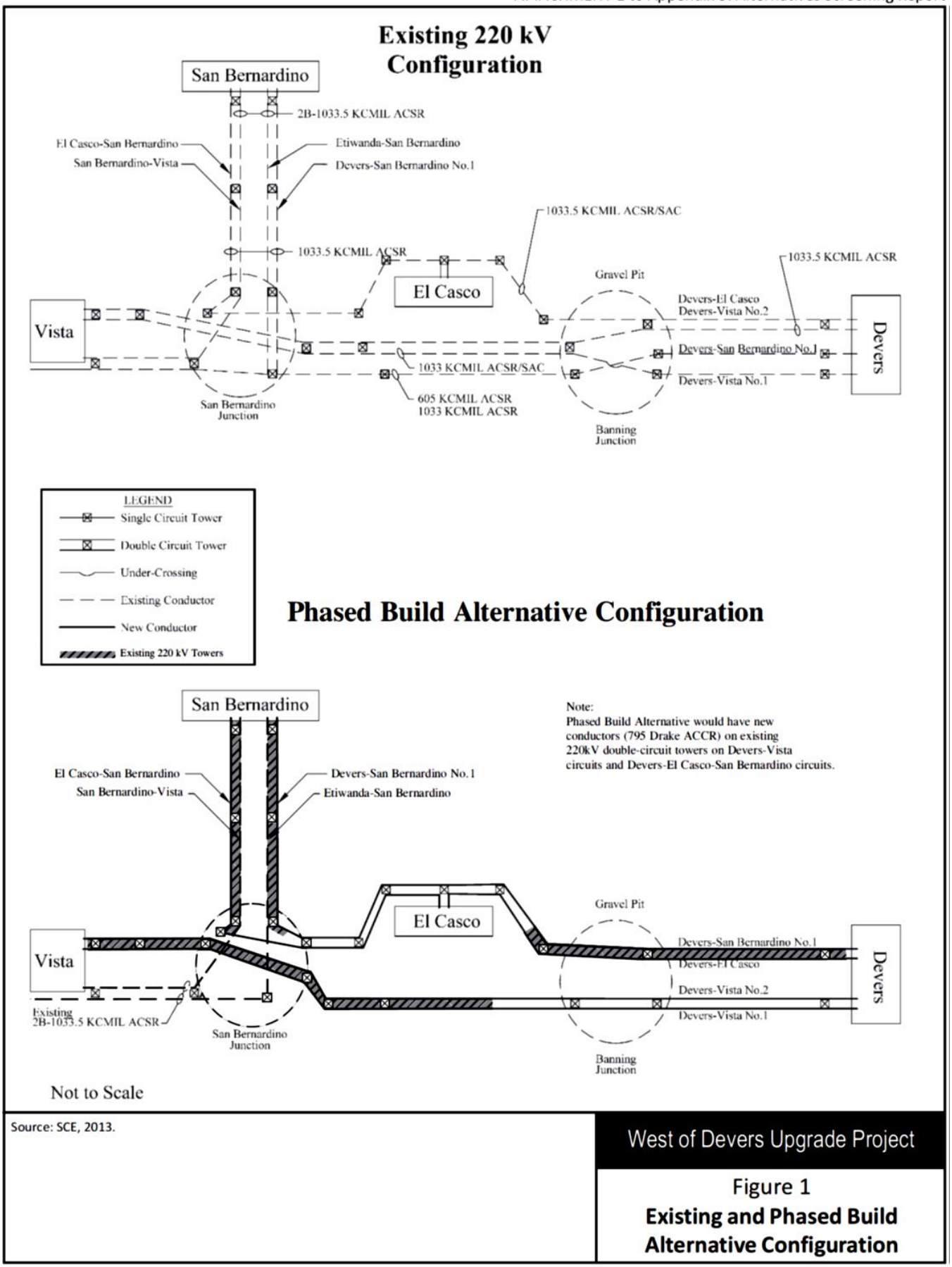
Response. The GIS files are provided in a separate attachment in both GIS and KML formats.

SCE Request #2: For the Phased Build Alternative, pp. Ap.5-47 describes the tower locations and lines for Segment 1 as keeping the existing towers and only reconductoring the circuits nearest the edges of the ROW, while Attachment 1, Figure 1, shows bundled 1033 ACSR on both circuits of the western towers and single 795 on both circuits of the eastern towers in Segment 1. Similarly, the subsequent descriptions of the circuit orientations on pp. Ap.5-47 and Ap.5-48 include the reconfigurations at San Bernardino Junction and Banning Junction, to place the Devers-El Casco-San Bernardino circuits in the northern part of the ROW, but this would conflict with stringing the Segment 1 corridor as described in the text. Please clarify the correct alignment and wire placement in Segment 1 for this alternative?

Response: One primary purpose of the Phased Build Alternative is to reduce required construction by retaining as many existing structures as possible (Draft EIR/EIS, Appendix 5, p. Ap.5-46). Therefore, the Phased Build Alternative would retain the existing double-circuit 220 kV towers and the San Bernardino–Vista and Etiwanda–San Bernardino circuits in their existing positions in Segment 1 without any changes (p. Ap.5-47). The only change to the 220 kV towers would be to reconductor the circuits nearest the edges of the ROW (from El Casco and Devers, Figure Ap.5-5a).

The comment correctly notes that the text is slightly different from the Segment 1 configuration illustrated in the Draft EIR/EIS Appendix 5, Attachment 1, Figure 1 (p. Ap.5 Att.1-5). The Final EIR/EIS will clarify that the figure was schematic and will present a revised figure that more closely matches the text (p. Ap.5-47). The text of Appendix 5 correctly describes the Phased Build Alternative with a reconductoring to replace the two existing circuits in the 220 kV positions nearest to the edges of the Segment 1 ROW. As a result, the Devers–San Bernardino and El Casco–San Bernardino circuits would use a new 795 Drake ACCR conductor (p. Ap.5-47). See the revised figure on the following page.

Some reconfiguration of San Bernardino Junction would be required, because the Phased Build Alternative would place the Devers–San Bernardino and El Casco–San Bernardino circuits on the northern side of the existing ROW in Segment 3 (p. Ap.5-47). The reconfiguration would be necessary because the new Devers–San Bernardino conductors would be in the northernmost position in Segment 3, and the circuit would need to transition to the easternmost position in Segment 1, like the Proposed Project. The new El Casco-San Bernardino conductors would cross the existing and unchanged San Bernardino–Vista and Etiwanda–San Bernardino circuits, as in the existing configuration.



Source: SCE, 2013.

West of Devers Upgrade Project

Figure 1
Existing and Phased Build Alternative Configuration

SCE Request #3: Per the Phased Build Alternative, in Segments 5 & 6 (MP30 – MP45) the existing 220 kV double-circuit structures are located in the far northern portion of the ROW. It's not clear whether these structures would be removed and replaced with new 220 kV double circuit structures to be located in the middle of the southern portion of the ROW or if they would remain in the northern portion of the ROW. If the latter, then SCE assumes that spacing for any future project would be left within the southern portion of the ROW such that the future line(s) would be positioned in-between the existing structures (located in the northern portion of the ROW) and the new double-circuit structures that would be located in the southern portion of the ROW. Please confirm the alignments in this portion of Segment 6 for the Phased Build Alternative.

Response: Because one primary purpose of the Phased Build Alternative is to reduce construction by retaining as many existing structures as possible (p. Ap.5-46), the existing 220 kV double circuit structures in Segment 6 would be retained (p. Ap.5-47). As noted in the comment, these structures would remain in the far northern portion of the ROW, and as also noted by the comment, any future project would be positioned within the vacant space south of the existing double-circuit structures that are in the northern portion of the Segment 6 ROW (p. Ap.5-54).

The Phased Build Alternative in Segment 5 includes 19 pairs of new tubular steel poles and 30 pairs of new lattice steel towers (p. Ap.5-47). In the westernmost part of Segment 5, the new structures would be located in new ROW (Figure Ap.5-5b), much like the Proposed Project (p. Ap.5-47). This design matches requirements defined in the Morongo Agreement with SCE.

SCE Request #4: In several sections of the Draft EIR/EIS, it states that the Phased Build Alternative would result in an overall construction duration and/or construction activities that would be shorter than that of the Proposed Project. Please send the Project/Construction schedule and assumptions that were used to conclude that the Phased Build Alternative would require less time to construct and could be in service sooner than the Proposed Project. If available, please also include all the Phased Build Alternative schedule assumptions associated with the additional engineering that would be needed, the number and duration of additional shoo-files and outages, and the procurement duration for the new 795 conductor as compared to the Proposed Project.

Response: One primary purpose of the Phased Build Alternative is to reduce construction by retaining as many existing structures as possible (p. Ap.5-46). The Phased Build Alternative calls for the existing double circuit towers in Segments 1, 2, 3, 4 and 6, to be reconductored with high performance 795 ACCR conductor (p. Ap.5-54-55 and Appendix 5, Attachment 3a) in lieu of replacing all of the towers and stringing double-bundle 1590 ACSR conductor, as is called for in the Proposed Project. Attachment 2 to Appendix 5 identifies that 65-70% of the existing double circuit lattice steel towers (LST) are capable of supporting 795 ACCR conductor without modification. The remaining 30-35% of existing LST would either be strengthened/modified or replaced. By avoiding the need for removing 65-70% of the existing double-circuit LST the Phased Build Alternative eliminates the construction required by the Proposed Project to replace these LST. In total the Phased Build Alternative avoids the construction time necessary for removal of approximately 125 towers. The Phased Build Alternative results in constructing roughly half as many double-circuit lattice steel towers, and their associated foundations, when compared to the Proposed Project. Since the Phased Build Alternative will string a single 795 ACCR conductor at each phase position, in lieu of the double-bundle 1590 ACSR conductor identified in the Proposed Project, the construction duration for wire stringing can be reduced by roughly 50%.

In addition, by utilizing the Phased Build Alternative, the existing 66 kV circuits in Segment 1 can remain in place (p. Ap.5-47). By avoiding the need for all of the 66 kV construction required by the Proposed Project, the Phased Build Alternative avoids removal of 3.5 miles of 66 kV towers and conductor, removal of over 50, 66 kV poles and eliminates; the installation of 180 single pole 66 kV structures, stringing 4 miles of overhead conductor, construction 4,800 feet of underground ductbank and 9 associated underground vaults, and installing 2.7 miles of underground cable. From a construction duration perspective, the project schedule can be reduced by the amount of time SCE planned for this portion of the Proposed Project.

SCE Request #5: In Appendix 5, Attachment 2, pp. 6-7, it states that the Phased Build Alternative would reduce the overall cost of the upgrades as compared to the Proposed Project. Please provide the cost estimate for the Phased Build Alternative that supports the conclusion that the Phased Build Alternative would be less expensive than the Proposed Project. If no such cost estimate exists, please provide the assumptions that led to this conclusion. Also, please explain if a cost per MW comparison and/or if the cost of any future phases were assessed in determining that the Phased Build Alternative would be less costly than the Proposed Project.

Response: A detailed cost estimate was not prepared but a rough comparison of the amount of construction avoided by the Phased Build Alternative indicates substantial cost savings in both materials and construction would be accomplished for each of the areas outlined below. Again, one primary purpose of the Phased Build Alternative is to reduce the extent of construction by retaining as many existing structures as possible (p. Ap.5-46). Following are specific components of cost savings that would result from the Phased Build Alternative:

- SCE's Proposed Project requires removal of roughly 400 existing single and double circuit lattice towers. By requiring the removal of fewer existing structures the Phased Build Alternative saves all of the labor cost associated with roughly 125 structure removals.
- The Phased Build Alternative results in construction of roughly half as many double-circuit lattice steel towers and associated foundations, as would be required in the Proposed Project, representing an additional substantial savings in material and construction labor costs.
- We recognize that there is a significant premium in the material cost for ACCR conductor when compared to the cost for the larger ACSR conductor in the Proposed Project. However, the Phased Build Alternative would require purchases of approximately 45% less conductor than the Proposed Project. Even allowing for potential additional handling required for the ACCR type conductor during wire stringing, by installing a single conductor at each phase position the Phased Build Alternative labor cost for conductor installation is assumed to be 35 to 40% less than for the Proposed Project.
- Further cost savings to be realized under the Phased Build Alternative would result from avoiding all of the costs for labor and material associated with the 66 kV removals and construction required by the Proposed Project.