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

October 17, 2022 EA2022-1015

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

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

Dear Mr. Tanguay:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Ogeonye Enyinwa and Monica Hoskins of ESRB staff conducted an electric distribution audit of PG&E's Peninsula Division from August 29 through September 2, 2022. During the audit, ESRB staff conducted a field inspection 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 one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. In addition, please respond no later than November 17, 2022, by 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.

The response should indicate each remedial action's date and completed preventive measure. In addition, 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.

If you have any questions concerning this audit, please get in touch with Ogeonye Enyinwa at (415) 470-3504 or ogeonye.enyinwa@cpuc.ca.gov.

Sincerely,

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

Enclosure: CPUC Electric Distribution Audit Findings

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, SED, CPUC
Nathan Sarina, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC

Rickey Tse, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC
Ogeonye Enyinwa, Senior Utilities Engineer (Specialist), ESRB, SED, CPUC
Monica Hoskins, Utilities Engineer, ESRB, SED, CPUC

PG&E PENINSULA DIVISION ELECTRIC DISTRIBUTION AUDIT FINDINGS

August 29 – September 2, 2022

I. Records Review

During the distribution audit, Electric Safety and Reliability Branch (ESRB) staff reviewed the following standards, procedures, and records for PG&E's Peninsula Division:

- Electric Distribution Preventive Maintenance Manual, April 1, 2016
- TD-2305M-B006, Revised Distribution Inspection Guidelines, January 24, 2020
- TD-2302S, Electric Distribution Maintenance Requirements for Overhead and Underground Equipment, August 02, 2022
- Distribution facilities statistics and their wildfire risks, including equipment risks and vegetation risks
- Peninsula Distribution Plats with High Fire Threat Districts
- Patrol and Inspection Records list, July 2017 – June 2022
- Electric Corrective Notifications list, July 2017 – June 2022
- Reliability Indexes and Outage list, June 2017 – June 2022
- Peninsula New Projects list, July 2021 – June 2022
- Pole Loading Calculations list, July 2020 – July 2022
- Incoming Third-Party Notifications list, November 2017 – April 2022
- Outgoing Third-Party Notifications list, July 2017 – June 2022
- Inspector training records, March 2017 – June 2022
- Equipment test records, August 2017 – June 2022
- Intrusive Inspections, July 2021 – July 2022
- PG&E Pre-Audit Preliminary Analysis for Audit Readiness – Records Review

II. Records Violations

ESRB staff 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 Peninsula Division for the past 60 months (April 2017 – April 2022), 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 14,054 work orders by their assigned due date. Table 1 below breaks down the 14,054 late work orders by their given priority, including the total number of late work orders completed, pending, and canceled work orders, which are included in the total.

Table 1: Late Work Orders in Peninsula Division

Priority Code	Late Work Orders Completed	Late Work Orders Pending	Late Work Orders Cancelled	Total
A	1,219	0	0	**1,219**
B	692	79	197	**968**
E	2,993	6,813	1,759	**11,565**
F	120	76	106	**302**
Total	**5,024**	**6,968**	**2,062**	**14,054**

PG&E needs to provide ESRB with its corrective action plan to complete the 6,968 late pending work orders and its preventive measures to prevent any work orders from being 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	117168488	710
B	118473280	516
E	116732598	1008
F	113702127	959

PG&E identified work order #117168488 on May 6, 2019, to replace a guy wire attached to a dead tree with a required end date of November 2, 2019. PG&E did not complete the work until October 12, 2022.

PG&E identified work order #118473280 on January 27, 2020, to replace an overloaded pole with a required end date of April 27, 2020. PG&E did not complete the work until September 25, 2021.

PG&E identified work order # 116732598 on March 14, 2019, to replace a leaning pole with overgrown vegetation and a damaged anchor with a required end date of September 10, 2019. PG&E did not complete the work until June 14, 2022.

PG&E identified work order #113702127 on October 7, 2017, to replace a leaning pole with a heavy load with a required end date of October 7, 2019. PG&E did not complete this work until May 23, 2022.

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 414 detailed overhead inspections in the High Fire Threat District (HFTD) of electric facilities past their GO 165 required completion date, as shown in the first worksheet of Attachment 1.

ESRB staff also identified that PG&E completed a total of 959 detailed overhead inspections of electric facilities past their GO 165 required completion date for non-HFTD, as shown in the second worksheet of Attachment 1.

ESRB staff found that PG&E completed a total of 12 Intrusive Inspections past their required completion date for the following equipment:

Table 3: Intrusive Inspections Completed Past Due Dates

Equipment	Inspection Date	Due Date
103489132	5/25/2022	1/1/1998
103501067	4/20/2022	1/1/2000
103848903	7/11/2022	1/1/2010
103993931	6/23/2022	1/1/2010
104101618	5/18/2022	1/1/2010
103475579	5/12/2022	1/1/2010
103477215	5/5/2022	1/1/2010
103960487	5/5/2022	1/1/2010
103960654	5/5/2022	1/1/2010
103476399	5/5/2022	1/1/2010
103062584	6/27/2022	1/1/2020
103067072	5/18/2022	1/1/2020

Additionally, ESRB staff found that PG&E completed a total of 13 overhead patrols past their GO 165 required completion date for the following maps:

Table 4: Overhead Patrols Completed Past Due Dates

Map	Due Date	Completion Date
F0625	10/13/2017	10/20/17
E0406	11/1/2017	11/07/17
I0514	10/21/2017	10/23/17
I0518	10/21/2017	10/23/17
D1014	11/24/2021	11/27/21
D1014	11/24/2021	11/27/21

E0911	11/17/2021	11/19/21
E0915	11/15/2021	11/17/21
E0915	11/15/2021	11/17/21
E0915	11/15/2021	11/17/21
E1024	11/28/2021	11/30/21
E1011	11/18/2021	11/19/21
E1018	11/18/2021	11/19/21

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 conformance with all applicable requirements these rules."

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 staff noted that PG&E failed to complete patrols of underground electric facilities located in seven underground maps given in Table 5:

Table 5: Underground Patrols Completed Past Due Dates

Map	Due Date	Completion Date
C0913	10/21/2017	10/26/2017
C0825	11/1/2017	11/02/2017
D0402	4/26/2018	4/30/2018
C0609	6/8/2018	6/12/2018
E0412	4/26/2018	4/27/2018
D0907	6/7/2022	6/30/2022
D0902	6/27/2022	6/30/2022

III. Field Inspection

During the field inspection, ESRB inspected locations listed in Table 6:

Table 6: List of Field Inspection Locations

Location #	SAP #	Structure Type
1	103781795	Wood pole
2	104038611	Wood pole
3	100278241	Wood pole
4	100314410	Wood pole
5	104102919	Steel Pole
6	100277787	Wood pole
7	100277788	Wood pole
8	100316693	Wood pole
9	100281907	Wood pole
10	100281906	Wood pole
11	108204695	Sub-surface Transformer
12	107544632	Splice Box
13	100278367	Wood pole
14	100278366	Wood pole
15	100281940	Wood pole
16	108174352	Pad-mounted Interrupter
17	108174354	Sub-surface Junction Box
18	108155881	Vault
19	108209476	Splice Box
20	108165591	Pad mount Transformer
21	100307170	Wood pole
22	100307171	Wood pole
23	100307173	Wood pole
24	100277117	Wood pole
25	100277119	Wood pole
26	100307169	Wood pole
27	100277137	Wood pole
28	100305875	Wood pole
29	100298087	Wood pole
30	100298009	Wood pole
31	100298010	Wood pole
32	100317146	Wood pole

Location #	SAP #	Structure Type
33	100298096	Wood pole
34	100298088	Wood pole
35	100298089	Wood pole
36	100319565	Wood pole
37	100319564	Wood pole
38	100270574	Wood pole
39	100270579	Wood pole
40	100270580	Wood pole
41	100270581	Wood pole
42	100321349	Wood pole
43	107299639	Pad mount Transformer
44	100319113	Wood pole
45	100276635	Wood pole
46	100319118	Wood pole
47	100314126	Wood pole
48	100314029	Wood pole
49	100292141	Wood pole
50	100290412	Wood pole
51	100290437	Wood pole
52	100290438	Wood pole
53	100290439	Wood pole
54	107556354	Sub-surface Transformer
55	107559769	Sub-surface Transformer
56	107559773	Sub-surface Transformer
57	100316581	Wood pole
58	100316580	Wood pole
59	100291861	Wood pole
60	100286299	Wood pole
61	100311862	Wood pole
62	100311858	Wood pole
63	100286298	Wood pole
64	100286300	Wood pole
65	100286301	Wood pole
66	100286302	Wood pole
67	100312330	Wood pole
68	100314929	Wood pole
69	100288945	Wood pole
70	102351163	Wood pole

Location #	SAP #	Structure Type
71	100268382	Wood pole
72	100268380	Wood pole
73	103898670	Wood pole
74	100268378	Wood pole
75	100263954	Wood pole
76	107542130	Splice Box
77	100263950	Wood pole
78	100263951	Wood pole
79	103910702	Wood pole
80	100263953	Wood pole
81	100318262	Wood pole
82	108188601	Pad mount Transformer
83	108188602	Pad mount Transformer
84	107668236	Splice Box
85	107294232	Pad mount Transformer
86	103994076	Wood pole
87	100266315	Wood pole
88	100257405	Wood Pole
89	100308125	Wood Pole
90	100294972	Wood Pole
91	100294971	Wood Pole
92	100294970	Wood Pole
93	100294973	Wood Pole
94	100294976	Wood Pole
95	100294974	Wood Pole
96	100308112	Wood Pole
97	100294977	Wood Pole
98	100287494	Wood Pole
99	100287493	Wood Pole
100	100308123	Wood Pole
101	100287492	Wood Pole
102	100287463	Wood Pole
103	100287462	Wood Pole
104	100287460	Wood Pole
105	100287488	Wood Pole
106	100287486	Wood Pole

IV. Field Inspection – Violations List

ESRB observed the following violations during the field inspection:

1. **GO 95, Rule 31.1, Design, Construction, and Maintenance** states in part:

   "Electrical supply and communications 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 7:

Table 7: GO 95, Rule 31.1 Findings

Location	Finding	Notes
1	Idle service anchor and a sagging communications service drop, which was at about 7ft	PG&E created Electric Corrective (EC) 124391766 to issue third-party notifications for the sagging communications service drop
2	Sagging communications cable across the road between pole IDs: 1105105519 and 120846429	PG&E created EC 124391810 to issue third-party notifications for the sagging communications cable
4	A partially buried anchor and a dangling communications cable in proximity to the guy wire	
6	Slack communications guy wire and abandoned anchor by communications.	
8	A slack guy for PG&E. A buried anchor, loose lashing, and dangling cable for communications	
10	Sagging communications service drop, a slack communications guy, and an abandoned communications anchor	

Location	Finding	Notes
21	There was significant erosion by the base of the pole, next to a dried-up creek.	There is a high chance of the pole foundation being compromised in heavy rains. PG&E upgraded the preexisting EC notification number 118991318 (which is for a tree trim) from an E to a B priority tag to address the erosion issue
24	Partially buried anchor	PG&E corrected the finding on the field
31	This pole appears to be overloaded due to the communications equipment.	PG&E created EC 124398607 tag for a pole overload test. This pole also had a PG&E EC notification number 121901171 for low climbing space steps.
32	A dangling communications cable was observed at this pole	PG&E created EC 124400360 to issue third-party notifications for the dangling communications cable
33	This pole had a preexisting notification for a damaged cross-arm. A clearance below-clearance communications service drop was observed at this pole.	The preexisting PG&E EC notification number for the cross-arm is 121906254. PG&E created an EC 124391810 to issue third-party notification for the low clearance communications service drop
40	Idle communications equipment	PG&E created EC 124408592 to issue third-party notifications for the idle communications equipment
42	The crossarm on the primary of this pole is out of plumb, bent, and decayed.	There was an existing notification, 117971479, to do animal mitigation on the riser pothead.
46	Leaning pole	PG&E created EC notification number EC124412407 pole overloading calculation to check if the leaning pole is above 10%. A third-party notification, 124412452, was created for dangling wires.

Location	Finding	Notes
47	There was an abandoned dangling communications cable. The pole also had a preexisting notification for a buried anchor and loose guy.	PG&E created 124415754 to issue third-party notifications for the dangling cable. The preexisting PG&E EC notification number is 124503348
56	The grate is rusted and beginning to break away.	PG&E created EC notification number 124417058 in the field to correct the issue
58	The communications guy anchor is buried.	PG&E created a third-party EC notification 124417213 in the field for the buried anchor
59	The pole had a buried anchor for the primary and secondary guy. There was also a dangling communications cable.	PG&E created EC notification 124417301, and a third-party notification 124417301 on the field for the dangling communications cable
67	Exposed communications grounding and damaged molding	PG&E created a third-party EC notification 124424552, in the field
76	A wooden log was left inside the splice box.	PG&E created a third-party EC notification 124430865, in the field
92	A solely owned PG&E pole had third-party communications attachments	PG&E created a third-party EC notification 124439143, in the field to perform a pole overload test.
97	Partially buried anchor and dangling abandoned communications cable	PG&E created EC notification 124439532 in the field to correct both issues
99	Slack span guy, damaged molding cover for the grounding, and low climbing steps. There was also a third-party communications attachment which PG&E corrected on the field.	PG&E created EC notification 124439663 in the field to correct all the issues.
104	A sagging communications service drop	PG&E created a third-party EC notification, 124440005, in the field

2. **General Order 95, Rule 51.6 – Marking and Guarding, High Voltage Marking** states:

"A. High Voltage Marking
Poles that 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."

ESRB's finding is listed in Table 8:

Table 8: GO 95, Rule 51.6 Findings

Location	Finding	Notes
38	This pole was missing a High Voltage sign.	PG&E created EC notification number 124408165 in the field to address the Finding.
39	This pole was missing a High Voltage sign. There was also a dangling communications coaxial cable.	PG&E created EC notification number 124408442 in the field to address the finding. PG&E created EC number 124408361 to issue a third-party notification for the dangling communications cable.
62	The high voltage sign is faded.	PG&E created EC notification 124421907 in the field to correct the issue.
74	Faded high voltage sign on one side of the cross-arm	PG&E created EC notification 124430391 in the field to correct the issue.
90	The guy wire is missing visibility strips	PG&E corrected the finding in the field.
91	The pole is missing the "High" sign.	PG&E created EC notification 124438945 in the field to correct the issue
92	The high voltage sign is damaged and needs replacement	PG&E created EC notification 124439115 in the field to correct the issue
93	This pole was missing a High Voltage sign on one side of the cross-arm	PG&E created EC notification 124439241 in the field to correct the issue

Table 8: GO 95, Rule 51.6 Findings

Location	Finding	Notes
94	This pole was missing a High Voltage sign.	PG&E created EC notification 124439340 in the field to correct the issue.
96	This pole was missing a High Voltage sign.	PG&E created EC notification 124439428 in the field to correct the issue.
97	This pole was missing a High Voltage sign on one side of the cross-arm	PG&E created EC notification 124439532 in the field to correct the issue

3. **General Order 95, Rule 35 – Vegetation Management** states:

"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 9:

Table 9: GO 95, Rule 35 Findings

Location	Finding	Notes
4	Vegetation abrasion was observed above the guy bulb, and the communication cable has twigs.	
24	A tree was grown above and around the bulb of the guy wire.	PG&E did tree trimming in the field to correct the Finding
96	Vegetation had grown above the bulb of the guy wire	PG&E created EC notification 124439428 in the field to correct the issue

4. **GO 95, Rule 34, Foreign Attachments** states**:**

"Nothing in these rules shall be construed as permitting the unauthorized attachment, to supply, streetlight 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."

ESRB's findings are listed in Table 10:

Table 10: GO 95, Rule 34 Findings

Location	Finding	Notes
2	The pole had a third-party sign	PG&E remedied it in the field
6	Third-party attachment for a traffic mirror by a resident	PG&E will create a third-party notification to the resident to remove the traffic mirror
92	Non-utility 3rd party attachment	PG&E created EC notification 124439085 in the field to correct the issue
93	The pole had a third-party sign and old communication equipment	PG&E created EC notification 124439419 in the field to correct the issue
96	The third-party non-utility attachment was found on the pole	PG&E created EC notification 124439451 in the field to correct the issue
100	Third-party non-utility equipment attachment was found on the pole	PG&E created EC notification 124439634 in the field to correct the issue