

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



October 3, 2023

TA2023-1067

Melvin Stark  
Principal Manager, T&D Compliance Integration  
Southern California Edison  
1 Innovation Way  
Pomona, CA 91786

Subject: Transmission Audit of Southern California Edison's Orange Grid

Mr. Stark:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Mily Vaidya and Jose Lastra of my staff conducted an electric transmission audit of Southern California Edison's (SCE) Orange Grid from May 22, 2023 to May 26, 2023. The audit included a review of SCE's records and field inspections of SCE's facilities.

During the audit, my staff identified violations of one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. Please advise me no later than November 3, 2023, by electronic or hard copy, of all corrective measures taken by SCE to remedy and prevent the recurrence of such violations.

If you have any questions concerning this audit, you can contact Mily Vaidya at (213) 999-8528 or [Mily.Vaidya@cpuc.ca.gov](mailto:Mily.Vaidya@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Fadi Daye".

Fadi Daye, P.E.  
Program and Project Supervisor  
Electric Safety and Reliability Branch  
Safety and Enforcement Division  
California Public Utilities Commission

Enclosures: Audit Findings

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC  
Nika Kjensli, Program Manager, ESRB, CPUC  
Mily Vaidya, Utilities Engineer, ESRB, CPUC  
Jose Lastra, Utilities Engineer, ESRB, CPUC

## AUDIT FINDINGS

### I. Records Review

During the audit, my staff reviewed the following records:

- Circuit facility inspection records.
- Completed and pending corrective action work orders.
- Pole loading calculations.
- Tower Structure Analysis Records
- Safety hazard notifications.
- Intrusive test records
- SCE's documented inspection program.

### II. Records Review – Violations List

My staff observed the following violations during the records review portion of the audit:

**GO 95, Rule 18, Rule 18-B1, Maintenance Programs**, states in part:

*Companies shall undertake corrective actions within the time periods stated for each of the priority levels set forth below. Scheduling of corrective actions within the time periods below may be based on additional factors, including the following factors, as appropriate ...*

**GO 95, Rule 31.1, Design, Construction and Maintenance**, states in part:

*For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.*

SCE's records indicated that from January 2021 to April 2023, there were 236 "pending" work orders that were past SCE's scheduled due date.

### III. Field Inspections

My staff inspected the following facilities during the field inspection:

No.	Structure ID	Structure	Location
1	OH7011136 (M8/T2)	Steel Tower	Santa Ana
2	OH7011135(M8/T1)	Steel Tower	Santa Ana
3	2340630E	Wood Pole	Santa Ana
4	2340743E	Wood Pole	Santa Ana
5	2340744E	Wood Pole	Santa Ana
6	1631462E	Wood Pole	Santa Ana
7	1631458E	Wood Pole	Santa Ana
8	1631457E	Wood Pole	Santa Ana
9	4438059E	Wood Pole	Santa Ana
10	4438058E	Wood Pole	Santa Ana
11	2018979E	Wood Pole	Irvine
12	2018980E	Wood Pole	Irvine
13	2018981E	Wood Pole	Irvine
14	2018982E	Wood Pole	Irvine
15	2018983E	Wood Pole	Irvine
16	2018978E	Wood Pole	Irvine
17	2018977E	Wood Pole	Irvine
18	2018976E	Wood Pole	Irvine
19	OH7011077 (M5/T8)	Wood Pole	Irvine
20	OH7011079 (M5/T9)	Wood Pole	Irvine
21	OH7011080 (M6/T1)	Wood Pole	Irvine
22	4247834E	Steel Tower	Mission Viejo
23	OH7013195 (M0/T2)	Steel Tower	Mission Viejo
24	4553707	Steel Tower	Mission Viejo
25	4247835E	Steel Tower	Mission Viejo
26	4553709E	Steel Tower	Mission Viejo
27	7013196	Steel Tower	Mission Viejo
28	7010769 (M20/T2)	Steel Tower	Mission Viejo
29	7013193 (M12/T7)	Steel Tower	Mission Viejo
30	7010768 (M20/T1)	Steel Tower	Mission Viejo
31	7013192 (M12/T6)	Steel Tower	Mission Viejo
32	4197397E	Wood Pole	Lake Forest
33	4256378E	Wood Pole	Lake Forest
34	4197398E	Wood Pole	Lake Forest
35	4197399E	Wood Pole	Lake Forest
36	4197400E	Wood Pole	Lake Forest
37	4197352E	Wood Pole	Lake Forest
38	4197401E	Wood Pole	Lake Forest
39	2140156E	Steel Tower	Lake Forest
40	4197390E	Wood Pole	Lake Forest
41	2140157E	Wood Pole	Lake Forest
42	2140158E	Wood Pole	Lake Forest
43	2140159E	Wood Pole	Lake Forest

44	4219947E	Wood Pole	Lake Forest
45	2140161E	Wood Pole	Lake Forest
46	2140162E	Wood Pole	Lake Forest
47	2140366E	Wood Pole	Lake Forest
48	2099694E	Wood Pole	Lake Forest
49	2099693E	Wood Pole	Lake Forest
50	2099692E	Wood Pole	Lake Forest
51	2099691E	Wood Pole	Lake Forest
52	2099690E	Wood Pole	Lake Forest
53	2099689E	Wood Pole	Lake Forest
54	2099688E	Wood Pole	Lake Forest
55	2099687E	Wood Pole	Lake Forest
56	2099686E	Wood Pole	Lake Forest
57	2099685E	Wood Pole	Lake Forest
58	4231966E	Wood Pole	Lake Forest
59	4231967E	Wood Pole	Lake Forest
60	2099682E	Wood Pole	Lake Forest
61	2099681E	Wood Pole	Lake Forest
62	1956510E	Wood Pole	Lake Forest
63	1977803E	Wood Pole	Lake Forest
64	4685695E	Wood Pole	Lake Forest
65	1977805E	Wood Pole	Lake Forest
66	VT6001155	Vault	Irvine
67	VT6001154	Vault	Irvine
68	VT48256	Vault	Irvine
69	VT48255	Vault	Irvine
70	VT6001171	Vault	Irvine
71	VT48277	Vault	Irvine
72	VT48270	Vault	Irvine
73	VT48252	Vault	Irvine
74	VT48253	Vault	Irvine
75	VT48254	Vault	Irvine
76	VT48186	Vault	Yorba Linda
77	VT48317	Vault	Yorba Linda
78	VT48318	Vault	Yorba Linda
79	VT48290	Vault	Yorba Linda
80	VT48330	Vault	Yorba Linda
81	1736939E	Wood Pole	Yorba Linda
82	1736940E	Wood Pole	Yorba Linda
83	1736941E	Wood Pole	Yorba Linda
84	1736942E	Wood Pole	Yorba Linda
85	1736943E	Wood Pole	Yorba Linda
86	1736944E	Wood Pole	Yorba Linda
87	1736945E	Wood Pole	Yorba Linda
88	1736946E	Wood Pole	Yorba Linda
89	1736947E	Wood Pole	Yorba Linda
90	1736948E	Wood Pole	Yorba Linda
91	4798000E	Wood Pole	Yorba Linda
92	1736950E	Wood Pole	Yorba Linda

93	1640498E	Wood Pole	Yorba Linda
94	1700052E	Wood Pole	Yorba Linda
95	1736848E	Wood Pole	Yorba Linda
96	1736851E	Wood Pole	Yorba Linda
97	1736852E	Wood Pole	Yorba Linda
98	1736853E	Wood Pole	Yorba Linda
99	1736854E	Wood Pole	Yorba Linda
100	1736850E	Wood Pole	Yorba Linda

#### **IV. Field Inspection Violations List**

My staff observed the following violations during the field inspections portion of the audit:

**GO 95, Rule 51.6, Marking and Guarding, High Voltage Marking of Poles**, states in part:

*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 (6) inches in height with letters not less than 3 inches in height. A pair of signs may be stacked to a height of no more than 12 inches. Such signs shall be of weather and corrosion-resisting material, solid or with letters cut out therefrom and clearly legible.*

The high voltage signs on each of the following poles were either missing or damaged:

- OH7011077 (M5/T8)
- OH7011080 (M6/T1)
- 4197399E
- 2099688E
- 1736942E
- 1736945E

**GO 95, Rule 56.2 Overhead Guys, Anchor Guys and Span Wires, Use**, states in part:

*Guys shall be attached to structures as nearly as practicable at the center of load. They shall be maintained taut and of such strength as to meet the safety factors of Rule 44.*

The SCE down guy wire supporting pole 1736848E was not taut.

**GO 95, Rule 61.6, Marking and Guarding**, states in part:

*All towers shall be equipped with signs designed to warn the public of the danger of climbing same. Additionally, such signs shall include a graphic depiction of the dangers of falling or electrocution associated with climbing the towers. Such signs shall be placed and arranged so that they may be read from the four corners of the tower.*

Warning signs attached to the SCE transmission tower OH7011135 (M8/T1) were illegible/missing from all four corners of the tower.

**GO 95, Rule 91.3 C, Poles, Towers and Structures, Stepping, states in part:**

*Where installed, the lowest step shall not be less than 8 feet from the ground line, or any easily climbable foreign structure from which one could reach or step. Above this point steps shall be placed, with spacing between steps on the same side of the pole not exceeding 36 inches, at least to that conductor level above which only circuits operated and maintained by one party remain. Steps or fixtures for temporary steps shall be installed as part of a pole restoration process. Steps shall be so placed that runs or risers do not interfere with the free use of the steps.*

Steps on the following transmission poles were lower than the minimum 8 feet from the ground line or from any easily climbable foreign structure:

- 1736940E
- 1736946E
- 1736948E

**GO 128, Rule 35.3, Warning Signs, states in part:**

*Warning signs indicating high voltage shall be installed on an interior surface, or barrier if present, inside the entrance of vaults, manholes, handholes, pad mounted transformer compartments, and other above ground enclosures containing exposed live parts above 750 volts. Such warning signs shall also be installed on an exterior surface of all such pad mounted transformer compartments and other above ground enclosures. Such signs shall be clearly visible to a person in position to open any such access door, other opening, or barrier.*

The high voltage signs on each of the following vaults were either missing or damaged:

- VT 6001155
- VT 48255
- VT 48270
- VT 48318