

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans
Rulemaking 18-10-007
Data Response

PG&E Data Request No.:	CalAdvocates_046-Q01		
PG&E File Name:	WildfireMitigationPlans_DR_CalAdvocates_046-Q01		
Request Date:	March 1, 2021	Requester DR No.:	CalAdvocates-PGE-2021WMP-12
Date Sent:	March 10, 2021	Requesting Party:	Public Advocates Office
PG&E Witness:		Requester:	Alan Wehrman

The following questions relate to PG&E's 2021 Wildfire Mitigation Plan (WMP) Update.

SUBJECT: DETAILED INSPECTIONS

QUESTION 01

Page (p.) 589 of PG&E's 2021 WMP, in section 7.3.4.2, Detailed Inspections of Transmission Electric Lines and Equipment, states the following:

In 2020, PG&E completed 26,282 units of overhead transmission enhanced inspections and projects. This represents 100 percent of HFTD Tier 3 transmission structures and 33 percent HFTD Tier 2 structures as defined in the 2020 WMP. Similarly, PG&E planned to complete aerial inspections (drone, helicopter, aerial lift-vehicle) for 25,412 assets.

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In 2021, 100 percent of overhead transmission poles in HFTD Tier 3 and Zone 1, roughly one third of poles in HFTD Tier 2 and HFRA will be subjected to detailed enhanced inspections and some form of aerial assessment (helicopter, drone, aerial lift, climbing).

PG&E's Table 12 identifies the following spending associated with section 7.3.4.2:

Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected
CAPEX (\$ thousands)	OPEX (\$ thousands)	Line miles to be treated	CAPEX (\$ thousands)	OPEX (\$ thousands)	Line miles to be treated	CAPEX (\$ thousands)	OPEX (\$ thousands)	Line miles to be treated
2020	2020	2020	2021	2021	2021	2022	2022	2022
\$0	\$89,857	5,235	\$0	\$105,104	5,235	\$0	\$109,048	5,235

- a. Please fill out the table below, disaggregating the actual and projected spending amounts as shown. Add extra columns as needed.

	Total OPEX	Detailed Ground Inspection	Detailed Climbing Inspection	Detailed Aerial Inspection (Total)	Detailed Aerial Inspection (Drone)	Detailed Aerial Inspection (Helicopter)	Detailed Aerial Inspection (Aerial Lift-Vehicle)	Other (Please Explain)
2020 OPEX	\$89,857							
2021 OPEX	\$105,104							
2022 OPEX	\$109,048							

- b. Please fill out the table below, providing the actual or projected number of transmission assets inspected by that method per year. Add extra columns as needed.

	Total Assets Inspected	Detailed Ground Inspection	Detailed Climbing Inspection	Detailed Aerial Inspection (Total)	Detailed Aerial Inspection (Drone)	Detailed Aerial Inspection (Helicopter)	Detailed Aerial Inspection (Aerial Lift-Vehicle)	Other (Please Explain)
2020								
2021								
2022								

- c. Please identify (by page or section number) any additional areas of PG&E's 2021 WMP (other than section 7.3.4.2) where PG&E proposes to use drone inspection of transmission or distribution assets.
- d. For each program identified in part (c), provide the actual or projected drone inspection spending for each year from 2020 to 2022.
- e. For each program identified in part (c), provide the actual or projected total number of distribution assets inspected by drone for each year from 2020 to 2022.
- f. For each program identified in part (c), provide the actual or projected total number of transmission assets inspected by drone for each year from 2020 to 2022.

ANSWER 01

- a. Please note that for the year 2020, figures represent current recorded data and incorporated a known cost transfer that was not reflected in the original submission due to the timing of when the cost transfer took place (after the WMP filing).

	Total OpEx	Detailed Ground	Detailed Climbing	Detailed Aerial - Drone	Detailed Aerial - Heli	Air Patrol
2020	\$90,208,358	\$41,500,060	\$2,438,239	\$23,900,187	\$17,988,770	\$4,381,102
2021	\$105,104,218	\$48,697,325	\$6,948,681	\$33,329,000	\$12,506,000	\$3,623,212
2022	\$109,048,312	\$50,524,719	\$7,209,434	\$34,328,870	\$12,881,180	\$4,104,109

- b. Please fill out the table below, providing the actual or projected number of transmission assets inspected by that method per year. Add extra columns as needed.

	Total Assets Inspected	Detailed Ground Inspection	Detailed Climbing Inspection	Detailed Aerial Inspection (Total)	Detailed Aerial Inspection (Drone)	Detailed Aerial Inspection (Helicopter)	Detailed Aerial Inspection (Aerial Lift-Vehicle)**	Other (Please Explain)
2020	57,492	57,492	2,902	55,471	33,982	21,489	-	-
2021	63,440	63,440	4,037	65,292	40,370	24,922	-	-
2022*	63,000	63,000	3,700	63,000	36,366	26,334	300	-

* Note: 2022 data is the best estimate as of submission and is subject to change

** This pertains to the use of bucket trucks

- c. Please identify (by page or section number) any additional areas of PG&E's 2021 WMP (other than section 7.3.4.2) where PG&E proposes to use drone inspection of transmission or distribution assets.

An additional pilot program performing transmission line "span" inspections leveraging drones are also described in Section 7.3.4.10. PG&E is also investigating the use of drones in various pilot programs that are described in more detail in Section 7.1.D.

This question references the use of drones to inspection "transmission or distribution assets", PG&E also uses drones to inspect substations (generally tracked and discussed in the WMP separately from transmission or distribution assets) as described in Section 7.3.4.15 of the 2021 WMP.

- d. For each program identified in part (c), provide the actual or projected drone inspection spending for each year from 2020 to 2022.

The costs associated with drone inspections of substations (section 7.3.4.15) include:

D Sub Enhance	Drone
2020	\$2,301,311
2021	\$2,370,350
2022	\$2,441,461
T Sub Enhance	Drone
2020	\$896,264
2021	\$923,152
2022	\$950,847

PG&E does not currently have readily available the costs associated with the pilot programs described in Sections 7.3.4.10 and 7.1.D.

- e. For each program identified in part (c), provide the actual or projected total number of distribution assets inspected by drone for each year from 2020 to 2022.

PG&E does not currently have unit forecasts associated with the drone pilot programs described in Section 7.1.D. As this question references the use of drones to inspection “distribution assets”, PG&E interprets the number of substations (which are generally tracked and discussed in the WMP separately from transmission or distribution assets) as not being applicable to this response.

Overall for distribution assets: there were no drone inspections of distribution assets in 2020. PG&E is conducting a pilot drone inspection program in 2021 for distribution assets. The results of the pilot program will help determine the amount of drone inspections performed in 2022. Therefore, the number of projected distribution assets to be inspected by drone in 2022 is not available.

- f. For each program identified in part (c), provide the actual or projected total number of transmission assets inspected by drone for each year from 2020 to 2022.

PG&E does not currently have unit forecasts associated with the drone pilot programs described in Sections 7.3.4.10 and 7.1.D. As this question references the use of drones to inspection “transmission assets”, PG&E interprets the number of substations (which are generally tracked and discussed in the WMP separately from transmission or distribution assets) as not being applicable to this response.