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

September 3, 2014

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

Re: Data Request #7 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 SCE 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. 7, which defines the additional questions we have at this time for the project description and alternatives. Additional data requests may be necessary to address other CEQA or NEPA topics as we move forward with EIR/EIS preparation.

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 two weeks (by September 16, 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.

Please submit one set of responses to me in both hard copy and electronic format and one to Susan Lee at Aspen Environmental Group in electronic format (unless there are hardcopy-only documents). 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 (Data Request)

cc: Mary Jo Borak, CPUC Supervisor CEQA Unit
Xiao Selena Huang, ORA
Cleveland Lee, Legal Division for ORA
Nicholas Sher, CPUC Legal Division
Frank McMenimen, Bureau of Land Management
John Kalish, Bureau of Land Management
Lynette Elser, Bureau of Land Management
Susan Lee & Hedy Koczwara, Aspen Environmental Group

SCE West of Devers Upgrade Project
Data Request No. 7

West of Devers Upgrade Project Data Request No. 7 includes requests related to the following issue areas:

- Project Description
- Alternatives

Project Description

PD-18 It is our understanding that SCE has installed cathodic protection on existing pipelines in conjunction with construction of SCE's Tehachapi Renewables Transmission Project (TRTP), Segment 3B. Because this work was unanticipated on TRTP, it was not included in the Final EIR project description. As a result, the CPUC prepared a CEQA Addendum to address this project change (SCE's Request for an Addendum dated December 2011; CPUC's CEQA Addendum dated March 2012). To ensure that any construction work and ground disturbance associated with cathodic protection of pipelines, if required, is included in the EIR/EIS for the proposed West of Devers Upgrade Project (WOD-UP):

a. Please provide a list of pipelines in the West of Devers project area that cross or parallel the existing transmission line corridor.

b. Please explain whether or not these existing pipelines, if any, may require cathodic protection. If cathodic protection is not required, please explain why.

c. If cathodic protection may be necessary, please provide a description of the construction process and associated ground disturbance for inclusions in the EIR/EIS Project Description.

PD-19 PEA Section 1.1.1, Integrate Planned Generation Resources, discusses the existing West of Devers (WOD) Interim Project, which is explained as allowing temporary deliverability of up to 1,050 megawatts (MW) (PEA pg. 1-9). Elsewhere, the PEA, in Section 3.0 (pg.3-6) states that the proposed WOD Upgrade Project would increase system transfer capacity from 1,600 MW to 4,800 MW (Sect 3.0, pg. 3-6). Please describe the difference between the 1,050 MW capability stated on page 1-9 and the stated 1,600 MW system transfer capacity stated on page 3-6.

PD-20 **WOD Interim Project.** Under CPUC Advice Letter 2343-E (U 338-E), dated October 21, 2011, SCE has constructed the West of Devers Interim Project "to provide partial deliverability to renewable generators in the I-10 corridor until the future and separate WOD Upgrade Project is completed." As part of the WOD Interim Project, SCE installed series reactors on the four 220 kV transmission lines that extend westward of the Devers Substation and a Special Protection System (SPS) on SCE fee-owned property on the west side of Diablo Road within the Devers Substation fence line. SCE stated in the Advice Letter that it plans to remove the new reactors after the completion of the WOD Upgrade Project.

(a) Please explain why SCE proposes to remove the WOD Interim Project. Would use of the WOD Interim Project after completion of the Proposed Project be either necessary or beneficial for operational flexibility to help achieve the 4,800 MW system transfer capacity anticipated as part of the Proposed Project?

(b) The WOD Interim Project included the multiple components noted below. If the Interim Project is to be removed, please specifically describe which of these components are to be removed or modified and how this will be accomplished.

i) 12 Single-phase series reactors

ii) Several transmission structures to reroute 220 kV lines

iii) Rerouted subtransmission lines

iv) Special Protection Systems

v) Telecommunications

(c) Please describe when the WOD Interim Project facilities would be removed following completion of the WOD Upgrade Project.

(d) Please describe site restoration activities that would occur, if any.

PD-21 In the PEA (pg.1-7), three Large Generator Interconnection Agreements (LGIA) totaling 1,485 MW of new solar generation identify the Proposed Project as the required transmission line project needed to achieve Full Capacity Deliverability Status requested by the generation facilities. These appear to be: 500 MW of solar thermal in FERC Docket No. ER11-4358-000 [NextEra Desert Center Blythe, LLC (Genesis McCoy)]; 485 MW of solar photovoltaic in FERC Docket No. ER11-2318-000 [Palo Verde Solar II, LLC (Palo Verde) subsequently purchased by NextEra]; and 500 MW of solar thermal in FERC Docket No. ER11-2455-000 [Palen Solar II, LLC (Palen) subsidiary of BrightSource Energy]. Please describe whether the existing WOD Interim Project presently achieves full capacity deliverability for these three generators having executed LGIA. If not, please describe why not.

PD-22 **Project Objectives**.

A.) Please elaborate on the Project Objectives for each of the individual circuits that would be modified as part of the proposed WOD Upgrade Project. For each circuit listed below, please provide the following information.

i. Provide the target in-service date and the transfer capacity achieved by the Proposed Project.

ii. Describe what portion (in MW) of the project's total capacity would serve load at the receiving substations and/or what portion (MW) of the project's capacity would flow through these substations and then further over the existing SCE transmission system.

iii. Provide this information for the controlling case, normal operation or short-term emergency operation.

iv. The circuits to be addressed for items (i) through (iii) above are the following:

- Devers-San Bernardino No 1
- Devers – El Casco
- El Casco – San Bernardino
- San Bernardino – Vista

- San Bernardino – Etiwanda
- Devers-Vista No 1
- Devers-Vista No 2

B.) Please explain whether SCE interprets the stated Project Objectives (PEA Section 1.3, p. 1-19) to include retaining adequate vacant ROW width for future transmission system expansion. To the extent possible, describe the dimensions of the minimum adequate ROW width, the desired location within the ROW for the vacant space, and the target date for availability of the vacant space.

PD-23 For the San Bernardino-Etiwanda circuit, the Proposed Project would reconductor only a small portion (3.5 miles) of the entire length to Etiwanda. Beyond that point, there is an additional 16 miles of this circuit, to City of Rancho Cucamonga. A similar situation would occur along the San Bernardino-Vista circuit.

Please describe whether reconductoring the complete San Bernardino-Etiwanda 220 kV circuit from San Bernardino Junction to Etiwanda or Rancho Vista would improve the transfer capacity between the WOD Upgrade Project and Etiwanda or the new Rancho Vista 500/220 kV Substation. If not, then please describe the purpose of the proposal to reconductor only the 3.5-mile segments of San Bernardino-Etiwanda and San Bernardino-Vista between San Bernardino Substation and San Bernardino Junction.

Alternatives

ALT-6 **No Project Scenario.** If the proposed WOD-UP project is not approved, please describe whether SCE may be required to remove certain transmission lines from Morongo tribal lands because their easements have expired. If this were to occur, specifically which transmission lines would SCE need to remove. Also, what would need to be constructed and where in order to preserve operation of the four existing 220 kV circuits?

ALT-7 **No Project Scenario.** If the proposed WOD-UP project is not approved, please describe the feasibility and necessity of expanding the WOD Interim Project to achieve deliverability for 1,485 MW of new generation shown as having executed Large Generation Interconnection Agreements (LGIA) in PEA Table 1.1.

ALT-8 **No Project Scenario.** Please describe whether the No Project Alternative could cause a delay or potentially lead to outright failure of any of the generation projects with executed interconnection agreements (shown in PEA Table 1.1). This response should specifically address the generation projects that presently have interconnection agreements shown with a status of “under negotiation” (PEA Table 1.1) and describe what kinds of changes could be triggered within these agreements if the proposed WOD-UP project is not approved.

ALT-9 **No Project Scenario.** The PEA (pg.1-8) shows that the CAISO Transmission Planning Process anticipates rebuilding the West of Devers corridor for “policy-driven” purposes or to facilitate achieving California’s renewable energy goals. Please describe whether any other means exist to achieve these goals if the Proposed Project is not approved.

ALT-10 Please confirm whether an alternative that achieves at least 2,479.5 MW of transfer capacity in the WOD corridor, in lieu of the 4,800 MW anticipated under the Proposed

Project (PEA p. 3-6), would provide full capacity deliverability status for the generation projects identified in PEA Table 1.1.

ALT-11 During CPUC completeness review of the PEA, SCE stated (in the 12/6/2013 Response to Question 01) that the system transfer capability increase is determined by the maximum amount of MW that can be accommodated on the facilities taking into account the NERC Transmission Planning standards. Please specifically describe the methodology used by SCE to calculate the capacity (in MW) and ampacity (Amps) for the existing and proposed transmission lines affected by the Proposed Project, including whether the controlling condition is a short term (emergency rating) or normal operation.

ALT-12 Using SCE's methodology for calculating transfer capabilities, please provide the calculated capacity (MW) and ampacity (Amps) for the following circuits and conductor combinations:

- 220 kV, Double-bundle 1590 "Lapwing" ACSR conductor
- 220 kV, Double-bundle 1033.5 "Curlew" ACSR conductor

ALT-13 Please identify SCE's standard conductor size(s) used for 500 kV transmission lines and what would be SCE's calculated ampacity (Amps) and capacity (MW) for the these conductors: e.g. 500 kV, SCE standard conductor, size 1; and 500 kV, SCE standard conductor, size 2.

ALT-14 **Previous WOD Corridor Proposal.** In the 2005 proposal by SCE for DPV2, the WOD portion of the DPV2 project would have included the following:

West of Devers (as defined in 2005 CPCN Application)

- Removal of two existing 40-mile 220 kV single-circuit transmission lines.
- Construction of one new 40-mile double-circuit 220 kV transmission line.
- Upgrade of 40 miles of double-circuit 220 kV transmission line between Devers Substation and San Bernardino Junction (accomplished by reconductoring the existing double-circuit 220 kV line only).
- Upgrade of 4.8 miles of double-circuit 220 kV transmission line between San Bernardino Junction and Vista Substation (reconductoring only).
- Upgrade of 6.8 miles of 220 kV transmission line between San Bernardino Junction and San Bernardino Substation (reconductoring only, one circuit on each of two existing double-circuit transmission lines)

Considering the previously proposed project, please answer the following:

- a. Please define the transfer capacity (in MW) that would result from implementing the following design, similar to the 2005 proposal for the WOD corridor:
  - Re-use the existing double-circuit towers (as proposed in 2005), and reconductor those two circuits using the highest capacity conductor that could be supported by the existing towers.
  - Remove the two existing single-circuit 220 kV tower lines (as proposed in 2005) and replace them with a single set of new double-circuit towers (as

proposed in 2005), but now using the currently-proposed conductors (double-bundled 1,590 kcmil ACSR).

ALT-15 **Tower Relocation.** In response to scoping comments, Aspen is exploring project alternatives that would alter the positions of the proposed 220 kV towers to be further from homes, but located within the existing ROW in a manner that retains adequate width in the ROW for unspecified future expansion. SCE has identified an interest in taking "reasonable measures to facilitate this expansion in the future" (previously noted in the 12/6/2013 Response to Question 02.c, during CPUC Completeness Review). Please answer the following questions:

A.) In Segments 4 through 6, the proposed towers would be located closer to homes than existing towers along the southern edge of the ROW, while retaining an empty space at least 175 feet wide from the centerline of the northernmost proposed 220 kV tower to the northern edge. What would be the minimum spacing required by SCE between a 220 kV transmission line and a 500 kV transmission line in the WOD corridor? If this depends upon whether the 500 kV line is single circuit or double circuit, please provide the spacing for both. Also, please explain if this distance depends on whether lattice steel towers or tubular steel poles are used for the 500 kV line, if so provide both.

B.) SCE originally proposed the Chino Hills double-circuit 500 kV line to be installed in a 150-foot wide ROW. Therefore, we have assumed in consideration of our alternatives that 175 feet would provide adequate space within the ROW for a future double-circuit 500 kV transmission line. Please confirm whether 150 feet or 175 feet, or some other width, would provide sufficient width for a double-circuit 500 kV in a manner consistent with SCE's transmission design criteria.

C.) What would be the minimum spacing SCE requires in the WOD corridor between the proposed 220 kV transmission tower pairs? Please explain if this distance depends on whether lattice steel towers or tubular steel poles are used, if so provide both.

ALT-16 **Whitewater Northern ROW.** Proposed Project towers 6N38, 6N39, 6N40, 6N41 appear to be positioned completely within the parcel boundaries of properties on Amethyst Drive and Haugen-Lehman Way (per Google Maps; Verbenia Ave. per the SCE Mapbook, page 13).

On the approximately 20 parcels that are at least partially within the ROW in this segment, there are currently 9 or 10 existing homes along the north side of Amethyst Drive which, given the proposed location of these towers, may have new conductors swaying over their homes. The new towers are moving south by about 55 feet (centerline to centerline).

In addition, between Towers 6N16 and 6N17 (just west of Hwy 62), the new towers would move south so the conductor moves about 60 feet closer to a residence (but not within its parcel boundary).

Four questions:

- a. What is SCE's acceptable setback distance for a residence from a 220 kV tower line ROW? What is the SCE policy on conductor sway and its proximity to residences?

- b. Is SCE proposing to purchase in fee these or any other parcels as part of this project?
- c. Does SCE believe that all components of the proposed new towers (6N38, 6N39, 6N40, 6N41), including conductors at maximum sway, would remain within the current ROW boundaries?
- d. What is the typical width of the crossarms illustrated in PEA Figure 3.1-4 (Typical Transmission Structures), and the anticipated maximum width of conductor sway?