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

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DRU Index #:		Requester:	Dakota Smith

SUBJECT: REGARDING UNDERGROUNDING EFFECTIVENESS

QUESTION 003

a. How is PG&E taking past underground ignitions and fires into consideration when determining the effectiveness of undergrounding as a mitigation for reducing wildfire risk?

ANSWER 003

To assess the effectiveness of undergrounding as a wildfire risk mitigation, PG&E analyzed several factors through an engineering review:

1) Historical outage combinations and underground's ability to prevent such failures,
2) Historical overhead vs. underground ignition rate per mile, and
3) Severity of fires associated with overhead vs. underground ignition events.

First, to determine the effectiveness of undergrounding as a mitigation for reducing wildfire risk, as compared to the baseline of the existing overhead electric distribution assets, PG&E engineers assess each historic outage type on the overhead system to determine if it would have been prevented by having the line underground.

Second, PG&E assesses the likelihood of underground ignitions vs. overhead ignitions per mile to estimate the benefits of converting from an overhead system to an underground system. Based on comparing the likelihood of ignition per mile between overhead and underground, the ignition rate per mile decreases by over 95%. This assessment acknowledges that there are still underground ignition incidents, such as animals getting into underground line assets or customer panel connection incidents.

Third, when PG&E assesses the historical fires associated with overhead vs. underground assets, PG&E has not seen an underground ignition spread to a fire of significance. This is largely attributed to the concrete vaults and clearing around underground assets, which minimizes the opportunity for ignition spread. Based on historical fires, undergrounding is nearly 100% effective at mitigating catastrophic wildfires.