

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



September 20, 2017

EA2017-757

Todd Gee
Liberty Utilities
Manager, GIS/Mapping
701 National Ave.
Tahoe Vista, CA 96148

SUBJECT: Audit of Liberty Utilities, South Lake Tahoe

Mr. Gee:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Ivan Garcia of ESRB staff conducted an electric distribution audit of Liberty Utilities (LU), South Lake Tahoe from July 24, 2017 to July 28, 2017. During the audit, ESRB staff conducted field inspection of LU's facilities and equipment and also reviewed pertinent documents and records.

During the audit, ESRB staff identified violations of one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. Please provide a response within 30 days of your receipt of this letter indicating all corrective actions and preventive measures, taken or planned, to address the violations to ensure compliance with GO requirements. The response should indicate the date of each remedial action and preventive measure completed within 30 days. For any outstanding items not addressed within 30 days, please provide the projected completion dates of all actions for all violations outlined in Sections II & IV of the enclosed Audit Findings.

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, appearing to read "Banu Acimis".

Banu Acimis, 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
Ryan Yamamoto, Senior Utilities Engineer, Supervisor, ESRB, CPUC
Ivan Garcia, Utilities Engineer, ESRB, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, ESRB staff reviewed the following records:

- LU's 2017 utility statistics including miles of overhead (OH) line, miles of underground (UG) cable, number of OH poles (subject to GO 95), number of UG structures (subject to GO 128), and number of customers.
- LU's overhead and underground inspection programs
- Patrol and Detailed Inspection Records from January 2007 to July 2017
- Completed Work Orders created in the past 6 months
- New Construction Records for the past 6 months
- Completed Pole Loading Calculations from the past 6 months
- LU's 2016 GO 165 Annual Report
- Third Party Notifications for 2017
- Inspector and Patrolmen List, Interview with Electric Inspector Steve Kauffman
- LU's District Map of the South Lake Tahoe District
- LU's Sustained Outage Records from 2007 to July 2017
- Reliability Metrics (SAIDI, SAIFI, CAIDI, MAIFI) from 2012 to 2016

II. Records Violations

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

1. **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."

ESRB observed that LU does not perform routine diagnostic testing on its switches, voltage regulators, reclosers, and capacitor banks. In addition, LU does not have written procedures in place for detailed inspections for the equipment mentioned above.

2. **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."

"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."

ESRB staff reviewed work orders and noted that LU did not complete the following work orders by the assigned due dates.

1. A work order to replace insulators at 1114 Blue Lake Ave., South Lake Tahoe, Pole #153534 was identified on January 25, 2016 with a 12 month priority for repair. LU completed the repairs on March 31, 2017.
2. A work order to trim tree branches near conductors at 1055 Marjorie St., South Lake Tahoe, Pole #66598 was identified on January 25, 2016 with a 6 month priority for repair. LU completed the repairs on March 31, 2017.
3. A work order to install transformer bolt covers at 1037 Marjorie St., South Lake Tahoe, Pole #66597 was identified on January 25, 2016 with a 12 month priority for repair. LU completed the repairs on March 31, 2017.

III. Field Inspection

During the field inspection, ESRB staff inspected the following facilities during the field inspection:

Structure Number	Type of Structure	Approximate Location
111493	Pole	2820 S. Upper Truckee Rd. South Lake Tahoe
50865	Pole	2820 S. Upper Truckee Rd. South Lake Tahoe
153534	Pole	1114 Blue Lake Ave., South Lake Tahoe
66598	Pole	1055 Marjorie St., South Lake Tahoe
66597	Pole	1037 Marjorie St., South Lake Tahoe
290758	Pole	2456 Conestoga St., South Lake Tahoe
290684	Pole	1275 Meadow Crest Dr., South Lake Tahoe
146136	Pole	1266 Glenwood Way, South Lake Tahoe
66584	Pole	3404 Woodland Rd., South Lake Tahoe
168149	Pole	Across from 3396 Woodland Rd., South Lake Tahoe
66574	Pole	Intersection of Walkup Rd. and Red Lakes Rd., South Lake Tahoe
66515	Pole	3693 Blackwood Rd., South Lake Tahoe
290424	Pole	1040 Fairway Ave., South Lake Tahoe
290477	Pole	1 st pole West of 401 Crystal Springs Rd., Markleeville
91499	Pole	Across from 401 Crystal Springs Rd., Markleeville
122329	Pole	389 Crystal Springs Rd., Markleeville
91498	Pole	Across from 353 Crystal Springs Rd., Markleeville
290476	Pole	314 Crystal Springs Rd., Markleeville
290475	Pole	273 Crystal Springs Rd., Markleeville
278290	Pole	240 Crystal Springs Rd., Markleeville
163878	Pole	235 Crystal Springs Rd., Markleeville
290474	Pole	235 Crystal Springs Rd., Markleeville
214611	Pole	West of 120 Crystal Springs Rd., Markleeville
186209	Pole	120 Crystal Springs Rd., Markleeville
290712	Pole	1585 Diamond Valley Road., Markleeville
290713	Pole	1585 Diamond Valley Road., Markleeville
290714	Pole	1585 Diamond Valley Road., Markleeville
264124	Pole	650 Eastside Lane, Coleville
264125	Pole	650 Eastside Lane, Coleville

264124	Pole	650 Eastside Lane, Coleville
92757	Pole	115430 Highway 395, Topaz
40314	Pole	4 th Pole on Roberts Ranch Tap, Topaz
75295	Underground Transformer	3838 Lake Tahoe Blvd., South Lake Tahoe
112123	Underground Transformer	Across from 3892 Lake Tahoe Blvd., South Lake Tahoe
30253	Underground Transformer	3300 Lake Tahoe Blvd., South Lake Tahoe
31827	Underground Transformer	4045 Lake Tahoe Blvd., South Lake Tahoe
30272	Underground Transformer	Across from 3859 Regina Rd. South Lake Tahoe
10953	Subsurface Transformer	4080 Lake Tahoe Blvd. South Lake Tahoe
10954	Subsurface Transformer	4080 Lake Tahoe Blvd. South Lake Tahoe
11011	Subsurface Transformer	4080 Lake Tahoe Blvd. South Lake Tahoe
10583	Subsurface Transformer	4080 Lake Tahoe Blvd. South Lake Tahoe
10582	Subsurface Transformer	4080 Lake Tahoe Blvd. South Lake Tahoe
10581	Subsurface Transformer	4080 Lake Tahoe Blvd. South Lake Tahoe

IV. Field Inspection Violations

ESRB staff observed the following violations during the field inspection:

1. 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.”

“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.”

LU left idle hardware (staple) at pole #264125 located at 650 Eastside Lane, Coleville.

LU has two underarm straps loose on the secondary bus at pole #92757 located at 115430 Highway 395, Topaz.

2. GO 95, Rule 51.6-A, Marking and Guarding, High Voltage Marking, states in part:

“Poles which support line conductors of more than 750 volts shall be marked with high voltage sign.”

LU Pole # 50865 did not have high voltage signs, located at 2820 S. Upper Truckee Rd., South Lake Tahoe.

3. 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 cross arms or on the surface of wood poles and structures shall be covered by a suitable protective covering (see Rule 22.8).”

LU had exposed ground wire on the following LU poles:

- Pole # 66597 located at 1037 Majorie St., South Lake Tahoe
- Pole # 163878 located at 235 Crystal Springs Rd., Markleeville
- Pole # 92757 located at 115430 Highway 395, Topaz

4. GO 95, Rule 54.6-I, Attachment of Protective Covering states in part:

“Protective covering shall be attached to poles, structures, crossarms, and other supports by means of corrosion-resistant materials (straps, plumbers tape, lags, nails, staples, screws, bolts, etc.) which are adequate to maintain such covering in a fixed position.”

LU has a loose riser strap on a riser guard approximately 15 feet high at pole #91499 located across from 401 Crystal Springs Rd., Markleeville.

LU has a loose riser strap on a riser guard approximately 20 feet high at pole #186209 located at 120 Crystal Springs Rd.

5. GO 95, Rule 56.4-C4 Clearances From Conductors Passing on Same Poles, states in part:

“The radial clearances between guys and conductors supported by or attached to the same poles or cross arms shall not be less than as specified in Table 2, 19C; 3 inches.”

LU had a service drop with less than 3 inches of radial clearance from an anchor at 314 Crystal Springs Rd. in Markleeville.

6. 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.”

6.1 During our field inspection of underground transformer #7295 at 3838 Lake Tahoe Blvd, ESRB staff observed that the enclosure was full of dirt and debris. A maintenance work order, due June 30, 2016, for LU crew to clean out the enclosure the underground transformer was not completed.

6.2 During our field inspection of underground transformer #31827 at 4045 Lake Tahoe Blvd, ESRB staff observed a missing bolt holder, which holds the bolt and lid in place. A maintenance work order, due June 25, 2016, for LU crew to install the bolt holder was not completed.

6.3 ESRB staff observed a broken enclosure located next to underground transformer #30272 and across from 3859 Regina Rd. in South Lake Tahoe.

7. GO 128, Rule 17.8, Identification of Manholes, Handholes, Subsurface and Self-contained Surface-mounted Equipment Enclosure, states:

“Manholes, hand holes, subsurface and self-contained surface-mounted equipment enclosures shall be marked as to ownership to facilitate identification by persons authorized to work therein and by other persons performing work in their vicinity.”

The following LU hand holes did not have LU ownership identification:

- Underground Transformer #75295 at 3838 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #112123 across from 3892 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #30253 at 3300 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #31827 at 4045 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #330272 across from 3859 Regina Rd., South Lake Tahoe

8. GO 128, Rule 35.1, Identification of Cables, states in part:

“Cables operating at a voltage in excess of 750 volts shall be permanently and clearly identified by tags or other suitable means to indicate their operating voltage and the circuit with which they are normally associated at each manhole or other commonly accessible location of the underground system.”

The following LU hand holes were missing identification cables:

- Underground Transformer #30253 at 3300 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #31827 at 4045 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #330272 across from 3859 Regina Rd., South Lake Tahoe

9. GO 128, Rule 35.3, Warning Signs, states in part:

“Warning signs indicating high voltage shall be installed on an interior surface, or barrier if present, inside the entrance of vaults, manholes, hand holes, pad mounted transformer compartments and other above ground enclosures containing exposed live parts above 750 volts.”

The following LU hand holes did not have high voltage warning signs:

- Underground Transformer #75295 at 3838 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #30253 at 3300 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #31827 at 4045 Lake Tahoe Blvd., South Lake Tahoe
- Underground Transformer #330272 across from 3859 Regina Rd., South Lake Tahoe

10. 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 of these rules (See Rule 12.3).”

11. GO 165, Table 1, Distribution Inspection Cycles, states in part:

“Underground Transformers shall have a detail inspection completed every 3 years.”

During our field inspection on July 28, 2017, LU inspector could not open the lid to the underground transformer #112123. The previous inspection record indicated that on June 30, 2015 the LU inspector also could not open the lid. LU has not inspected the underground transformer per GO 128 and GO 165 requirements.