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Pacific Gas & Electric Company (PG&E)
300 Lakeside Dr., Oakland, CA 94612

SUBJECT: Electric Distribution Audit of PG&E's Yosemite Division

Mr. Tanguay:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Dmitriy Lysak of ESRB staff conducted an electric distribution audit of PG&E's Yosemite Division from October 16 through October 20, 2023. During the audit, ESRB staff conducted field inspections of PG&E's distribution facilities and equipment and reviewed pertinent documents and records.

As a result of the audit, ESRB staff identified violations of General Order (GO) 95 and GO 128. A copy of the audit findings itemizing the violations and observations is enclosed. Please provide a response no later than February 2, 2024, via electronic copy of all corrective actions and preventive measures taken by PG&E to correct the identified violations and prevent the recurrence of such violations. Please note that ESRB will be posting the audit report and your response to our audit on the CPUC website. If there is any information in your response that you would like us to consider as confidential, we request that in addition to your confidential response, you provide us with a public version (a redacted version of your confidential response) to be posted on our website.

If you have any questions concerning this audit, please contact Dmitriy Lysak at (415) 940-4423 or dmitriy.lysak@cpuc.ca.gov.

Sincerely,

Rickey Tse, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Enclosure: CPUC Electric Distribution Audit Report for PG&E Yosemite Division

Cc: Lee Palmer, Director, Safety and Enforcement Division (SED), CPUC
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PG&E YOSEMITE DIVISION
ELECTRIC DISTRIBUTION AUDIT FINDINGS
OCTOBER 16 – 20, 2023

I. Records Review

During the audit, Electric Safety and Reliability Branch (ESRB) staff reviewed the following records:

- PG&E's inspection and maintenance procedures.
- Electric Distribution Preventive Maintenance Manual, April 1, 2016.
- Overhead and underground facilities statistics.
- Completed work orders with notifications, canceled work orders with notifications, and open work orders with notifications from August 2018 to August 2023.
- Patrol and detailed inspection records from August 2018 to August 2023.
- Reliability metrics and sustained outages from August 2018 to August 2023.
- Yosemite Division map.
- New Construction projects (both overhead and underground) from September 2022 to September 2023.
- Pole loading and safety factor calculations completed from September 2022 to September 2023.
- Third Party Safety Hazard notifications sent and received from August 2018 to August 2023.
- Inspector list from August 2018 to August 2023 and inspector qualifications.
- Equipment test records from August 2018 to August 2023.
- Intrusive inspection records from September 2022 to September 2023.
- PG&E Pre-Audit Preliminary Analysis for Audit Readiness – Records Review

II. Records Violations

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

1. **General Order (GO) 95, Rule 18-B, Maintenance Programs, (1)(a)** 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.

   The maximum time periods for corrective actions associated with potential violation of GO 95 or a Safety Hazard are based on the following priority levels:

   (i) Level 1 -- An immediate risk of high potential impact to safety or reliability:

   - *Take corrective action immediately, either by fully repairing or by temporarily repairing and reclassifying to a lower priority.*

   (ii) Level 2 -- Any other risk of at least moderate potential impact to safety or reliability:

   - *Take corrective action within specified time period (either by fully repair or by temporarily repairing and reclassifying to Level 3 priority). Time period for corrective action to be determined at the time of identification by a qualified company representative, but not to exceed: (1) six months for potential violations that create a fire risk located in Tier 3 of the High Fire-Threat District; (2) 12 months for potential violations that create a fire risk located in Tier 2 of the High Fire-Threat District; (3) 12 months for potential violations that compromise worker safety; and (4) 36 months for all other Level 2 potential violations.*

   (iii) Level 3 -- Any risk of low potential impact to safety or reliability:

   - *Take corrective action within 60 months subject to the exception specified below."*

   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 Yosemite Division for the past 60 months (August 2018 – August 2023) shown in Table 1. 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 69,870 work orders by their assigned due date. Table 1 below breaks down the late work orders by their given priority, including the total number of late work orders completed, pending and cancelled work orders, which are included in the total.

Table 1: Late Work Orders in Yosemite Division

Priority Code	Late Work Orders Pending	Late Work Orders Completed	Late Work Orders Canceled	Total
A	43	2,488	692	**3,223**
B	735	4,373	418	**5,526**
E	40,585	13,557	6,409	**60,551**
F	362	93	115	**570**
Total	**41,725**	**20,511**	**7,634**	**69,870**

PG&E needs to provide ESRB with its corrective action plan to complete the 41,725 late pending work orders and its preventive actions to prevent any work orders to be addressed late in the future.

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 Assigned Due Date
A	118399821	876
B	117182871	1,426
E	117212924	1,489
F	117218848	1,355

PG&E identified work order # 118399821 on December 18, 2019, to replace a broken pole with a required end date of January 8, 2020. PG&E did not complete the work until June 2, 2022.

PG&E identified work order #117182871 on May 8, 2019, to replace a broken pole with a required end date of November 8, 2019. PG&E has not completed the work order as of October 4, 2023.

PG&E identified work order #117212924 on May 10, 2019, to replace a broken pole with a required end date of September 6, 2019. PG&E has not completed the work order as of October 4, 2023.

PG&E identified work order #117218848 on June 12, 2019, to replace an anchor with a required end date of November 8, 2019. PG&E did not complete the work until July 25, 2023.

2. **General Order (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 in part:

> *"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 identified that PG&E had completed a total of 33,204 overhead patrols and inspections past their assigned due dates in the last five years. Table 3 below breaks down the late overhead patrols and inspections by year and total structures late.

Table 3: Late Overhead Patrols and Inspections

Year	Inspection Type	Total Structures
2021	Patrols	23,408
2021	Inspections	9,796

III. Field Inspection

During the field inspection, ESRB inspected the following facilities in Table 4:

Table 4: Field Inspection Locations

Location #	SAP ID	Structure Type	City
1	107180371	Secondary Box	Merced
2	107170486	Pad Mount Transformer	Merced
3	107170475	Pad Mount Transformer	Merced
4	107192572	Subsurface Transformer	Merced
5	107192561	Subsurface Transformer	Merced
6	103330857	Pole	North Fork
7	101057818	Pole	North Fork
8	101057817	Pole	North Fork
9	101057816	Pole	North Fork
10	104006745	Pole	North Fork
11	101059074	Pole	Yosemite Lakes
12	103815759	Pole	Yosemite Lakes
13	104145440	Pole	Yosemite Lakes
14	103817595	Pole	Yosemite Lakes
15	104123098	Pole	Yosemite Lakes
16	101050316	Pole	Yosemite Lakes
17	101050313	Pole	Yosemite Lakes
18	101050311	Pole	Yosemite Lakes
19	103329578	Pole	Yosemite Lakes
20	104039849	Pole	Oakhurst
21	101024512	Pole	Oakhurst
22	101024667	Pole	Oakhurst
23	101024513	Pole	Oakhurst
24	101079173	Pole	Bootjack

25	101079172	Pole	Bootjack
26	104084761	Pole	Bootjack
27	101039674	Pole	Twain Harte
28	101039750	Pole	Twain Harte
29	101039733	Pole	Twain Harte
30	101039736	Pole	Twain Harte
31	101057461	Pole	Mono Vista
32	101057460	Pole	Mono Vista
33	101057459	Pole	Mono Vista
34	104103766	Pole	Mono Vista
35	103357075	Pole	Mono Vista
36	101046622	Pole	Sonora
37	101046625	Pole	Sonora
38	101046620	Pole	Sonora
39	103917331	Pole	Jamestown
40	101051710	Pole	Jamestown
41	103349274	Pole	Jamestown
42	101051711	Pole	Jamestown
43	103917347	Pole	Jamestown
44	101283625	Pole	Copperopolis
45	101283316	Pole	Copperopolis
46	101283399	Pole	Copperopolis
47	101283400	Pole	Copperopolis
48	10123314	Pole	Copperopolis
49	102334081	Pole	East Oakdale
50	102334078	Pole	East Oakdale
51	102334079	Pole	East Oakdale
52	102334076	Pole	East Oakdale
53	102334077	Pole	East Oakdale
54	101187733	Pole	Volta
55	101179162	Pole	Los Banos
56	101179160	Pole	Los Banos
57	101179171	Pole	Los Banos
58	101179157	Pole	Los Banos
59	101179155	Pole	Los Banos
60	101179138	Pole	Los Banos
61	101175531	Pole	Dos Palos
62	101175534	Pole	Dos Palos
63	101175537	Pole	Dos Palos
64	101175525	Pole	Dos Palos
65	101175520	Pole	Dos Palos
66	101175515	Pole	Dos Palos
67	103165380	Pole	Parksdale
68	103165379	Pole	Parksdale
69	103165378	Pole	Parksdale

70	103165377	Pole	Parksdale
71	103165376	Pole	Parksdale
72	103215598	Pole	Madera
73	103307886	Pole	Madera
74	101217023	Pole	Madera
75	101217024	Pole	Madera
76	101217025	Pole	Madera
77	101135133	Pole	Madera
78	101135130	Pole	Madera
79	101135126	Pole	Madera
80	103387019	Pole	Madera
81	101135120	Pole	Madera
82	103352419	Pole	Gustine
83	101220259	Pole	Gustine
84	103791281	Pole	Gustine
85	101220253	Pole	Gustine
86	101220250	Pole	Gustine
87	101220246	Pole	Gustine
88	101220242	Pole	Gustine
89	101220236	Pole	Gustine
90	101220248	Pole	Gustine

IV. Field Inspection Violations

ESRB identified 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."*

ESRB's findings are listed in Table 5:

Table 5: GO 95, Rule 31.1 Findings

Location #	Findings	Notes
6	Woodpecker damage assessment	EC123925570 - Existing tag
8	Slack down guy with buried anchor	EC123925750 - Existing tag
9	Pole replacement - deterioration	EC117213957 - Existing tag

Location #	Findings	Notes
10	Woodpecker damage assessment	EC127288474 - New tag created
11	Pole replacement - deterioration	EC116880167 - Existing tag
27	Pole replacement - deterioration	EC117273304 - Existing tag
29	Conductor improperly attached	EC123873831 - Existing tag
30	Replace pole due to overload	EC121541482 - Existing tag
32	Pole replacement tag for deterioration should be canceled	EC124004637 - Existing tag
37	Replace pole due to overload	EC124357189 - Existing tag
41	Replace pole due to overload and deterioration	EC117692416 - Existing tag EC124149849 - Existing tag
42	Replace pole due to overload and deterioration	EC117115694 - Existing tag EC124158625 - Existing tag
46	Insulator on top of pole leaning due to pole top decay	
47	Insulator on top of pole leaning, slack down guy, missing visibility strip on pole	
50	Connector incorrectly installed	EC121401105 - Existing tag
54	Connector incorrectly installed	EC121902737 - Existing tag
55	Connector incorrectly installed	EC122098188 - Existing tag
56	Connector incorrectly installed	EC122098295 - Existing tag
57	Transformer on pole leaning due to loose hardware, woodpecker hole at the top of pole	EC12730467 - PG&E created a B tag to replace pole
61	Slack down guy	EC112867308 - Existing tag
64	Service drop connector detached from roof	Addressed in field
81	Connector incorrectly installed	EC126469170 - Existing tag
82	Connector incorrectly installed	EC124358185 - Existing tag
83	Connector incorrectly installed	EC124358002 - Existing tag
84	Pole set depth is too low	
85	Pole replacement - deterioration	EC124357914 - Existing tag

2. **GO 95, Rule 31.6, Abandoned Lines states:**

"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. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use."

ESRB's finding is listed in Table 6:

Table 6: GO 95, Rule 31.6 Finding

Location #	Finding
26	Old pole was left on the ground after it was replaced

3. **GO 95, Rule 91.3C, Stepping states in part:**

"Where installed, 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."

ESRB's findings are listed in Table 7:

Table 7: GO 95, Rule 91.3C Findings

Location #	Findings
38	Pole step installed too low
87	Pole step installed too low
89	Pole step installed too low

4. **GO 95, Rule 37, Table 1** requires the following:

5b. Basic minimum allowable vertical clearance of wires above ground in areas accessible to pedestrians only must be at least 10 feet for service drop of 0 – 750 volts.

ESRB's finding is listed in Table 8:

Table 8: GO 95, Rule 37 Finding

Location #	Finding	Notes
65	Service drop low vertical clearance	Repaired in field

5. **GO 95, Rule 51.6 – Marking and Guarding, High Voltage Marking** states:

> *"A. High Voltage Marking*
>
> *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 thansix (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."*

ESRB's findings are listed in Table 9:

Table 9: GO 95, Rule 51.6 Findings

Location #	Findings	Notes
7	Missing "High Voltage" Sign	EC112053097 - Existing tag
30	Missing "High Voltage" Sign	EC12154182 – Issue will be added to existing tag
48	Missing "High Voltage" Sign	
62	Missing "High Voltage" Sign	EC124300299 - Existing tag
78	Damaged "High Voltage" Sign	EC126463595 - Existing tag

6. **GO 95, Rule 84.6.B, Ground Wires** states:

> *"Ground wires, other than lightning protection wires not attached to equipment or ground wires on grounded structures, shall be covered by metal pipe or suitable covering of wood or metal, or of plastic conduit material as specified in Rule 22.8–A, for a distance above ground sufficient to protect against mechanical injury, but in no case shall such distance be less than 7 feet. Such covering may be omitted providing the ground wire in this 7-foot section has a mechanical strength at least equal to the strength of No. 6 AWG medium–hard–drawn copper.*
>
> *Portions of ground wires which are on the surface of wood poles and within 6 feet vertically of unprotected supply conductors supported on the same pole, shall be covered with a suitable protective covering (see Rule 22.8)."*

ESRB's findings are listed in Table 10:

Table 10: GO 95, Rule 84.6.B Findings

Location #	Findings	Notes
22	Exposed vertical ground wire	Repaired in field
23	Exposed vertical ground wire	Repaired in field
31	Exposed vertical ground wire	Partially repaired in field
81	Exposed vertical ground wire	Repaired in field
86	Exposed vertical ground wire	Repaired in field
89	Exposed vertical ground wire	Repaired in field

7. **GO 95, Rule 35 – Vegetation Management** states in part:

> *"Where overhead conductors traverse trees and vegetation, safety and reliability of service demand that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, the minimum clearances set forth in Table 1, Cases 13 and 14, measured between line conductors and vegetation under normal conditions shall be maintained. (Also see Appendix E for tree trimming guidelines.) These requirements apply to all overhead electrical supply and communication facilities that are covered by this General Order, including facilities on lands owned and maintained by California state and local agencies."*

ESRB's findings are listed in Table 11:

Table 11: GO 95, Rule 35 Findings

Location #	Findings	Notes
6	Vegetation contact on down guy above insulator	
31	Tree vine strain on down guy	EC112053097 - Existing tag
33	Vegetation contact on down guy above insulator	
35	Vegetation contact on down guy above insulator	
48	Vegetation contact on down guy above insulator	
54	Vegetation contact on down guy above insulator	EC121902737 – Issue will be added to existing tag
77	Vegetation on secondary lines and down guy	EC126477847 – Existing tag
85	Vegetation strain on service drop	Repaired in field

8. **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's findings are listed in Table 12:

Table 12: GO 128, Rule 17.1 Findings

Location #	Findings	Notes
1	Secondary enclosure cracked	EC127284674 - New tag created
2	Missing direction tags on secondary cables	EC127285032 - New tag created
3	Missing direction tags on secondary cables	EC127284575 - New tag created

9. **GO 128, Rule 35.1, Identification of Cables** states:

> *"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."*

ESRB's finding is listed in Table 13:

Table 13: GO 128, Rule 35.1 Finding

Location #	Finding
3	Missing voltage tags on primary cables

V. Observations

1. **GO 95, Rule 18-A, Resolution of Potential Violations of General Order 95 and Safety Hazards** states in part:

   (2) "Where a communications company's or an electric utility's (Company A's) actions result in potential violations of GO 95 for another entity (Company B), that entity's (Company B's) remedial action will be to transmit a single documented notice of identified potential violations to the communications company or electric utility (Company A) within a reasonable amount of time not to exceed 180 days after the entity discovers the potential violations of GO 95. If the potential violation constitutes a Safety Hazard, such notice shall be transmitted within ten (10) business days after the entity discovers the Safety Hazard.

   (3) If a company, while performing inspections of its facilities, discovers a Safety Hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other entity of such Safety Hazard(s) no later than ten (10) business days after the discovery.

   (4) To the extent a company that has a notification requirement under (2) or (3) above cannot determine the facility owner/operator, it shall contact the pole owner(s) within ten (10) business days if the subject of the notification is a Safety Hazard, or otherwise within a reasonable amount of time not to exceed 180 days after discovery. The notified pole owner(s) shall be responsible for promptly (normally not to exceed five business days) notifying the company owning/operating the facility if the subject of the notification is a Safety Hazard, or otherwise within a reasonable amount of time not to exceed 180 days, after being notified of the potential violation of GO95."

Table 14 includes all non-PG&E (third-party) findings that ESRB observed during the audit:

Table 14: Observations

Location #	Findings
28	Communication line contacting down guy
29	Communication lines not transferred to new pole
65	Communication service drop low clearance from ground – addressed in field by PG&E
66	Exposed communications ground wire
76	Abandoned communications service drop – addressed in field by PG&E
79	Communications line with low vertical clearance
81	Exposed communications vertical ground wire