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

October 21, 2022 TA2022-1008

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

SUBJECT: Electric Transmission Audit of PG&E's Eureka Headquarters (HQ)

Dear Mr. Tanguay:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Samuel Mandell and Monica Hoskins of ESRB staff conducted an electric transmission audit of PG&E's Eureka HQ from August 08, 2022 through August 12, 2022. During the audit, ESRB staff conducted field inspection of PG&E's transmission 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 November 18, 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 the date of each remedial action and preventive measure completed. 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 contact Samuel Mandell at (916) 217-8294 or samuel.mandell@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 Transmission Audit Report of PG&E Eureka HQ

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
Samuel Mandell, Utilities Engineer, ESRB, SED, CPUC
Monica Hoskins, Utilities Engineer, ESRB, SED, CPUC

CPUC AUDIT REPORT OF PG&E EUREKA HEADQUARTERS
ELECTRIC TRANSMISSION AUDIT
August 08 – 12, 2022

I. Records Review

During the record review part of the audit, ESRB staff reviewed the following records for the Eureka Headquarter (Eureka HQ) Electric Transmission facilities provided by PG&E:

- PG&E's "Electric Transmission Preventive Maintenance Manual (ETPM) TD-1001M" Rev 3, Rev 4, and Rev 5
- PG&E's utility procedures, standards, guidelines, and job aids for electric transmission facility inspections
- Maps of transmission circuits
- A list of transmission circuits and tower count
- A list of transmission facilities
- Lists of patrol, enhanced inspection, and drone inspections for electric transmission facilities from 2017 to June 2022
- A list of non-routine patrols for electric transmission facilities from 2017 to June 2022
- Third-Party Notification and Resolution of Potential Violations and Safety Hazards from 2017 to June 2022
- Notification to Third-Party Non-Utility of Nonconformance from 2017 to June 2022
- PG&E's utility procedures, standards, guidelines, and job aids for electric transmission vegetation management
- A list of vegetation management for transmission circuits from 2017 to June 2022
- A list of all open, closed, and cancelled notifications from 2017 to June 2022
- PG&E’s policy and procedures related to transmission right-of-way maintenance, and associated performance records from 2018 to June 2022
- PG&E’s policy and procedures for insulator washing, and associated performance records from 2018 to June 2022
- PG&E’s policy and procedures for pole intrusive tests, foundation tests, and all other tests related to transmissions structure safety, and associated performance records from 2018 to June 2022
- PG&E’s policy and procedures for assigning priority levels to the transmission deficiencies identified from 2018 to June 2022
- A list of all new construction projects completed from 2018 to June 2022
- A list of all pole loading calculations from 2021 to June 2022
- A list of PG&E's training courses from 2017 to June 2022

- The results of all internal quality management audits from 2017 to June 2022
- PG&E's utility standard and procedures for transmission work verification, vegetation management quality assurance, and vegetation management audit

II. Records Violations

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

1. **General Order (GO) 95, Rule 31.2, Inspection of Lines** states in part:

   "Lines shall be inspected frequently and thoroughly for the purpose of insuring 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."

   PG&E failed to complete the three non-routine patrols in Table 1 by their required due dates.

Table 1: PG&E Late Inspections

Inspection Type	Facility	Notification Number	Completion Date	Due Date	Days Late
Non-Routine Patrol	Trinity-Maple Creek NRP	118210000	1/16/2020	12/28/2019	19
Non-Routine Patrol	Trinity-Maple Creek_60217	121829467	8/18/2021	8/6/2021	12
Non-Routine Patrol	Trinity-Maple Creek_60217	122071253	10/4/2021	9/22/2021	12

2. **PG&E's last two versions of its ETPM, Revision 4, effective 11/20/2018 and Revision 5, effective August 31, 2020,** define the priority codes and associated due dates for the corrective actions shown in Tables 2 and 3:

Table 2: PG&E ETPM Rev 04, Published on 11/20/2018, Priority Codes

Priority Code	Priority Code Priority Description
A	The condition is urgent and requires immediate response and continued action until the condition is repaired or no longer presents a potential hazard. SAP due date will be 30 days to allow time for post-construction processes and notification close-out.
B	Corrective action is required within 3 months from the date the condition is identified. The condition must be reported to the transmission line supervisor as soon as practical.
E	Corrective action is required within 12 months from the date the condition is identified.
F	Corrective action is recommended within 24 months from the date the condition is identified, (due beyond 12 months, not to exceed 24 months). Requires Director approval.
1. QCRs must report immediately any "Priority Code A" abnormal condition to the transmission line supervisor and GCC.	

2. In addition, QCRs must report any "Priority Code B" condition to the transmission line supervisor as soon as practical, to ensure that correction occurs within the appropriate time.

Table 3: PG&E ETPM Rev 05, Published on 08/31/2020, Priority Codes

Priority Code[1]	Priority Description
A[2]	The condition is urgent and requires **immediate** response and continued action until the condition is repaired or no longer presents a potential hazard. SAP due date will be 30 days to allow time for post-construction processes and notification close-out.
B[3]	Corrective action is required within **3 months** from the date the condition is identified. The condition must be reported to the transmission line supervisor as soon as practical.
E	Corrective action is required within **12 months** from the date the condition is identified. ***EXCEPT FOR ITEMS WITHIN HFTD TIER 3 ARE REQUIRED WITHIN 6 MONTHS[4].***
F	Corrective action is recommended within **24 months** from the date the condition is identified, (due beyond 12 months, not to exceed 24 months). ***EXCEPT FOR ITEMS WITHIN HFTD TIER 3 ARE REQUIRED WITHIN 6 MONTHS AND WITHIN HFTD TIER 2 ARE REQUIRED WITHIN 12 MONTHS[5].***
1) Refer to 2.3.5.2, "Priority Code Due Dates for High Fire Risk Conditions within HFTDs" and 2.3.5.3, "Priority Code Due Dates for Non-Fire Risk Conditions within HFTDs."	
2) QCRs must report immediately any "Priority Code A" abnormal condition to the transmission line supervisor, and the transmission supervisor or QCR contacts GCC.	
3) In addition, QCRs must report any "Priority Code B" condition to the transmission line supervisor as soon as practical, to ensure that correction occurs within the appropriate time.	
4) If the condition in the HFTD Tier 3 does NOT create a fire risk (non-threatening) the corrective action is required within 12 months.	
5) If the condition in the HFTD Tier 3 OR Tier 2 does NOT create a fire risk (non-threatening) the corrective action is required within 24 months.	

ESRB noted that PG&E did not correct identified deficiencies according to PG&E's

assigned due dates. ESRB staff reviewed notifications from "*DR 15 – Master List of Notifications*" and found a total of 2,954 past due notifications, including 303 past due exempt notifications. Table 4 below is a breakdown of the 2,954 past due work orders for each priority.

Table 4: Number of Notifications Past Their Scheduled Completion Dates by Priority Codes

Priority Code*	Total Late Notifications	Late Exempt Open/Closed Notifications	Late Non-Exempt Open/Closed Notifications	Total Late Cancelled Notifications
A	6	0	6	0
B	266	28	238	0
E	2,432	185	2,247	0
F	250	90	160	0
Total	**2,954**	**303**	**2,651**	**0**

*Current Priority Codes

Table 5 below shows the longest overdue notification for each priority.

Table 5: Latest Open or Closed Non-Exempt Notifications

Priority Codes*	Most Overdue Notification	Corrective Action Completion Date	Required End Date	Days Overdue
A	118576902	02/26/2020	08/08//2019	202
B	115447759	03/27/2022	10/09/2019	900
E	117275798	Open	07/10/2019	1,078**
F	117794325	Open	09/05/2019	1,021**

*Current Priority Codes
**As of June 22, 2022

III. Field Inspection List

During the field inspection, ESRB staff inspected PG&E's transmission facilities listed in the following Table 6:

Table 6: Structures Inspected During Field Visit

Location	Structure Number	Circuits	Voltage (kV)
1	010/004	Essex Junction – Orick	60
2	010/005	Essex Junction – Orick	60
3	010/006	Essex Junction – Orick	60
4	010/007	Essex Junction – Orick	60
5	010/010	Essex Junction – Orick	60
6	010/011	Essex Junction – Orick	60
7	010/012	Essex Junction – Orick	60
8	010/013	Essex Junction – Orick	60
9	011/000	Essex Junction – Orick	60
10	014/004	Essex Junction – Orick	60
11	014/005	Essex Junction – Orick	60
12	014/006	Essex Junction – Orick	60
13	016/002	Essex Junction – Orick	60
14	001/010	James Creek Tap	60
15	001/011	James Creek Tap	60
16	011/005	Humboldt #1	60
17	011/006	Humboldt #1	60
18	:003/002	Essex Junction – Arcata – Fairhaven	60
19	:003/004	Essex Junction – Arcata – Fairhaven	60
20	008/042	Essex Junction – Arcata – Fairhaven	60
21	008/043	Essex Junction – Arcata – Fairhaven	60
22	051/001	Humboldt – Trinity	115
23	051/002	Humboldt – Trinity	115
24	053/007	Humboldt – Trinity	115
25	008/006	Trinity – Maple Creek	60
26	008/006	Trinity – Maple Creek	60
27	000/004	Simpson - Korbel	60
28	000/003	Simpson - Korbel	60
29	000/002	Simpson - Korbel	60
30	000/005	Simpson - Korbel	60
31	001/001	Ultra Power Tap	60
32	000/014	Ultra Power Tap	60
33	000/013	Ultra Power Tap	60
34	000/012	Ultra Power Tap	60
35	084/594	Bridgeville - Cotton	115
36	084/593	Bridgeville - Cotton	115
37	084/595	Bridgeville - Cotton	115

Location	Structure Number	Circuits	Voltage (kV)
38	039/008	Rio Dell Junction – Bridgeville	60
39	000/009	Bridgeville – Garberville	60
40	039/009	Rio Dell Junction - Bridgeville	60
41	001/000	Bridgeville – Garberville	60
42	037/000	Rio Dell Junction - Bridgeville	60
43	037/005	Rio Dell Junction - Bridgeville	60
44	037/004	Rio Dell Junction - Bridgeville	60
45	037/003	Rio Dell Junction - Bridgeville	60
46	004/002	Humboldt Bay – Rio Dell Junction	60
47	004/003	Humboldt Bay – Rio Dell Junction	60
48	004/004	Humboldt Bay – Rio Dell Junction	60
49	004/005	Humboldt Bay – Rio Dell Junction	60
50	004/006	Humboldt Bay – Rio Dell Junction	60
51	002/009	Humboldt Bay – Rio Dell Junction	60
52	001/006	Humboldt Bay – Humboldt #1	60
53	001/008	Humboldt Bay – Eureka	60
54	001/008	Humboldt Bay – Humboldt #1 Humboldt Bay – Humboldt #2	115 60
55	001/009	Humboldt Bay – Eureka	60
56	001/007	Humboldt Bay – Humboldt #1	60
57	002/010	Humboldt Bay – Rio Dell Junction	60
58	002/011	Humboldt Bay – Rio Dell Junction	60
59	001/008	Humboldt Bay – Humboldt #1	60
60	001/010	Humboldt Bay – Eureka	60
61	005/001	Rio Dell Tap	60
62	005/000	Rio Dell Tap	60
63	004/016	Rio Dell Tap	60
64	004/015	Rio Dell Tap	60
65	004/014	Rio Dell Tap	60
66	004/013	Rio Dell Tap	60
67	005/002	Rio Dell Tap	60
68	005/003	Rio Dell Tap	60
69	000/010	Rio Dell Tap	60
70	000/011	Rio Dell Tap	60
71	000/012	Rio Dell Tap	60
72	000/009	Rio Dell Tap	60

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 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.

   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."

   ESRB identified the following structures which either need to be repaired or replaced, shown in Table 7.

Table 7: Deficient Poles

Location	Structure Number	Deficiencies	Comments
11	014/006	Bent insulator mount on pole top	Line Corrective (LC) 119518634 Existing tag, Past due since 07/28/2021
47	004/003	Pole is deteriorated, needs to be replaced	LC120852913 Existing tag, Past due since 04/20/2022
48	004/004	Pole is deteriorated, needs to be replaced	LC119374377 Existing tag, Past due since 07/15/2021
55	001/009	Pole is deteriorated, needs to be replaced	LC119478207 Existing tag, Past due since 07/20/2021
60	001/010	Pole is deteriorated, needs to be replaced	LC119478231 Existing tag, Past due since 07/20/2021
64	004/015	Pole is deteriorated, needs to be replaced	LC119002998 Existing tag, Past due since 05/07/2021
65	004/016	Pole is deteriorated, needs to be replaced	LC119002809 Existing tag, Past due since 05/07/2022

2. **GO 95, Rule 34, Foreign Attachments** states in part:

   "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."

The structures listed in Table 8 have unauthorized third-party attachments.

Table 8: Third-Party Attachments

Location	Structure Number	Deficiencies	Comments
22	051/002	Unauthorized sign on pole	Corrected in the field
66	004/013	Unauthorized signs on pole	Corrected in the field
70	000/011	Pole being used as fence post	LC124282768 created in the field

3. **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 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."

   GO 95, Rule 61.6 – Marking and Guarding states:

   "A. Marking

   All towers shall be equipped with signs designed to warn the public of the danger of climbing same. Additionally, such signs shall include a graphic depiction of the dangers of falling or electrocution associated with climbing the towers. Such signs shall be placed and arranged so that they may be read from the four corners of the tower. Such signs shall be neither less than 8 feet nor more than 20 feet above the ground except where the lowest horizontal member of the tower is more than 20 feet above the ground in which case the sign shall be not more than 30 feet above the ground."

   ESRB identified the following damaged signage given in Table 9.

Table 9: Structure with Damaged Signs

Location	Structure Number	Deficiencies	Comments
18	:003/002	Damaged "High Voltage" sign	Added to existing tags LC119321351 and LC124197143

4. **GO 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 onlands owned and maintained by California state and local agencies."

   ESRB identified the following vegetation management issue shown in Table 10.

Table 10: Vegetation Management Issue

Location	Structure Number	Deficiency	Comments
21	008/042	Vegetation needs removal	LC124255782 – Created in the field

5. **GO 95, Rule 31.1 - Design, Construction, and Maintenance** states:

   "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."

   ESRB identified the following guy wires in Table 11 that were not in conformance with PG&E guidelines in TD-1001M-JA13.

Table 11 – Deficient Guy Wires

Location	Structure Number	Deficiencies	Comments
01	010/004	Install sectionalizer rod	LC119005217 – Existing tag, Past due since 05/07/2021

58	014/006	Install sectionalizer rod	LC119518635 – Existing tag, Past due since 07/28/2021
14	001/010	Install sectionalizer rod	LC119696950 – Existing tag, Past due since 08/28/2021
15	001/009	Install sectionalizer rod	LC119093878 – Existing tag, Past due since 05/18/2021
19	:003/004	Slack middle down guy	LC124255113 – Created tag
32	000/014	Install sectionalizer rod	LC119992718 – Existing tag, Past due since 11/04/2021
33	000/013	Install sectionalizer rod	LC119016749 – Existing tag, Past due since 05/07/2021
34	000/012	Install sectionalizer rod	LC119466327 – Existing tag, Past due since 07/17/2021
40	039/007	Slack down guy, install sectionalizer rod	LC123657094 – Existing tag
43	037/005	Corroded guy anchor	LC123658885 – Existing tag
49	004/005	Buried anchor	LC119374581 Existing tag, Past due since 07/15/2021
72	000/009	Install sectionalizer rod	LC117089551 Existing tag, Past due since 04/24/2020