

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

DATA REQUEST SET A1310021 Moorpark-Newbury-ED-SCE-03

To: ENERGY DIVISION
Prepared by: Sheridan Mascarenhas
Title: Field Engineering Project Manager
Dated: 10/20/2014

Question Q.01:

Provide updated system power flow diagrams similar to PEA Confidential Attachments B, C, and D for the 2013 transmission plan, updated utilizing 2014 plan data. Perform necessary contingency analysis and note years when, and locations where: voltage and reliability become issues, magnitude of voltage become issues, and line overloads. Assume this system configuration as the Base Case for following analysis.

Response to Question Q.01:

Please see attached files for updated system power flow diagrams similar to PEA Confidential Attachments B, C and D utilizing the 2014 plan data. Please note that SCE has discontinued the use of its High Case analysis for the evaluation of its subtransmission system in its 2014 - 2023 Peak Demand forecast, and accordingly, the power flow analyses used in each of the responses in this data request set use Likely Case forecast data. Note the practical effect of using Likely Case rather than the previous High Case analysis actually results in a lower peak demand forecast.

Please note the following observations.

- 1) The Voltage Drop identified in PEA Confidential Attachments B and C is forecasted at 5.0% in the year 2020, using the updated 2014 - 2023 Peak Demand Forecast data.
- 2) The Base Case overload identified in PEA Confidential Attachment C is forecasted at 100.7% in the year 2021, using the updated 2014 - 2023 Peak Demand Forecast data.

PLEASE NOTE THE ATTACHMENTS TO THIS DATA REQUEST CONTAIN PROTECTED MATERIAL, INCLUDING CRITICAL ENERGY INFRASTRUCTURE INFORMATION, AND SHOULD NOT BE MADE PUBLICLY AVAILABLE.

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Question Q.02:

Provide update of area substation load forecast similar to PEA Confidential Attachment A.

Response to Question Q.02:

Please see attached file updated with area substation load forecast similar to PEA Confidential Attachment A utilizing the 2014 - 2023 Peak Demand Forecast data.

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Question Q.03:

Provide results of above power flow (Base Case and contingency cases) analysis with the Proposed Project in service.

Response to Question Q.03:

Please see attached files for 2021 Base Case and contingency case power flow results with the Proposed Project in service. Please note, power flows for 2020 are not provided due to the fact that, as expected, no voltage drop violations or line overloads are expected to occur in that year.

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Question Q.04:

Provide results of above power flow (Base Case and contingency cases) analysis with PEA System Alternative 2 (reconductor option) in service.

Response to Question Q.04:

Please see results of power flow analysis with PEA System Alternative 2 (reconductor option) in service.

Notes:

- The table below provides the percent loading on the section of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that would be reconducted under PEA System Alternative 2.
- Power flow analysis performed for the results below assumes that the proposed project (new Moorpark-Newbury 66 kV Subtransmission Line) would NOT be in service.
- Results below only provide power flow analysis results and do not take into consideration any other issues with this Alternative such as those discussed in Section 5.2.5.2 of the PEA.

Base Case

Forecast Year	Percent Loading on Line
2014	93.4%
2015	94.2%
2016	95.2%
2017	95.6%
2018	96.8%
2019	98.1%
2020	97.6%
2021*	83.9%
2022*	85.6%
2023*	85.9%

* Assumes that PEA System Alternative 2 would be in service, commencing in the year 2021.

Contingency Case

With the contingency case as the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line out of service, no system operating violations have been observed.

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Question Q.05:

Provide results of above power flow (Base Case and contingency cases) analysis assuming CAMGEN unit is connected to the Moorpark system.

Response to Question Q.05:

Please see results of power flow analysis assuming the Camgen unit connected to the Moorpark System and in service.

Notes:

- The table below provides the percent loading on the line section of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that is forecasted to be overloaded in the year 2021.
- Power flow analysis performed for the results below assumes that the proposed project (new Moorpark-Newbury 66 kV Subtransmission Line) is NOT in service.
- Results below only provide power flow analysis results and not the potential "issues and currently known potential problems" that have been requested in Question 7.
- Power flow analysis performed for the results below assume that the Camgen Generator remains reliable up to the end of year 2023.

Base Case

Forecast Year	Percent Loading on Line
2014	93.4%
2015	94.2%
2016	95.2%
2017	95.6%
2018	96.8%
2019	98.1%
2020	97.6%
2021*	88.5%
2022*	89.7%
2023*	90.2%

* Assumes that the CAMGEN Unit would be connected to the Moorpark System and would be in service, commencing in the year 2021 (the currently forecasted overload year for the

Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line).

Contingency Case

With the contingency case as the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line out of service, no system operating violations have been observed.

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Question Q.06:

Provide results of above power flow (Base Case and contingency cases) analysis with PEA System Alternative 2 (reconductor option) project and assuming CAMGEN unit is connected to the Moorpark system.

Response to Question Q.06:

Please see Base Case table below showing results of power flow analysis with PEA System Alternative 2 in service and assuming the Camgen unit connected to the Moorpark System and in service.

Notes:

- The table below provides the percent loading on the section of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that would be reconducted under PEA System Alternative 2.
- Power flow analysis performed for the results below assumes that the proposed project (new Moorpark-Newbury 66 kV Subtransmission Line) is NOT in service.
- Results below only provide power flow analysis results. Results below only provide power flow analysis results and not the potential "issues and currently known potential problems" that have been requested in Question 7.
- Power flow analysis performed for the results below assume that the Camgen Generator remains reliable up to the end of year 2023.

Base Case

Forecast Year	Percent Loading on Line
2014	93.4%
2015	94.2%
2016	95.2%
2017	95.6%
2018	96.8%
2019	98.1%
2020	97.6%
2021*	74.3%
2022*	74.9%

2023*	76.3%
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* Assumptions

1. PEA System Alternative 2 would be in service, commencing in the year 2021.
2. The CAMGEN Unit would be connected to the Moorpark System and would be in service, commencing in the year 2021.

Contingency Case

With the contingency case as the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line out of service, no system operating violations have been observed.