

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



May 12, 2017

EA2017-749

Ben Goehring
Electric Program Supervisor
Redding Electric Utility (REU)
20055 Viking Way, Building #2
Redding, CA 96003

SUBJECT: Electric Distribution Audit of Redding Electric Utility

Mr. Goehring:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Ivan Garcia of my staff conducted an Electric Distribution Audit of Redding Electric Utility (REU) on April 4, 2017 to April 7, 2017. The audit included a review of REU's records and a field inspection of its distribution 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 June 12, 2017, by electronic or hard copy, of all corrective measures taken by REU to remedy and prevent such violations.

If you have any questions concerning this audit, please contact Ivan Garcia at (916) 928-5875 or ivan.garcia@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: CPUC Audit Findings

Cc: Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC
Lee Palmer, Deputy Director, Office of Utility Safety, SED, CPUC
Charlotte TerKeurst, Program Manager, ESRB, CPUC
Ivan Garcia, Utilities Engineer, ESRB, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- Completed Corrective Action Work Orders from February 2012 to March 2017
- Pending Corrective Action Work Orders from February 2016 to March 2017
- Patrol and Inspection Records from February 2012 to March 2017
- New Construction Projects from February 2016 to March 2017
- Pole Loading Calculations from February 2016 to March 2017
- Third Party Notification Records from February 2012 to March 2017
- Diagnostic Equipment Testing Records from February 2012 to March 2017
- REU Distribution Overhead & Underground Inspection and Preventative Maintenance Guideline, September 23, 2014 revision
- Reliability Metrics from March 2016 to March 2017

II. Records Violations

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.

Although REU's inspection plan requires five year and three year detailed inspection cycle for overhead facilities and underground facilities, respectively. REU does not inspect all its overhead facilities at least once every five years, as required by GO 165, instead they inspect them once every seven years. Also, REU does not inspect all its underground facilities at least once every three years, as required by GO 165, instead they inspect them once every eight years. The last completed detailed overhead inspection of its facilities was in 2010. The last completed underground detailed inspection of its underground facilities was in 2009.

GO 165, Section III-C, Record Keeping, states in part:

The utility shall maintain records for (1) at least ten (10) years of the patrol and detailed inspection activities, and (2) the life of the pole for intrusive inspection activities.

REU's does not maintain patrol and detailed inspection records for 10 years, instead, REU maintain the records for five years only after completion of repairs.

GO 165, Section III-D, - Reporting, states in part:

By July 1st each utility subject to this General Order shall submit an annual report for the previous year under penalty of perjury.

REU's has not submitted any annual reports to the Commission. Annual reports must be submitted to the Commission by July 1st each year.

GO 95, Rule 18-A2a, - Resolution of Safety Hazards and GO 95 Nonconformances, states in part:

All companies shall establish an auditable maintenance program for their facilities and lines. All companies must include a timeline for corrective actions to be taken following the identification of a Safety Hazard or nonconformances with General Orders 95 on the company's facilities. The auditable maintenance program shall prioritize corrective actions consistent with the priority levels set forth below and based on the following factors, as appropriate."

REU's Distribution Overhead and Underground Inspection and Preventative Maintenance Guideline does not have the appropriate timeline for corrective actions.

III. Field Inspection

The following are the facilities we inspected during the field inspection:

Structure Number	Type of Structure	Approximate Location
T5217L	Pad mount Transformer	1230 Golden Gate Trail, Redding
J1102	Junction Box	4311 Caterpillar Rd., Redding
T1800L	Pad mount Transformer	801 Little Deer Ln., Redding
T5834L	Pad mount Transformer	1921 Kinvarra Way, Redding
J1223L	Junction Box	Quartz Hill Rd. between Coronado Ave. and Loma St., Redding
J1984	Junction Box	3737 Oro St., Redding
T6910L	Pad mount Transformer	3737 Oro St., Redding
T8059L	Pad mount Transformer	935 Lake Blvd., Redding
J21114	Junction Box	Caterpillar Rd. and Beltline Rd., Redding
T5217	Pad mount Transformer	1220 Golden Gate Trail., Redding
E28144	Pole	825 Northridge Dr., Redding
H33206	Pole	Mark St. and Wyndham Lane, Redding
H33210	Pole	Mark St. and Wyndham Lane, Redding
H33214	Pole	Polk St. and Wyndham Lane, Redding
H33215	Pole	Polk St. and Wyndham Lane, Redding
J33117	Pole	Eastside Rd. and Wyndham Lane, Redding
H36109	Pole	4740 Westside Rd., Redding
H36108	Pole	4740 Westside Rd., Redding
H36162	Pole	4660 Memory Ln., Redding
H36163	Pole	4640 Memory Ln., Redding
G36122	Pole	1426 Riviera Dr., Redding
G36123	Pole	1400 Riviera Dr., Redding
H23107	Pole	3425 Little St., Redding
H23106	Pole	3425 Little St., Redding
H23177	Pole	4191 Lake Blvd., Redding
G31229	Pole	2055 Skyline Dr., Redding
G31128	Pole	2055 Skyline Dr., Redding
G31127	Pole	2065 Skyline Dr., Redding
G31126	Pole	2090 Skyline Dr., Redding
G31125	Pole	2125 Skyline Dr., Redding
G31124	Pole	2135 Skyline Dr., Redding
G31123	Pole	2155 Skyline Dr., Redding
G31122	Pole	2237 Skyline Dr., Redding
G31121	Pole	2190 Skyline Dr., Redding

IV. Field Inspection Violations

We observed the following violations during the field inspection:

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 concrete pad of padmounted transformer T1800L, located at 825 Little Deer Lane was broken.

Junction box J1223L located at Quartz Hill Rd., between Coronado Ave. and Loma St. was broken along its sides due to tree roots.

Junction box J1984 located at 3737 Oro St., was broken along its sides.

Junction box J21114 located at the corner of Caterpillar Rd. and Beltline Rd., was broken along its sides.

GO 128, Rule 17.3, Design, Construction and Maintenance states in part:

Facilities shall be located with consideration for safety of property, the general public and persons engaged in the construction, operation and maintenance thereof (See Rule 17.1).

Padmounted transformer T8059, located at 935 Lake Blvd., was installed in an area accessible to vehicular traffic without proper barriers/post.

GO 128, Rule 35.3, Warning Signs, States:

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.

Padmounted transformer T6910L located at 3737 Oro St., contained exposed live parts above 750 Volts and did not have a warning sign inside the enclosure.

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 crossarm at the primary level on pole H33206, located at the corner of Mark St. and Wyndham Lane, was damaged (split).

The brace bolt of the crossarm on pole H36162 located at 4660 Memory Ln., was loose.

The crossarm at the primary level on Pole G36122, located at 1426 Riviera Dr., was split.

The bolt guard for the transformer on pole H23106, located at 3425 Little St., was missing.

The pole top of pole H23177, located at 4191 Lake Blvd., was damaged (split).

The guy anchor for pole G31125, located at 2125 Skyline Dr., was buried.

GO 95, Rule 91.3-B, Stepping, states in part:

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.

The lowest step on pole G36123, located at 1400 Riviera Dr., was less than 8 feet.

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 sign.

Pole H23107, located at 3425 Little St., did not have high voltage signs.

Pole H23106, located at 3425 Little St., did not have high voltage signs.

GO 95, Rule 54.6-B, Vertical and Lateral Conductors, Ground Wires, states in part:

That portion of the ground wire 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 wire on pole H36163, located at 4640 Memory Ln., was exposed.

The ground wire on pole G31124, located at 2135 Skyline Dr., was exposed.

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.

The guy wire on pole G31125, located at 2125 Skyline Dr., did not have a guy guard.