

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



April 1, 2020

EA2020-855

Lise Jordan, Sr. Director
Regulatory Compliance and Quality Assurance
Pacific Gas and Electric Company (PG&E)
77 Beale Street
San Francisco, CA 94105

SUBJECT: Audit of PG&E's Kern Division

Dear Ms. Jordan:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Stephen Lee, Ivan Garcia, Samuel Mandell, and Charles Mee of ESRB conducted an electric distribution audit of PG&E's Kern Division from February 24, 2020 through February 28, 2020. During the audit, ESRB staff conducted field inspections of PG&E's facilities and equipment and reviewed pertinent documents and records.

As a result of 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 no later than May 11, 2020, by electronic or hard copy of all corrective actions and preventive measures taken by PG&E to correct the identified violations and prevent the recurrence of such violations. The response should indicate the date of each remedial action and preventive measure completed by May 11, 2020. For any outstanding items not addressed, please provide the projected completion dates of all corrective actions for the violations outlined in Sections II & IV of the enclosed Audit Findings.

For Finding 1 in Section II of the enclosed Audit Findings, please reference the attached Excel document and explain in detail why PG&E did not include these past due notifications that are highlighted in Column L for Sheets 3A and 3B, respectively, in the requested list of past due notifications for Sheet 3C. ESRB staff tabulated these findings in Table 3 and 4 in the report.

If you have any questions concerning this audit, please contact Stephen Lee at (916) 713-4140 or stephen.lee@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, "KE#3 - Work Orders" Excel Document

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
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CPUC AUDIT FINDINGS OF PG&E KERN DIVISION
February 24-28, 2020

I. Records Review

During the audit, ESRB staff reviewed the following records:

- Completed work orders with notifications from the past 12 consecutive calendar months, cancelled work orders with notifications from the past 12 consecutive calendar months, and late completed work orders from the last 60 consecutive calendar months.
- Patrol and detailed inspection records from the past 72 consecutive calendar months.
- Feeder reliability metrics and sustained outages in the Division from the last 60 calendar months.
- Master Map displaying approximate locations of the plat maps administered by the Division.
- New Construction (both overhead and underground) projects in the last 12 months not subject to a patrol or detailed inspection.
- Pole loading calculations from the last 12 consecutive calendar months including completion dates.
- Third-party notifications sent in the last 60 consecutive calendar months and received from the last 60 consecutive calendar months.
- List of inspectors and patrolmen active in the Division from 2015 to year to date (YTD).
- Electronic training records for inspectors from 2015 to YTD.
- Completed equipment test records, deferred equipment test records, and temporarily delayed equipment tests during the last three years.

II. Records Violations

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

1. GO 95, Rule 18-B, Maintenance Programs states in part:

“Each company (including electric utilities and communications companies) shall establish and implement an auditable maintenance program for its facilities and lines for the purpose of ensuring that they are in good condition so as to conform to these rules. Each company must describe in its auditable maintenance program the required qualifications for the company representatives who perform inspections and/or who schedule corrective actions. Companies that are subject to GO 165 may maintain procedures for conducting inspections and maintenance activities in compliance with this rule and with GO 165.”

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.”

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.

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.”

ESRB staff reviewed late work orders completed within the Kern Division for the past 60 months (from January 1, 2015 to January 13, 2020). PG&E’s Electric Distribution Preventative Maintenance (EDPM) Manual, published on April 1, 2016, defines the priority codes and associated time frames for the response/repair action as follows:

- **Priority A – Safety / Emergency Immediate Response**
An emergency is defined as any activity in response to an outage to customer(s) or an unsafe condition requiring immediate response or standby to protect the public.
- **Priority B – Urgent Compliance (Due within 3 months)**
- **Priority E – Compliance (Due 3-12 months)**
- **Priority F – Compliance (For Regulatory Conditions, the Recommended Repair Date is the due date for the next Inspection (UG = 3 years, OH = 5 years).**

ESRB staff reviewed late work orders and determined that PG&E did not address a total of 483 work orders by their required due date. Of these 483 work orders, 460 were classified as “late non-exempt” and 23 were classified as “late-exempt”.

Per GO 95, Rule 18-B(1)(b) states: *“Correction times may be extended under reasonable circumstances, such as: third party refusal, customer issue, no access, permits required, system emergencies (e.g. fires, severe weather conditions)”*. PG&E classifies work orders under these circumstances as “late-exempt” as they are exempted from completion by their required due date.

Table 1 below breaks down the 483 late work orders by their given priority, including the total number of late work orders, as well as non-exempt and cancelled work orders, which are included in the total.

Table 1: Late Work Orders

Priority Code	Total Late Work Orders	Non-Exempt Late Work Orders	Total Cancelled Late Work Orders
A	0	0	0
B	120	118	10
E	290	270	15
F	73	72	7
Total	483	460	32

Table 2 below identifies the most overdue non-exempt work orders for each priority.

Table 2: Most Overdue Work Orders

Priority Code	Most Overdue Work Orders (WO#s)	Number of Days Past Required Due Date
B	111963997	110
E	110538685	479
F	106109981	179

PG&E identified work order #111963997 on September 15, 2016 to remove idle underground facilities with a required completion date of December 15, 2016. PG&E did not complete the work until April 4, 2017.

PG&E identified work order #110538685 on July 23, 2015 to replace a corroded transformer with a required completion date of July 23, 2016. PG&E did not complete the work until November 14, 2017.

PG&E identified work order #106109981 on June 17, 2012 to install missing high signs with a required completion date of June 17, 2017. PG&E did not complete the work until December 13, 2017.

ESRB staff also identified an additional unreported 294 work orders in the requested records for the completed and cancelled work orders from the past 12 consecutive calendar months that PG&E did not address by their required due date. PG&E did not identify if these work orders were exempt. Table 3 below breaks down the additional 294 work orders by their given priority, including the total number of late completed work orders and late cancelled work orders. As you can see from Table 3 below, 135 of the unreported 273 work orders that were completed late, were categorized as Priority A which is defined as “Safety/Emergency Immediate Response” according to PG&E’s EDPM Manual.

Table 3: Unreported Late Work Orders

Priority Code	Completed Late Work Orders	Cancelled Late Work Orders
A	135	15
B	20	0

E	77	2
F	41	4
Total	273	21

Table 4 below identifies the most overdue unreported work orders for each priority.

Table 4: Most Overdue Unreported Work Orders

Priority Code	Most Overdue Work Orders (WO#s)	Number of Days Past Required Due Date
A	115105044	165
B	117970007	110
E	114740206	172
F	108575385	166

Specifically, PG&E identified work order #115105044, which was categorized as a Priority A tag- “Safety/Emergency Immediate Response”, on October 31, 2018 to replace a damaged padmount transformer with a required completion date of November 21, 2018. PG&E did not complete the work until May 5, 2019, which was 165 days after its required completion date.

As Table 4 shows PG&E identified work order #117970007, which was categorized as a Priority B- “Urgent Compliance due within 3 months”, on July 15, 2019 to replace a connector with temperature differential issues with a required completion date of August 15, 2019. PG&E did not complete the work until December 3, 2019, which was 110 days after its required completion date.

PG&E also identified work order #114740206, which was categorized as a Priority E tag- “Compliance (due 3-12 months)”, on June 29, 2018 to replace a rotten and decayed pole with a required completion date of June 29, 2019. PG&E did not complete the work until December 18, 2019, which was 172 days after its required completion date.

Additionally, PG&E identified work order #108575385 on July 10, 2014 to replace a guy anchor with a required completion date of July 10, 2019. PG&E did not complete the work until December 23, 2019.

2. GO 95, Rule 31.2, Inspection of Lines states in part:

“Lines shall be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard.”

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 staff noted that PG&E completed two overhead inspections past their required due date for the following maps:

Table 5: Past Due Overhead Inspections

Map	Required Due Date	Completion Date
2928332	4/1/2016	May and June 2016
25206	4/29/2019	5/2/2019

3. GO 128, Rule 17.2, Inspection states in part:

“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.”

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 staff noted that PG&E completed 13 underground inspections past their required due date for the following maps:

Table 6: Past Due Underground Inspections

Map	Required Due Date	Completion Date
2928233	12/11/2014	5/20/2015
2927174	2/24/2015	5/20/2015
2927172	2/24/2015	5/20/2015
2927173	2/24/2015	5/20/2015
2827266	4/5/2016	May and June 2016
2827352	4/5/2016	May and June 2016
2827354	4/5/2016	May and June 2016
2827363	4/5/2016	May and June 2016
2827366	4/6/2016	May and June 2016
2927091	4/7/2016	May and June 2016
2927092	4/7/2016	May and June 2016
3027062	5/6/2016	May and June 2016
3027064	4/27/2016	May and June 2016

III. Field Inspection

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

Location	SAP Number	Equipment Number/ Barcode	Type of Structure	Approximate Location	City
1	107070476		Junction Box	5604 Kleinpell Ave	Bakersfield
2		T-1234	Subsurface Transformer	505 Winston Dr	Bakersfield
3		T-5917	Subsurface Transformer	60 Green Haven	Bakersfield
4	100243401	120429396	Pole	Rear of 1914 Bank St	Bakersfield
5	100193828	120429397	Pole	Rear of 1930 Bank St	Bakersfield
6	100243402		Pole	1 Pole East of Location 7	Bakersfield
7	100193829	120429448	Pole	Rear of 226 Oleander Ave	Bakersfield
8	100243403	120429447	Pole	2011 3rd St	Bakersfield
9	100195356	120427272	Pole	2010 3rd St	Bakersfield
10	100143820		Pole	601 Washington Ave	Oildale
11	103776646		Pole	1 Pole West of Location 10	Oildale
12	100241026		Pole	1008 Yosemite Dr	Oildale
13	100241027		Pole	1009 Yosemite Dr	Oildale
14		120160129	Pole	1 Pole West of Location 13	Oildale
15	100226018	120370835	Pole	281 E Cedar (West corner of Baseball Park)	Taft
16	100226019		Pole	1 Pole East of Location 15	Taft
17	100189284	120370833	Pole	1 Pole East of Location 16	Taft
18	100226020		Pole	1 Pole East of Location 17	Taft
19	100189145		Pole	Pole in front of Communication Tower, (West of intersection of Airport Rd and Honolulu Rd)	Taft
20	100226010		Pole	1 Pole East of Location 19	Taft
21	100189143		Pole	1 Pole East of Location 20	Taft
22	100226009		Pole	1 Pole East of Location 21	Taft

23	100189142		Pole	1 Pole East of Location 22	Taft
24	100189141		Pole	1 Pole North of Location 23	Taft
25	100224590		Pole	503 Taylor St	Taft
26	100220906		Pole	Corner of Kern and Center St	Maricopa
27	100221186		Pole	Front of Oil Derrick 420	Maricopa
28	110363290	10363290	Pole	1 Pole West of Loc 27	Maricopa
29	100221185		Pole	1 Pole West of Loc 28	Maricopa
30	100190769		Pole	1 Pole West of Loc 29	Maricopa
31	100221184		Pole	1 Pole West of Loc 30	Maricopa
32	100196760		Pole	1 Pole West of Loc 31	Maricopa
33	100238599		Pole	NW corner of Map 30264 (West of Access Road off S Allen Rd)	Bakersfield
34	41662238		Pole	1 Pole North of Location 33	Bakersfield
35	100156433	135401	Pole	1 Pole West of Location 33	Bakersfield
36	100236947	623843	Pole	1 Pole South of Location 33	Bakersfield
37	103233297		Pole	2811 Gibson St	Lebec
38	103134326		Pole	1 Pole South of Location 37	Lebec
39	100196675		Pole	2729 Gibson St	Lebec
40	100223035		Pole	1 Pole South of Location 39	Lebec
41	103134325		Pole	2898 Gibson St	Lebec
42	107228721		Junction Box	2854 Gibson St	Lebec
43	103134327		Pole	2854 Gibson St, farthest pole behind gate	Lebec
44	100196961		Pole	Happy Hour Ranch, 700 Canyon Dr	Lebec
45	100222852		Pole	Intersection of Canyon Dr and Lebec Oaks Rd	Lebec
46	103951725	120123968	Pole	Rear of 909 Canyon Rd	Lebec
47		J-35922	Junction Box	Intersection of Laval Rd and Outlet Dr	Wheeler Ridge
48		J-14169	Junction Box	Sidewalk of Intersection of Laval Rd and Outlet Dr	Wheeler Ridge

49		F-69841	Switchgear	Intersection of Laval Rd and Outlet Dr	Wheeler Ridge
50		T-99924	Padmount Transformer	Intersection of Laval Rd and Outlet Dr	Wheeler Ridge
51		J-64002	Junction Box	West of Location 50	Wheeler Ridge
52		F-59511	Switchgear	West of Location 51	Wheeler Ridge
53	100212036		Pole	Behind Shorty's Market (275 S A St)	Arvin
54	100235673	7275	Streetlight	In Front of Shorty's Market	Arvin
55	100212031		Pole	Across from Shorty's Market	Arvin
56	100212058		Pole	Corner of N A St and 4th Ave	Arvin
57	100212063		Pole	144 N A St	Arvin
58	100212066		Streetlight	138 N A St	Arvin
59	100212144		Pole	352 N A St	Arvin
60	100212150		Pole	130 N A St	Arvin
61	103852317	120159911	Pole	132A N A St	Arvin
62	100212176		Pole	132B N A St	Arvin
63	100212026	7099	Pole	316 N A St	Arvin
63.A			Pole	1 Pole North of Location 63 (348 N A St)	Arvin
64		T-9754	Padmount Transformer	14861 Lost Hills Rd	Lost Hills
65		110419518	Pole	Across from 14670 Lost Hills Rd	Lost Hills
66		110419520	Pole	Adjacent to Kern County Fire Station	Lost Hills
67	103091838		Pole	1 Pole East of Location 66	Lost Hills
68	100129799		Pole	1 Pole East of Location 67	Lost Hills
69	103324842		Pole	South of Location 66	Lost Hills
70	100129797		Pole	East of Location 69	Lost Hills
71	103324841		Pole	South of Location 69	Lost Hills
72	100129794		Pole	West of Location 71	Lost Hills
73	100129684		Pole	2nd Pole West of Intersection of Rte 46 and Lost Hills Rd	Lost Hills

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.”

1.1) The pole in the rear of 1914 Bank Street in Bakersfield (Location 4) has a deteriorated primary crossarm. The pole’s secondary crossarm is also missing an under-arm bus strap. Additionally, one of the outermost secondary pin insulators has become detached from the crossarm (the insulator is “floating”).

1.2) The pole at 2010 3rd St in Bakersfield (Location 9) is leaning more than 10%.

1.3) The fifth pole west of Oil Derrick 420 in Maricopa (Location 32) has a deteriorated crossarm that is causing a pin insulator to “squat”. PG&E wrote EC Notification 117132745 to replace the crossarm.

1.4) The primary jumpers on the pole located on the northwest corner of Map 30264 in Bakersfield (Location 33) have secondary-rated connectors. PG&E wrote EC Notification 117836839 to address the issue.

1.5) The pole at 2729 Gibson St in Lebec (Location 39) has two large woodpecker holes near the overhead transformer’s top through bolt.

1.6) The pole at 2898 Gibson St in Lebec (Location 41) has multiple woodpecker starter holes along a vertical section next to the pole’s secondary service riser.

1.7) The pole at “Happy Hour Ranch” near 700 Canyon Dr in Lebec (Location 44) has a large woodpecker hole below the primary insulator’s through bolt. There is also a large woodpecker hole below the primary crossarm’s through bolt.

1.8) The pole at 132B N A St in Arvin (Location 62) is leaning more than 10%.

1.9) A primary jumper on the pole located at 348 N A St in Arvin (Location 63.A) has a secondary-rated connector.

1.10) The second pole west of the intersection of Rte. 46 and Lost Hills Rd (Location 73) has a tilted crossarm.

2. 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.

Nothing herein contained shall be construed as requiring utilities to grant permission for such use of their overhead facilities; or permitting any use of joint poles or facilities for such permanent or temporary construction without the consent of all parties having any ownership whatever in the poles or structures to which attachments may be made; or granting authority for the use of any poles, structures or facilities without the owner's or owners' consent."

2.1) The pole located two poles east of the Kern County Fire Station in Lost Hills (Location 68), has a foreign attachment (running shoes) hanging on one of the overhead transformers. PG&E wrote EC Notification 117393607 to remove the foreign attachment.

3. GO 95, Rule 51.6-A, High Voltage Marking 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. Such signs shall be of weather and corrosion-resisting material, solid or with letters cut out therefrom and clearly legible."

3.1) The pole located in front of the communication tower west of the intersection of Airport Rd and Honolulu Rd in Taft (Location 19) did not have a high voltage sign on one side of the crossarm. PG&E installed a new high voltage sign during the audit.

3.2) The pole located three poles east of Location 19 (Location 22), did not have high voltage signs. PG&E installed new high voltage signs during the audit.

4. 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)."

4.1) The ground molding on the pole located at 2011 3rd St in Bakersfield (Location 8) is missing a three-inch section about ten feet from the ground surface.

4.2) The ground molding on the pole located in the west corner of the baseball field near 281 E Cedar St in Taft (Location 15) is missing a six-inch section about ten feet from the ground surface. PG&E corrected the issue during the audit.

4.3) The ground molding on the pole located one pole south of the Kern County Fire Station in Lost Hills (Location 69) is missing a section about one foot from the ground surface.

5. GO 95, Rule 54.6-E.(1), Risers, Encased from Ground Level to 8 Feet Above the Ground states:

“Risers from underground cables or other conductors shall be encased from the ground level to a level not less than 8 feet above the ground (see Figure 54–4A & B) in:

(a) Securely or effectively grounded iron or steel pipe (or other covering at least of equal strength); or

(b) Nonmetallic conduit, provided that risers of circuits in excess of 750 volts shall have an effectively grounded metallic shield. Such conduit shall be of material as specified in Rule 22.8–B; or

(c) Nonmetallic U-shaped moulding, provided that risers of circuits in excess of 750 volts shall have an effectively grounded metallic shield. Such U-shaped moulding shall be of a material as specified in Rule 22.8–B, and the U-shaped moulding shall be installed with a backup plate (to effectively encase the cable or conductors) of similar type material.”

5.1) The pole located one pole east of the Kern County Fire Station in Lost Hills (Location 67), had a damaged riser cover near the ground surface. PG&E repaired the riser during the audit.

6. GO 95, Rule 54.8-B.(1), Service Drops, 0 – 750 Volts, Clearances above Ground, Buildings, Etc., Above Public Thoroughfares states:

“Service drop conductors shall have a vertical clearance of not less than 18 feet above public thoroughfares, except that this clearance may grade from 18 feet at a position not more than 12 feet horizontally from the curb line to a clearance of not less than 16 feet at the curb line, provided the clearance at the centerline of any public thoroughfare shall in no case be less than 18 feet. Where there are no curbs the foregoing provisions shall apply using the outer limits of possible vehicular movement in lieu of a curb line.”

6.1) The service drop on the pole located at 132B N A St in Arvin (Location 62) was measured at 10 feet 6 inches above the outermost edge of the thoroughfare.

V. Observations

ESRB staff observed the following during the field inspection:

1. The following locations had potential third-party safety concerns:

1.1) The AT&T vault cover at 5604 Kleinpell Ave in Bakersfield (Location 1) is damaged.

1.2) ESRB staff identified a buddy pole one pole west of 1009 Yosemite Dr in Oildale (Location 14) that required a communications facility transfer.

PG&E had already issued a Third-Party Notification to AT&T prior to the audit on January 9, 2020.

1.3) The communications ground molding on the pole at the corner of Kern and Center St in Maricopa (Location 26) is missing a three-foot section starting from the ground surface.