

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



April 12, 2021

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

TA2020-883

Subject: Transmission Audit of Southern California Edison's North Coast District

Mr. Stark:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Eric Ujiiye and Kyle King of my staff conducted an electric transmission audit of Southern California Edison's (SCE) North Coast District from October 26, 2020 to October 30, 2020. 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 May 12, 2021, by electronic or hard copy, of all corrective measures taken by SCE to remedy and prevent the recurrence such violations.

If you have any questions concerning this audit, you can contact Eric Ujiiye at (213) 620-2598 or eric.ujiiye@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
Eric Ujiiye, 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 165, Section IV, Transmission Facilities, states in part:

Each utility shall prepare and follow procedures for conducting inspections and maintenance activities for transmission lines.

GO 95, Rule 31.2, Inspection of Lines, states in part:

Lines shall be inspected frequently and thoroughly for the purpose of insuring that they are in good condition so as to conform with these rules.

SCE's inspection records indicated that from 2018 to 2020, SCE performed 57 patrol inspections and 28 detailed inspections past SCE's assigned inspection due dates.

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 for the 5-year period ending on August 18, 2020, SCE did not complete 386 work orders by SCE's own scheduled due date for corrective action.

III. Field Inspections

My staff inspected the following facilities during the field inspection:

No.	Structure ID	Circuit	Structure	Location
1	10 (mile)/ 3 (tower)	Pardee / Sylmar 1 & 2	Tower	Sylmar
2	0 / 2	Eagle Rock / Sylmar & Gould / Sylmar	Tower	Sylmar
3	0 / 3	Eagle Rock / Sylmar & Gould / Sylmar	Tower	Sylmar
4	10 / 2	Pardee / Sylmar 1 & 2	Tower	Sylmar
5	4389401E	Not Recorded	Steel Pole	Chatsworth
6	1840635E	Not Recorded	Wood Pole	Chatsworth
7	4539434E	Not Recorded	Wood Pole	Chatsworth
8	1840637E	Not Recorded	Wood Pole	Chatsworth
9	4761524E	Not Recorded	Wood Pole	Chatsworth
10	1241813E	Not Recorded	Wood Pole	Chatsworth
11	4315608E	Not Recorded	Wood Pole	Chatsworth
12	1241815E	Not Recorded	Wood Pole	Chatsworth
13	1 / 1	Pardee Saugus No.1 & 2	Tower	Valencia
14	39 / 4	Pardee Saugus No. 3	Tower	Valencia
15	4784518E	Saugus-Colossus-Lockheed-Pitchgen	Steel Pole	Valencia
16	4239765E	Saugus-Haskell-Solemint	Steel Pole	Valencia
17	4239764E	Saugus-Haskell-Lockheed	Steel Pole	Valencia
18	4784519E	Saugus-Colossus-Lockheed-Pitchgen	Steel Pole	Valencia
19	5575836	Pardee Saugus No.1 & 2	Steel Pole	Valencia
20	0 / 3	Pardee-Sylmar No.2	H-Frame	Valencia
21	24 / 8	Moorpark Pardee No.1	H-Frame	Valencia
22	4032541E	Saugus-Haskell	Wood Pole	Valencia
23	2295742E	Saugus-Haskell	Steel Pole	Valencia
24	40 / 5	Pardee-Saugus No.4	Tower	Valencia
25	0 / 1	Pardee-Saugus No.2	Tower	Valencia
26	24 / 5	Moorpark Pardee No.1 & 4	Tower	Valencia
27	24 / 6	Moorpark Pardee No. 2 & 3	Tower	Valencia
28	1927005E	Saugus Appgen Newhall	Steel Pole	Valencia
29	4244883E	Saugus-North Oaks-Tengen	Steel Pole	Valencia
30	4752063E	Saugus-North Oaks-Tengen, Saugus Newhall No.3	Steel Pole	Valencia
31	24 / 7	Moorpark-Pardee No. 2 & 3	H-Frame	Valencia
32	24 / 6	Moorpark-Pardee No. 1	H-Frame	Valencia
33	0 / 2	Pardee-Saugus No.1 & 2	Tower	Valencia
34	40 / 4	Pardee-Saugus No.3 & 4	Tower	Valencia
35	0 / 3	Saugus-Appgen-Newhall, Saugus-Newhall No.3	Tower	Valencia
36	0 / 4	Saugus-Appgen-Newhall, Saugus-Newhall No.3	Tower	Valencia
37	0 / 4	Pardee-Sylmar No.1 & 2	Tower	Valencia
38	0 / 5	Pardee-Sylmar No.1 & 2	Tower	Valencia
39	0 / 5	Saugus-Appgen-Newhall, Saugus-Newhall No.3	Tower	Valencia
40	0 / 6	Pardee-Sylmar No.1 & 2	Tower	Valencia
41	0 / 6	Saugus-Appgen-Newhall, Saugus-Newhall No.3	Tower	Valencia
42	0 / 7	Saugus-Appgen-Newhall, Saugus-Newhall No.3	Tower	Valencia

43	0 / 7	Pardee-Sylmar No.1 & 2	Tower	Valencia
44	1 / 1	Saugus-Appgen-Newhall, Saugus-Newhall No.3	Tower	Valencia
45	1 / 1	Pardee-Sylmar No.1 & 2	Tower	Valencia
46	1927003E	Saugus-Appgen-Newhall	Steel Pole	Valencia
47	24 / 5	Moorpark-Pardee No.2 & 3	Tower	Valencia
48	24 / 4	Moorpark-Pardee No.1 & 4	Tower	Valencia
49	1927002E	Saugus-Appgen-Newhall	Steel Pole	Valencia
50	24 / 4	Moorpark-Pardee No.2 & 3	Tower	Valencia
51	24 / 2	Moorpark-Pardee No.1	H-Frame	Valencia
52	24 / 3	Moorpark-Pardee No.2 & 3	H-Frame	Valencia
53	0 / 2	Saugus-Moorpark-Santa Susana-Torrey, Saugus-Filmore	Tower	Valencia
54	0 / 2	Saugus-Filmore No.1, Saugus-Moorpark-Santa Susana-Torrey	Tower	Valencia
55	0 / 2	Saugus-Santa Susana,	Tower	Valencia
56	0 / 2	Saugus-Newhall No.1 & 2	Tower	Valencia
57	0 / 2	Saugus-Filmore No.2, Saugus-Chatsworth-Royal-Santa Susana	Tower	Valencia
58	24 / 2	Moorpark-Pardee No.2 & 3	H-Frame	Valencia
59	0 / 3	Saugus-Chatsworth-Royal-Santa Susana	Tower	Valencia
60	24 / 1	Moorpark-Pardee No.1	H-Frame	Valencia
61	0 / 3	Saugus-Newhall No.2	Tower	Valencia
62	0 / 3	Saugus-Santa Susana	Tower	Valencia
63	0 / 3	Saugus-Filmore No.1, Saugus-Moorpark-Santa Susana-Torrey	Tower	Valencia
64	1730401E	Moorpark-Oak Park, Moorpark-Crater-Malibu	Steel Pole	Moorpark
65	1604051E	Moorpark-Thousand Oaks No.2, Moorpark-Potrero	Steel Pole	Moorpark
66	4761851E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
67	1730402E	Moorpark-Oak Park, Moorpark-Crater-Malibu	Steel Pole	Moorpark
68	1604052E	Moorpark-Thousand Oaks No.2, Moorpark-Potrero	Steel Pole	Moorpark
69	4761849E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
70	4761850E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
71	1730403E	Moorpark-Oak Park, Moorpark-Crater-Malibu	Steel Pole	Moorpark
72	1604053E	Moorpark-Thousand Oaks No.2, Moorpark- Potrero	Steel Pole	Moorpark
73	4761846E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
74	4761847E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
75	1730404E	Moorpark-Oak Park, Moorpark-Crater-Malibu	Steel Pole	Moorpark
76	1604054E	Moorpark-Thousand Oaks No.2, Moorpark-Potrero	Steel Pole	Moorpark

77	4434836E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Steel Pole	Moorpark
78	1356809E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
79	4434837E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Steel Pole	Moorpark
80	1356811E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
81	4761845E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
82	4761844E	Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
83	1356813E	Moorpark-Thousand Oaks No.1	Wood Pole	Moorpark
84	4761843E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
85	1356815E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
86	2116243E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
87	2116244E	Moorpark-Thousand Oaks No.1, Moorpark-Potrero-Thousand Oaks	Wood Pole	Moorpark
88	1604055E	Moorpark-Potrero, Moorpark-Thousand Oaks No.2	Steel Pole	Moorpark
89	1730405E	Moorpark-Oak Park, Moorpark-Crater-Malibu	Steel Pole	Moorpark
90	2303917E	Not Recorded	Steel Pole	Thousand Oaks
91	831685E	Not Recorded	Wood Pole	Thousand Oaks
92	4197803E	Not Recorded	Steel Pole	Thousand Oaks
93	1441404E	Moorpark-Newbury, Moorpark-Newbury- Pharmacy	Steel Pole	Thousand Oaks
94	1433054E	Newbury-Thousand Oaks	Wood Pole	Thousand Oaks
95	1441405E	Moorpark-Newbury, Moorpark-Newbury- Pharmacy	Steel Pole	Thousand Oaks
96	1433053E	Newbury-Thousand Oaks	Wood Pole	Thousand Oaks
97	1433052E	Newbury-Thousand Oaks	Wood Pole	Thousand Oaks
98	1441406E	Moorpark-Newbury, Moorpark-Newbury- Pharmacy	Steel Pole	Thousand Oaks
99	1441407E	Moorpark-Newbury, Moorpark-Newbury- Pharmacy	Steel Pole	Thousand Oaks
100	1433051E	Newbury-Thousand Oaks	Wood Pole	Thousand Oaks
101	1433050E	Newbury-Thousand Oaks	Wood Pole	Thousand Oaks
102	1441408E	Moorpark-Newbury-Pharmacy	Steel Pole	Thousand Oaks
103	4948876E	Not Recorded	Wood Pole	Ojai
104	4894385E	Not Recorded	Wood Pole	Ojai
105	4762445E	Not Recorded	Steel Pole	Ojai
106	4841922E	Not Recorded	Wood Pole	Ojai
107	4539558E	Not Recorded	Steel Pole	Ojai
108	1562753E	Santa Clara-Ojai	Steel Pole	Ojai
109	1562752E	Santa Clara-Ojai	Steel Pole	Ojai
110	4424314E	Santa Clara-Ojai	Steel Pole	Ojai

111	4440512E	Santa Clara-Ojai	Steel Pole	Ojai
112	0 / 3	Goleta-Santa Clara No.1 & 2	Tower	Ventura
113	0 / 3	Pardee-Santa Clara, Santa Clara-Vincent	Tower	Ventura
114	0 / 3	Moorpark Santa Clara No.1 & 2	Tower	Ventura
115	39 / 4	Santa Clara-Wakefield No.1 & 2	Tower	Ventura
116	0 / 3	Santa Clara-Shellsom-Somis, Santa Clara-Camarillo	Tower	Ventura
117	0 / 3	Santa Clara-Colonia	Tower	Ventura
118	0 / 3	Santa Clara-Saticoy No.1 & 2	Tower	Ventura
119	4453203E	Santa Clara-Casitas No.1, Santa Clara-Carpinteria-Casitas	Steel Pole	Ventura
120	4453202E	Santa Clara-Casitas No.1, Santa Clara-Carpinteria-Casitas	Steel Pole	Ventura
121	0 / 2	Santa Clara-Tayshell	Tower	Ventura
122	0 / 2	Santa Clara-Ojai-Santa Barbara	Tower	Ventura
123	0 / 2	Santa Clara-Ojai	Tower	Ventura
124	4713731E	Santa Clara-Levy-Procgen	Steel Pole	Ventura
125	1 / 3	Santa Clara-Mandalay No.3 & 4	Tower	Ventura
126	7 / 3	Santa Clara-Mandalay No.1 & 2	Tower	Ventura
127	4713726E	Santa Clara-Levy-Procgen	Steel Pole	Ventura
128	1 / 2	Santa Clara-Levy-Procgen	Tower	Ventura
129	1 / 2	Santa Clara-Mandalay No.3 & 4	Tower	Ventura
130	7 / 4	Santa Clara-Mandalay No.1 & 2	Tower	Ventura
Vegetation Inventory Spans Inspected				
131	4713726E – 4713731E	Not Recorded	Steel Poles	Ventura
132	7 / 1 – 7 / 2	Mandalay-Santa Clara No.1 & 2	Towers	Ventura
133	6 / 3 – 6 / 2	Mandalay-Santa Clara No.1,2,3, & 4	Towers	Ventura
134	6 / 3 – 6 / 2	Mandalay-Santa Clara No.1,2,3, & 4	Towers	Ventura
135	6 / 2 – 6 / 1	Mandalay-Santa Clara No.1,2,3, & 4	Towers	Ventura
136	3 / 2 – 3 / 1	Mandalay-Santa Clara No.1,2,3, & 4	Towers	Ventura

IV. Field Inspection Violations List

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

GO 95, Rule 18.B, Reporting and Resolution of Safety Hazards Discovered by Utilities, Notifications of Safety Hazards, states in part:

If a company, while performing inspections of its facilities, discovers a safety hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other company and/or facility owner of such safety hazard(s) no later than 10 business days after the discovery.

An LADWP down guy wire supporting Pole 4315608E was not maintained taut. SCE did not notify LADWP of this safety hazard.

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

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.

The following SCE transmission facilities required maintenance:

- Pole 4389401E: The jumper wires connecting the potheads to the overhead conductors on the B and C phases had bird caging damage.
- Tower 39/4 (Pardee-Saugus No.1 & 2): A structural member was damaged at the base of the tower.
- Pole 2295742E: An access panel cover was missing at the center phase level of the pole.
- Tower 0/3 (Saugus-Chatsworth-Royal-Santa Susana): A structural member was damaged at the base of the tower.
- Tower 0/3 (Saugus-Chatsworth-Royal-Santa Susana): The attachment points of the tower members to the tower support footings was buried in the ground.
- Tower 0/2 (Santa Clara-Ojai-Santa Barbara): At two of the four tower support footings, portions of steel structural members were buried in the ground.
- Tower 1/2 (Santa Clara-Levy-Progen): The above-ground section of one of the tower's concrete piles was deteriorated.

GO 95, Rule 51.6-A, 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 top of such sign(s) shall be located between the level of the lowest line conductor, energized in excess of 750 volts, on the pole to no more than 40 inches below that conductor level.

The "HIGH VOLTAGE" band signage supported on Pole 4315608E was damaged and illegible. Additionally, the "HIGH VOLTAGE" band signage was not located below the lowest line conductor energized in the excess of 750 Volts.

GO 95, Rule 54.7, Climbing and Working Space, states in part:

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

The climbing space on Pole 1241813E was obstructed by vegetation, which completely encircled the pole at the public level.

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.

The following SCE transmission towers supported warning signs that could not be read from all four corners of the tower.

- Tower 10 / 3 (Circuit: Pardee-Sylmar No.1&2)
- Tower 0 / 2 (Circuit: Eaglerock-Sylmar, Gould-Sylmar)
- Tower 0 / 3 (Circuit: Eaglerock-Sylmar, Gould-Sylmar)
- Tower 10 / 2 (Circuit: Pardee-Sylmar No.1&2)
- Tower 39 / 4 (Pardee-Saugus No.3)
- Tower 0 / 6 (Pardee-Sylmar No.1&2)
- Tower 0 / 2 (Circuit: Saugus-Santa Susana, Saugus-Filmore)
- Tower 0 / 2 (Circuit: Saugus-Santa Susana)
- Tower 0 / 3 (Circuit: Saugus-Newhall No.2)
- Tower 0 / 3 (Circuit: Saugus-Santa Susana)