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

PG&E Data Request No.:	TURN_008-Q005		
PG&E File Name:	WMP-Discovery2023_DR_TURN_008-Q005		
Request Date:	April 24, 2023	Requester DR No.:	TURN-PG&E-8
Date Sent:	April 27, 2023	Requesting Party:	The Utility Reform Network
DRU Index #:		Requester:	Tom Long

SUBJECT: RISK ANALYSIS

QUESTION 005

In response to TURN DR 5-4, after stating that PG&E is not undergrounding service drops and is not undergrounding secondary lines in most cases, PG&E states in the last paragraph, "We will overhead *remaining* secondary and service 3 lines by replacing open-wire secondary, gray services, and tree-connects with the current standard covered aerial conductor." (emphasis added)

a. What is meant by the word "remaining" in this quote?

b. Does this mean that, in a project PG&E describes as an undergrounding project, some of the "undergrounding" work typically consists of overhead hardening of secondary and service lines? Please explain your answer.

c. Please explain the conditions under which an undergrounding project would include overhead hardening of secondary and service lines and when an undergrounding project would not include such overhead hardening work. Please provide an estimate of the percentage of undergrounding projects that include overhead hardening of secondary and service lines.

d. In Table 8-3 of the WMP, for the row "10K undergrounding" (initiative GH-04), do the target miles for "undergrounding work" include overhead hardening of secondary and service lines? If not, where is the overhead hardening of secondary and service lines described in this DR response accounted for in Table 8-3?

e. Do PG&E's unit cost estimates for "undergrounding" include the costs of overhead hardening of secondary and service lines that may be included in "undergrounding" projects? Please explain your response.

f. Do PG&E's RSE calculations for "undergrounding" include miles, costs, and risk reduction benefits from overhead hardening of secondary and service lines that may be included in "undergrounding" projects? Please explain your response.

ANSWER 005

a) In some cases, where secondary or service wires are in-line with the primary being undergrounded, it too will be undergrounded in the same trench; however, any secondary or service lines that are "lateral" to the undergrounded primary will not be placed underground. Therefore, the term "remaining" is meant to apply to

those lateral secondary or service lines that are going to remain overhead. Those "remaining" secondary and service lines will be hardened by replacing open-wire secondary, gray services, and tree-connects with the current standard covered aerial conductor.

b) Yes, our underground projects include overhead hardening of secondary and services where required as described in subpart a). We also execute some "hybrid" system hardening projects where portions of a circuit are undergrounded and other portions of the circuit are overhead hardened where undergrounding is deemed infeasible. Some projects also contain overhead line removal when the line is deemed idle or not required as part of a relocation or deployment of a remote grid.

c) Our undergrounding work includes overhead hardening of secondary and service lines where required because the existing overhead secondary and service lines are not already in alignment with our design requirement. As noted in our response to TURN DR 5-4, secondary and service assets that are not in alignment with our design requirements and would need to be replaced include open-wire secondary, gray services, and tree-connects. We do not have exact data on the volume of undergrounding projects that involve some overhead hardening of secondary and services but estimates that the majority of undergrounding projects involve some overhead hardening of secondary and services. An exception is that Community Rebuild projects in areas impacted by a significant wildfire generally involve undergrounding secondary and services, particularly where previously existing secondary and service assets have been damaged or destroyed.

d) No, the miles of secondary and services overhead hardened is not included in the miles of targeted undergrounding work. Secondary and Service replacement is also not tracked separately or reported as overhead hardened miles. We do not currently track the length or mileage of secondary and service lines replaced, overhead hardened, or otherwise modified.

e) Yes, the cost of hardening secondary and service line is included in the recorded UG cost per mile used to develop the unit cost estimates. The total cost of the undergrounding project, including overhead hardening of secondary and service lines, is divided by the miles of primary distribution circuits installed underground to develop the unit cost per mile of UG projects. The cost of the secondary and services undergrounding is not itemized or projected separately.

f) Our RSE calculations are based off the unit costs associated with our current undergrounding standard. Given that our current undergrounding standard includes overhead hardening of secondary and service lines that may be included as part of the "undergrounding projects", it is captured. RSEs, whether it be for tranche level representation as shared in GRC or selection criteria as part of Wildfire Feasibility Effectiveness (WFE, also called Simplified Wildfire Risk Spend Efficiency), is provided as directional guidance for grid design teams, so the actual costs per project can vary substantially.