PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans Discovery 2023-2025
Data Response

PG&E Data Request No.:	CalAdvocates_042-Q003		
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PG&E Witness:		Requester:	Holly Wehrman

QUESTION 003

Page 7 of PG&E's 2025 WMP Update states, with regard to PG&E's distribution event probability models, "Significant efforts were made to improve asset, ignitions, and outage data quality."

List and explain the significant efforts discussed above.

ANSWER 003

As mentioned on page 7 of PG&E's 2025 WMP, the following is a more detailed list of specific data quality improvements that are a result of the continuous effort to improve the quality and utilization of model data for assets, ignitions, and outages.

Asset data quality improvements included:

- Tracing asset failures and asset history back in time to identify the asset that failed and its characteristics.

- Gathering asset information related to causal pathways as recommended by Subject Matter Experts (SMEs).
    - For support structures, this included:
        - Incorporating pole remaining strength as a feature in the model.
    - For primary conductors, this included:
        - Gathering distribution load flow software outputs.
        - Shifting conductor material and size types from categorical model inputs to continuous model inputs (i.e. conductor diameter, conductor strength, and conductor weight).
        - Using LiDAR data and splice observations where available in HFTD areas.
        - Incorporating Finite Element Analysis (FEA) model developed by the Applied Technology Services (ATS) team that assessed fault current and wind-driven line slap scenarios.
        - Including open tags.
    - For dynamic protective devices, fuses, switches, capacitor banks, and voltage regulators:

- Gathering asset attributes as captured in EDGIS over time (2016-2022).
  - Including open tags.
  - Creating methodologies to estimate asset age when missing.
- Reporting asset data quality issues to the Asset Knowledge Management team to resolve.

Ignition data quality improvements were primarily focused on:

- Enhancing wildfire ignition data for use in the wildfire consequence model.
- Reporting data quality issues back to the Ignitions Investigation team to resolve.

Outage data quality improvements included:

- Improving the incorporating vegetation outage report latitude & longitude locations to improve outage fault locations.
- Utilizing latitude & longitude locations from notification repair records where available to improve outage fault locations.
- Assigning historical equipment failure-caused outages to the equipment ID of the asset that failed.
- Working with Distribution Asset Strategy to help improve field personnel reporting of outages.
- Shifting to a data pipeline that updates daily to categorize emergent outages to the appropriate model.
- Developing 100% unit test coverage of data pipeline supporting functions to enhance reliability of the data.