

*Southern California Edison*  
**Moorpark-Newbury A.13-10-021**

**DATA REQUEST SET A1310021 Moorpark-Newbury-ED-SCE-04**

**To:** ENERGY DIVISION  
**Prepared by:** Sheridan Mascarenhas  
**Title:** Field Engineering Project Manager  
**Dated:** 02/24/2015

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**Question Q.01:**

Provide details regarding System Alternative 2 (the reconductoring alternative) identified in the Proponent's Environmental Assessment (PEA), including the specific line segments that would be reconducted, distances of the replaced segments, the need to replace existing poles, the size and ampacity (normal and emergency) of the new conductor, as well as the ampacity information for the existing conductors (for purposes of this discussion, conductors refer to the lines connecting Moorpark and Thousand Oaks substations to Newbury Substation).

**Response to Question Q.01:**

The length of conductor that would need to be upgraded on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line (Moorpark segment) and Newbury-Thousand Oaks 66 kV Subtransmission Line (entire line) are approximately 7.3 miles and 12.6 miles respectively.

The normal and emergency capacities of the existing and potential new conductors are identified in the table below. Note, SCE understands that the CPUC is asking for "capacity" (in MVA) rather than "ampacity" and this table is presented accordingly.

Subtransmission Line	Existing 653 ACSR Conductors		New 954 ACSR/SAC Conductor (Reconducted)	
	Normal	Emergency	Normal	Emergency
Moorpark-Newbury-Pharmacy	105 MVA	142 MVA	125 MVA	168 MVA
Thousand Oaks-Newbury	105 MVA	142 MVA	125 MVA	168 MVA

With respect to the need to replace existing poles, there are approximately 485 poles/towers on the 66 kV lines in question. SCE believes the responses to this Data Request set provide sufficient information to show why System Alternative 2 is not a recommended solution because it does not address the voltage violations at Newbury and Pharmacy substations. In addition, preliminary studies (refer to SCE's Response to Question 2 and related attachments) show that System Alternative 2 does not address an additional N-1 overload that is projected on the Moorpark-Thousand Oaks No. 1 66 kV Subtransmission Line.

However, should the CPUC disagree and wish to consider this Alternative further, SCE will need to allocate resources to determine how many of these poles/towers will require replacement due to the need for taller poles to accommodate the new conductor, and whether any poles/towers require replacement for other reasons, such as deterioration. SCE will be able to provide an estimate if the CPUC wishes to pursue this alternative. Please notify SCE as soon as possible if the CPUC wishes for SCE to do so.

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**Question Q.02:**

Conduct power flow studies (and provide results in the form of power flow plots) assuming implementation of System Alternative 2 (for both the Moorpark-Newbury-Pharmacy line and the Thousand Oaks-Newbury line).

**Response to Question Q.02:**

Three power flow plots have been provided. They represent the load flows in 2026 (the year the violations first occur) with both the Moorpark segment of Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the entire Newbury-Thousand Oaks line reconducted from 653 ACSR to 954 SAC. The three plots represent:

- § Basecase
- § N-1 loss of Moorpark-Newbury-Pharmacy (including Pharmacy load)
- § N-1 loss of Moorpark segment of Moorpark-Newbury-Pharmacy (assuming Pharmacy load picked up)

Annotations have been provided on the power flow plots and demonstrate the following:

- § Under basecase, no violations occur
- § Under N-1 loss of Moorpark-Newbury-Pharmacy (including Pharmacy load), voltage violation of >5% occurs at Newbury
- § Under N-1 loss of Moorpark segment of Moorpark-Newbury-Pharmacy (assuming Pharmacy load picked up), voltage violations at Newbury and Pharmacy >5% and N-1 line overload on the Moorpark-Thousand Oaks #1 line

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**Question Q.03:**

Conduct analysis and provide results to show the load level and years at which SCE would expect voltage or line loading violations under normal and emergency conditions under System Alternative 2.

**Response to Question Q.03:**

Please see response to Question 2.

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**Question Q.04:**

Provide power flow studies assuming implementation of System Alternative 2 to illustrate the impact of connecting Camgen during any violations identified as a result of item 3, above (i.e., to what extent would the Camgen generator assist in mitigating voltage or line overloads?).

**Response to Question Q.04:**

Three power flow plots have been provided. They represent the load flows in 2026 (the year the violations first occur) with both the Moorpark segment of Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the entire Thousand Oaks-Newbury 66 kV Subtransmission Line reconducted from 653 ACSR to 954 SAC and Camgen reconnected to the Newbury-Thousand Oaks 66 kV Subtransmission Line. The three plots represent:

- § Basecase
- § N-1 loss of Moorpark-Newbury-Pharmacy (including Pharmacy load)
- § N-1 loss of Moorpark segment of Moorpark-Newbury-Pharmacy (assuming Pharmacy load picked up)

Annotations have been provided on the power flow plots and demonstrated the following:

- § Under basecase, no violations occur
- § Under N-1 loss of Moorpark-Newbury-Pharmacy (including Pharmacy load), no violations occur
- § Under N-1 loss of Moorpark segment of Moorpark-Newbury-Pharmacy (assuming Pharmacy load picked up), voltage violations at Newbury and Pharmacy >5%