PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans Discovery 2023
Data ResponseA

PG&E Data Request No.:	OEIS_003-Q016		
PG&E File Name:	WMP-Discovery2023_DR_OEIS_003-Q016		
Request Date:	April 21, 2023	Requester DR No.:	P-WMP_2023-PG&E-003
Date Sent:	April 26, 2023	Requesting Party:	Office of Energy Infrastructure Safety
DRU Index #:		Requester:	Colin Lang

SUBJECT: REGARDING PG&E'S RESPONSE TO OEIS DATA REQUEST 2 QUESTION 5 ATTACHMENT 1

QUESTION 016

a. How did PG&E determine a mitigation effectiveness of 11.8% for down conductor detection (DCD)?

b. In Table 8-4, PG&E has included 2023, 2024 and 2025 targets for DCD. Additionally, in response to CalAdvocates Data Request 10 Question 1, PG&E supplies that 21,000 miles will be covered by DCD by 2025. However, within the attachment, PG&E only demonstrates goals of approximately 27.34, 1.40, and 0 miles in 2023, 2024, and 2025 respectively.[1] Explain this discrepancy.

c. Include the number of miles DCD covered in 2022, as well as how many additional miles will be covered based on PG&E's targets for 2023, 2024, and 2025 broken down by year.

d. How did PG&E determine a mitigation effectiveness of 65% for EPSS?

e. Why is partial voltage detection (PVD) not included within PG&E's mitigations within the attachment? If it were, what would the mitigation effectiveness be for including PVD?

ANSWER 016

a) The mitigation effectiveness for down conductor detection was based on the incremental benefit to EPSS. The mitigation effectiveness was determined by reviewing the ignitions that occurred during EPSS enablement periods. Out of the 30 ignitions reviewed, 14 of them are high impedance faults. Of the 14 ignitions, we estimate that 25% can be prevented based on subject matter expert review. That review considered the fault characteristics relative to DCD's ability to detect high impedance faults as small as 1 amp, and that DCD can detect line to ground faults, but not line to line faults. Based on the above, the calculation of effectiveness is as follows: 14/30 * 25% = 11.8%

[1] Calculation based on multiplying the total mileage of the CPZ by the DCD % of Segment.

b) The approximate miles that OEIS calculates is only the miles in the Top 5% of risk (41 circuit segments) and not the full mileage across all locations in which DCD is covering.

c) Approximately 3,500 HFRA miles were covered by Down Conductor Detection (DCD) in 2022, with another 17,000 HFRA miles planned in 2023, 700 HFRA miles in 2024 and 30 HFRA miles in 2025. HFRA map utilizes the same methodology as CPUC-approved HFTD map, but also factors in incremental adds or exclusions to the HFTD map boundaries in consideration of risk factors for potential catastrophic fires originating from utility infrastructure.

d) The effectiveness of 65% was a conservative estimation of EPSS effectiveness prior to the final calculated effectiveness of 68% based on review of 2022 EPSS ignitions.

e) We do not possess sufficient data on Partial Voltage Detection in order to adequately represent an effectiveness.