

**BEFORE THE OFFICE OF ENERGY INFRASTRUCTURE SAFETY STATE OF
CALIFORNIA (OEIS)**

Electrical: Wildfire Mitigation Plans (WMPs)

Docket # 2022-WMPs

Comments of Kevin Collins referring to the 2022 Wildfire Mitigation Plan Updates and specifically addressing 2023 WMP Guidelines, specified by Melissa Semcer, Deputy Director, Electrical Infrastructure Directorate, OEIS

May 6, 2022

These comments are submitted in response to the following notice:

Energy Safety will also be accepting written comments. Written comments should focus on the 2023 WMP Guidelines and may include topic areas not directly covered during the workshop. Written comments must be no longer than 25 pages, are due by May 6, 2022, and must be filed in Docket 2023-WMPs in the Energy Safety e-filing system. Supporting documents may be included as appendices or attachments and are excluded from the 25-page limit.

<https://efiling.energysafety.ca.gov/Lists/DocketLog.aspx?docketnumber=2022-wmps>

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Introduction

It is of note that the document record for OEIS has quickly adopted the scale, in square miles of paper, laid edge to edge, of that characteristic of a CPUC Proceeding. The docket link above contained 101 individual filings from the time period of November 9, 2021 to April 29, 2022, a mere six months. This focus upon bureaucratic digressions is not unexpected considering the origins of the Office of Energy Infrastructure Safety, coming from Senate Bill 901 in 2018 and moved from the CA Public Utilities Commission.

The document I located applying specifically to the 2023 WMP Guidelines is a brief workshop

outline published April 22, 2023.

I have a long standing interest in the safety of overhead power utility circuits and the solutions to the wildfires ignited by electrical circuit faults.

In 2018 I filed a formal adjudicatory Complaint against PG&E, docketed in October of 2018, as Case 18-09-011. In that Complaint I cited two instances of energized "down wires" arcing to earth in front of my home, in one case, arcing on the edge of a road, for more than twenty four hours before PG&E linemen showed up to de-energize that circuit.

I provided extensive technical documents supporting my assertion that the overhead circuit design code of the CPUC, i.e. General Order 95 in particular, was badly outdated. As relief sought for my Complaint, I asserted that it was necessary for the Commission to open a Proceeding to update these regulations to modern circuit safety standards. My Complaint was dismissed without the technical and logical merits of that Complaint being considered. Instead the Administrative Law Judge ruled that the CPUC's Rules of Procedure did not accommodate my Complaint. I was told personally by this Judge during the Pre-Hearing Conference that my time would be better spent if I followed the, soon to open, Proceeding R. 18-10-007 Wildfire Mitigation Plans (WMP). I indeed followed this Proceeding, eventually filing and reluctantly receiving "Party Status".

CPUC Proceeding R. 18-10-007 never once touched upon the glaring defects and omissions in General Orders 95, 174 etc. and instead carried on narrowly as the Legislature had directed in SB 901. Each IOU wrote its own WMP, all heading in different directions. SCE committed to rebuilding circuits and installing insulated "covered" conductor cables on a large scale, while PG&E focused upon the large scale destruction of trees.

Both SCE (Southern CA Edison) and SDG&E (San Diego Gas and Electric) began the process of installing advanced computerized circuit protection devices including high impedance arc fault interruption on Distribution circuits (described in my Complaint) and Phasor PMU measurement safety sensing and relay devices on Transmission circuits. The CPUC continued to refer to this equipment as "pre-commercial" even though it was, and remains, available "off the shelf" from several international engineering companies and was being installed successfully in California, in other states, and internationally.

Now that the Wildfire Safety Division of the CPUC has been moved to CA Natural Resources, and is now called the CA Office of Energy Infrastructure Safety, the process of Wildfire Mitigation Plan writing and review is essentially the same.

Comments upon 2023 WMP Guidelines

Small changes in the format and requirements for WMPs will provide a negligible fire safety improvement for California. Notably the OEIS and CPUC approved PG&E WMP shortly after the massive Dixie Fire's ignition had been attributed by CalFire to have originated from a PG&E circuit

left energized all day until that fire was set. If that circuit had been simply de-energized on the morning of July 13, when an electrical circuit fault was obvious, there would very likely have been no Dixie Fire. 1,500 square miles of CA would not have burned. Four years plus of WMPs did not prevent this wildfire. And in fact this fire seems to have been ignored when approving PG&E's plans. A mere SCADA servo opening of a modern recloser, (or an old style "truck roll" hand opening of an upstream recloser) would have very likely prevented this fire. Shortly after this fire, if memory serves, PG&E started its "Enhanced Powerline Safety Settings" or EPSS, also called "Fast Trip". EPSS has resulted in many hundreds of unanticipated power outages causing a massive and preposterous inconvenience for thousands of people and businesses. PG&E calls EPSS an interim solution. Considering that PG&E has about 25,500 circuit miles in Tier 2 and Tier 3 utility ignition, High Wildfire Threat Districts, and that utility fires are not limited to these areas alone, EPSS is likely to be permanent for at least a decade.

Excerpts from: PACIFIC GAS AND ELECTRIC COMPANY'S -- SAFETY AND OPERATIONAL METRICS REPORT-- filed April 1,2022 into General Rate Case A. 21-06-021

Letter Author's note: The expression "System Hardening" has no clear consistent definition. It is specifically not circuit rebuilding as conducted by Southern CA Edison. In my experience PG&E will replace certain selected wooden power poles and some cross bars, and then re-hang the old conductors from these new power poles. In other situation the conductors themselves are replaced. But in my own experience it is more common to witness old conductors re-hung from replaced power poles. These are personal observations and cannot be corroborated with the information available to me at the time of writing this letter.

2. 1-11

Grid Design and System Hardening:

"PG&E's broader grid design program covers a number of significant programs, called out in detail in PG&E's 2022 WMP. The largest of these programs is the System Hardening Program which focuses on the mitigation of potential catastrophic wildfire risk caused by distribution overhead assets. In 2022, we are rapidly expanding our system hardening efforts by: completing 470 circuit miles of system hardening work which includes overhead system hardening, undergrounding and removal of overhead lines in HFTD or buffer zone areas; completing at least 175 circuit miles of undergrounding work, including Butte County Rebuild efforts and other distribution system hardening work; replacing equipment in HFTD areas that creates ignition risks, such as non-exempt fuses (3,000) and surge arresters (~4,500, all known, remaining in HFTD areas). As we look beyond 2022, PG&E is targeting 3600 miles of Undergrounding to be completed between 2023 and 2026 as part of the 10,000 Mile Undergrounding

program. This system hardening work done at scale is expected to have limited reliability benefit due rural HFTD geography, and is prioritized to mitigate wildfire risk rather than reliability risk at this time.

3. 1-5

D. Current and Planned Work Activities

"PG&E will continue to execute many ongoing activities to reduce wires down, including the OH Conductor Replacement: PG&E's electric distribution system includes approximately 81,000 circuit miles of OH conductor on its distribution system that operates between 4 and 21 kilovolt, including bare and covered conductors. Approximately 55,000 circuit miles of this distribution conductor, including approximately 40,000 circuit miles of small conductor is in non-HFTD areas. PG&E's OH Conductor Replacement Program, recorded in MAT 08J, proactively replaces OH conductor in non-HFTD areas to address elevated rates of wires down and deteriorated/damaged conductors and to improve system safety, reliability, and integrity.

PG&E updated its prioritization process for OH conductor replacements to include consideration the RAMP risk tranches with Safety Consequence Zones and/or shared protection zones with critical customer(s). The three focused tranches are: (1) corrosive regions with specific materials (Aluminum Conductor Steel-Reinforced (ACSR)), (2) elevated wires down (small copper conductors), and (3) poor reliability performance. The final definition of the Safety Consequence Zones is being developed, but currently takes into consideration: Within buffer zones near Major Transportation Infrastructure, Public Assembly Areas, and Public Safety Entities."

Letter Author's Note: No distinction is made between bare and covered [insulated] conductor in the above paragraphs, despite the fact that insulated cable is understood to be far safer than bare cable for fire ignition safety. This is an example of the non-specific nature of the term "System Hardening".

Comment:

It is not useful to further analyze this afore specified report. My point is that PG&E produces many such reports and filings. Most, in my opinion, serve only to fill a place marker in the bureaucratic mazes of the OEIS and the CPUC.

It would be far more effective, in respect to public safety and sanity, if the OEIS were to define precisely what they require to be included in 2023 Wildfire Mitigation Plans, and also to demand a stop to redundant reiterations that only confuse the issues.

Fire Ignition safety from overhead power circuits is not "rocket science". Personally I understand this subject well and I'm not a licensed electrical engineer. I'm merely someone who understands these circuits and connected them to buildings for decades as a general building contractor. I understand the equipment that must be used and the equipment that is obsolete and requires replacement.

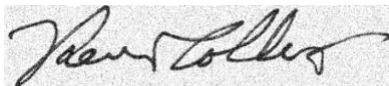
OEIS has an obligation to gain control of this subject and demand specificity and conformance to modern circuit safety standards and technology in Wildfire Mitigation Plans.

To be most effective this charade should be sent back to the CA State Legislature because that is where the current confusion originated. The IOUs should never have been placed in control of this issue.

The State could gain access to qualified independent experts to re-write General Order 95 and related codes so that these regulations drive wildfire ignition safety forward instead of this code being a Tort Law backstop to protect utilities from their bad decisions.

Public Safety Power Shutoffs and Enhanced Powerline Safety Settings are going to persist for at least a decade and probably far longer, until every overhead power circuit has been rebuilt to logical modern engineering standards. Wildfires are driven by Climate Change. Climate Change is only getting worse. People will probably continue to die and landscapes will certainly continue being torched until power utility circuits are built to be fire ignition safe.

Regards,



Kevin Collins

Filed this date May 6, 2022
from San Rafael, California

cc. CA State Senator Mike McGuire
CA Assemblymember Marc Levine
Katie Rice, Board President, Marin County Board of Supervisor