

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE

SAN FRANCISCO, CA 94102-3298



April 25, 2011

Melvin Stark  
Manager, Maintenance & Inspection  
Southern California Edison  
2885 W. Foothill Blvd.  
Rialto, CA 92376

**SUBJECT:** Electric Audit of SCE's Tehachapi District

Dear Mr. Stark:

On behalf of the Utilities Safety and Reliability Branch of the California Public Utilities Commission, Ben Brinkman and I conducted an Electric Audit of Southern California Edison's (SCE) Tehachapi District from March 7 – 11, 2011. The audit included a review of SCE's records and field inspections of SCE's facilities that had been recently inspected by SCE staff.

During the audit, I identified violations of General Orders (GO) 95 and 165. A copy of the violations is enclosed. In addition, I examined pole loading calculations that SCE performed on Pole number 4121645E, a new pole, dated February 24, 2011. The calculations indicated that the bending and buckling safety factors were 8.23 and 10.09, respectively. However, the calculations did not take into account a communications service drop, and also utilized an incorrect SCE down guy wire attachment height. Corrected pole loading calculations were performed on March 11, 2011. These new calculations indicated that the bending and buckling safety factors were 8.10 and 4.04, respectively.

When performing pole loading calculations, all of the facilities on the pole should be considered, and accurate values should be used.

Please advise me no later than May 27, 2011, by electronic or hard copy, of all corrective measures taken by SCE to remedy and prevent such violations.

If you have any questions, you can contact me at (213) 576-6850.

Sincerely,

A handwritten signature in black ink, appearing to read "Derek Fong".

Derek Fong  
Utilities Engineer  
Utilities Safety and Reliability Branch  
Consumer Protection and Safety Division

Enclosure: Audit Summary

Cc: John Deng, Technical Specialist 3, SCE, Santa Ana  
Moses Varela, Manager, Program Contract 3, SCE, Ventura

## AUDIT SUMMARY

**Company: SCE – Tehachapi District**  
**Electric Audit**  
**Date: March 7 – 11, 2011**

The following violations were observed:

1. **GO 95, Rule 54.8C(4): Above or below Supply Service Drops**  
*“The radial clearance between communication service drop conductors and supply service drop conductors may be less than 48 inches as specified in Table 2, Column C, Cases 4 and 9; Column D, Cases 3 and 8, but shall be not less than 24 inches. Where within 15 feet of the point of attachment of either service drop on a building, this clearance may be further reduced but shall be not less than 12 inches”.*
  - 1) Pole 4010130E – an SCE service drop had less than a 24 inch separation from a communications cable 15 feet from the point of attachment. This was not documented by SCE when it inspected the pole on 9/2/10.
  - 2) Pole X17490 – an SCE service drop had less than a 24 inch separation from a communications cable 15 feet from the point of attachment. This was not documented by SCE when it inspected the pole on 7/21/10.
  - 3) Pole 1938283E – an SCE service drop had less than a 24 inch separation from a communications cable 15 feet from the point of attachment. This was not documented by SCE when it inspected the pole on 6/30/10.
  
2. **GO 95, Rule 38: Minimum Clearances of Wires from other Wires**  
*Table 2, Case 19, Column C requires that the radial separation between guy wires and communication conductors supported on the same poles be at least 3 inches.*
  - 1) Pole 2305940E – an SCE down guy wire was in contact with a communications cable. This was not documented by SCE when it inspected the pole on 10/22/10.
  - 2) Pole 1820767E – an SCE down guy wire was in contact with a communications cable. This was not documented by SCE when it inspected the pole on 6/29/10.

3. **GO 95, Rule 51.6A: High Voltage Marking**

*"Poles which support line conductors of more than 750 volts shall be marked with high voltage signs. This marking shall consist of a single sign showing the words "HIGH VOLTAGE", or pair of signs showing the words "HIGH" and "VOLTAGE", not more than six inches in height with letters not less than 3 inches in height. Such signs shall be of weather and corrosion-resisting material, solid or with letters cut out therefrom and clearly legible".*

- 1) Pole 2003713E was missing a high voltage sign. This was not documented by SCE when it inspected the pole on 6/29/10.
- 2) Pole 4136407E had a damaged high voltage sign. This was not documented by SCE when it inspected the pole on 6/30/10.

4. **GO 95, Rule 54.7: Climbing and Working Space**

*"Climbing space shall be maintained from the ground level. Climbing space, measured from the center line of pole, shall be provided on one side or in one quadrant of all poles or structures ..."*

- 1) Pole 4011414E had a communications cable in the climbing space. This was not documented by SCE when it inspected the pole on 9/2/10.
- 2) Pole 2238397E had a communications cable in the climbing space. This was not documented by SCE when it inspected the pole on 10/22/10.
- 3) Pole 1820772E had a communications ground wire across the climbing space. This was not documented by SCE when it inspected the pole on 6/29/10.
- 4) Pole 2227550E had a communications cable in the climbing space. This was not documented by SCE when it inspected the pole on 6/30/10.

5. **GO 95, Rule 91.3A(1): Use of Steps**

*"Poles with Vertical Runs or Risers: All jointly used poles which support supply conductors shall be provided with pole steps if vertical runs or risers are attached to the surface of such poles..."*

- 1) Pole 4073198E, a jointly-used pole with a vertical run, did not have pole steps. This was not documented by SCE when it inspected the pole on 9/2/10.
- 2) Pole 4418419E, a jointly-used pole with a vertical run, did not have pole steps. This was not documented by SCE when it inspected the pole on 10/21/10.

6. **GO 95, Rule 86.2: Overhead Guys, Anchor Guys and Span Wires**

*"They [guys] shall be maintained taut and of such strength as to meet the safety factors of Rule 44."*

- 1) Pole X17274E – an SCE down guy wire was not taut. This was not documented by SCE when it inspected the pole on 9/2/10.

**7. GO 95, Rule 31.1: Design, Construction and Maintenance**

“Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service”.

Pole 4203186E had a damaged riser. This was not documented by SCE when they inspected the pole on 6/30/10.

**8. GO 165, Section IV – Standards for Inspection, Record-keeping, and Reporting, states:**

*“For all inspections, within a reasonable period, company records shall specify the circuit, area, or equipment inspected, the name of the inspector, the date of the inspection, and any problems identified during each inspection, as well as the scheduled date of corrective action.”*

During the audit, I identified 97 work orders, from 2008 to 2011, that were completed late.