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Kristin Ralff Douglas
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715 P Street, 20th Floor
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Re: **Pacific Gas and Electric Company's Comments on Issues Raised by PG&E and Other Topics Discussed at the Workshop Held July 25, 2024, by Energy Safety on the Draft Electrical Undergrounding Plan Guidelines**

Dear Ms. Douglas:

Thank you for the opportunity to provide comments on the topics that were discussed during Energy Safety's public workshop held on July 25, 2024, on the potential changes you are considering to the draft Electrical Undergrounding Plan (EUP) Guidelines and the issues that we raised as well. Our comments are organized in the same structure as the updated workshop slide deck that you provided stakeholders, followed by the five issues PG&E raised during the workshop. Additionally, PG&E has identified two areas for further clarification.

1. Topic: Screens Overview

a. Slide 8: Energy Safety proposes to clarify that non-EUP projects do not need the full risk analysis required for EUP undergrounding projects (e.g. separate, collective, ablation analysis). PG&E agrees with this recommendation.

b. Slide 8: Energy Safety proposes to add three columns to the Circuit Risk Score Table (non-EUP mitigation projects, type of mitigation, mitigation funding source). PG&E does not support these recommendations.

The draft guidelines still require an electrical corporation to provide a significant amount of information about non-EUP projects, some of which is unnecessary to evaluating an EUP. Along with the risk modeling information required in the Circuit Segment Risk Score Table (e.g. overall utility risk score and system and portfolio rank, ignition consequence score and system and portfolio rank, outage program likelihood score and system and portfolio rank), the electrical corporation must also provide a brief overview of all non-EUP projects and programs aimed at reducing Ignition Risk and Outage Program Risk, including the timeline for completion of these projects, their Project Status, and their associated risk reduction. The overview

must discuss how these other programs and the projects selected are different from the EUP and how they will be coordinated with the EUP (Draft Guidelines, Section 2.4.5.2).

Many of the non-EUP projects PG&E conducts are Rule 20 project which include Rule 20A, Rule 20B and Rule 20C.[1] PG&E's Rule 20 program is managed separately from the system hardening undergrounding program.

The Rule 20 projects are different from the EUP because the locations for all Rule 20 projects are selected by other parties and not by PG&E. Because Rule 20 projects are not selected by PG&E to address ignition risk or improve reliability, it is unreasonable to require us to provide detailed risk information about them. In addition, most Rule 20 projects are constructed outside of High Fire Threat Districts (HFTD).

It is unnecessary to provide detailed information about PG&E's Rule 20 program in the EUP because we already provide an annual report about our Rule 20 program that includes project location, project status, project size and cost and other information.[2]

Other non-EUP undergrounding work includes new business, capacity projects and work at the request of others. New business and capacity projects are new construction that is installed underground and does not convert overhead lines and/or equipment underground and therefore does not need to be reported in the EUP. Work at the request of others includes relocating existing electric facilities under the provisions of Rule 20B and Rule 20C. This goal of this non-EUP work is not to reduce ignition risk or reduce the impacts of PSPS or EPSS, although there may be some tangential benefits in these regards.

Providing risk analysis and construction information about the non-EUP projects is an unnecessary burden for selecting and developing an undergrounding portfolio that reduces ignition risk and improves reliability. Additionally, a narrative overview of all non-EUP projects and programs aimed at reducing

[1] Rule 20A Conversion projects are funded by ratepayers throughout the service territory, but only for projects deemed to create a general public benefit by satisfying at least one qualifying criterion. Electric Rule 20B Conversion projects are funded by both ratepayers and property owners. This program provides limited ratepayer subsidies for undergrounding utility lines in areas that do not qualify under Rule 20A. Electric Rule 20C Conversion projects are funded almost entirely by those requesting the underground conversion. This program enables property owners to pay for the cost of undergrounding utility lines which do not qualify under Rule 20A or 20B.CPUC Rule 20 Undergrounding Programs -- FAQs (ca.gov)

[2] System Hardening & Undergrounding (pge.com). To locate the Rule 20 Annual Report, click on the Frequently Asked Questions and select, "What is Rule 20?." A link to the annual report is provided at the end of the Rule 20 description.

Ignition Risk and Outage Program Risk is unnecessary since the projects are not selected to reduce ignition and outage program risk.[3]

PG&E recommends that the requirements for non-EUP projects in the final guidelines be revised to include limited, relevant data fields from the tables in Appendix C-1. We provided our proposed non-EUP information table in our Opening Comments (Table 1, p. 8) and we continue to support that recommendation.

2. Topic: Project Information Lists

a. Slide 10: Energy Safety proposes to revise the methods for submitting project information lists by eliminating the Project Reference Sheet and expanding the Project Index Table. Most of the circuit segment information will be submitted in one or two Excel tables. PG&E supports this proposal.

b. Slide 11: Energy Safety recommends additional project-level narratives:
   (1) Explaining the selection of the alternative mitigations for comparison, the selection of undergrounding as the preferred mitigation, and the estimated completion dates;
   (2) Justifying non-undergrounding subprojects and explaining the funding source and timeline; and
   (3) Justifying projects in the portfolio that do not meet Project-Level Standards.

   PG&E supports this recommendation.

3. Topic: Objectives and Targets

a. Slide 13: Energy Safety recommends:
   (1) Removing Portfolio Objectives and renaming plan-level metrics as Plan Mitigation Objective and Plan Targets;
   (2) Clarifying the difference between Plan Mitigation Objective and Plan Targets; and
   (3) Clarifying the meaning of Project-Level Standards and Portfolio-Level Standards.

   PG&E supports these changes and clarifications.

b. Slide 15: Energy Safety proposes requiring minimum levels of Ignition Risk and Outage Program risk reduction on a per-mile basis as set forth in the Portfolio-Level Standards. PG&E does not support this proposal.

[3] While some Rule 20 projects may address fire safety, wildfire risk reduction is not the objective of the Rule 20 program. The CPUC determined that the Commission and OEIS have existing processes that are more appropriate than the Rule 20 program for considering whether to approve ratepayer-funded investments in wildfire-related undergrounding. Decision (D). 23-06-008, Findings of Fact 2.

If the guidelines require minimum levels of Ignition Risk and Outage Program risk reduction on a per-mile basis it will significantly limit an electrical corporation's flexibility in selecting individual projects. This requirement would, by default, lock an electrical corporation into selecting projects from 1-N based on ignition risk. This selection process does not support selecting projects that will improve reliability and eliminates the ability to select certain projects based on execution strategies, cost efficiency, or public safety. Instead, PG&E recommends accounting for risk reduced per mile when comparing alternative mitigations, but not require a minimum level of ignition and outage risk reduction per mile.

c. Slide 15: Energy Safety proposes that electrical corporations provide a summary of how projects with multiple subprojects, including non-undergrounding work, will be reported and how the amount of risk reduced by these projects will count towards the Plan Mitigation Objective and the Portfolio and Project Standards. PG&E supports this proposal.

d. Slide 16: Energy Safety proposes a number of potential plan targets that would be measured at the Portfolio and System levels.

   PG&E supports items: (a) targets must be specific, measurable, achievable, realistic and timely outcomes for the EUP; (c) targets based on total overall utility risk reduction; (d) targets based on ignition risk reduction and outage program risk; and (f) targets based on number of undergrounding miles completed, which is a requirement of SB 884 (section 8388.5(c)(3).

   PG&E does not support item (b), including annual and 5-year targets. PG&E recommends that these items be included in the 6-month progress reports as *indicators* of program performance. Over the life of the program, our progress against targets will fluctuate based on the specific work completed in any one year—a reasonable outcome for a long-term program—but we will achieve the targets that we set by the end of the 10 years. The most important measure should be what the program ultimately achieves and not interim, annual measures. Additionally, managing the program to annual and five-year targets plus the project and plan level thresholds and standards already required by the draft Guidelines is unnecessary and could severely limit our ability to manage the 10-year program in the most efficient and effective way.

   PG&E does not support item (e), risk reduced per mile. While we will use risk reduced per mile (risk density) for the alternatives analysis, we do not recommend using risk density as a target because it will not be indicative of overall risk reduction on the system. If risk per mile becomes a target, it would reduce our flexibility in how we prioritize and manage our work which can increase costs and slow risk reduction.

   PG&E does not support item (g), the number of projects confirmed, scoped and completed. The EUP priority should be ignition risk reduction and reliability improvements. Measuring the number of projects confirmed, scoped, and completed does not advance these priorities. We note that electrical corporations will report

project status updates in their status reports and the information will be available for review.

4. <u>Topic: Hybrid Distribution Hardening</u>

a. Slide 18: Energy Safety recommends:
   (1) Revising the Guidelines to address how a circuit segment with multiple mitigations will be evaluated and updated at Screens 2 and 3;
   (2) Require non-undergrounding portions to be separate subproject(s); and
   (3) Limit EUP funding to only include work done in direct support of line undergrounding.

   PG&E supports revising the Guidelines to address how a circuit segment with multiple mitigations will be evaluated and updated at Screens 2 and 3. PG&E supports requiring non-undergrounding portions to be separate subproject(s), *except* in cases where there will be nominal overhead hardening such as stepping up to a riser or small water crossings that directly supports undergrounding. In these cases, PG&E recommends the guidelines allow an undergrounding subproject to include overhead hardening that directly supports the undergrounding.

   Regarding the third option to "limit EUP funding to only include work done in direct support of line undergrounding," we believe that the situations we describe above are aligned to this requirement. If not, PG&E welcomes clarification.

5. <u>Topic: Subprojects</u>

a. Slide 20: Energy Safety proposes defining subprojects as portions of a project and requiring electrical corporations to split projects into subprojects when they have different completion dates or use different mitigations. PG&E supports this recommendation.

b. Slide 20: PG&E acknowledges that the entire project is considered in meeting the Project-Level Standard and only undergrounding subprojects are counted for the Plan Mitigation Objective.

c. Slide 21: Energy Safety proposes to add a new core capability to Section 2.7.5 to address subprojects. The new core capability will require that the electrical corporation:
   (1) Detail its method for evaluating projects that are completed and stages and that have multiple mitigations;
   (2) Demonstrate how it models overall and subproject risk;
   (3) Demonstrate how it apportions risk reduction to account for each mitigation type. Additionally, the electrical corporation will provide subproject information in the Constructed Projects table, describe its project scoping process in Screen 3, and provide a narrative justification on how and why non-undergrounding projects were chosen.

PG&E supports these proposals.

6. Topic: Alternative Comparisons

Energy Safety makes several recommendations related to alternative mitigation comparisons and to the process for circuit segments with multiple mitigations.

a. Slide 24: Regarding alternative mitigations, Energy Safety recommends:
   (1) Requiring covered conductor plus fast trip in place of covered conductor only as an alternative mitigation; and
   (2) Adding a requirement to include one additional combination of alternative mitigations that meet or exceed the Project-Level Standard.

   PG&E supports covered conductor plus fast trip as the required alternative mitigation.

   PG&E does not support the recommendation to include one additional combination of alternative mitigations that meet or exceed the Project-Level Standard because there may not be another alternative mitigation that will meet the standard. This requirement could force an electrical corporation to model and report on a fabricated alternative mitigation that is not part of its suite of mitigation options, is operationally infeasible, or cost prohibitive. Requiring this comparison is unnecessary and creates additional work for no additional value.

b. Slide 24: Regarding the process for circuit segments with multiple mitigations, Energy Safety recommends adding two comparisons in Screen 3:
   (1) Only the underground portion of the circuit segment; and
   (2) The complete project with all scoped mitigations. Once complete, the Screen 2 comparisons would be updated once a circuit segment is scoped to have multiple mitigations.

   PG&E does not support these recommendations.

   Conducting this additional analysis will require significant effort and time and will not provide new or additional data for project analysis. In PG&E's case, because we do our risk modeling at the circuit segment level and would then apportion risk across the circuit segment (an average risk per mile calculation), the new comparative mitigation analyses at the subproject level would result in the same outcomes relative to each other as the circuit segment level comparison.

7. Topic: Separate, Collective, and Ablation Analyses

a. Slide 30: Energy Safety proposes clarifying language to emphasize that only projects that have reached Screen 3 need separate, collective and ablation studies. PG&E appreciates this clarification.

b. Slide 30: Energy Safety proposes that for EUP submission, the electrical corporation must provide one circuit with multiple projects and, if the plan will include projects in

the following categories, one circuit segment with multiple subprojects, three projects with multiple mitigation types, and two High Frequency Outage Program and/or Wildfire Tail Risk Circuits. PG&E supports this proposal.

8. Topic: Data Appendix

a. Slide 32: Energy Safety recommends that risk model backtesting will be collected in tabular form. To construct the new Risk Model Backtesting Table, the electrical corporation would be required to apply all prior risk models to the current baseline and the current risk model to all prior baselines.

PG&E supports providing backtesting data in tabular form.

PG&E supports the requirement to apply all prior risk models to the current baseline and the current risk model to all prior baselines *as long as* the requirement starts with the risk model used to develop the EUP submission (in PG&E's case this would be the Wildfire Distribution Risk Model, version 4). PG&E would appreciate if Energy Safety can confirm that this requirement starts with the risk model used to develop the EUP submission in the final guidelines.

b. Slide 33: Energy Safety recommends adding a circuit segment change log to the requirements. This change log would connect old circuit segment IDs to new ones and to the spatial data submitted through the Wildfire Mitigation Plan (WMP) process. PG&E supports this recommendation.

c. Slide 34: Energy Safety recommends replacing the Constructed Projects table with a Subprojects table to collect subproject information. PG&E supports this recommendation.

9. Topic: Issues Raised by PG&E

a. **Topic: High Frequency Outage Program Threshold**

Draft Guidelines (Section 2.7.9)

High Frequency Outage Program Threshold is the measure of likelihood above which is considered to have a significantly high likelihood of frequent or prolonged disruption of service to customers. This threshold must measure both likelihood of an Outage Program Event and its anticipated length. This threshold must represent less than 1% of circuit segments in the entire system by mile and no more than 10% of Outage Program Likelihood by score.

Issue

1. The likelihood and duration of an Enhanced Powerline Safety Setting (EPSS) event and a Public Safety Power Shutoff (PSPS) event can be very different, and it is difficult to scale the two outage events together. Additionally, choosing a threshold

based on both programs will naturally more heavily weight the outcomes towards EPSS due to the widespread nature of the program.

2. The Guidelines are inconsistent in how they define High Frequency Outage Program. Section 2.7.9 defines High Frequency Outage Program Threshold as measuring both the likelihood of an event and its anticipated length. The High Frequency Outage Program Mitigation Standard is defined as the minimum decrease in Outage Program Likelihood but does not refer to anticipated duration. The definition of High Frequency Outage Program excluding anticipated duration of an outage is included in Section 2.7.9.1 and in Appendix A.

PG&E's Proposals

1. Amend the Guidelines to allow an electrical corporation to create High Frequency Outage Program Thresholds unique to each Outage Program (EPSS and PSPS), as long as each threshold does not exceed 1% of circuit segments or 10% outage program likelihood individually.

2. Revise the definition of High Frequency Outage Program Threshold in Section 2.7.9 and Appendix A to align to the definition of High Frequency Outage Program Mitigation Standard in Section 2.7.9.1.

   Note: proposed additions to the guidelines are shown in *italics* and deletions are shown as ~~crossed out~~.

   - Section 2.7.9.1: High Frequency Outage Program Threshold is the measure of likelihood above which is considered to have a significantly high likelihood of frequent or prolonged disruption of service to customers. This threshold must measure ~~both~~ *the* likelihood of an Outage Program Event ~~and its anticipated length~~. This threshold must represent less than 1% of circuit segments in the entire system by mile and no more than 10% of Outage Program Likelihood by score.

   - Appendix A: High Frequency Outage Program Threshold is the measure of likelihood above which is considered to have a significantly high likelihood of frequent or prolonged disruption of service to customers. This threshold must measure ~~both~~ *the* likelihood of an Outage Program Event ~~and its anticipated length~~. This threshold must represent less than 1% of circuit segments in the entire system by mile and no more than 10% of Outage Program Likelihood by score.

b. **Topic: Project-Level Thresholds and Standards**

Draft Guidelines (Section 2.7.9.1)

Ignition Tail Risk Threshold is the measure of consequence above which a circuit segment is considered to have significant potential for catastrophic wildfire, that it merits

special consideration. This threshold must represent less than 1% of circuit segments in the entire system by mile and no more than 10% of the wildfire consequence by score.

High Frequency Outage Program Threshold is the measure of likelihood above which is considered to have a significantly high likelihood of frequent or prolonged disruption of service to customers. This threshold must measure both likelihood of an Outage Program Event and its anticipated length. This threshold must represent less than 1% of circuit segments in the entire system by mile and no more than 10% of Outage Program Likelihood by score.

Issue

When an electrical corporation updates its risk models, the ignition tail risk and high frequency outage program thresholds referenced in Section 2.7.9.1 of the Guidelines may change.

The thresholds are: (1) Ignition Tail Risk - 1% of circuit segments in the entire system by mile and no more than 10% of the wildfire consequence by score; and (2) High Frequency Outage Program - 1% of circuit segments by mile and no more than 10% of outage program likelihood by score.

It is unclear if the Guidelines allow an electrical corporation to establish new thresholds when it updates its risk model.

PG&E's Proposal

Allow an electrical corporation to reevaluate and change the circuit segments that make-up the ignition tail risk and high frequency outage program thresholds when it updates its risk model.

We recommend revising Section 2.7.9 as follows (Note: proposed additions to the guidelines are shown in *italics* and deletions are shown as ~~crossed out~~.):

- Ignition Tail Risk Threshold is the measure of consequence above which a circuit segment is considered to have significant potential for catastrophic wildfire, that it merits special consideration. This threshold must represent less than 1% of circuit segments in the entire system by mile and no more than 10% of the wildfire consequence by score. *A large electrical corporation may revise the circuit segments that make-up the ignition tail risk thresholds when it introduces a new risk model or updates its risk model version.*

- High Frequency Outage Program Threshold is the measure of likelihood above which is considered to have a significantly high likelihood of frequent or prolonged disruption of service to customers. This threshold must measure ~~both~~ *the* likelihood of an Outage Program Event ~~and its anticipated length~~. This threshold must represent less than 1% of circuit segments in the entire system by mile and no more than 10% of Outage Program Likelihood by score. *A large electrical corporation may revise the*

circuit segments that make-up the ignition tail risk thresholds when it introduces a new risk model or updates its risk model version.

c. **Topic: Emergent Rebuild Work**

Draft Guidelines

The existing EUP guidelines are silent about rebuild-related requirements.

SB 884 section "8388.5 (2) indicates eligibility for "Only undergrounding projects located in tier 2 or 3 high fire-threat districts or rebuild areas may be considered and constructed as part of the program."

Issue

PG&E would like to understand how Energy Safety envisions allowing for fire rebuild to be introduced to the EUP for execution and cost recovery if requested by the Electric Corporation. There are two key issues that emergent rebuild work could have on the program: (1) unplanned rebuild work may impact the total planned risk reduction established in the base EUP, and (2) unplanned rebuild work may impact the electric corporations' ability to complete originally planned work due to the shifting resources to complete rebuild work.

PG&E's Proposal

During the July 25 workshop Energy Safety directed PG&E to include its strategy for addressing emergency rebuild work in its EUP. PG&E supports Energy Safety's direction and we will include our strategy in our EUP.

d. **Topic: Project Construction Table (C.1.12) – Historical Line Identification**

Draft Guidelines

Table C.1.12, the Project Construction Table, requires an electrical corporation to provide both a historical line identification (historical_line_id) and new line alignment (new_alignment_id) by mapping to geo-spatial submission for every project or subproject with all applied screens.

Issue

PG&E does not maintain historical GIS data that shows where a line was located. When a line is removed and relocated (either underground or overhead) only the new, current location is maintained in our GIS system of record.

As discussed in our Opening Comments, PG&E does not track historical changes or planned undergrounding work in GIS. Any line or circuit segment designations are for internal use only and are not centrally managed or governed in GIS.[4]

It would be extremely burdensome to develop a system that would provide both a historical line identification and new line alignment by mapping to geo-spatial submission for every project or subproject with all applied screens.

PG&E's Proposal

PG&E would appreciate the opportunity to discuss potential solutions to this issue with Energy Safety.

Alternatively, PG&E recommends that an electrical corporation provide a snapshot of its system from GIS with every six-month report. The snapshot will not include circuit segment-level data or circuit segment identification numbers and will show only new line alignments.

e. **Topic: New Technology**

Draft Guidelines

New technology is not addressed in the draft guidelines.

Issue

An electrical corporation may want to introduce new technology as a potential mitigation for consideration in the EUP. The guidelines are silent on how these mitigations would be introduced and considered for inclusion in the plan.

PG&E's Proposal

Update the final guidelines to allow electrical corporations to add new mitigation alternatives into their portfolio of work. The electrical corporation would describe the new alternative in a six-month progress report.

10. Topic: Areas for Further Clarification

a. **Topic: Tail Risk Threshold**

In the draft Guidelines, tail risk is described in terms of both consequence and likelihood.

- Section 2.7.9: Ignition Tail Risk Threshold "is the measure of **consequence** above which a circuit segment is considered to have significant potential for catastrophic wildfire"

[4] PG&E's Opening Comments on the Draft Guidelines, pp. 19-20.

- Section 2.7.9.1: Tail Risk Mitigation Project Standard "is the minimum decrease in wildfire **likelihood** that any project considered under the Ignition Tail Risk Threshold must achieve to meet the required substantial reduction of the risk of wildfire"

We would appreciate if Energy Safety can confirm that these definitions are accurate.

a. **Topic: High Frequency Outage Program Project Standard**

Section 2.8.6.2, Figures 6, 7 and 9: The draft Guidelines refer to both the High Frequency Outage Program Project Standard and the Frequent Outage Program Project Standard.

The Frequent Outage Program Project Standard is not defined in Appendix A. Can you please confirm if the two terms are synonymous or if there is a different definition for Frequent Outage Program Project Standard.

Thank you in advance for considering our comments. Please feel free to contact me if you have questions about these items or need additional information from me at Megan.Ardell@pge.com.

Very truly yours,

/s/ Megan Ardell

Megan Ardell