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

PG&E Data Request No.:	WSD_010-Q02		
PG&E File Name:	WildfireMitigationPlans_DR_WSD_010-Q02		
Request Date:	March 15, 2021	Requester DR No.:	WSD to PGE – Data Request – 20210315
Date Sent:	March 18, 2021	Requesting Party:	Wildfire Safety Division
PG&E Witness:		Requester:	Ryan Arba

QUESTION 02

PG&E has explained that outage data is recorded at the nearest circuit protection device, instead of at the location in which the outage event occurred.

a. Does PG&E investigate the cause of all outage events? If not, explain how PG&E decides which outage events to investigate.

b. How does PG&E utilize ignition data that have "Unknown" or "Other" causes when training its models?

c. Does PG&E identify the exact location of an outage event when investigating the cause?

   i. If so, how is this location recorded?

   ii. If so, would PG&E be able to use this location data in train the model if it were to use outage data for training purposes?

   iii. If PG&E does not identify the exact location of an outage event when investigating the cause, is any additional specificity obtained regarding the location of the event?

ANSWER 02

a. PG&E responds to all outage events and records initial cause information based on input from the responding field personnel. Subsequently, PG&E may also further investigate the cause of outages that includes and is not limited to the following:

- Initially reported with an unknown cause.
- Outages involving an ignition, injury, or property damage.
- Outages involving an equipment failure related wire down event.
- Vegetation related outages.
- Asset failure related outages that impacted many customers.

b. Ignition data is categorized by a field labeled “Suspected Initiating Event” and a separate field labeled “Equipment Involved with Ignition” among other variables in reports to the CPUC.[1] Ignition data that has the “Suspected Initiating Event” field marked as “Unknown” or “Other” was included to train the Equipment model when the conductor was identified as the asset in the “Equipment Involved with Ignition” field. Because ignitions for the Vegetation model are identified by the “Suspected Initiating Event” field, only those with “Vegetation” as the cause in the “Suspected Initiating Event” field were included.

c. First responders (typically Troublemen) are dispatched to identify the cause and the location of damage found when responding to an outage. This location is recorded as a text field and is saved within the outage database.

   i The location of the damage found is recorded as a text field describing the location such as a street name and a certain distance from the nearest cross street, etc.

   ii Yes, this locational data can be used as a training data set. In some cases, such as line slap, the location of events is not always known. To the extent that training data is incomplete it impacts the predictive power of the model. The use of outage data to train wildfire risk models is currently part of the 2022 Wildfire Risk modeling development. Since this information is currently recorded as a text field, methods are being developed to condition this data so that it can be accessed for model development.

   iii Since PG&E has the Lat/Long of the equipment that was used to isolate an outage, it is used as a proxy to determine if an outage was within a Tier 2 or Tier 3 HFTD area. PG&E is currently developing plans to utilize new mobile device technology to more precisely record the Lat/Long of the actual damage location.

[1] *See e.g.* 2019 Fire Incident Data Collection Plan Annual Report provided to the CPUC.