STATE OF CALIFORNIA GAVIN C. NEWSOM., *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

February 1, 2024 EA2023-1146

Vincent Tanguay, Senior Director
Electric Compliance, Electric Engineering
Pacific Gas & Electric Company (PG&E)
300 Lakeside Dr., Oakland, CA 94612

SUBJECT: Electric Distribution Audit of PG&E's Sacramento 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 Sacramento Division from December 4 through December 8, 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 March 1, 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 Sacramento Division

Cc: Lee Palmer, Director, Safety and Enforcement Division (SED), CPUC
Nika Kjensli, Program Manager, ESRB, SED, CPUC
Fadi Daye, Program and Project Supervisor, ESRB, SED, CPUC
Nathan Sarina, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC
Dmitriy Lysak, Utilities Engineer, ESRB, SED, CPUC
Anne Beech, Director of EO Compliance, PG&E
Tripti Uprety, Manager of EO Compliance, PG&E
Sean Mackay, Director of Investigations, PG&E
Leah Hughes, Manager of Investigations, PG&E
Jerrod Meier, Director of Governance and Reporting, PG&E
Meredith Allen, VP of Regulatory Affairs, PG&E
Spencer Olinek, Chief Regulatory Liaison, PG&E
Electric Data Requests (ElectricDataRequests@pge.com)

PG&E SACRAMENTO DIVISION
ELECTRIC DISTRIBUTION AUDIT FINDINGS
DECEMBER 4 – 8, 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 October 2018 to October 2023.
- Patrol and detailed inspection records from October 2018 to October 2023.
- Reliability metrics and sustained outages from October 2018 to October 2023.
- Sacramento Division map.
- New Construction projects (both overhead and underground) from November 2022 to November 2023.
- Pole loading and safety factor calculations completed from November 2022 to November 2023.
- Third Party Safety Hazard notifications sent and received from October 2018 to October 2023.
- Inspector list from October 2018 to October 2023 and inspector qualifications.
- Equipment test records from October 2018 to October 2023.
- Intrusive inspection records from November 2022 to November 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 Sacramento Division for the past 60 months (October 2018 – October 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 38,786 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 Sacramento Division

Priority Code	Late Work Orders Pending	Late Work Orders Completed	Late Work Orders Canceled	Total
A	49	1,959	424	**2,432**
B	508	1,723	201	**2,432**
E	26,808	4,602	2,123	**33,533**
F	360	21	8	**389**
Total	**27,725**	**8,305**	**2,756**	**38,786**

PG&E needs to provide ESRB with its corrective action plan to complete the 27,725 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	115085068	345
B	118200742	1,268
E	117776813	1,519
F	115058615	1,459

PG&E identified work order # 115085068 on October 24, 2018, to replace a broken pole with a required end date of November 14, 2018. PG&E did not complete the work until October 25, 2019.

PG&E identified work order #118200742 on November 14, 2019, to replace an overloaded pole with a required end date of December 24, 2019. PG&E did not complete the work until June 14, 2023.

PG&E identified work order #117776813 on August 19, 2019, to remove idle facilities with a required end date of September 25, 2019. PG&E has not completed the work order as of November 22, 2023.

PG&E identified work order #115058615 on October 11, 2018, to remove idle facilities with a required end date of November 24, 2019. PG&E has not completed the work order as of November 22, 2023.

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 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 32,038 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	16,101
2021	Inspections	15,935
2022	Inspections	2

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	101619491	Pole	Woodland
2	101619492	Pole	Woodland
3	101619493	Pole	Woodland
4	101601999	Pole	Woodland
5	101601889	Pole	Woodland
6	101601888	Pole	Woodland
7	101638181	Pole	Woodland
8	101610795	Pole	Woodland
9	104149904	Pole	Woodland
10	101610791	Pole	Woodland
11	107762287	Pad Mount Transformer	Smartsville
12	107762282	Pad Mount Transformer	Smartsville
13	107748626	Pad Mount Transformer	Smartsville
14	107995818	Pad Mount Transformer	Smartsville
15	101287384	Pole	Sicard Flat
16	104108907	Pole	Sicard Flat
17	103988760	Pole	Sicard Flat
18	103686239	Pole	Sicard Flat
19	103684114	Pole	Sicard Flat
20	103684117	Pole	Sicard Flat
21	103684119	Pole	Sicard Flat
22	107755430	Pad Mount Switch	Linda
23	108135286	Splice Vault	Linda
24	107735907	Pad Mount Junction Box	Linda
25	107735913	Pad Mount Transformer	Linda
26	107760260	Pad Mount Transformer	Linda

27	101316362	Pole	Olivehurst
28	101333223	Pole	Olivehurst
29	101316359	Pole	Olivehurst
30	101333227	Pole	Olivehurst
31	101316292	Pole	Olivehurst
32	101316294	Pole	Olivehurst
33	101595496	Pole	Knights Landing
34	101660117	Pole	Knights Landing
35	101595502	Pole	Knights Landing
36	101595494	Pole	Knights Landing
37	101569440	Pole	Vacaville
38	103987489	Pole	Vacaville
39	101569416	Pole	Vacaville
40	101569442	Pole	Vacaville
41	101664189	Pole	Vacaville
42	101664188	Pole	Vacaville
43	101572719	Pole	Vacaville
44	101572717	Pole	Vacaville
45	101572712	Pole	Vacaville
46	103899856	Pole	Vacaville
47	104174092	Pole	Vacaville
48	104104793	Pole	Vacaville
49	104104794	Pole	Vacaville
50	104048104	Pole	Fairfield
51	103804604	Pole	Fairfield
52	101564619	Pole	Fairfield
53	101564626	Pole	Fairfield
54	101564620	Pole	Fairfield
55	101573865	Pole	Davis
56	107785032	Pad Mount Transformer	Davis
57	107785026	Pad Mount Transformer	El Macero
58	108002728	Underground Transformer	El Macero
59	108023073	Underground Transformer	El Macero
60	108023983	Underground Transformer	El Macero
61	101621944	Pole	Dunnigan
62	101621943	Pole	Dunnigan
63	101621942	Pole	Dunnigan
64	101652089	Pole	Dunnigan
65	101621936	Pole	Dunnigan
66	101628754	Pole	Williams
67	101628755	Pole	Williams
68	101635235	Pole	Williams
69	101628760	Pole	Williams
70	101635236	Pole	Williams
71	104159861	Pole	Stegeman

72	101640330	Pole	Stegeman
73	101613080	Pole	Stegeman
74	101613083	Pole	Stegeman
75	101635468	Pole	Colusa
76	103688640	Pole	Colusa
77	101628093	Pole	Colusa
78	101628092	Pole	Colusa
79	101635467	Pole	Colusa
80	104008450	Pole	Colusa
81	101628089	Pole	Colusa
82	103689698	Pole	Colusa
83	104169975	Pole	Williams
84	101626141	Pole	Williams
85	101644415	Pole	Williams
86	101626143	Pole	Williams
87	103867588	Pole	Williams
88	101593577	Pole	Cottonwood
89	101644259	Pole	Cottonwood
90	101593601	Pole	Cottonwood
91	103770875	Pole	Cottonwood
92	101593606	Pole	Cottonwood
93	103988489	Pole	Winters
94	103988491	Pole	Winters
95	104143901	Pole	Winters
96	104143900	Pole	Winters
97	104085714	Pole	Winters
98	101645950	Pole	Winters
99	101577195	Pole	Winters
100	101645949	Pole	Winters
101	101577188	Pole	Winters
102	104185350	Pole	Winters

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
1	Anchor replacement and slack guy – work is finished and tag needs to be closed	EC119772452 – Existing tag
7	Foreign attachment	
21	Pole replacement - damage, conductor damaged	EC116809718 – Existing tag
30	Broken conductor	EC127159103 – Existing tag
32	Pole replacement - deterioration, broken conductor, molding loose, frame hardware loose, pole top damaged	EC126159447 – Existing tag
34	Pole replacement - deterioration	EC124867747 – Existing tag
38	Woodpecker damage	EC127545142 – New tag created
39	Pole bending at communications connection, possibly overloaded	
53	Replace leaning pole, rusted transformer	EC125073241 – Existing tag
55	Pole replacement - deterioration, broken conductor	EC127228707 – Existing tag
64	Pole replacement - deterioration, anchor soil erosion	EC110510268 – Existing tag
66	Pole replacement - deterioration	EC117302904 – Existing tag
68	Pole replacement - deterioration	EC127549578 – New tag created
70	Pole replacement – pole and crossarm deterioration	EC117301872 – Existing tag
72	Pole replacement - deterioration	EC124430195 – Existing tag
73	Anchor soil erosion	EC112987909 – Existing tag
76	Fuse replacement – work is finished and tag needs to be closed	EC126026143 – Existing tag
88	Pole replacement - deterioration	EC122069718 – Existing tag
89	Woodpecker damage assessment	EC111927272 – Existing tag
96	Two slack down guys/damaged guy guard	EC127554124 – New tag created
98	Woodpecker damage repair, loose hardware	EC126884536 – Existing tag

Location #	Findings	Notes
99	Damaged crossarm	EC122627697 – Existing tag
101	Connector improperly installed	EC121580309 – Existing tag

2. **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 6:

Table 6: GO 95, Rule 91.3C Findings

Location #	Findings	Notes
68	Pole step low	EC127549578 – New tag created
77	Pole step low	Repaired in field

3. **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 findings are listed in Table 7:

Table 7: GO 95, Rule 31.6 Findings

Location #	Findings	Notes
98	Idle secondary line	EC126884537 – Existing tag to investigate idle facility
101	Idle service drop to abandoned building	EC126883980 – Existing tag to investigate idle facility

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 a service drop of 0 – 750 volts.

6a. Basic minimum allowable vertical clearance of wires above non-walkable surfaces on buildings must be at least 8 feet for a service drop of 0 – 750 volts.

ESRB's findings are listed in Table 8:

Table 8: GO 95, Rule 38 Findings

Location #	Findings	Notes
69	Service drop low clearance from roof	EC127549820 – New tag created
70	Service drop low clearance from ground	EC117301872 – Added to existing tag

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
4	Missing "High Voltage" Sign	
15	Missing "High Voltage" Sign - work is finished and tag needs to be closed	EC127077101 – Existing tag
16	Missing "High Voltage" Sign - work is finished and tag needs to be closed	EC127076681 – Existing tag
21	Damaged "High Voltage" Sign	EC116809718 – Existing tag
63	Damaged "High Voltage" Sign	Repaired in field
64	Missing "High Voltage" Sign	EC110510268 – Existing tag
89	Missing "High Voltage" Sign	EC111927272 – 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
33	Exposed vertical ground wire	EC127543763 – New tag created
47	Exposed vertical ground wire	Repaired in field
68	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
35	Service drop vegetation strain	EC117108196 – Existing tag, moved from location #34

Location #	Findings	Notes
55	Service drop vegetation strain	EC127228707 – Existing tag
66	Vegetation overgrown on secondary span guy	EC117302904 – Added to existing tag
80	Service drop vegetation strain	EC127550794 – New tag created
98	Overgrown vegetation at base of pole	EC126884536 – Existing tag
101	Service drop vegetation strain	EC126883980 – Added to existing tag

8. **GO 95, Rule 56.9, Guy Marker (Guy Guard)** states:

"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."

ESRB's finding is listed in Table 12:

Table 12: GO 95, Rule 86.9 Finding

Location #	Finding	Notes
72	Faded guy marker	EC124430195 – Added to existing tag

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

Table 13: Observations

Location #	Observations	Notes
5	Exposed vertical ground wire, weatherhead detached from house	EC127540598 – New tag created
6	City light disconnect switch detached from pole	EC127540657 – New tag created
18	Exposed vertical ground wire	EC127542295 – New tag created
18	Service drop contacting down guy	EC127542337 – New tag created
50	Buddy pole with lines not transferred	EC127546258 – New tag created
92	Exposed vertical ground wire	EC127553904 – New tag created