PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans Discovery 2022
Data Response

PG&E Data Request No.:	OEIS_018-Q01		
PG&E File Name:	WMP-Discovery2022_DR_OEIS_018-Q01		
Request Date:	September 26, 2022	Requester DR No.:	OEIS-P&GE-22-018
Date Sent:	September 29, 2022	Requesting Party:	Office of Energy Infrastructure Safety
PG&E Witness:		Requester:	Kevin Miller

SUBJECT: ASSET DATA INVENTORY

QUESTION 01

a. Provide a list of each data field (manufacturer, installation date, asset age, etc.) collected within PG&E's inventory for distribution and transmission equipment.

b. Provide the percentage of missing data for each data field broken down by equipment type (transformer, circuit breaker, etc.).

c. Explain how PG&E is determining the "expected life cycle" as well as "status of wear" for equipment, as described in OEIS Data Request 2, Question 9.

d. In OEIS Data Request 2, Question 9, PG&E states that "Parameters such as age and status of wear of assets for Distribution equipment is still being verified and refined." What is PG&E's timeline for completion for this effort?

ANSWER 01

a. We are providing a list of data fields for wildfire critical assets as identified and described by Energy Safety within their OEIS GIS Data Standard Version 2.2, found within the 3.1 Asset Point feature dataset section, and for assets that we own and that are stored in a system of record.

b. We are providing a list of data fields for critical assets with their associated percentage of completeness for data submitted in the latest Spatial Quarterly Data Report on August 1, 2022. Please see attachment "WMP-Discovery2022_DR_OEIS_018-Q01Atch01". Please note, in some cases fields may not contain data by default. For example, one of the fields in the OEIS GIS Data Standard V2.2 request support structures associated with transformer sites. However, not all transformers are attached to support structures, they may be on the padmount or found underground. In this case, data would be omitted for this field.

c. We are in the process of determining expected useful life of assets through the development of the Wildfire Transmission Risk Model (WTRM, detailed in WMP Section 4.5.1 (c)). The model incorporates age, in addition to other parameters, to assess risk based on the probability of an asset failure leading to an ignition occurring, and the consequence of a wildfire if it were to occur. Useful life becomes the point at which the asset risk requires mitigation response. For example, the

response for a high-risk asset may be a detailed inspection, and the inspection may result in the need to replace or repair that asset. The age of the asset when it requires replacement pinpoints the end of its useful life.

Status of wear is another parameter within the WTRM. This information comes from multiple sources, including direct condition data from inspections, understanding of historical repairs and maintenance, prior incident data, and first principle understanding of the rate of degradation of certain material types in certain environmental conditions.

For Distribution, we are in the process of incorporating Pole Test and Treat (PT&T) data related to remaining strength of the pole to assess useful life of the asset. The Wildfire Distribution Risk Model (WDRM) incorporates age and other factors such as PTT data, to assess risk based on the probability of an asset failure leading to an ignition occurring, and the consequence of a wildfire if it were to occur.

d. We are following two primary and connected paths to understand and improve critical Distribution asset data such as age and condition. Asset age is determined by the installation date, a required field in our Asset Registry. Asset condition is assessed as part of regular system inspections and used with WDRM to support maintenance prioritization.

As outlined in WMP Section 7.3.7.1, we have implemented a centralized data platform (Palantir Foundry) to integrate data from key asset management systems, allowing us to quantitively evaluate data quality and correlate records between systems. A key Foundry-based initiative currently underway is the Asset Registry Data Quality (ARDQ) program. This will be implemented on a risk prioritized basis, with Distribution Overhead assets currently being added. This provides measurement of data quality for critical asset data elements (such as install date) across multiple quality dimensions, including completeness, conformity, and consistency. Identification of gaps, such as missing/null installation dates, is driving remediation efforts, which can include verification of install date during inspections.

System inspections, including GO 165 and the PT&T program, are being used to assess asset condition. Since the beginning of 2022, the PT&T program includes validation of installation date, which is then captured in our asset management systems, updating missing data as applicable.

These approaches together allow us to identify and work down gaps in critical asset data. The ARDQ program provides a dashboard and ongoing metrics that support initiatives and prioritization with asset strategy and inspection. The timelines to complete the support structure asset age data validation is tied to the PT&T program, which has a 10-year cycle. This would complete by 2032.