

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

PG&E Data Request No.:	CalAdvocates_003-Q02		
PG&E File Name:	WMP-Discovery2022_DR_CalAdvocates_003-Q02Supp01		
Request Date:	January 25, 2022	Requester DR No.:	003
Date Sent:	February 10, 2022 Supp01: February 15, 2022	Requesting Party:	Public Advocates Office
PG&E Witness:		Requester:	Alan Wehrman

The following questions relate to your 2022 WMP Update submission.

If a full response to a given question will be included in your WMP submission, your response to that question of this data request may consist of a citation to the specific page(s) or table(s) of the WMP where the information may be found, a written response to the question, or both.

QUESTION 02

Provide an Excel table of all transmission circuits existing as of January 1, 2022 (as rows) that includes the following information in separate columns.

- a. Circuit name
- b. Circuit ID number
- c. Total circuit miles
- d. Circuit miles in Non-HFTD Areas
- e. Circuit miles in Other HFTD
- f. Circuit miles in HFTD Tier 2
- g. Circuit miles in HFTD Tier 3
- h. Circuit voltage
- i. Circuit SAIDI (System Average Interruption Duration Index) for 2021
- j. Circuit SAIFI (System Average Interruption Frequency Index) for 2021
- k. Circuit MAIFI (Momentary Average Interruption Frequency Index) for 2021
- l. Total customer-minutes of de-energization on the circuit due to PSPS events in 2020 (sum of customer-minutes across all PSPS events).
- m. Total customer-minutes of de-energization on the circuit due to PSPS events in 2021 (sum of customer-minutes across all PSPS events).
- n. Total customer-minutes of de-energization on the circuit due to EPSS fast-trip settings in 2021.
- o. Number of trees that were worked on for EVM in Non-HFTD in 2020
- p. Number of trees that were worked on for EVM in Non-HFTD in 2021

- q. Number of trees that were worked on for EVM in Other HFTD in 2020
- r. Number of trees that were worked on for EVM in Other HFTD in 2021
- s. Number of trees that were worked on for EVM in HFTD Tier 2 in 2020
- t. Number of trees that were worked on for EVM in HFTD Tier 2 in 2021
- u. Number of trees that were worked on for EVM in HFTD Tier 3 in 2020
- v. Number of trees that were worked on for EVM in HFTD Tier 3 in 2021
- w. Miles of covered conductor installed in Non-HFTD in 2018
- x. Miles of covered conductor installed in Non-HFTD in 2019
- y. Miles of covered conductor installed in Non-HFTD in 2020
- z. Miles of covered conductor installed in Non-HFTD in 2021
- aa. Miles of covered conductor installed in Other HFTD in 2018
- bb. Miles of covered conductor installed in Other HFTD in 2019
- cc. Miles of covered conductor installed in Other HFTD in 2020
- dd. Miles of covered conductor installed in Other HFTD in 2021
- ee. Miles of covered conductor installed in HFTD Tier 2 in 2018
- ff. Miles of covered conductor installed in HFTD Tier 2 in 2019
- gg. Miles of covered conductor installed in HFTD Tier 2 in 2020
- hh. Miles of covered conductor installed in HFTD Tier 2 in 2021
- ii. Miles of covered conductor installed in HFTD Tier 3 in 2018
- jj. Miles of covered conductor installed in HFTD Tier 3 in 2019
- kk. Miles of covered conductor installed in HFTD Tier 3 in 2020
- ll. Miles of covered conductor installed in HFTD Tier 3 in 2021
- mm. Number of poles replaced in Non-HFTD in 2018
- nn. Number of poles replaced in Non-HFTD in 2019
- oo. Number of poles replaced in Non-HFTD in 2020
- pp. Number of poles replaced in Non-HFTD in 2021
- qq. Number of poles replaced in Other HFTD in 2018
- rr. Number of poles replaced in Other HFTD in 2019
- ss. Number of poles replaced in Other HFTD in 2020
- tt. Number of poles replaced in Other HFTD in 2021
- uu. Number of poles replaced HFTD Tier 2 in 2018
- vv. Number of poles replaced HFTD Tier 2 in 2019
- ww. Number of poles replaced HFTD Tier 2 in 2020
- xx. Number of poles replaced HFTD Tier 2 in 2021
- yy. Number of poles replaced HFTD Tier 3 in 2018

zz. Number of poles replaced HFTD Tier 3 in 2019

aaa. Number of poles replaced HFTD Tier 3 in 2020

bbb. Number of poles replaced HFTD Tier 3 in 2021

ccc. Miles of LiDAR inspection in Non-HFTD in 2020

ddd. Miles of LiDAR inspection in Non-HFTD in 2021

eee. Miles of LiDAR inspection Other HFTD in 2020

fff. Miles of LiDAR inspection Other HFTD in 2021

ggg. Miles of LiDAR inspection HFTD Tier 2 in 2020

hhh. Miles of LiDAR inspection HFTD Tier 2 in 2021

iii. Miles of LiDAR inspection HFTD Tier 3 in 2020

jjj. Miles of LiDAR inspection HFTD Tier 3 in 2021

kkk. Number of detailed overhead inspections in Non-HFTD in 2020

lll. Number of detailed overhead inspections in Non-HFTD in 2021

mmm. Number of detailed overhead inspections in Other HFTD in 2020

nnn. Number of detailed overhead inspections in Other HFTD in 2021

ooo. Number of detailed overhead inspections in HFTD Tier 2 in 2020

ppp. Number of detailed overhead inspections in HFTD Tier 2 in 2021

qqq. Number of detailed overhead inspections in HFTD Tier 3 in 2020

rrr. Number of detailed overhead inspections in HFTD Tier 3 in 2021

sss. Number of sectionalization devices installed in Non-HFTD in 2018

ttt. Number of sectionalization devices installed in Non-HFTD in 2019

uuu. Number of sectionalization devices installed in Non-HFTD in 2020

vvv. Number of sectionalization devices installed in Non-HFTD in 2021

www. Number of sectionalization devices installed in Other HFTD in 2018

xxx. Number of sectionalization devices installed in Other HFTD in 2019

yyy. Number of sectionalization devices installed in Other HFTD in 2020

zzz. Number of sectionalization devices installed in Other HFTD in 2021

aaaa. Number of sectionalization devices installed in HFTD Tier 2 in 2018

bbbb. Number of sectionalization devices installed in HFTD Tier 2 in 2019

cccc. Number of sectionalization devices installed in HFTD Tier 2 in 2020

dddd. Number of sectionalization devices installed in HFTD Tier 2 in 2021

eeee. Number of sectionalization devices installed in HFTD Tier 3 in 2018

ffff. Number of sectionalization devices installed in HFTD Tier 3 in 2019

gggg. Number of sectionalization devices installed in HFTD Tier 3 in 2020

hhhh. Number of sectionalization devices installed in HFTD Tier 3 in 2021

- iiii. Miles of transmission ROW expansion performed in Non-HFTD in 2020
- jjjj. Miles of transmission ROW expansion performed in Other HFTD in 2020
- kkkk. Miles of transmission ROW expansion performed in HFTD Tier 2 in 2020
- llll. Miles of transmission ROW expansion performed in HFTD Tier 3 in 2020
- mmmm. Miles of transmission ROW expansion performed in Non-HFTD in 2021
- nnnn. Miles of transmission ROW expansion performed in Other HFTD in 2021
- oooo. Miles of transmission ROW expansion performed in HFTD Tier 2 in 2021
- pppp. Miles of transmission ROW expansion performed in HFTD Tier 3 in 2021

ANSWER 02 SUPPLEMENTAL 01

Please see the response below, which supplements PG&E's response to Data Request CalAdvocates-PGE-2022WMP-03, Question 2, submitted on February 10, 2022 and completes the data requested for Transmission circuits. PG&E is also submitting a revised attachment as "*WMP-Discovery2022_DR_CalAdvocates_003-Q02Supp01Atch01CONF.xlsx*", which supersedes attachment "*WMP-Discovery2022_DR_CalAdvocates_003-Q01Atch01CONF.xlsx*", submitted on February 10, 2022, in its entirety.

LiDAR inspection	ccc-jjj	In PG&E's data request response "WildfireMitigationPlans_DR_CalAdvocates_035-Q05" provided on February 12, 2021, spans that crossed both within and outside of the High Fire-Threat District (HFTD) Tier 2 or Tier 3 areas were considered entirely within the boundary. In 2021, the method to differentiate between the Tier Zones was updated due to complexities with zone proximity. The method used in the attached dataset splits spans exactly at the Tier 2, Tier 3 and non-HFTD boundary. The effective change is that the total HFTD mileage decreased slightly, where portions of spans were re-allocated to the non-HFTD area. The highest change was around 1.5 miles total for Fulton-Silverado, which is a very long circuit that traverses multiple boundaries. There were no increases in the HFTD mileage.
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ANSWER 02

Pursuant to the Public Advocates Office's revised Data Request received on January 13, 2022, PG&E is providing the requested transmission information at the circuit level in the attachment named "*WMP-Discovery2022_DR_CalAdvocates_003-Q01Atch01CONF.xlsx*." Included in the table below are notes that document assumptions in the methodology for data collection. Where we have not included any notes, the data provided did not require adaptations or assumptions in answering the request. For purposes of this request, "Other HFTD" refers to Zone 1 areas.

Asset data provided in response to this request was generated from PG&E's Geographic Information System (GIS) and presented in a spreadsheet format PG&E's Electric Transmission GIS and Electric Distribution GIS mapping systems represent assets associated with construction work when that work has been received and mapped by electric GIS mapping technicians. Construction jobs that are partially complete or fully complete may be mapped in the GIS systems once construction "as-built" information has been submitted and accepted by the GIS Mapping Department. Prior to being received by the GIS Mapping Department, completed job packages must undergo several processing steps including clerical review, processing, and paperwork scanning. Sometimes completed job packages require additional information from the field or post-estimating work. The processing steps take time to complete. Until a project is completed and mapped, detailed information remains in the design systems and paper job packages. Therefore, completed field work is not always reflected in the current GIS systems.

Once data is mapped in PG&E's GIS systems, it can be formatted to meet the requirements of the Office of Energy Infrastructure Safety File Geodatabase schema and included in our GIS Data Standard submissions.

Data	Question	Notes
Circuit Information	a-h	Some circuits can have multiple voltages. Where this occurs the Circuit Voltage in column g reflects the voltage of the majority of the circuit (based on circuit miles).
SAIDI/SAIFI/MAIFI	i-k	The SAIDI/SAIFI/MAIFI metric results noted in the 1_Distribution worksheet includes the contributions of transmission and substation related outages. Customers served directly by our transmission lines (typically larger industrial and commercial customers) are not captured in our distribution outage reporting system and hence not included in our reliability metrics. Whenever we have an outage affecting distribution-

Data	Question	Notes
		<p>served customers due to a transmission line or substation problem, then multiple distribution circuits are typically involved. Each year PG&E has approximately 1,000 outages on our transmission and substation (T&S) grid. Due to the design and redundancy in our T&S grid, only about 20% of these affect our distribution-served customers and therefore contribute to SAIDI and SAIFI metrics. A more effective measure of transmission performance is “availability” – i.e., how often is a particular transmission circuit available to serve the system, including our customers and the market for buying & selling of electricity. On an annual basis PG&E transmission lines have an availability of greater than 99.8%.</p>
Public Safety Power Shut-off (PSPS)	I-m	<p>As previously stated in our PSPS Post Event De-Energization reports submitted to the CPUC: “The information, times and figures referenced in this report are based on the best available information available at the time of this report’s submission. The information, times and figures herein are subject to revision based on further analysis and validation.” As such, we note that there are some minor updated revisions in the data included in this submission, as compared to the data that may have been previously reported in previous submissions immediately following the events, due to further data reconciliation and analysis having been performed in the time which has elapsed between this report and any other previous submissions.</p> <p>Additionally, in certain circumstances where an ongoing fire or widespread damage may delay or prevent full restoration of all customers, PG&E may decide to “end” the PSPS event even though a small number of un-restorable customers have not been re-energized. For example, the January 18, 2021 event involved severely damaging wind that</p>

Data	Question	Notes
		<p>prevented PG&E from fully re-energizing our facilities. Our Post De-Energization reports typically will note where circuits have not been restored due to fire or other extenuating circumstances.</p> <p>When we make the decision to “end” a PSPS event, we freeze our data to allow time to process it for production for our PSPS Post Event De-Energization Report. As a result, those customers who had not yet been de-energized when PG&E froze the data will not have restoration date and times, and thus their outage durations are not represented in Questions 1s-t, and Questions 12n-q.</p> <p>This data request will reference all outages associated with a PSPS event, including those which are either indirect effects of the PSPS event and are not direct de-energizations, or brief outages occurring as a result of microgrid switching or temporary generation used as part of PSPS mitigation solution. Most switching in a PSPS event to re-energize customers takes place, typically, between five minutes and one hour, and that re-energization occurring within four hours of de-energization or outages less than four hours, typically, can likely be attributed to switching.</p>
Enhanced Powerline Safety Settings (EPSS)	n	EPSS was implemented on July 28, 2021. EPSS-related outage data is subject to change based on ongoing quality reviews.
EVM	o-v	EVM is not performed on Transmission circuits.
Covered Conductor	w-ll	Transmission lines do not include covered conductors as they are not approved for use.
Number of Poles Replaced	mm-bbb	Data includes poles and towers. Poles were matched to a circuit by GIS radius of 15 feet.
LiDAR inspection	ccc-jjj	PG&E is currently working to collect this data and will supplement this response after the collection has been completed.

Data	Question	Notes
Detailed Overhead Inspections	kkk-rrr	
Sectionalization Devices	sss-hhhh	Sectionalization devices include switches that are replaced/installed on a regular basis across all circuits. These devices can serve as sectionalized devices during planned or unplanned outages.
Transmission ROW Expansion	iiii-pppp	<p>Reported data is unaudited and subject to change upon review by internal Quality Assurance/Quality Control. All miles are reported in line miles.</p> <p>2020 tiered miles are an estimate based on available data. 2020 previously reported miles completed on DONNELLS-CURTIS (ETL.1400) have subsequently been updated to reflect the current configuration where the line was split into two separate lines (DONNELLS-MI-WUK, ETL.1400 and MI-WUK-CURTIS, ETL.1073) in 2021 with the addition of a new substation to the line.</p> <p>There was an overall net increase of 1.35 miles above previously reported 2020 Right of Way Expansion (ROWX) miles in the WMP, including the addition of 2 lines with ROWX miles completed identified subsequent to previous WMP reporting.</p> <p>In 2021, Transmission ROWX has completed approximately 288.6 miles year-to-date in HFTD areas, of which 217.9 miles were creditable against the 200-mile Wildfire Mitigation Plan (WMP) commitment; i.e., in HFTD areas on or adjacent to planned lines (60/70/115kV). The remaining non-creditable 70.7 miles in HFTD were primarily on or adjacent (parallel) to 230kV lines. An additional 25.2 miles were completed in non-HFTD areas.</p> <p>Please note that 2020 mileages are reported to include 230kV circuits, and 2021 mileages are reported not to include 230kV circuits per WMP reporting</p>

Data	Question	Notes
		requirements. Also, 2020 mileages do not include parallel lines, whereas 2021 mileages do include parallel lines.