PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE SAN FRANCISCO, CA 94102-3298 EDMUND G. BROWN JR., Governor



EA2011-25

October 18, 2011

Gary Davidson Electric Superintendent City of Gridley 685 Kentucky St Gridley, CA 95948

Subject: City of Gridley Electric Audit

Dear Mr. Davidson:

On behalf of the Utilities Safety and Reliability Branch (USRB) of the California Public Utilities Commission (CPUC), Ivan Garcia and I conducted an audit of the City of Gridley's (Gridley's) electric distribution system from September 26-28, 2011. The audit included a review of Gridley's records for April 2007 through September 2011.

During the audit, we identified violations of one or more General Orders. I have enclosed a copy of our audit summary itemizing those violations. By November 18, 2011, Gridley must send me a response to this letter detailing its plans to address those violations and when Gridley expects to complete them. You may email an electronic copy of the response to kh2@cpuc.ca.gov or send a hard copy to:

Attn: Kenneth How California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102-3298

Should you have any questions concerning this letter I can be reached at by phone at (415) 703-2875 or by email at kh2@cpuc.ca.gov.

Sincerely,

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Kenneth K. How Utilities Safety and Reliability Branch Consumer Protection and Safety Division California Public Utilities Commission

Enclosures: Audit Summary

CC: Ivan Garcia, Utilities Engineer, USRB, CPUC Alok Kumar, Senior Utilities Engineer, USRB, CPUC Raymond Fugere, Program and Project Supervisor, USRB, CPUC

# AUDIT SUMMARY

## **I. Record Violations**

This section summarizes the General Order (GO) violations that we found during our review of The City of Gridley's (Gridley's) maintenance records.

#### A. <u>No GO 165 Patrols or Inspections Documented Prior to September 2011</u>

GO 165, specifies the frequencies a utility must patrol and perform detailed inspections on its facilities. Gridley did not have any documented patrols or detailed inspections for the April 2007 through August 2011 period. In September 2011, Gridley only performed an overhead patrol of its system. Gridley must perform and document patrols and detailed inspections as required by GO 165.

### B. Not All Identified Problems Documented During Patrols

GO 165 Part IV states in part:

For all inspections, within a reasonable period, company records shall specify the circuit, area, or equipment inspected, the name of the inspector, the date of the inspection, and any problems identified during each inspection, as well as the scheduled date of corrective action.

GO 165 requires utilities to write down any problems they find during their inspections. At the time of the audit, Gridley indicated that it did not write down problems found on poles scheduled for replacement. Gridley must record these problems in order to be compliant with GO 165.

#### C. <u>No Diagnostic Equipment Tests</u>

GO 165 Section III: Definitions states in part:

"Detailed" inspection shall be defined as one where individual pieces of equipment and structures are carefully examined, visually and through use of routine diagnostic test, as appropriate, and (if practical and if useful information can be so gathered) opened, and the condition of each rated and recorded.

GO 165 specifies the frequency a utility must inspect its facilities. During our audit, we found that Gridley was not performing diagnostic testing on its capacitors and switching/protective devices. Gridley must diagnostically test GO 165 listed equipment as appropriate, per, at a minimum, the detailed inspection cycles outlined in GO 165.

### D. <u>No Pole Loading Calculations</u>

GO 95 Section IV covers the mechanical strength requirements for all lines. Utilities must be able to show that facilities meet these GO 95 strength requirements during the installation of new poles or when newly installed facilities negatively impact the strength of a pole. At the time of our audit, Gridley was not performing pole loading calculations prior to new construction or when it added new facilities were onto existing poles. Gridley must perform these pole loading calculations in order to show that it is compliant with the pole strength requirements required by GO 95.

# **II. Field Violations**

This section lists the GO 95 and 128 violations that we identified during our field inspections of Gridley's facilities. For the field work, we primarily chose locations that Gridley visited recent to our audit date.

<b>A.</b>	Location:	Padmount, Jay Dr & Bowen Ct, Gridley, CA
	Equipment ID:	T-924
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/26/11
Explanation of Violation(s):		tion(s):
	Equipment Case Not Secured to Pad	
	GO 128 Rule 34.3:	
	The equipment case or enclosure shall be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.	
	The padmounted transformer case was not secured (bolted) onto the pad.	

В.	Location:	Padmount, 2029 Jacob, Gridley, CA
	Equipment ID:	T-917
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/26/11
	Explanation of Violation(s):	
	Equipment Case Not Secured to Pad	
	GO 128 Rule 34.3:	
	The equipment case or enclosure shall be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.	
	The padmounted transformer case was not secured (bolted) onto the pad.	

C.	Location:	Padmount, Sycamore St Between Butte View & Randolph,
<b>U.</b>		Gridley, CA
	Equipment ID:	T-913
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/26/11
	Explanation of Viola	tion(s):
	Equipment Case Not Secured to Pad GO 128 Rule 34.3:	
	The equipment case or enclosure shall be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.	
	The padmounted transformer case was not secured (bolted) onto the pad.	

D.	Location:	Pole, Hazel St & Idaho St, Gridley, CA
	Pole No.:	4270
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 6)
	Date Visited by CPUC:	9/26/11
	Explanation of Viola	tion(s):
	Bolt Cover Not Secure	
	GO 95 Rule 58.1B3 Enclosed Equipment Case and Lead Wire Clearances From Hardware:	
	Equipment cases, hangers, and other metal parts in contact therewith shall clear through bolts, arm braces of metal, and other hardware elements, by not less than 1.5 inchesThe minimum clearance of 1.5 inches need not apply to through bolts in metallic contact with equipment casesprovided the portion of such through bolts extending into the climbing space is covered with non-conducting material as specified in Rule 22.8.	
	The bolt cover on the transformer mounting through bolt was not securely fastened.	

Е.	Location:	Pole, Spruce St & Idaho St, Gridley, CA
	Pole No.:	4210
	Previous Visit by	9/14/11
	Utility:	Overhead Patrol (Sheet 6)
	Date Visited by CPUC:	9/26/11
	Explanation of Viola	tion(s):
	Missing High Voltage Sign	
	GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	
	Primary Down Guy Touching Communication Span	
	GO 95 Table 2 Case 19C requires a 3 inch clearance between guys in proximity and communication conductors.	
	The primary down guy was touching a communication span at this location	

The primary down guy was touching a communication span at this location.

F.	Location:	Pole, Oak St & Alley Between Idaho and Nevada, Gridley, CA
	Pole No.:	4900
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 6)
	Date Visited by CPUC:	8/9/11
Explanation of Violation(s):		tion(s):
	Broken Ground Molding GO 95 Rule 54.6 B:	
	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	
	The ground molding was broken at this location.	

G.	Location:	Pole, Spruce St & Alley Between Idaho and Nevada, Gridley, CA
	Pole No.:	4200
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 6)
	Date Visited by CPUC:	9/26/11
Explanation of Violation(s):		ation(s):
	Missing High Voltage Sign	
	GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

Н.	Location:	Pole, Hazel St & Alley Between Idaho and Nevada, Gridley, CA
	Pole No.:	4870
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 7)
	Date Visited by CPUC:	9/26/11
	Explanation of Viola	ation(s):
Missing High Voltage Sign		e Sign
	<ul> <li>GO 95 Rule 51.6 A3:</li> <li><i>Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors</i></li> <li>The pole at this location was missing high voltage signs.</li> </ul>	

I.	Location:	Pole, Hazel St & Alley Between Idaho and Nevada, Gridley, CA
	Pole No.:	4850
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 7)
	Date Visited by CPUC:	9/26/11
Explanation of Violation(s):		ation(s):
	Missing High Voltage Sign	
	GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

J.	Location:	Pole, Sycamore St & Alley Between Idaho and Nevada, Gridley, CA
	Pole No.:	4840
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 7)
	Date Visited by CPUC:	9/26/11
	Explanation of Viola	ation(s):
	Missing High Voltage Sign GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

K.	Location:	Pole, Sycamore St & Alley Between Idaho and Nevada, Gridley, CA
	Pole No.:	4820
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 7)
	Date Visited by CPUC:	9/26/11
Explanation of Violation(s):         Broken Ground Molding		ation(s):
		ling
	GO 95 Rule 54.6 B:	
	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	
	The ground molding was broken at this location.	

		Pole, Locust St & Alley Between Idaho and Nevada,	
L.	Location:	Gridley, CA	
	Pole No.:	4610	
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 7)	
	Date Visited by CPUC:	9/27/11	
	Explanation of Viol	ation(s):	
	Missing High Voltag	e Sign	
	GO 95 Rule 51.6 A3:		
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors		
	The pole at this location was missing high voltage signs.		
	Missing Guy Guard		
	GO 95 Rule 56.9 Guy Marker (Guy Guard):		
	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.		
	There was a broken guy guard at this location.		

М.	Location:	Padmount, Locust & Nevada, Gridley, CA
	Equipment ID.:	T-906
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/27/11
	Explanation of Violation(s):	
	Equipment Case Not Secured to Pad	
	GO 128 Rule 34.3:	
	· · ·	case or enclosure shall be secured in place and be of gth to resist entrance or damage to the equipment by persons.
	The padmounted tran	sformer case was not secured (bolted) onto the pad.

NT	<b>T</b>	Pole, Near Locust & Alley between Oregon and California,
<b>N.</b>	Location:	Gridley, CA
	Pole No.:	4990
	Previous Visit by	9/14/11
	Utility:	Overhead Patrol (Sheet 7)
	Date Visited by CPUC:	9/27/11
	Explanation of Viol	ation(s):
	Broken Ground Molding	
	GO 95 Rule 54.6 B:	
	v	f the ground wires attached on the face or back of wood on the surface of wood poles and structures shall be covered by ective covering
	The ground molding was broken at this location.	

0.	Location:	Pole, Near Cedar & Alley between Oregon and California, Gridley, CA
	Pole No.:	5000
	Previous Visit by Utility:	9/14/11 Overhead Patrol (Sheet 7)
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Missing High Voltage Signs	
	GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

Р.	Location:	Pole, Biggs Gridley Memorial Hospital Parking Lot, Gridley, CA
	Pole No.:	1360
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 4)
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Missing High Voltage Signs	
	GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

Q.	Location:	Pole, Biggs Gridley Memorial Hospital Parking Lot, Gridley, CA
	Pole No.:	1340
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 4)
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Missing High Voltage Signs	
	GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

R.	Location:	Padmount, Biggs Gridley Memorial Hospital Parking Lot, Gridley, CA
	Equipment ID.:	T-511
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Bollard Blocking Padmount Door	
	GO 128 Rule 34.2 C	Transformers:
	Transformers operating at more than 600 volts, other than current and potential transformers and transformers which constitute a component part of other apparatus and which conform to the requirements of such apparatus, shall be readily accessible for operation, inspection, maintenance, and replacement.	
	A bollard in front of this padmounted transformer was preventing the door on its operating side from opening completely.	

S.	Location:	Padmount, Biggs Gridley Memorial Hospital Parking Lot, Gridley, CA
	Equipment ID.:	J-1350
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/27/11
	Explanation of Viol	ation(s):
	Cables not Identified	
	GO 128 Rule 35.1 Identification of Cables	
	clearly identifi voltage and the	ng at a voltage in excess of 750 volts shall be permanently and ed by tags or other suitable means to indicate their operating e circuit with which they are normally associated at each her commonly accessible location of the underground system.
	The primary cables in operating voltage.	n this junction box were not marked with associated circuit and

T.	Location:	Pole, Backyard at Sage St, Gridley, CA
	Pole No.:	1370
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 4)
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Missing High Voltage Signs	
	GO 95 Rule 51.6 A3:	
		ere present may be marked in lieu of marking the pole. Such placed on the face and back of each crossarm supporting line
	The pole at this locat	ion was missing high voltage signs.

U.	Location:	Padmount, Biggs Gridley Memorial Hospital Parking Lot,
	Equipment ID.:	Gridley, CA T-512
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Cables not Identified	
	GO 128 Rule 35.1 Ide	entification of Cables
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.		ed by tags or other suitable means to indicate their operating c circuit with which they are normally associated at each
	The primary cables in this junction box were not marked with associated circuit and operating voltage.	
	Equipment Case Not	Secured to Pad
	GO 128 Rule 34.3:	
		case or enclosure shall be secured in place and be of gth to resist entrance or damage to the equipment by ersons.
	The padmounted tran	sformer case was not secured (bolted) onto the pad.

V.	Location:	Pole, Sage St & Jackson St, Gridley, CA
	Pole No.:	1430
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 4)
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Missing High Voltage Signs	
	GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

W.	Location:	Pole Near Sage St & Jackson St, Gridley, CA
	Pole No.:	1420
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 4)
	Date Visited by CPUC:	9/27/11
	Explanation of Violation(s):	
	Missing High Voltage Signs	
	GO 95 Rule 51.6 A3:	
		ere present may be marked in lieu of marking the pole. Such placed on the face and back of each crossarm supporting line
	The pole at this location was missing high voltage signs.	

X.	Location:	Pole, Backyard between Ford Ave and Sage St, Gridley, CA
	Pole No.:	1410
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 4)
	Date Visited by CPUC:	9/27/11
	Explanation of Viola	ation(s):
	Missing High Voltag	e Signs
	GO 95 Rule 51.6 A3: Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	
	Missing Guy Guard	
	GO 95 Rule 56.9 Guy	y Marker (Guy Guard):
	or plastic, not a anchor guys. W	narker of suitable material, including but not limited to metal less than 8 feet in length, shall be securely attached to all There more than one guy is attached to an anchor rod, only the is required to have a marker.
	There was a broken g	uy guard at this location.

<b>Y.</b>	Location:	Pole near Haskell and Sycamore, Gridley, CA	
	Pole No.:	7310	
	Previous Visit by Utility:	9/7/11 Overhead Patrol (Sheet 1)	
	Date Visited by CPUC:	9/27/11	
	Explanation of Violation(s):		
	Missing High Voltage Signs		
	GO 95 Rule 51.6 A3:		
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors		
	The pole at this location was missing high voltage signs.		
	Broken Ground Molding		
	GO 95 Rule 54.6 B:		
	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 The ground molding was broken at this location.		

Z.	Location:	Pole near Haskell and Sycamore, Gridley, CA
	Pole No.:	7300
	Previous Visit by Utility:	9/7/11 Overhead Patrol (Sheet 1)
	Date Visited by CPUC:	9/27/11
	Explanation of Violation(s):         Missing High Voltage Signs         GO 95 Rule 51.6 A3:	
	Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors	
	The pole at this location was missing high voltage signs.	

1A.	Location:	Padmount on Fairview & Alley Between Hazel and
		Sycamore, Gridley, CA
	Equipment ID.:	T-302
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/27/11
	Explanation of Violation(s):	
	Equipment Case No	t Secured to Pad
GO 128 Rule 34.3: <i>The equipment case or enclosure shall be secured in place and be of</i> <i>sufficient strength to resist entrance or damage to the equipment by</i> <i>unauthorized persons.</i>		
		ngth to resist entrance or damage to the equipment by
	The padmounted transformer case was not secured (bolted) onto the pad.	

1B.	Location:	Padmount on Fairview & Alley Between Hazel and
		Sycamore, Gridley, CA
	Equipment ID.:	T-303
	Previous Visit by Utility:	N/A
	Date Visited by CPUC:	9/27/11
	Explanation of Violation(s):	
Equipment Case Not Secured to Pad GO 128 Rule 34.3:		t Secured to Pad
	The equipment case or enclosure shall be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons. The padmounted transformer case was not secured (bolted) onto the pad.	

1C.	Location:	Pole on Magnolia & Alley Between Lincoln and Haskell
	Pole No.:	7080
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 2)
	Date Visited by CPUC:	9/28/11
Explanation of Violation(s):         Missing High Voltage Signs		lation(s):
		ge Signs
	<ul> <li>GO 95 Rule 51.6 A3:</li> <li><i>Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors</i></li> <li>The pole at this location was missing high voltage signs.</li> </ul>	

1D.	Location:	Padmount Behind Wilson Elementary	
	Equipment ID.:	T-306	
	Previous Visit by Utility:	N/A	
	Date Visited by CPUC:	9/28/11	
	Explanation of Vio	lation(s):	
	Equipment Case Not Secured to Pad		
	<ul> <li>GO 128 Rule 34.3:</li> <li>The equipment case or enclosure shall be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.</li> <li>The padmounted transformer case was not secured (bolted) onto the pad.</li> <li><u>Cables not Identified</u></li> </ul>		
	GO 128 Rule 35.1 Identification of Cables 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 primary cables i operating voltage.	in this junction box were not marked with associated circuit and	

1E.	Location:	Pole on Haskell East of Wilson School
	Pole No.:	8150
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 2)
	Date Visited by CPUC:	9/28/11
Explanation of Violation(s):         Missing High Voltage Signs		lation(s):
		ge Signs
	<ul> <li>GO 95 Rule 51.6 A3:</li> <li><i>Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors</i></li> <li>The pole at this location was missing high voltage signs.</li> </ul>	

1F.	Location:	Pole on Haskell & Norman
	Pole No.:	8080
	Previous Visit by Utility:	9/8/11 Overhead Patrol (Sheet 2)
	Date Visited by CPUC:	9/28/11
	Explanation of Violation(s):         Missing High Voltage Signs         GO 95 Rule 51.6 A3:         Crossarms where present may be marked in lieu of marking the pole. Such signs shall be placed on the face and back of each crossarm supporting line conductors         The pole at this location was missing high voltage signs.	

# **III. Concerns and Recommendations**

This section discusses any additional items found during the audit that we have concerns about. These items are not necessarily rule violations.

#### A. Pole Loading Calculations on all Pole Replacement Work

In part due to the pole loading calculation issues we found during our Audit (see I.D.), we recommend that Gridley perform pole loading calculations on all pole replacement work, even if the facilities attached to the replacement poles do not change.

### B. Inspection of Splice Boxes/Junction Boxes

We recommend that Gridley perform regular inspections of the facilities in its splice and junction boxes.