

**PACIFIC GAS AND ELECTRIC COMPANY  
Wildfire Mitigation Plans Discovery 2023  
Data Response**

PG&E Data Request No.:	OEIS_001-Q015		
PG&E File Name:	WMP-Discovery2023_DR_OEIS_001-Q015		
Request Date:	April 5, 2023	Requester DR No.:	P-WMP_2023-PG&E-001
Date Sent:	April 10, 2023	Requesting Party:	Office of Energy Infrastructure Safety
DRU Index #:		Requester:	Colin Lang

**SUBJECT: REGARDING PG&E’S ENHANCED POWERLINE SAFETY SETTINGS (EPSS) PROGRAM**

**QUESTION 015**

- a) On page 464, PG&E states “...also referred to as high impedance faults, we plan to engineer, program, and install the Downed Conductor Detection (DCD) algorithm on recloser controllers. We will also evaluate high impedance fault detection algorithms for circuit breakers in 2023 and beyond.” Then on page 374, PG&E states that the DCD Utility Initiative will likely continue from 2023-2025.
  - i) What is the prioritization process for deciding which circuits will receive the DCD algorithm?
  - ii) Will the number of outages, due to EPSS de-energizations, be looked at to identify which circuits should receive the DCD algorithm first?
- b) In figure 8.1.8-4: CPUC REPORTABLE IGNITIONS IN HFTDS (page 468) PG&E shows that through December 31, 2022, there was a greater than 36 percent reduction in CPUC reportable ignitions in HFTD-areas compared to the overall 2018-2020 average. PG&E claims that this reduction is a direct result of enabling EPSS in HFTDs.
  - i) Was this data adjusted for circuits that have been hardened with covered conductor or other mitigations?
  - ii) Did PG&E associate the ignition data to each individual circuit that was enabled showing a direct connection to the result, or is this data an assumption that has been made by looking at the overall HFTD areas and the overall reportable ignitions?
  - iii) Were weather and vegetation conditions factored into this data conclusion?

**ANSWER 015**

- a) i) DCD algorithm installation was prioritized based on the addressable risk reduction from each DCD device using PG&E’s WDRM v3 risk model and maximizing High Fire Risk Area (HFRA) electric distribution line mile coverage. Addressable risk reflects the devices and circuits that are capable of accepting the DCD algorithm. By the end of 2025, DCD is planned to be installed on approximately 21,000 HFRA miles. Circuit breakers and 4-wire circuits are not currently capable of receiving

DCD. Mileage is subject to change due to undergrounding of overhead lines and additional grid configuration changes anticipated through 2025.

- a) ii) DCD is an enhancement to EPSS intended to identify low current, high-impedance fault conditions in our high fire risk areas not currently fully mitigated by EPSS. As such, number of previous EPSS outages was not considered as part of the prioritization effort.
- b) i) On page 468 of the WMP we state that the 36% reduction in HFTD reportable ignitions was primarily driven by the effectiveness of the EPSS program. EPSS is understood to be the primary driver of this overall reduction given the scope and reach of the program.
- b) ii and iii) We determined the 2022 EPSS ignition reduction of 68% by comparing the CPUC reportable ignitions that occurred on primary distribution conductor in High Fire Threat Districts (HFTD) when EPSS was enabled with an annual average of ignitions on primary distribution conductor from 2018 – 2020, which was then weather-normalized to include only ignitions that occurred during conditions that met or exceeded EPSS enablement criteria.