

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

DATA REQUEST SET A1310021 Moorpark-Newbury-ED-SCE-07

To: ENERGY DIVISION
Prepared by: Sheridan Mascarenhas
Title: Field Engineering Project Manager
Dated: 08/27/2015

Question 01:

In its comments on the Draft EIR dated July 27, 2015, SCE indicates that need for the Proposed Project has been confirmed using its recently approved 10-year planning forecast data for 2015 - 2024. Please provide the associated power flow studies for the existing base case as well as for the N-1 abnormal system condition.

Response to Question 01:

Please see the attached CEII files showing the power flow studies for the base case and N-1 abnormal system condition (with the existing system facilities) for projected overloads on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the projected voltage drops at the Newbury Substation 66 kV bus.

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Question 02:

Please also provide the 2015 - 2024 power flow studies for the base case as well as for the N-1 abnormal system condition under the following Draft EIR alternative scenarios: Alternative 1, Reconductoring; Alternative 4, Reconnect the Camgen Generator to the Moorpark System; and the combination of Alternatives 1 and 4, Reconductoring plus Camgen Reconnection. For each power flow study, indicate the first year when a voltage violation is projected and first year when a line overload is projected.

Response to Question 02:

Please see the attached files for the associated power flow studies for the existing base case and N-1 abnormal system condition for violations on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the Newbury Substation 66 kV bus.

For the **Base Case** scenario, the following observations were made.

Alternative	Year of overload	Overloaded component	Overload	Percent Overload
Alternative 1 (line reconductor)	2023	Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line	130.0 MVA	100.50%
Alternative 4 (Camgen reconnection)	No overload from 2015 through 2024	None	N/A	N/A
Alternative 1 + Alternative 4	No overload from 2015 through 2024	None	N/A	N/A

For the **N-1 scenario** (loss of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line), the following voltage observations were made.

Alternative	Year of violation	Newbury Substation Voltage (before N-1 event)	Newbury Substation Voltage (after N-1 event)	Newbury Substation Voltage (after Pharmacy reconnection)	Total Voltage Drop	Total Percent Voltage Drop
Alternative 1 (line reconductor)	2015	1.033 per unit	0.986 per unit	0.851 per unit	0.182 per unit	18.2%
Alternative 4 (Camgen reconnection)	2015	1.018 per unit	1.008 per unit	0.952 per unit	0.066 per unit	6.6%
Alternative 1 + Alternative 4	2015	1.029 per unit	1.017 per unit	0.963 per unit	0.066 per unit	6.6%

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Question 03:

Confirm whether or not the power flow studies conducted by SCE for the reconductoring alternative as described in SCE responses to CPUC Data Request 4 assume that a portion of the reconductoring would be with 954 SAC conductor. If so, describe why 954 ACSR conductor would not be exclusively used for reconductoring given that it has a higher standard rating than 954 SAC.

Response to Question 03:

The power flow studies performed for the reconductoring alternative in response to CPUC Data Request 4 assume all line segments would be 954 SAC upon completion of the reconductoring project.

The capacity of each conductor is listed below.

Conductor	Rating (amps)	
	Normal	Emergency
954 SAC	1090	1470
954 ACSR	1100	1483

As seen in the table above, the capacity of each conductor type is essentially the same value (less than a 1% difference). SCE originally analyzed the reconductoring alternative using 954 SAC because it is lighter and more economical. Additional engineering would be required for this alternative in order to confirm that SCE would ultimately use 954 SAC. Given the insignificant incremental increase in capacity, the use of 954 ACSR would not materially increase the efficacy of this alternative. In addition, if 954 ACSR were to be used, it could potentially lead to the need for additional pole replacements and/or interset poles in order to accommodate the heavier conductor.

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Question 05:

Confirm that the 2015 – 2024 forecast data and power flow studies requested above use “Likely Case” forecast data, as opposed to the “High Case” data used in the 2013 – 2022 and earlier forecasts.

Response to Question 05:

The 2015-2024 forecast data and power flow studies used the "likely case" forecast data. Please note, SCE no longer uses any other planning scenario.