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October 25, 2022

Subject: Comment - Proposed OEIS 2023 to 2025 Wildfire Mitigation Plan Guidelines

Introduction

This letter will address aspects of the Guidelines important for preventing wildfire ignitions from utility circuits. Global Warming has forced this issue as have five consecutive years of disastrous PG&E power line ignited wildfires. The flammability of California's landscapes has worsened to the point that it's no longer possible to use common and increasingly obsolete equipment, such as small size uninsulated conductors and jumper wires, exposed blade switch "fuses", and reclosers that are only capable of responding to amperage overloads, but fail to reliably respond to high impedance faults from downed energized wires, and conductor to grounded contact involving low conductivity. This type of ground fault ignited the 1,500 square mile Dixie Fire, after PG&E left this faulted circuit energized for 10 hours. This letter also address the substitution of "fast trip" recloser initiated power outages for what could be fundamentally fire-safe and reliable overhead circuits.

New standards for overhead power circuit design and maintenance are necessary. This OEIS update does not address the underlying regulations of the State. Therefore OEIS is in the awkward position of finding a means to promote circuit safety in the absence of modern regulatory standards for circuit design. This problem has it source in the failure of the CA Public Utilities Commission.

The Commission has comprehensively neglected to address the pressing need for fire-safe utility circuits. General Order 95 is a thoroughly obsolete set of regulations that no utility company would dare use as a minimum standard for the construction of new circuits. For example, General Order 95 still allows the use of bare, single strand, AWG 6 and 8 gauge copper as primary conductors. I've seen tiny old #8 conductor (kitchen range size wire) in use in Santa Cruz Mountain forests. In 2013 Liberty Consulting advised the Commission that PG&E had 22,000 circuit miles of "obsolete" #6 copper in use, across its service area. Most of those circuit

miles of antique conductor remains in use today. It is scandalous that such negligent and wildfire promoting regulations exist in twenty-first century California. Many other outdated "regulations" remain in the code. GO 95 has nothing at all to say about circuit protection devices and does not even set standards for fuses.

The three electrical circuit General Orders of the Commission are entirely irrelevant, and so may actually protect negligent behavior, thus endangering the people and landscapes of California. It is only the legal liability for fires that financially motivates investor owned utility companies to move in the direction of fire safety.

OEIS cannot succeed in the supervision *of effective* Wildfire Mitigation Plans until the Commission corrects its own negligence as demonstrated in the General Orders. There are however some steps OEIS could take to advance the fire safety of overhead power circuits.

There is No Definition for "System Hardening"

The document "2023-2025 Draft Wildfire Mitigation Plan Guidelines" continues a major error. There is no OEIS-Energy Safety, nor CA Public Utilities Commission definition for "system hardening". This crucial but abused concept is a direct and indivisible aspect for utility circuit fire ignition safety.

This error and omission is especially problematic when it involves Pacific Gas and Electric. This company avoids rebuilding its circuits for as long as it deems possible and apparently prefers to replace individual component equipment within old circuits, rather than to rebuild a circuit, once most of the equipment in that circuit is technically obsolete and/or degraded by age and corrosion.

There is never a point when "System Hardening" will mean anything, if substantial component parts of a circuit remain old and degraded. This is a "weakest link in the chain" situation. An example of this is the fact that PG&E has finally increased its replacement rate for rotten cracked power poles. However often very old conductors will be rehung onto these new poles and perhaps even onto new cross bars. Such a circuit has not been "hardened" (made safer) because the primary cable/wire, the jumpers, insulators, fuses, transformers, reclosers, pole mounted capacitors and so on, may be old and in various states of wear and decay. Also despite the fact that far safer computer operated circuit protection devices exist "on the shelf", PG&E shows little interest in these solutions.

Section 8.1.2 of these Draft Guidelines comes as close to a substitute definition for System Hardening as does anything in these proposed WMP Guidelines.

"The electrical corporation is required, at a minimum, to discuss grid design and system hardening for each of the following mitigation initiatives:

1. Covered conductor installation

2. Undergrounding of electric lines and/or equipment

*3**. Traditional overhead hardening***

4. Line removal (in HFTD)

5. Distribution pole replacements and reinforcements

6. Transmission pole/tower replacements and reinforcements

7. Microgrids

8. Other grid topology improvements to minimize risk of ignitions

9. Other grid topology improvements to mitigate or reduce PSPS events

10. Installation of system automation equipment

11. Other grid hardening technology installations and pilot progress

12. Other technologies and systems not listed above "

Nevertheless this list includes the even more obscure notion of "traditional overhead hardening". As an informed commenter who understands how these overhead circuits function, and what their components are, this is meaningless. It must be deleted.

Solution: Cease using undefined terms such as "system hardening" and "traditional system hardening" and confine this proposal to clear specific terms, and enforceable standards for wildfire ignition safety.

OEIS may not have the authority to enforce a code. But it certainly has a responsibility to advise the Commission of major defects in the Commission's own General Orders.

Impact of, and Reliance Upon, PG&E's "fast trip" or "EPSS" (Enhanced Power Line Safety Settings)

The record of the OEIS Workshop on the Draft 2023-2025 Wildfire Mitigation Plan Guidelines neglects to Include PG&E's distribution circuit, recloser based, "fast trip" or "EPSS" (Enhanced Power Line Safety Settings) as a subject topic; other than to include it, under 8. Wildfire Mitigations" as "Grid Operations (including Protective Equipment and Device Settings).

I could speculate upon the reason for the obscurity placed upon this "Elephant in the Room". Instead I will include statistics from PG&E's reports to OEIS upon the frequency of these power outages. The causes are predictable, considering the state of PG&E's grid.

By far the biggest issue is bare uninsulated conductors and jumper wires. All animal and object contact faults are the result of uninsulated conductors. Vegetation contact faults would nearly vanish if insulated cable were used. All that would remain as vegetation involved faults would be "wires down" faults. These could be prevented with the use of high impedance arc fault interruption devices and other advanced, currently market available, modern circuit protection equipment such as GE's "Multilin" Feeder Circuit Protection.

The following information is drawn from Excel file documents provided by OEIS to its service list:

Title: PG&E EPSS Outages Monthly Report - September 16, 2022
Document Description: Updated PG&E EPSS Outages Monthly Report

Year to Date (presumably January 1 2022 to August 1or August 31, 2022)

27 circuits having 5 or more outages in the time span, for a total of 135 sustained EPSS power outages.

27 circuits had 6 EPSS power outages, for a total of 162 power outages
15 circuits had 7 EPSS outages total of 105
5 circuits has 8 EPSS outages total of 40
2 circuits had 9 EPSS outages total 18
5 circuits had 10 EPSS outages total 50
3 circuits had 11 EPSS outages total 33
4 circuits had 12 EPSS outages total 48
1 circuit had 14 EPSS outages
1 circuit had 15 EPSS power outages

2022 YTD Summary	
Category	Count
Medical Baseline	82,810
Life Support	57,774
Critical Customers	20,570
Hospitals	134
Schools	2,575
Overall CAIDI	183
Restored <60 Mins	124
Total Outages	1,413
Total Customers Experiencing Outages	1,273,747

August 2022 Summary	
Category	Count
Medical Baseline	27,625
Life Support	19,166
Critical Customers	6,678
Hospitals	47
Schools	948
Overall CAIDI	170
Restored <60 Mins	41
Total Outages	452
Total Customers Experiencing Outages	427,675

These huge numbers of "fast trip" Recloser opening, power outages are a violation of a primary mandate of the CA Public Utilities Commission, which is to insure safe and RELIABLE electrical power service.

It is important to remember: these are power outages that generally ***never occurred before in the Summer and Fall months.***

Now that "Fast Trip" or "Enhanced Power Line Safety Settings"/EPSS has been extended by PG&E across all 25,500 circuit miles in all Tier 2 and Tier 3 High Fire Threat Districts, there is a new, and I will argue, A PERMANENT LEVEL OF SERVICE DECLINE FOR EVERYONE LIVING AND WORKING IN RURAL, UPPER ELEVATION, CALIFORNIA.

When I say rural, this likely includes hundreds of towns and small cities in the foothills of N. CA Mountain ranges.

I lived in such a setting for 32 years. Summer and Fall power outages were once rare events. The vast majority of power outages occurred only during winter storms.

Now these power outages have become common disruptions to the lives and businesses of well over a million people in PG&E's service territory.

Copied from the following document:

PACIFIC GAS AND ELECTRIC COMPANY'S (U39M)
SAFETY AND OPERATIONAL METRICS REPORT --Dated April 1, 2022.
Page 2.1-4
Chapter 2.1
3. Metric Performance

"In 2021, the unplanned SAIDI [System Average Interruption Duration Index] metric performance was 3.05 hours, which is approximately 45 percent higher than the 2020 result of 2.10 hours. This was largely due to the following factors: To reduce ignition risk, PG&E implemented the Enhanced Powerline Safety Shutoff (EPSS) program in July 2021. This program enabled higher sensitivity settings on targeted circuits in High Fire Threat Districts (HFTD) to deenergize when tripped. As illustrated below, unplanned SAIDI performance was significantly impacted during the period these settings were activated (July 28-October 22, 2021)".

Only 41 of 452 August 2022 EPSS Power Outages was restored (re-energized) in less that 60 minutes.

I speculate that the reason for the long delays in restoring power after an EPSS recloser trip is that PG&E has so little situational awareness on its grid.

This equipment goes by the term SCADA or System Control and Data Acquisition. This is equipment that would (if it were adequately used) allow PG&E to locate circuit faults remotely by cell or radio signal and pin these problems to a short section of a circuit rather that to anywhere down-stream of a recloser device. Without adequate SCADA, PG&E linemen have to use a "truck roll", eyeballs and a flashlight to find the problem that caused their recloser to trip open. Thus hours long power outages are the inevitable result.

I see no reason why the duration of the average EPSS power outage would be less today at the writing of this letter. No new equipment of any service area significance has been installed that I have heard about. Anyone reading this letter can see that I'm paying attention.

What Should OEIS do in Response to THE PERMANENT USE OF EPSS?

OEIS has one important tool. It can deny a recommendation of approval of PG&E's next WMP update, until PG&E has successfully addressed this massive violation of the Mandate of the Commission: Reliability of power supply.

Until EPSS outages begin a clear and sustained decline in frequency, no update of a PG&E Wildfire Mitigation Plan should be approved again. This may sound far-fetched to people who have dealt with this company for years. But OEIS exists to serve the people of California, not Pacific Gas and Electric.

Both the Commission and OEIS
May be Seen as in Violation of this PUC Code Section

PUC § 8386
(b) (18) A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk that is consistent with the methodology used by other electrical corporations unless the commission determines otherwise.

It is difficult to be certain what the Legislature intended when writing this code section. To "present" an enterprise wide safety risk is one issue. To effectively address that risk is another.

Regardless of what was intended by the Legislature, it is a massive omission for OEIS and the Commission to avoid comparing the success and/or failure of the three big IOU's in California to prevent their equipment from starting wildfires. It seems now likely that PG&E has ignited the Mosquito Fire in 2022. We will have to wait for the National Forest Service to release their report on the cause of this wildfire. Victims of this wildfire are already in court.

PG&E is alone in the slow pace it has assigned to circuit safety updating. PG&E is claiming to have undergrounded 174 miles of circuit. What are we to make of this when PG&E has about 148,000 circuit miles of overhead wire? 174 miles and the small additions claimed for the coming 3 years of undergrounding, are nearly irrelevant to wildfire safety. I regard PG&E's undergrounding plan as a Public Relations diversion from its massive backlog of degraded circuit equipment.

Southern CA Edison -SCE has installed well over three thousand <u>more</u> circuit miles of fully insulated conductor than has PG&E. Both San Diego Gas and Electric - SDG&E and SCE have

gone considerably further with the use of modern computerized circuit protection and SCADA equipment than has PG&E. I have seen utility systems in Western Europe that make Northern California look like a poor country that cannot afford a modern power grid.

OEIS is obligated to conduct a full review of these discrepancies between the WMP success of three big IOU's. Which are more successful in preventing wildfire and why? Which have not been successful and for what reasons? The contract Independent Safety Monitors are reviewing each utility separately. They will not be answering this crucial question.

Southern CA Edison and San Diego Gas and Electric have both focused on circuit rebuilding and the use of modern circuit protection. It is long past time for a full review of the fire ignition safety success differences between PG&E, SCE and SDG&E.

Massive Environmental and Property Damage Inflicted by PG&E

OEIS may not consider natural resource conservation to be their purview. It should be. If the massive felling of trees by PG&E is not very effective, it needs to stop. **In all cases this destruction needs major restraints placed upon it.** The harassment of homeowners is profoundly offensive.

In "*Table 1-1. Exemplar List and Description of Electrical Corporation-Specific WMP.....*" of the Draft one finds this:

"Continue development of inventory tree database
- **Continue to implement vegetation management work plan with enhanced clearances in high-risk areas (going above regulatory requirements)**
- Continue fuels management program"

Why has OEIS made this recommendation? Do you have proof of effectiveness?

Because CEQA review was illegally avoided by the Commission in 2017, OEIS has no science based evidence to justify this recommendation. Also it is contrary to law in several different ways.

The evidence for harm and the constant expansion of that harm, to property, to the environment, and to the peace of mind of home and landowners, is a scandal. Huge numbers of homeowners are harassed and misled into having their property permanently damaged. "Enhanced Vegetation Management" is hugely destructive, and arrogant in the extreme. PG&E uses terms like "overstrike" and "strike distance" to fell millions of trees that were never before regarded as a threat to anyone. Destroying the natural resources of California is not going to prevent wildfires. But it will demolish the legitimacy of OEIS and what is left of the legitimacy

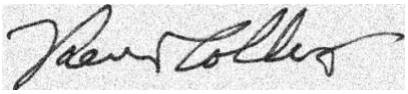
of the Commission. I have spoken to scores of homeowners who will never forget what has been done to their land under the guise of utility fire safety. Lumber trees are squandered into wildfire enhancing chips and slash that are dumped across landscapes in ways that worsen fire risks. CA's climate change, environmental protection, water quality, wildlife protection and Forest Practice Act laws are bushed aside as it they were irrelevant.

PG&E's own former CEO Bill Johnson stated: **"No amount of tree clearing can prevent catastrophic wildfires or windblown debris from hitting and impacting our equipment."**

Despite this the Commission and OEIS continue to press for more destruction. It is time to focus Wildfire Mitigation Plans on the sources of fire ignition. Trees do not start fires. But degraded obsolete utility equipment is very effective at fire ignition. The solutions are obvious. They are infrastructure investment.

OEIS collects "square miles" of documents. Nothing comes close to the torrent of files from PG&E. Excel files and endlessly redundant reports are not equivalent to utility safety. OEIS has the option to advance utility fire ignition safety. Please do so.

Regards,



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