

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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October 12, 2022

EA2022-980

Scott Hirashima, P.E.
Manager of Regulatory Standards and Compliance
Regulatory Standards and Compliance Section
City of Los Angeles, Department of Water and Power (LADWP)
111 North Hope Street, Room 1246
Los Angeles, CA 90012

SUBJECT: Audit of LADWP's Northridge District

Mr. Hirashima:

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 LADWP's Northridge District from August 8, 2022 to August 12, 2022. The audit included a review of LADWP's inspection and maintenance records and a field inspection of LADWP'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 14, 2022, by electronic or hard copy, of all corrective measures taken by LADWP 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,

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

Enclosure: Audit Findings

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, CPUC
Majed Ibrahim, Senior Utilities Engineer, Electric Safety and Reliability Branch, CPUC
Stacey Ocampo, Utilities Engineer, ESRB
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.
- Completed and pending corrective action work orders.
- Pole loading calculations.
- Intrusive test records.
- LADWP's visual inspection program.

II. Records Review – Violations List

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

GO 165, Section III-B, 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 insuring that they are in good condition so as to conform with these rules.

LADWP's inspection records indicated that from 2017 to 2021, the following number of overhead patrol inspections were either completed or pending completion past the assigned due dates:

- Late Overhead Patrol Inspections
 - Tier 2 – 8,838
 - Tier 3 – 511

LADWP's inspection records indicated that from 2011 to 2021, the following number of overhead detailed inspections were either completed or pending completion past the assigned due date:

- Late Overhead Detailed Inspections
 - Tier 2 – 5,334
 - Tier 3 – 145

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.

LADWP inspection records indicated that from 2017 to 2021, the following number of underground patrol inspections were either completed or pending completion past the assigned due date:

- Late Underground Patrol Inspections
 - Tier 2 – 9,987
 - Tier 3 – 440

LADWP inspection records indicated that from 2011 to 2021, the following number of underground detailed inspections were either completed or pending completion past the assigned due date:

- Late Underground Detailed Inspections
 - Tier 2 – 9,526
 - Tier 3 – 433

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.

LADWP's records indicated that from 2017 to 2021, LADWP completed 3,086 overhead work orders past LADWP'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.

LADWP's records indicated that from 2017 to 2021, LADWP completed 66 underground work orders past LADWP's scheduled due date for corrective action.

III. Field Inspection

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

No.	Structure ID.	Type of Structure	Location
1	307274M	Pole	Northridge
2	369252M	Pole	Northridge
3	209404M	Pole	Northridge
4	209403M	Pole	Northridge
5	209402M	Pole	Northridge
6	403716M	Pole	Northridge
7	209400M	Pole	Northridge
8	56811M	Pole	Northridge
9	307278M	Pole	Northridge
10	307277M	Pole	Northridge
11	323019M	Pole	Northridge
12	307276M	Pole	Northridge
13	240378M	Pole	Northridge
14	307275M	Pole	Northridge
15	422021M	Pole	Northridge
16	221307M	Pole	Northridge
17	24255M	Pole	Northridge
18	408187M	Pole	Northridge
19	60949M	Pole	Northridge
20	408188M	Pole	Northridge
21	310444M	Pole	Woodland Hills
22	310457M	Pole	Woodland Hills
23	310442M	Pole	Woodland Hills
24	310440M	Pole	Woodland Hills
25	310441M	Pole	Woodland Hills
26	310447M	Pole	Woodland Hills
27	310448M	Pole	Woodland Hills
28	310449M	Pole	Woodland Hills
29	310450M	Pole	Woodland Hills
30	310451M	Pole	Woodland Hills
31	310452M	Pole	Woodland Hills
32	310453M	Pole	Woodland Hills
33	310454M	Pole	Woodland Hills
34	310443M	Pole	Woodland Hills
35	311313M	Pole	Woodland Hills
36	311314M	Pole	Woodland Hills
37	241462M	Pole	Canoga Park
38	71279M	Pole	Canoga Park
39	71276M	Pole	Canoga Park

40	71275M	Pole	Canoga Park
41	71274M	Pole	Canoga Park
42	241460M	Pole	Canoga Park
43	249950M	Pole	Canoga Park
44	249951M	Pole	Canoga Park
45	249952M	Pole	Canoga Park
46	249953M	Pole	Canoga Park
47	249954M	Pole	Canoga Park
48	426719M	Pole	Canoga Park
49	426718M	Pole	Canoga Park
50	426717M	Pole	Canoga Park
51	239814M	Pole	Canoga Park
52	239815M	Pole	Canoga Park
53	352678M	Pole	Canoga Park
54	179236M	Pole	Canoga Park
55	310974M	Pole	Canoga Park
56	413613M	Pole	Chatworth
57	325135M	Pole	Chatsworth
58	321456M	Pole	Chatsworth
59	321552M	Pole	Chatsworth
60	321536M	Pole	Chatsworth
61	358037M	Pole	Chatsworth
62	321547M	Pole	Chatsworth
63	325136M	Pole	Chatsworth
64	325137M	Pole	Chatsworth
65	325138M	Pole	Chatsworth
66	325139M	Pole	Chatsworth
67	325140M	Pole	Chatsworth
68	325141M	Pole	Chatsworth
69	440805M	Pole	Granada Hills
70	440806M	Pole	Granada Hills
71	440807M	Pole	Granada Hills
72	440808M	Pole	Granada Hills
73	440258M	Pole	Granada Hills
74	440257M	Pole	Granada Hills
75	440809M	Pole	Granada Hills
76	440256M	Pole	Granada Hills
77	440810M	Pole	Granada Hills
78	440811M	Pole	Granada Hills
79	405115M	Pole	Granada Hills
80	440812M	Pole	Granada Hills
81	238074M	Pole	Van Nuys
82	307216M	Pole	Van Nuys
83	173074M	Pole	Van Nuys
84	173069M	Pole	Van Nuys

85	173068M	Pole	Van Nuys
86	512610H	Pole	Van Nuys
87	512611M	Pole	Van Nuys
88	312658M	Pole	Van Nuys
89	777537H	Pole	Van Nuys
90	777536H	Pole	Van Nuys
91	214314M	Pole	Van Nuys
92	214315M	Pole	Van Nuys
92	214313M	Pole	Van Nuys
94	214312M	Pole	Van Nuys
95	333056M	Pole	Van Nuys
96	97208M	Pole	Van Nuys
97	351816M	Pole	Van Nuys
98	97206M	Pole	Van Nuys
99	372191M	Pole	Van Nuys
100	223444M	Pole	Van Nuys
101	1024827	Vault	Woodland Hills
102	1467406	Pad-mounted Transformer	Woodland Hills
103	1178532	Handhole	Porter Ranch
104	1178490	Pad-mounted Transformer	Porter Ranch
105	1178482	Handhole	Porter Ranch
106	1176130	Handhole	Porter Ranch
107	1176148	Pad-mounted Transformer	Porter Ranch
108	21843M	Pole	Encino
109	386859M	Pole	Encino
110	25225GT	Pole	Granada Hills

IV. Field Inspection – Violations List

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.

LADWP facilities on the following poles required maintenance:

- 209403M: the visibility strip was damaged.
- 325140M: the visibility strip was damaged.
- 310457M: the “eye” of the LADWP down guy anchor attached the pole was buried.
- 325137M: the ground molding was not properly attached to the pole.

The ground wire attached to the following LADWP poles was damaged:

- 241462M
- 249950M
- 426719M

A crossarm on each of the following LADWP poles was damaged:

- 241462M
- 321536M

Insulators on the following LADWP poles were “sunken”:

- 310447M
- 310448M
- 239814M
- 239815M
- 179236M
- 325135M
- 321456M
- 312658M
- 97208M

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 each of the following poles was damaged:

- 241462M
- 214312M

The ground moulding on Pole 209403M is missing on the bottom section of the pole, exposing the ground wire.

GO 95, Rule 56.2, Overhead Guys, Anchor Guys and Span Wire 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 214315M was not taut.

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 high voltage signs on the following LADWP poles were damaged or missing:

- 369252M
- 209404M
- 310444M
- 310440M
- 310447M
- 310448M
- 310449M
- 310452M
- 310453M
- 310443M
- 311313M
- 241462M
- 71276M
- 71274M
- 249950M
- 239815M
- 352678M
- 179236M
- 310974M
- 325135M
- 321456M
- 325136M
- 325137M
- 325138M
- 325140M
- 173069M
- 173068M
- 512610H
- 512611M
- 312658M
- 214312M
- 333056M
- 97208M
- 351816M
- 97206M
- 21843M
- 386859M

GO 95, Rule 38 - Minimum Clearances of Wires from Other Wires, Table 2, Column D, Case 19 requires the minimum clearance between guys and span wires passing conductors of 0 to 750 volts supported on the same poles to be 3 inches.

- The down guy wire on Pole 310457M was contacting a secondary service drop attached to the same pole.
- The separation between LADWP’s secondary service drop and down guy wire on pole 325139M was less than 3 inches.

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

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 310451M 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 six poles was located at a height of less than eight feet:

- 209403M
- 310444M
- 310440M
- 310449M
- 440809M
- 777537H

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.

- An unauthorized bear face was attached to Pole 310443M.
- An unauthorized spiderman figure was attached to Pole 386589M.

Unauthorized signs were attached to each of the following poles:

- 209404M
- 403716M
- 209402M
- 209400M
- 56811M
- 249954M
- 249950M
- 325141M
- 372191M
- 310974M

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 down guy wire on Pole 321456M was contacting a communication conductor attached to the same pole.

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 communications service drop was in contact with LADWP's secondary service drop on Pole 310442M.

GO 128, Rule 17.1, 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 [the] communication or supply lines and equipment.

- The maple block inside handhole 1178532 was not properly attached to the wall.
- Handhole 1178482 was not properly secured and the metal casing supporting the lid was corroded.