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Melissa Semcer
Deputy Director
Office of Energy Infrastructure Safety
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, California 95814

Re: Joint Local Governments' Comments on PG&E 2023–2025 Wildfire Mitigation Plan

Dear Deputy Director Semcer:

The Counties of Marin, Napa, San Luis Obispo, and Sonoma, and the City of Santa Rosa (the Joint Local Governments) appreciate the opportunity to submit these comments on PG&E's 2023–2025 Wildfire Mitigation Plan. While PG&E has developed a fairly robust portfolio of wildfire mitigation measures since 2019, PG&E's increasing reliance on its fast-trip outage program (Enhanced Powerline Safety Settings, or EPSS, in PG&E's public relations parlance) as the solution to its perceived wildfire risk and liability is deeply concerning to the impacted communities. It should concern PG&E's regulators, as well.

Summary of Recommendations

PG&E's WMP shows that the utility still has a considerable amount of work to do in terms of quantifying, analyzing, and calibrating its fast-trip outage program. To ensure that PG&E actually does that work, we recommend that Energy Safety order PG&E to:

- Perform detailed risk- and ignition-reduction modeling for its fast-trip program, as well as a robust analysis of the scope of its program relative to the likely reductions;

- Provide a detailed analysis of its planned fast-trip mitigation measures and the modeling that supports its predicted 2% year-over-year improvements. If PG&E's analysis does not justify either the breadth of the predicted outages or the incremental impact reduction, PG&E should be required to revise the scope of its program; and

- Model fast-trip impacts and estimated restoration times during extreme weather events and other natural disasters, and make any necessary changes to the scope and scale of the fast-trip program.

The Joint Local Governments also note that a motion asking the California Public Utilities Commission to scrutinize and regulate the large utilities' fast-trip outage programs has been

pending before the CPUC since July 2022.[1] We strongly support the motion. While the motion is not within Energy Safety's jurisdiction, we urge Energy Safety to provide any information or inter-agency collaboration necessary to inform the CPUC's eventual decision on the motion.

Fast-Trip Causes Power Outages

PG&E has put noticeable effort into crafting a narrative about its fast-trip program that downplays the impacts and puffs up the benefits. Nowhere is this exertion more obvious than PG&E's claim that "EPSS does not cause a power outage."[2] Instead of a power outage, PG&E explains, "[t]hese settings help protect customers and communities from potential ignitions that could result in wildfires by de-energizing the line when a fault is detected on the power line."[3] De-energizing a power line quite literally causes a power outage: the line stops conducting electricity and the customers served by the de-energized line lose power.

PG&E is attempting to split semantic hairs by using a definition of "power outage" that excludes protective device settings that cause lines to de-energize when a fault or abnormal condition is detected.[4] PG&E's response to Cal Advocates' request that PG&E explain its confounding position tries to create a meaningful distinction between the device setting that de-energizes the line and the result of the de-energization: "Stated another way," PG&E explains, "EPSS does not cause outages but rather outages may result from a line being quickly de-energized when a tree, vegetation or other foreign debris makes contact with the EPSS-enabled line."[5] That is a distinction without a difference. It also ignores the fundamental reality of the fast-trip program: customers, including critical facilities and medically vulnerable electricity-dependent individuals, lose power, often repeatedly and for extended periods. The fast-trip outages that impact PG&E's customers would not be less burdensome if they were called "device settings that de-energize." The power goes out on fast-trip-enabled lines. There is no other story about the fast-trip program that can be told with a straight face.

PG&E also makes the remarkable argument in a data response that its fast-trip program has not resulted in a net increase in outages compared to the last five years.[6] PG&E does concede that "the outages that do occur tend to impact more customers since the protection scheme over-reaches fuses by design," and goes on to state that faults that cause a fast-trip device to operate "typically would have caused either a sustained or momentary outage without EPSS enabled."[7] That analysis reveals that PG&E is not including the number of customers impacted in its tally of

[1] CPUC Docket R.18-12-005, *Joint Motion for Consideration of Fast Trip Program Rules in the De-Energization Rulemaking* (July 12, 2022).
[2] PG&E 2023–2025 WMP (Revision No.1 (April 6, 2023)), p. 463.
[3] *Ibid.*
[4] See PG&E Response to CalPA_Set WMP-14_Q14 (April 17, 2023).
[5] PG&E Response to CalPA_Set WMP-14_Q14.
[6] PG&E Response to OEIS-004-Q2 (May 9, 2023). This data response focuses on the fact that PG&E's OPW-IPW model does not differentiate between circuits with or without fast-trip enabled. The response is relevant to the larger issue of how PG&E is trying to sell its fast-trip program; it also raises questions about why the *number* of outages and not the *impacts* are the focus of the modeling inputs for fast-trip.
[7] *Ibid*.

total annual outages, which is a bold choice. It also suggests that *momentary* outages are included in PG&E's annual totals. Momentary outages may technically be outages, but they do not cause the impacts that sustained outages do. So while there may be a way to tabulate the data to produce a steady number of outage events in each of the last five years, PG&E cannot claim that the impacts of the outages have also held steady.

PG&E's efforts to convince its regulators that fast-trip is not an outage program should prompt Energy Safety to closely scrutinize PG&E's justifications for its program. The statistics tell a story that doesn't match PG&E's strained narrative.

The Math Does Not Add Up to Support PG&E's Claimed Fast-Trip Benefits

PG&E's WMP presents a highly curated view of the relative benefits and impacts of the fast-trip outage program that does not stand up to scrutiny. First, PG&E asks readers to focus on the 58% of customers that did *not* experience fast-trip outages in 2022 as an indication of how well-calibrated the program is,[8] instead of addressing the 770,441 unique customer accounts (and 2,083,985 total customer accounts) that *did* lose power from fast-trip.[9] PG&E also frames the 114,164 customer accounts that lost power five or more times as "fewer than 7 percent" of fast-trip-eligible customers,[10] and doesn't acknowledge the 8,059 customer accounts that lost power more than 10 times, except as a line-item in the Areas for Continued Improvement appendix update on its EPSS Reliability Study.[11] PG&E's WMP also fails to include the statistics on fast-trip impacts to critical facilities and vulnerable customers. In 2022, fast-trip outages cut power to: 134,622 medical baseline customers; 93,876 customers who need electricity for life support; 34,841 critical customers; 185 hospitals, and 4,573 schools.[12] The issue is not the percentage of customers in PG&E's vast service territory that are *not* affected by fast-trip; the issue is the large number of customers, including critical facilities and vulnerable individuals, that *are* losing power—many of them repeatedly.

PG&E's focus on average customer impacts also obfuscates the on-the-ground impacts of the fast-trip program. Citing to the average Customer Average Interruption Duration Index (CAIDI) of 176 minutes (an average of an average, it appears) and the average Customers Experiencing a Sustained Outage (CESO) of 877 customers as the defining metrics of the program[13] draws focus from the fact that many customers experience outages lasting longer than three hours and that many outages impact more than 877 customer accounts. For example, in September and October 2022, 50 circuits experienced outages between 12–16 hours, 25 circuits experienced outages

[8] PG&E 2023–2025 WMP, p. 463.
[9] PG&E EPSS Outages Monthly Report (January 17, 2023), Excel Spreadsheet, Tab 1 (Summary), 2022 YTD Summary.
[10] PG&E 2023–2025 WMP, pp. 463, 962 (Figure PG&E-22-23-1).
[11] *Id.* at pp. 961–962. We also note that PG&E's ACI report on fast-trip reliability impacts states that "PG&E has not yet included any data from 2022 in its EPSS reliability impact study." (*Id.* at p. 961.)
[12] PG&E EPSS Outages Monthly Report (January 17, 2023), Excel Spreadsheet, Tab 1, 2022 YDT Summary.
[13] PG&E 2023–2025 WMP, p. 463.

lasting 16–20 hours, and 24 circuits experienced outages lasting over 20 hours.[14] It is also necessary to remember that PG&E calculated its average 877 customers impacted per outage by dividing the 2,083,985 total customer accounts de-energized in 2022 by the 2,375 circuit outages that caused those de-energizations. In August 2022, 427,675 customer accounts lost power from 452 fast-trip circuit outages; September saw 473,062 customer accounts de-energized by 487 circuit outages; and 224,721 customer accounts lost power in 319 circuit outages in October.[15] Context matters. Fast-trip is not a benign equipment setting, nor is it a small program in PG&E's larger suite of mitigation activities.[16]

PG&E's ignition reduction statistics for fast-trip also appear to overstate the program's effectiveness. In a data response to Energy Safety's question about the percentage of fast-trip outages that would have otherwise led to an ignition, PG&E opined that "[m]ore than 95% of outages that occurred in 2022 while EPSS protection was enabled presented a potential ignition risk."[17] Not only does PG&E's response side-step the question, but the proposition that 95% of all fast-trip outages presented a potential ignition risk makes an unremarkable fact—that faults on electric lines can cause ignitions—sound more ominous than it is. The actual answer to Energy Safety's question is addressed to a certain extent in the WMP, where PG&E touts a greater than 36% reduction in CPUC-reportable ignitions in 2022, compared to the 2018–2020 average, which is the difference between 132 and 87 reportable ignitions.[18] That means the 2,375 fast-trip circuit outages in 2022 reduced the total number of reportable ignitions by 45. And it means that PG&E's equipment still caused 87 ignitions. While all ignitions must be taken seriously, those statistics do not add up to the level of success PG&E proclaims.

Nor do PG&E's figures on the reduced acreage burned by wildfires demonstrate, when examined, that fast-trip is providing staggering benefits. PG&E claims that 2022 saw a 99% reduction in total High Fire Threat District acres burned relative to the 2018–2020 average, and that fast-trip significantly contributed to the reduction in fire size.[19] While 2022 *might* be the first year since 2016 that PG&E avoided starting a wildfire,[20] the 2018–2020 period included the

[14] PG&E EPSS Outages Monthly Report (October 17, 2022; November 15, 2022).
[15] PG&E EPSS Outages Monthly Report (September 16, 2022; October 17, 2022; November 15, 2022).
[16] It is also unclear from PG&E's fast-trip presentation how the circuits outside the high fire threat areas factor into PG&E's statistics. In addition to the 25,236 miles of circuits in the high fire threat areas, PG&E enabled fast-trip on nearly 20,000 miles of circuits in buffer areas—almost doubling the line-mile footprint of the outage program. (PG&E 2023–2025 WMP, p. 466.) While PG&E provides these basic facts, as well as its plan to enable the same scope of circuits in 2023, PG&E doesn't elaborate on outage or ignition statistics inside vs. outside the high fire threat areas, or provide sufficient detail to allow Energy Safety or stakeholders to assess whether the scope of the program is appropriate.
[17] PG&E Response to OEIS_02_Q9(c) (April 18, 2023).
[18] PG&E 2023–2025 WMP, p. 467. Elsewhere, PG&E refers to the 36% reduction in reportable ignitions as "dramatic," which arguably overstates the impact of fast-trip, particularly given the sheer volume of outages required to produce a savings of 45 fewer ignitions. (*Id.* at p. 7.)
[19] *Id.* at p. 467.
[20] The cause of the Mosquito Fire is still under investigation as of the date of these comments.

Camp, Kincade, and Zogg Fires, which burned approximately 290,000 combined acres—a 99% reduction is not necessarily the coup that PG&E claims. PG&E also fails to mention the early arrival of rainy weather in 2022, which cut the fire season short and reduced overall fire risk.

The numbers indicate that PG&E is relying on correlation to imply causation. But PG&E has not actually done the work to prove causation, nor has it demonstrated that its fast-trip program is appropriately calibrated to maximize fire risk reduction while minimizing customer impacts.

Energy Should require detailed risk- and ignition-reduction modeling from PG&E for its fast-trip program, as well as a robust analysis of the scope of its program relative to the likely fire risk and ignition reductions.

PG&E Does Not Address the Actual Customer Impacts of Fast-Trip

The discussion and supporting data for fast-trip's benefits in PG&E's WMP are sparse, but the acknowledgement of the actual impacts to customers is nonexistent. The harms to customers from these widespread and relentless outages are not theoretical, nor are they just an inconvenience. For example:

- Fast-trip outages occurred in vast numbers during high-fire-hazard conditions and weather events in 2022, and they will continue to do so in the future.

- Fast-trip outages cause wireless and landline communications networks to frequently go down, notwithstanding the backup power requirements the CPUC imposed in recent years, which leaves people unable to call for help, receive emergency warning and alert messages, or access basic information.

- Impacted customers lose the ability to pump well water, which compromises human health and harms families, livestock, and crops.

- Without advance notice, medically vulnerable customers cannot charge their devices or backup batteries in advance, prearrange transportation to energized locations, or escape the constant looming threat of sudden power loss.

- Approximately 244,000 customer accounts (between approximately 488,000 and 732,000 individuals) lost power from fast-trip during the historic heat dome event in the first 10 days of September 2022,[21] which shattered heat record and posed a widespread danger to health and safety.

- Customers also lost power from fast-trip while the Mosquito Fire was rapidly expanding, which put them at risk of missing evacuation warnings and being unable to charge electric cars to evacuate.

[21] PG&E EPSS Outages Monthly Report (October 17, 2022).

Again, context matters. PG&E's outage program cannot be analyzed or understood based on percentages and statistics alone—and certainly not the sanitized figures PG&E highlights in its WMP.

Fast-Trip Outages are Expected to Remain Near Current Levels for the Foreseeable Future

After a year in which the fast-trip program caused power outages with total impacts on par with its disastrous 2019 de-energization events, PG&E announced that it only expects a 2% year-over-year reduction in fast-trip impacts during this WMP period.[22] By 2025, after implementing the suite of targeted fast-trip mitigations touted in the WMP, PG&E anticipates customers will still experience 2,250 fast-trip outages—a total reduction of 125 outages from 2022 levels.[23] PG&E's explanation for that paltry reduction is that, "[w]ith only one year of EPSS protection performance to review, we made a conservative estimate of the reliability improvement that could be realized based on the planned sectionalization and mitigation activities."[24] That means that, all other things being equal, PG&E's planned outage mitigation measures will not meaningfully reduce fast-trip impacts.

It is also telling that PG&E states elsewhere in the WMP that "[r]eliance on EPSS will decrease as lines are relocated underground."[25] The extent to which PG&E's aspirational 10,000-mile undergrounding program, and any subsequent undergrounding plans submitted under the expedited SB 884 process, will be approved by the CPUC and Energy Safety is currently undetermined. There are also legitimate concerns about PG&E's ability to execute anything close to the now-scaled-down undergrounding program in its general rate case application.[26] Given the slow timelines and extravagant costs of undergrounding, it is not likely to be the panacea for reliability problems that PG&E claims.

Energy Safety should require PG&E to provide a detailed analysis of its planned fast-trip mitigation measures and the modeling that supports its predicted 2% year-over-year improvements. If PG&E's analysis does not justify either the breadth of the predicted outages or the incremental impact reduction, PG&E should be required to revise the scope of its program.

[22] PG&E 2023–2025 WMP, p. 335.
[23] *Id.* at p. 336 (Table 8-5).
[24] PG&E Response to CalPA_Set WMP-10_Q2(b) (April 10, 2023).
[25] PG&E 2023–2025 WMP, p. 317.
[26] See, e.g., CPUC Docket A.21-06-021, *TURN Opening Brief*, pp. 395–403 (explaining the extreme difficulty PG&E will face in attempting to increase its undergrounding work from an average of 22 miles per year to over 800 miles per year) (November 4, 2022); Sur-Reply Briefs on PG&E's Revised Undergrounding Proposal of Pacific Bell Telephone Company, Comcast Cable Communications Management, the Public Advocates Office, the California Farm Bureau Federation, TURN, *passim* (addressing PG&E's recently scaled-back undergrounding targets) (January 23, 2023).

PG&E Has Not Answered a Number of Important Fast-Trip Questions

There is little substantive information or analysis in PG&E's WMP of its fast-trip program, beyond the questionable statistics discussed above and the raw outage data reported in its EPSS Reliability Study.[27] PG&E also fails to address specific safety concerns that stakeholders have raised repeatedly and publicly.

PG&E's plan to leave fast-trip settings enabled during extreme weather events that could also trigger a de-energization event is deeply concerning,[28] particularly because there is no evidence that PG&E has considered the practical implications of its plan. Local government emergency managers have raised concerns on multiple occasions about the potential for widespread and extended outages if fast-trip settings are enabled during high-wind events. We are not aware of attempts by PG&E to understand the likely outage scope and duration under that scenario, nor is it clear that PG&E would be able to restore power in a timely manner, based on its performance under "normal" fast-trip outage conditions.

PG&E has also given no indication that it has considered, let alone modeled, the results of enabling fast-trip settings during a major natural disaster, like a wildfire or large earthquake. These events could cause massive numbers of outages that, combined with extended restoration times, could significantly compound the effects of these disasters on impacted communities.

Based on its WMP, PG&E has analyzed reduced ignitions, reduced acres burned, and average customer impacts as a result of fast-trip. Those figures barely scratch the surface of what the fast-trip program does to impacted customers or what it has the power to do in a natural disaster or extreme weather event. Fast-trip cannot be fully analyzed or understood without significantly more information than PG&E has provided.

Energy Safety should direct PG&E to model fast-trip impacts and estimated restoration times during extreme weather events and other natural disasters. Based on the results of that modeling, PG&E should be required to make adjustments to the scope and scale of the fast-trip program to minimize impacts to customers and communities.

Conclusion

The Joint Local Governments have been heavily impacted by PG&E-caused wildfires, and we support PG&E's efforts and improvements to its wildfire mitigation activities in recent years. But PG&E has a tendency to implement programs that are over-broad and under-considered, which have serious and potentially life-threatening impacts on the communities they are intended to protect. That was true for its de-energization program in 2019 and it was true for the launch of fast-trip in mid-2021. PG&E has made some improvements to the fast-trip program since its surprise implementation, but the data and analysis in PG&E's WMP shows that the utility has declared victory with a program that is dubiously calibrated and selectively analyzed. Fast-trip may be a beneficial tool in PG&E's wildfire mitigation portfolio, but its benefits are not (yet) the

[27] PG&E 2023–2025 WMP, ACI PG&E-22-32.
[28] See, e.g., *PG&E Letter re: CPUC Oversight of Large Electric Utilities' Fast-Trip Outage Programs* (November 16, 2022), p. 2; PG&E 2023–2025 WMP, pp. 464–465.

foregone conclusions PG&E claims. PG&E has a lot more work to do; Energy Safety must ensure that PG&E does it.

Sincerely,

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