

**BEFORE THE OFFICE OF ENERGY INFRASTRUCTURE SAFETY
OF THE STATE OF CALIFORNIA**

Office of Energy Infrastructure Safety
Natural Resources Agency

**COMMENTS OF THE GREEN POWER INSTITUTE ON THE ERRATA AND
SUPPLEMENTAL REPORTABLE UPDATES FOR PACIFIC GAS AND ELECTRIC
COMPANY 2025 WILDFIRE MITIGATION PLAN UPDATE**

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COMMENTS OF THE GREEN POWER INSTITUTE ON THE ERRATA AND SUPPLEMENTAL REPORTABLE UPDATES FOR PACIFIC GAS AND ELECTRIC COMPANY 2025 WILDFIRE MITIGATION PLAN UPDATE

The Green Power Institute (GPI), the renewable energy program of the Pacific Institute for Studies in Development, Environment, and Security, provides these *Comments of the Green Power Institute on the Errata and Supplemental Reportable Updates for Pacific Gas and Electric Company 2025 Wildfire Mitigation Plan Update*.

Comments on approved PG&E Change Order requests to initiatives AI-07, GM-09, and GM-01

PG&E's 2025 WMP Update revision and 2023-2025 Base WMP revision were submitted on July 5, 2025, per OEIS's Change Order Decision and the Errata and Supplemental Reportable Update order for PG&E's WMP filings.^{1,2} GPI appreciates the thoroughness of required updates to resolve PG&E's 2025 WMP Update errata – especially the requirement and accompanying update to include an updated top 5% ignition risk circuit segment table.

GPI's primary concern is with the large methodological shift in Detailed Inspection method clarified in the Pacific Gas & Electric Company's Revised 2025 WMP Update Cover Letter, and permitted due to approving the looser language requested in PG&E's change order request.^{3,4} PG&E's change order request to "AI-07: Detailed Ground and Aerial Inspections – Distribution" to lump in aerial inspection and to set a cumulative ground and aerial detailed inspection distribution pole target gives PG&E full flexibility and control over varying the number of ground versus aerial detailed inspections. To achieve this flexibility and control they also had to request a revision that offers flexibility in the method and associated unit target of QC and QA

¹ Office of Energy Infrastructure Safety Decision on Pacific Gas and Electric Company's Change Order Request in relation to its 2023-2025 Base Wildfire Mitigation Plan. May 31, 2024.

² Notice on Errata and Supplemental Reportable Updates for Pacific Gas and Electric Company 2025 Wildfire Mitigation Plan Update. June 20, 2024.

³ Office of Energy Infrastructure Safety Decision on Pacific Gas and Electric Company's Change Order Request in relation to its 2023-2025 Base Wildfire Mitigation Plan. May 31, 2024. p. 3-4.

⁴ PG&E's 2024 Change Order for the 2023-2025 Wildfire Mitigation Plan (WMP), January 8, 2024.

audits (GM-09 Asset Inspection – Quality Control and GM-01: Asset Inspections – Quality Assurance). Together these three approved changes give PG&E freedom to internally adjust the number of aerial versus ground detailed inspections at will, over the course of the year, and the ability to align QA/QC audits methods accordingly.

It appears PG&E intends to take full advantage of this target loosening and reports:

Our goal in 2024 is to perform as many aerial inspections as possible and to do ground inspections when conditions prevent us from performing aerial inspections. Therefore, we do not have a specific, designated number for how many inspections will be completed via aerial and how many will be inspected via ground. However, we anticipate the number of aerial inspections will greatly exceed the 37,000 inspections that were performed as part of our pilot.”⁵

The primary question is how the systemwide expansion of aerial inspection methods is to be implemented, and whether that implementation schedule provides as good or better than ground-only detail inspections for the specific purpose of distribution pole inspection in the HFTD/HFRA to reduce wildfire risk. PG&E states “Given the repeated years of ground inspections, we strongly believe the focus on aerial inspections will help reduce the most risk on our system.”⁶ This suggests a narrow assessment of the value and role of repeating ground detailed inspections over time. The issue with PG&E’s justification and updated plan is over focus on near term actions and the lack of plan development that will leverage the complementary nature of aerial and ground detailed inspections over time.

It’s important to determine whether PG&E intends to change to a largely aerial-only inspection method for the long-term, whether that approach is prudent, or whether adopting an alternating ground and aerial detailed inspection approach is needed to provide the same or better identification of tags compared to applying the previous ground-only detailed inspection method over the long term. Notably, PG&E is integrating aerial detailed inspection on their transmission system in a “staggered” approach with ground detailed inspections.⁷ However, their revised

⁵ Pacific Gas & Electric Company’s Revised 2025 WMP Update and Revised 2023-2025 Wildfire Mitigation Plan Redline Version Cover Letter. July 5, 2024. p. 2.

⁶ Pacific Gas & Electric Company’s Revised 2025 WMP Update and Revised 2023-2025 Wildfire Mitigation Plan Redline Version Cover Letter. July 5, 2024. p. 2.

⁷ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. P. 478-480.

2023-2025 Base WMP only refers to plans for coordinating ground and aerial detailed inspections in 2023, stating:

One area of focus in 2023 will include coordinating timing of detailed ground inspections with aerial inspections in areas where inspection plans overlap so that tags can be generated in the same time frame.⁸

The 2025 WMP Update states:

The decision to inspect high consequence structures every other year also considered the opportunity to optimize across ground and aerial inspection plans beginning in 2023.⁹

PG&E has not developed a transparent plan to optimize or assess whether or how the expansion of their aerial detailed inspection work should be integrated with ground inspection methods, and how the work plan would fit with its detailed distribution system inspection cycle for Extreme & Severe, High, and Medium Consequence areas (response to PG&E-23-09).¹⁰

GPI recognizes that promising aerial detailed distribution inspection results were reported, and that PG&E found aerial inspections to provide benefits for identifying issues not always visible from the ground.¹¹ PG&E also clearly states that aerial inspections only capture the top 1/3 or 2/3 of the pole, meaning it cannot identify visual details along the entire length of the pole, including the ground interface.^{12,13} PG&E provides evidence of this limitation in its aerial versus ground inspection study, which resulted in a 3 percent (n=52 tags) versus 8 percent (n=165 tags) find rate, respectively, for “Pole-Decayed/Rotten-Replace” tags.¹⁴ PG&E’s study report recognizes that:

Overall, the results indicate that ground and drone inspections are complementary in nature, with ground being able to better detect some conditions than drone, and vice versa.¹⁵

⁸ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. P. 491.

⁹ Pacific Gas & Electric Company’s Revised 2025 WMP Update R1. July 5, 2024. p. 76.

¹⁰ Pacific Gas & Electric Company’s Revised 2025 WMP Update R1. July 5, 2024. p. 75.

¹¹ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. P. 1089-1098.

¹² Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. P. 273.

¹³ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. P. 1090.

¹⁴ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. P. 1097.

¹⁵ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. P. 1098.

It should also be considered whether the initial use of drones to conduct detailed pole inspections after years of ground inspections plus the complimentary aspects of aerial inspection could have elevated the tag find rate. In this case over reliance on aerial detailed inspections in the long-term could result in the accumulation of specific types of distribution pole Facility Damage Actions (FDAs). This may affect the long-term efficacy of relying on aerial-only detailed inspections.

Detailed inspections are specifically defined by GO165 as

"Detailed" inspection shall be defined as one where individual pieces of equipment and structures are carefully examined, visually and through use of routine diagnostic test, as appropriate, and (if practical and if useful information can be so gathered) opened, and the condition of each rated and recorded.¹⁶

Notably the legal definition of Detailed inspections includes visual *and* routine diagnostic tests. For distribution poles these inspections are a bridge between patrol inspections (1 to 2-year cycle requirement) and intrusive inspections (10 to 20-year cycle requirement). Aerial "Detailed" distribution pole inspections presumably only include a visual inspection such that the poles are not subject to any diagnostic tests. Diagnostic testing, such as sounding and probing, could reveal wood pole decay and may allow for early degradation detection and proactive versus reactive (post-failure) remediation actions. One study reported that visual-only ground inspections have relatively low effectiveness for identifying decayed and no longer serviceable poles.¹⁷ Aerial detailed inspections which are visual-only for the top 1/3 to 2/3 of the pole may be even less effective. GPI takes these findings as an indication that more work and analysis is warranted before fully embracing a large or long-term shift away from ground detailed distribution pole inspections in favor of aerial detailed inspections within PG&E's HFTD and HFRA.

Transitioning from a pilot scale to systemwide reliance is a large adjustment. The approved Change Order requests will obscure the breakdown of planned and completed aerial versus

¹⁶ GO 165. https://docs.cpuc.ca.gov/PUBLISHED/GENERAL_ORDER/159182.htm Accessed on July 19, 2024.

¹⁷ T&D World. Poles Apart: The Surprising Truth About Power Pole Evaluation Methods and Their Results. Published October 25, 2023. <https://www.tdworld.com/test-and-measurement/article/21276039/osmose-utilities-services-inc-poles-apart-the-surprising-truth-about-power-pole-evaluation-methods-and-their-results> Accessed July 19, 2024.

ground detailed inspections in PG&E’s WMP reporting as the program is transitioned from a pilot program to a standard initiative with more risk impact. Section “8.1.3.2.7 Pilot Inspections” also states:

Based on 2023 results and learnings, PG&E will develop a more detailed aerial inspections plan for 2024 and 2025 that will incorporate lessons learned from conducting inspections at scale in 2023.¹⁸

However, PG&E has not provided a more detailed aerial inspections plan as promised and has instead succeeded in eliminating the ability to separately track the use, effectiveness, and QA/QC results of aerial versus ground detailed distribution pole inspections via its WMP. We recommend that this methodological overhaul should be tracked, and its success and potential shortfalls be transparently reported, both qualitative and quantitatively.

GPI recommends issuing an ACI via the 2025 WMP Update Decision that requires PG&E to provide the following in its 2026-2028 Base WMP:

- A breakdown of the number of aerial versus ground detailed pole inspections completed in 2024 – 2025 and planned for 2026-2028;
- Separate QA/QC results for each method;
- The number and location (HFTD, HFRA, non-HFTR/HFRA) of Level 1-3 find rates for each method;
- Method-specific cost effectiveness metrics;
- An analytical summary of the results;
- Provide an evaluation on whether implementing aerial detailed inspections in a complementary manner to ground detailed inspections is more effective. For example, by staggering or alternating between these inspection methods over time. The response should include plans for an ongoing assessment on how to right-size and optimally schedule aerial versus ground detailed inspections;
- Provide a plan for detailed distribution system inspections over 2026-2028 that includes whether and how PG&E will implement staggered aerial and ground detailed distribution pole inspection methods and how it will implement these inspection methods into its

¹⁸ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. p. 496.

planned risk-based detailed inspections frequencies to balance the benefits and limitations of each method.

It may also be warranted for PG&E to conduct a comparison of ground and aerial detailed inspection methods to intrusive pole inspection methods to assess effectiveness against the most rigorous pole inspection method. The resulting ACI response will support ongoing assessment of the effectiveness of aerial detailed inspections in place of, or in addition to ground detailed inspections. It will also provide useful information to other utilities that may benefit from adjusting their detailed distribution pole inspection schedules and methods.

PG&E did not update “Table 8-6: Asset Inspection Frequency, Method, and Criteria” to reflect planned changes to their Distribution Aerial Pilot and Distribution Overhead Equipment Inspections rows, consistent with the approved Change Order requests.¹⁹ The table still lists aerial inspections as “Pilot”, the inspection frequencies as triggered by WDRM V3, and the governing standards and operating procedures as “NA Pilot.”²⁰ Distribution Overhead Equipment Inspections are still listed as occurring “annually” via “Ground visual.”²¹ PG&E also did not update the “Aerial Inspections” narration under section “8.1.3.2.7 Pilot Inspections” in its 2023-2025 Based WMP Revision 6.²² GPI recommends ordering PG&E to update Table 8-6 and Section 8.1.3.2.7 as needed.

Conclusions

We respectfully submit these comments and look forward to reviewing future wildfire mitigation plans and related filings. For the reasons stated above, we urge the OEIS to adopt our recommendations herein.

¹⁹ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. p. 476.

²⁰ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. p. 476.

²¹ Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. p. 476.

²² Pacific Gas & Electric Company’s 2023-2025 WMP Revision 6, Redlined Version. July 5, 2024. p. 495.

Dated July 22, 2024.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Gregory Morris". The signature is written in a cursive style and is positioned above a solid horizontal line.

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