STATE OF CALIFORNIA GAVIN NEWSOM, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

February 9, 2023 EA2022-986

Melvin Stark
Principle Manager, T&D Compliance Integration
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1 Innovation Way
Pomona, CA 91786

Subject: Audit of Southern California Edison's Santa Ana District

Mr. Stark:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Stacey Ocampo and James Miller of my staff conducted an electric distribution audit of Southern California Edison's (SCE) Santa Ana District from December 5, 2022 to December 9, 2022. The audit included a review of SCE's inspection and maintenance records and a field inspection 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 March 9, 2023, by electronic or hard copy, of all corrective measures taken by SCE to remedy and prevent such violations.

If you have any questions concerning this audit, you can contact Stacey Ocampo at (213) 266-4712 or Stacey.Ocampo@cpuc.ca.gov.

Sincerely,

Fadi Daye

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

Enclosure: Audit Findings

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, SED, CPUC
Majed Ibrahim, Senior Utilities Engineer, ESRB, SED, CPUC
Stacey Ocampo, Utilities Engineer, ESRB, SED, CPUC
James Miller, Utilities Engineer, ESRB, SED, CPUC

Audit Findings

I. Records Review

During the audit, my staff reviewed the following records:

- Overhead and underground detailed inspection records
- Patrol records
- Completed and pending corrective action work orders
- Pole load calculations
- Intrusive test records
- Safety hazard notifications
- SCE's documented inspection program.
- Vegetation Records

II. Records Review – Violations List

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

GO 165, Section III-B, Distribution Facilities, Standards for Inspection, states:

> *Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to ensure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in Table 1.*

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

> *Lines shall be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard.*

- SCE's records indicated that from September 2017 through September 2022, SCE completed 37 patrol inspections past SCE's scheduled due date.

- SCE's records indicated that from September 2017 through September 2022, SCE completed 8520 detailed inspections past SCE's scheduled due date. Additionally, as of the date of the audit, SCE had 794 pending detailed inspections that were past SCE's scheduled due date.

GO 165, Section III-B, Distribution Facilities, Standards for Inspection, states:

> *Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to ensure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in Table 1.*

GO 128, Rule 17.2, Inspection, states:

> *Systems shall be inspected by the operator frequently and thoroughly for the purpose of insuring that they are in good condition and in conformance with all applicable requirements these rules.*

SCE's records indicated that from September 2017 through September 2022, SCE completed 361 underground inspections past SCE's scheduled due date. Additionally, as of the date of the audit, SCE had 23 pending underground inspections that were past SCE's scheduled due date.

GO 95, 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 September 2017 through September 2022, SCE completed 215 overhead work orders past SCE's due date for corrective action. Additionally, as of the date of the audit, SCE had 118 open overhead work orders that were past SCE's scheduled due date for corrective action.

GO 128, Rule 17.1, 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.*

SCE's records indicated that from September 2017 through September 2022, SCE completed 205 underground work orders past SCE's due date for corrective action. Additionally, as of the date of the audit, SCE had 77 open underground work orders that were past SCE's scheduled due date for corrective action.

III. Field Inspection

My staff inspected the following facilities during the field inspection portion of the audit:

No.	Structure ID	Type of Structure	Location
1	4539869E	Pole	Santa Ana
2	972150E	Pole	Santa Ana
3	1838085E	Pole	Santa Ana
4	1838084E	Pole	Santa Ana
5	1810436E	Pole	Santa Ana
6	1810439E	Pole	Santa Ana
7	1810442E	Pole	Santa Ana
8	2243139E	Pole	Santa Ana
9	1150380E	Pole	Santa Ana
10	773931H	Pole	Santa Ana
11	4659593E	Pole	Santa Ana
12	773937H	Pole	Santa Ana
13	773933H	Pole	Santa Ana
14	773948H	Pole	Santa Ana
15	773938H	Pole	Santa Ana
16	4853631E	Pole	Santa Ana
17	7739401	Pole	Santa Ana
18	7739411	Pole	Santa Ana
19	4814511E	Pole	Santa Ana
20	2256803E	Pole	Villa Park
21	4470900E	Pole	Villa Park
22	4461102E	Pole	Villa Park
23	4461103E	Pole	Villa Park
24	4461104E	Pole	Villa Park
25	737972	Pole	Villa Park
26	656832E	Pole	Villa Park
27	1535217E	Pole	Villa Park
28	1315704E	Pole	Orange
29	1315705E	Pole	Orange
30	1315707E	Pole	Orange
31	1315706E	Pole	Orange
32	4024577E	Pole	Orange
33	1315709E	Pole	Orange
34	1315710E	Pole	Orange
35	1315711E	Pole	Orange
36	1315712E	Pole	Orange
37	1315713E	Pole	Orange
38	4813291E	Pole	Orange
39	4252133E	Pole	Orange

40	1315718E	Pole	Orange
41	1315719E	Pole	Orange
42	1916174E	Pole	Orange
43	4256180E	Pole	Garden Grove
44	4502337E	Pole	Garden Grove
45	2256179E	Pole	Garden Grove
46	2286217E	Pole	Garden Grove
47	716719E	Pole	Garden Grove
48	4619956E	Pole	Garden Grove
49	2145726E	Pole	Garden Grove
50	2145727E	Pole	Garden Grove
51	763432E	Pole	Garden Grove
52	4872312E	Pole	Garden Grove
53	4450212E	Pole	Garden Grove
54	1115350E	Pole	Garden Grove
55	1252616E	Pole	Garden Grove
56	1252617E	Pole	Garden Grove
57	1252618E	Pole	Garden Grove
58	1252619E	Pole	Garden Grove
59	1252620E	Pole	Garden Grove
60	4110752E	Pole	Garden Grove
61	V5464815	Vault	Tustin
62	P5548663	Pad-mounted switch	Tustin
63	P5463308	Pad-mounted transformer	Tustin
64	P5513683	Pad-mounted transformer	Tustin
65	P5513684	Structure without equipment (SWEQ)	Tustin
66	V5328831	Vault	Santa Ana
67	P5495843	BURD transformer	Santa Ana
68	P5077241	Pad-mounted switch	Stanton
69	P5078006	Pad-mounted transformer	Stanton
70	55077246	Sub-surface enclosure	Stanton
71	SS5511909	Sub-surface enclosure	Stanton
72	P5077816	Pad-mounted transformer	Stanton
73	1590667E	Pole	Santa Ana
74	2145638E	Pole	Santa Ana
75	1590668E	Pole	Santa Ana
76	1590669E	Pole	Santa Ana
77	1590670E	Pole	Santa Ana
78	1590671E	Pole	Santa Ana
79	624413H	Pole	Santa Ana
80	1350799	Pole	Santa Ana
81	2146380E	Pole	Santa Ana
82	2249690E	Pole	Santa Ana
83	1017332E	Pole	Santa Ana
84	1016965E	Pole	Santa Ana

85	512948E	Pole	Santa Ana
86	4683979E	Pole	Santa Ana
87	1016967E	Pole	Santa Ana
88	1017096E	Pole	Santa Ana
89	1017097E	Pole	Santa Ana
90	1017098E	Pole	Santa Ana
91	1017099E	Pole	Santa Ana
92	1017100E	Pole	Santa Ana
93	1017326E	Pole	Santa Ana
94	1017327E	Pole	Santa Ana
95	1017328E	Pole	Santa Ana
96	4802185E	Pole	Santa Ana
97	1673635E	Pole	Orange
98	1673643E	Pole	Orange
99	4340813E	Pole	Orange
100	1679453E	Pole	Orange
101	4009307E	Pole	Orange
102	4009309E	Pole	Orange
103	4820909E	Pole	Orange

IV. Field Inspection – Violations List

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

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.*

SCE's facilities on the following poles required maintenance:

- Pole 1838084E: a plastic wrap was wrapped around a secondary service drop.
- Pole 1810442E: a pair of shoes was caught on the secondary service drop.
- Pole 1810439E: the ground wire was damaged.
- Pole 7739333H: visibility strips were covered by vegetation.
- Pole 1017096E: the down guy wire was damaged.
- Pole 4619956E: the "eye" of the SCE down guy anchor attached the pole was buried.

The visibility strips attached to the following SCE poles were damaged:

- 1810439E
- 1810442E
- 1017097E

Insulators attached to the following SCE poles were "sunken":

- 1810436E
- 1810439E
- 763432E
- 1017098E

GO 95, Rule 31.6, Abandoned Lines, states in part:

> *Lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use.*

Insulators on Pole 1017098E were abandoned and not removed.

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 down guy wire attached to Pole 1679453E was loose and not taut.

GO 95, Rule 34, Foreign Attachments, states in part:

> *Nothing in these rules shall be construed as permitting the unauthorized attachment, to supply, street light or communication poles or structures, of antennas, signs, posters, banners, decorations, wires, lighting fixtures, guys, ropes and any other such equipment foreign to the purposes of overhead electric line construction.*

Unauthorized foreign attachments were observed on the following poles:

- Pole 1150380E had an unauthorized "Missing Female Dog"" sign attached to it.
- Pole 4814511E had an unauthorized "We Buy Junk Cars" sign attached to it.
- Pole 1350799E had an unauthorized "We Buy Junk Cars" sign attached to it.
- Pole 1016967E had an unauthorized "Garage Sale" sign attached to it.
- Pole 1590668E had an unauthorized telephone wire attached to it.
- Pole 1017098E had an unauthorized camera attached to it.

GO 95, Rule 44.1, Installation and Reconstruction, states in part:

> *Lines and elements of lines, upon installation or reconstruction, shall provide as a minimum the safety factors specified in Table 4. The design shall consider all supply and communication facilities planned to occupy the structure. For purposes of this rule, the term "planned" applies to the facilities intended to occupy the structure that are actually known to the constructing company at the time of design.*

The pole loading calculations supplied by SCE for the following poles contained incorrect information:

- 1673643E – The pole loading data included a down guy wire and anchor guy that were not present at the time of the field inspection.
- 1916174E – The pole loading data included two 8 foot crossarms, one 10 foot crossarm and one 4 foot crossarm. One 8 foot crossarm and one 10 foot crossarm were not present at the time of the field inspection.

GO 95, Rule 38, Minimum Clearances of Wires from other Wires, Table 2, Case 8, Column D requires the vertical separation between secondary and communications conductors supported on the same pole to be not less than 48 inches.

A SCE service drop attached to pole 4502337E was in contact with a third-party communication service drop.

GO 95, Rule 18-A3, Maintenance Programs and Resolution of Potential Violations of General Order 95 and Safety Hazards, A. Resolution of Potential Violations of General Order 95 and Safety Hazards, states in part:

(3) 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 entity of such safety hazard(s) no later than 10 business days after the discovery.

For the following poles, SCE did not send the third-party notifications for these hazards:

- Pole 4470900E: the third-party communications box and service drop was not properly secured to the pole.
- Pole 1315718E: the "eye" of the communications down guy anchor attached the pole was buried.
- Pole 624413H: a third-party communications lashing wire was broken.
- Pole 4539869E: a third-party communications pole step was bent.

GO 95, Rule 56.9, Guy Marker (Guy Guard), states:

> *A substantial marker of suitable material, including but not limited to metal or plastic, not less than 8 feet in length, shall be securely attached to all anchor guys. Where more than one guy is attached to an anchor rod, only the outermost guy is required to have a marker.*

The reflective guy marker on a down guy attached to Pole 1315718E was missing.

GO 95, Rule 91.3 Stepping, B. Location of Steps, states in part:

> *The lowest step shall be not 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.*

The lowest pole step on each of the following three poles was located at a height of less than eight feet:

- 1810439E
- 1810442E
- 4461104E
- 4502337E
- 1679453E

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" sign or band on each of the following poles was missing or damaged:

- 1810436E
- 1810442E
- 4461103E
- 4461104E
- 1315713E
- 4813291E
- 4256180E
- 2145727E
- 763432E
- 4450212E
- 1017099E
- 1017100E
- 1017326E
- 1017327E
- 1017328E

General Order 95, Rule 38 - Minimum Clearances of Wires from Other Wires, Table 2, Column C, Case 19 requires the minimum radial clearance between guys and span wires passing communication conductors supported on the same poles to be 3 inches.

The radial clearance between an SCE down guy wire and a third-party communications conductor on Pole 1810442E was less than 3 inches.

GO 95, Rule 54.6-B, Ground Wires, states in part:

> *That portion of the ground wires attached on the face or back of wood crossarms or on the surface of wood poles and structures shall be covered by a suitable protective covering (see Rule 22.8).*

The ground moulding attached to following poles was damaged:

- 1838084E
- 1810439E
- 7739401

GO 128, Rule 17.1, 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 plastic cable hook inside the sub-surface enclosure 55077246 was not properly attached to the wall.