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Via Electronic Filing

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Subject: **Public Advocates Office Comments on the Draft Decision Approving PG&E's 2022 Wildfire Mitigation Plan Update**
Docket: **2022-WMPs**

Dear Director Thomas Jacobs,

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) submits the following comments on the Draft Decision of the Office of Energy Infrastructure Safety (Energy Safety) approving Pacific Gas and Electric Company's (PG&E) 2022 Wildfire Mitigation Plan Update. We urge Energy Safety to adopt the recommendations discussed herein.

I. INTRODUCTION

On February 25, 2022, Pacific Gas and Electric Company (PG&E) submitted its annual wildfire mitigation plan (WMP) update for 2022. On April 11, 2022, Cal Advocates and other stakeholders submitted formal comments on the WMPs of PG&E[1] and other large utilities.[2] On May 26, 2022, Energy Safety issued a revision notice and extension to the evaluation period of PG&E's WMP. PG&E filed its revised 2022 WMP Update on July 27, 2022, and Cal Advocates commented on August 10, 2022. On September 14, 2022, Energy Safety deferred publication of a draft decision on PG&E's 2022 WMP to October 6, 2022.[3]

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[1] *Comments of the Public Advocates Office on the 2022 Wildfire Mitigation Plan Updates of the Large Investor-Owned Utilities*, Docket 2022-WMPs, April 11, 2022, pp. 31-42.

[2] *Comments of the Public Advocates Office on General Issues in the 2022 Wildfire Mitigation Plan Updates of the Large Investor-Owned Utilities*, Docket 2022-WMPs, April 11, 2022.

These comments use the more common terms "utility," "investor-owned utility," or "IOU" and the phrase "electrical corporations" interchangeably to refer to the entities that must comply with the wildfire safety provisions of the Public Utilities Code.

[3] Energy Safety, *Extension of the evaluation timeframe for Southern California Edison's 2022 Wildfire Mitigation Plan Update*, Docket 2022-WMPs, May 13, 2022.

On October 6, 2022, Energy Safety issued its *Draft Decision on 2022 Wildfire Mitigation Plan Update: Pacific Gas and Electric Company* (Draft Decision).[4] Pursuant to the Draft Decision and the *Final 2022 Wildfire Mitigation Plan (WMP) Update Guidelines* (2022 WMP Guidelines),[5] stakeholders may submit comments on the Draft Decision by October 26, 2022 and reply comments by November 7, 2022.

In these comments, Cal Advocates recommends the following:

- Energy Safety should require PG&E to explain the changes between versions 2 and 3 of its wildfire distribution risk model.
- Energy Safety should require PG&E to identify the causes of its poor asset inspection quality in 2022.
- Energy Safety should require PG&E to resolve its backlog of repairs by the end of 2025 at latest.
- Energy Safety should require PG&E to more thoroughly justify the scope and pace of its program to underground 10,000 miles.

II. Grid Design and System Hardening

A. Energy Safety should require PG&E to explain the changes between versions 2 and 3 of its wildfire distribution risk model.

Energy Safety raises reasonable concerns regarding the lack of correlation between the risk scores from versions 2 and 3 of PG&E's wildfire distribution risk model (WDRM).[6] The narrative portion of the Draft Decision states that PG&E "must" demonstrate an understanding of how the changes to its risk model will affect its mitigation prioritization.[7] However, none of the 35 specified "areas for continued improvement" address this requirement.[8]

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[4] *Draft Decision on 2022 Wildfire Mitigation Plan Update: Pacific Gas and Electric Company*, October 6, 2022 (Draft Decision).

[5] Energy Safety, *Final 2022 Wildfire Mitigation Plan (WMP) Update Guidelines*, Docket 2022-WMPs, December 15, 2021. See Attachment 5: Guidelines for Submission and Review of 2022 Wildfire Mitigation Plan Updates, pp. 5-6.

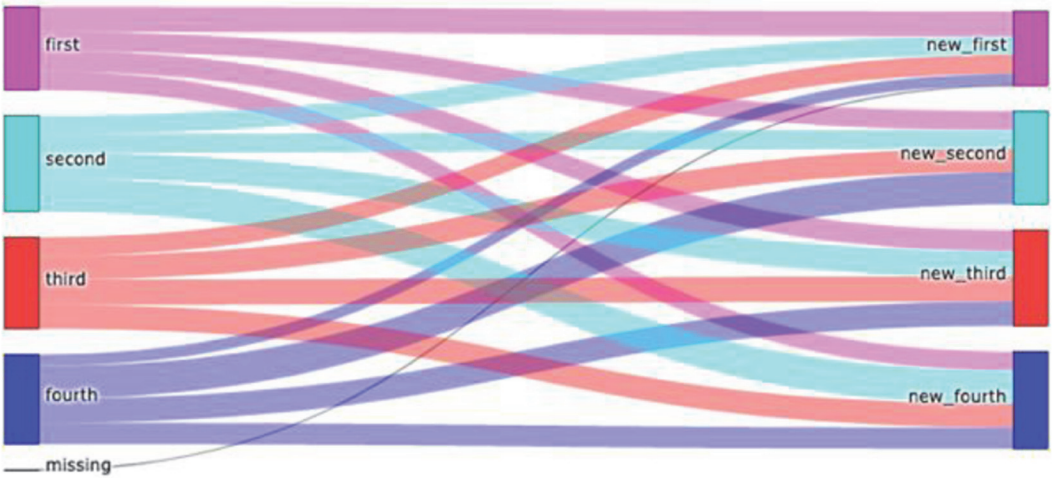
[6] "For the undergrounding projects from 2024 to 2026, no observable correlation between the V2 and V3 risk scores can be seen." Draft Decision, p. 64.

[7] "PG&E must demonstrate an understanding of the impact of the changes made between its V2 and V3 models in order to further validate continued confidences in the risk model outputs, particularly relating to projects that may be stranded due to changes in prioritization." Draft Decision, p. 64.

[8] Draft Decision, pp. 170-183.

Cal Advocates agrees with Energy Safety that PG&E has generally improved its risk models with each iteration.[9] However, the continual updates to its WDRM have resulted in substantial changes to the estimated risk for many individual circuit segments. Figures 1 and 2 below demonstrate the significant shift in risk ranking between the most recent three version of PG&E's WDRM. Each quartile of risk in version 1 appears to have been distributed nearly evenly throughout the risk quartiles of version 2. A similar trend appears in the change from version 2 to version 3.

Figure 1 – Difference in risk quartiles from version 1 to 2 of PG&E's WDRM[10]



[9] Draft Decision, p. 64.

[10] PG&E's Revised 2021 WMP, June 3, 2021, p. 176, Figure "PG&E-Revision Notice-4.5-15: Comparing 2019 Probability Of Ignition X Reax Consequence X Egress (Baseline) To 2021 POI X 2021 Technosylva Consequence (Removing 2019 POI And Adding 2021 POI),"

Figure 2 – Difference in risk quartiles from version 2 to 3 of PG&E's WDRM[11]

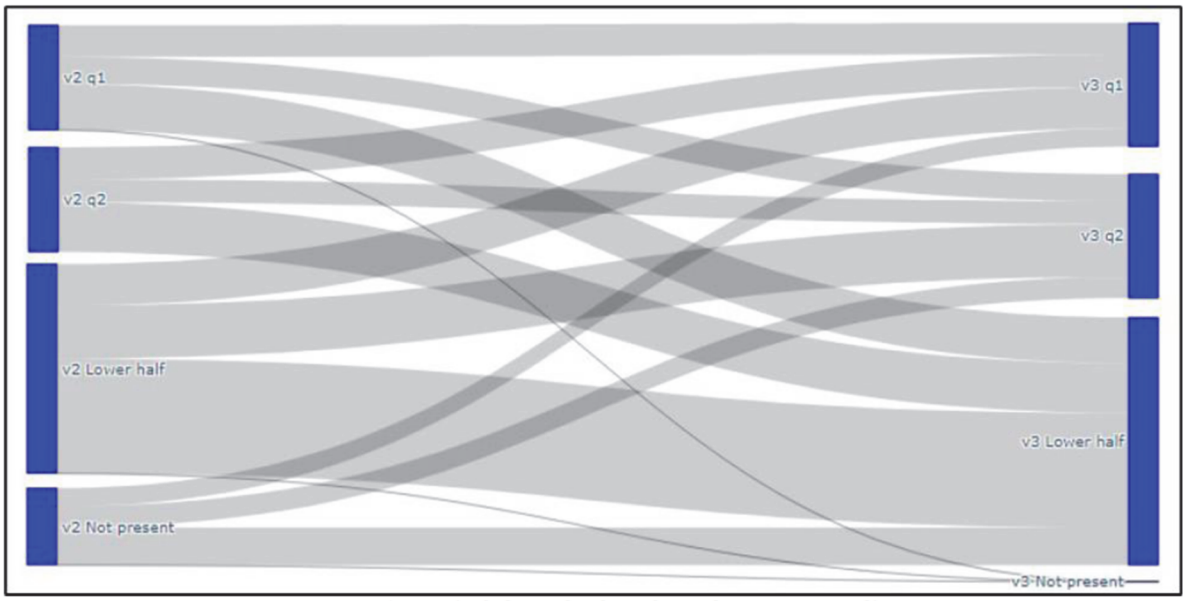


Figure 5. PG&E's Shifting of Risk Ranking of CPZs – V2 to V3[31]

In a nutshell, the figures above show that a circuit-segment's risk ranking in one version of the WDRM does not usefully predict its ranking in the next version of the model. A circuit-segment in the top quartile in version 2 of the model has roughly random odds of ending up in the top quartile, second quartile, or bottom half of the ranking in version 3 of the model.

This result is highly problematic because it calls into question which version of the model accurately identifies the highest-risk circuit segments. It also implies that PG&E may have spent the past two years prioritizing projects in "high-risk locations" (according to older versions of the WDRM) that are no longer considered high-risk in the latest model.

Since it is clear that PG&E's risk models are still evolving, Energy Safety should require PG&E to demonstrate its understanding of how this continual evolution will affect its mitigation prioritization. How can PG&E use its resources efficiently to address the riskiest locations on its grid if it cannot reliably and consistently identify those locations?

Energy Safety should incorporate the following requirement from the narrative portion of the Draft Decision as an additional area for continued improvement:

[11] Filsinger Energy Partners, *PG&E Independent Safety Monitor Status Update Report*, October 4, 2022, p. 21.

> PG&E must demonstrate its understanding of the impact of the changes made between its V2 and V3 models in order to further validate continued confidences in the risk model outputs, particularly relating to projects that may be stranded due to changes in prioritization.[12]

Alternatively, Energy Safety should incorporate the above requirement into PG&E-22-16, "Progress and Updates on Undergrounding and Risk Prioritization."[13]

III. Asset Management and Inspections

A. Energy Safety should require PG&E to identify the causes of its poor asset inspection quality in 2022.

The Draft Decision notes that PG&E is behind in its 2022 goals with respect to asset inspection quality assurance and quality control (QA/QC).[14] In fact, PG&E's failure rates across all quality control types have increased substantially in 2022 compared to 2021.[15]

The Draft Decision appropriately requires PG&E to discuss any changes it has made to its QA/QC processes.[16] However, to identify the necessary changes, Energy Safety should require PG&E to also identify the specific failures and weak points that have contributed to PG&E's high QA/QC failure rates in 2022. Energy Safety should modify the area for continued improvement PG&E-22-21, "Asset Inspections Quality Assurance and Quality Control" to include this additional requirement.[17]

B. Energy Safety should require PG&E to resolve its backlog of repairs by 2025 at latest.

The Draft Decision correctly notes that PG&E is not in compliance with General Order requirements regarding its maintenance backlog.[18] PG&E's plan to resolve its maintenance backlog is woefully insufficient. PG&E's plan would not resolve all "ignition risk tags"[19] in

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[12] Draft Decision, p. 64.

[13] Area for continued improvement PG&E-22-16, Draft Decision, p. 176.

[14] Draft Decision, p. 101.

[15] Draft Decision, p. 101.

[16] Area for continued improvement PG&E-22-21, Draft Decision, p. 178.

[17] Area for continued improvement PG&E-22-21, Draft Decision, p. 178.

[18] Area for continued improvement PG&E-22-22, Draft Decision, p. 178.

[19] Per PG&E's response to critical issue RN-PG&E-22-05 in *Pacific Gas and Electric Company 2022 Wildfire Mitigation Plan Response to Revision Notice*, July 11, 2022, p. 49, "Ignition Risk" tags are maintenance tags that have been determined to have some form of ignition risk as a result of the non-conformance identified on the tag (e.g., conductor or structural support deficiency).

high fire-threat districts (HFTD) until the end of 2029, and would not resolve "non-ignition risk tags"[20] in the HFTD until the end of 2032.[21]

Overdue maintenance tags represent a clear wildfire risk that can and has been linked to multiple ignitions in the high fire-threat districts.[22] While General Order 95 allows correction times to be extended under "reasonable circumstances,"[23] it is far from reasonable for PG&E to request such a lengthy extension for maintenance tags that are, in some cases, multiple years past due.

The Draft Decision addresses PG&E's backlog, requiring PG&E to "come into compliance with the relevant [General Order] work order backlog requirements by the end of 2023."[24] General Order 95 imposes requirements for the allowable correction times for maintenance issues, but does not permit utilities to keep a persistent backlog of work orders. Thus, it is reasonable to interpret Energy Safety's requirement to PG&E to "come into compliance" with General Orders by end of 2023 as directing PG&E to eliminate its maintenance backlog by the end of 2023. Cal Advocates strongly supports such a prudent requirement. Nonetheless, Energy Safety should clarify its directive.

To ensure safe operations and compliance with General Orders, Energy Safety should require PG&E to commit to a reasonable and prudent deadline for resolution of its entire backlog. As Cal Advocates previously recommended, Energy Safety should require PG&E to remediate its full maintenance backlog as soon as feasible, and no later than the end of the next three-year WMP cycle (2023-2025).[25]

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[20] Per PG&E's response to critical issue RN-PG&E-22-05 in *Pacific Gas and Electric Company 2022 Wildfire Mitigation Plan Response to Revision Notice*, July 11, 2022, p. 50, "Non-Ignition Risk" tags are defined as maintenance tags where the non-conformance would not result in a failure that could produce an ignition (e.g., missing high sign or visibility strip).

[21] PG&E's response to critical issue RN-PG&E-22-05 in *Pacific Gas and Electric Company 2022 Wildfire Mitigation Plan Response to Revision Notice*, July 11, 2022, pp. 42-43.

[22] *See Comments of the Public Advocate's Office on the 2022 Wildfire Mitigation Plan Updates of the Large Investor-Owned Utilities Docket 2022-WMPs*, April 11, 2022, pp. 25-29.

[23] Per GO 95 Rule 18, level 1 issues must be addressed immediately. Level 2 issues must be addressed within six to 36 months depending on location and severity. Level 3 issues must be addressed within 60 months. Correction times may be extended under reasonable circumstances, such as third-party refusal, customer issue, no access, permits required, and system emergencies.

[24] Area for continued improvement PG&E-22-22, Draft Decision, p. 178.

[25] PG&E's 2022 WMP Update, February 25, 2022, p. 523.

IV. Resource Allocation Methodology

A. Energy Safety should require PG&E to more thoroughly justify the scope and pace of its program to underground 10,000 miles.

PG&E's 2022 WMP introduced a multi-year program to underground 10,000 miles of distribution lines.[26] Multiple stakeholders expressed concerns with PG&E's proposal, including that:[27]

- PG&E has not demonstrated a comprehensive analysis of alternatives to undergrounding,
- PG&E has not supported its projected reduction in costs,
- The undergrounding program will cost ratepayers more than $20 billion in the best-case scenario, and
- PG&E has not justified the scale of its undergrounding program, which would place nearly 40 percent of its distribution lines in HFTD underground.

The Draft Decision identifies further issues with PG&E's system hardening proposals, which are primarily driven by undergrounding feasibility.[28] It is inappropriate for utilities to select mitigation initiatives with a decision-making process driven by whether a single predetermined approach is feasible. As Energy Safety correctly observes, mitigation strategies must be chosen based on risk analysis and prioritized to address the risks present at each location.[29]

The narrative portion of the Draft Decision proposes that PG&E conduct a "rigorous, quantitative analysis of alternative[s]" to develop an overall plan that (1) prioritizes mitigations by risk, (2) "addresses risk by location" and (3) "uses limited resources effectively."[30] Energy Safety should add this goal should as an additional requirement in the areas for continued improvement.

In addition to the analysis described above, Energy Safety should require PG&E to justify the scope and pace of its undergrounding program. As discussed in section II.A of these comments,

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[26] *See Public Advocates Office Comments on PG&E's Revised 2022 WMP*, July 11, 2022, p. 16.

[27] *See Comments of the Rural County Representatives of California on the Large IOU 2022 Wildfire Mitigation Plan Updates*, April 11, 2022, pp. 3-5; Mussey Grade Road Alliance Comments On 2022 Wildfire Mitigation Plans Of PG&E, SCE, And SDG&E, April 11, 2022, pp. 72-77; *Comments of the Public Advocate's Office on the 2022 Wildfire Mitigation Plan Updates of the Large Investor-Owned Utilities Docket 2022-WMPs*, April 11, 2022, pp. 10-21.

[28] "Currently, PG&E's decision-making process is particularly driven by whether undergrounding is feasible; if undergrounding is not feasible, another mitigation strategy is chosen." Draft Decision, p. 143.

[29] "Energy Safety asserts that mitigation strategies must be chosen for a given area based on risk model output, prioritized by the risks present at that location." Draft Decision, p. 143.

[30] Draft Decision, p. 143.

PG&E's risk models are continually evolving, leading to dramatic shifts in the risk rankings of its assets with each update. Undergrounding is an expensive and lengthy mitigation that takes an average of 31 months to move from initial scoping to completed construction.[31] Over that period, PG&E will perform at least two annual updates to its risk models, potentially leading to situations where PG&E has spent substantial money and staff time, both presumably funded by ratepayers, to underground circuit segments that are no longer considered high risk under a newer, refined version of its risk model.

Energy Safety should modify the area for continued improvement, PG&E-22-34, to impose additional requirements.[32] Specifically, Energy Safety should require PG&E to:

- Conduct a rigorous, quantitative analysis of alternative mitigation techniques.
  - This analysis should support an overall mitigation strategy that (1) prioritizes mitigation techniques and projects according to highest risk, (2) addresses risk by location, and (3) uses limited resources effectively.[33]
  - This alternatives analysis should quantitatively evaluate a menu of alternatives to each undergrounding project that includes specific alternative mitigation techniques both individually and as sets (for example, combined covered conductor and REFCL[34]).
- Analyze the potential of risk-inefficient spending due to scoping substantial undergrounding mileage based on a dynamic, still-evolving risk model that changes significantly from year to year.
- Consider adjusting both the scope and pace of its undergrounding program in response to both analyses described above.

PG&E should be required to report on these analyses in its 2023 WMP.

[31] PG&E's Revised 2021 WMP, June 3, 2021, p. 563.

[32] Area for continued improvement PG&E-22-34, Draft Decision, p. 183.

[33] Draft Decision, p. 143.

[34] Rapid Earth Fault Current Limiter.

V. CONCLUSION

Cal Advocates respectfully urges Energy Safety to adopt the recommendations discussed herein. For any questions relating to these comments, please contact Henry Burton (Henry.Burton@cpuc.ca.gov).

Respectfully submitted,

/s/ ***Carolyn Chen***

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