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

February 9, 2024 TA2023-1158

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

SUBJECT: Electric Transmission Audit of PG&E Victor Headquarters (HQ)

Mr. Tanguay:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Samuel Mandell and Gordon Szeto of ESRB staff conducted an electric transmission audit of PG&E Victor HQ from September 11, 2023 through September 15, 2023. During the audit, ESRB staff conducted field inspections 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 March 11, 2024, 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.

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 Samuel Mandell at (916) 217-8294 or samuel.mandell@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 Transmission Audit Report for PG&E Victor HQ

Cc:

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CPUC AUDIT REPORT OF PG&E VICTOR HEADQUARTERS
ELECTRIC TRANSMISSION AUDIT
September 11 – 15, 2023

I. Records Review

During the record review part of the audit, ESRB staff reviewed the following records for the Victor Headquarter (Victor 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 transmissionfacility 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 July 2018 to July 2023
- A list of non-routine patrols for electric transmission facilities from July 2018 to July 2023
- Third-Party Notification and Resolution of Potential Violations and Safety Hazards from July 2018 to July 2023
- Notification to Third-Party Non-Utility of Nonconformance from July 2018 to July 2023
- PG&E's utility procedures, standards, guidelines, and job aids for electric transmissionvegetation management
- A list of vegetation management for transmission circuits from July 2018 to July 2023
- A list of all open, closed, and cancelled notifications from July 2018 to July 2023
- PG&E's policy and procedures related to transmission right-of-way maintenance, and associated performance records from July 2018 to July 2023
- PG&E's policy and procedures for insulator washing, and associated performance records from July 2018 to July 2023
- 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 July 2018 to July 2023
- PG&E's policy and procedures for assigning priority levels to the transmission deficiencies identified from July 2018 to July 2023
- A list of all new construction projects completed from July 2018 to July 2023
- A list of all pole loading calculations from July 2021 to July 2023
- A list of PG&E's training courses from July 2018 to July 2023

- The results of all internal quality management audits from July 2018 to July 2023
- 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 22 inspections in Table 1 below by their assigned due dates.

Table 1: PG&E Late Inspections

Inspection Type	Structure Number	Functional Location	Due Date	Completion Date	Days Late
Enhanced Ground	003/021	ETL.3830	7/31/2022	8/5/2022	5
Enhanced Ground	005/002-GUY	ETL.8220	7/31/2022	9/12/2022	43
Enhanced Ground	005/001-GUY	ETL.8220	7/31/2022	9/12/2022	43
Enhanced Ground	004/006-GUY	ETL.8220	7/31/2022	9/12/2022	43
Enhanced Ground	009/190-GUY	ETL.8210	7/31/2022	11/10/2022	102
Enhanced Ground	009/189-GUY	ETL.8210	7/31/2022	11/10/2022	102
Enhanced Ground	011/151-GUY	ETL.8264	7/31/2022	11/22/2022	114
Enhanced Ground	011/157-GUY	ETL.8264	7/31/2022	11/22/2022	114
Enhanced Ground	011/159-GUY	ETL.8264	7/31/2022	11/22/2022	114
Enhanced Ground	002/057-GUY	ETL.8351	7/31/2022	11/23/2022	115
Enhanced Ground	000/020-GUY	ETL.8351	7/31/2022	11/23/2022	115
Air+	000/008	ETL.1402	7/31/2022	9/28/2022	59
Air+	009/189-GUY	ETL.8210	7/31/2022	10/3/2022	64
Air+	009/190-GUY	ETL.8210	7/31/2022	10/5/2022	66
Air+	004/006-GUY	ETL.8220	7/31/2022	10/3/2022	64
Air+	005/001-GUY	ETL.8220	7/31/2022	10/3/2022	64
Air+	005/002-GUY	ETL.8220	7/31/2022	10/3/2022	64
Air+	011/151-GUY	ETL.8264	7/31/2022	10/3/2022	64
Air+	011/157-GUY	ETL.8264	7/31/2022	10/3/2022	64
Air+	011/159-GUY	ETL.8264	7/31/2022	10/3/2022	64
Air+	000/020-GUY	ETL.8351	7/31/2022	10/3/2022	64
Air+	002/057-GUY	ETL.8351	7/31/2022	10/3/2022	64

2. **PG&E's last two versions of its ETPM, Revision 4, effective 11/20/2018 and Revision 5, effective 08/31/2020,** define the priority codes and associated duedates 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 found that PG&E did not correct identified deficiencies according to PG&E's assigned due dates. ESRB staff reviewed notifications from "*DR 16 – Master List of Notifications*" and found a total of 7,991 past due notifications. Table 4 below is a breakdown of the 7,991 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 Open Notifications	Late Closed Notifications	Late Cancelled Notifications
A	3	0	2	1
B	246	0	217	29
E	5,963	2,494	2,582	887
F	1,779	1,400	153	226
Total	**7,991**	**3,894**	**2,954**	**1,143**

*Current Priority Codes

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

Table 5: Most Overdue Open or Closed Notifications

Priority Codes*	Most Overdue Notification	Corrective Action Completion Date	Required End Date	Days Overdue
A	119180837	06/17/2020	05/17/2020	31
B	116948235	12/30/2021	04/02/2020	637
E	116762722	04/28/2023	03/09/2020	1135
F	116744807	10/28/2022	01/29/2020	1003

*Current Priority Codes

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	A006/096	Lockeford – Lodi 2	60
2	A006/095	Lockeford – Lodi 2	60
3	A006/094	Lockeford – Lodi 2	60
4	001/025	Lockeford 1	60
5	001/024	Lockeford 1	60
6	001/023	Lockeford 1	60
7	056/250A	Los Banos – Quintos SW Station	230
8	056/250	Los Banos – Quintos SW Station	230
9	057/249	Tesla – Los Banos 1	500
10	063/281	Tracy – Los Banos	500
11	042/183	Quinto – Wesely	230
12	073/320	Miller 1	115
13	048/216	Tracy – Los Banos	500
14	042/184	Tesla – Los Banos 1	500
15	041/182	Quinto – Wesely	230
16	073/319	Miller 1	115
17	000/002	Salado – Crow Creek	60
18	000/001	Salado – Crow Creek	60
19	000/001	Salado – Newman 2	60
20	000/:002	Salado – Newman 2	60
21	000/:003	Salado – Newman 2	60
22	000/:004	Salado – Newman 2	60
23	018/005A	Donnells – Mi-Wuk	115
24	018/005B	Mi-Wuk – Curtis	115
25	018/005	Donnells – Mi-Wuk	115
26	018/005C	Mi-Wuk – Curtis	115
27	018/006	Mi-Wuk – Curtis	115
28	018/007	Mi-Wuk – Curtis	115
29	018/008	Mi-Wuk – Curtis	115
30	018/009	Mi-Wuk – Curtis	115
31	001/005	Racetrack Tap	115
32	001/006	Racetrack Tap	115
33	007/011	Melones – Racetrack	115
34	007/010	Melones – Racetrack	115
35	007/009	Melones – Racetrack	115
36	007/012	Melones – Racetrack	115
37	007/013	Melones – Racetrack	115
38	019/128	Bellota – Cottle	230

Location	Structure Number	Circuits	Voltage (kV)
39	019/128	Bellota – Cottle	230
40	019/131	Cottle – Melones	230
41	015/119	Salt Springs – Tiger Creek	115
42	015/120	Salt Springs – Tiger Creek	115
43	015/121	Salt Springs – Tiger Creek	115
44	015/117	Salt Springs – Tiger Creek	115
45	015/118	Salt Springs – Tiger Creek	115
46	004/034	Tiger Creek – Valley Springs	230
47	004/035	Tiger Creek – Electra	230
48	001/017	West Point – Valley Spring	60
49	004/036	Tiger Creek – Valley Spring	230
50	004/037	Tiger Creek – Electra	230
51	010/127	West Point – Valley Spring	60
52	010/126	West Point – Valley Spring	60
53	010/125	West Point – Valley Spring	60
54	000/001	Electra – Bellota	230
55	013/109	Tiger Creek – Electra	230
56	013/107	Tiger Creek – Valley Springs	230
57	013/108	Tiger Creek – Electra	230
58	:004/011	Tesla – Stockton Cogen	115
59	:004/012	Tesla – Stockton Cogen	115
60	:004/013	Tesla – Stockton Cogen	115
61	:004/014B	Tesla – Stockton Cogen	115
62	:004/014A	Kasson - Louise	60
63	:004/015B	Tesla – Stockton Cogen	115
64	004/015A	Kasson - Louise	60
65	:004/016B	Tesla – Stockton Cogen	115
66	004/016A	Kasson - Louise	60
67	004/011	Kasson - Louise	60
68	004/012	Kasson - Louise	60
69	004/013	Kasson - Louise	60
70	000/010	Kasson - Louise	60
71	000/009	Kasson - Louise	60
72	022/157	Schulte – Kasson – Manteca	115
73	001/013	Manteca – Vierra	115
74	AA001/017	Manteca 1	60
75	i000/001	Tesla – Salado – Manteca	115

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 Towers/Poles

Location	Structure Number	Deficiencies	Comments
3	006/A094	Buried Anchor	PG&E fixed in the field
10	63/281	Guy wire installed incorrectly	PG&E has past due notification LC122383619
16	073/319	Foundation Repair	PG&E created LC127042032 to correct the issue
26	018/005C	Foundation Repair	PG&E created LC127045756 to correct the issue
34	007/010	Replace Pole	PG&E has passed due notifications LC123098820 and LC126640240
42	015/120	Corrosion on Steel Structure	PG&E created LC127054149 to correct the issue
46	004/034	Corrosion on Steel Structure	PG&E created LC127055651 to correct the issue
47	004/035	Corrosion on Steel Structure	PG&E created LC127055781 to correct the issue
49	004/036	Replace Insulator	PG&E has past due notification

			LC123789505
52	010/126	Exposed Ground Rod	PG&E corrected in the field
57	013/108	Foundation Below Grade	PG&E created LC127058669 to correct the issue
62	:004/014	Missing Visibility Strips	PG&E corrected in the field
69	000/013	Missing guy bonding	PG&E has past due notification LC119379220
73	001/013	Bent Structure	PG&E has past due LC119707825
73	001/013	Foundation Below Grade	PG&E created LC127063870 to correct the issue

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
64	:004/015A	Unauthorized Sign Attached	PG&E fixed in the field
66	:004/016A	Unauthorized Sign Attached	PG&E fixed in the field

3. GO 95, Rule 61.7, Stepping states in part:

"All towers which are required to be climbed by workmen shall be provided with steps or ladders. Steps or ladders shall start at not less than 7 feet 6 inches from the ground line or from any easily climbed foreign structure, within 6 feet of a tower, from which one could reach or step, including tower footings. The spacing between steps on the same side of the tower legs shall not exceed 36 inches."

ESRB identified the following low pole step issues shown in Table 9.

Table 9: Low Tower Step

Location	Structure Number	Deficiency	Comments
56	013/107	Low Pole Step	PG&E corrected the issue in the field
57	013/108	Low Pole Step	PG&E corrected the issue in the field