

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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January 3, 2023

EA2022-998

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 Central District

Mr. Hirashima:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Calvin Choi and Bryan Pena of my staff conducted an electric distribution audit of LADWP's Central District from September 19, 2022 to September 23, 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 February 3, 2023, 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 Calvin at (213) 266-4730 or calvin.choi@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
Calvin Choi, Utilities Engineer, ESRB

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 and detailed inspections were either completed or pending completion past LADWP's assigned due dates:

- Late Overhead Patrol Inspections
 - Tier 1 – 3,093
 - Tier 2 – 1,131
- Late Overhead Detailed Inspections
 - Tier 1 – 3,196
 - Tier 2 – 1,096

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 and detailed inspections were either completed or pending completion past the assigned due date:

- Late Underground Patrol Inspections
 - Tier 1 – 911
 - Tier 2 – 84
- Late Underground Detailed Inspections
 - Tier 1 – 1,390
 - Tier 2 – 200

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 5,712 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 1,226 underground work orders past LADWP's scheduled due date for corrective action.

III. Field Inspection

My staff inspected the following facilities during the field inspection:

No.	Structure ID	Type of Structure
1	431067M	Pole
2	268427M	Pole
3	431065M	Pole
4	431064M	Pole
5	431072M	Pole
6	17985M	Pole
7	17986M	Pole
8	17987M	Pole
9	17988M	Pole
10	431071M	Pole
11	381283M	Pole
12	345516M	Pole
13	19128G	Pole
14	19129G	Pole
15	234433M	Pole
16	19131G	Pole
17	312836M	Pole
18	234432M	Pole
19	6355M	Pole
20	334892M	Pole
21	411482M	Pole
22	334893M	Pole
23	316700M	Pole
24	323311M	Pole
25	104721M	Pole
26	758774H	Pole
27	286800M	Pole
28	759026H	Pole
29	373492M	Pole
30	191539M	Pole
31	191538M	Pole
32	191537M	Pole
33	435085M	Pole
34	520897M	Pole
35	520898M	Pole
36	520899M	Pole
37	435087M	Pole
38	420342M	Pole
39	520995M	Pole

40	1813699E	Pole
41	1643464E	Pole
42	1643463E	Pole
43	291561E	Pole
44	322072M	Pole
45	291562E	Pole
46	933871E	Pole
47	4427062E	Pole
48	381786M	Pole
49	522800M	Pole
50	24505M	Pole
51	24515M	Pole
52	335536M	Pole
53	4135M	Pole
54	4122M	Pole
55	4121M	Pole
56	328836M	Pole
57	4628M	Pole
58	426062M	Pole
59	426061M	Pole
60	24513M	Pole
61	24514M	Pole
62	377827M	Pole
63	377636M	Pole
64	377635M	Pole
65	24518M	Pole
66	1521442	Pad Mounted Transformer
67	1074285	Pad Mounted Transformer
68	1056621	Pad Mounted Transformer
69	1501576	Pad Mounted Transformer
70	1073980	Pad Mounted Transformer
71	1119593	Vault
72	1118223	Pad Mounted Transformer
73	1119023	Vault
74	1521228	Pad Mounted Transformer

IV. Field Inspection – Violations List

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

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 poles were damaged and/or missing:

- 381283M
- 345516M
- 19128G
- 19129G
- 234433M
- 234432M
- 6355M
- 323311M
- 286800M
- 759026H
- 373492M
- 191538M
- 1643464E
- 322072M
- 381786M
- 24505M
- 24515M
- 335536M
- 4135M
- 4122M
- 328836M
- 24513M
- 24514M
- 24518M

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.

An abandoned span guy wire was still attached to Pole No. 323311M.

GO 95, Rule 56.2, Uses (Guy Wires), 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 LADWP down guy wire attached to Pole No. 381283M was not taut.

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 LADWP ground moulding attached to each of the following poles was damaged and/or missing:

- 19129G
- 316700M
- 759026H
- 1643464E
- 291561E

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:

- Pole 17987M: the tamper lock was not secured on a capacitor control box.
- Pole 381283M: the visibility strip was damaged.
- Pole 316700M: a pole step was rotated and bent.
- Pole 104721M: two of the insulators attached to the primary crossarm were “sunken”.
- Pole 286800M: one of the insulators attached to the primary crossarm were “sunken”.
- Pole 759026M: the primary crossarm attached to the pole was deteriorating and splitting.
- Pole 24505M: the LADWP riser was damaged near the base of the pole.
- Pole 24515M: three of the insulators attached to the primary crossarm were “sunken”.
- Pole 4135M: the primary crossarm was splitting in the middle and the insulators attached to the primary crossarm were “sunken”.
- Pole 4122M: two of the insulators attached to the primary crossarm were “sunken”.
- Pole 328836M: the primary crossarm attached to the pole was deteriorating and splitting at the end.
- Pole 24513M: the secondary crossarm attached to the pole was deteriorating and splitting at the end and was missing conduit brackets.
- Pole 435085M: the span length on the pole loading calculations for the primary span was not correct.