

PUBLIC UTILITIES COMMISSION

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March 19, 2014

Ryan Stevenson
Regulatory Policy & Affairs
Southern California Edison
8631 Rush Street, General Office 4 - G100
Rosemead, CA 91770

Re: Data Request #3 for the SCE West of Devers Upgrade Project - Application No. A.13-10-020

Dear Mr. Stevenson:

The California Public Utilities Commission's (CPUC) Energy Division has reviewed all of the documents and materials that PG&E has provided, including the Application and Proponent's Environmental Assessment (PEA; dated October 25, 2013), the PEA deficiency response items submitted in late 2013 and early 2014, and SCE's data responses to date. During the analysis of the aforementioned materials, we have identified additional information items needed from SCE.

Attached please find Data Request No. 3, which defines the questions we have at this time regarding review of SCE's Electric and Magnetic Field (EMF) Management Plan for the West of Devers Upgrade Project, included in Application A.13-10-020. In some cases, these data requests may be more broadly applicable as comments or questions for the Proposed Project. It is also understood that the Field Management Plan (FMP) would change if towers are moved in the current design refinement.

We would appreciate your prompt responses to these data requests, which will allow us to maintain our current schedule. We request that responses be provided to us within approximately two weeks (by April 4, 2014). We understand that some of these requests may require more time; however, we request that information be provided to us as soon as each response is available, along with an estimated response date for any information that can't be provided within two weeks. Additional data requests may be necessary to address other CEQA or NEPA topics as we move forward with EIR/EIS preparation.

Please submit one set of responses to me and one to Susan Lee at Aspen Environmental Group in San Francisco, in both hard copy and electronic format. Any questions on this data request 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
Brian Paul, Bureau of Land Management
Holly Roberts, Bureau of Land Management

Lynette Elser, Bureau of Land Management
Susan Lee & Hedy Koczwar, Aspen Environmental Group
Nicholas Sher, CPUC Legal Division

SCE West of Devers Upgrade Project

Data Request No. 3

West of Devers Upgrade Project Data Request No. 3, includes requests related to the following issue area:

- EMF Management Plan/Public Health and Safety

EMF Management Plan/Public Health and Safety

GENERAL

- PHS-1** Please confirm that when the Field Management Plan (FMP) indicates existing magnetic field levels it includes the field from 66 kV and 220 kV lines that exist today but will be removed or relocated as part of the project.
- PHS-2** What is the line loading condition assumed for the “existing” and “proposed” cases in the EMF models?
- PHS-3** It is explained that the 220 kV structures being removed are replaced by similar but stronger structures. Is the conductor spacing, center-to-center, both vertically and horizontally, the same on the new structures as on the old structures? If not, please provide the old and new dimensions.
- PHS-4** Please indicate if the magnetic field levels predicted in the FMP are for the location in the ROW where the conductor is closest to the ground (lowest sag point), the worst-case scenario, or if at some other location. If it is not at the point the conductor is closest to ground, please describe the rationale for using some other reference point.
- PHS-5** For the option of utilizing taller structure heights, it is indicated that the structures would be 15 feet taller. However, it is also noted the conductor ground clearance would only increase by 8 feet. This appears to be conflicting – if all parameters (loading, conductor tension, phase arrangement) are kept the same and only the structure height is varied, the clearance to the low point of conductor sag should increase the same amount as the structure height increase. Please clarify how EMF was modeled.
- PHS-6** The magnetic field levels vary from one side of the ROW to the other depending upon where lines are located within the ROW. Why was only one-side of the ROW considered when calculating the percentage reduction obtained from the various design options?

SEGMENT 1 – San Bernardino Substation to San Bernardino Junction

- PHS-7** **Model 1 – San Bernardino Substation to West Lugonia Avenue.**
- In this Model it appears the FMP has retained the two 66 kV circuits on the west side of the right-of-way (ROW), refer to Figures 3 & 4. It is our understanding that these lines were to be removed and the results would be the similar to those shown for Model 2 where the two 66 kV circuits have been removed. Please clarify and revise the analysis in this area, if necessary.
 - For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where the lines would be adjacent to populated areas. However, it is noted that this section is

adjacent to a commercial/industrial area. Are any taller structures planned in this area and if so where?

- c. In this model the existing and proposed double-circuit 220 kV structures appear to be approximately 50 feet apart (Figure 4) and roughly centered in the 245 foot ROW. Please confirm the circuit spacing used for the EMF modeling.

PHS-8

Model 2 – West Lugonia Ave to Redlands Boulevard. Note that in this Model it appears the FMP has removed the two 66 kV circuits on the west side of the right-of-way (ROW) (see Figures 5 & 6).

- a. For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where the lines would be adjacent to populated areas. However, it is noted that this section is adjacent to a commercial/industrial area. Are any taller structures proposed in this area, and if so where?
- b. In this model the new double-circuit 220 kV structures appear to be nearly 100 feet apart. Please confirm the circuit spacing used for the EMF modeling. It appears that the alignment and spacing of the 220 kV circuits used for Model 1 could be maintained in this area, and this spacing would reduce the magnetic field level at edge of ROW.

PHS-9

Model 3 – Redlands Boulevard to Barton Road. Note that in this Model it appears the FMP has shown that there are no 66 kV circuits on the ROW, either existing or proposed. Refer to Figures 7 & 8.

- a. For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where adjacent to populated areas. This section is adjacent to residential areas. Has SCE proposed taller structures for this entire section?
- b. In this model the existing and proposed double-circuit 220 kV structures appear to be approximately 50 feet apart (Figure 4) and roughly centered in the 150 foot ROW. Please confirm the circuit spacing used for the EMF modeling.

PHS-10

Model 4 – Barton Road to San Bernardino Junction. Note that in this Model it appears the FMP has shown that there are no 66 kV circuits on the ROW, either existing or proposed. Refer to Figures 9 & 10.

- a. For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where adjacent to populated areas. This section is adjacent to residential areas for roughly 60% of its length. Is it planned to use taller structures only in the areas adjacent to residences (if so, which structures) or for this entire section?
- b. In this model the existing and proposed double-circuit 220 kV structures appear to be approximately 50 feet apart (Figure 4) and roughly centered in the 150 foot ROW. Please confirm the circuit spacing used for the EMF modeling.
- c. It appears the magnetic field level for the east edge of the ROW for the existing scenario should be the same for Models 3 and 4. This is not the case and it appears this may be due to an inadvertent transposition of a number. Please confirm whether the magnetic field at the east edge should be 66.7 mG or 67.6 mG.

SEGMENT 2 – San Bernardino Junction to Vista Substation

PHS-11 Model 1 – Area of Barton Road and East Hilltop Drive. For this Model, Table 1 indicates, "Yes", for utilizing taller structures where adjacent to populated areas. This section is adjacent to residential areas and there is substantial topography variation resulting in the residences on the north side of the ROW being at the same elevation or below the base of the structures while the residences on the south of the ROW are on a ridge top and near the conductor level of the lines. It is noted that the proposed project with phasing results in magnetic fields less than existing. This appears to be the case for the homes to the north. Has SCE considered the location of the houses to the south and can SCE provide magnetic modeling for the elevations where the homes are much closer to the elevation of the conductors?

PHS-12 Model 2 – South Lauralwood Avenue & South Walter Court. For this Model, Table 1 indicates, "Yes", for utilizing taller structures where the lines would be adjacent to populated areas. This section is adjacent to residential areas for a relatively small portion of its overall length. Has SCE proposed to use taller structures only in the areas adjacent to residences (if so, which structures) or for this entire section?

SEGMENT 3 – San Bernardino Junction to El Casco Substation

Comment: The description of the area analyzed notes it is near Helena Street inside Fisherman's Retreat, this appears to be Eucalyptus Lane shown on sheet 46 of the SCE Map Book.

PHS-13 For this Model, Table 1 indicates, "Yes", for utilizing taller structures where the lines would be adjacent to populated areas. Large portions of this segment are in undeveloped areas. Therefore, please describe which specific areas or structures are planned for the use of taller structures.

SEGMENT 4 – El Casco Substation to San Gorgonio Avenue, Banning

- PHS-14** Are taller structures proposed for the entire section of each of the following models?
- a. **Model 1 – Area East of El Casco Substation prior to area where ROWs merge.** For this Model, Table 1 indicates, "Yes", for utilizing taller structures where the lines would be adjacent to populated areas. Note that this section is adjacent to residential areas and the proposed lines have been moved to the edge of the ROW resulting in much higher magnetic field on one side of the ROW than the other. From an EMF management perspective it would appear that locating the lines in the center of the ROW would result in lower fields on each side of the ROW compared to the existing condition.
 - b. **Model 2 – City of Beaumont and City of Banning.** For this Model, Table 1 indicates, "Yes", for utilizing taller structures where the lines would be adjacent to populated areas. Note that this section is adjacent to residential areas and the proposed lines have been moved from one edge of the ROW to the other, resulting in much higher magnetic field on one side of the ROW than the other. From an EMF management perspective it would appear that locating the lines in the center of the ROW would result in lower fields on each side of the ROW compared to the existing condition.

SEGMENT 5 – San Gorgonio Avenue, Banning to Rushmore Avenue, Whitewater

PHS-15 Model 1 – San Gorgonio Ave to area of Robertson’s sand and gravel (Sheet 27 to Sheet 25). This section is within existing ROW and in generally undeveloped areas and the proposed lines have been moved to the edge of what is shown as the existing ROW, resulting in much higher magnetic field on one side of the ROW than the other. From an EMF management perspective it would appear that locating the lines in the center of the ROW would result in lower fields on each side of the ROW compared to the existing condition.

For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where the lines would be adjacent to populated areas. Are taller structures proposed for this entire section?

PHS-16 Model 2 – Robertson’s sand and gravel to Malki Road (Sheet 25 to Sheet 21). This section is within a new 150 foot ROW and is in generally undeveloped areas with the proposed lines located in the center of the ROW. This placement results in relatively similar fields on each side of the ROW. For this area the use of taller structures for EMF management was not considered.

In the mapping provided, the extent or boundary for the transmission line ROW when located on Morongo tribal lands is not shown. The text on page 61 regarding Magnetic Field Calculations appears to mistakenly identify Figure 24 and Table 12 in lieu of Figure 25 and Table 13 for this line section. The text also refers to a comparison of existing and proposed design, however since this is a new ROW, there is no existing design for this section. Please provide updated mapping, confirm the correct figure/table, and confirm whether there is an existing design.

PHS-17 Model 3 – Malki Road to Rushmore Avenue (Sheet 21 to Sheet 14)

- a. Portions of this section are within an existing ROW and portions are within a new 150 foot ROW. In the mapping provided, the extent or boundary for the transmission line ROW when located on Morongo tribal lands is not shown. The text on page 65 regarding Magnetic Field Calculations appears to mistakenly identify Figure 26 and Table 13 in lieu of Figure 27 and Table 14 for this line section. This section is in generally undeveloped areas and it appears the proposed lines have been placed in the center of the existing and new ROWs. This placement results in relatively similar fields on each side of the ROW. Please provide updated mapping and confirm the correct figure/table.
- b. For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where the lines would be adjacent to populated areas. Are taller structures proposed for this entire section?

SEGMENT 6 – Rushmore Avenue, Whitewater to North Palm Springs

PHS-18 Model 1 – Rushmore Avenue to Amethyst Drive (Sheet 14 to Sheet 13). The spacing of the lines has been increased to 100 feet, as opposed to the 50 foot spacing used to the west of this section. The proposed lines have been moved to the edge of what is shown as the existing ROW, resulting in much higher magnetic field on one side of the ROW than the other. From an EMF management perspective it would appear that keeping the

50 feet line spacing and locating the lines in the center of the ROW would result in lower fields on each side of the ROW compared to the existing condition.

- a. The text on page 68 regarding Magnetic Field Calculations appears to mistakenly identify Figure 28 and Table 14 in lieu of Figure 29 and Table 15 for this line section. Please identify which are the correct figure and table.
- b. For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where the lines would be adjacent to populated areas. Are taller structures proposed for this entire section?

PHS-19

Model 2 – Amethyst Drive to west of Windhaven Drive (Sheet 13 to Sheet 5). The proposed line in the northern ROW has been moved to the edge of what is shown as the existing ROW, resulting in much higher magnetic field on one side of the ROW than the other. The proposed line in the southern ROW is located in the center of the ROW resulting in similar field strength on each side of the ROW. From an EMF management perspective it would appear that locating the northern line in the center of the ROW would result in lower fields on each side of the ROW compared to the existing condition.

- a. In this section the two double circuit lines diverge into separate ROWs. The text on page 71 regarding Magnetic Field Calculations appears to mistakenly identify Figure 30 and Table 15 in lieu of Figure 31 and Table 16 for this line section. Please identify which are the correct figure and table.
- b. For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where the lines would be adjacent to populated areas. Are taller structures proposed for this entire section?

PHS-20

Model 3 – Desert View Road & 16th Avenue, North Palm Springs (Sheet 3). The proposed line in the southern ROW is located near the northern edge of what is shown as the existing ROW, resulting in much higher magnetic field on one side of the ROW than the other. From an EMF management perspective it would appear that locating the southern line in the center of the ROW would result in lower fields on each side of the ROW compared to the existing condition.

- a. At this location the two double-circuit lines are in separate ROWs. The text on page 74 regarding Magnetic Field Calculations appears to mistakenly identify Figure 32 and Table 16 in lieu of Figure 33 and Table 17 for this line section. Please identify which are the correct figure and table.
- b. For this Model, Table 1 indicates, “Yes”, for utilizing taller structures where the lines would be adjacent to populated areas. Are taller structures proposed for this entire section?