

Southern California Edison
San Joaquin Cross Valley Loop Project A.08-05-039

DATA REQUEST SET SJXVL CPUC-ED-02

To: ENERGY DIVISION
Prepared by: Robert J. Tucker
Title: Power System Planner
Dated: 06/23/2008

Question 01:

Please identify any equipment upgrades (reconductoring, improvements, etc.) that are not already described in the PEA that SCE is planning to undertake in the next five years to the electrical system that falls within the boundaries of the Electrical Needs Area illustrated in Figure 1.1. Please superimpose these projects on a map of the proposed SJXVL project with footnotes that describe the purpose and function of the upgrade.

Response to Question 01:

On the 220 kV system, two circuit breakers at Rector Substation are planned to be replaced in 2009. In addition, there are plans in 2009 to replace the existing overhead ground wire (OHGW) on the Big Creek 3-Rector 220-kV transmission line north of Rector Substation with optical ground wire (OPGW) as part of a telecommunications system upgrade.

While the Big Creek Corridor 220 kV transmission system delivers power to the Rector 220 kV bus (sometimes referred to as the "source bus" feeding the Electrical Needs Area), the Rector 66 kV subtransmission system consists of lower voltage facilities (generally 66 kV, 12 kV and 4.16 kV) that take power from this source bus and deliver/distribute it to end use customers within the Electrical Needs area. The planned upgrades in the Rector 66 kV subtransmission system are listed below.

2008: Riverway Substation (66/12 kV) is operational

2008: Rector Substation (66/12 kV) Add 28.8 MVAR to 66 kV switched capacitor bank

2009: Riverway Substation (66/12 kV) Add four 12 kV circuits

2009: Venida Substation (66/12 kV) Increase transformer capacity from 25 MVA to 56 MVA

2009: Tulare Substation (66/12 kV) Increase transformer capacity from 100.8 MVA to 112 MVA

2009: Tulare Substation (66/12 kV) Add one 12 kV circuit

2009: Hanford Substation (66/12 kV) Increase transformer capacity from 112.0 MVA to 140 MVA

2009: Hanford Substation (66/12 kV) Add one 12 kV circuit

2009: Hanford Substation (66/12 kV) Reconductor bus

2009: Hanford Substation (66/12 kV) Replace 2000 Amp breaker with 3000 Amp breaker

2010: Visalia Substation (66/12 kV) Reconductor bus
2010: Visalia Substation (66/12 kV) New breaker
2010: Divisadero Substation (12/4.16) Remove facilities
2010: Tulare Substation (66/12 kV) Add one 12 kV circuit
2010: Venida Substation (66/12 kV) Add one 12 kV circuit
2010: Woodlake Substation (12/12 kV) Decommission
2010: New Rector-Goshen-Liberty 66 kV subtransmission line
2010: Rector Substation (66/12 kV) Install 28.8 MVAR 66 kV switched capacitor bank

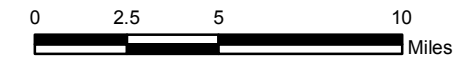
2011: Hanford Substation (66/12 kV) Reconductor operating bus and transfer bus
2011: Rector Substation (66/12 kV) Increase transformer capacity from 56 to 84 MVA
2011: Tulare Substation (66/4.16 kV) Removal of 4 kV banks
2011: Mascot Substation (66/12 kV) (new) 56 MVA, 9.6 MVAR, four 12 kV circuits, 14.4 MVAR 66 kV capacitor, with 66 kV subtransmission line support
2011: Rector Substation (66/12 kV) Add one 12 kV circuit
2011: Liberty Substation (66/12 kV) Add two 12 kV circuits
2011: Reconductor Rector-Oak Grove 66 kV subtransmission line
2011: Hanford Substation (66/12 kV) Decrease transformer capacity from 140.0 to 112.0 MVA

2012: Riverway Substation (66/12 kV) Add one 12 kV circuit
2012: Mascot Substation (66/12 kV) Add one 12 kV circuit
2012: Rector Substation (66/12 kV) Add one 12 kV circuit
2012: Reconductor Rector-Riverway 66 kV subtransmission line

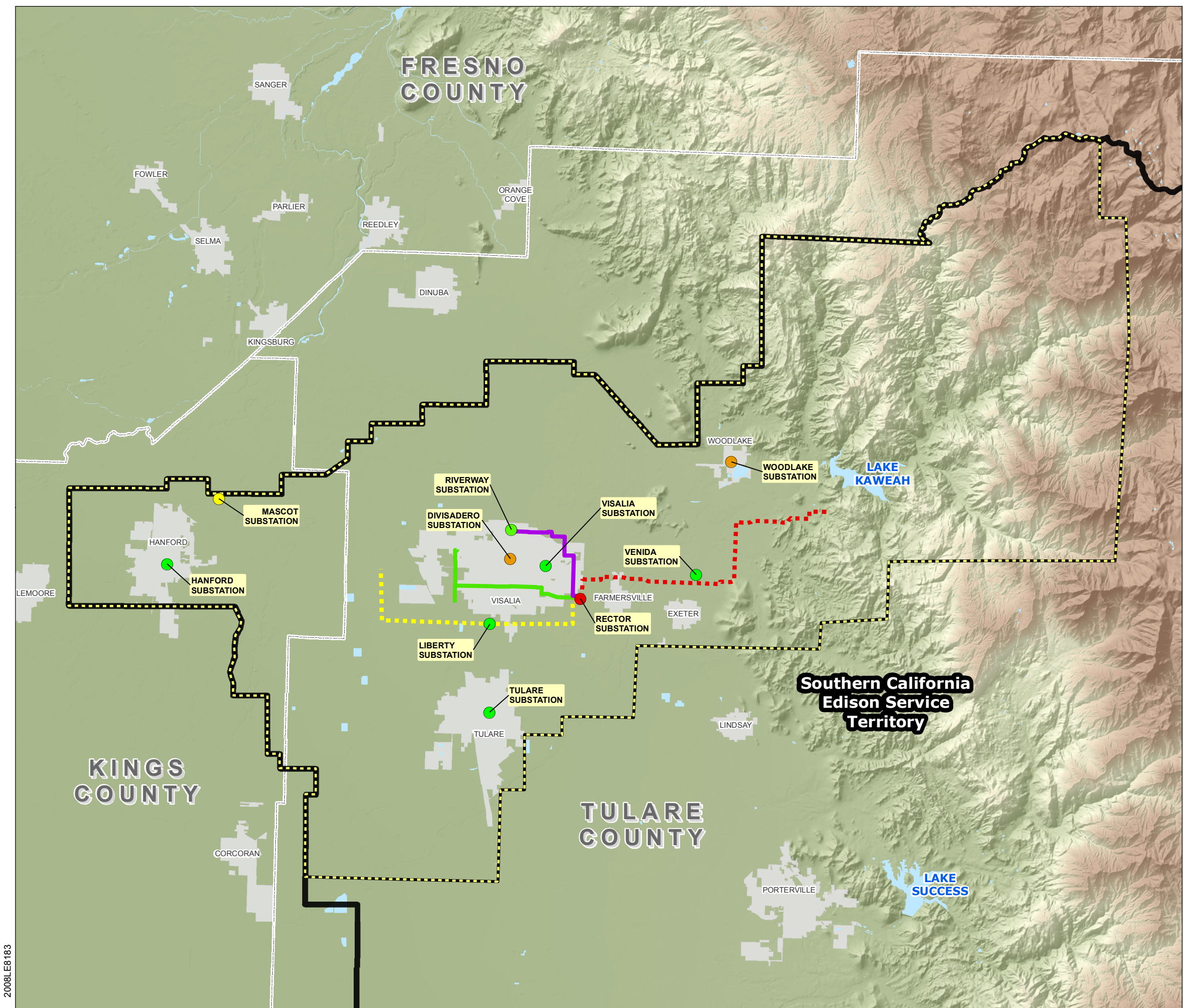
The locations of these upgrades are shown on the attached figure entitled, "Planned Upgrades to the Electrical System within the Electrical Needs Area, 2008 - 2012".

Planned Upgrades to the Electrical System within the Electrical Needs Area 2008-2012

- San Joaquin Cross Valley Loop Project
- Planned Rector-Goshen-Liberty 66 kV Transmission Line
- Planned 66 kV Substation (Estimated Location)
- Existing SCE Substation Planned Upgrades**
 - 12 kV
 - 66 kV
 - 220 kV
- Existing 66 kV Transmission Line Planned Upgrades**
 - Rector-Riverway
 - Rector-Oak Grove No. 2
- Electrical Needs Area
- SCE Service Territory Boundary (SCE, 2006)
- County Boundaries (TBM, 2008)
- Water Features (TBM, 2008)
- Cities (TBM, 2008)



Features depicted herein are planning level accuracy, and intended for informational purposes only. Distances and locations may be distorted at this scale. Always consult with the proper legal documents or agencies regarding such features.
 © Corporate Real Estate Department, REO – Survey and Mapping
 Thomas Bros. Maps is a registered trademark of Rand McNally & Company. Reproduced with permission granted by Rand McNally & Company. © Rand McNally & Company. All rights reserved.



2008LE183