

Count	Party Name	Data Set	Data Request	Question No.	Question ID	Question Text	Responses	Requestor	Date Rec'd	Final Due Date	Date Sent	Links	Number of Acts	NDA Required	WMP Section	Category	Subcategory	
Link to Discovery Responses: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan-discovery-data-requests-page																		
Pre-Discovery 01	CaPA	Set WMP-01	CaIPA_Set WMP-01	1	CaIPA_Set WMP-01_Q1	Please provide a copy of each WMP-related document, submission, or report you submit to the Office of Energy Infrastructure Safety (Energy Safety) in 2023 that is related to your WMP. Provide the copy to Cal Advocates within one business day of the document's submission to Energy Safety. (If you have submitted the document to Energy Safety in 2023 prior to this data request, please provide a copy as soon as possible and no later than 10 business days from the issuance of this data request.) This request is limited to materials or documents that (1) are related to work plans, initiative targets, risk models, risk spend efficiency (RSE) calculations, or WMP change orders, and (2) are provided to Energy Safety to provide additional details or context concerning information or statements in your WMP (and any subsequent revisions or change orders affecting your WMP).	<p>GENERAL OBJECTIONS TO THIS SET OF DATA REQUESTS</p> <p>PG&E objects to the instructions or definitions in the set of data requests entitled CalAdvocates-PGE-2023WMP-01 that purport to impose any obligations greater than those provided by the applicable rules and decisions of the Commission or any other statutes, orders, rules, or laws limiting the regulatory authority and jurisdiction of the Commission. In particular, PG&E objects to the instruction that purports to place a burden on the responding party to reach out to the requesting party to clarify any unclear questions, definitions, or requests. The duty to prepare precise and well-written instructions, definitions, and requests is on the party seeking the information and cannot be shifted to the respondent. Additionally, PG&E objects to the instruction that PG&E must "[p]rovide the name and title of the responding individual" as burdensome and not reasonably calculated to lead to the discovery of admissible evidence. Our responses to data requests are not the product of a single individual but of numerous individuals working together from different departments of the company. If the requesting party wishes to contact PG&E with questions or concerns about a data request, it may do so by contacting the appropriate individuals in the Regulatory Relations or Law Department upon whom the request was served.</p> <p>PG&E also objects to the following definitions:</p> <ul style="list-style-type: none"> The definitions of "[p]relate to" or "concern" which are overbroad and burdensome to the extent they request materials "mention, or be connected with in any way" the subject of the data requests. The definitions of the terms "document," "documents," and "documentary material," which include "correspondence" and "communications," making these terms overbroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence in the proceeding. The definition of the phrase "state the basis," which is overbroad and burdensome to the extent it requests "every fact, statistic, inference, supposition, estimate, consideration, conclusion, study, report, and analysis...." <p>ANSWER 001</p> <p>In addition to all general objections, PG&E specifically objects to this request on the grounds that it is unduly burdensome. PG&E further objects to this request as the information requested is vague, ambiguous, and overbroad. Lastly, PG&E objects to this request on the grounds that it seeks to impose a continuing response obligation on the responding party. Continuing discovery obligations are not permitted under California law. <i>Biles v. Exxon Mobil Corp.</i>, 124 Cal.App.4th 1315, 1328 (2004); Code Civ. Proc. § 2030.060(g). Notwithstanding and without waiving these objections, PG&E responds as follows. We will do our best to provide the requested information within the requested timeframe, or as soon as possible thereafter. However, please note that due to the timing and voluminous nature of our submissions to Energy Safety, it may not always be possible to provide the information sought within the requested timeframe. In these instances, we will provide the requested information as soon as it is reasonably possible. Additionally, with the exception of confidential and spatial data, please note that we post our WMP-related submissions on our website, www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan-discovery-data-requests-page, on the same business day that the documents are provided to Energy Safety. Furthermore, all submissions to Energy Safety are also posted to the relevant docket on the Energy Safety website, https://efiling.energysafety.ca.gov/, and are nearly always publicly available within one business day of submission. Public email notifications of the availability of these documents are sent to all parties who subscribe to the service lists for those dockets.</p>	Holly Wehman	2/7/2023	2/14/2023	2/14/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_001.zip	0	N/A	N/A	N/A	N/A	N/A
Pre-Discovery 03	CaPA	Set WMP-01	CaIPA_Set WMP-01	3	CaIPA_Set WMP-01_Q3	Provide a copy of all documents or files that are referenced in your WMP Quarterly Data Reports and submitted to Energy Safety (including but not limited to PDFs, spatial data files, non-spatial data files, and confidential attachments) on the same business day that the document is sent to Energy Safety.	<p>In addition to all general objections, PG&E specifically objects to this request on the grounds that it is unduly burdensome. PG&E further objects to this request as the information requested is vague, ambiguous, and overbroad. Lastly, PG&E objects to this request on the grounds that it seeks to impose a continuing response obligation on the responding party. Continuing discovery obligations are not permitted under California law. <i>Biles v. Exxon Mobil Corp.</i>, 124 Cal.App.4th 1315, 1328 (2004); Code Civ. Proc. § 2030.060(g). Notwithstanding and without waiving these objections, PG&E responds as follows.</p> <p>We will do our best to provide the requested information within the requested timeframe, or as soon as possible thereafter. However, please note that due to the timing and voluminous nature of our submissions to Energy Safety, it may not always be possible to provide the information sought within the requested timeframe. In these instances, we will provide the requested information as soon as it is reasonably possible.</p> <p>Additionally, with the exception of confidential and spatial data, please note that we post our WMP-related submissions on our website, www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan-discovery-data-requests-page, on the same business day that the documents are provided to Energy Safety. Furthermore, all submissions to Energy Safety are also posted to the relevant docket on the Energy Safety website, https://efiling.energysafety.ca.gov/, and are nearly always publicly available within one business day of submission. Public email notifications of the availability of these documents are sent to all parties who subscribe to the service lists for those dockets.</p>	Holly Wehman	2/7/2023	2/14/2023	2/14/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_001.zip	0	N/A	N/A	N/A	N/A	
Pre-Discovery 04	CaPA	Set WMP-01	CaIPA_Set WMP-01	4	CaIPA_Set WMP-01_Q4	Provide a copy to Cal Advocates of all your confidential responses to WMP discovery requests, on the same business day that you sent the documents to the issuer of the discovery request. This includes: a) Confidential responses to WMP discovery requests issued by Energy Safety. b) Confidential responses to WMP discovery requests issued by other entities.	<p>In addition to all general objections, PG&E specifically objects to this request on the grounds that it is unduly burdensome. PG&E further objects to this request as the information requested is vague, ambiguous, and overbroad. Lastly, PG&E objects to this request on the grounds that it seeks to impose a continuing response obligation on the responding party. Continuing discovery obligations are not permitted under California law. <i>Biles v. Exxon Mobil Corp.</i>, 124 Cal.App.4th 1315, 1328 (2004); Code Civ. Proc. § 2030.060(g). Notwithstanding and without waiving these objections, PG&E responds as follows.</p> <p>We will do our best to provide the requested information within the requested timeframe, or as soon as possible thereafter. However, please note that due to the timing and voluminous nature of our submissions to Energy Safety, it may not always be possible to provide the information sought within the requested timeframe. In these instances, we will provide the requested information as soon as it is reasonably possible.</p>	Holly Wehman	2/7/2023	2/14/2023	2/14/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_001.zip	0	N/A	N/A	N/A	N/A	
Pre-Discovery 02	CaPA	Set WMP-01	CaIPA_Set WMP-01	2	CaIPA_Set WMP-01_Q2	Please provide a copy of your WMP pre-submission within two business days of its submission to Energy Safety.	<p>Attachment "WMP-Discovery2023_DR_CalAdvocates_001-Q02A1ch01CONFP.pdf" is our WMP pre-submission to Energy Safety. Please note that this document is not our final WMP submission and may be subject to revision before the final WMP is submitted in March. Additionally, we have designated this entire submission as confidential to align with Energy Safety's pre-submission process and guidelines which stipulate that the pre-submission documents are not to be made public.</p>	Holly Wehman	2/7/2023	2/15/2023	2/15/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_001.zip	1	N/A	N/A	N/A	N/A	
Pre-Discovery 07	CaPA	Set WMP-02	CaIPA_Set WMP-02	3	CaIPA_Set WMP-02_Q3	Provide an Excel table of all defects in the year 2022 found by Energy Safety's Compliance Branch (as rows) that includes the following information in separate columns: a) Associated circuit name b) Defect type c) Description of defect d) WMP initiative (from your 2022 WMP Update) associated with defect e) Date that the defect was identified f) Date that the defect was corrected g) If the defect has not yet been corrected as of the issuance date of this data request, a brief explanation h) Priority level of corresponding corrective tag i) Geographic latitude of defect in decimal degrees, truncated to seven decimal places j) Geographic longitude of defect in decimal degrees, truncated to seven decimal places	<p>Please see attachment "WMP-Discovery2023_DR_CalAdvocates_002-Q03A1ch01CONFP.xlsx" for a list of all alleged defects identified in December 2021 by the Office of Energy Infrastructure Safety ("Energy Safety"). Please note these defects were issued as notification of defects in March 2022.</p> <p>Please note the following:</p> <ul style="list-style-type: none"> The data provided for "Defect type", "Description of defect," and "Date that the defect was identified" are all based on Energy Safety's inspection reports. Not all corrective actions required Electric Corrective (EC) notifications (or "EC tags"). For example, while reviewing the alleged defects from Energy Safety, some work was addressed directly in the field (e.g., trimming of vegetation), and to EC tag was created. This attachment contains confidential information. 	Holly Wehman	2/7/2023	2/22/2023	2/22/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_002.zip	1	N/A	8.1.3	Asset Inspections	N/A	
Pre-Discovery 05	CaPA	Set WMP-02	CaIPA_Set WMP-02	1	CaIPA_Set WMP-02_Q1	Please identify and provide a copy of all quality assurance or quality control (QA/QC) reports conducted by internal entities that were completed since January 1, 2022 and that examined any programs, initiatives, or strategies described in your 2022 WMP Update.	<p>PG&E understands this question to refer to reports from our internal Quality Control, Quality Assurance, and Quality Verification programs as set forth below.</p> <p>System Inspections Department Please see the attachment below for the System Inspections QC Department's daily and weekly dashboards communicating Key Performance Indicators (KPIs) and analysis.</p> <p>Electric Compliance Quality Management + GO 165 Inspections Please see attachment listed below for the Electric Compliance Quality Management Department's audits of GO 165 inspections. One Distribution and one Transmission system inspections audits were conducted in 2022. Please see attachments "WMP-Discovery2023_DR_CalAdvocates_002-Q001A1ch01CONFP.pdf" and "WMP-Discovery2023_DR_CalAdvocates_002-Q001A1ch03CONFP.pdf".</p> <p>Vegetation Quality Assurance (QA) The 2022 WMP submission for Vegetation QA is broken down to the following components: Distribution Reviews, Transmission Reviews, Vegetation Control Reviews, Enhanced Vegetation Management (EVM), and Break-In Audits. Please see the following reports for each of these components: + QVIM Work Log (attached as "xslx") is a comprehensive log for all QV reviews completed in 2022 including a summary of findings for each review as well as a detailed report of those findings. + 2022 EVM Report, attached as "WMP-Discovery2023_DR_CalAdvocates_002-Q001A1ch05.pdf". + Vegetation Quality Assurance (QA) The 2022 WMP submission for Vegetation QA is broken down by "bundles." Final reports are available for bundles that have been completed to date. Please see the attached zip file for a total of 37 QA Report Packages: "WMP-Discovery2023_DR_CalAdvocates_002-Q001A1ch03CONFP.zip".</p>	Holly Wehman	2/7/2023	3/7/2023	3/7/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_002.zip	6	N/A	N/A	N/A	N/A	
Pre-Discovery 06	CaPA	Set WMP-02	CaIPA_Set WMP-02	2	CaIPA_Set WMP-02_Q2	Please identify and provide a copy of all quality assurance or quality control (QA/QC) reports conducted by external entities that were completed since January 1, 2022 and that examined any programs, initiatives, or strategies described in your 2022 WMP Update. External entities include, but are not limited to, consultants, contractors, auditors, court-appointed monitors, and Independent Evaluators.	<p>The PG&E Independent Safety Monitor Status Update Report, dated October 4, 2022, discusses programs and initiatives described in our 2022 WMP. Please find the document here: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_002.zip</p>	Holly Wehman	2/7/2023	3/7/2023	3/7/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_002.zip	1	N/A	N/A	N/A	N/A	
Pre-Discovery 18	CaPA	Set WMP-04	CaIPA_Set WMP-04	1	CaIPA_Set WMP-04_Q1	For each WMP initiative for which you forecast capital expenditures in 2023 to be at least two times actual capital expenditures in 2022, please provide: a) The name of the initiative as it is identified in your 2023-2025 WMP b) The WMP initiative number in Table 11 of your 2023-2025 WMP c) The name of the initiative as it is identified in your 2022 WMP Update d) The WMP initiative number in Table 12 of your 2022 WMP Update e) An explanation for the projected increase.	<p>a) 2023 WMP financials are mapped per WMP Initiative Activities as laid out in Table 11 from Energy Safety. As the 2023 WMP is a new cycle with new mapping of financials by activities that align with the 2023 WMP narrative, there is not an apples-to-apples re-mapping of costs back to the 2022 WMP view. Thus, the comparison can only be made using the 2023 WMP view. Below are the 2023 WMP activities and section numbers where 2023 capital forecast is at least two times compared to the 2022 recorded costs.</p> <ul style="list-style-type: none"> Customer support in wildfire and PSPS emergencies – section 8.4.6 Traditional Overhead Hardening Transmission – 8.1.2.5 <p>b) See the response to part a).</p> <p>c) N/A. As explained in response to part a), there is not an apples-to-apples re-mapping of costs back to the 2022 WMP view. Thus, the comparison can only be made using the 2023 WMP view of 2022 recorded costs.</p> <p>d) N/A. Please refer to part c).</p> <p>e) Explanations for the projected increase are below:</p> <ul style="list-style-type: none"> Customer support in wildfire and PSPS emergencies – There was a minor cost adjustment/correction in the 2022 recorded costs which resulted in a credit/negative in the 2022 recorded costs as shown in Table 11. Traditional Overhead Hardening Transmission – We look to complete 43 miles in 2023 as compared to 38 miles in 2022. In addition, the 2022 recorded costs reported in Table 11 are too low due to missing some costs. The 2022 recorded for this initiative should be \$7.9M instead of \$4.6M. We will correct this item in Table 11 pursuant to the 2023-2025 WMP Guidelines from Energy Safety. 	Holly Wehman	2/7/2023	3/7/2023	3/7/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_004.zip	0	N/A	Section 4.3	Proposed Expenditures	N/A	
Pre-Discovery 19	CaPA	Set WMP-04	CaIPA_Set WMP-04	2	CaIPA_Set WMP-04_Q2	For each WMP initiative for which you forecast capital expenditures in 2024 to be at least two times actual capital expenditures in 2022, please provide: a) The name of the initiative as it is identified in your 2023-2025 WMP b) The WMP initiative number in Table 11 of your 2023-2025 WMP c) The name of the initiative as it is identified in your 2022 WMP Update d) The WMP initiative number in Table 12 of your 2022 WMP Update e) An explanation for the projected increase.	<p>a) 2023 WMP financials are mapped per WMP Initiative Activities as laid out in Table 11 from Energy Safety. As the 2023 WMP is a new cycle with new mapping of financials by activities that align with the 2023 WMP narrative, there is not an apples-to-apples re-mapping of costs back to the 2022 WMP view. Thus, the comparison can only be made using the 2023 WMP view. Below are the 2023 WMP activities and section numbers where 2024 capital forecast is at least two times compared to the 2022 recorded costs.</p> <ul style="list-style-type: none"> Customer support in wildfire and PSPS emergencies – section 8.4.6 Traditional Overhead Hardening Transmission – We look to complete 43 miles in 2023 as compared to 38 miles in 2022. In addition, the 2022 recorded costs reported in Table 11 are too low due to missing some costs. The 2022 recorded for this initiative should be \$7.9M instead of \$4.6M. We will correct this item in Table 11 pursuant to the 2023-2025 WMP Guidelines from Energy Safety. 	Holly Wehman	2/7/2023	3/7/2023	3/7/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_004.zip	0	N/A	Section 4.3	Proposed Expenditures	N/A	
Pre-Discovery 20	CaPA	Set WMP-04	CaIPA_Set WMP-04	3	CaIPA_Set WMP-04_Q3	For each WMP initiative for which you forecast operating expenditures in 2023 to be at least two times actual operating expenditures in 2022, please provide: a) The name of the initiative as it is identified in your 2023-2025 WMP b) The WMP initiative number in Table 11 of your 2023-2025 WMP c) The name of the initiative as it is identified in your 2022 WMP Update d) The WMP initiative number in Table 12 of your 2022 WMP Update e) An explanation for the projected increase.	<p>a) 2023 WMP financials are mapped per WMP Initiative Activities as laid out in Table 11 from Energy Safety. As the 2023 WMP is a new cycle with new mapping of financials by activities that align with the 2023 WMP narrative, there is not an apples-to-apples re-mapping of costs back to the 2022 WMP view. Thus, the comparison can only be made using the 2023 WMP view. Below are the 2023 WMP activities and section numbers where 2023 operating expense forecasts are at least two times compared to the 2022 recorded costs.</p> <ul style="list-style-type: none"> Other technologies and systems not listed above – section 8.1.2.12 Environmental monitoring systems – 8.3.2 Fall-in mitigation 8.2.3.4 <p>b) See the response to part a).</p> <p>c) N/A. As explained in response to part a), there is not an apples-to-apples re-mapping of costs back to the 2022 WMP view. Thus, the comparison can only be made using the 2023 WMP view of 2022 recorded costs.</p> <p>d) N/A. Please refer to the response to part c).</p> <p>e) Explanations for the projected increase are below:</p> <ul style="list-style-type: none"> Other technologies and systems not listed above – The 2022 recorded costs in Table 11 are too low due to missing some costs. The 2022 recorded costs need to be adjusted to pull in recorded costs for Substation animal abatement. We will correct this item in Table 11 pursuant to the 2023-2025 WMP Guidelines from Energy Safety. Environmental monitoring systems – The forecast increase in 2023 is mainly driven by anticipated weather station maintenance work such as calibrations. Fall-in mitigation – The forecast increase is due to implementing three new VM programs starting in 2023 that support fall-in mitigations (VM for Operational Mitigations, Tree Removal Inventory, Focused Tree Inspections). Please refer to the 2023 WMP narrative in section 8.2.3.4 for additional details. 	Holly Wehman	2/7/2023	3/7/2023	3/7/2023	https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_004.zip	0	N/A	Section 4.3	Proposed Expenditures	N/A	

Pre-Discovery 21	CaPA	Set WMP-04	CaPA_Set WMP-04	4	CaPA_Set WMP-04_Q4	<p>a) 2023 WMP financials are mapped per WMP Initiative Activities as laid out in Table 11 from Energy Safety. As the 2023 WMP is a new cycle with new mapping of financials by activities that align with the 2023 narrative, there is not an apples-to-apples re-mapping of costs back to the 2022 WMP view. Thus, the comparison can only be made using the 2023 WMP view. Below are the 2023 WMP activities and section numbers where 2024 operating expense forecasts are at least two times the 2022 recorded costs.</p> <ul style="list-style-type: none"> Other technologies and systems not listed above – section 8.1.2.12 Microgrids – section 8.1.2.7 Environmental monitoring systems – 8.3.2 Fall-in mitigation 8.2.3.4 <p>b) See the response to part a).</p> <p>c) As explained in part a), there is not an apples-to-apples re-mapping of costs back to the 2022 WMP view. Thus, the comparison can only be made using the 2023 WMP view of 2022 recorded costs.</p> <p>d) N/A. Please refer to the response to part c).</p> <p>e) Explanations for the projected increases are below:</p> <ul style="list-style-type: none"> Other technologies and systems not listed above – The 2022 recorded costs are too low by anticipated weather station maintenance work such as calibrations. Fall-in mitigation – The forecast increase is due to implementing three new VM programs that support fall-in mitigations (VM for Operational Mitigations, Tree Removal Inventory, Focused Tree Inspections). Please refer to the narrative in section 8.2.3.4 of the 2023 WMP for more details due to missing some costs. The 2022 recorded costs need to be adjusted to pull in recorded costs for Substation animal abatement. We will correct this item in Table 11 pursuant to the 2023-2025 WMP Guidelines from Energy Safety. Microgrids – The projected increase is based on forecast and anticipated projects put forward to the CPUC in PG&E's Microgrids Incentive Program Implementation Plan. <p>The plan is currently awaiting a CPUC Decision.</p> <ul style="list-style-type: none"> Environmental monitoring systems – The forecast increase in 2023/2024 is mainly driven. 	Holly Wehrman	2/7/2023	3/7/2023	3/7/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_004.zip	0	N/A	Section 4.3	Proposed Expenditures	N/A
Pre-Discovery 43	CPUC - SPD (Safety Policy Division)	001	CPUC - SPD (Safety Policy Division)_001	1	CPUC - SPD (Safety Policy Division)_001_Q1	<p>REFCL Inquiries:</p> <p>REFCL Pilot at Calistoga Circuit Segment ID 1102131531</p> <ul style="list-style-type: none"> Describe various active settings profiles. Describe how staged fault testing is planned to be conducted. Explain how REFCL rides through momentary faults and when REFCL deenergizes line for permanent faults. Substation Configuration – Describe any substation and/or circuit configuration issues to deploy REFCL. Availability of REFCL – Describe any known barriers to increasing deployment in CA. Explain which risk drivers per Table PG&E-7.1.4-1 REFCL mitigates. Explain why REFCL is not preferred mitigation for broader deployment and confirm PG&E no longer plans to install REFCL at 2 substations per year per GRC filing. 	Wendy Al-Mukdad	2/23/2023	3/9/2023	3/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/SPD_001.zip	0	N/A	8.1.8.1.3	Grid Operations and Procedures	Settings of Other Emerging Technologies (e.g., Rapid Earth Fault Current Limiters)
Pre-Discovery 44	CPUC - SPD (Safety Policy Division)	001	CPUC - SPD (Safety Policy Division)_001	2	CPUC - SPD (Safety Policy Division)_001_Q2	<p>EPSS & Supporting Technologies (DCD & Partial Voltage Detection) Inquiries:</p> <ul style="list-style-type: none"> Explain all activities planned to mitigate EPSS reliability impacts. Explain customer support programs (e.g., battery backup) distinct from or linked to those in place for PSPS implementation? Explain Sensitive Ground Fault settings for EPSS enabled circuit segments. Explain Downed Conductor Detection (DCD) technology and how it isolates high impedance faults with EPSS. Explain DCD 2023-2025 Targets (i.e. 500, 400 & 250 protective device controllers or relays) and whether they will cover all HFTD and buffer EPSS circuits. Explain why says To Be Updated. Explain how many DCD are currently installed including on top 5% risk circuit segments. Explain Partial Voltage Detection using SmartMeters and how supplements DCD and EPSS. 	Wendy Al-Mukdad	2/23/2023	3/9/2023	3/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/SPD_001.zip	0	N/A	8.1.8.1.1	Grid Operations and Procedures	Protective Equipment and Device Settings
Pre-Discovery 45	CPUC - SPD (Safety Policy Division)	001	CPUC - SPD (Safety Policy Division)_001	3	CPUC - SPD (Safety Policy Division)_001_Q3	<p>EPSS & REFCL Inquiries:</p> <ul style="list-style-type: none"> EPSS vs REFCL – Describe the major similarities and differences. What are advantages and disadvantages? In terms of capability, sectionalization, safety, and reliability? Phase-to-Ground Faults vs Complex (Multiphase) Faults – What is the risk profile of existing ignitions on PG&E's system and how does REFCL & EPSS mitigate these risks? Combination of REFCL with EPSS & Other Mitigations – Explain how these could work together, and if PG&E has quantified combined risk-reduction benefits. Explain the differences in fault energy for EPSS vs REFCL including for low and high impedance faults. Explain why EPSS is preferred if REFCL fault energy is less than 10% of EPSS fault energy for low impedance faults. Explain the effectiveness of DCD vs REFCL on high impedance faults. 	Wendy Al-Mukdad	2/23/2023	3/9/2023	3/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/SPD_001.zip	0	N/A	8.1.8.1	Grid Operations and Procedures	Equipment Settings to Reduce Wildfire Risk
Pre-Discovery 46	CPUC - SPD (Safety Policy Division)	001	CPUC - SPD (Safety Policy Division)_001	4	CPUC - SPD (Safety Policy Division)_001_Q4	<p>General risk reduction inquiry:</p> <ul style="list-style-type: none"> What's PG&E's goal for long-term risk reduction, particularly reduction of likelihood of ignition and also reduction of consequences, for circuits in HFTDs that are not underground? 	Wendy Al-Mukdad	2/23/2023	3/9/2023	3/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/SPD_001.zip	0	N/A	7.2.1	Wildfire Mitigation Strategy Development	Overview of Mitigation Initiatives and Activities
Pre-Discovery 22	CaPA	Set WMP-05	CaPA_Set WMP-05	1	CaPA_Set WMP-05_Q1	<p>In response to Data Request CalAdvocates-PGE-2022WMP-31 on September 8, 2022, PG&E provided information regarding its Wildfire Distribution Risk Model version 3 (WDRM v3). Please provide an updated response to questions 1-7 of the above-referenced data request, including any new or changed information since PG&E's original response. If the response to a question has not changed, please so indicate.</p>	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_005.zip	0	N/A	2022 WMP Section 4.5	Model Metrics and Calculation Methodologies	WDRM v3
Pre-Discovery 23	CaPA	Set WMP-05	CaPA_Set WMP-05	2	CaPA_Set WMP-05_Q2	<p>a) Have you identified transportation corridors within your service territory where falling or failing lines or poles could currently limit egress and/or ingress during an emergency?</p> <p>b) If the answer to part (a) is yes, please describe how you identify such transportation corridors.</p> <p>c) If available, please provide a geospatial data file that contains all current identified transportation corridors with ingress and egress hazards.</p>	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_005.zip	0	N/A	8.1.3	Asset Inspections	N/A
Pre-Discovery 24	CaPA	Set WMP-05	CaPA_Set WMP-05	3	CaPA_Set WMP-05_Q3	<p>Please fill out the attached spreadsheet, CalAdvocates-PGE-2023WMP-05 Attachment 1, requesting information regarding your asset inspectors in 2022.</p>	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_005.zip	1	N/A	8.1.3	Asset Inspections	Inspections completed in 2022

Pre-Discovery 25	CaPA	Set WMP-05	CaPA_Set WMP-05	4	CaPA_Set WMP-05_Q4	<p>Please align Table 12 of the non-spatial data tables in your WMP Quarterly Data Report for Q4 of 2022, which reports asset-related corrective notifications on electric circuits that were open at the end of the quarter, as follows:</p> <p>a. Add the following information in separate columns:</p> <p>i. Name of the associated circuit</p> <p>ii. ID number of the associated circuit</p> <p>iii. Geographic latitude in decimal degrees, truncated to seven decimal places</p> <p>iv. Geographic longitude in decimal degrees, truncated to seven decimal places</p> <p>v. Priority of the original notification, using PG&E's internal priority level codes</p> <p>vi. Object/damage code or other internal description of defect</p> <p>b. Please complete column b ("Equipment type") of Table 12.</p> <p>c. Please complete or explain why each of the below columns is not applicable:</p> <p>i. Column j</p> <p>ii. Column k</p> <p>iii. Column l</p>	<p>a-b. Please see attachments "WMP-Discovery2023_DR_CalAdvocates_005-Q004AtoH1.xlsx" for the requested Distribution Information and "WMP-Discovery2023_DR_CalAdvocates_005-Q004AtoH2.xlsx" for the requested Transmission Information.</p> <p>c. Please note that columns i, j, k, and l will not be available for Distribution and Transmission circuits until the 2023 Q1 Quarterly Data Report (QDR) because the data is not ready, and due to recent changes to the standard that resulted in a substantial re-assessment of our notification data.</p>	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_005.zip	2	N/A	2022 Q4 QDR	P	tags
Pre-Discovery 08	CaPA	Set WMP-03	CaPA_Set WMP-03	1	CaPA_Set WMP-03_Q1	<p>Provide an Excel table of all distribution circuits existing as of January 1, 2023 (as rows) that includes the following information in separate columns:</p> <p>a. Circuit name</p> <p>b. Circuit ID number</p> <p>c. Total circuit miles</p> <p>d. Circuit miles in Non-HFTD Areas</p> <p>e. Circuit miles in Other HFTD</p> <p>f. Circuit miles in HFTD Tier 2</p> <p>g. Circuit miles in HFTD Tier 3</p> <p>h. Circuit voltage</p> <p>i. Circuit SAIDI (System Average Interruption Duration Index) for 2021</p> <p>j. Circuit SAIDI (System Average Interruption Duration Index) for 2022</p> <p>k. Circuit SAIFI (System Average Interruption Frequency Index) for 2021</p> <p>l. Circuit SAIFI (System Average Interruption Frequency Index) for 2022</p> <p>m. Circuit MAIFI (Momentary Average Interruption Frequency Index) for 2021</p> <p>n. Circuit MAIFI (Momentary Average Interruption Frequency Index) for 2022</p> <p>o. Total customer-minutes of de-energization on the circuit due to PSPS events in 2021 (sum of customer-minutes across all PSPS events)</p> <p>p. Total customer-minutes of de-energization on the circuit due to PSPS events in 2022 (sum of customer-minutes across all PSPS events)</p> <p>q. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2021.</p> <p>r. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2022.</p> <p>s. Number of trees that were worked on for EVM in Non-HFTD in 2021</p> <p>t. Number of trees that were worked on for EVM in HFTD in 2021</p> <p>u. Number of trees that were worked on for EVM in HFTD Tier 2 in 2021</p> <p>v. Number of trees that were worked on for EVM in HFTD Tier 3 in 2021</p> <p>w. Number of trees that were worked on for EVM in HFTD Tier 2 in 2022</p> <p>x. Number of trees that were worked on for EVM in HFTD Tier 3 in 2022</p> <p>y. Number of trees that were worked on for EVM in HFTD Tier 2 in 2022</p> <p>z. Number of trees that were worked on for EVM in HFTD Tier 3 in 2022</p> <p>aa. Miles of covered conductor installed in Non-HFTD in 2021</p> <p>ab. Miles of covered conductor installed in Non-HFTD in 2022</p>	<p>PG&E is providing the requested distribution information at the circuit level in attachment "WMP-Discovery2023_DR_CalAdvocates_003-Q001AtoH1.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.</p> <p>Asset data provided in response to the request was generated from PG&E's Geographic Information Systems (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.</p> <p>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 (Energy Safety) File Geodatabase schema and included in our GIS Data Standard submissions.</p> <p>Data Question Notes</p> <p>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). Please note, Circuit IDs and Circuit Names representing idle circuits were not included in this response.</p> <p>SAIDI/SAIFI/MAIFI i-n: All transmission, substation, and distribution level outages as of February 22, 2023 were used to quantify the metric results as measured at the individual distribution circuit level and include Major Event Days (as defined in the IEEE 1366 Standard). The denominator used for each calculation is based on the number of customers served by each circuit (based on the system confirmation at the end of 2022 and may not represent the same circuit configuration at the time of each contributing outage event).</p> <p>De-Energization o-r: 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>De-Energization s: 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>In some circumstances, PG&E may conclude a PSPS before all customers are restored. For example, when there is an ongoing fire that prohibits PG&E from restoring customers or extensive weather-related damages that require extended outages while crews safely repair the area. The outage durations for these customers are not included in Questions 1o-p and Questions 2j, as we do not have restoration dates and times. For information on which circuits were not restored prior to concluding the PSPS, please see the "Time, Place, Duration, and Affected Customers" appendix section of the PSPS Post-Event Reports.</p> <p>Note the sum of PSPS customer outage durations is rounded up to the whole minute for each circuit to be consistent with data reported in the WMP Quarterly Data Report.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_003.zip	2	N/A	8.1.3	Asset Inspections	Distribution
Pre-Discovery 09	CaPA	Set WMP-03	CaPA_Set WMP-03	2	CaPA_Set WMP-03_Q2	<p>Provide an Excel table of all transmission circuits existing as of January 1, 2023 (as rows) that includes the following information in separate columns:</p> <p>a. Circuit name</p> <p>b. Circuit ID number</p> <p>c. Total circuit miles</p> <p>d. Circuit miles in Non-HFTD Areas</p> <p>e. Circuit miles in Other HFTD</p> <p>f. Circuit miles in HFTD Tier 2</p> <p>g. Circuit miles in HFTD Tier 3</p> <p>h. Circuit voltage</p> <p>i. Total customer-minutes of de-energization on the circuit due to PSPS events in 2021 (sum of customer-minutes across all PSPS events)</p> <p>j. Total customer-minutes of de-energization on the circuit due to PSPS events in 2022 (sum of customer-minutes across all PSPS events)</p> <p>k. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2021.</p> <p>l. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2022.</p> <p>m. Number of support structures replaced in Non-HFTD in 2021</p> <p>n. Number of support structures replaced in Other HFTD in 2021</p> <p>o. Number of support structures replaced in Other HFTD in 2022</p> <p>p. Number of support structures replaced in HFTD Tier 2 in 2021</p> <p>q. Number of support structures replaced in HFTD Tier 2 in 2022</p> <p>r. Number of support structures replaced in HFTD Tier 3 in 2021</p> <p>s. Number of support structures replaced in HFTD Tier 3 in 2022</p> <p>t. Miles of LIDAR inspection in Non-HFTD in 2021</p> <p>u. Miles of LIDAR inspection in Non-HFTD in 2022</p> <p>v. Miles of LIDAR inspection in Other HFTD in 2021</p> <p>w. Miles of LIDAR inspection in Other HFTD in 2022</p> <p>x. Miles of LIDAR inspection in HFTD Tier 2 in 2021</p> <p>y. Miles of LIDAR inspection in HFTD Tier 2 in 2022</p> <p>z. Miles of LIDAR inspection in HFTD Tier 3 in 2021</p> <p>aa. Miles of LIDAR inspection in HFTD Tier 3 in 2022</p> <p>ab. Miles of LIDAR inspection in HFTD Tier 3 in 2022</p>	<p>PG&E is providing the requested transmission information at the circuit level in attachment "WMP-Discovery2023_DR_CalAdvocates_003-Q001AtoH1.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 Systems (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.</p> <p>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 (Energy Safety) File Geodatabase schema and included in our GIS Data Standard submissions.</p> <p>Data Question Notes</p> <p>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).</p> <p>De-Energization i-l: 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>In some circumstances, PG&E may conclude a PSPS before all customers are restored. For example, when there is an ongoing fire that prohibits PG&E from restoring customers or extensive weather-related damages that require extended outages while crews safely repair the area. The outage durations for these customers are not included in Questions 1o-p and Questions 2j, as we do not have restoration dates and times. For information on which circuits were not restored prior to concluding the PSPS, please see the "Time, Place, Duration, and Affected Customers" appendix section of the PSPS Post-Event Reports.</p> <p>Note the sum of PSPS customer outage durations is rounded up to the whole minute for each circuit to be consistent with data reported in the WMP Quarterly Data Report.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_003.zip	0	N/A	8.1.3	Asset Inspections	Transmission
Pre-Discovery 10	CaPA	Set WMP-03	CaPA_Set WMP-03	3	CaPA_Set WMP-03_Q3	<p>Provide an Excel table of all distribution circuits existing as of January 1, 2022 (as rows) that were removed or decommissioned in 2022, either partially or entirely. This includes permanent removal, removal of overhead lines that were moved underground, or overhead lines that were decommissioned but not physically removed. Include the following information in separate columns:</p> <p>a. Circuit name</p> <p>b. Circuit ID number</p> <p>c. Circuit miles removed or decommissioned in Non-HFTD Areas</p> <p>d. Circuit miles removed or decommissioned in Other HFTD</p> <p>e. Circuit miles removed or decommissioned in HFTD Tier 2</p> <p>f. Circuit miles removed or decommissioned in HFTD Tier 3</p> <p>g. Reason(s) for removal or decommissioning</p>	<p>Below we provide additional information to clarify the data provided in the attachment in response to the request.</p> <p>a. Circuit name: See column C.</p> <p>b. Circuit ID number: See column D.</p> <p>c. Circuit miles removed or decommissioned in Non-HFTD Areas: N/A. As noted above, PG&E does not track line removals when relocating overhead to underground, removing secondary services, or removing lines in non-HFTD.</p> <p>d. Circuit miles removed or decommissioned in Other HFTD: N/A. PG&E does not track line removals when relocating overhead to underground, removing secondary services, or removing lines in non-HFTD.</p> <p>e. Circuit miles removed or decommissioned in HFTD Tier 2: Column E indicates if the project in the unique circuit segment is in either a Tier 2 and/or Tier 3 HFTD, and column G includes the associated circuit miles.</p> <p>f. Circuit miles removed or decommissioned in HFTD Tier 3: Column E indicates if the project in the unique circuit segment is in either a Tier 2 and/or Tier 3 HFTD, and column G includes the associated circuit miles.</p> <p>g. Reason(s) for removal or decommissioning: See Column F, which notes the name of one of three programs:</p> <p>(1) Fire Rebuild – Removal based on rebalancing in the aftermath of wildfires;</p> <p>(2) Idle Facilities – Unused facilities with no foreseeable future use; or</p> <p>(3) Idle SA (System Average Interruption Duration Index) – Removal based on the risk informed analysis used in PG&E's System Hardening Program.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_003.zip	1	N/A	8.1.2	Grid Design and System Hardening	Work Performed in 2022
Pre-Discovery 11	CaPA	Set WMP-03	CaPA_Set WMP-03	4	CaPA_Set WMP-03_Q4	<p>Provide an Excel table of all transmission circuits existing as of January 1, 2022 (as rows) that were removed or decommissioned in 2022, either partially or entirely. This includes permanent removal, removal of overhead lines that were moved underground, or overhead lines that were decommissioned but not physically removed. Include the following information in separate columns:</p> <p>a. Circuit name</p> <p>b. Circuit ID number</p> <p>c. Circuit miles removed or decommissioned in Non-HFTD Areas</p> <p>d. Circuit miles removed or decommissioned in Other HFTD</p> <p>e. Circuit miles removed or decommissioned in HFTD Tier 2</p> <p>f. Circuit miles removed or decommissioned in HFTD Tier 3</p> <p>g. Reason(s) for removal or decommissioning</p>	<p>Please see "WMP-Discovery2023_DR_CalAdvocates_003-Q004AtoH1.xlsx."</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_003.zip	1	N/A	Grid Design and System Hardening	System Hardening	Work Performed in 2022
Pre-Discovery 12	CaPA	Set WMP-03	CaPA_Set WMP-03	5	CaPA_Set WMP-03_Q5	<p>For each WMP initiative listed below, please state how the modeled Wildfire Risk Scores for each circuit or circuit-segment influenced where you performed work in 2022.</p> <p>a. EVM</p> <p>b. Covered conductor installation</p> <p>c. Undergrounding</p> <p>d. Distribution pole replacement</p> <p>e. Grid sectorization</p> <p>f. Detailed inspections of distribution assets</p> <p>g. Detailed inspections of transmission assets</p> <p>h. Aerial inspections of distribution assets</p> <p>i. Aerial inspections of transmission assets</p> <p>j. LIDAR inspections of distribution assets</p> <p>k. LIDAR inspections of transmission assets</p>	<p>a. EVM work in 2022 was informed by a modification of the 2021 Wildfire Distribution Risk Model (WDRM). The refined output from the 2021 WDRM is referred to as the EVM Tree-Weighted Prioritization. The EVM Tree-Weighted Prioritization prioritized the high risk CPZs with the associated miles and estimated tree work to produce the 2022 EVM Scope of Work as described in the 2022 WMP Section 7.1.B. In 2022, the goals for the EVM program were: (1) to perform at least 80% of our 2022 EVM work on the highest 20% of the risk-ranked miles; and (2) to perform approximately 1,800 miles of EVM work by the end of the year.</p> <p>b. As described in the 2022 WMP Section 7.3.3.17.1 "System Hardening – Distribution," PG&E targeted the highest wildfire risk miles and applied various mitigations such as line removal, conversion from overhead to underground, application of remote grid alternatives, mitigation of exposure through relocation of overhead facilities, and in-place overhead system hardening (emphasis added).</p> <p>For 2022, the highest wildfire risk miles were separated into four categories:</p> <ol style="list-style-type: none"> The top 20 percent of circuit segments as defined by PG&E's 2021 WDRM v2 for System Hardening; Fire and Major Emergency rebuild within HFTD; PSPS mitigation projects; and Locations identified by PG&E's Public Safety Specialist (PSS) team as presenting elevated wildfire risk. <p>The primary approach used for selecting and prioritizing circuit segments for covered conductor installation was based on the 2021 WDRM v2.</p> <p>c. As described in the 2022 WMP Section 7.3.3.17.1 "System Hardening – Distribution," PG&E targeted the highest wildfire risk miles and applied various mitigations such as line removal, conversion from overhead to underground (emphasis added), application of remote grid alternatives, mitigation of exposure through relocation of overhead facilities, and in-place overhead system hardening.</p> <p>For 2022, the highest wildfire risk miles are separated into four categories:</p> <ol style="list-style-type: none"> The top 20 percent of circuit segments as defined by PG&E's 2021 WDRM v2 for System Hardening; Fire and Major Emergency rebuild within HFTD; PSPS mitigation projects; and Locations identified by PG&E's Public Safety Specialist (PSS) team as presenting elevated wildfire risk. <p>The primary approach used for selecting and prioritizing circuit segments for covered conductor installation was based on the 2021 WDRM v2. As described in the 2022 WMP Section 7.3.3.17.6 "Butte County Rebuild Program," PG&E did not identify these circuit segments using a risk model.</p> <p>d. As described in the 2022 WMP Section 7.3.3.6 "Distribution Pole Replacement and Reinforcement, Including with Composite Poles," PG&E leveraged the Wildfire Distribution Risk Model (WDRM) v2 to determine what pole replacement work was performed in 2022. Pole replacements are driven primarily by asset condition, namely maintenance tags found through enhanced inspections and intrusive inspections ("Pole Test and Treat"). These tags are then prioritized using the WDRM, which considers both wildfire ignition likelihood and consequences. In addition, pole replacements were also prioritized based on CPZ considerations, self-repairs, and</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_003.zip	0	N/A	2022 WMP Section 7.1	Wildfire Mitigation Strategy Development	N/A

Pre-Discovery 13	CaPA	Set WMP-03	CaPA_Set WMP-03	6	CaPA_Set WMP-03_06	<p>For each WMP initiative listed below, please state how the modeled Wildfire Risk Scores for each circuit or circuit-segment influenced how work in 2022 was sequenced.</p> <p>a. EVM b. Covered conductor installation c. Undergrounding d. Distribution pole replacement e. Grid sectionalization f. Detailed inspections of distribution assets g. Detailed inspections of transmission assets h. Aerial inspections of distribution assets i. Aerial inspections of transmission assets j. LIDAR inspections of distribution assets k. LIDAR inspections of transmission assets</p>	<p>a. The 2022 EVM Scope of Work was based on the prioritization from the 2021 list of circuit protection zones informed by the EVM Tree Weighted Prioritization (having external factors and leveraging efficiency of bundling where possible). b. The circuit segments selected for the installation of covered conductor in the System Hardening program were based on the highest wildfire risk criteria described in response to Question 5(b). To then sequence projects, PG&E assesses the dependencies and readiness of each project based on the stage of the work (e.g., designing/estimating, permit acquisition, construction) to appropriately schedule each individual project, as the development time for each project can vary widely. Once projects are in the construction phase, schedules can continue to evolve based on various factors that impact project execution, including unanticipated weather, material availability, and customer preference of timing of re-connection. c. The circuit segments selected for the installation of underground lines in the System Hardening program were based on the highest wildfire risk criteria described in response to Question 5(c). To then sequence projects, PG&E assesses the dependencies and readiness of each project in each stage of the work (e.g., designing/estimating, permit acquisition, land rights acquisition, construction) to appropriately schedule each individual project, as the development time for each project can vary widely. Once projects are in the construction phase, schedules can continue to evolve based on various factors that impact project execution including unanticipated weather, material availability, community limitations (e.g., for road closures), customer preference of timing of re-connection, discovery of hard work, and/or detection of unmarked existing utility infrastructure. d. After the work for 2022 was prioritized based on the process described in Q005, the pole replacement sequencing was determined based on each pole's priority bucket, estimating and material readiness, and crew and clearance availability. Wildfire risk scores were not factors in determining sequencing after prioritization. e. For grid sectionalization, Wildfire Risk scores were not factors in determining how work was sequenced. f. In 2022, wildfire risk scores were not factors in how distribution ground inspections were sequenced. Inspections were sequenced based on field conditions including physical access, environmental restrictions, permitting constraints and customer refusals. g. In 2022, the overhead transmission assets in the work plan for inspection were each labeled with the average wildfire risk of their host circuit for consideration in inspection sequencing. Assets were typically grouped by line for execution efficiency. The sequence prioritization also considered operational field knowledge and constraints, including restricted physical access periods, to inform the schedule for completion. h. For overhead distribution aerial pilot inspections, wildfire risk scores for each circuit or circuit-segment did not influence how work in 2022 was sequenced. Sequencing was based on the scheduled ground inspection as well as operational field knowledge and constraints, including restricted physical access periods. i. In 2022, the overhead transmission assets in work plan for inspection were each labeled with the average wildfire risk of their host circuit for consideration in inspection sequencing. Assets were typically grouped by line for execution efficiency. The sequence prioritization also considered operational field knowledge and constraints, including restricted physical access periods, to inform the schedule for completion.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_003.zip	0	N/A	2022 WMP Section 7.1	Wildfire Mitigation Strategy Development	N/A
Pre-Discovery 14	CaPA	Set WMP-03	CaPA_Set WMP-03	7	CaPA_Set WMP-03_07	<p>For each WMP initiative listed below, please state how the modeled Wildfire Risk Scores for each circuit or circuit-segment influence where you plan to perform work in 2023.</p> <p>a. EVM b. Covered conductor installation c. Undergrounding d. Distribution pole replacement e. Grid sectionalization f. Detailed inspections of distribution assets g. Detailed inspections of transmission assets h. Aerial inspections of distribution assets i. Aerial inspections of transmission assets j. LIDAR inspections of distribution assets k. LIDAR inspections of transmission assets</p>	<p>a. PG&E is not conducting EVM in 2023. b. As described in the 2023 WMP Section 8.1.2.1 "Covered Conductor Installation - Distribution," PG&E's System Hardening program, which includes targeted CC installation, focuses on mitigating potential catastrophic wildfire risk caused by distribution overhead assets. The System Hardening Program applies various mitigations to circuit segments that have the highest wildfire risk. For 2023, the highest wildfire risk miles are identified using the following categories: 1. Top Risk Based on Wildfire Distribution Risk Models (WDRM): The primary approach for selecting system hardening miles used two risk prioritization methodologies: (1) top 20 percent circuit segments based on the 2021 WDRM v2, and (2) the Wildfire Feasibility Efficiency (WFE) ranked circuit segments based on the 2022 WDRM v3. Overhead hardening was selected where undergrounding was deemed infeasible for the WDRM v3 selection. 2. Fire Rebuilds: Rebuilding electric distribution lines within towns and communities in the aftermath of catastrophic wildfires. Overhead hardening Fire Rebuild work is identified through a decision tree to determine the type of rebuild (overhead hardening, undergrounding, or other solution) in areas that have been impacted by a wildfire and may include fire-impacted areas in both HFTD and non-HFTD, and 3. PG&E's Public Safety Specialist (PSS) identified locations identified by PG&E's PSS team as presenting elevated wildfire risk, such as ingress/egress constraints and community risk factors. c. As described in the 2023 WMP Section 8.1.2.2 "Undergrounding of Electric Lines and/or Equipment," PG&E leveraged the undergrounding portfolio to focus on undergrounding lines in the highest risk areas, which include the following: 1. Top Risk-Ranked Circuit Segments based on WDRMs: The primary approach for selecting miles used two risk prioritization methodologies: (1) Top 20 percent circuit segments based on the 2021 WDRM v2, and (2) the WFE-ranked circuit segments based on the 2022 WDRM v3 and considering undergrounding feasibility. Both approaches used to select undergrounding projects represent approximately 70 percent of total wildfire risk. 2. Fire Rebuilds: Undergrounding electric distribution lines within towns and communities that are rebuilding in the aftermath of catastrophic wildfires. Undergrounding work in Fire Rebuild areas typically results from the use of a decision tree to determine the type of asset to rebuild and occurs in areas that have been impacted by an actual wildfire that may include fire-impacted areas in both HFTD and non-HFTD. 3. PSPS Mitigation Projects: Projects identified that would reduce PSPS customer impacts. 4. PG&E's PSS Identification: Locations identified by PG&E's PSS team as presenting elevated wildfire risk such as ingress/egress constraints and community risk factors. d. As described in the 2023 WMP Section 8.1.2.3, "Distribution Pole Replacements and Reinforcements," PG&E leveraged the Wildfire Distribution Risk Model (WDRM) v3 to determine what pole replacement work is planned to be performed in 2023. Pole replacements are driven primarily by asset condition, namely maintenance tags found through enhanced inspections and intrusive inspections (EVI and TPI). These tags are then prioritized using the WDRM v3, which considers both wildfire and non-wildfire risk without regard to the tag and TPI. The tags are then prioritized using the WDRM v3, which considers both wildfire and non-wildfire risk without regard to the tag and TPI.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_003.zip	0	N/A	7.2	Wildfire Mitigation Strategy Development	Wildfire Mitigation Strategy
Pre-Discovery 15	CaPA	Set WMP-03	CaPA_Set WMP-03	8	CaPA_Set WMP-03_08	<p>For each WMP initiative listed below, please state how the modeled Wildfire Risk Scores for each circuit or circuit-segment influence how work in 2023 will be sequenced.</p> <p>a. EVM b. Covered conductor installation c. Undergrounding d. Distribution pole replacement e. Grid sectionalization f. Detailed inspections of distribution assets g. Detailed inspections of transmission assets h. Aerial inspections of distribution assets i. Aerial inspections of transmission assets j. LIDAR inspections of distribution assets k. LIDAR inspections of transmission assets</p>	<p>a. PG&E is not conducting EVM in 2024. b. The circuit segments selected for the installation of covered conductor in the System Hardening program were based on the highest wildfire risk criteria described in response to Question 7(b). To then sequence projects, PG&E assesses the dependencies and readiness of each project based on the stage of the work (e.g., designing/estimating, permit acquisition, construction) to appropriately schedule each individual project, as the development time for each project can vary widely. Once projects are in the construction phase, schedules can continue to evolve based on various factors that impact project execution, including unanticipated weather, material availability, and customer preference of timing of re-connection. c. The circuit segments selected for the installation of underground lines in the System Hardening program were based on the highest wildfire risk criteria described in response to Question 7(c). To then sequence projects, PG&E assesses the dependencies and readiness of each project in each stage of the work (e.g., designing/estimating, permit acquisition, land rights acquisition, construction) to appropriately schedule each individual project, as the development time for each project can vary widely. Once projects are in the construction phase, schedules can continue to evolve based on various factors that impact project execution including unanticipated weather, material availability, community limitations (e.g., for road closures), customer preference of timing of re-connection, discovery of hard work, and/or detection of unmarked existing utility infrastructure. d. After the work for 2023 is prioritized based on the process described in response to Q007 part d, the pole replacement sequencing is determined based on each pole's priority bucket, estimating and material readiness, and crew and clearance availability. e. For transmission line, there is no targeted work planned in 2023 for grid sectionalization. For distribution, the 2023 additional sectionalizing and protective device installation work is prioritized by highest reliability benefit and not wildfire risk. f. In 2023, PG&E's sequencing for the ground inspection plan is informed by wildfire risk and wildfire consequence as described in 2023 WMP Section 8.1.3.2.1. Detailed inspection activities in HFTD and HFRA are scheduled such that extreme, severe, and high consequence plot maps will be completed by July 31. Medium consequence plot maps will be completed by October 1. Low consequence plot maps will be completed by December 31. Inspections are also sequenced based on field conditions including physical access, environmental restrictions, permitting constraints and customer refusals. g. In 2023, the overhead transmission assets in scope for inspection are each labeled with the average wildfire risk of their host circuit for consideration in inspection sequencing. Assets are typically grouped by line for execution efficiency. The sequence prioritization also considers operational field knowledge and constraints, including restricted physical access periods, to inform the schedule for completion. h. In 2023, PG&E's sequencing for the pilot aerial inspections is not directly based on wildfire risk score. However, in areas of overlap with detailed ground inspections, aerial inspections are scheduled to take place in the same time frame as the scheduled ground inspection, which is based on wildfire consequence. Sequencing is based on the scheduled ground inspection as well as operational field knowledge and constraints, including restricted physical access periods, to inform the schedule for completion. i. PG&E is not conducting EVM in 2024.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_003.zip	0	N/A	7.2	Wildfire Mitigation Strategy Development	Wildfire Mitigation Strategy
Pre-Discovery 16	CaPA	Set WMP-03	CaPA_Set WMP-03	9	CaPA_Set WMP-03_09	<p>For each WMP initiative listed below, please state how the modeled Wildfire Risk Scores for each circuit or circuit-segment influence how work in 2024 will be sequenced.</p> <p>a. EVM b. Covered conductor installation c. Undergrounding d. Distribution pole replacement e. Grid sectionalization f. Detailed inspections of distribution assets g. Detailed inspections of transmission assets h. Aerial inspections of distribution assets i. Aerial inspections of transmission assets j. LIDAR inspections of distribution assets k. LIDAR inspections of transmission assets</p>	<p>a. PG&E is not conducting EVM in 2024. b. Please refer to the response to Question 7b, which also applies to 2024. c. Please refer to the response to Question 7c, which also applies to 2024. d. Please refer to the response to Question 7d, which also applies to 2024. e. For transmission line, there is no targeted work planned in 2024 for grid sectionalization. For distribution, there is no targeted work planned in 2024 for grid sectionalization as future work related to EPSS reliability will be incorporated into base reliability programs. f. In 2024, PG&E's sequencing for the ground inspection plan will be informed by wildfire risk and wildfire consequence as described in 2023 WMP Section 8.1.3.2.1. PG&E developed a frequency recommendation for each level of wildfire consequence: extreme and severe consequence plot maps will be inspected annually; high consequence plot maps will be inspected every other year; and all other plot maps will be inspected every three years. Structures that constitute the top 10 percent of wildfire risk but are not already included in a plot map that is being inspected by ground or aerial are also included in the 2024 ground inspection plan. g. In 2024, wildfire risk and wildfire consequence will inform the annual overhead detailed inspection scope at a structure level (in addition to other considerations such as inspection trends and a baseline frequency of every three years for HFTD/FRAs assets). Specifically, highest wildfire risk and wildfire consequence locations were included in the 2024 scope. h. In 2024, PG&E's distribution aerial inspection pilot will be informed by wildfire risk and wildfire consequence as described in 2023 WMP Section 8.1.3.2.1. For aerial inspections, PG&E used the same prioritization framework with the same plot map level designation that we used for detailed ground inspections and is described in Section 8.1.3.2.1. The specific structures and plot maps to be included for inspection in 2024 will depend on 2023 pilot results. i. In 2024, wildfire risk and wildfire consequence will inform the annual overhead detailed inspection scope at a structure level (in addition to other considerations such as inspection trends and a baseline frequency of every three years for HFTD/FRAs assets). Specifically, highest wildfire risk and wildfire consequence locations were included in the 2024 scope. j. PG&E does not have a stand-alone LIDAR distribution inspection program but collects LIDAR data on distribution to support various needs, including flight planning for aerial inspections and engineering analyses, such as pole loading calculations. PG&E did not use the wildfire risk model in 2022 or 2023 to select locations or sequence LIDAR collection activities. k. PG&E does not use risk-informed prioritization for Transmission LIDAR inspections, rather, it inspects 100 percent of the system annually using LIDAR. The Transmission Routine NERC and Non-NERC inspection cycle consists of a LIDAR inspection followed by a ground patrol based on LIDAR findings. The LIDAR inspection provides an inventory of potential vegetation for ground patrol, and the results of the ground patrol prescribe the forecasted tree work to comply with state and federal regulations. l. PG&E has designated the entire pre-submission as confidential to align with Energy Safety's pre-submission process and guidelines which stipulate that the pre-submission documents are not to be made public. In addition, the pre-submission contains contact information for individuals that is considered confidential.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_003.zip	0	N/A	7.2	Wildfire Mitigation Strategy Development	Wildfire Mitigation Strategy
Pre-Discovery 17	CaPA	Set WMP-03	CaPA_Set WMP-03	10	CaPA_Set WMP-03_010	<p>For each WMP initiative listed below, please state how the modeled Wildfire Risk Scores for each circuit or circuit-segment influence how work in 2024 will be sequenced.</p> <p>a. EVM b. Covered conductor installation c. Undergrounding d. Distribution pole replacement e. Grid sectionalization f. Detailed inspections of distribution assets g. Detailed inspections of transmission assets h. Aerial inspections of distribution assets i. Aerial inspections of transmission assets j. LIDAR inspections of distribution assets k. LIDAR inspections of transmission assets</p>	<p>a. PG&E is not conducting EVM in 2024. b. Please refer to the response to Question 8b, which also applies to 2024. c. Please refer to the response to Question 8c, which also applies to 2024. d. Please refer to the response to Question 8d, which also applies to 2024. e. There is no targeted work planned in 2024 for grid sectionalization for both transmission or for distribution. f. In 2024, PG&E's sequencing for the ground inspection plan will be informed by wildfire consequence as described in 2023 WMP Section 8.1.3.2.1. Detailed inspection activities in HFTD and HFRA are scheduled such that extreme, severe, and high consequence plot maps will be completed by July 31. Medium consequence plot maps will be completed by October 1. Low consequence plot maps will be completed by December 31. Inspections are also sequenced based on field conditions including physical access, environmental restrictions, permitting constraints and customer refusals. g. In 2024, the overhead transmission assets in scope for inspection are each labeled with the average wildfire risk of their host circuit for consideration in inspection sequencing. Assets are typically grouped by line for execution efficiency. The sequence prioritization also considers operational field knowledge and constraints, including restricted physical access periods, to inform the schedule for completion. h. In 2024, PG&E's sequencing for the pilot aerial inspections will not be directly based on wildfire risk score. However, in areas of overlap with detailed ground inspections, aerial inspections are scheduled to take place in the same time frame as the scheduled ground inspection, which is based on wildfire consequence. Sequencing is based on the scheduled ground inspection as well as operational field knowledge and constraints, including restricted physical access periods, to inform the schedule for completion. i. In 2024, the overhead transmission assets in scope for inspection are each labeled with the average wildfire risk of their host circuit for consideration in inspection sequencing. Assets are typically grouped by line for execution efficiency. The sequence prioritization also considers operational field knowledge and constraints, including restricted physical access periods, to inform the schedule for completion. j. PG&E does not have a stand-alone LIDAR distribution inspection program but collects LIDAR data on distribution to support various needs, including flight planning for aerial inspections and engineering analyses, such as pole loading calculations. PG&E did not use the wildfire risk model in 2022 or 2023 to select locations or sequence LIDAR collection activities. k. PG&E does not use risk-informed prioritization for Transmission LIDAR inspections, rather, it inspects 100 percent of the system annually using LIDAR. The Transmission Routine NERC and Non-NERC inspection cycle consists of a LIDAR inspection followed by a ground patrol based on LIDAR findings. The LIDAR inspection provides an inventory of potential vegetation for ground patrol, and the results of the ground patrol prescribe the forecasted tree work to comply with state and federal regulations. l. PG&E has designated the entire pre-submission as confidential to align with Energy Safety's pre-submission process and guidelines which stipulate that the pre-submission documents are not to be made public. In addition, the pre-submission contains contact information for individuals that is considered confidential.</p>	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_003.zip	0	N/A	7.2	Wildfire Mitigation Strategy Development	Wildfire Mitigation Strategy
Pre-Discovery 47	Green Power Institute (GPI)	001	Green Power Institute (GPI)_001	1	Green Power Institute (GPI)_001_Q1	<p>Please provide PG&E's Pre-submission 2023-2025 WMP Base Plan filed on February 13, 2023, with the OEIS per the 2023 WMP Guidelines and Schedule document. Including all attachments and associated supporting documents required for the Pre-submission 2023-2025 WMP Base Plan filing.</p>	<p>As noted in our correspondence to you on March 8th and March 10th, we can provide you with a copy of the pre-submission documents that were submitted upon execution of a non-disclosure agreement. Alternatively, we will be submitting our final 2023-2025 Wildfire Mitigation Plan (WMP) for public review on March 27, 2023 if you would prefer to wait for a copy of the completed WMP following Energy Safety's completeness check. Please feel free to reach out to us to discuss how you would prefer to move forward with this request.</p>	Zoe Harold	3/1/2023	3/14/2023	3/14/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/GPI_001.zip	0	N/A	All	All	All

Pre-Discovery 26	CaPA	Set WMP-06	CaIPA_Set WMP-06	1	CaIPA_Set WMP-06_Q1	Provide your workplan that describes where you will undertake EVM projects in 2023. This workplan should be in an Excel format, with circuit-segments as rows. Please include the following information in separate columns in the Excel spreadsheet at a minimum: a) Circuit name b) Circuit ID number c) Circuit-segment name d) Circuit-segment ID number e) EVM miles to be completed in 2023 f) Risk ranking(s) for the circuit segment	The EVM program concluded at the end of 2022. There is no EVM workplan for 2023.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	2023-2025 WMP 8.2.3	Vegetation Management	EVM
Pre-Discovery 27	CaPA	Set WMP-06	CaIPA_Set WMP-06	2	CaIPA_Set WMP-06_Q2	Provide your workplan that describes where you will undertake EVM projects in 2024. This workplan should be in an Excel format, with circuit-segments as rows. Please include the following information in separate columns in the Excel spreadsheet at a minimum: a) Circuit name b) Circuit ID number c) Circuit-segment name d) Circuit-segment ID number e) EVM miles to be completed in 2024 f) Risk ranking(s) for the circuit segment	The EVM program concluded at the end of 2022. There is no EVM workplan for 2024.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	2023-2025 WMP 8.2.3	Vegetation Management	EVM
Pre-Discovery 28	CaPA	Set WMP-06	CaIPA_Set WMP-06	3	CaIPA_Set WMP-06_Q3	In response to Data Request CaAdvocates-PGE-2022WMP-11, Question 2, March 3, 2022, PG&E provided its 2022 EVM workplan. Please provide an updated version of this workplan that lists the actual EVM mileage performed in each circuit-segment in 2022 as a new column. Rows should be added as needed to cover all circuit-segments where you performed EVM work in 2022 (even if those circuit-segments were not included in the original workplan).	Please see "WMP-Discovery2023_DR_CaAdvocates_006-Q003ACh01.xlsx" for actual 2022 EVM mileage data broken down by circuit segment. Column G on tab "2022 EVM Miles Planned" contains the number of miles planned for EVM work in 2022. Column G on tab "2022 EVM Miles Completed" contains the number of miles that were completed and work verified in 2022.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	1	N/A	2022 WMP 7.3.5.2	Vegetation Management and Inspections	Enhanced Vegetation Management
Pre-Discovery 29	CaPA	Set WMP-06	CaIPA_Set WMP-06	4	CaIPA_Set WMP-06_Q4	In response to Data Request CaAdvocates-PGE-2022WMP-16, Question 11, March 23, 2022, PG&E stated the following: "Through 2022, the EVM program includes strike trees evaluation and hazard trees mitigation, overhanging clearing and radial clearance. Starting in 2023, Enhanced VM only includes overhanging clearing." a) Is the statement above still accurate as of the date of this request? b) If the answer to part (a) is no, please update the above statement to reflect PG&E's vegetation management strategy for 2023. c) If the answer to part (a) is no, please update the above statement to reflect PG&E's vegetation management strategy for 2024.	a) 10 maximum reduction of wildfire risk effectively and efficiently, the Enhanced Vegetation Management (EVM) program concluded at the end of 2022. b) Three new VM programs will be incorporated into the 2023 workplan. These programs for VM are Focused Tree Inspections, VM for Operational Mitigations, and Tree Removal Inventory. c) Focused Tree Inspections: We developed specific areas of focus (referred to as Areas of Concern (AOC)), primarily in the HFRA, where we will concentrate our efforts to inspect and address high-risk locations, such as those that have experienced higher volumes of vegetation damage during PSPS events, outages, and/or lightning. d) VM for Operational Mitigations: This program is intended to help reduce outages and potential ignitions using a risk informed, targeted plan to mitigate potential vegetation contacts based on historic vegetation caused outages on EPSS enabled circuits. We will initially focus on mitigating potential vegetation contacts in circuit protection zones that have experienced vegetation caused outages. Scope of work will be developed by using EPSS and historical outage data and vegetation failure from the WDRM v3 risk model. EPSS-enabled devices vegetation outages extent of condition inspections may generate additional tree work. e) Tree Removal Inventory: This is a long-term program intended to systematically work down trees that were previously identified through EVM inspections. We will develop annual risk-ranked work plans and mitigate the highest risk-ranked areas first and will continue monitor the condition of these trees through our established inspection programs. f) The three programs identified above will continue in 2024. These combined three programs are also referred to as EVM Operational Mitigations.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	2022 WMP 7.3.5	Vegetation Management and Inspections	Program Costs
Pre-Discovery 30	CaPA	Set WMP-06	CaIPA_Set WMP-06	5	CaIPA_Set WMP-06_Q5	In response to Data Request CaAdvocates-PGE-2022WMP-15, Question 16, March 18, 2022, PG&E provided the following table, which shows spending on vegetation management programs in thousands of dollars (actual figures for 2019-2021 and forecast figures for 2022-2023). Please update this table as follows: a) Update the 2022 column to state actual spending in 2022. b) Update the 2023 column to show PG&E's current forecast for 2023. c) Add a column that shows PG&E's current forecast for 2024. d) Please add rows as necessary, if any changes in PG&E's vegetation management strategy have created new initiatives or categories of spending.	Please see updated table below with 2022 Actuals, and our current forecasts for 2023 and 2024.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	Vegetation Management	N/A	N/A
Pre-Discovery 31	CaPA	Set WMP-06	CaIPA_Set WMP-06	6	CaIPA_Set WMP-06_Q6	Please provide a list of any incidents in 2022 where the actions of a VM contractor posed a safety risk to workers and/or the public. "Safety risk" here is defined as any occurrence on a worksite where the contractor's actions created a safety hazard for either workers or the general public. For each instance, please provide: a) The date you were informed of the safety issue b) The date that the original work that created the safety issue was performed c) Whether the safety issue concerned a transmission or distribution circuit d) The vegetation management initiative involved in the original work e) A brief description of the safety issue involved.	Please refer to Attachment "WMP-Discovery2023_DR_CaAdvocates_006-Q006ACh01CONF.xlsx" for a list of all contractors involved safety incidents that took place in 2022. This data includes, but is not limited to: • Contractor Name/ParentCo: The contractor/parent company involved in the incident. • IncDate: The date of the incident. • Date EN: The date the incident was formally reported and logged. • Division: The division where the incident took place. • Inc Types: The incident type (ie line strike) • Incident Description: A brief description of the incident. • Program: Description on which initiative a contractor was working on, on the date of incident. • Corrective Action: A description of the action(s) PG&E took to prevent recurrence. Please note, both Distribution and Transmission contractor incidents are included in the attachment. These records are pulled from the Enterprise Contractor Incident Records Tool (ECIRT) database. The ECIRT database incident recording process does not have a space for routing Distribution or Transmission circuit information, therefore we are unable to provide that information on the attached document. The data in the 2022 columns were only for projects that overlapped with 2021 completed miles. It did not represent a comprehensive list of 2022 projects. Similarly, the 2020 columns were only for projects that overlapped with 2021 completed miles. It did not represent a comprehensive list of 2020 projects.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	1	N/A	Vegetation Management	N/A	N/A
Pre-Discovery 32	CaPA	Set WMP-06	CaIPA_Set WMP-06	7	CaIPA_Set WMP-06_Q7	In response to Data Request CaAdvocates-PGE-2022WMP-14, Question 13, March 15, 2022, PG&E provided its 2022 system hardening workplan for the categories referred to in parts (a)-(d) below. Please provide an updated version of this workplan with additional columns to show the actual system hardening work performed in each circuit-segment in 2022 for each of these categories. Please add rows as needed to cover all circuit-segments where PG&E performed system hardening work in 2022 (even if those circuit-segments were not included in the original workplan). a) Installation of covered conductor b) Installation of underground conductor c) Removal of overhead conductor d) Removal of overhead conductor associated with remote grid work.	See "WMP-Discovery2023_DR_CaAdvocates_006-Q007ACh01CONF.xlsx." This file includes the 2022 system hardening completed work in the below columns: a. Installation of covered conductor: See column O b. Installation of underground conductor: See column P c. Removal of overhead conductor: See column Q. Note, this removal work is not associated with the lines removed from overhead for installation of underground projects. It is strictly overhead conductor completely de-energized and removed. d. Removal of overhead conductor associated with remote grid work: N/A. There are no removals from remote grid work in 2022. Since the installation of remote grid generating units work occurred late in 2022, the associated line removal of de-energized conductor will take place in 2023. Similar to the response to CaAdvocates-PGE-2022WMP-14, Question 13, the data includes project information from 2021 and 2023 only where projects overlap with those years. Thus, the 2021 and 2023 data is not comprehensive. Additionally, because this question is associated with the System Hardening workplan only, this data does not include undergrounding.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	1	N/A	2022 WMP Section 7.3.3.17	Grid Design and System Hardening	System Hardening
Pre-Discovery 33	CaPA	Set WMP-06	CaIPA_Set WMP-06	8	CaIPA_Set WMP-06_Q8	Provide your workplan that describes where and when you will perform system hardening on distribution circuits in 2023. For projects that you expect to partially complete in 2023 (i.e., projects that started before 2023 and are expected to continue in 2023, or projects that are expected to be completed after 2023), please include the project and report the work that you forecast will actually be performed in calendar year 2023. For each project, include the following information in separate columns, at a minimum: a) Order number b) MAT code c) Program d) Circuit ID number e) Circuit-segment name or ID number (if the project affects more than one circuit-segment, please identify each one) f) Relevant wildfire risk score(s) from the wildfire risk model that you are using to estimate distribution risk in your 2023-2025 WMP filing g) The expected or actual start date of the project. h) The expected completion date of the project. i) Length (in circuit miles) of covered conductor to be installed in 2023. j) Length (in circuit miles) of underground conductor to be installed in 2023. k) Length (in circuit miles) of overhead conductor to be permanently removed in 2023 and replaced by underground conductor (note that this may differ slightly from the previous section due to differing overhead and underground routes). l) Length (in circuit miles) of overhead conductor to be permanently removed in 2023 and not replaced with covered conductor or undergrounded. m) Length (in circuit miles) of any other type of system hardening project to be installed in 2023.	Please see attachment "WMP-Discovery2023_DR_CaAdvocates_006-Q008ACh01CONF.xlsx" a. See columns A (order number), and B (order description) b. See column C c. See column D d. See column E e. See column F f. See columns G, I and K Column G shows the Applicable Risk Model that was used for selecting the project and putting it into scope. Risk Rank scores, shown in Columns I and K, are based on the Wildfire Distribution Risk Model (WDRM) for Version 2 and Version 3, respectively. The Risk ranking outcomes are the results of the relevant risk model (e.g., WDRM v2, WDRM v3) where circuit segments are ranked on a 1 to N basis, where 1 is the highest risk circuit segment, and N is the lowest risk. g. See column L h. See column M i. See column Z j. See column AA k. N/A - PG&E does not track length (in circuit miles) of overhead conductor to be permanently removed and replaced by underground. l. See column AB m. N/A The data includes project information from prior to 2022 and 2022 where projects overlap with these years. Data is provided in the same file for 2024 that is responsive to Question Q009. Additionally, because this question is associated with the System Hardening workplan only, this data does not include undergrounding mileage associated with the Butte Rebuild.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	1	N/A	2023 WMP Section 8.1.2.5	System Hardening	N/A
Pre-Discovery 34	CaPA	Set WMP-06	CaIPA_Set WMP-06	9	CaIPA_Set WMP-06_Q9	Provide your workplan that describes where and when you will perform system hardening on distribution circuits in 2024. For projects that you expect to partially complete in 2024 (i.e., projects that are expected to start before 2024 and are expected to continue in 2024, or projects that are expected to be completed after 2024), please include the project and report the work that you forecast will actually be performed in calendar year 2024. For each project, include the following information in separate columns, at a minimum: a) Order number b) MAT code c) Program d) Circuit ID number e) Circuit-segment name or ID number (if the project affects more than one circuit-segment, please identify each one) f) Relevant wildfire risk score(s) from the wildfire risk model that you are using to estimate distribution risk in your 2023-2025 WMP filing g) The expected or actual start date of the project. h) The expected completion date of the project. i) Length (in circuit miles) of covered conductor to be installed in 2024. j) Length (in circuit miles) of underground conductor to be installed in 2024. k) Length (in circuit miles) of overhead conductor to be permanently removed in 2024 and replaced by underground conductor (note that this may differ slightly from the previous section due to differing overhead and underground routes). l) Length (in circuit miles) of overhead conductor to be permanently removed in 2024 and not replaced with covered conductor or undergrounded. m) Length (in circuit miles) of any other type of system hardening project to be installed in 2024 (if this is greater than zero, please describe the type of system hardening project).	Please see "WMP-Discovery2023_DR_CaAdvocates_006-Q008ACh01CONF.xlsx" a. See columns A (order number), and B (order description) b. See column C c. See column D d. See column E e. See column F f. See columns G, I and K Column G shows the Applicable Risk Model that was used for selecting the project and putting it into scope. Risk Rank scores, shown in Columns I and K, are based on the Wildfire Distribution Risk Model (WDRM) for Version 2 and Version 3, respectively. The Risk ranking outcomes are the results of the relevant risk model (e.g., WDRM v2, WDRM v3) where circuit segments are ranked on a 1 to N basis, where 1 is the highest risk circuit segment, and N is the lowest risk. g. See column L h. See column M i. See column AD j. See column AE k. N/A - PG&E does not track length (in circuit miles) of overhead conductor to be permanently removed and replaced by underground. l. See column AF m. N/A The data includes project information from prior to 2022, 2022, and 2023 where projects overlap with these years. Data is provided in the same file for 2023 that is responsive to Question Q008. Additionally, because this question is associated with the System Hardening workplan only, this data does not include undergrounding mileage associated with the Butte Rebuild.	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	2023 WMP Section 8.1.2.5	System Hardening	N/A
Pre-Discovery 35	CaPA	Set WMP-06	CaIPA_Set WMP-06	10	CaIPA_Set WMP-06_Q10	For each of your 2023-2025 WMP system hardening initiatives, please provide disaggregated information related to expenditures and circuit miles treated in the attached table, CaAdvocates-PGE-2023WMP-06 Attachment 1. Add columns as needed.	Please see details on the cost and mileage breakdowns in attached file "WMP-Discovery2023_DR_CaAdvocates_006-Q010ACh01.xlsx."	Holy Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	1	N/A	2023 WMP Section 4.3	Proposed Expenditures	System Hardening

Pre-Discovery 36	CaPA	Set WMP-06	CaIPA_Set WMP-06	11	CaIPA_Set WMP-06_Q11	<p>Please provide a spreadsheet listing (as rows) each undergrounding project completed during the period of January 1, 2022, through December 31, 2022. For each project, please provide the following information (as columns):</p> <p>a) Project ID number or other identifier b) Circuit ID c) ID of each circuit segment that was entirely undergrounded in the project d) ID of each circuit segment that was partially undergrounded in the project e) County or counties where undergrounding took place f) Project start date g) Project completion date h) Total circuit-miles undergrounded i) Total miles of trenching required j) Total life-cycle electric costs of the project (i.e., costs attributed to your electric facilities), including costs for planning, design, permitting, and construction k) Total life-cycle costs of the project, including costs attributed to non-electric utilities, including costs for planning, design, permitting, and construction l) Whether this was a Rule 20 project (yes/no) m) Whether this was a WMP project (yes/no) n) Whether this was a post-wildfire rebuild project (yes/no) o) Whether you shared trenches for this project with any telecommunications utilities (yes/no) p) Whether you shared trenches for this project with gas facilities (yes/no).</p> <p>3 Constructed in accordance with The CPUC's Electric Tariff Rule 20. 4 For the purposes of this question and the following question, "life-cycle costs" refers to the start-to-finish costs to complete the capital project, from planning to the end of construction. This does not include maintenance or operational costs after the performance of the project.</p>	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	1	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution	
Pre-Discovery 37	CaPA	Set WMP-06	CaIPA_Set WMP-06	12	CaIPA_Set WMP-06_Q12	<p>Please provide a geodatabase file with a polyline feature for each undergrounding project completed during the period of January 1, 2022 through December 31, 2022. In addition to the spatial location, please provide the following attributes for each project:</p> <p>a) Project ID number or other identifier, matching part (a) of the previous question b) Circuit ID c) Project completion date</p>	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	1	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution	
Pre-Discovery 38	CaPA	Set WMP-06	CaIPA_Set WMP-06	13	CaIPA_Set WMP-06_Q13	<p>Identify any ignitions in 2022 associated with assets where you had an existing corrective notification at the time of the ignition. Please provide a spreadsheet listing each such ignition (as rows) with the following information in separate columns:</p> <p>a) Unique ignition ID b) Date of ignition c) Cause of ignition d) Type of asset associated with the ignition e) Acres burned f) Number of structures burned, if any g) Number of injuries associated with ignition, if any h) Asset ID of asset associated with ignition i) Circuit ID number of circuit associated with ignition j) Notification number(s) for the existing maintenance tag on the asset in question.</p>	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	<p>Please see the table below identifying 2022 CPUC reportable ignitions where the asset involved in the ignition was associated with an existing open corrective maintenance notification at the time of the event.</p> <p>Ignition ID Date of Ignition Suspected Cause Equipment Type Associated With Ignition Fire Size Structures Destroyed Injuries Asset ID Circuit ID Existing Maintenance Notifications 20220374 4/6/2022 Equipment Failure Conductor - Primary 0.26-9.99 Acres 0 0 101894229 MESA 1103 121931783 20220613 5/17/2022 Equipment Failure Splice/ Clamp/ Connector 1 meter - <3 meters 0 0 102242348 SAN RAFAEL 3104</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	2022 WMP Section 7.3.4	Asset Management and Inspections	N/A
Pre-Discovery 39	CaPA	Set WMP-06	CaIPA_Set WMP-06	14	CaIPA_Set WMP-06_Q14	<p>a) Has PG&E's Asset Failure Analysis Team causally connected any ignitions that occurred in 2022 to assets with existing asset or vegetation corrective notifications at the time of ignition? b) If the answer to part (a) is yes, please provide the following information on each such ignition: i. Unique ignition ID (matching the previous question) ii. Date of ignition iii. Cause(s) identified by the Asset Failure Analysis Team iv. The type of corrective notification that was linked to the ignition (i.e., the priority level and whether it related to asset management or vegetation management) v. Copies of associated reports or investigations performed by the Asset Failure Analysis Team.</p>	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	<p>Two ignitions have been identified that meet these criteria: Ignition ID Date of Ignition Cause Type of Corrective Notification Copies of Associated Reports 20221278 7/29/2022 The cause of this ignition is still being finalized. EC Notification 11842975 – Pole Replacement The report in question is still being finalized and can be provided upon completion. 20222013 11/16/2022 Broken crossarm EC Notification 12389174 – Crossarm replacement (later updated to pole replacement)</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	2022 WMP 7.3.7	Data Governance	Asset Failure Analysis
Pre-Discovery 40	CaPA	Set WMP-06	CaIPA_Set WMP-06	15	CaIPA_Set WMP-06_Q15	<p>Per PG&E's response to Data Request CaAdvocate-PGE-2022WMP-17, Question 13, March 24, 2022, PG&E's inspection strategy in 2022 was to complete detailed inspections on all assets in HFTD Tier 3 and Zone 1, and approximately one-third of assets in HFTD Tier 2.</p> <p>a) Please describe any changes to the above strategy for PG&E's detailed distribution inspections in 2023. b) Please describe any changes to the above strategy for PG&E's detailed transmission inspections in 2023. c) Please describe any changes to the above strategy for PG&E's detailed distribution inspections in 2024. d) Please describe any changes to the above strategy for PG&E's detailed transmission inspections in 2024.</p>	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	<p>Please note that the data reflected in this GIS geospatial file will not match the data set from Q11 due to the process time lag between construction completion and being fully mapped in GIS.</p> <p>Please see the table below identifying 2022 CPUC reportable ignitions where the asset involved in the ignition was associated with an existing open corrective maintenance notification at the time of the event.</p> <p>Ignition ID Date of Ignition Suspected Cause Equipment Type Associated With Ignition Fire Size Structures Destroyed Injuries Asset ID Circuit ID Existing Maintenance Notifications 20220374 4/6/2022 Equipment Failure Conductor - Primary 0.26-9.99 Acres 0 0 101894229 MESA 1103 121931783 20220613 5/17/2022 Equipment Failure Splice/ Clamp/ Connector 1 meter - <3 meters 0 0 102242348 SAN RAFAEL 3104</p> <p>Yes, please see below: b) Two ignitions have been identified that meet these criteria: Ignition ID Date of Ignition Cause Type of Corrective Notification Copies of Associated Reports 20221278 7/29/2022 The cause of this ignition is still being finalized. EC Notification 11842975 – Pole Replacement The report in question is still being finalized and can be provided upon completion. 20222013 11/16/2022 Broken crossarm EC Notification 12389174 – Crossarm replacement (later updated to pole replacement)</p> <p>The report in question is still being finalized and can be provided upon completion.</p> <p>as provided PG&E's Wildfire Distribution Risk Model v3. PG&E will complete a detailed inspection on each structure every one to three years. For additional details on this strategy, please refer to Section 8.1.3.2 of our 2023 WMP. This differs from our 2022 strategy where we inspected all of Tier 3 and one-third of Tier 2. b) There are no major changes in our strategy compared to last year. Transmission detailed inspections in 2023 are informed by predictive models of asset health and wildfire consequence. HFTD (Tier 3, Tier 2, and Zone 1) and HFRA structures have a baseline inspection frequency of once every three years. In addition to this baseline frequency, structures may be added to the detailed inspection scope annually based on the following considerations: • Wildfire Risk, which is informed by the asset health Transmission Composite Model V1 (TCM) annualized probability of failure and the Wildfire Consequence Model V3.4. • Other factors involving data not currently integrated into the Wildfire Transmission Risk Model V1 (ex: inspection result trends, historic fire locations etc.) For additional details on this strategy, please refer to Section 8.1.3.1 of our 2023 WMP. c) No major changes are anticipated to the detailed distribution ground inspection strategy in 2024. However, as PG&E's risk models and understanding of the distribution system continues to mature, we may adjust the strategy described above or establish additional criteria to define the structures for inspection each year. d) There is no major anticipated change to detailed inspection scoping strategy in 2024. However, the considerations or thresholds used to define the additional structures may vary each year as the risk models mature and the overall risk of the transmission system</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	2022 WMP 7.3.4.1 and 7.3.4.14	Asset Management and Inspections	N/A
Pre-Discovery 41	CaPA	Set WMP-06	CaIPA_Set WMP-06	16	CaIPA_Set WMP-06_Q16	<p>Regarding your PSPS circuit modeling capabilities:</p> <p>a) Please describe your present circuit modeling capabilities with regard to PSPS decision-making ("PSPS circuit modeling capabilities"), including with what level of granularity they are able to determine how circuit hardening efforts or other changes to a line segment will affect PSPS thresholds. b) Please describe any improvements to the present PSPS circuit modeling capabilities that you expect to implement in 2024. c) Please describe any improvements to the present PSPS circuit modeling capabilities that you expect to implement in 2024. d) Please describe the expected state of your PSPS circuit modeling capabilities at the conclusion of the 2023-2025 WMP cycle.</p>	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	<p>For all questions below, PG&E understands circuit modeling to mean the level of granularity at which a utility can model the configuration of its electrical assets and de-energize them as such. PG&E models and de-energizes circuits utilizing all switching devices on the system that do not pose ignition risks. The effects of hardening and other changes to lines will be accounted for by our IPW model which uses machine learning to quantify past outages and ignitions and uses those as a basis for ignition and outage potential going forward which feeds into our PSPS modeling. Thus, any improvements to the system or changes would be incorporated as their historical performance changes. As mentioned, PG&E models circuits at the most granular level for de-energization taking into account all devices on the system that do not pose an ignition risk. c) As mentioned, PG&E models circuits at the most granular level for de-energization taking into account all devices on the system that do not pose an ignition risk. d) As mentioned, PG&E models circuits at the most granular level for de-energization taking into account all devices on the system that do not pose an ignition risk.</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	0	N/A	PSPS	N/A	N/A
Pre-Discovery 42	CaPA	Set WMP-06	CaIPA_Set WMP-06	17	CaIPA_Set WMP-06_Q17	<p>a) Have you developed Public Safety Power Shutoff (PSPS) risk scores at the circuit-segment level? b) Have you developed Enhanced Powerline Safety Settings (EPSS) risk scores at the circuit segment level? c) If the answer to either parts (a) or (b) is yes, please provide a spreadsheet that lists (as rows) each circuit-segment for which you have modeled PSPS or EPSS risk scores. Include the following attributes for each circuit segment: i. Circuit Identification Number ii. Circuit Name iii. Circuit Segment Identification Number iv. Circuit segment-level PSPS Risk Score (if applicable) v. Circuit segment-level EPSS Risk Score (if applicable) d) If the answer to either parts (a) or (b) is yes, please provide a spreadsheet that lists (as rows) each circuit-segment for which you have modeled PSPS or EPSS risk scores. Include the following attributes for each circuit segment: i. Circuit Identification Number ii. Circuit Name iii. Circuit Segment Identification Number iv. Circuit segment-level PSPS Risk Score (if applicable) v. Circuit segment-level EPSS Risk Score (if applicable)</p>	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	<p>a) Yes. This is cited in Section 6.2.1, figure 6.2.1-3. b) No. c) Please see "WMP-Discovery2023_DR_CaAdvocates_006-Q017A1ch01CONF.zip" which is a geodatabase file containing the circuit segments along with PSPS risk values and Circuit Segment names. Due to the different circuit segment voltages approximately 400 of the circuit segments are not mapped. d) Yes, please see "WMP-Discovery2023_DR_CaAdvocates_006-Q017A1ch02CONF.xlsx" which provides the circuit segment PSPS risk values. e) Not applicable. f) PG&E produces an annual reliability study of EPSS outage activity, which informs reliability mitigation actions. Furthermore, PG&E is exploring incorporating this data into an "EPSS reliability risk" score for circuit segments.</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_006.zip	2	N/A	PSPS/EPSS	N/A	N/A
1	CaPA	Set WMP-07	CaIPA_Set WMP-07	1	CaIPA_Set WMP-07_Q1	<p>a) Please confirm that no asset data collected after January 1, 2022 was used in the WDRM v3. b) If asset data collected after January 1, 2022 was used in PG&E's WDRM v3, please specify the date(s) on which any such data was collected. c) Please confirm that "asset data" in parts a) and b) is geospatial (GIS) data from the operational system of record. If not, please state the origin of the asset data.</p>	Joshua Borkowski	3/27/2023	3/30/2023	3/30/2023	<p>All distribution asset data utilized in the Wildfire Distribution Risk Model (WDRM) v3 were extracted from PG&E's EDGIS system on January 1, 2022, with the exception of the transformer data which was extracted from EDGIS on February 2, 2022. a) See answer to part a. c) See answer to part a.</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_007.zip	0	N/A	6.2	Risk Methodology and Assessment	Risk Analysis Framework
2	CaPA	Set WMP-07	CaIPA_Set WMP-07	2	CaIPA_Set WMP-07_Q2	<p>Page 15 of the E3 Review includes a list of components included in the WDRM v3. 4 a) Please confirm the date that the WDRM v3 was finalized. If the final list of components is different than what is listed in the E3 review, please provide an updated and accurate list of components that are used as inputs in PG&E's WDRM v3. c) For any inputs included in your response to Question 2(b) that do not appear on Page 15 of the E3 review, please provide the latest date on which each input was updated. d) If any dates given in response to Question 2(c) are different from those cited in question 2(b), please explain why they are different.</p>	Joshua Borkowski	3/27/2023	3/30/2023	3/30/2023	<p>The Wildfire Distribution Risk Model (WDRM) v3 was finalized by approval at the Wildfire Risk Governance Steering Committee (WRGSC) on April 13, 2022. a) The 8 asset groups listed on page 15 of the E3 Review are included in the WDRM v3 but are grouped into the sub-models listed in Figure 5 Sub-model Predictive Performance Measures on page 21 of the E3 Review document. b) Not applicable, please see response to 2b. c) Not applicable, please see response to 2c.</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_007.zip	0	N/A	6.2	Risk Methodology and Assessment	Risk Analysis Framework
3	CaPA	Set WMP-07	CaIPA_Set WMP-07	3	CaIPA_Set WMP-07_Q3	<p>a) Please confirm the date that the WDRM v4 was finalized. If it has not been finalized, please provide an estimated date on which it will be finalized. b) Please provide a current list of components that are used as inputs in v4 of the WDRM model. c) Please state the date of PG&E asset data used in v4 of the WDRM model. If there are multiple dates, include the most recent date for any asset data used in the model, and any date(s) on which the data used in the model was collected. d) Please confirm that "asset data" in part c) is geospatial (GIS) data from the operational system of record. If not, please state the origin(s) of the asset data.</p>	Joshua Borkowski	3/27/2023	3/30/2023	3/30/2023	<p>The Wildfire Distribution Risk Model (WDRM) v4 has not been finalized. Model review and approval is scheduled for Q2 2023. b) The list of equipment components in the WDRM v4 has not been finalized at this time. c) The asset data for the WDRM v4 was extracted from PG&E's EDGIS on January 1, 2023. d) Please see the response to 3c.</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_007.zip	0	N/A	6.2	Risk Methodology and Assessment	Risk Analysis Framework
68	CPUC - SPD (Safety Policy Division)	002	CPUC - SPD (Safety Policy Division)_002	1	CPUC - SPD (Safety Policy Division)_002_Q1	<p>Provide Attachment 2023-03-27_PGE_2023_WMP_R0_Appendix D ACI PG&E-22-16_A1ch01_CONF (PG&E-2023-2026 Undergrounding Workplan)</p>	Kevin Miller	4/4/2023	4/5/2023	4/4/2023	<p>The CONFIDENTIAL attachment is being provided pursuant to the confidentiality declaration "DRU11407_003_Confidentiality Declaration.pdf". As requested, please see attachment "2023-03-27_PGE_2023_WMP_R0_Appendix D ACI PG&E-22-16_A1ch01_CONF.xlsx" attached.</p>	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_002.zip	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization

13	CaPA	Set WMP-08	CaPA_Set WMP-08	1	CaPA_Set WMP-08_Q1	<p>PG&E's WMP states: The EVM Program concluded at the end of 2022. PG&E will continue to strengthen our other existing VM programs. PG&E is transitioning the maintenance of enhanced clearances that were achieved in EVM to Routine VM patrols. We established routine maintenance requirements for electric distribution circuits where EVM scope clearances have been performed (in HFTD designated areas) and passed by work verification 4</p> <p>a) Please describe how PG&E intends to strengthen its other existing VM programs as stated above. b) Does PG&E intend to achieve "enhanced clearances" in areas where they have not already been achieved through EVM, or is PG&E only intending to maintain existing enhanced clearances? c) If PG&E will pursue the achievement of enhanced clearances in new locations, please provide PG&E's strategy and methodology for the following: i. Deciding which circuits and/or locations need enhanced clearances ii. Deciding which trees to trim in a given project location iii. Deciding the cleared clearance distances iv. Setting the schedule and sequence of enhanced clearance projects d) If PG&E only intends to maintain existing enhanced clearances, please explain why.</p>	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	N/A	8.2.2.2.6	Vegetation Management and Inspections	Discontinued Programs
14	CaPA	Set WMP-08	CaPA_Set WMP-08	2	CaPA_Set WMP-08_Q2	<p>Regarding the new "Tree Removal Inventory Program" described in section 8.2.2.2.4 of PG&E's WMP, PG&E states: This is a new transitional program for 2023 stemming from the conclusion of the EVM program. This program is intended to work down trees previously identified. PG&E estimates that our EVM inventory included more than 300,000 trees at the end of 2022. Under the Tree Removal Inventory program, we remove or re-inspect trees identified in the EVM program. Based on this on-going re-inspection and evaluation work, we will develop annual risk-ranked work plans and mitigate the highest risk-ranked circuit segments or CPZs first. We plan to address all trees in the inventory in a multi-year program.</p> <p>a) Please explain what is meant by the term "transitional" in the first sentence. b) Does PG&E intend to identify new trees for the sort of work identified in this inventory? c) If the answer to part (b) is yes, please provide PG&E's methodology and strategy for doing so. d) If the answer to part (b) is no, please explain why. e) If the answer to part (b) is no, please explain how PG&E intends to achieve comparable risk reduction outcomes to those previously provided by its EVM program. f) What is the nature of the aforementioned "on-going re-inspection and evaluation work"? g) Please state the frequency of the "on-going re-inspection and evaluation work". h) How many years will the aforementioned "multi-year program" last? i) After the "multi-year program" ends, will PG&E cease to have a tree inventory? j) If the answer to part (i) is yes, please explain how PG&E intends to address vegetation in high-risk areas going forward. k) If the answer to part (i) is no, please explain how the tree inventory will be maintained and used going forward. l) When it is stated that "PG&E estimates that our EVM inventory included more than 300,000 trees at the end of 2022," please explain why this number is an estimate rather than a precise number.</p>	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	N/A	8.2.2.2.4	Vegetation Management and Inspections	Tree Removal Inventory
15	CaPA	Set WMP-08	CaPA_Set WMP-08	3	CaPA_Set WMP-08_Q3	<p>Regarding the new "VM for Operational Mitigations" described in section 8.2.2.2.3 of PG&E's WMP, PG&E states: This is a new transitional program for 2023 stemming from the conclusion of the EVM program. This program is intended to help reduce outages and potential ignitions using a risk-informed, targeted plan to mitigate potential vegetation contacts based on historic vegetation outages on EPSS-enabled circuits. PG&E will initially focus on mitigating potential vegetation contacts in CPZs that have experienced vegetation caused outages. Scope of work will be developed by using EPSS and historical outage data and vegetation failure from the WDRM v3 risk model. EPSS-enabled devices vegetation outages extent of condition inspections may generate additional tree work.</p> <p>a) Please explain what is meant by the term "transitional" in the first sentence. b) Please explain what is meant by the sentence "EPSS-enabled devices vegetation outages extent of condition inspections may generate additional tree work." c) When will PG&E develop initial the scope of work for this program? d) How frequently will PG&E update the scope of work for this program (e.g., annually or quarterly)? e) Please explain PG&E's methodology for developing the scope of work for this program. f) Please explain how PG&E will use EPSS data to contribute to the scope of work for this program. g) Please explain how PG&E will use historical outage data to contribute to the scope of work for this program. h) Please explain how PG&E will use "vegetation failure from the WDRM v3 risk model" to contribute to the scope of work for this program.</p>	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	N/A	8.2.2.2.3	Vegetation Management and Inspections	VM for Operational Mitigations
16	CaPA	Set WMP-08	CaPA_Set WMP-08	4	CaPA_Set WMP-08_Q4	<p>Regarding the new "Focused Tree Inspections" described in section 8.2.2.2.5 of PG&E's WMP, PG&E states: This is a new transitional program for 2023 stemming from the conclusion of the EVM program. PG&E is developing AOCs to better focus VM efforts to address high risk areas that have experienced higher volumes of vegetation damage during PSPS events, outages, and/or ignitions. We have conducted a county-by-county review with regional SMEs and used this information to develop polygons where focused vegetation inspections can be evaluated to determine appropriate counties to prioritize pilot(s). Focused Tree Inspection plans will be piloted in at least one area. The pilot will develop and implement guidelines that inform inspections.</p> <p>a) Please explain what is meant by the word "transitional" in the first sentence. b) Does "AOCs" stand for "Areas of Concern" in this instance? If not, please define it. c) Please describe PG&E's methodology for developing the aforementioned polygon. d) How does PG&E determine where focused vegetation inspections can be evaluated? e) How does PG&E determine which counties are appropriate to prioritize for pilots? f) How will PG&E determine in which county or counties to execute a pilot or pilots? g) Please describe the following aspects of the pilot or pilots: i. Scope of work ii. Budget iii. Duration iv. Goals and objectives v. Success metrics vi. Please describe the following regarding the guidelines that PG&E will develop based on the pilot(s), as mentioned above: i. The expected content of the guidelines ii. How PG&E expects the guidelines to inform inspections iii. When PG&E expects to develop such guidelines j) Please describe the steps that PG&E expects a "focused tree inspection" to include. k) Please compare the planned "focused tree inspections" to the tree inspections previously performed as part of PG&E's EVM program. Describe the similarities and differences. l) What metrics and criteria will PG&E use to determine whether a tree passes or fails a "focused tree inspection"?</p>	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	N/A	8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
17	CaPA	Set WMP-08	CaPA_Set WMP-08	5	CaPA_Set WMP-08_Q5	<p>PG&E states on p. 539 of its WMP: PG&E is restructuring our VM Program starting in 2023. Based on recent data and analysis, the risk reduction in the EVM Program is less than the risk reduction from the EPSS program that was introduced in 2021.8</p> <p>a) Please describe the aforementioned "data and analysis" that shows that "the risk reduction of the EVM program is less than the risk reduction from the EPSS program". b) Please provide any available workpapers, reports, or other documents that support the statement quoted above.</p>	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	N/A	8.2.3.4	Vegetation Management and Inspections	Fall-In Mitigation
18	CaPA	Set WMP-08	CaPA_Set WMP-08	6	CaPA_Set WMP-08_Q6	<p>PG&E states on p. 539 of its WMP: Additional Operational Mitigations such as PVD and DCD will also help to mitigate risk previously prescribed to EVM. As a result, PG&E concluded the EVM Program at the end of 2022.</p> <p>a) Does "PVD" stand for "Partial Voltage Detection" in this instance? Please define if not. b) Does "DCD" stand for "Downed Conductor Detector" in this instance? Please define if not. c) How has PG&E determined that PVD will help to mitigate risk that PG&E previously sought to mitigate with EVM? d) Which particular risks will PVD help mitigate that PG&E previously sought to mitigate with EVM? e) Please provide any available documentation and analysis showing that PVD will help to mitigate risks that PG&E previously sought to mitigate with EVM. f) How has PG&E determined that DCD will help to mitigate risk that PG&E previously sought to mitigate with EVM? g) Which particular risks will DCD help mitigate that PG&E previously sought to mitigate with EVM? h) Please provide any available documentation and analysis showing that DCD will help to mitigate risks that PG&E previously sought to mitigate with EVM.</p>	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	N/A	8.2.3.4	Vegetation Management and Inspections	Fall-In Mitigation
19	CaPA	Set WMP-08	CaPA_Set WMP-08	7	CaPA_Set WMP-08_Q7	<p>On p. 1142.11 of PG&E's WMP, PG&E divides its operational mitigations into four different groups. Group 2 includes "inspections and maintenance programs where we exceed compliance requirements until permanent mitigations are deployed and/or we implement new technologies so that we no longer need to exceed compliance requirements." For the following Group 2 mitigations, please state the criteria by which PG&E will determine that it no longer needs to exceed compliance requirements, and state the basis for such a determination:</p> <p>a) Equipment Maintenance and Repair b) Pole Clearing Program c) Utility Defensible Space Program d) Wood Management e) Substation Defensible Space f) Focused Tree Inspections g) Transmission Integrated VM h) Firearm Response VM</p>	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	N/A	7.2.3	Wildfire Mitigation Strategy Development	Interim Mitigation Initiatives

20	CaPA	Set WMP-08	CaPA_Set WMP-08	8	CaPA_Set WMP-08_Q8	On pp. 314-318 of PG&E's WMP, PG&E divides its operational mitigations into four different groups. Group 2 includes "Inspections and maintenance programs where we exceed compliance requirements until permanent mitigations are deployed and/or we implement new technologies so that we no longer need to exceed compliance requirements." For each of the following Group 2 mitigations, please state whether or PG&E intends to discontinue the program/initiative once permanent mitigations are deployed or new technologies are implemented: a) Equipment Maintenance and Repair b) Pole Clearing Program c) Utility Defensible Space Program d) Wood Management e) Substation Defensible Space f) Focused Tree Inspections g) Transmission Integrated VM h) Emergency Response VM i) Vegetation Management	At this time PG&E does not intend to discontinue any of the programs/initiatives listed in Group 2 mitigation. The programs/initiatives are designed and implemented to ensure that PG&E maintains compliance with state and federal regulations, as well as mitigate portions of the system that may be exposed to wildfire risk that cannot be managed through our control programs pending the implementation of System Resilience Initiatives. In the future, for programs/initiatives that exceed compliance, PG&E may determine to stay at compliance requirements based on risk or benefit information.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	7.2.3	Wildfire Mitigation Strategy Development	Interim Mitigation Initiatives
21	CaPA	Set WMP-08	CaPA_Set WMP-08	9	CaPA_Set WMP-08_Q9	Regarding the new "Tree Removal Inventory Program" described in section 8.2.2.4 of PG&E's WMP, PG&E states: "PG&E estimates that our EVM inventory included more than 300,000 trees at the end of 2022." Table 8-14, PG&E's VM Targets, p. 502, states that PG&E will remove approximately 60,000 trees identified from the legacy EVM program through the end of 2025. a) Are the 60,000 trees "identified from the legacy EVM program" a subset of the trees in PG&E's EVM inventory? b) If the answer to part (a) is yes, how will PG&E mitigate the risk posed by the approximately 240,000 trees from the EVM inventory that will not be removed during the period from 2023-2025? c) If the answer to part (a) is no, please explain the difference between the 60,000 trees to be addressed through 2025, and the more than 300,000 trees in the EVM inventory.	a) Yes, the 60K trees come from the group of approximately 385K EVM trees remaining. We plan to work down the risk associated with the 385K trees starting with 15K trees in 2023, 20K trees in 2024, and 25K trees in 2025, which results in 60K trees being worked through 2025. b) PG&E has operational mitigations including EPSS enablement in place. Additionally, PG&E conducts and will continue to conduct annual Routine and Second Patrol of these areas and address any Priority 1 or 2 hazardous tree conditions accordingly. c) NA. 10 PG&E's WMP, p. 528. 11 15,000 trees in 2023, 20,000 trees in 2024, and 25,000 trees in 2025.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.2.4	Vegetation Management and Inspections	Tree Removal Inventory
22	CaPA	Set WMP-08	CaPA_Set WMP-08	10	CaPA_Set WMP-08_Q10	Per Table 8-12, Vegetation Management Implementation Objectives, PG&E's Focused Tree Inspection Program is currently under development. By the end of 2025, PG&E plans to "Fully implement AOC cross-functional team to implement guidelines across all AOCs." Given that PG&E's EVM program has been discontinued, and that its Focused Tree Inspection Program has not yet been fully developed, how will PG&E assess the risk of tree fall-ins during the period from 2023-2025? Table 8-14, PG&E's VM Targets, states that PG&E will collect LIDAR data on its Transmission System (17,500 circuit miles). Table 5-2, Electrical Infrastructure, states that PG&E has a total of 18,111 circuit miles of overhead transmission lines. a) Does PG&E plan to not collect LIDAR data on approximately 600 overhead circuit miles of transmission? b) If the answer to part (a) is yes, please explain why. c) If the answer to part (a) is no, please explain why Table 8-14 shows a LIDAR target that is smaller than the size of PG&E's overhead transmission system.	PG&E will continue to assess the risk of tree fall-ins during the period from 2023-2025 through the Distribution Routine and Second Patrol programs accordingly. The identification of hazardous or other emergent priority trees is embedded into all VM tree trimming and mitigation programs, as well as the resulting work verification and quality programs. In addition to the Focused Tree Inspection Program, PG&E has also introduced the Tree Removal Inventory (TRI) and Vegetation Management for Operational Mitigation programs which will also be implemented to assess the risk of tree fall-ins during the same period in targeted portions of the service territory.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
23	CaPA	Set WMP-08	CaPA_Set WMP-08	11	CaPA_Set WMP-08_Q11	Table 8-14, PG&E's VM Targets, states that PG&E will collect LIDAR data on its Transmission System (17,500 circuit miles). Table 5-2, Electrical Infrastructure, states that PG&E has a total of 18,111 circuit miles of overhead transmission lines. a) Does PG&E plan to not collect LIDAR data on approximately 600 overhead circuit miles of transmission? b) If the answer to part (a) is yes, please explain why. c) If the answer to part (a) is no, please explain why Table 8-14 shows a LIDAR target that is smaller than the size of PG&E's overhead transmission system.	a) No, PG&E will collect LIDAR data on all overhead Transmission circuit miles. b) NA c) The difference between LIDAR Transmission Inspections mapped on ETGIS and our LIDAR vendor's data is due largely to parallel circuits and some geometry differences; miles are confirmed against circuit location and length from the LIDAR data. It is common to see a difference between ETGIS and LIDAR survey data. When our LIDAR vendor indicates their completed miles on 100% of PG&E Transmission circuit miles, we use the ETGIS miles. PG&E continues to use ETGIS values as this is our asset data.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.2.1.1	Vegetation Management and Inspections	Routine Transmission NERC and Non-NERC
24	CaPA	Set WMP-08	CaPA_Set WMP-08	12	CaPA_Set WMP-08_Q12	Table 8-14, PG&E's VM Targets, states that: "Each of the 3 programs (Routine Distribution, Routine Transmission and Pole Clearing) must achieve a 95% quality verification audit results pass rate." Please describe the actions PG&E will take during the 2023-2025 period if a program does not achieve a 95% pass rate on quality verification audits.	Should a program fall below a 95% pass rate, catch back plans will be developed in partnership with VM execution to mitigate for specific cause of deficient rate.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.2.4	Vegetation Management and Inspections	Tree Removal Inventory
25	CaPA	Set WMP-08	CaPA_Set WMP-08	13	CaPA_Set WMP-08_Q13	Table 8-18-1, Vegetation Management QV Program, lists the following audit pass results for 2022 VM work: Distribution: 91.3% Transmission: 94.2% Vegetation Control Pole Clearing: 60.3% Please describe any actions PG&E has taken or plans to take to improve the Distribution VM audit results pass rate from 91.3% in 2022 to 95% in 2023. Please include the timeline for completing those actions. Please describe any actions PG&E has taken or plans to take to improve the Pole Clearing VM audit results pass rate from 60.3% in 2022 to 95% in 2023. Please include the timeline for completing those actions. Regarding the "Defensible Space Inspection" described in section 8.2.2.3.1 of PG&E's WMP, PG&E states: "Landowner related issues continue to prevent PG&E from achieving 100 percent defensible space completion status at locations where substation defensible space zones extend into privately owned property." a) Where substation defensible space zones extend into privately owned property, what is PG&E's process for completing defensible space inspections? b) What actions does PG&E plan to take during the 2023-2025 WMP period to address landowner related issues in order to achieve the highest possible defensible space completion status?	a) Improved quality verticals have been established for 2023, allowing for greater insight into overall VM work product throughput and risk identification/mitigation. Clear definitions of acceptance criteria, sampling methodology, population eligibility, and pass rate calculations were established and communicated across the VM organization prior to beginning 2023 audits. b) Improved quality verticals have been established for 2023, allowing for greater insight into overall VM work product throughput and risk identification/mitigation. Clear definitions of acceptance criteria, sampling methodology, population eligibility, and pass rate calculations were established and communicated across the VM organization prior to beginning 2023 audits. c) Improved quality verticals have been established for 2023, allowing for greater insight into overall VM work product throughput and risk identification/mitigation. Clear definitions of acceptance criteria, sampling methodology, population eligibility, and pass rate calculations were established and communicated across the VM organization prior to beginning 2023 audits.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.5.1	Vegetation Management and Inspections	Quality Assurance and Quality Verification
26	CaPA	Set WMP-08	CaPA_Set WMP-08	14	CaPA_Set WMP-08_Q14	PG&E has implemented a plan to complete the identified dead/dying tree work within 180 days for HFTD areas and within 365 days for non-HFTD areas. a) What specific steps, actions, or measures are included in the plan noted in the quote above – in other words, what specific steps is PG&E taking to ensure that dead/dying tree work will be completed within the stated timeframe? b) How did PG&E determine that 180 days was an appropriate and prudent timeframe for completing dead/dying tree work in HFTD areas? c) Does PG&E plan to complete identified dead/dying tree work within 180 days in HFTD areas for its Distribution Routine Patrol (section 8.2.2.2.1)? d) If the answer to part (c) is no, please explain why not. e) What is PG&E's expected time to complete dead/dying tree work identified during its Distribution Routine Patrol?	a) To ensure that dead/dying tree work is completed with 180 days in HFTD and 365 days in non-HFTD, PG&E VM has developed a process to report out to Daily Operating Reviews and Weekly Operating reviews at multiple functional levels – including VM leadership and VM execution – the status of dead and dying trees and their timelines and timeliness status. This measure ensures visibility and accountability at the regional level. b) In addition to managing to complete work between Routine and Second Patrol work-cycles, the timeframe to complete dead/dying tree work is based on GO 95 Rule 16 priority level 2, for corrective actions of conditions within Tier 3 to be completed within 6 months (180 days) of identification. c) Yes, PG&E does plan to address identified dead/dying trees in the stated timeframes in HFTD and non-HFTD in Distribution Routine Patrol. d) NA. See c. above. e) The timeframe to complete dead/dying tree work identified during Distribution Routine Patrol is 180 days in HFTD and 365 days in non-HFTD.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.2.2.2	Vegetation Management and Inspections	Distribution Second Patrol
27	CaPA	Set WMP-08	CaPA_Set WMP-08	15	CaPA_Set WMP-08_Q15	Regarding the "Defensible Space Inspection" described in section 8.2.2.3.1 of PG&E's WMP, PG&E states: "Landowner related issues continue to prevent PG&E from achieving 100 percent defensible space completion status at locations where substation defensible space zones extend into privately owned property." a) Where substation defensible space zones extend into privately owned property, what is PG&E's process for completing defensible space inspections? b) What actions does PG&E plan to take during the 2023-2025 WMP period to address landowner related issues in order to achieve the highest possible defensible space completion status?	a) When defensible space zones extend onto private property, outreach to such landowners is made in advance to obtain permission to enter and conduct inspection. If access is granted, the inspection is executed with fuel reduction and PRG 4291 compliance prescription determined. If access is denied and found to be without applicable easements, other land rights or valid entry agreements, the inspection record will reflect a "refusal" and documented for future reference as PG&E does not have the right to conduct defensible space inspections on property not owned by the Company. b) Annual defensible space inspections do serve as an opportunity to re-engage prior refusal landowners. Changes of ownership, changes in landowner opinion, new local agency defensible space ordinances or code often support reversal in status.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.2.3.1	Vegetation Management and Inspections	Defensible Space Inspection
28	CaPA	Set WMP-08	CaPA_Set WMP-08	16	CaPA_Set WMP-08_Q16	Regarding "Wood and Slash Management" described in section 8.2.3.2 of PG&E's WMP, PG&E states: "Chips are left on site or removed off site based on owner preferences." PG&E further states that "Wood Management is a voluntary program in which property owners must opt-in to participate." a) If PG&E is unable to contact a landowner, how does it manage wood chips? b) How does PG&E ensure that landowners are aware of the opt-in Wood Management program? c) How does PG&E record landowner opt-ins to the Wood Management program? d) Does a landowner opt into the Wood Management program, how quickly does the program become effective? E.g., could a landowner opt-in while VM work is being performed? e) How does PG&E inform VM contractors of the landowner's Wood Management preference? f) Does the Wood Management opt-in remain valid indefinitely or must landowners renew their preferences on a regular basis? g) If a landowner has complaints regarding wood and slash management by PG&E VM employees or contractors, what is the process for receiving, recording, and responding to such complaints?	a) If PG&E is unable to contact a landowner regarding their preference for wood chips, crews will remove the wood chips when safe to do so. If access does not allow for chipping and wood chip removal, crews will log and scatter debris on site in accordance with applicable regulations. b) There are multiple real-time opportunities for landowners to request wood management. PG&E field personnel attempt to engage with landowners in-person about tree work and wood management preferences at the time of inspections, tree work and post-tree work verification. Field personnel may also leave door hangers or other informational materials if landowners are unavailable. Following active emergency response efforts where landowners may not be present, we initiate regional post-event outreach. This may include letters, door hangers, interactive voice messages and/or press releases. Information is also available at pge.com. c) Our dedicated customer team is equipped to receive, record, and process all landowner opt-ins for wildfire and EVM wood management through our internal customer relationship management database. This includes opt-ins that come through field personnel. d) Yes, landowner wood management preferences are effective immediately. We work as quickly and efficiently as possible to manage and haul accessible wood without compromising public safety, access or environmental and cultural resources. As each property is different, we collaborate with the landowner to find an optimal solution. The timeline for wood management is dependent on landowner permission, ground conditions, and the ability for our crews to safely access the wood. Wood management may also be subject to permitting requirements. Landowners can opt into the Wood Management program at any time before, during or after tree work is conducted. Field personnel as well as our dedicated customer team can work directly with landowners to record their wood management preferences through our internal customer management database in person, by phone or by email. e) Landowner wood management preferences are indicated to operations personnel through our work management platform. f) Wood management preferences apply to an instance of tree work activity on a property. If new tree work is prescribed, we would coordinate with the landowner on their preferences again as preferences may vary by tree species, size or specific location. We are always looking for opportunities to continuously improve our Wood Management program, including new methods for recording landowner preferences. g) Wood management escalations are primarily received, recorded and responded to by our dedicated customer team through our internal system and case management process.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.3.2	Vegetation Management and Inspections	Wood and Slash Management
29	CaPA	Set WMP-08	CaPA_Set WMP-08	17	CaPA_Set WMP-08_Q17	Regarding "High-Risk Species" described in section 8.2.3.6 of PG&E's WMP, PG&E states: "There are no governing standards for high-risk species." a) Does PG&E plan to develop governing standards for high-risk species? b) If the answer to part (a) is yes, when does PG&E expect to complete development of such standards? c) If the answer to part (a) is no, please explain why not.	a) For Routine and Second Patrol, PG&E does not currently have standards specific to high-risk species. Trees identified during these inspection cycles that require mitigation per PRC4293 and GO95 Rule 35 are expected to be identified and listed for work regardless of species. A new program, Focused Tree Inspection (FTI) is being piloted starting in Q2 2023 and will incorporate regional outage analysis informed by tree caused outages within Areas of Concern (AOC) developed in Q4 2022. These pilots are expected to analyze area specific vegetation related outages within the AOC polygons in advance of FTI. When detailed outage data is available, this analysis will indicate vegetation caused outage trends that include species and failure types. The experience and findings during execution of these pilots may inform development of program specific guidance that relates to regional high-risk species. PG&E will then determine which programs are best suited to incorporate species specific guidance due to anticipated regional variation. b) Development of any standards related to high-risk species is still being determined and contingent upon completion of FTI pilots in 2023. A determination will be made specific to that program as its guidance is formalized following the pilots. c) NA, applicable.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.3.6	Vegetation Management and Inspections	High-Risk Species
30	CaPA	Set WMP-08	CaPA_Set WMP-08	18	CaPA_Set WMP-08_Q18	PG&E's WMP states, in Table 8-18-3, VM Field QC Metrics Report, that pass rates are "not a WMP target" for 2023-2025. Please explain why PG&E has not set target pass rates for VM Field QC for 2023-2025.	The Quality Management team has aligned on setting target pass rates at 88% for Field Quality Control Active Observation Programs for the following core vegetation management programs: Routine Distribution, Second Patrol Distribution, Vegetation Control, and Routine Transmission.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	0	NA	8.2.5.2	Vegetation Management and Inspections	Quality Control
31	CaPA	Set WMP-08	CaPA_Set WMP-08	19	CaPA_Set WMP-08_Q19	For the 3 Priority 1/Priority 2 Trees out of the set of 296, please refer to tab "P2 Data". a) Please see "Age" in Column I on tab "P2 Data" for the age in days since the last inspection as of February 28, 2022. b) Please see "Priority" in Column E on tab "P2 Data" for the priority level. c) If vegetation is determined to be an immediate risk to PG&E facilities, described as a Priority 1 Condition, the condition will be mitigated within 24 hours of identification as long as conditions are safe for the tree crew to proceed with work. * Vegetation identified as pending Priority 2 work within the RFW area will be reviewed and mitigated as outlined in the VM Priority Tag Procedure (1D.7.1029-17). c) Please see "dtinsDate" in Column D on tab "P2 Data" for the inspection date. d) Please see "HFTDTier" in Column H on tab "P2 Data" for the HFTD Tier. e) We do not have a source for tracking planned work dates for individual trees and are unable to provide the data at this time. For the 293 trees out of the set of 296, please refer to tab "TM Data". Please note, the quantity of trees that correspond to the "TreeRecID" can be located on "Column L" of the "TM Data" tab in attachment. a) Please see "Age" in "Column J" on tab "TM Data" for the age in days since the last inspection as of February 28, 2022. b) Please see "Priority" in "Column F" on tab "TM Data" for the priority level. * Routine classification is normal compliance work prioritized to be completed during the normal work cycle. * Expanded classification is work that needs to be completed as part of reliability. * Accelerated classification are trees that are out of compliance and need to be worked before the next work cycle occurs. c) Please see "dtinsDate" in "Column D" on tab "TM Data" for the last inspection date as of February 28, 2022. d) Please see "HFTDTier" in "Column K" on tab "TM Data" for the HFTD Tier.		Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_008.zip	1	NA	8.2.6	Vegetation Management and Inspections	Open Work Orders
32	CaPA	Set WMP-09	CaPA_Set WMP-09	1	CaPA_Set WMP-09_Q1	P. 10 of PG&E's WMP states, "We have completed certain programs and removed some less impactful targets from the 2023 WMP." a) Please list the "less impactful" targets that were removed from the 2023 WMP. b) For each target in part (a), please explain how PG&E determined that the target was "less impactful."	a) The targets that were included in the 2023 WMP but not included in the 2023 WMP are identified below. Please note that we do not necessarily consider each of these to be "less impactful" in all situations. Instead, they are more properly described as not being the best choice for our wildfire mitigation portfolio at this particular point in time. * Weather Station Installation and Optimization – PG&E did not include a target for weather station installation in the 2023-2025 WMP because our weather station network is nearing full maturity with more than 1,400 weather stations installed. We will continue to evaluate the need for additional stations. * High-Definition Camera Installations – PG&E has sponsored over 600 cameras covering 90 percent of the HFTD tier 2 and tier 3 areas and, given this saturation, we are not currently planning to install new cameras at all this time. * Early Fault Detection Installations – PG&E does not have a 2023 target for EFD installations. We plan to develop and implement processes and procedures to analyze EFD alarms, conduct field investigations and track mitigation activities to effectively use EFD technology prior to deploying additional sensors. * Distribution Sectionizing Devices – PG&E has completed our transmission and distribution PSPS line sectionizing programs. Because there is limited incremental benefit to installing additional switches, we are not including these mitigation initiatives in this WMP. * Temporary Distribution Microgrids – No additional temporary distribution microgrids will be built in 2023. The program will close after improvement projects on existing sites are completed. PG&E may develop other distribution microgrids supported by temporary or permanent generation through other programs such as the Community Microgrid Enablement Program and Microgrid Incentive Program. * Remote Grid – PG&E is continuing to develop Remote Grids as an alternative to, or in conjunction with, system hardening or other mitigation efforts. Even though we do not have a quantitative target for remote grids installed, they will continue to be part of our wildfire mitigation portfolio. * Enhanced Vegetation Management (EVM) – PG&E's EVM program concluded at the end of 2022. * EPSS Reliability Improvements – This initiative was a target in PG&E's 2022 WMP. In our 2023 WMP this target becomes an objective (GM-07) through which we will update our EPSS reliability study annually. * Community Engagement Meetings – In the 2023 WMP Community Engagement Meetings transitions from a target to 3-year and 10-year objectives (CU-01 and CU-03).	Holly Wehrman	4/4/2023	4/7/2023	4/7/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_009.zip	0	NA	1	Executive Summary & Overview	NA

Table with 15 columns: ID, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS, OGIS. Rows 73-83 contain details for various OGIS items, including descriptions of wood management, enhanced vegetation, wildfire mitigation, and asset management. Each row includes a response section with detailed technical and operational information.

166	CaPA	Set WMP-15	CaIPA_Set WMP-15	17	CaIPA_Set WMP-15_017	<p>PG&E states in its response to Question 17(b) of CalAdvocates-PGE-2023WMP-08 that "For Routine and Second Patrol, PG&E does not currently have standards specific to high-risk species," but that species types will be incorporated into Focused Tree Inspections in 2023. PG&E states in its response to question 17(b) that "Development of any standards related to high-risk species is still being determined and contingent upon completion of FTI pilots in 2023. A determination will be made specific to that program as its guidance is formalized following the pilots."</p> <p>a) Why does PG&E not have standards specific to high-risk species for routine and second patrol? b) Why does PG&E only plan to develop standards related to high-risk species for Areas of Concern, rather than throughout its service territory? c) How is PG&E establishing the standards for high-risk species? d) What method is PG&E using to establish the standards for high-risk species? e) What experts is being used and/or consulted? f) Is PG&E undertaking independent third party review, peer review, or some other method to provide independent assurance of their proposed standards? g) Would PG&E plan to expand standards related to high-risk species developed for its Areas of Concern for use throughout its service territory? <i>Link: https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_015.zip</i></p>	Holly Wehrman	4/11/2023	4/14/2023	4/14/2023	0	N/A	8.2.3.6	Vegetation Management and Inspections	High-Risk Species
167	CaPA	Set WMP-15	CaIPA_Set WMP-15	18	CaIPA_Set WMP-15_018	<p>PG&E states in its response to Question 18 of CalAdvocates-PGE-2023WMP-08 that "The Quality Management team has aligned on setting target pass rates at 88% for Field Quality Control Active Observation Programs for the following core vegetation management programs: Routine Distribution, Second Patrol Distribution, Vegetation Control, and Routine Transmission."</p> <p>Please state the basis, provide the method, and supporting documentation for the abovementioned 88% target pass rate.</p>	Holly Wehrman	4/11/2023	4/14/2023	4/14/2023	2	N/A	8.2.3.6	Vegetation Management and Inspections	High-Risk Species
168	CaPA	Set WMP-15	CaIPA_Set WMP-15	19	CaIPA_Set WMP-15_019	<p>In its response to Question 5 of CalAdvocates-PGE-2023WMP-08, PG&E provides the following table of actual and forecasted costs for vegetation management programs. PG&E further states that "The EVM Transitional programs for VM are Focused Tree Inspections, VM for Operational Mitigations, and Tree Removal Inventory."</p> <p>a) Please update this table to include the actual and forecast costs for each EVM Transitional Program, including: i. Focused Tree Inspections ii. VM for Operational Mitigations iii. Tree Inventory Removal. b) Please explain how PG&E plans to achieve the following cost reductions in vegetation management as demonstrated in the above table: i. \$331,522,000 between 2022 and 2023 ii. \$24,861,000 between 2023 and 2024.</p>	Holly Wehrman	4/11/2023	4/14/2023	4/14/2023	0	N/A	8.2.5.2	Vegetation Management and Inspections	Quality Control
169	CaPA	Set WMP-15	CaIPA_Set WMP-15	20	CaIPA_Set WMP-15_020	<p>In its response to Question 19(e) of CalAdvocates-PGE-2023WMP-08, PG&E says, "We do not have a source for tracking planned work date for individual trees and are unable to provide the data at this time."</p> <p>a) Does PG&E plan to develop a source for tracking planned work date for individual trees? b) If the answer to part (a) is yes, when does PG&E expect to have such a system implemented? c) If the answer to part (a) is no, please explain why not.</p>	Holly Wehrman	4/11/2023	4/14/2023	4/14/2023	0	N/A	8.2.3.4	Vegetation Management and Inspections	Fail-In-Mitigation
170	TURN	004	TURN_004	1	TURN_004_01	<p>Following up on the response to TURN Data Request 3, Question 2, please provide PG&E's data showing the "recorded reliability improvements at locations that have been undergrounded and/or have been hardened with covered conductor" that will be assessed in the study planned for completion on June 30, 2023.</p>	Tom Long	4/12/2023	4/17/2023	4/17/2023	1	Yes	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
171	TURN	004	TURN_004	2	TURN_004_02	<p>Regarding Table PG&E-22-35-1 (PSPS Events Lookback Analysis) on page 972 of PG&E's 2023-2025 WMP, a) For each column with numerals, provide a verbal description of all input data and of how the numerals in each column were calculated. b) Provide the table in Excel format.</p>	Tom Long	4/12/2023	4/17/2023	4/17/2023	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-35 Quantify Mitigation Benefits of Reducing PSPS Scale, Scope, and Frequency
172	TURN	004	TURN_004	3	TURN_004_03	<p>Regarding PG&E's response to ACI PG&E 22-35, beginning on page 971 of its WMP: a) Please identify each mitigation discussed in PG&E's current WMP or its 2022 WMP that has the potential to mitigate the scale, scope, frequency, or duration of PSPS events. b) Please explain why Table 22-35-1 only looks at the impact of two mitigations, undergrounding and MSO, and does not consider the other mitigations identified in response to subpart (a). c) Please provide all PG&E analyses similar to what is presented in Table 22-35-1 regarding the impact on PSPS scale, scope, frequency, or duration of any or all of the other mitigations identified in response to subpart (a). d) Regarding the statement on page 971: "We concluded that none of the 2022 mitigation initiatives eliminated any event." e) Please identify each of the "2022 mitigation initiatives" that are referenced in this statement. f) Is the meaning of this statement that none of the 2022 mitigation initiatives reduced the scale, scope, frequency or duration of any event? If not, please explain what is meant by the statement and how it relates to the analysis presented in Table 22-35-1.</p>	Tom Long	4/12/2023	4/17/2023	4/17/2023	0	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-35 Quantify Mitigation Benefits of Reducing PSPS Scale, Scope, and Frequency
174	CaPA	Set WMP-14	CaIPA_Set WMP-14	1	CaIPA_Set WMP-14_Q1	<p>P. 347 of PG&E's WMP states (regarding PG&E's undergrounding program), "Among other benefits, the reduced pace (as compared to prior projections) will decrease costs in the initial years of the program." Please list the "other benefits" referenced in the quote above.</p>	Holly Wehrman	4/11/2023	4/17/2023	4/17/2023	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
175	CaPA	Set WMP-14	CaIPA_Set WMP-14	2	CaIPA_Set WMP-14_Q2	<p>P. 347 of PG&E's WMP states (regarding PG&E's undergrounding program), "Among other benefits, the reduced pace (as compared to prior projections) will decrease costs in the initial years of the program." Please list the "other benefits" referenced in the quote above.</p>	Holly Wehrman	4/11/2023	4/17/2023	4/17/2023	0	N/A	8.1.2.6.1	Grid Design and System Hardening	Distribution, Transmission, and Substation: Fire Action Schemes and Technology
176	CaPA	Set WMP-14	CaIPA_Set WMP-14	3	CaIPA_Set WMP-14_Q3	<p>P. 359 of PG&E's WMP discusses Breakaway Connectors, and states, "The breakaway disconnect uses a weak link to provide a predictable point of separation and the service will then fall to the ground de-energized." a) What is the maximum wind speed that Breakaway Connectors can handle without separating? b) Has PG&E studied whether conditions exist that could cause a temporary fault and minimal or no damage to a non-breakaway connection, but would cause a Breakaway Connector to separate? For example, a small branch falling on the line. c) If the answer to part (b) is yes, please provide any results of such studies. d) If the answer to part (b) is no, does PG&E plan to perform such a study? e) What reliability impacts does PG&E forecast from Breakaway Connector installation? f) Please quantify the ignition risk associated with a Breakaway Connector separating. If this risk has not been quantified, describe the ignition risk in qualitative terms. g) Do Breakaway Connectors increase the likelihood of an EPSS-induced outage? Please explain your answer. h) If the answer to part (g) is yes, please quantify the increased likelihood of an EPSS-induced outage on circuits where Breakaway Connectors are installed.</p>	Holly Wehrman	4/11/2023	4/17/2023	4/17/2023	0	N/A	8.1.2.6.2	Grid Design and System Hardening	Breakaway Connector
177	CaPA	Set WMP-14	CaIPA_Set WMP-14	4	CaIPA_Set WMP-14_Q4	<p>P. 359 of PG&E's WMP states, "Breakaway disconnect does not impact PSPS Risk." Please state the basis for the above quote.</p>	Holly Wehrman	4/11/2023	4/17/2023	4/17/2023	0	N/A	8.1.2.6.2	Grid Design and System Hardening	Breakaway Connector

186	OEIS	002	OEIS_002	9	OEIS_002_09	<p>a. Provide the definitions for the EPSS Outage Types under Column J for the tab labeled "2022 EPSS Outage Data".</p> <p>b. What analysis has PG&E performed on EPSS-caused outages to determine which outages would have led to an ignition?</p> <p>c. What percentage of EPSS-caused outages since the establishment of the EPSS program would have led to an ignition had EPSS not been enabled?</p> <p>d. Broken down by year since establishment of the EPSS program, how many ignitions have occurred on EPSS-enabled circuits while EPSS was enabled at the time of ignition?</p> <p>e. Broken down by year since establishment of the EPSS program, how many ignitions have occurred on EPSS-enabled circuits while EPSS was not enabled at the time of ignition?</p> <p>f. In PG&E's response to RN-PG&E-22-12, PG&E provided additional reliability measures in Table RN-PG&E-22-12-05: EPSS System Reliability Remediations & Correction Actions, such as targeted equipment repairs. Is PG&E still using all of the identified reliability measures within this table? If not, provide a list of reliability measures PG&E is no longer using, as well as an explanation as to why it is no longer being used.</p> <p>g. Provide the GIS file for Figure PG&E-22-32-1: Circuits by Number of EPSS Outages.</p> <p>h. Provide an updated Excel version of 2023-03-27_PGE_2023_WMP_RO_Appendix D AGI PG&E-22-32_Acct01 with additional columns on the tab labeled "2022 CPZ Data".</p> <p>i. Whether or not the CPZ qualifies for additional mitigations based on the results of the study.</p> <p>j. The mitigation type(s) being used on the CPZ as a result (vegetation management, installation of animal guards, etc.)</p>	Colin Lang	4/13/2023	4/18/2023	4/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_002.zip	1	NA	Appendix D	Areas for Continued Improvement	ACI PG&E-23-32 - Updates on EPSS Reliability Study
103	CaPA	Set WMP-12	CaPA_Set WMP-12	1 SUPP	CaPA_Set WMP-12_01 SUPP	<p>Regarding Table 9-2 (Lists of Frequently De-energized Circuits) in Appendix F of PG&E's WMP, the column "Measures Taken, or Planned to Be Taken, to Reduce the Need for and Impact of Future PSPS of Circuit" is blank for the following distribution circuit Entry Numbers: 7, 8, 11, 15, 17, 18, 28, 29, 30, 36, 37, 38, 39, 47, 58, 62, 63, 70, 71, 97, 105, 111, 122, 120, 122, 125, 126, 148, 151, 153, 163, 178, 179, 183.</p> <p>a) For each of the above Entry Numbers, please explain why "Measures Taken, or Planned to Be Taken, to Reduce the Need for and Impact of Future PSPS of Circuit" are blank.</p> <p>b) For each of the above Entry Numbers, please state whether PG&E plans to take any measures during the 2023-2025 WMP period to reduce the need for and impact of future PSPS on that circuit.</p> <p>c) For each item in part (b) where PG&E does not plan to take any measures to reduce the need for an impact of future PSPS on that circuit, please state the basis for this decision.</p>	Holly Wehman	4/6/2023	4/18/2023	4/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_012.zip	1	NA	9.1.2	Public Safety Power Shutoff	Identification of Frequently De-Energized Circuits
104	CaPA	Set WMP-12	CaPA_Set WMP-12	2 SUPP	CaPA_Set WMP-12_02 SUPP	<p>Regarding Table 9-2 (Lists of Frequently De-energized Circuits) in Appendix F of PG&E's WMP, the column "Measures Taken, or Planned to Be Taken, to Reduce the Need for and Impact of Future PSPS of Circuit" is blank for the following transmission circuit Entry Numbers: 200, 227 a) For each of the above Entry Numbers, please explain why "Measures Taken, or Planned to Be Taken, to Reduce the Need for and Impact of Future PSPS of Circuit" are blank. b) For each of the above Entry Numbers, please state whether PG&E plans to take any measures during the 2023-2025 WMP period to reduce the need for and impact of future PSPS on that circuit. c) For each item in part (b) where PG&E does not plan to take any measures to reduce the need for an impact of future PSPS on that circuit, please state the basis for this decision.</p>	Holly Wehman	4/6/2023	4/18/2023	4/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_012.zip	0	N/A	9.1.2	Public Safety Power Shutoff	Identification of Frequently De-Energized Circuits
106	CaPA	Set WMP-12	CaPA_Set WMP-12	4 SUPP	CaPA_Set WMP-12_04 SUPP	<p>Regarding Table 9-2 (Lists of Frequently De-energized Circuits) in Appendix F of PG&E's WMP, distribution circuit Entry Numbers: 3, 4, 6, 13, 14, 19, 20, 21, 22, 23, 24, 25, 26, 27, 32, 35, 49, 50, 51, 52, 53, 60, 61, 64, 65, 66, 68, 69, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 84, 85, 91, 94, 96, 99, 100, 101, 102, 104, 106, 107, 108, 109, 110, 114, 115, 116, 123, 124, 126, 128, 129, 132, 137, 140, 142, 145, 147, 149, 150, 154, 158, 159, 164, 165, 168, 170, 171, 173, 180, 181, 182, 184, 186, 188, 189, 191 a) Please describe the PSPS protocols referenced in these Entry Numbers. b) Please explain how customers were "Mitigated by PSPS protocols." c) Please state how many customers benefited from mitigation by PSPS protocols in past events. d) State whether the customers referenced in part (c) benefited because they were not de-energized or because they had reduced impacts from PSPS. e) Please state how many customers PG&E expects to benefit in the future due to mitigation by PSPS protocols. f) State whether the customers referenced in part (e) will benefit because they will not be de-energized or because they will have reduced impacts from PSPS.</p>	Holly Wehman	4/6/2023	4/18/2023	4/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_012.zip	0	NA	9.1.2	Public Safety Power Shutoff	Identification of Frequently De-Energized Circuits
107	CaPA	Set WMP-12	CaPA_Set WMP-12	5 SUPP	CaPA_Set WMP-12_05 SUPP	<p>Regarding Table 9-2 (Lists of Frequently De-energized Circuits) in Appendix F of PG&E's WMP, transmission circuit Entry Numbers: 193, 195, 197, 198, 199, 201, 202, 203, 204, 205, 208, 209, 210, 211, 212, 213, 215, 217, 218, 219, 221, 222, 223, 224, 226, 228, 231, 232, 233, 234, 235, 236 a) Please describe the PSPS protocols referenced in these Entry Numbers. b) Please explain how customers were "Mitigated by PSPS protocols." c) Please state how many customers benefited from mitigation by PSPS protocols in past events. d) State whether the customers referenced in part (c) benefited because they were not de-energized or because they had reduced impacts from PSPS. e) Please state how many customers PG&E expects to benefit in the future due to mitigation by PSPS protocols. f) State whether the customers referenced in part (e) will benefit because they will not be de-energized or because they will have reduced impacts from PSPS.</p>	Holly Wehman	4/6/2023	4/18/2023	4/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_012.zip	0	NA	9.1.2	Public Safety Power Shutoff	Identification of Frequently De-Energized Circuits
188	TURN	005	TURN_005	1	TURN_005_01	<p>1. Please provide any decision tree schematic in PG&E's possession that shows, for a given location where PG&E believes that system hardening is necessary, how PG&E decides which mitigation technique to use – i.e., undergrounding, covered conductor, remote grid installation, etc. – including without limitation the criteria that PG&E uses to select the mitigation technique for that location. Please describe a narrative explanation of what the decision tree schematic shows.</p>	Tom Long	4/13/2023	4/19/2023	4/19/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_005.zip	3	NA	8.1.2	Grid Design and System Hardening	ALL
189	TURN	005	TURN_005	2	TURN_005_02	<p>2. If the response to question 1 is that PG&E has no such decision tree schematic, then please describe the process that PG&E uses to decide, for a given location, which mitigation technique to use – i.e., undergrounding, covered conductor, remote grid installation, etc. – including without limitation the criteria that PG&E uses to select the mitigation technique for that location.</p>	Tom Long	4/13/2023	4/19/2023	4/19/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_005.zip	0	NA	8.1.2	Grid Design and System Hardening	ALL
190	TURN	005	TURN_005	3	TURN_005_03	<p>3. In choosing among alternative system hardening mitigation techniques – i.e., undergrounding, covered conductor, remote grid installation, etc. – for a given location, please explain how PG&E takes into account the execution and schedule risks associated with undergrounding compared to other alternatives. PG&E discusses those risks in its 2023-2025 WMP at pages 344-346. They were also discussed in PG&E's Revised 2021 WMP (version dated 6/30/21) at pages 600-601 (Section 7.3.3.17.1, Subsection 3(b)), where PG&E uses the terms "execution risk" and "schedule risk."</p>	Tom Long	4/13/2023	4/19/2023	4/19/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_005.zip	0	NA	8.1.2	Grid Design and System Hardening	ALL
191	TURN	005	TURN_005	4	TURN_005_04	<p>4. For the undergrounding work described in PG&E's 2023-2025 WMP, please describe PG&E's policy concerning undergrounding of service connectors and the removal of poles on which service connectors are attached. To the extent that this determination varies by project, please describe the criteria that PG&E uses to decide whether PG&E undergrounds service connectors in a given location.</p>	Tom Long	4/13/2023	4/19/2023	4/19/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_005.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
192	TURN	005	TURN_005	5	TURN_005_05	<p>5. For the undergrounding work described in PG&E's 2023-2025 WMP, please describe PG&E's policy concerning undergrounding of secondary distribution lines (as opposed to primary lines) and the removal of poles on which secondary lines are attached. To the extent that this determination varies by project, please describe the criteria that PG&E uses to decide whether PG&E undergrounds secondary lines in a given location.</p>	Tom Long	4/13/2023	4/19/2023	4/19/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_005.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
193	TURN	005	TURN_005	6	TURN_005_06	<p>For the distribution circuits on which PG&E plans System Hardening undergrounding (as opposed to Rebuild undergrounding) as that term is used in PG&E's WMP (see, e.g., Table PG&E-8.1.2-2 on page 347), please provide PG&E's best estimate of the percentage of existing poles in the affected circuits including poles supporting primary lines, secondary lines, and services) that will be removed as a result of the planned System Hardening undergrounding in 2023-2025. Please explain how PG&E made this calculation and provide all inputs and assumptions.</p>	Tom Long	4/13/2023	4/19/2023	4/19/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_005.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution

197	CaPA	Set WMP-16	CaPA_Set WMP-16	2	CaPA_Set WMP-16_Q2	<p>The confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p> <p>a) For distribution operations operating procedures, if de-energizing or energizing from Load break elbows that are not protected by fuses on the source side, then reclosing a relay cut out or verified cut out on the source side protective device as well as ground relay verified cut in. Following the source side protective setup (reclosing relay cutout/ground relay cut in), the ok is then given to the field operators to then manually remove or place load break elbow to de-energize/energize circuit segment. De-energizing elbows will be placed on insulated stand off and protective equipment installed. To energize elbows, protective equipment is removed, and elbows are placed/closed in operating position. Once operation is complete, relays are then placed to their previous state.</p> <p>Load Break elbows are not to be used when energizing a segment with a known or potential fault.</p> <p>b) Please reference "WMP-Discovery2023_DR_CaAdvocates_016-Q001A1ch01CONC.pdf" and "WMP-Discovery2023_DR_CaAdvocates_016-Q001A1ch02CONF.pdf" provided in response to Question 01(b) of this Data Request Set for a copy of these Procedures.</p> <p>c) For distribution operations operating procedures, see the answer to subpart a) for energizing/deenergizing. If the segment to place normal is already energized, a parallel cannot be made using load break elbows, however, a parallel can be made adjoining the 2 circuits at a different location (i.e. an UG SCADA switch) in order to loop switch with the load break elbows. Protection schemes for a parallel have ground and reclosing relays cut out, as well as any fuses in the path bypassed. Before closing load breaks in a loop, while still in parallel, ground relays must be cut in, reclosing relays verified cut out, and then the ok will be given to the field to perform the operation of closing the load break elbow on a loop. The abnormally closed device will then be opened to separate the loop. Relays will then be placed in their proper configuration to address the current parallel, and then parallel will be separated and relays and fuses placed into their beginning state, placing the circuit normal. If no parallel is needed (i.e. only one circuit involved), cut-out the source side protective device's reclosing relay and verify the ground relay is cut in, bypass fuses before closing on a loop, and then open the abnormally closed device to separate the loop. Protective schemes will be then placed in their previous state.</p> <p>d) For distribution operations operating procedures, please see the answer to subpart c). The process is the same for opening a load break elbow when placing circuit normal using a larger parallel path if more than one circuit involved, and creating a local loop to the confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	0	N/A	8.1.2.10.3	Grid Design and System Hardening	Motor Switch Operator Switch Replacement
198	CaPA	Set WMP-16	CaPA_Set WMP-16	3	CaPA_Set WMP-16_Q3	<p>Regarding PG&E's Junction Boxes:</p> <p>a) Please explain in detail PG&E's operating procedure for operating a junction box in a vault to energize or de-energize a circuit or circuit segment.</p> <p>b) Please provide PG&E's written procedures or other documentation related to your response to part (a).</p> <p>c) Please explain in detail PG&E's operating procedure, from start to finish, for the following operation: after opening a circuit segment via a junction box that is normally in an open position, the circuit segment is returned to its normally closed position during switching.</p> <p>d) Please explain in detail PG&E's operating procedure, from start to finish, for the following operation: after closing a circuit segment via a junction box that is normally in a closed position, the circuit segment is returned to its normally open position during switching.</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	0	N/A	8.1.2.10	Grid Design and System Hardening	Other Grid Topology Improvements to Minimize Risk of Ignitions
199	CaPA	Set WMP-16	CaPA_Set WMP-16	4	CaPA_Set WMP-16_Q4	<p>Please explain PG&E's selection criteria for where to install the following equipment on underground circuits:</p> <p>a) SCADA UG switches</p> <p>b) Junction boxes</p> <p>c) Load break elbows</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	0	N/A	8.1.2	Grid Design and System Hardening	Other Grid Topology Improvements to Minimize Risk of Ignitions
200	CaPA	Set WMP-16	CaPA_Set WMP-16	5	CaPA_Set WMP-16_Q5	<p>Please explain PG&E's selection criteria for where to install the following equipment on underground circuits</p> <p>a) Pad-mounted transformers</p> <p>b) Subsurface transformers</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment
201	CaPA	Set WMP-16	CaPA_Set WMP-16	6	CaPA_Set WMP-16_Q6	<p>For each of the underground projects that PG&E has planned for 2023, please answer the following questions on each project:</p> <p>a) How many SCADA underground switches will be installed?</p> <p>b) How many overhead switches will be removed?</p> <p>c) How many tie switches to adjacent circuits currently exist?</p> <p>d) How many OH tie switches to adjacent circuits will be removed?</p> <p>e) How many tie switches (OH or UG) will exist when the project is complete?</p> <p>f) How many SCADA overhead switches will be removed?</p> <p>g) How many SCADA underground switches will be installed as tie points to adjacent circuits?</p> <p>h) How many SCADA underground switches will be installed for sectionalizing?</p> <p>i) How many subsurface transformers will be installed?</p> <p>j) How many pad-mounted transformers will be installed?</p> <p>k) How many vaults will be installed?</p> <p>l) How many junction boxes will be installed?</p> <p>m) How many junction boxes will be installed for sectionalizing?</p> <p>n) How many junction boxes will be installed as tie points to adjacent circuits?</p> <p>o) How many load break elbows will be installed?</p> <p>p) How many load break elbows will be installed for sectionalizing?</p> <p>q) How many load break elbows will be installed as tie points to adjacent circuits?</p> <p>r) How many handholes will be installed?</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment
202	CaPA	Set WMP-16	CaPA_Set WMP-16	7	CaPA_Set WMP-16_Q7	<p>For each of the underground projects that PG&E has planned for 2023, please answer the following questions on each project:</p> <p>a) How many SCADA underground switches will be installed in each circuit.</p> <p>b) How many overhead switches will be removed?</p> <p>c) How many tie switches to adjacent circuits currently exist?</p> <p>d) How many OH tie switches to adjacent circuits will be removed?</p> <p>e) How many tie switches (OH or UG) will exist when the project is complete?</p> <p>f) How many SCADA overhead switches will be removed?</p> <p>g) How many SCADA underground switches will be installed as tie points to adjacent circuits?</p> <p>h) How many SCADA underground switches will be installed for sectionalizing?</p> <p>i) How many subsurface transformers will be installed?</p> <p>j) How many pad-mounted transformers will be installed?</p> <p>k) How many vaults will be installed?</p> <p>l) How many junction boxes will be installed?</p> <p>m) How many junction boxes will be installed for sectionalizing?</p> <p>n) How many junction boxes will be installed as tie points to adjacent circuits?</p> <p>o) How many load break elbows will be installed?</p> <p>p) How many load break elbows will be installed for sectionalizing?</p> <p>q) How many load break elbows will be installed as tie points to adjacent circuits?</p> <p>r) How many handholes will be installed?</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment
204	CaPA	Set WMP-16	CaPA_Set WMP-16	9	CaPA_Set WMP-16_Q9	<p>8.1.2.10 - Other Grid Topology Improvements to Minimize Risk of Ignitions</p> <p>8.1.2.10.1 - Downed Conductor Detection Devices</p> <p>Fig 374-375 of PG&E's WMP states, "Installation of DCD on existing, new, and retrofitted recloser controllers is expected to reduce the number of ignitions due to high impedance line-to-ground faults by quickly detecting and de-energizing the fault, which is the primary existing gap in EPSS protection on primary overhead distribution conductor. Approximately half of the CPUC reportable ignitions in HFTD that occurred in 2022 while EPSS was enabled were the result of high-impedance faults."</p> <p>a) Explain the existing gap on EPSS.</p> <p>b) Explain how DCD technology can mitigate this gap to encompass all high impedance faults.</p> <p>c) List the advantages of having both programs working simultaneously.</p> <p>d) What percentage of high-impedance faults does PG&E anticipate could be mitigated by EPSS alone?</p> <p>e) What percentage of high-impedance faults does PG&E anticipate could be mitigated by DCD alone?</p> <p>f) What percentage of high-impedance faults does PG&E anticipate could be mitigated by the combination of EPSS and DCD?</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	0	N/A	8.1.2.10	Grid Design and System Hardening	Other Grid Topology Improvements to Minimize Risk of Ignitions
205	CaPA	Set WMP-16	CaPA_Set WMP-16	10	CaPA_Set WMP-16_Q10	<p>Please provide an Excel sheet listing each circuit (in its own row) that had circuit outages that occurred from 2020 to 2022 in any HFTD area. A circuit outage is when the Substation circuit breaker trips and de-energizes the entire circuit due to a fault. For each circuit with an outage, the Excel sheet should list each Circuit Outage as a row. Please provide the following additional information (in columns):</p> <p>a) ID number of the circuit affected</p> <p>b) The date of the outage</p> <p>c) Cause of outage</p> <p>d) For all equipment failure outages, please state the specific type of failure (i.e.: OH transformer failure, overload, cross arms, UG transformer failure, cable failure, splice failure, etc.)</p> <p>e) The outage duration in minutes</p> <p>f) The total number of customers impacted</p> <p>g) If all or part of the circuit is currently undergrounded, provide the date that OH to UG conversion was completed.</p> <p>h) If all or part of the circuit is in scope of a planned undergrounding project, the forecast completion date of the OH to UG conversion project.</p>	Holly Wehman	4/18/2023	4/21/2023	4/21/2023	1	N/A	QDR	N/A	N/A

12	MGRA	Data Request No. 1	MGRA_Data Request No. 1	9 SUPP	MGRA_Data Request No. 1_09 SUPP	Please provide a layer indicating calculated circuit-level risk using the methodology presented in the WMP. a. If independent probability and consequence layers exist, please provide these independently as well. Regarding Comprehensive System Diagram for All Risk Models Used: Provide comprehensive system diagrams in MS Visio or PPT for all risk models. 1. A comprehensive diagram for operational models and 2. A comprehensive diagram for planning models. Section 6.1.2, Summary of Risk Models, asks for a summary of risk models in table form with specific fields. Section 6.2.1, Risk and Risk Component Identification, asks for a chart that demonstrates the components of overall utility risk. This request is comprehensive of all models that work together in the Decision-Making Framework (DMF). The requested diagram should show: a. Interaction between the models presented graphically (e.g., inputs and outputs coming to and going from models to other models). b. Organization with the use of swimlanes where applicable. c. Starting and ending points. d. Decisions and process flows. e. Use of a legend and colors to classify inputs/output types and model-to-model interactions, and f. The full name of models used to build the model and creation feedback for model adjustments and flow logic.	The method described in the 2023 WMP to aggregate model results is conducted to produce a circuit segment level risk value but it is not used to produce a circuit level risk value. However, the geospatial representation of circuit segments that would be provided in response to this data request involves the identification of CEII, which we are required by law to maintain as confidential and cannot produce without the requesting party agreeing to protect the information through a non-disclosure agreement.	Joseph Mitchell	3/29/2023	4/21/2023	4/21/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_001.zip	1	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
76	OEIS	001	OEIS_001	8	OEIS_001_08	PG&E has provided two system diagrams within WMP-Discovery2023_DR_OEIS_001-Q008Atch01.pdf in response to this data request – one for operational models (side 01) and one for planning models (side 02). Each diagram depicts the interaction among different models and each's inputs and outputs. The diagrams also show the decision points, process flows, feedback loops where adjustments to the models are required. 1) Please see side 01 of WMP-Discovery2023_DR_OEIS_001-Q008Atch01.pdf. 2) Please see side 02 of WMP-Discovery2023_DR_OEIS_001-Q008Atch01.pdf. This diagram depicts PG&E's comprehensive decision-making framework, from identifying risk drivers to developing mitigation initiatives to address risk, adjusting program scope and developing workplans, balancing the mitigation portfolio, and executing the work.	PG&E has provided two system diagrams within WMP-Discovery2023_DR_OEIS_001-Q008Atch01.pdf in response to this data request – one for operational models (side 01) and one for planning models (side 02). Each diagram depicts the interaction among different models and each's inputs and outputs. The diagrams also show the decision points, process flows, feedback loops where adjustments to the models are required. 1) Please see side 01 of WMP-Discovery2023_DR_OEIS_001-Q008Atch01.pdf. 2) Please see side 02 of WMP-Discovery2023_DR_OEIS_001-Q008Atch01.pdf. This diagram depicts PG&E's comprehensive decision-making framework, from identifying risk drivers to developing mitigation initiatives to address risk, adjusting program scope and developing workplans, balancing the mitigation portfolio, and executing the work.	Colin Lang	4/5/2023	4/24/2023	4/24/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_001.zip	1	N/A	6.1.2	Risk Methodology and Assessment	Summary of Risk Models
207	MGRA	Data Request No. 2	MGRA_Data Request No. 2	1	MGRA_Data Request No. 2_01	With regard to PG&E's response to CaPA_Set WMP-11_014: PG&E states that one of the significant changes to the grid required for REFCL is "The replacement of old, direct bury underground cable" with REFCL. Please explain the incompatibility of "old, direct bury underground cable" with REFCL.	During the demonstration project, we reviewed primary distribution equipment installation ratings. During REFCL operation, line-to-ground voltage increases by 1.7 times, so the equipment must be able to withstand this increased voltage. A long run of old (1970 build), direct bury underground cable was identified during the review. The cable was tested for consistent neutral resistance and tan delta. The cable sections did not pass the tests and would likely fail during REFCL operation, so the cable sections were replaced. Underground cable replacements like this may be needed before a REFCL can be put into service for a given distribution substation.	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	0	N/A	8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
208	MGRA	Data Request No. 2	MGRA_Data Request No. 2	2	MGRA_Data Request No. 2_02	With regard to PG&E's response to CaPA_Set WMP-11_014: PG&E states that one of the significant changes to the grid required for REFCL is "The replacement of old, direct bury underground cable". Does PG&E have any recently undergrounded segments that are also "direct bury"? If so would these be incompatible with REFCL?	Direct bury of underground cable, meaning laying the cable directly in a dirt trench and not inside a conduit, is not a standard, approved design for our underground electric distribution system at this point in time. As such, no, we have not recently undergrounded any electric distribution segments via direct bury. The direct bury underground cable design itself would not be incompatible with REFCL, however, many direct bury underground cable installations are old and the cable insulation may not withstand the 1.7 times normal line-to-ground voltages required during REFCL operation.	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	0	N/A	8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
209	MGRA	Data Request No. 2	MGRA_Data Request No. 2	3	MGRA_Data Request No. 2_03	With regard to PG&E's response to CaPA_Set WMP-11_014: PG&E states that one of the significant changes to the grid required for REFCL is "The replacement of old, direct bury underground cable". Does PG&E's future undergrounding plans include "direct bury" and if so would that make these segments incompatible with REFCL?	No, PG&E's undergrounding plans include cable in conduit with standard voltage ratings exceeding REFCL operating voltage.	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	0	N/A	8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
210	MGRA	Data Request No. 2	MGRA_Data Request No. 2	4	MGRA_Data Request No. 2_04	Please provide non-confidential versions of the following documents: WMP-Discovery2023_DR_OEIS_001-Q007Atch02CONF.pdf	Please see "WMP-Discovery2023_DR_OEIS_001-Q007Atch02_Redacted.pdf."	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	1	N/A	Appendix B	Supporting Documentation for Risk Methodology and Assessment Definitions	Detailed Model Documentation
211	MGRA	Data Request No. 2	MGRA_Data Request No. 2	5	MGRA_Data Request No. 2_05	Please provide non-confidential versions of the following documents: WMP-Discovery2023_DR_OEIS_001-Q007Atch03CONF.pdf	Please see "WMP-Discovery2023_DR_OEIS_001-Q007Atch03_Redacted.pdf."	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	1	N/A	Appendix B	Supporting Documentation for Risk Methodology and Assessment Definitions	Detailed Model Documentation
212	MGRA	Data Request No. 2	MGRA_Data Request No. 2	6	MGRA_Data Request No. 2_06	Please provide non-confidential versions of the following documents: WMP-Discovery2023_DR_OEIS_001-Q007Atch04CONF.pdf	Please see "WMP-Discovery2023_DR_OEIS_001-Q007Atch04_Redacted.pdf."	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	1	N/A	Appendix B	Supporting Documentation for Risk Methodology and Assessment Definitions	Detailed Model Documentation
213	MGRA	Data Request No. 2	MGRA_Data Request No. 2	7	MGRA_Data Request No. 2_07	Please provide a GIS file of 2022 outages occurring on circuits where EPSS was enabled.	The method of providing a geospatial file with the location of 2022 outages on EPSS enabled circuits would require the disclosure of device location and therefore the geospatial representation of outage location that would be provided in this response to the data request involves the identification of Critical Energy Infrastructure Information (CEII), which we are required by law to maintain as confidential and cannot produce without the requesting party agreeing to protect the information through a non-disclosure agreement.	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	0	N/A	8.1.8.1.1	Grid Operations and Procedures	Protective Equipment and Device Settings
214	MGRA	Data Request No. 2	MGRA_Data Request No. 2	8	MGRA_Data Request No. 2_08	Please provide a GIS file of 2022 ignitions occurring on circuits where EPSS was enabled.	Please see "WMP-Discovery2023_DR_MGRA_002-Q008Atch01.kmz."	Joseph Mitchell	4/20/2023	4/25/2023	4/25/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_002.zip	1	N/A	8.1.8.1.1	Grid Operations and Procedures	Protective Equipment and Device Settings
215	OEIS	003	OEIS_003	1	OEIS_003_01	CPUC General Order 166 Standard 1A, Internal Coordination, requires California electric utilities to provide as part of their emergency plans a description of internal coordination functions how they gather, process, and disseminate information within their service areas, set priorities, allocate resources, and coordinate activities to restore service. GO 166 Standard 1D, External and Government Coordination, requires California electric utilities to address as part of their emergency planning coordination with Essential Customers and state and local government agencies. a) The additional items referenced above that are not required by GO 166 are listed below: i. We have drafted a Threat Hazard Identification Risk Assessment (THRA) and will be sharing the results with external agency partners. ii. We participate in quarterly MARAC meetings. iii. We hold quarterly Operational Area calls with our PG&E Public Safety Specialists. iv. We conduct more than the minimum one single exercise and include public partners in integrated exercise play; this includes inviting them to be part of the planning exercises. Internal and External Coordination Additionally, although not required as part of GO 166, Standard 1A compliance, a key element of PG&E's internal and external coordination strategy is the alignment of PG&E's functional areas to the frameworks provided by the California Standardized Emergency Management System (SEMS) and SEMS component Incident Command System (ICS). The adoption of these frameworks aligns PG&E with public partners to execute a coordinated response that supports safe restoration of service and whole community recovery. Specifically, PG&E has adopted the following SEMS/ICS consistent operational components: • Use of the same framework as the SEMS Operational Area concept in the context of emergency organizational structure and levels, with emergencies beginning at the local level (Level 1) which is PG&E's base emergency posture. • Whole community engagement through PG&E's presence in County Emergency Operations Centers and the State Operations Center, and actions of PG&E's Liaison Officer and team leveraging coordination calls and collaboration of community and customer support. SEMS Operational Area coordination framework details can be found in CERP subsection 9.4, Local Government, Operational Areas. Whole community engagement, including PG&E Liaison Officer actions are described in CERP sections 4 and 9, Coordination and Communication, and External Relationships PG&E Worker Training General Order 166, Standard 3C, requires California utilities to annually train designated personnel in preparation for emergencies and major outages. Per Standard 3C, the training shall be designed to overcome problems identified in the evaluations of responses to a major outage or exercise and reflect relevant changes to the plan. Although not required as part of GO Standard 3C compliance, PG&E has continued to train its EOC staff using a SEMS/ICS Baseline, Expanded, Advanced and Position Specific approach, as follows: • Non-Dispatchable Emergencies (NDE) system projects and projects in the pipeline. • Cybersecurity (NERC CIP-005 compliance), EMER-3102M • Disaster Rebuild, EMER-3012M • Extreme Weather Annex (EMER-3108M) • Infectious Disease and Pandemic Response Annex, EMER-3103M • Nuclear Annex • Electric, EMER-3002M • Emergency Communications, EMER-3008M • Information Technology, EMER-3007M • Tsunami Annex, EMER-3104M • Aviation Services Annex, EMER-3010M • Logistics, EMER-3005M • Earthquake, EMER-3101M • Canal Entry Annex, EMER-3011M • Gas, EMER-3003M • Human Resources, EMER-3006M • Power Generation, EMER-3004M • Workforce Management/Contact Center Operations, EMER-3009M • Physical Threat Annex b) The other emergency plan (annexes) are not WMP commitments however they may be used during any response, including a wildfire. They are either requirements of GO 166 or have been developed to address a specific hazard and/or response. As they are not commitments specifically for wildfire mitigation they are not presented as objectives. However, we have included expansion of all	Regarding Activities that Exceed GO 166 On page 624, PG&E states it "is currently working with internal and external stakeholders, including CAIOES, to develop and implement activities that exceed compliance requirements in CPUC General Order (GO) 166, Standards for Operation, Reliability, and Safety During Emergencies and Disasters." a. List and describe the referenced activities. b. Explain how each listed activity exceeds GO 166.	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	N/A	8.4.1.1	Emergency Preparedness	Objectives
216	OEIS	003	OEIS_003	2	OEIS_003_02	Regarding Emergency Preparedness Plans Beyond Stated Objectives On page 624, PG&E states that there are, "current plans for wildfire-related activities beyond the objectives in Table 8-33 and Table 8-34." a. List and describe the plans... beyond the objectives." b. Explain why plans beyond the objectives are not presented as objectives in WMP Table 8-33 and 8-34.	• Cybersecurity (NERC CIP-005 compliance), EMER-3102M • Disaster Rebuild, EMER-3012M • Extreme Weather Annex (EMER-3108M) • Infectious Disease and Pandemic Response Annex, EMER-3103M • Nuclear Annex • Electric, EMER-3002M • Emergency Communications, EMER-3008M • Information Technology, EMER-3007M • Tsunami Annex, EMER-3104M • Aviation Services Annex, EMER-3010M • Logistics, EMER-3005M • Earthquake, EMER-3101M • Canal Entry Annex, EMER-3011M • Gas, EMER-3003M • Human Resources, EMER-3006M • Power Generation, EMER-3004M • Workforce Management/Contact Center Operations, EMER-3009M • Physical Threat Annex b) The other emergency plan (annexes) are not WMP commitments however they may be used during any response, including a wildfire. They are either requirements of GO 166 or have been developed to address a specific hazard and/or response. As they are not commitments specifically for wildfire mitigation they are not presented as objectives. However, we have included expansion of all	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	N/A	8.4.1.1	Emergency Preparedness	Objectives
217	OEIS	003	OEIS_003	3	OEIS_003_03	Regarding After Action Reports a. Provide After Action Reports (or similar post-event reports) for each wildfire-related emergency in 2021 and 2022. b. Does PG&E have internal After-Action Reports (or similar post event reports) for both actual and potential PSPS events that differ from reports filed with the CPUC? If so, provide these internal reports for events in 2021 and 2022.	The confidential attachments are being provided pursuant to the accompanying confidentiality declaration. a. We interpret "wildfire-related emergency" as wildfire events for which our Emergency Operations Center was activated. Please reference "WMP-Discovery2023_DR_OEIS_003-Q003Atch01CONF.pdf" for the After Action Report for the wildfire-related emergency that occurred in 2021. Please note, the EOC was not activated for any "wildfire-related emergencies" in 2022. b. Yes, please reference the following attachments for the requested information: • WMP-Discovery2023_DR_OEIS_003-Q003Atch02CONF.pdf • WMP-Discovery2023_DR_OEIS_003-Q003Atch03.pdf • WMP-Discovery2023_DR_OEIS_003-Q003Atch04CONF.pdf PG&E includes the scope of the wildfire emergency and partners with Community Based Organizations (CBOs) to activate services based on the wildfire footprint and estimated customer impact. Two contact centers are activated during emergencies to provide 24/7 emergency live agent service for customers to report emergencies and obtain information on support resources. PG&E's partnership with 211 connects customers identified as Access and Functional Need (AFN), including Medical Baseline (MBL) customers, with approximately 11,000 CBOs and government agencies across PG&E's service area. 2-1-1 provides emergency needs screening via incoming calls and texts, outbound efforts, and in-person visits to identify the needs of households during wildfire emergencies. 2-1-1 provides Care Coordination. Through the Care Coordination process, individuals will undergo an intake assessment with a 2-1-1 Care Coordinator, including their current household situation, electricity needs, and medication and/or assistive technology usage to determine their needs during a wildfire emergency. Care Coordination provides a personalized safety plan that lists the individual's emergency contacts, local emergency or customer organization contact information, health and medical information, and other similar items. 2-1-1 Care Coordinators will contact the individual customer to check whether they require additional support. PG&E also partners with local food banks to provide customers with support during wildfires. For additional information, please refer to PG&E's 2023 AFN Plan at https://www.pge.com/en_US/residential/pages/public-safety-power-shutoff/pssp-support-page . At times, PG&E may also make Live Agent phone calls to Medical Baseline customers daily, in order to be able to provide support during a wildfire emergency. Please see attached "WMP-Discovery2023_DR_OEIS_003-Q003Atch01CONF.pdf" for the 2021 survey questionnaires and executive summaries for surveys regarding outreach effectiveness and general customer awareness of PSPS: • 2021 PSPS Pre-Season Questionnaire and Executive Summaries; • 2021 PSPS Post-Season Questionnaire and Executive Summaries; • 2021 PSPS Outreach Effectiveness Questionnaire and Executive Summaries; • 2022 PSPS Pre-Season Questionnaire and Executive Summaries; • 2022 PSPS Post-Season Questionnaire and Executive Summaries; and • 2022 PSPS Outreach Effectiveness Questionnaire and Executive Summaries. Due to limitations around uploading compressed documents (zip files) to OEIS's Docket portal, we are unable to serve this attachment through the confidential Docket. We have placed the confidential attachment within OEIS's secure ShareBase	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	4	N/A	8.4	Emergency Preparedness	NA
218	OEIS	003	OEIS_003	4	OEIS_003_04	Regarding Support for Medical Baseline Customers a. How does PG&E support Medical Baseline (MBL) customers during wildfire emergencies?	PG&E includes the scope of the wildfire emergency and partners with Community Based Organizations (CBOs) to activate services based on the wildfire footprint and estimated customer impact. Two contact centers are activated during emergencies to provide 24/7 emergency live agent service for customers to report emergencies and obtain information on support resources. PG&E's partnership with 211 connects customers identified as Access and Functional Need (AFN), including Medical Baseline (MBL) customers, with approximately 11,000 CBOs and government agencies across PG&E's service area. 2-1-1 provides emergency needs screening via incoming calls and texts, outbound efforts, and in-person visits to identify the needs of households during wildfire emergencies. 2-1-1 provides Care Coordination. Through the Care Coordination process, individuals will undergo an intake assessment with a 2-1-1 Care Coordinator, including their current household situation, electricity needs, and medication and/or assistive technology usage to determine their needs during a wildfire emergency. Care Coordination provides a personalized safety plan that lists the individual's emergency contacts, local emergency or customer organization contact information, health and medical information, and other similar items. 2-1-1 Care Coordinators will contact the individual customer to check whether they require additional support. PG&E also partners with local food banks to provide customers with support during wildfires. For additional information, please refer to PG&E's 2023 AFN Plan at https://www.pge.com/en_US/residential/pages/public-safety-power-shutoff/pssp-support-page . At times, PG&E may also make Live Agent phone calls to Medical Baseline customers daily, in order to be able to provide support during a wildfire emergency. Please see attached "WMP-Discovery2023_DR_OEIS_003-Q003Atch01CONF.pdf" for the 2021 survey questionnaires and executive summaries for surveys regarding outreach effectiveness and general customer awareness of PSPS: • 2021 PSPS Pre-Season Questionnaire and Executive Summaries; • 2021 PSPS Post-Season Questionnaire and Executive Summaries; • 2021 PSPS Outreach Effectiveness Questionnaire and Executive Summaries; • 2022 PSPS Pre-Season Questionnaire and Executive Summaries; • 2022 PSPS Post-Season Questionnaire and Executive Summaries; and • 2022 PSPS Outreach Effectiveness Questionnaire and Executive Summaries. Due to limitations around uploading compressed documents (zip files) to OEIS's Docket portal, we are unable to serve this attachment through the confidential Docket. We have placed the confidential attachment within OEIS's secure ShareBase	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	N/A	8.4.6	Emergency Preparedness	Customer Support in Wildfire and PSPS Emergencies
219	OEIS	003	OEIS_003	5	OEIS_003_05	Regarding Emergency Operations Customer Surveys a. Provide an example of each customer survey sent in 2021 and 2022 regarding emergency operations and any reports analyzing those surveys' results.	The confidential attachments are being provided pursuant to the accompanying confidentiality declaration. Please see attached "WMP-Discovery2023_DR_OEIS_003-Q003Atch01CONF.pdf" for the 2021 survey questionnaires and executive summaries for surveys regarding outreach effectiveness and general customer awareness of PSPS: • 2021 PSPS Pre-Season Questionnaire and Executive Summaries; • 2021 PSPS Post-Season Questionnaire and Executive Summaries; • 2021 PSPS Outreach Effectiveness Questionnaire and Executive Summaries; • 2022 PSPS Pre-Season Questionnaire and Executive Summaries; • 2022 PSPS Post-Season Questionnaire and Executive Summaries; and • 2022 PSPS Outreach Effectiveness Questionnaire and Executive Summaries. Due to limitations around uploading compressed documents (zip files) to OEIS's Docket portal, we are unable to serve this attachment through the confidential Docket. We have placed the confidential attachment within OEIS's secure ShareBase	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/page_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	1	N/A	8.4.4	Emergency Preparedness	Public Emergency Communication Strategy

222	OEIS	003	OEIS_003	8	OEIS_003_08	<p>Regarding Confidential Stakeholder Data Requests</p> <p>a. Provide PG&E's confidential responses and attachments to the following Data Requests: i. WMP-Discovery2023_CalAdvocates_002-Q001 ii. WMP-Discovery2023_CalAdvocates_006-Q007 iii. WMP-Discovery2023_CalAdvocates_006-Q008 iv. WMP-Discovery2023_CalAdvocates_006-Q011 v. WMP-Discovery2023_CalAdvocates_006-Q012 vi. WMP-Discovery2023_CalAdvocates_009-Q016</p>	<p>The confidential material is being provided pursuant to the accompanying confidentiality declaration.</p> <p>Please see requested attachments: i. WMP-Discovery2023_DR_CalAdvocates_002-Q001.pdf ii. WMP-Discovery2023_DR_CalAdvocates_002-Q001Atch01CONF.pdf iii. WMP-Discovery2023_DR_CalAdvocates_002-Q001Atch02CONF.pdf iv. WMP-Discovery2023_DR_CalAdvocates_002-Q001Atch03CONF.pdf v. WMP-Discovery2023_DR_CalAdvocates_002-Q001Atch04.xlsx vi. WMP-Discovery2023_DR_CalAdvocates_006-Q007.pdf vii. WMP-Discovery2023_DR_CalAdvocates_006-Q007Atch01CONF.xlsx viii. WMP-Discovery2023_DR_CalAdvocates_006-Q008.pdf ix. WMP-Discovery2023_DR_CalAdvocates_006-Q008Atch01CONF.xlsx x. WMP-Discovery2023_DR_CalAdvocates_006-Q011.pdf xi. WMP-Discovery2023_DR_CalAdvocates_006-Q011Atch01CONF.xlsx xii. WMP-Discovery2023_DR_CalAdvocates_006-Q012.pdf xiii. WMP-Discovery2023_DR_CalAdvocates_009-Q016.pdf</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	NA	7	Wildfire Mitigation Strategy Development	NA
223	OEIS	003	OEIS_003	9	OEIS_003_09	<p>Regarding PG&E's Asset Inspection Program</p> <p>a. Provide the inspection checklists used for both PG&E's patrols and detailed inspections. b. If PG&E tailors its inspections specifically to inspect wildfire risk specific items, identify which items within the checklist this applies to, particularly if such differs from standard GO 95 inspections. c. On average, how many detailed inspections are completed by inspectors per day?</p>	<p>The confidential material is being provided pursuant to the accompanying confidentiality declaration.</p> <p>Distribution Inspection Program a) Please see attachment "WMP-Discovery2023_DR_OEIS_003-Q009Atch01.xlsx" for the inspection checklist used by our detailed distribution inspections. Please note that no checklist is used during distribution patrols. b) Please see column F of attachment "WMP-Discovery2023_DR_OEIS_003-Q009Atch01.xlsx" for the items specific to wildfire risk. The checklist items that are related to wildfire risk have been designated as "critical attributes." c) On average, PG&E completes 23 to 30 structures per day, per inspector. Transmission Inspection Program a) Please see the following attachments for the checklists related to our Transmission Inspection Program: i. Transmission Inspection form ii. "WMP-Discovery2023_DR_OEIS_003-Q009Atch02.xlsx" iii. Patrol forms iv. "WMP-Discovery2023_DR_OEIS_003-Q009Atch03CONF.pdf"; v. "WMP-Discovery2023_DR_OEIS_003-Q009Atch04.pdf." b) Wildfire risk items are identified through asset abnormalities prioritized by G.O. 95, Rule 18 and documented in Please reference "WMP-Discovery2023_DR_OEIS_003-Q009Atch01.xlsx" for the items specific to wildfire risk. The checklist items that are related to wildfire risk have been designated as "critical attributes." https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/standards-and-procedures/8123p-103.pdf. Items that reference "issues" on Column "Question" of the inspection form attachment WMP-Discovery2023_DR_OEIS_003-Q009Atch02.xlsx (ex. "Conductor Issues") list potential wildfire risk items for the inspectors to identify. c) On average, PG&E completes inspections on 20 to 25 structures per day, per inspector. Substation Inspection Program a) Please see attachment "WMP-Discovery2023_DR_OEIS_003-Q009Atch05.xlsx" for a checklist providing a detailed view of supplemental inspection questions by substation asset type. b) Substation supplemental inspections questions were developed specifically for the detection of fire ignition risks within substations and were informed by Failure Modes & Effects Analysis (FMEA). Although, many of the questions are overlapped from the routine-based inspections, the methods for detecting ignition issues utilized during supplemental inspections are more rigorous and intended to provide higher ignition detectability compared to routine (GO 174) inspections. The supplemental inspection program utilizes a combination of ground-based inspections, aerial-based drone inspections, and infrared-based inspections to complete a supplemental inspection unit at a substation. Different than routine-based substation inspections, the supplemental inspections are then reviewed in part by a Centralized Inspection Review Team (CIRT) and Inspection Review Specialists (IRS) to validate findings and ensure.</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	5	NA	8.1.3	Asset Inspections	NA
225	OEIS	003	OEIS_003	11	OEIS_003_011	<p>Regarding PG&E's Response to P-WMP_2023-PG&E-002-Q07</p> <p>a. PG&E states that a Critical Attribute is defined as "a condition that could lead to either an ignition point or wire down situation that could result in a potential fire ignition." Provide all supporting documentation for procedures PG&E uses to determine whether something is a Critical Attribute. If such procedures do not exist, PG&E must provide the following: i. A description of PG&E's process for how it determines what qualifies as a Critical Attribute. ii. A list of criteria PG&E uses to qualify an asset as a Critical Attribute. b. What does PG&E mean by "as defined by Asset Strategy"?</p>	<p>i. For distribution, a critical attribute is any question that identifies a condition that could lead to either an ignition point or wire down situation that could result in a potential fire ignition. The determination of critical attribute was created based on discussions with multiple stakeholders/SMEs from Asset Strategy, Standards, and System Inspections. The finalized list was routed through EDRS and was approved by leaders from Asset Strategy and System Inspections. This list is provided as Atch01, included in our response to Question 011 A.II below. For transmission, the guidance within "Electric Transmission Line Guidance for Setting Priority Codes" provided in our response to Question 009, in accordance with GO-95 Rule 18, informs whether issues identified through inspection are critical attributes in the context of the program for asset inspections. Questions on the inspection form that lead to high priority findings are considered critical. For example, the finding of greater than 50% material loss of a conductor is critical. ii. For distribution asset inspections, please review "WMP-Discovery2023_DR_OEIS_003-Q009Atch01.xlsx" provided in our response to Question 009 for a list of our Distribution assets that we have defined as "Critical Attributes." For Transmission asset inspections, PG&E uses the following criteria to qualify critical attributes: + TD-SZSP-103 "Priority A": The condition is urgent and requires immediate response and continued action until the condition is repaired or no longer presents a potential hazard. b. "As defined by Asset Strategy" means that the guidance was provided via the Asset Strategy departments within PG&E. PG&E uses the term "critical attribute" in a variety of contexts, such as the approximately 300 critical data elements noted in WMP Table 22-23.2. The definition of critical attributes is provided in the following link: https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	NA	Appendix D	Areas for Continued Improvement	ACI PG&E-22-21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22-08 Better Application of Specific Lessons Learned from Utility-Caused Fires
226	OEIS	003	OEIS_003	12	OEIS_003_012	<p>Regarding PG&E's Response to P-WMP_2023-PG&E-002-Q09</p> <p>a. PG&E states that it is still performing targeted equipment repairs relating to EPSS. Is this a program separate from that described within Section 8.1.7 of its WMP? If so, provide the following: i. Description and procedures in which PG&E uses to decide when and where it will perform EPSS-related targeted equipment repairs. ii. How PG&E reallocates resources to address these EPSS-related targeted equipment repairs (particularly in relation to the program described in Section 8.1.7). iii. The scale of such EPSS-related targeted equipment repairs (i.e. number of work orders, number of CPZs included in the program). b. In the attachment "WMP-Discovery2023_DR_OEIS_003-Q009Atch02.xlsx", targeted equipment repairs are not included as part of the additional mitigations being completed. Why were these not included if PG&E is still using this measure? c. Provide a GIS file with the locations of CPZs scoped for additional reliability mitigations based on EPSS results.</p>	<p>The confidential material is being provided pursuant to the accompanying confidentiality declaration.</p> <p>a. (i) (ii) EPSS targeted equipment repairs are incorporated into the Open Work Orders Tag program as described in Section 8.1.7 of the WMP. EPSS targeted equipment repairs can be either an EC, ER, or CE Notification. Notifications with a potential reliability impact on EPSS circuits receive a priority ranking for visibility during work scheduling to allow them to be scheduled on a priority basis compared to other work. Field Operations uses the priority ranking during scheduling to help in decision-making and subsequent execution. PG&E is currently using the prioritization criteria from 2022 that is based on circuit risk rankings. b. EPSS targeted equipment repairs are currently included as a part of attachment "WMP-Discovery2023_DR_OEIS_002-Q009Atch01.xlsx" in column "Open Work Tags (Assets)". These Tags may constitute EC, ER, and CE Notifications and may be EPSS targeted equipment repairs or other types of work. The additional mitigation measures previously included in the attachment are mitigation measures being undertaken from a reliability improvement perspective. These are in addition to the Open Work Orders Tag program. c. Please see attached file "WMP-Discovery2023_DR_OEIS_003-Q012Atch01CONF.kmz".</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	1	NA	Appendix D	Areas for Continued Improvement	ACI PG&E-22-21 Reliability Study
227	OEIS	003	OEIS_003	13	OEIS_003_013	<p>Regarding PG&E's Response to P-WMP_2023-PG&E-002-Q08</p> <p>a. Provide all Enhanced Ignition Analysis (EIA) reports completed for instances in which the qualifier was an EPSS protected facility. Provide all Enhanced Ignition Analysis (EIA) reports completed for instances in which the qualifier was an EPSS protected facility.</p>	<p>The confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p> <p>In response to Question 8 of Energy Safety's Second Data Request, subpart (b), PG&E provided a list of ignitions that were evaluated/partially evaluated in the Enhanced Ignition Analysis (EIA) program and listed why each ignition event qualified to be included in the program. The program is primarily focused on analyzing ignitions in HFTD and HFRA, but PG&E includes ignitions on EPSS protected facilities in the process as an exception, regardless of location. As indicated in the spreadsheet in response to Question 8 (d), there were 22 ignitions on circuits protected by EPSS that were included into the EIA program when the location criteria was not also met. PG&E understands this request is a follow-up asking for the deliverables for the 22 events where the only qualifier was EPSS. Given the limited time to respond to this request, PG&E is providing the summary investigation reports prepared by the EIA program for each of the 22 ignitions in "WMP-Discovery2023_DR_OEIS_003-Q013CONF.zip". Please note this entire .zip file is confidential. We note that this population of events is not inclusive of all ignitions associated with EPSS protected facilities that were analyzed as part of the program and qualified for review based on other factors like location (i.e. HFTD or HFRA as indicated in response to Question 8 (d)). Please feel free to reach out if you have any additional questions regarding this response.</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	1	NA	Appendix D	Areas for Continued Improvement	ACI PG&E-22-08 Better Application of Specific Lessons Learned from Utility-Caused Fires
228	OEIS	003	OEIS_003	14	OEIS_003_014	<p>Regarding PG&E's Fault Tamer Replacements</p> <p>a. Provide the number of fault tamers PG&E has replaced by year since 2020. b. Provide PG&E's targets for fault tamer replacements in 2023 and 2024, as applicable. c. Provide the number of fault tamer devices within PG&E's HFTD. d. Provide the number of fault tamer devices identified as needing replacement within PG&E's HFTD.</p>	<p>The confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p> <p>a. We interpret "replace" to mean a proactive changing of an in-service fault tamer fuse that had not failed or operated normally due to a fault. In July 2021, in response to our 2020 causal evaluation of 4 apparent fault tamer failures, we published a bulletin that requires replacement of the entire fuse after a fault (no re-use of the backup limiter portion of the fuse). We replaced fuses at seven locations associated with recent transformer changeouts in high wildfire consequence zones. At the time, there was a hypothesis that fault tamer failures were correlated with transformer changeouts. That hypothesis has since been disproven. Several fault tamer replacements from circuits in the Sonoma division were completed in August 2022 to support our failure evaluation. On 10/06/2022, after identifying an internal weld separation issue as the root cause of a recent increase in failures associated with 2021 and newer voltage fuses, we issued a full stop of new fault tamer inventory, and we purged and returned all fault tamer inventory. b. We do not have any defined targets for proactive replacements in 2023 and 2024, unless they are identified in our GO 165 inspection program guidance, as revised for 2023 to better assess for fuse end-of-life conditions and to reflect recent updates in manufacturer guidelines. New fault tamers are not currently being installed, so when a fault tamer fuse operates after a fault, it is replaced with a substitute fuse. c. We have records indicating there are 59,102 fault tamer fuses in service for transformer protection in HFTD, installed between 2020 and 2022, through the October 2022 purge of fault tamer inventory. There are additional fault tamers installed prior to 2020 and a separate smaller population of fault tamers in place for line protection. Those totals are not available in the limited amount of time to respond to the data request. d. The WDRM v4 is currently in review and validation prior to an anticipated approval in Q2 2023. e. The WDRM v4 will be available as an input to the underground program development after approval in Q2 2023. Beyond the response provided to ACI PG&E-22-34, the impact to the underground program—i.e., how it will be applied and which years it will be used to plan—has not yet been determined. f. WDRM v4 has not yet been finalized, so we do not have a final list of differences and improvements being made to v4 in comparison to v3. However, in our 2023-2025 WMP, we discussed potential changes and improvements to WDRM v4 at high level. In Section 6.7 (page 213), we discussed our Risk Assessment Improvement Plan, including potential model improvements. Similarly, on page 848 in Appendix B we discussed WDRM v4 as part of our model development schedule. And ACI 22-07 (page 865) discusses our lessons learned from third party review of our model. d. Yes, as part of the review and validation model development step, the WDRM v4 is currently undergoing third-party review. The final validation report is due in Q2 2023. b) The mitigation effectiveness for down conductor detection was based on the incremental benefit to EPSS. The mitigation effectiveness was determined by reviewing the ignitions that occurred during EPSS enablement periods. Out of the 30 ignitions reviewed, 14 of them are high impedance faults. Of the 14 ignitions, we estimate that 25% can be prevented based on subject matter expert review. That review considered the fault characteristics relative to DCD's ability to detect high impedance faults as small as 1 amp, and that DCD can detect line to ground faults, but not line to line faults. Based on the above, the calculation of effectiveness is as follows: 14/30 * 25% = 11.8%. c) The approximate miles that OEIS calculates is only the miles in the Top 5% of risk (41 circuit segments) and not the full mileage across all locations in which DCD is covering. d) Approximately 20% of HFRM miles were covered by Down Conductor Detection (DCD) in 2022, with another 7,000 HFRM miles planned in 2023. 700 HFRM miles in 2024 and 30 HFRM miles in 2025. HFRM map utilizes the same methodology as CPUC-approved HFTD map, but also factors in incremental adds or exclusions to the HFTD map boundaries in consideration of risk factors for potential catastrophic fires originating from utility infrastructure. e) The effectiveness of 65% was a conservative estimate of EPSS effectiveness prior to the final calculated effectiveness of 68% based on review of 2022 EPSS ignitions. f. We do not possess a full list of Partial Voltage Detection in order to adequately represent an effectiveness.</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	NA	NA	NA	NA
229	OEIS	003	OEIS_003	15	OEIS_003_015	<p>Regarding PG&E's V4 of its Wildfire Distribution Risk Model (WDRM)</p> <p>a. What is PG&E's status for review and approval of V4? b. When does PG&E intend to use V4 output to influence its undergrounding plan? Include discussion on details of how this may affect PG&E's undergrounding plan. c. Provide a list of the differences and improvements being made to V4 in comparison to V3. d. Is V4 undergoing third-party review similar to V2 and V3? If so, provide a status update on the review, including expected completion date for the related report.</p>	<p>The confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p> <p>a. The WDRM v4 is currently in review and validation prior to an anticipated approval in Q2 2023. b. The WDRM v4 will be available as an input to the underground program development after approval in Q2 2023. Beyond the response provided to ACI PG&E-22-34, the impact to the underground program—i.e., how it will be applied and which years it will be used to plan—has not yet been determined. c. WDRM v4 has not yet been finalized, so we do not have a final list of differences and improvements being made to v4 in comparison to v3. However, in our 2023-2025 WMP, we discussed potential changes and improvements to WDRM v4 at high level. In Section 6.7 (page 213), we discussed our Risk Assessment Improvement Plan, including potential model improvements. Similarly, on page 848 in Appendix B we discussed WDRM v4 as part of our model development schedule. And ACI 22-07 (page 865) discusses our lessons learned from third party review of our model. d. Yes, as part of the review and validation model development step, the WDRM v4 is currently undergoing third-party review. The final validation report is due in Q2 2023.</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	NA	6.2.1	Risk Methodology and Assessment	Risk and Risk Component Identification
230	OEIS	003	OEIS_003	16	OEIS_003_016	<p>Regarding PG&E's response to OEIS Data Request 2 Question 5 Attachment 1</p> <p>a. How did PG&E determine a mitigation effectiveness of 11.8% for down conductor detection (DCD)? b. In Table 8-4, PG&E has included 2023, 2024 and 2025 targets for DCD. Additionally, in response to CalAdvocates Data Request 10 Question 1, PG&E supplies that 21,000 miles will be covered by DCD by 2025. However, within the attachment, PG&E only demonstrates goals of approximately 27.34, 1.40, and 0 miles in 2023, 2024, and 2025 respectively. 2. Explain this discrepancy. c. Include the number of miles DCD covered in 2022, as well as how many additional miles will be covered based on PG&E's targets for 2023, 2024, and 2025 broken down by year. d. How did PG&E determine a mitigation effectiveness of 65% for EPSS? e. Why is partial voltage detection (PVD) not included within PG&E's mitigations within the attachment? If it were, what would the mitigation effectiveness be for including PVD?</p>	<p>The confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p> <p>a. The mitigation effectiveness for down conductor detection was based on the incremental benefit to EPSS. The mitigation effectiveness was determined by reviewing the ignitions that occurred during EPSS enablement periods. Out of the 30 ignitions reviewed, 14 of them are high impedance faults. Of the 14 ignitions, we estimate that 25% can be prevented based on subject matter expert review. That review considered the fault characteristics relative to DCD's ability to detect high impedance faults as small as 1 amp, and that DCD can detect line to ground faults, but not line to line faults. Based on the above, the calculation of effectiveness is as follows: 14/30 * 25% = 11.8%. b) The approximate miles that OEIS calculates is only the miles in the Top 5% of risk (41 circuit segments) and not the full mileage across all locations in which DCD is covering. c) Approximately 20% of HFRM miles were covered by Down Conductor Detection (DCD) in 2022, with another 7,000 HFRM miles planned in 2023. 700 HFRM miles in 2024 and 30 HFRM miles in 2025. HFRM map utilizes the same methodology as CPUC-approved HFTD map, but also factors in incremental adds or exclusions to the HFTD map boundaries in consideration of risk factors for potential catastrophic fires originating from utility infrastructure. d) The effectiveness of 65% was a conservative estimate of EPSS effectiveness prior to the final calculated effectiveness of 68% based on review of 2022 EPSS ignitions. e. We do not possess a full list of Partial Voltage Detection in order to adequately represent an effectiveness.</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	NA	8.1.2.10	Grid Design and System Hardening	Downed Conductor Detection Devices
231	OEIS	003	OEIS_003	17	OEIS_003_017	<p>Regarding undefined terms in 8.4.6</p> <p>PG&E discusses "red tagged" customers, "impacted" communities, and "impacted" customers (including cities, counties, and tribal governments) in Section 8.4.6; however, definitions of such terms are not provided. a. Provide a definition, as it pertains to both wildfire and PSPS events in the context of Section 8.4.6, and the criteria for these groups being identified as such: i. "Red tagged" customers ii. "Impacted" communities iii. "Impacted" customers</p>	<p>The confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p> <p>Red Tag: For natural disasters, including wildfires, in which the Governor or POTUS declares a State of Emergency, the official definition comes from D.19-07-015 (page 16) "...when a disaster(s) has resulted in the destruction or damage of a structure, such that utility service is disrupted voluntarily or involuntarily due to safety concerns or reconstruction activities to address the damage from a proclaimed state of emergency event." Impacted Communities: This term was used as shorthand for all impacted customers and facilities. Impacted Customers: In a typical wildfire event, PG&E uses the fire perimeter maps available on National Inter-Agency Fire Center website and expand them by 2 miles each day. Any customer attached to a meter within the extended perimeter becomes an "impacted customer". The list of impacted customers and structures are refreshed daily, until the fire is contained.</p>	Colin Lang	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	0	NA	8.4.6	Emergency Preparedness	Customer Support in Wildfire and PSPS Emergencies
236	TURN	006	TURN_006	1	TURN_006_01	<p>1. Regarding the System Hardening Decision Tree provided as Attachment 3 to the response to TURN data request 5-1, please define the following acronyms used in the Decision Tree: a. PSS b. FSD c. EASOP d. WGC e. ECOP</p>	<p>The confidential attachments are being provided pursuant to the accompanying confidentiality declaration.</p> <p>a. PSS = Public Safety Specialist. PG&E PSS team members with extensive, local wildfire operations experience. Many had a previous career with CAL FIRE or other fire agencies. b. FSD = Field Scoping Desktop Meeting. Meeting to scope potential undergrounding project sites held in office as opposed to in the field. c. EASOP = Economic Analysis Software Program. Program used by PG&E to evaluate project economics. d. WGC = Wildfire Governance Committee. Also referred to as PG&E's Wildfire Risk Governance Steering Committee (WRGSC). It makes decisions about developing and prioritizing mitigation initiatives. e. ECOP = Electric Correction Optimization Program. This program considers existing open electric work when prioritizing, leveraging opportunities to gain efficiency by bundling multiple undergrounding work into a project.</p>	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_006.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution

237	TURN	006	TURN_006	2	TURN_006_Q2	Regarding the System Hardening Decision Tree provided as Attachment 3 to the response to TURN data request 5-1 and discussed in that response: a. Does PG&E intend to use this Decision Tree for future projects during the 2023-2025 period for selecting which system hardening mitigation to use for a given location? b. If the answer to "a" is anything other than an unequivocal "no," please explain each and every circumstance under which PG&E intends to use this Decision Tree for future projects.	a) No. The System Hardening Decision Tree was used to scope base system hardening projects in the workplan from 2023-2026 that were selected using the WDRM, version 2. Much of this work was initiated for scoping prior to the 10K UG program announcement in late 2021. The System Hardening Decision Tree is not and will not be used for newly scoped work. b) N/A	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_006.zip	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
238	TURN	006	TURN_006	3	TURN_006_Q3	Regarding the Undergrounding Decision Tree provided as Attachment 1 to the response to TURN data request 1 and discussed in that response: a. Please provide a time range in months for each of the "Key Phases" listed in the box in the lower left corner. b. Please explain how PG&E defines the words "infeasible," as used in the text of the response (related to the possibility that undergrounding may ultimately be determined to be "infeasible"), and "unfeasible" as used in the Decision Tree.	a) Circuit Segment Risk Ranking – The WDRM risk model is the first step in identifying the list of circuit segments where wildfire risk is the highest. This data is updated roughly on an annual basis. b) Circuit Selection Process – The inputs to the feasibility score, bundling methodology following the previous year's lessons learned, and new inputs are developed in parallel, but require multiple reviews of the analysis and ultimate approval. This can take 2-3 months, but the first discussions often start before the risk model is finalized. Once the model is available, and barring any major modifications to inputs, it can be 1-2 months following release of the new risk model and associated Circuit Segment Risk Ranking. c) Feasibility Study – Currently, the outlook for steady state output from this step is 40-70 miles per month with many activities being done in parallel. The Grid Design team can usually complete this step in about 1 month. d) Field Scoping – This is often the longest step due to the coordination of multiple groups, field checks, and finalization of documents and decisions related to the details of the project being scoped. Typically, this step can take ~2-3 months with high variation in that number for specific projects. e) In the context, infeasible and unfeasible are used interchangeably, to represent an option as impractical to actually construct. Typically, locations deemed infeasible would require substantial re-routing of the line or must cross simply non-passable terrain that would impede a potential LFC route for the circuit. In these cases, parallel use of OH line segments is considered. f) P41 – Pre-entailed Interconnection Map – In this context, this refers to a level point to facilitate generation connection to serve customers on a radially fed circuit with no available field-side operational ties (AKA "back-ties"). g) EASOP – Economic Analysis Software Program – Program used by PG&E to evaluate project economics. A OEC – Operations Emergency Center – Regional operation center activated during an emergency event to manage resources and response locally. h) DG – Distribution Generators – Generators installed on the primary voltage system serving multiple customers. i) SG – Service Generators – Generators installed in the secondary/service conductor often serving only one customer. j) PG&E will use this Fire Rebuild Decision Tree to provide guidance to the OEC and supporting teams on how to rebuild the system when damaged by a major storm or fire event. k) Gray Services – An older type of installed service aerial conductor that is more susceptible to water ingress and deterioration. l) Tree-connects – In this context, a service or secondary wire that is tied / connected directly to trees instead of poles. m) Breakaway connectors – A connector system, primarily used at the service pole, that is designed to separate safely (AKA "break-aways"), in the event of a tree or branch falling into the line, at the pole instead of pulling down the energized service wire or disconnecting at the weather head. The breakaway connector system is designed to leave no exposed energized components on the downed service line.	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_006.zip	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
239	TURN	006	TURN_006	4	TURN_006_Q4	Regarding the Fire Rebuild Decision Tree provided as Attachment 2 to the response to TURN data request 5-1 and discussed in that response: a. Please define the following acronyms used in the Decision Tree: PH, EASOP, OEC, DG, SG. b. Does PG&E intend to use this Decision Tree for future fire rebuild projects during the 2023-2025 period for selecting which system hardening mitigation to use for a given location? c. If the answer to "b" is anything other than an unequivocal "no," please explain each and every circumstance under which PG&E intends to use this Decision Tree for future fire rebuild projects.	a) PH – Pre-entailed Interconnection Map – In this context, this refers to a level point to facilitate generation connection to serve customers on a radially fed circuit with no available field-side operational ties (AKA "back-ties"). b) EASOP – Economic Analysis Software Program – Program used by PG&E to evaluate project economics. A OEC – Operations Emergency Center – Regional operation center activated during an emergency event to manage resources and response locally. c) DG – Distribution Generators – Generators installed on the primary voltage system serving multiple customers. d) SG – Service Generators – Generators installed in the secondary/service conductor often serving only one customer. e) PG&E will use this Fire Rebuild Decision Tree to provide guidance to the OEC and supporting teams on how to rebuild the system when damaged by a major storm or fire event.	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_006.zip	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
240	TURN	006	TURN_006	5	TURN_006_Q5	Regarding the response to TURN data request 5-4, please explain the following terms used in the last paragraph of that response: a. Gray services b. Tree-connects c. "Breakaway" connectors	a) Gray Services – An older type of installed service aerial conductor that is more susceptible to water ingress and deterioration. b) Tree-connects – In this context, a service or secondary wire that is tied / connected directly to trees instead of poles. c) Breakaway connectors – A connector system, primarily used at the service pole, that is designed to separate safely (AKA "break-aways"), in the event of a tree or branch falling into the line, at the pole instead of pulling down the energized service wire or disconnecting at the weather head. The breakaway connector system is designed to leave no exposed energized components on the downed service line.	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_006.zip	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
241	TURN	006	TURN_006	6	TURN_006_Q6	Regarding the response to TURN data request 5-6: a. Please explain what is meant by the word "topped" in the phrase: "Determining the poles that will be topped." b. Is PG&E able to offer a rough approximation of the percentage of existing poles in the affected distribution circuits – including poles supporting primary lines, secondary lines and service – that would be removed as a result of the planned undergrounding mileage 2023-2025? Please provide such a rough approximation if possible.	a) We do not provide a separate SWRSE score because, as indicated on page 968 of the 2023-2025 WMP, while in practice the standard cost per mile of undergrounding is expected to decline over time, we assumed it will be fixed at 1.1 for all circuit segments. In the amount of time available to respond to this request, there are several reasons why the project mileage may be different from the quoted OH HFTD miles. These reasons include: • The total OH HFTD miles do not equal the required mileage for an underground project. • Projects can span multiple years. • Projects can include multiple circuit segments. • Projects can include remote grid or hybrid alternatives. • Some portions of the line may already be hardened. • Relocation of the line can result in a difference in resultant project miles. • Portions of the line may be private or customer owned.	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_006.zip	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
242	TURN	007	TURN_007	1	TURN_007_Q1	1. Regarding the 2023-2026 Undergrounding Workplan referenced on page 910 of the WMP (R1) and provided in Excel format in response to TURN Data Request 2-4: a. Please explain how, if at all, either or both of Simplified Wildfire Risk Spend Efficiency (SWRSE) and Wildfire Feasibility Efficiency (WFE) values (discussed on p. 968 of the WMP (R1)) were used in developing this workplan. b. Please explain what measure(s) PG&E used to prioritize projects in this workplan and how such measure(s) were used. c. Please add to the Excel spreadsheet columns showing the SWRSE and WFE for each listed circuit segment. d. Comparing this Workplan with Table 7-2 of the WMP, please explain how the HFTD miles in Table 7-2 for a given circuit segment relate to the Planned UG miles in Column V through AA of the Undergrounding Workplan. For example, the second highest risk ranked circuit segment in Table 7-2, Borner Nook 1101CB, is shown to have 17.80 HFTD miles, but the Undergrounding Workplan shows projects for 2023-2026 totaling only 0.91 miles. Please explain all of the reasons why the miles in the Undergrounding Workplan would differ from the miles in Table 7-2 for a given circuit segment. Please also specifically explain for the Borner Nook 1101CB circuit segment, why the planned undergrounding mileage only addresses a small portion of the mileage identified in Table 7-2.	a) The SWRSE and WFE scores are calculated by the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2: $Enterprise\ Risk\ Score = \frac{1}{D} \sum_{i=1}^n \frac{W_i \cdot V_i}{T_i}$ For example, in Table 7-2.4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calculated by 11.41 to arrive at comparable enterprise level scores used for the Overall Risk Score. b. As stated in Section 6.4.2, we consider circuit segment ranking by high to low mean risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment based on the mean risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total risk from WDRM. The total risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution. c. Please see attachment WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx. Two additional columns N/O were added to this "TopRisk_Table" tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column ENEQ. Please note, the items outside of the top 5% risk circuit segments do not have same level of detailed review given the 5% risk circuit segments do not have same level of detailed review given the limited time to respond to this request. d. Responses below: i) The values are determined by the subdiver effectiveness against the subdiver probability of each circuit segment. ii) This was an error. The corrected file has been provided in response to Cal Advocates and OES data requests and will be corrected in an errata filing on April 26, 2023. The corrected values are used in attachment "WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx". iii) These values are based on the blended average effectiveness based on the subdiver composition for each circuit segment. As per Table 7-2, the contribution of vegetation, equipment, and contact from object is different for each circuit segment, so the effectiveness varies by location. iv) It is part of the consideration, however, the overall risk reduction benefit is much higher for undergrounding as compared to covered conductor. https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	1	Yes	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
243	TURN	007	TURN_007	2	TURN_007_Q2	Regarding Table 7-2 in the WMP: a. TURN understands from Table 6-5 that the Overall Risk Score values in Table 7-2 are the sum of Total Ignition Risk Score and the Total PSPS Risk Score. Please explain how these input values to the Overall Risk Score column were calculated. Please include in the explanation the relevant mathematical equation(s). b. If not explained in response to "a", please explain how the Overall Risk Score relates to the Wildfire Mean Risk Score. c. Please provide, in live Excel format, a table that shows the information in Table 7.2 for all HFTD circuit segments. If PG&E has the same information for its self-identified HFRA circuit segments, please include that information also, and indicate which circuit segments are HFRA.	a) The SWRSE and WFE scores are calculated by the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2: $Enterprise\ Risk\ Score = \frac{1}{D} \sum_{i=1}^n \frac{W_i \cdot V_i}{T_i}$ For example, in Table 7-2.4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calculated by 11.41 to arrive at comparable enterprise level scores used for the Overall Risk Score. b. As stated in Section 6.4.2, we consider circuit segment ranking by high to low mean risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment based on the mean risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total risk from WDRM. The total risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution. c. Please see attachment WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx. Two additional columns N/O were added to this "TopRisk_Table" tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column ENEQ. Please note, the items outside of the top 5% risk circuit segments do not have same level of detailed review given the 5% risk circuit segments do not have same level of detailed review given the limited time to respond to this request. d. Responses below: i) The values are determined by the subdiver effectiveness against the subdiver probability of each circuit segment. ii) This was an error. The corrected file has been provided in response to Cal Advocates and OES data requests and will be corrected in an errata filing on April 26, 2023. The corrected values are used in attachment "WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx". iii) These values are based on the blended average effectiveness based on the subdiver composition for each circuit segment. As per Table 7-2, the contribution of vegetation, equipment, and contact from object is different for each circuit segment, so the effectiveness varies by location. iv) It is part of the consideration, however, the overall risk reduction benefit is much higher for undergrounding as compared to covered conductor. https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	1	N/A	7.1.3	Wildfire Mitigation Strategy Development	Risk-Informed Prioritization
245	TURN	007	TURN_007	4	TURN_007_Q4	Regarding Attachment 2023-03-27_PGE_2023_WMP_R1_Section 6.4.2_A1ch1, which is referenced on page 195, fn. 77 of the WMP (R1): a. Please provide a version of this Excel workbook that includes the same information for all of PG&E's HFTD circuit segments, or as many of those segments for which PG&E has such information. b. If PG&E has comparable information for its self-identified HFRA segments, please provide that information. c. Has PG&E calculated RSEs at the circuit segment level for any of the various mitigations shown in this workbook? If so, which mitigations? Provide those calculated RSEs, preferably as additional columns in the workbook(s) provided in response to "a" and "b". d. Regarding the Covered Conductor Mitigation Effectiveness values in Columns (U) through (X), AE (2022), BP (2024), and DA (2025): i. Please explain how these values were determined. ii. Why are the values for 2023-2025 much lower than the values for 2022? iii. Why do the values differ (slightly) based on circuit segment? iv. Are the values shown the values that are being used in PG&E's process for selecting among different wildfire mitigation techniques (e.g., undergrounding vs. covered conductor) for the listed circuit segments?	a) The SWRSE and WFE scores are calculated by the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2: $Enterprise\ Risk\ Score = \frac{1}{D} \sum_{i=1}^n \frac{W_i \cdot V_i}{T_i}$ For example, in Table 7-2.4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calculated by 11.41 to arrive at comparable enterprise level scores used for the Overall Risk Score. b. As stated in Section 6.4.2, we consider circuit segment ranking by high to low mean risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment based on the mean risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total risk from WDRM. The total risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution. c. Please see attachment WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx. Two additional columns N/O were added to this "TopRisk_Table" tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column ENEQ. Please note, the items outside of the top 5% risk circuit segments do not have same level of detailed review given the 5% risk circuit segments do not have same level of detailed review given the limited time to respond to this request. d. Responses below: i) The values are determined by the subdiver effectiveness against the subdiver probability of each circuit segment. ii) This was an error. The corrected file has been provided in response to Cal Advocates and OES data requests and will be corrected in an errata filing on April 26, 2023. The corrected values are used in attachment "WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx". iii) These values are based on the blended average effectiveness based on the subdiver composition for each circuit segment. As per Table 7-2, the contribution of vegetation, equipment, and contact from object is different for each circuit segment, so the effectiveness varies by location. iv) It is part of the consideration, however, the overall risk reduction benefit is much higher for undergrounding as compared to covered conductor. https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	Tom Long	4/21/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	0	N/A	6.4.2	Risk Methodology and Assessment	Top Risk-Contributing Circuits/Segments
246	CaPA	Set WMP-16	CaPA_Set WMP-16	11	CaPA_Set WMP-16_Q11	Regarding PG&E's Average Peak Load for UG Projects. For the purposes of this question, if any portion of a circuit was or will be undergrounded as part of an OH to UG conversion project, the circuit should be included: a) Provide the average peak load to circuit ampacity in percent from 2017 to 2019 for the circuits with OH to UG conversion completed in 2020. b) Provide the average peak load to circuit ampacity in percent from 2018 to 2020 for the circuits with OH to UG conversion completed in 2021. c) Provide the average peak load to circuit ampacity in percent from 2019 to 2021 for the circuits with OH to UG conversion completed in 2022. d) Provide the average peak load to circuit ampacity in percent from 2020 to 2022 for the circuits that will be undergrounded in 2023. e) Provide average peak load to circuit ampacity in percent from 2020 to 2022 for the circuits that will be undergrounded in 2024. f) Provide the average peak load to circuit ampacity in percent from 2020 to 2022 for all adjacent circuits to the circuits that have OH to UG conversion projects in 2023. g) Provide the average peak load to circuit ampacity in percent from 2020 to 2022 for all adjacent circuits to the circuits that have OH to UG conversion projects in 2024.	a) The SWRSE and WFE scores are calculated by the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2: $Enterprise\ Risk\ Score = \frac{1}{D} \sum_{i=1}^n \frac{W_i \cdot V_i}{T_i}$ For example, in Table 7-2.4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calculated by 11.41 to arrive at comparable enterprise level scores used for the Overall Risk Score. b. As stated in Section 6.4.2, we consider circuit segment ranking by high to low mean risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment based on the mean risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total risk from WDRM. The total risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution. c. Please see attachment WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx. Two additional columns N/O were added to this "TopRisk_Table" tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column ENEQ. Please note, the items outside of the top 5% risk circuit segments do not have same level of detailed review given the 5% risk circuit segments do not have same level of detailed review given the limited time to respond to this request. d. Responses below: i) The values are determined by the subdiver effectiveness against the subdiver probability of each circuit segment. ii) This was an error. The corrected file has been provided in response to Cal Advocates and OES data requests and will be corrected in an errata filing on April 26, 2023. The corrected values are used in attachment "WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx". iii) These values are based on the blended average effectiveness based on the subdiver composition for each circuit segment. As per Table 7-2, the contribution of vegetation, equipment, and contact from object is different for each circuit segment, so the effectiveness varies by location. iv) It is part of the consideration, however, the overall risk reduction benefit is much higher for undergrounding as compared to covered conductor. https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	Holly Wehman	4/18/2023	4/26/2023	4/26/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_016.zip	1	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment
246	CaPA	Set WMP-18	CaPA_Set WMP-18	1	CaPA_Set WMP-18_Q1	PG&E states in response to Question 1(a) of CalAdvocates-PGE-2023WMP-15: Vegetation Management for Operational Mitigation (VMM) will be primarily focused in HFTD and HFRA. There are instances where a circuit segment may cross in or out of HFTD/EFRA and VMM would complete work on the whole circuit segment including the areas outside HFTD/EFRA. Focused Tree Inspections are planned for HFTD areas in the plan developed for 2023. a) Is it correct to interpret the statement above to mean that Focused Tree Inspections will take place only in HFTD areas (and will not include the HFRA, as VMM will) in 2023? b) If Focused Tree Inspections will take place only in HFTD areas and not in HFRA, please explain why. c) Will Focused Tree Inspections take place outside of the HFTD after the year 2023? d) If yes, please state where (in addition to the HFTD) Focused Tree Inspections are likely to take place after the year 2023.	a) The SWRSE and WFE scores are calculated by the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2: $Enterprise\ Risk\ Score = \frac{1}{D} \sum_{i=1}^n \frac{W_i \cdot V_i}{T_i}$ For example, in Table 7-2.4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calculated by 11.41 to arrive at comparable enterprise level scores used for the Overall Risk Score. b. As stated in Section 6.4.2, we consider circuit segment ranking by high to low mean risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment based on the mean risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total risk from WDRM. The total risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution. c. Please see attachment WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx. Two additional columns N/O were added to this "TopRisk_Table" tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column ENEQ. Please note, the items outside of the top 5% risk circuit segments do not have same level of detailed review given the 5% risk circuit segments do not have same level of detailed review given the limited time to respond to this request. d. Responses below: i) The values are determined by the subdiver effectiveness against the subdiver probability of each circuit segment. ii) This was an error. The corrected file has been provided in response to Cal Advocates and OES data requests and will be corrected in an errata filing on April 26, 2023. The corrected values are used in attachment "WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx". iii) These values are based on the blended average effectiveness based on the subdiver composition for each circuit segment. As per Table 7-2, the contribution of vegetation, equipment, and contact from object is different for each circuit segment, so the effectiveness varies by location. iv) It is part of the consideration, however, the overall risk reduction benefit is much higher for undergrounding as compared to covered conductor. https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	Holly Wehman	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_018.zip	0	N/A	8.2.2.6	Vegetation Management and Inspections	Discontinued Programs
247	CaPA	Set WMP-18	CaPA_Set WMP-18	2	CaPA_Set WMP-18_Q2	PG&E states in response to Question 3 of CalAdvocates-PGE-2023WMP-15 that "PG&E intends to track trees identified for work under VMM and FTI using the OneVM tool." Please provide the following regarding the OneVM tool: a) Its purpose(s) b) How the tool works (i.e. what mechanisms or procedures it will use to achieve outputs) c) When the tool was developed d) When PG&E will begin utilizing the tool.	a) The SWRSE and WFE scores are calculated by the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2: $Enterprise\ Risk\ Score = \frac{1}{D} \sum_{i=1}^n \frac{W_i \cdot V_i}{T_i}$ For example, in Table 7-2.4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calculated by 11.41 to arrive at comparable enterprise level scores used for the Overall Risk Score. b. As stated in Section 6.4.2, we consider circuit segment ranking by high to low mean risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment based on the mean risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total risk from WDRM. The total risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution. c. Please see attachment WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx. Two additional columns N/O were added to this "TopRisk_Table" tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column ENEQ. Please note, the items outside of the top 5% risk circuit segments do not have same level of detailed review given the 5% risk circuit segments do not have same level of detailed review given the limited time to respond to this request. d. Responses below: i) The values are determined by the subdiver effectiveness against the subdiver probability of each circuit segment. ii) This was an error. The corrected file has been provided in response to Cal Advocates and OES data requests and will be corrected in an errata filing on April 26, 2023. The corrected values are used in attachment "WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx". iii) These values are based on the blended average effectiveness based on the subdiver composition for each circuit segment. As per Table 7-2, the contribution of vegetation, equipment, and contact from object is different for each circuit segment, so the effectiveness varies by location. iv) It is part of the consideration, however, the overall risk reduction benefit is much higher for undergrounding as compared to covered conductor. https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	Holly Wehman	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_018.zip	0	N/A	8.2.2.4	Vegetation Management and Inspections	Tree Removal Inventory
248	CaPA	Set WMP-18	CaPA_Set WMP-18	3	CaPA_Set WMP-18_Q3	PG&E states in its response to Question 5(a)(i) of CalAdvocates-PGE-2023WMP-15: "VM EPSS-enabled outage data was used to determine both a planned unit forecast and identify CPDs where EPSS VM Outages took place." Please explain what "planned unit forecast" refers to in the above information.	a) The SWRSE and WFE scores are calculated by the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2: $Enterprise\ Risk\ Score = \frac{1}{D} \sum_{i=1}^n \frac{W_i \cdot V_i}{T_i}$ For example, in Table 7-2.4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calculated by 11.41 to arrive at comparable enterprise level scores used for the Overall Risk Score. b. As stated in Section 6.4.2, we consider circuit segment ranking by high to low mean risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment based on the mean risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total risk from WDRM. The total risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution. c. Please see attachment WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx. Two additional columns N/O were added to this "TopRisk_Table" tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column ENEQ. Please note, the items outside of the top 5% risk circuit segments do not have same level of detailed review given the 5% risk circuit segments do not have same level of detailed review given the limited time to respond to this request. d. Responses below: i) The values are determined by the subdiver effectiveness against the subdiver probability of each circuit segment. ii) This was an error. The corrected file has been provided in response to Cal Advocates and OES data requests and will be corrected in an errata filing on April 26, 2023. The corrected values are used in attachment "WMP-Discovery2023_DR_TURN_007-Q002A1ch1.xlsx". iii) These values are based on the blended average effectiveness based on the subdiver composition for each circuit segment. As per Table 7-2, the contribution of vegetation, equipment, and contact from object is different for each circuit segment, so the effectiveness varies by location. iv) It is part of the consideration, however, the overall risk reduction benefit is much higher for undergrounding as compared to covered conductor. https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	Holly Wehman	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/w					

250	CaPA	Set WMP-18	CaPA_Set WMP-18	5	CaPA_Set WMP-18_Q5	<p>In response to question 19(b)(ii) of CalAdvocates-PGE-2023WMP-15, PG&E states: The difference [in projected vegetation management costs] of \$24,861,000 between 2023 and 2024 is due to several factors, including (1) transitioning from EVM to three new programs (2) reducing the amount of Routine VM work conducted each year commensurate with the amount of undergrounding miles completed; and (3) reducing unit costs through efficiencies over the rate case period through targeted programmatic adjustments that refine processes and improve resource efficiency.</p> <p>a) How does transitioning from EVM to three new programs result in a cost reduction?</p> <p>b) Please provide the following information about anticipated VM cost reductions from undergrounding in the below table:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Number of Undergrounding Miles to be Completed</th> <th>Planned reduction in Number of Routine VM Miles</th> <th>Amount of Routine VM Cost Savings from Undergrounding (\$\$\$)</th> </tr> </thead> <tbody> <tr> <td>2023</td> <td>2023 350 Miles</td> <td></td> <td></td> </tr> <tr> <td>2024</td> <td>2024 450 Miles</td> <td></td> <td></td> </tr> <tr> <td>2025</td> <td>2025 550 Miles</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Number of Undergrounding Miles to be Completed	Planned reduction in Number of Routine VM Miles	Amount of Routine VM Cost Savings from Undergrounding (\$\$\$)	2023	2023 350 Miles			2024	2024 450 Miles			2025	2025 550 Miles			Holly Wehman	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_018.zip	0	N/A	8.2.5.2	Vegetation Management and Inspections	Quality Control
Year	Number of Undergrounding Miles to be Completed	Planned reduction in Number of Routine VM Miles	Amount of Routine VM Cost Savings from Undergrounding (\$\$\$)																													
2023	2023 350 Miles																															
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251	CaPA	Set WMP-18	CaPA_Set WMP-18	6	CaPA_Set WMP-18_Q6	<p>In response to question 19(b)(iii) of CalAdvocates-PGE-2023WMP-15, PG&E states: The difference [in projected vegetation management costs] of \$24,861,000 between 2023 and 2024 is due to several factors, including (1) transitioning from EVM to three new programs (2) reducing the amount of Routine VM work conducted each year commensurate with the amount of undergrounding miles completed; and (3) reducing unit costs through efficiencies over the rate case period through targeted programmatic adjustments that refine processes and improve resource efficiency.</p> <p>a) For which specific programs does PG&E anticipate reducing unit costs as mentioned in the quote above?</p> <p>b) For each individual program identified in your response to the previous part, please state the following:</p> <ol style="list-style-type: none"> Program/initiative name What efficiencies does PG&E anticipate realizing? Describe the "targeted programmatic adjustments" that PG&E is considering or planning to make. State the current unit costs and the applicable units. State the unit costs that PG&E anticipates achieving in 2024 (on average for the year). State the unit costs that PG&E anticipates achieving in 2025 (on average for the year). 	Holly Wehman	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_018.zip	0	N/A	8.2.5.2	Vegetation Management and Inspections	Quality Control																
252	CaPA	Set WMP-18	CaPA_Set WMP-18	7	CaPA_Set WMP-18_Q7	<p>Please provide the following information regarding actual and projected costs for each WMP initiative under Chapter 8.2 (Vegetation Management and Inspections). Each initiative should be a row in the table below:</p> <table border="1"> <thead> <tr> <th>WMP Initiative Name</th> <th>2022 Capital Expenditure (Actual)</th> <th>2022 Capital Expenditure (Forecast)</th> <th>2023 Capital Expenditure (Actual)</th> <th>2023 Capital Expenditure (Forecast)</th> <th>2024 Operating Expense (Actual)</th> <th>2024 Operating Expense (Forecast)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	WMP Initiative Name	2022 Capital Expenditure (Actual)	2022 Capital Expenditure (Forecast)	2023 Capital Expenditure (Actual)	2023 Capital Expenditure (Forecast)	2024 Operating Expense (Actual)	2024 Operating Expense (Forecast)								Holly Wehman	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_018.zip	0	N/A	8.2	Vegetation Management and Inspections	N/A		
WMP Initiative Name	2022 Capital Expenditure (Actual)	2022 Capital Expenditure (Forecast)	2023 Capital Expenditure (Actual)	2023 Capital Expenditure (Forecast)	2024 Operating Expense (Actual)	2024 Operating Expense (Forecast)																										
253	TURN	008	TURN_008	1	TURN_008_Q1	<p>Our most recent calculation of RSEs for Undergrounding is shared in our 2023 GRC Supplemental Filing from February 2022. The most granular level at which we calculated RSEs is at the tranche level. This is summarized in attachment "WMP_Discovery2023_DR_TURN_008-Q001AtoH01". The RSE results are summarized in the RSE Results' tab with the RSE across 2023-2025 shown in cells "H12:L12".</p> <p>The supporting inputs are shared across M002 references in tabs "1-Program Exposure", "2-Program Cost", "3-Eff - Freq Program", "M002 - M002 - SME input", and "M002 - Efficiency Input".</p> <p>Specific to more granular level assessments, WMP guidelines require risk reduction not RSE based on 2023-2025 workplans. Those risk reduction values are provided in workpaper "2023-03-27_PGE_2023_WMP_R2_Section 6.4.2" and are available in the response as "WMP_Discovery2023_DR_TURN_008-Q001AtoH01".</p>	Tom Long	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_008.zip	2	N/A	7.2	Wildfire Mitigation Strategy Development	Risk Impact of Mitigation Initiatives																
254	TURN	008	TURN_008	2	TURN_008_Q2	<p>Our most recent calculation of RSEs for Covered Conductor is shared in our 2023 GRC Supplemental Filing from February 2022. The most granular level at which we calculated RSEs is at the tranche level. This is summarized in attachment "WMP_Discovery2023_DR_TURN_008-Q001AtoH01". The RSE results are summarized in the RSE Results' tab with the RSE across 2023-2025 shown in cells "H11:L11".</p> <p>The supporting inputs are shared across M002 references in tabs "1-Program Exposure", "2-Program Cost", "3-Eff - Freq Program", "M002 - M002 - SME input", and "M002 - Efficiency Input".</p> <p>Specific to more granular level assessments, WMP guidelines require risk reduction, not RSE, based on 2023-2025 workplans. Those risk reduction values are provided in workpaper "2023-03-27_PGE_2023_WMP_R2_Section 6.4.2" and provided with this response as "WMP_Discovery2023_DR_TURN_008-Q001AtoH01".</p>	Tom Long	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_008.zip	0	N/A	7.2.2	Wildfire Mitigation Strategy Development	Risk Impact of Mitigation Initiatives																
255	TURN	008	TURN_008	3	TURN_008_Q3	<p>Regarding the Undergrounding Decision Tree provided in response to Data Request 5-1, A1ch 1, is there an error in the alternative responses to the question at the far right: "Will a route or project scope change mitigate impediments?" It appears that the "Yes" and "No" alternatives should be flipped. This is an error, please provide a corrected Decision Tree.</p>	Tom Long	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_008.zip	0	N/A	8.1.2	Grid Design and System Hardening	ALL																
256	TURN	008	TURN_008	4	TURN_008_Q4	<p>a) This statement was based on our CPUC reportable ignitions in High Fire Threat Districts (HFTDs) across PG&E's service territory in 2019-2022. See Worksheet a of attachment WMP-Discovery2023_DR_TURN_008-Q004AtoH01.xlsx. The detailed data by ignition can be found in worksheet entitled "Detail_CPUC HFTD 2015-2022". As shown in the table on Worksheet a, we observed 33 of 489 (7%) equipment-related ignitions in HFTDs associated with transmission powerlines, 33 of 489 (7%) equipment-related ignitions in HFTDs associated with lower voltage service distribution powerlines, and 25 of 489 (5%) equipment-related ignitions in HFTDs associated with lower voltage secondary distribution powerlines. In contrast, for the same period, we observed over 80% of ignitions in HFTDs on primary distribution powerlines.</p> <p>b) Please see four separate worksheets for each subpart in attachment "WMP_Discovery2023_DR_TURN_008-Q004AtoH01.xlsx" that provide the detail requested for 2015 through 2022. The detailed data by ignition can be found in worksheet entitled "Detail_CPUC HFTD 2015-2022".</p> <ol style="list-style-type: none"> Number of ignitions Size (e.g., acres) of fires resulting from ignitions, and Number of structures destroyed by fires resulting from ignitions. 	Tom Long	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_008.zip	1	N/A	8.1.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution																
257	TURN	008	TURN_008	5	TURN_008_Q5	<p>In response to TURN DR 5-4, after stating that PG&E is not undergrounding service drops and is not undergrounding secondary lines in most cases, PG&E states in the last paragraph, "We will overhead remaining secondary and service 3 lines by replacing open-wire secondary, gray services, and tree-connects with the current standard covered aerial conductor" (emphasis added).</p> <p>a. What is meant by the word "remaining" in the quote?</p> <p>b. Does this mean that, in a project PG&E describes as an undergrounding project, some of the "undergrounding" work typically consists of overhead hardening of secondary and service lines? Please explain your answer.</p> <p>c. Please explain the conditions under which an undergrounding project would include overhead hardening of secondary and service lines and when an undergrounding project would not include such overhead hardening work. Please provide an estimate of the percentage of undergrounding projects that include overhead hardening of secondary and service lines.</p> <p>d. In Table 8-3 of the WMP, for the row "10K undergrounding" (initiative GH04), do the target miles for "undergrounding work" include overhead hardening of secondary and service lines? If not, where is the overhead hardening of secondary and service lines described in this DR response accounted for in Table 8-3?</p> <p>e. Do PG&E's unit cost estimates for "undergrounding" include the costs of overhead hardening of secondary and service lines that may be included in "undergrounding" projects? Please explain your response.</p> <p>f. Do PG&E's RSE calculations for "undergrounding" include miles, costs, and risk reduction benefits from overhead hardening of secondary and service lines that may be included in "undergrounding" projects? Please explain your response.</p>	Tom Long	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_008.zip	0	N/A	8.1.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution																
258	TURN	008	TURN_008	6	TURN_008_Q6	<p>SCE's WMP (R0), p. 252, states that: "SCE has determined that lines with covered conductor have a 90% risk in PSPS activations. When a circuit (or fully isolatable circuit segment) is all covered conductor, the de-energization threshold is increased to 40/50 mph (sustained wind/gusts)."</p> <p>a. Please provide any data, studies or reports in PG&E's possession that address whether lines with covered conductor have experienced a reduction in PSPS activations.</p> <p>b. Please provide any reports or studies in PG&E's possession that assess whether any de-energization thresholds should be changed for circuits (or portions thereof) with covered conductor.</p> <p>c. Does PG&E have plans to do any studies in the future to assess whether any de-energization thresholds should be changed for circuits (or portions thereof) with covered conductor? If so, describe what will be studied and the planned timing for the study or studies.</p>	Tom Long	4/24/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_008.zip	0	N/A	8.1.2.1.6.9	Grid Design and System Hardening & PSPS	Covered Conductor and PSPS																

221	OEIS	003	OEIS_003	7	OEIS_003_Q7	<p>Regarding Focused Tree Inspections</p> <p>a. During the decision process to discontinue use of the Tree Assessment Tool (TAT) and adopt the ISA's Basic Tree Risk Assessment Form (ISA Form), did PG&E consider incorporating elements from the ISA's form into the TAT?</p> <p>b. Is PG&E collecting a digital record of each ISA form generated by inspectors, in OneVM or another system?</p> <p>c. How does PG&E plan to incorporate known localized risk factors (e.g., wind, outage rates by species) into tree risk assessments?</p> <p>d. Did PG&E perform any analysis or study that compared the outcomes of the TAT and the ISA's checklist in the field? If so, provide this analysis or study.</p> <p>e. Has PG&E benchmarked and/or discussed the latest version of its TAT and the associated risk assessment procedure and its new tree risk assessment procedures using the ISA's checklist with other utilities, including, but not limited to, SCE and its Tree Risk Calculator? If so, provide a summary of that benchmarking/discussion.</p> <p>f. Provide the logic and any documentation of methodologies, stakeholders, and data sources for the most recent version of the TAT. Include a list of the factors considered in TAT scoring methodology.</p>	<p>a. Yes, as part of normal practice, we considered enhancing the TAT by incorporating additional elements of the ISA Form in 2022.</p> <p>b. At this time, the TRAQ form will not be digitized for the Focused Tree Inspection Program (FTI). It is the current plan that FTI Inspections will be performed by 100% TRAQ certified arborists and the TRAQ form will be used as a guide.</p> <p>c. We will utilize the TRAQ form for tree risk assessments which considers local weather patterns. Inspection will also be informed by historical vegetation and outage trends within the area of concern.</p> <p>d. Yes, we did informally compare the outcomes of the TAT and the ISA form. The comparison included a field testing of a sample of locations and trees for validation purposes. This study and analysis effort was not finalized.</p> <p>e. As part of the TAT improvement efforts in 2022, our subject matter experts met on a recurring basis with counterparts from SCE and SGE&E to share experiences, methodology and other ideas regarding hazard tree assessment.</p> <p>f. Please see below for Logic and Methodology of the TAT that was last used by the EVM program until the program concluded at the end of 2022. Please see attachment "WMP-Discovery2023_DR_OEIS_003-Q007A001_CONC.pdf" for the white paper describing the basis for the development of the TAT as well as the stakeholders and data sources.</p> <p>1. Preliminary Strike Assessment a. Questions and results of the survey (in red font) are listed below. If no result is listed, the survey continues to the next question.</p> <p>i. Is the tree tall enough to strike the facilities? 1. Yes 2. No- STOP TAT. TAT NOT REQUIRED</p> <p>ii. Is the tree already removed- ABATE? 3. No- tree already removed- ABATE</p> <p>iii. Is the tree completely blocked from falling towards facilities? Some trees are tall enough to strike, but cannot because the path is blocked. CONSIDER that other trees can reduce the likelihood of a tree falling toward facilities, but only in extreme cases do they completely and reliably block the path to facilities</p> <p>1. Yes- DO NOT ABATE 2. No ii. Is the tree leaning severely (>25 degrees)? 1. No 2. Toward Facilities- ABATE 3. Away from Facilities- DO NOT ABATE</p> <p>4. Parallel to Facilities</p> <p>2. Tree Health Score</p> <p>a. Questions and results of the survey listed below (if no result is listed, the survey continues to the next question.) i. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>ii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>iii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>iv. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>v. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>vi. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>vii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>viii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>ix. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>x. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xi. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xiii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xiv. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xv. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xvi. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xvii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xviii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xix. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xx. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxi. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxiii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxiv. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxv. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxvi. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxvii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxviii. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxix. Is the tree dead or clearly dying? 1. Yes- ABATE</p> <p>xxx. Is the tree dead or clearly dying? 1. Yes- ABATE</p>	Colin Lang	4/21/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	1	NA	8.2	Vegetation Management and Inspections	NA
244	TURN	007	TURN_007	3	TURN_007_Q3	<p>Regarding the System Hardening Workplan provided as Attachment 1 to the response to TURN data request 2: 2 (which in turn asked for a response provided to Cal Advocates):</p> <p>a. The first tab in this Excel workbook is named "SH Workplan_2023-2026_Conf", which suggests that this response to Cal Advocates was taken from a document that also included the years 2025 and 2026. Please provide the most up-to-date version of this workbook for the period 2023-2026. Indicate the date of the information in the workbook that is provided.</p> <p>b. It appears that some of the circuit segments listed as high risk in Table 7-2 of the WMP and in the 2023-2026 Undergirding Work Plan referenced on page 910 of the WMP (R1), e.g., Indian Flat 1104CB and Bonnie Hook 1102CB (only Bonnie Hook 1102CB is shown), are not listed in this workbook. Please explain why this is the case, even though this workbook includes planned undergrounding miles.</p> <p>c. Are there discrepancies in the names of the circuit segments between this workbook, and Table 7-2 and the 2023-2026 Undergirding Work Plan referenced on page 910 of the WMP (R1). If so, please modify the version of this workbook provided in response to "a" to make the circuit segment names consistent with Table 7-2 and the 2023-2026 Undergirding Work Plan referenced on page 910 of the WMP (R1).</p>	<p>a. The estimated mileage forecasts for each sub-type of hardening (overhead, underground and line removal) will vary from the actual mileage completed in each year. Additionally, if we complete system hardening miles above the annual targets in a particular year, we may lower future annual targets in a subsequent WMP or plan update.</p> <p>The following are the reasons why circuit segments from Table 7-2 may not be on the undergrounding workplan:</p> <ul style="list-style-type: none"> The circuit segment has a lower Wildfire Feasibility Effectiveness (WFE) score due to expected high undergrounding difficulty and/or bundling with other nearby circuit segments that could result in the combined WFE score for the bundled segment being relatively lower. These projects were not scoped in the workplan and remain supported by other layers of protection as described in Table 7-4 of the WMP. The circuit segment is shorter such that it is being bundled with other nearby circuit segment(s) to optimize construction efficiency as part of a combined project. The circuit segment was previously hardened (either OH or UG). The circuit segment is a privately owned line. We send an annual letter to the owner reminding them of their responsibility to maintain the line but do not take action on these circuits. <p>The following is a list of circuit segments that were listed in Table 7-2 and an explanation why it was not included in the 2023-2026 Undergirding Workplan:</p> <ul style="list-style-type: none"> Oakhurst 110310140 - This circuit segment had a lowered WFE score due to expected high undergrounding difficulty, and, after bundling with nearby segments, there are other locations with higher WFE scores to prioritize in the earlier years. Monticello 1101654 - This circuit segment had a lowered WFE score due to expected high undergrounding difficulty, and, after bundling with nearby segments, there are other locations with higher WFE scores to prioritize in the earlier years. In addition, this section has significant OH hardening that was completed following the 2020 LNU fire. Balch No 1 1101105414 - This circuit segment had a lowered WFE score due to expected high undergrounding difficulty, and, after bundling with nearby segments, there are other locations with higher WFE scores to prioritize in the earlier years. Curtis 17036972 - This circuit segment had a lowered WFE score due to expected high undergrounding difficulty, and, after bundling with nearby segments, there are other locations with higher WFE scores to prioritize in the earlier years. Monticello 1101630 - This circuit segment had a lowered WFE score due to expected high undergrounding difficulty, and, after bundling with nearby segments, there are other locations with higher WFE scores to prioritize in the earlier years. In addition, this section has significant OH hardening that was completed following the 2020 LNU fire. Calistoga 1102134531 - This circuit segment had a lowered WFE score due to expected high undergrounding difficulty, and, after bundling with nearby segments, there are other locations with higher WFE scores to prioritize in the earlier years. In addition, this section has significant OH hardening that was completed following the 2020 LNU fire. 	Tom Long	4/21/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/TURN_007.zip	1	Yes	8.1.2.2	Grid Design and System Hardening	Undergrounding - Electric Lines and/or Equipment - Distribution
71	OEIS	001	OEIS_001	3 SLP2_2	OEIS_001_Q3_SLP2_2	<p>Regarding PG&E's Focused Tree Inspections pilot</p> <p>a. Describe the current state of development for the pilot area, PG&E's Areas of Concern (AOC), and "polygons where focused vegetation inspection can be evaluated to determine appropriate courtes to prioritize pilots(s)" (page 529) and the expected timeline for operationalization.</p> <p>b. Detail the criteria PG&E has and is using to develop the pilot area, PG&E's Areas of Concern (AOC), and "polygons where focused vegetation inspection can be evaluated to determine appropriate courtes to prioritize pilots(s)" (page 529).</p> <p>c. What standards, processes, procedures, and tools are vegetation management personnel using/will use to perform tree risk assessments for this pilot?</p> <p>d. Was PG&E using its One VM Tool for recordkeeping for this pilot? If not, what system will PG&E use for recordkeeping for this pilot?</p> <p>e. Where is PG&E conducting its Focused Tree Inspections pilot? If PG&E has not yet begun its pilot, where will PG&E be conducting its Focused Tree Inspections pilot?</p> <p>f. How many circuit miles are in scope for the pilot?</p> <p>g. Was the pilot area previously in-scope for Enhanced Vegetation Management (EVM)?</p> <p>h. For each Circuit Protection Zone (CPZ) in the pilot area provide the:</p> <p>i. CPZ name.</p> <p>ii. Tree Weighted Risk Score from PG&E's most recent version of its EVM Tree-Weighted Prioritization List.</p> <p>iii. Tree Weighted Rank from PG&E's most recent version of its EVM Tree-Weighted Prioritization List.</p> <p>iv. Risk Tranche.</p> <p>v. Does PG&E have a plan to continue its Focused Tree Inspections assuming the pilot is a success? If so, detail those plans, including how many circuit miles PG&E plans to inspect under this program in 2023 and 2024.</p> <p>vi. Provide a GIS layer of the pilot area, PG&E's Areas of Concern (AOC), and "polygons where focused vegetation inspection can be evaluated to determine appropriate courtes to prioritize pilots(s)" (page 529). As applicable, provide the following attributes for each polygon:</p> <p>i. Number of overhead circuit miles within the polygon</p> <p>ii. Overall Utility Risk</p> <p>iii. Ignition Risk</p> <p>iv. PSPS Risk</p> <p>v. Contact from Vegetation Likelihood of Ignition</p>	<p>i. GIS layer for each polygon with the additional attributes have been provided.</p> <p>Please see "WMP-Discovery2023_DR_OEIS_001-Q003Supp02A002.zip" and "WMP-Discovery2023_DR_OEIS_001-Q003Supp02A002.xlsx"</p> <p>Specifically for Overall Utility Risk, Ignition Risk, and PSPS Risk, these are typically presented in terms of circuit segments or circuit protection zones. The AOC polygons do not always align with CPZ segments so circuit segments may be partially included or completely included.</p> <p>Since PG&E does not calculate the percentage of risk within the circuit segment designations, PG&E provides pro-rated risk scores based purely on the percentage of miles that fall within the AOC as an approximation for the data response.</p>	Colin Lang	4/5/2023	4/27/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/OEIS_001.zip	2	NA	8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
259	CaPA	Set WMP-19	CaPA_Set WMP-19	1	CaPA_Set WMP-19_Q1	<p>Please list PG&E's expected average useful life for a given installation of the following technologies:</p> <p>a) DCD</p> <p>b) REFLC</p>	<p>a) DCD technology is provisioned on protective relay equipment. Expected useful life based upon similar technology obsolescence, as well as asset health and lifecycle, is projected to be 20-30 years.</p> <p>b) REFLC expected useful life of the core components is estimated to be 30 years.</p>	Holly Wehrman	4/25/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_019.zip	0	NA	8.1	Grid Design, Operations and Maintenance	Down Conductor Detection Devices Rapid Earth Fault Current Limiter
260	CaPA	Set WMP-19	CaPA_Set WMP-19	2	CaPA_Set WMP-19_Q2	<p>a) In 2023, what is the average per-circuit-mile cost that PG&E expects to incur for asset inspection and maintenance for a covered conductor distribution line installed in the HFTD?</p> <p>b) In 2023, what is the average per-circuit-mile cost that PG&E expects to incur for asset inspection and maintenance for an underground distribution line installed in the HFTD?</p> <p>c) In 2023, what is the average per-circuit-mile cost that PG&E expects to incur for asset inspection and maintenance for a bare distribution line installed in the HFTD?</p> <p>d) Please state the assumptions and limitations of your estimates for parts (a) through (c).</p>	<p>a) Conductor is inspected as part of our General Order (GO) 165 detailed ground inspections and patrols program. It is also inspected during infrared inspection.</p> <p>These inspection processes currently do not differentiate between covered conductor and bare conductor. The cost that we expect to incur for distribution overhead asset inspections in HFTDs in 2023 is roughly \$2,310 per-circuit-mile, regardless of whether the conductor is covered or bare. In addition, the cost that we expect to incur for distribution overhead asset maintenance in HFTDs in 2023 is \$44,665 per-circuit-mile.</p> <p>b) Underground cable is inspected as part of our GO 128 underground inspections and patrols program, which has an expected cost in 2023 of \$93/Unit for inspection and \$11/Unit for patrol. We do not calculate a per-circuit-mile cost on distribution underground inspections because the cost of inspection is an enclosure, padmount, substation vault, manhole, or J-box. We expect to spend \$12.7 million for distribution underground inspections and patrols system-wide in 2023. In addition, we expect to spend \$92.4 million for distribution underground asset maintenance system-wide in 2023. We do not track whether costs for distribution underground line inspection and maintenance occur in HFTDs and non-HFTDs.</p> <p>c) Please see the response to subpart (a).</p> <p>d) We used the following assumptions in calculating the per-circuit-mile inspection cost for overhead conductor in HFTD:</p> <ul style="list-style-type: none"> We expect to spend \$25.7 million for distribution overhead conductor inspections in HFTDs in 2023. This includes spending for the following types of inspections: detailed ground inspection, patrol inspection, and infrared inspection. We expect to inspect approximately 234,648 support structures in HFTDs in 2023, as part of its detailed ground inspections. We use an average span length of 250 feet. We expect to inspect approximately 11,110 circuit-miles of overhead distribution conductor in HFTDs in 2023, as part of its detailed ground inspections. Our calculated cost to inspect distribution overhead conductor is \$2,310 per circuit-mile in HFTDs in 2023. <p>We used the following assumptions in calculating the per-circuit-mile maintenance costs for distribution overhead assets in HFTD:</p> <ul style="list-style-type: none"> We only included the maintenance costs associated with general overhead Electric Corrective (EC) Notifications. These costs are tracked at the Maintenance Activity Type (MAT) level, not detailed by asset type, so we could not extract the costs associated with conductor only EC notifications. As such, the maintenance costs are for all assets in the HFTDs. Proactive asset replacement programs were not included (e.g. pole replacements, transformer replacements, overhead line equipment replacements, etc.). System hardening program was not included. We expect to spend \$384.6 million for distribution overhead asset maintenance in HFTDs in 2023. We have approximately 25,000 circuit-miles of overhead distribution in HFTDs. <p>We do not differentiate costs between covered and bare conductor, so these costs are for all assets in the HFTDs. Further, we only included the maintenance costs associated with general overhead Electric Corrective (EC) Notifications. These costs are tracked at the Maintenance Activity Type (MAT) level, not detailed by asset type, so we could not extract the costs associated with conductor only EC Notifications. In addition, the costs for our proactive asset replacement programs were not included.</p> <p>b) In response to 2022 WMP Discovery, Cal Advocates 028, Question 3, provided on August 1, 2022, PG&E reported our total overhead distribution line circuit-miles as approximately 25,000 in the HFTDs. This data was originally extracted from the Quarterly Data Report (QDR), Table 8. Our GIS system is a dynamic, "real-time" system that reflects the current assets in our service territory. When old assets are removed, or replaced, they are removed from the GIS system. In addition, our GIS system does not include an attribute to distinguish between covered and bare conductor. As a result, we are only able to provide the total overhead distribution line circuit-miles, not the breakdown between covered and bare conductor.</p> <p>c) In 2022, we spent \$109 million for asset inspections and maintenance on distribution underground lines system-wide. We do not track whether costs for distribution underground line inspections and maintenance occur in HFTD and non-HFTDs.</p> <p>d) In response to 2022 WMP Discovery, Cal Advocates 028, Question 3, provided on August 1, 2022, we reported our total underground distribution line circuit-miles as approximately 2,855 in the HFTDs. This data was originally extracted from the QDR, Table 8.</p>	Holly Wehrman	4/25/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_019.zip	0	NA	8.1.5	Asset Management and Inspection Enterprise Systems)	NA
261	CaPA	Set WMP-19	CaPA_Set WMP-19	3	CaPA_Set WMP-19_Q3	<p>a) State the total costs that PG&E incurred in 2022 for asset inspections and maintenance on covered conductor distribution lines installed in the HFTD.</p> <p>b) State the total number of circuit-miles of covered conductor distribution lines that PG&E had in the HFTD as of January 1, 2022.</p> <p>c) State the total costs that PG&E incurred in 2022 for asset inspections and maintenance on underground distribution lines installed in the HFTD.</p> <p>d) State the total number of circuit-miles of underground distribution lines that PG&E had in the HFTD as of January 1, 2022.</p> <p>e) State the total costs that PG&E incurred in 2022 for asset inspections and maintenance on bare overhead distribution lines installed in the HFTD.</p> <p>f) State the total number of circuit-miles of bare overhead distribution lines that PG&E had in the HFTD as of January 1, 2022.</p>	<p>a) We do not separately track costs incurred in HFTD vs. Non-HFTD for asset inspections and maintenance on covered conductor distribution lines installed in the HFTD.</p> <p>b) We do not separately track costs incurred in HFTD vs. Non-HFTD for asset inspections and maintenance on underground distribution lines installed in the HFTD.</p> <p>c) We do not separately track costs incurred in HFTD vs. Non-HFTD for asset inspections and maintenance on bare overhead distribution lines installed in the HFTD.</p> <p>d) We do not separately track costs incurred in HFTD vs. Non-HFTD for asset inspections and maintenance on bare overhead distribution lines installed in the HFTD.</p>	Holly Wehrman	4/25/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_019.zip	0	NA	8.1.2	Grid Design, Operations and Maintenance	Grid Design and System Hardening
262	CaPA	Set WMP-19	CaPA_Set WMP-19	4	CaPA_Set WMP-19_Q4	<p>a) In 2023, what is the average per-circuit-mile cost that PG&E expects to incur for vegetation management for an overhead distribution line installed in the HFTD?</p> <p>b) In 2023, what is the average per-circuit-mile cost that PG&E expects to incur for vegetation management for an underground distribution line installed in the HFTD?</p>	<p>a) Based on 2019-2022 data, our cost for vegetation management maintenance systemwide was approximately \$8,500 per mile. We expect to incur similar costs in 2023. Costs for vegetation management are not forecast separately between HFTD and Non-HFTD.</p> <p>b) We do not separately forecast an average per-circuit-mile cost incurred for vegetation management for an underground distribution line installed in HFTD.</p>	Holly Wehrman	4/25/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_019.zip	0	NA	8.2	Vegetation Management and Inspections	NA
263	CaPA	Set WMP-19	CaPA_Set WMP-19	5	CaPA_Set WMP-19_Q5	<p>a) State the total costs that PG&E incurred in 2022 for vegetation management on overhead distribution lines in the HFTD.</p> <p>b) State the total costs that PG&E incurred in 2022 for vegetation management on underground distribution lines in the HFTD.</p>	<p>a) We do not separately track costs incurred in HFTD vs. Non-HFTD for vegetation management on overhead distribution lines.</p> <p>b) We do not separately track costs incurred in HFTD vs. Non-HFTD for vegetation management on underground distribution lines.</p>	Holly Wehrman	4/25/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_019.zip	0	NA	8.2	Vegetation Management and Inspections	NA
264	CaPA	Set WMP-19	CaPA_Set WMP-19	6	CaPA_Set WMP-19_Q6	<p>a) Please describe the vegetation management activities that PG&E currently undertakes on rights-of-way with underground lines in the HFTD.</p> <p>b) Please describe any changes PG&E plans to make during the 2023-2025 WMP period regarding the vegetation management activities that PG&E plans to undertake on rights-of-way with underground lines in the HFTD.</p> <p>c) Please provide any protocols, procedures, or manuals that describe PG&E's approach to vegetation management where PG&E has underground lines in the HFTD.</p>	<p>a) Where there are no overhead electric facilities, we do not conduct routine vegetation management activities. As part of GO 165, the PG&E System Inspection program can identify vegetation work as part of clearing and maintenance for padmount transformers and other typical underground equipment.</p> <p>b) Not applicable.</p> <p>c) Not applicable.</p>	Holly Wehrman	4/25/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_019.zip	0	NA	8.2	Vegetation Management and Inspections	NA

220	OEIS	003	OEIS_003	6	OEIS_003_06	<p>Regarding PG&E's Areas of Concern</p> <p>a. Provide a GIS layer of PG&E's Areas of Concern (AOC) with the following attributes for each AOC polygon: i. Name of the AOC ii. Number of overhead circuit miles in the AOC that are in scope for Focused Tree Inspections iii. AOC in place? (Yes/No) iv. Cumulative probability of ignition caused by vegetation coupled with consequence of ignition as given by WDRM V3 (wdrmv3_v_c) v. Average probability of ignition caused by vegetation coupled with consequence of ignition as given by WDRM V3 (wdrmv3_v_c) vi. Cumulative Overall Utility Risk as defined by the 2023-2025 WMP Technical Guidelines, Appendix B vii. Cumulative Ignition Risk as defined by the 2023-2025 WMP Technical Guidelines, Appendix B viii. Cumulative PPS Risk as defined by the 2023-2025 WMP Technical Guidelines, Appendix B ix. Cumulative Contact from Vegetation Likelihood of Ignition as defined by the 2023-2025 WMP Technical Guidelines, Appendix B</p> <p>b. Has PG&E used any vegetation related data source to identify the density/presence of overstrike trees to create the AOCs? (e.g., LIDAR, satellite) If so, list the data source(s) and the date the data were collected. (e.g., distribution LIDAR flown by PG&E in 2019)</p> <p>c. Has PG&E used any tree mortality data sets to: i. Create the AOCs? If so, list the data set(s) and the date the data were collected. ii. Determine the prioritization of inspection among the AOCs? If so, list the data set(s) and the date the data were collected.</p>	<p>a. Please reference "WMP-Discovery2023_DR_OEIS_003-Q006A01.xlsx" and "WMP-Discovery2023_DR_OEIS_003-Q006A02.pdf" for the requested information.</p> <p>Specifically for Overall Utility Risk, Ignition Risk, and PPS Risk, these are typically presented in terms of circuit segments or circuit protection zones. The AOC polygons do not always align with CPZ segments so circuit segments can be partially included or completely included.</p> <p>Since PG&E does not calculate the percentage of risk within the circuit segment designations, we will provide pro-rated risk scores based purely on the percentage of miles that fall within the AOC as an approximation for this data response.</p> <p>b. Yes, PG&E used vegetation related data sources to identify the density/presence of overstrike trees to create the AOCs. Please see supporting data "WMP-Discovery2023_DR_OEIS_003-Q006A03.jpg". The AOC drafting and development was completed using Google Earth and supporting KMZ files. The following imagery or KMZ data was available to inform density and presence of vegetation including overstrike trees.</p> <p>i. Satellite imagery was used as a base map layer in Google Earth and helped developers understand vegetation densities in proximity to other datasets used to aid development of AOC polygons.</p> <p>ii. Outage Clusters 2018-2021 by frequency and season. These layers help identify regional areas where vegetation failures have caused outages which can be considered a data-informed proxy for area with higher densities of overstrike trees and overhanging canopy conditions.</p> <p>iii. Fire Perimeters with strike trees identified through 2019-2020 LIDAR data was also made available to the AOC development team. Paired with the outage cluster data and satellite imagery this KMZ file could also help developers evaluate vegetation density and areas with higher populations of overstrike trees or canopy conditions that could also help developers evaluate vegetation density and areas with higher populations of overstrike trees or canopy conditions that have resulted in CPUC reportable ignitions.</p> <p>iv. Vegetation caused ignitions (June 2014-2021) were also provided by resulting fire size. Paired with satellite imagery, this data could also help developers evaluate vegetation density and areas with higher populations of overstrike trees or canopy conditions that have resulted in CPUC reportable ignitions.</p> <p>v. PPS Asset Damages (2020-2021) was provided to identify areas where trees with overstrike potential have been documented in association with problematic winds combined with seasonally extreme dry conditions.</p> <p>c.</p> <p>i. Yes, PG&E utilized the Second Patrol VM review of tree mortality populations at a divisional level in October 2022.</p> <p>ii. The development team was expected to have strong local knowledge of regional tree mortality trends and utilize that knowledge to inform review. PG&E respectfully finds that the CPZ mileages presented in Table 1 are incorrect. As a result of the mileage errors in the Table, the Calculated Risk/Mile</p>	Colin Lang	4/21/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	3	NA	8.2	4/28/2023	Vegetation Management and Inspections	NA
232	CaPA	Set WMP-17	CaPA_Set WMP-17	1	CaPA_Set WMP-17_Q1	<p>PG&E's WDRM V3 ranks circuit protection zones (CPZs) based on risk measured across 17 risk models to create a "cumulative risk score" for each CPZ 4 in Table 1 above, select CPZs that PG&E has decided not to pursue Undergrounding in its first 2100 miles of UG projects as compared by:</p> <ul style="list-style-type: none"> Cumulative risk score for the CPZ in WDRM V3 Total CPZ length in miles measured by projecting the feature class in WDRM V3 to a UTM projection and calculating geometry in GIS A calculated "risk per mile" or "average risk" value derived from the two previous values Whether the CPZ has experienced outages due to PPS or EPSS in the past three years <p>PG&E 2023 WMP's decision to which program the CPZ belongs (crossed referenced against Question 8 on "PGE-2023WMP-06_VM_Inspection_SH_questions" for projects in the 2023-2024 timeframe)</p> <p>PG&E 2023 WMP's risk rank for each CPZ (crossed referenced against Question 8 on "PGE-2023WMP-06_VM_Inspection_SH_questions" for projects in the 2023-2024 timeframe)</p> <p>PG&E 2023 WMP's Wildfire Feasibility Effectiveness (WFE Score) for each CPZ (crossed referenced against Question 16 on "PGE-2023WMP-09_VM_WTRM_LUG_vs_CC_costs_and_RSSE" for projects in the 2023-2026 timeframe)</p> <p>a. Please explain why these select CPZs in Table 1, with large average risk profiles in WDRM V3 and some with reliability concerns from PPS or EPSS outages, are not being considered potential projects for Undergrounding in the first 2,100 miles.</p> <p>b. Please identify all factors in the selection of CPZ "EL DORADO PH 21011975Z" for "BASE SH (base system hardening) rather than Undergrounding in PG&E's 2023 WMP project selection.</p> <p>c. Please identify all factors in the selection of CPZ "PEORIA 17019009Z" for "BASE SH (base system hardening) rather than Undergrounding in PG&E's 2023 WMP project selection.</p> <p>d. Please identify all factors that resulted in CPZ "OAKHURST 110310140Z" not being selected for any WMP system hardening program (including Base SH, Community Rebuild, Fire Rebuild, Targeted UG, Idle Facilities, Other) despite it being targeted for PPS and EPSS outages and having a larger average risk profile than other projects in Table 1.</p> <p>e. Please identify all factors that resulted in CPZ "BEAR VALLEY 21050CB" not being selected for any WMP system hardening program (including Base SH, Community Rebuild, Fire Rebuild, Targeted UG, Idle Facilities</p>	<p>CONFIDENTIAL - Provided Pursuant to Confidentiality Declaration ("WMP-Discovery2023_DR_CaAdvocates_017_Confidentiality Declaration.pdf")</p> <p>WMP-Discovery2023_DR_CaAdvocates_017-Q001CONF Page 3</p> <p>figures are incorrect as well. We also note that we do not use the term "cumulative risk." We use the term "composite risk" and interpret this question as involving "composite risk" scores. Any difference between these two terms is not material to our response.</p> <p>The attachment used to develop the quoted miles from this analysis, WMP-Discovery2023_DR_CaAdvocates_035, does not represent the total OH miles contained within each circuit segment, but the total projected UG miles from the "project." These "projects" can include multiple circuit segments and represent the UG miles planned to be installed, not the OH miles removed used to calculate the risk value. Each of these segments were bundled with other high-risk segments and brought forward to be worked concurrently. The bundling of neighboring circuit segments supports cost effectiveness and will provide a larger benefit in terms of reduced PPS/EPSS impacts as well. Therefore, the analysis performed here in terms of risk points for a single circuit segment divided by the undergrounding miles for a bundled project (which includes multiple circuit segments) is not comparing a consistent numerator and denominator.</p> <p>Lastly, our workplan as presented in the 2023 WMP was developed using numerous factors that could cause a particular circuit segment not to be included in this iteration of the 2023 WMP workplan including:</p> <ol style="list-style-type: none"> Due to the typically long timeframe required to develop and construct an underground project, 2022 WDRM V3 risk data via the WFE only minimally informed the early years in the 2023-2026 workplan, with much of the portfolio being informed by 2021 WDRM V2. There continues to be carry over work from previous workplans that must be completed, if a project had been started in a prior period it will be worked to completion. The WFE selection strategy utilizing WDRM V3 takes various cost and schedule optimization inputs into its selection methodology including: <ul style="list-style-type: none"> Area saturation Underground difficulty and long-term permitting risks Circuit segment bundling Resource readiness and availability Previously hardened facilities Private/customer owned facilities <p>El Dorado PH 21011975Z is already hardened with some undergrounding along Sly Park Rd. The fact that a portion of the circuit is already undergrounded was not considered by the WDRM V3 risk model as a result of GIS mapping timing, but upon engineering review of the circuit based on its current configuration, no additional work is recommended at this time.</p> <p>El Dorado PH 21011975Z was identified as the under-capacity of the Southern Region program and completed in 2022. The scope of the project was to upgrade the circuit to meet the needs of the Southern Region program and completed in 2022. The scope of the project was to upgrade the circuit to meet the needs of the Southern Region program and completed in 2022. The scope of the project was to upgrade the circuit to meet the needs of the Southern Region program and completed in 2022.</p>	Matthew Taul	4/21/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_017.zip	0	NA	8.1.2.2		Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution
233	CaPA	Set WMP-17	CaPA_Set WMP-17	2	CaPA_Set WMP-17_Q2	<p>In general, identify all the factors PG&E considers when deciding that a CPZ with a large average risk profile or large total risk in WDRM V3 should not be prioritized in PG&E's 2023 WMP project selection.</p>	<p>CONFIDENTIAL - Provided Pursuant to Confidentiality Declaration ("WMP-Discovery2023_DR_CaAdvocates_017_Confidentiality Declaration.pdf")</p> <p>WMP-Discovery2023_DR_CaAdvocates_017-Q002CONF Page 2</p> <p>allows for more comprehensive customer and community engagement as opposed to multiple projects being developed and worked on separate timelines.</p> <p>Lastly, our workplan as presented in the 2023 WMP was developed using numerous factors that could cause a particular circuit segment not to be included in this iteration of the 2023 WMP workplan including:</p> <ol style="list-style-type: none"> Due to the typically long timeframe required to develop and construct an underground project, 2022 WDRM V3 risk data via the WFE only minimally informed the early years in the 2023-2026 workplan, with much of the portfolio being informed by 2021 WDRM V2. There continues to be carry over work from previous workplans that must be completed, if a project had been started in a prior period it will be worked to completion. The WFE selection strategy utilizing WDRM V3 takes various cost and schedule optimization inputs into its selection methodology including: <ul style="list-style-type: none"> Area saturation Underground difficulty and long-term permitting risks Circuit segment bundling Resource readiness and availability Previously hardened facilities Private/customer owned facilities 	Matthew Taul	4/21/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_017.zip	0	NA	8.1.2.2		Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution
234	CaPA	Set WMP-17	CaPA_Set WMP-17	3	CaPA_Set WMP-17_Q3	<p>In general, identify all the factors PG&E considers when deciding that a CPZ with a large average risk profile or large total risk in WDRM V3 should not be prioritized in PG&E's 2023 WMP project selection.</p>	<p>CONFIDENTIAL - Provided Pursuant to Confidentiality Declaration ("WMP-Discovery2023_DR_CaAdvocates_017_Confidentiality Declaration.pdf")</p> <p>WMP-Discovery2023_DR_CaAdvocates_017-Q003CONF Page 1</p> <p>allows for more comprehensive customer and community engagement as opposed to multiple projects being developed and worked on separate timelines.</p> <p>Lastly, our workplan as presented in the 2023 WMP was developed using numerous factors that could cause a particular circuit segment not to be included in this iteration of the 2023 WMP workplan including:</p> <ol style="list-style-type: none"> Due to the typically long timeframe required to develop and construct an underground project, 2022 WDRM V3 risk data via the WFE only minimally informed the early years in the 2023-2026 workplan, with much of the portfolio being informed by 2021 WDRM V2. There continues to be carry over work from previous workplans that must be completed, if a project had been started in a prior period it will be worked to completion. The WFE selection strategy utilizing WDRM V3 takes various cost and schedule optimization inputs into its selection methodology including: <ul style="list-style-type: none"> Area saturation Underground difficulty and long-term permitting risks Circuit segment bundling Resource readiness and availability Previously hardened facilities Private/customer owned facilities 	Matthew Taul	4/21/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_017.zip	0	NA	8.1.2.2		Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution
235	CaPA	Set WMP-17	CaPA_Set WMP-17	4	CaPA_Set WMP-17_Q4	<p>In general, identify all the factors PG&E considers when deciding that a CPZ with small total risk profiles and small average risk profiles in WDRM V3 should be prioritized in PG&E's 2023 WMP project selection.</p>	<p>CONFIDENTIAL - Provided Pursuant to Confidentiality Declaration ("WMP-Discovery2023_DR_CaAdvocates_017_Confidentiality Declaration.pdf")</p> <p>WMP-Discovery2023_DR_CaAdvocates_017-Q004CONF Page 1</p> <p>allows for more comprehensive customer and community engagement as opposed to multiple projects being developed and worked on separate timelines.</p> <p>Lastly, our workplan as presented in the 2023 WMP was developed using numerous factors that could cause a particular circuit segment not to be included in this iteration of the 2023 WMP workplan including:</p> <ol style="list-style-type: none"> Due to the typically long timeframe required to develop and construct an underground project, 2022 WDRM V3 risk data via the WFE only minimally informed the early years in the 2023-2026 workplan, with much of the portfolio being informed by 2021 WDRM V2. There continues to be carry over work from previous workplans that must be completed, if a project had been started in a prior period it will be worked to completion. The WFE selection strategy utilizing WDRM V3 takes various cost and schedule optimization inputs into its selection methodology including: <ul style="list-style-type: none"> Area saturation Underground difficulty and long-term permitting risks Circuit segment bundling Resource readiness and availability Previously hardened facilities Private/customer owned facilities 	Matthew Taul	4/21/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_017.zip	0	NA	8.1.2.2		Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution

142	CaPA	Set WMP-14	CaPA_Set WMP-14	19	CaPA_Set WMP-14_Q19	<p>Please provide a list of all dig-in incidents that occurred from 2020-2022 and involved an underground electric distribution line. For each incident, please provide:</p> <p>a) Date of the incident b) Whether the dig-in was caused by PG&E employees, PG&E contractors, or a third-party c) Duration of the resulting outage, if applicable d) Injuries associated with the dig-in, if any e) Fatalities associated with the dig-in, if any f) Damage to non-PG&E structures associated with the dig-in, if any.</p>	<p>PG&E objects to this request as beyond the scope of this proceeding and unrelated to PG&E's 2023 WMP. Notwithstanding and without waiving these objections, we provide the following information in relation to dig-ins that happened in the 2020 to 2022 timeframe within HFTD Tier 2 and Tier 3 zones:</p> <p>a) Please see column A of attachment "WMP-Discovery2023_DR_CalAdvocates_014-Q019A1ch01.xlsx" for the requested information. b) Please see columns G and H of attachment "WMP-Discovery2023_DR_CalAdvocates_014-Q019A1ch01.xlsx" for the requested information. c) Please see column E of attachment "WMP-Discovery2023_DR_CalAdvocates_014-Q019A1ch01.xlsx" for the requested information. d) Please see column J of attachment "WMP-Discovery2023_DR_CalAdvocates_014-Q019A1ch01.xlsx" for the requested information. Please note that there were no injuries associated with dig-ins involving an underground electric distribution line in the 2020 to 2022 time period. e) Please see column K of attachment "WMP-Discovery2023_DR_CalAdvocates_014-Q019A1ch01.xlsx" for the requested information. Please note that there were no fatalities associated with dig-ins involving an underground electric distribution line in the 2020 to 2022 time period. f) Please see column L of attachment "WMP-Discovery2023_DR_CalAdvocates_014-Q019A1ch01.xlsx" for the requested information. Please note that there were no fatalities associated with dig-ins involving an underground electric distribution line in the 2020 to 2022 time period.</p>	Holly Wehrman	4/11/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_014.zip	1	N/A	8.4.2.1	Emergency Preparedness	Overview of Wildfire and PSPS Emergency Preparedness
118	CaPA	Set WMP-13	CaPA_Set WMP-13	5	CaPA_Set WMP-13_Q5	<p>Table 7-4 on pp. 307-313 of PG&E's WMP lists the top risk circuit segments (i.e., riskiest segments when sorted by total wildfire risk).</p> <p>a) Do the values in the column entitled "Jan. 1, 2023 Overall Risk" account for risk reduction associated with EPSS? Please explain how PG&E quantified the risk reduction associated with EPSS for each of the circuit segments in Table 7-4. b) Do the values in the column entitled "Jan. 1, 2024 Overall Risk" account for risk reduction associated with EPSS? c) Do the values in the column entitled "Jan. 1, 2025 Overall Risk" account for risk reduction associated with EPSS? d) Do the values in the column entitled "Jan. 1, 2026 Overall Risk" account for risk reduction associated with EPSS? e) Please supplement Table 7-4 with the following additional columns: i. Forecast SAIDI in 2023 if EPSS were not adopted; ii. Forecast SAIDI in 2023 with EPSS.</p>	<p>a) Based on the recorded effectiveness performance of Enhanced Powering Safety Settings (EPSS) in 2022, we include this effectiveness across each circuit segment across High Fire Threat Districts (HFTD) circuit segments. The recorded effectiveness compares EPSS enabled igniters to those that met EPSS criteria and is normalized by circuit-mile-days. The recorded effectiveness uses Fire Potential Index (FPI) information provided from our Meteorology team, which is currently only available through 2020, therefore we used 2018-2020 as a baseline. b) Yes, it includes the risk reduction associated with EPSS. c) Yes, it includes the risk reduction associated with EPSS. d) Yes, it includes the risk reduction associated with EPSS. WMP-Discovery2023_DR_CalAdvocates_013-Q005A1ch01.xlsx. This is shown in tab "TopRisk_Table" columns E and F. The SAIDI forecast was based on reliability of data between 2020-2022. With a very limited data set on EPSS performance, the SAIDI forecast at a device level may vary significantly. Some devices may not have any activity in the past year with or without EPSS and could have actual data in 2023. As we collect more data, the SAIDI forecast will improve.</p>	Holly Wehrman	4/6/2023	4/28/2023	4/28/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_013.zip	1	N/A	7.2.2.3	Wildfire Mitigation Strategy Development	Projected Risk Reduction on Highest-Risk Circuits Over the 3-Year WMP Cycle
282	TURN	009	TURN_009	1	TURN_009_Q1	<p>1. Regarding the 2023-2026 Undergrounding Workplan referenced on page 910 of the WMP (R1) and provided in Excel format in response to TURN Data Request 2-4:</p> <p>a) For each undergrounding project listed in this document, please provide the RSE calculated in accordance with the CPUC's S-MAP Settlement (see pp. 242 et seq of PG&E's WMP-R1) (not SWRSE or WFE) that PG&E calculated for the undergrounding project. Please provide all inputs and calculations for these RSE values, in Excel format. b) For each undergrounding project listed in this document, please provide the RSE calculated in accordance with the CPUC's S-MAP Settlement (see pp. 242 et seq of PG&E's WMP-R1) that PG&E calculated for any alternative mitigation for the project location, including but not limited to covered conductor. Please provide all inputs and calculations for these RSE values, in Excel format.</p>	<p>a) As explained on page 968 of the 2023-2026 WMP, PG&E developed a measurement described in the 2022 Revised WMP as the Simplified Wildfire Risk Spend Efficiency (SWRSE) or Wildfire Feasibility Efficiency (WFE) to identify where PG&E could most efficiently reduce risk given the terrain feasibility at a particular location due to the presence of hard rock, large water crossings, and/or gradient. PG&E calculates the SWRSE as follows: SWRSE = Wildfire Risk / Cost Standard Cost * Feasibility Score While in practice the standard cost per mile of undergrounding is expected to decline over time, PG&E assumed it to be fixed at 1 for all circuit segments so that the selection is only driven by feasibility and risk. This defines the WFE Score: WFE Score = RSE / (SWRSE * Feasibility Score) PG&E's WFE scores incorporate the elements of RSE calculations with the feasibility element used to account for operational and executability factors. PG&E has calculated WFE scores for individual circuit segments. The WFE scores are provided in the WMP-Discovery2023_DR_TURN_009-Q001A1ch01.xlsx. PG&E does not have any other RSE calculations matching the CPUC's S-MAP Settlement for each underground project listed in its workplan. Specific to more granular level assessments at the circuit segment level, WMP guidelines require risk reduction (not RSE) based on 2023-2026 workplans. Those risk reduction values are provided in workpaper "2023-03-27_PGE_2023_WMP_R2_Section 4.4.2" which was provided in response to TURN Data Request 8, Question 1 as "WMP-Discovery2023_DR_TURN_009-Q001A1ch02.xlsx". b) As explained in response to subpart (a), PG&E has created WFE scores for each circuit segment included in PG&E's undergrounding workplan. These scores incorporate the elements of RSE calculations with the added element of feasibility to account for operational and executability factors. PG&E does not have separate RSE calculations matching the CPUC's S-MAP Settlement for each project alternative listed in the document. Specific to more granular level assessments at the circuit segment level, WMP guidelines require risk reduction (not RSE) based on 2023-2026 workplans. Those risk reduction values are provided in workpaper "2023-03-27_PGE_2023_WMP_R2_Section 4.4.2" which was provided in response to TURN Data Request 8, Question 1 as "WMP-Discovery2023_DR_TURN_009-Q001A1ch02.xlsx".</p>	Tom Long	4/26/2023	5/1/2023	5/1/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_009.zip	0	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-16 - Progress and Updates on Undergrounding and Risk Prioritization
283	MGRA	Data Request No. 3	MGRA_Data Request No. 3	1	MGRA_Data Request No. 3_Q1	<p>Please provide for Asset Point data for Camera, Fuse, Support Structure, and Weather Station.</p>	<p>The attachments have been reuploaded to ESFT.</p>	Joseph Mitchell	4/27/2023	5/2/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_003.pdf	0	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
284	MGRA	Data Request No. 3	MGRA_Data Request No. 3	2	MGRA_Data Request No. 3_Q2	<p>Provide Asset Line data for Transmission Line (as permitted as non-confidential), Primary Distribution Line, and Secondary Distribution Line.</p>	<p>The attachments have been reuploaded to ESFT.</p>	Joseph Mitchell	4/27/2023	5/2/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_003.pdf	0	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
285	MGRA	Data Request No. 3	MGRA_Data Request No. 3	3	MGRA_Data Request No. 3_Q3	<p>Provide PSPS Event data. Include Event Log, Event Line, Event Polygon data. Please exclude customer meter data. Provide all PSPS Event Asset Damage data including photos.</p>	<p>The attachments have been reuploaded to ESFT.</p>	Joseph Mitchell	4/27/2023	5/2/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_003.pdf	0	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
286	MGRA	Data Request No. 3	MGRA_Data Request No. 3	4	MGRA_Data Request No. 3_Q4	<p>Provide Risk Event Point data, including Wire Down, Ignition, Transmission unplanned outage (as classified non-confidential), Distribution Unplanned Outage data, Distribution Vegetation Caused Unplanned Outage, Risk Event Asset Log.</p>	<p>The attachments have been reuploaded to ESFT.</p>	Joseph Mitchell	4/27/2023	5/2/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_003.pdf	0	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
287	MGRA	Data Request No. 3	MGRA_Data Request No. 3	5	MGRA_Data Request No. 3_Q5	<p>Under Initiatives, please provide Grid Hardening data, including Hardening Log, Hardening Point, and Hardening Line data. Inspection data is not requested at this time.</p>	<p>The attachments have been reuploaded to ESFT.</p>	Joseph Mitchell	4/27/2023	5/2/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_003.pdf	0	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
288	MGRA	Data Request No. 3	MGRA_Data Request No. 3	6	MGRA_Data Request No. 3_Q6	<p>Under Initiatives, please provide Other Initiative data for point, line, polygon features and the Other Initiative Log.</p>	<p>The attachments have been reuploaded to ESFT.</p>	Joseph Mitchell	4/27/2023	5/2/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_003.pdf	0	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
289	MGRA	Data Request No. 3	MGRA_Data Request No. 3	7	MGRA_Data Request No. 3_Q7	<p>Under Other Required Data, please provide Red Flag Warning Day polygon data.</p>	<p>The attachments have been reuploaded to ESFT.</p>	Joseph Mitchell	4/27/2023	5/2/2023	4/27/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_003.pdf	0	N/A	6.4	Risk Methodology and Assessment	Risk Analysis Results and Presentation
290	CaPA	Set WMP-21	CaPA_Set WMP-21	1	CaPA_Set WMP-21_Q1	<p>Per Table 8-12, Vegetation Management Implementation Objectives, PG&E's Focused Tree Inspection (FTI) Program is currently under development. By the end of 2025, PG&E plans to "Fully implement AOC cross-functional team to implement guidelines across all AOCs." PG&E states in response to question 11 of data request CalAdvocates-PGE-WMP-15 that its FTI pilot of 300 overhead miles is "intended to yield the learnings needed to support and inform future work plans."</p> <p>Please provide an anticipated schedule for PG&E's rollout of the Focused Tree inspection Program in the table below (adding rows as needed). Include, at a minimum, when and how PG&E will execute the pilots, analyze data collected from those pilots, and translate said data into a fully realized Focused Tree Inspection Program. Step in implementing the Focused Tree Inspections Program. Beginning Date Completion Date</p>	<p>Please see the table below for the Focused Tree Inspection Program schedule. PG&E is still developing the procedures for this program. We intend to use Q4 of 2023 to analyze the results of the pilots to inform our 2024 FTI plan. Step in implementing the Focused Tree Inspections Program Beginning Date Completion Date Execute FTI Pilots 5/30/2023 12/31/2023 Evaluate how mid-cycle inspections sequences can adjust with FTI 6/1/2023 11/30/2023 Review relevant processes and procedures 3/1/2023 10/31/2023 Implement guidelines across all AOCs in HFRA 10/31/2024 12/31/2024 Evaluate feasibility of developing a multi-year historical dataset 8/1/2023 3/1/2024</p>	Holly Wehrman	4/27/2023	5/2/2023	5/2/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_021.zip	0	N/A	8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
292	CaPA	Set WMP-21	CaPA_Set WMP-21	3	CaPA_Set WMP-21_Q3	<p>In response to data request CalAdvocates-PGE-2023WMP-16, question 10, PG&E stated, "The five most common problems identified in the QC process are: C-hooks, insulators, cotter pins, shoe issues, and structural issues."</p> <p>For each of the five problems listed above, please list any changes PG&E has made to its inspection process, procedures, or training to reduce the number of inspectors with these problems.</p>	<p>The confidential attachment is being provided pursuant to the accompanying confidentiality declaration. Please note, the quote is in reference to CalAdvocates-PGE-2023WMP-16, question 15. For transmission inspectors training, the top QC findings were shared with all returning and new inspectors as part of 2023 Onboarding and Refresher. Aerial Transmission Inspectors 1) C-Hooks and hanger plates: PG&E created visual diagrams to help identify wear and corrosion on c-hooks and hanger plates. Please see the Air+Handbook page 121-124 and job aid TD-1001M-JA-07. 2) Insulators: PG&E developed training and documentation for identifying issues from flashes/backing/chalking/contamination/pain corrosion. Additionally, PG&E continue to share all uncommon issues PG&E finds amongst our pod chats to ensure alignment and consistent resolution. Please see the Air+Handbook page 90-112 and job aid TD-1001M-JA-07. 3) Cotter pins: PG&E developed training and documentation for identifying different styles of cotter pins and when they become unneeded, including humps, straight legs, and gaps between legs. Please see the Air+Handbook page 117-119 and job aid TD-1001M-JA-07. WMP-Discovery2023_DR_CalAdvocates_021-Q003 Page 2 4) Shoe issues: PG&E developed training and documentation for identifying cracked shoes and making other determinations on damage such as hardware corrosion. Please see the Air+Handbook page 112-123 and job aid TD-1001M-JA-07. 5) Structural: PG&E developed training and documentation for identifying different levels of corrosion, and judging when hardware is loose, judging primary vs secondary members, and evaluating the size and severity of any woodpecker damage. Please see the Air+Handbook page 55-76 and job aids TD-1001M-JA-04 and TD-1001M-JA-06. In addition to the items listed above, PG&E also has an A-lag presentation and weekly meeting in which we go over any questions or concerns relating to PG&E equipment, along with any uncommon issues identified. Transmission Ground Detailed & Transmission Climbing Detailed Inspections 1) C-Hooks: PG&E developed training and documentation that provides examples of issues with c-hooks and describes how to identify various levels of material loss that are also included in inspector initial and refresher training, as well as in job aid TD-1001M-JA-07. 2) Insulators: PG&E developed training and documentation that provides examples of issues with insulators and describes how to identify various types of damage, corrosion, and material loss that are also included in inspector initial and refresher training, as well as in job aid TD-1001M-JA-07. 3) Cotter Pins: PG&E developed training and documentation that provides examples of issues with cotter pins and describes how to identify various types of damage and</p>	Holly Wehrman	4/27/2023	5/2/2023	5/2/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_021.zip	3	N/A	QDR	N/A	N/A
293	CaPA	Set WMP-21	CaPA_Set WMP-21	4	CaPA_Set WMP-21_Q4	<p>Figure PG&E-8.1.8-2 on p. 465 of PG&E's WMP shows that PSPS will be considered under the following conditions: • Wind gusts 30-40+ mph • Relative humidity <30% • Dead Fuel Moisture <9-11% • FPI of R5+ Page 768 of PG&E's WMP states that the following thresholds are taken into consideration in PSPS decision-making: • Sustained wind speed above 19 miles per hour • Dead fuel moisture (DFM) 10 hour less than 9 percent • DFM 100-hour, 1,000 hours less than 11 percent • Relative Humidity (RH) below 30 percent • Herbaceous live fuel moisture below 65 percent • Shrub (Chamise) Live Fuel Moisture below 90 percent • FPI above 0.7</p> <p>With respect to the WMP passages noted above: a) Please explain why these lists are different. b) What is the difference between an FPI of R5+ and a FPI above 0.7? c) Does PG&E consider sustained wind speeds, gusts, or both in PSPS decision-making? Please explain your response.</p>	<p>a) Figure PG&E-8.1.8-2 on p. 465 of PG&E's WMP is intended to be a simplified version of our criteria for general awareness. When the thresholds on page 768 of PG&E's WMP are the minimum fire potential conditions with quantifiable factors used during PSPS. b) An FPI of R5+ is when there is an occurrence of high FPI (above 0.7) plus the presence of high ignition potential driven by wind. c) PG&E considers sustained wind speeds for PSPS decision making on the distribution system.</p>	Holly Wehrman	4/27/2023	5/2/2023	5/2/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_021.zip	0	N/A	9.2.1	Public Safety Power Shutoff	Risk Thresholds (e.g., WS, FPI, etc.) and Decision-Making Process That Determine the Need for a PSPS.

201	CaPA	Set WMP-16	CaPA_Set WMP-16	6 SUPP	CaPA_Set WMP-16_06 SUPP	<p>For each of the undergrounding projects that PG&E has planned for 2023, please answer the following questions on each project:</p> <p>a) How many SCADA underground switches will be installed?</p> <p>b) How many overhead switches will be removed?</p> <p>c) How many tie switches to adjacent circuits currently exist?</p> <p>d) How many OH tie switches to adjacent circuits will be removed?</p> <p>e) How many tie switches (OH or UG) will exist when the project is complete?</p> <p>f) How many SCADA overhead switches will be removed?</p> <p>g) How many SCADA underground switches will be installed as tie points to adjacent circuits?</p> <p>h) How many SCADA underground switches will be installed for sectionalizing?</p> <p>i) How many pad-mounted transformers will be installed?</p> <p>j) How many vaults will be installed?</p> <p>k) How many junction boxes will be installed?</p> <p>l) How many junction boxes will be installed for sectionalizing?</p> <p>m) How many junction boxes will be installed as tie points to adjacent circuits?</p> <p>n) How many load break elbows will be installed?</p> <p>o) How many load break elbows will be installed for sectionalizing?</p> <p>p) How many load break elbows will be installed as tie points to adjacent circuits?</p> <p>q) How many handholes will be installed?</p> <p>r) How many risers will be installed?</p>	Holly Wehrman	4/18/2023	5/2/2023	5/1/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_016.zip	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment
294	MGRA	Data Request No. 4	MGRA_Data Request No. 4	1	MGRA_Data Request No. 4_01	<p>Please provide a description of how the data was created, and from which version of WDRM. Please provide a description of how risk data was assigned to the 100 meter square polygons that make up the layer, specifically if it is an average over the risk scores of the components within the area.</p>	Joseph Mitchell	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_016.zip	1	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA Proposed Updates to HFTD
295	MGRA	Data Request No. 4	MGRA_Data Request No. 4	2	MGRA_Data Request No. 4_02	<p>Explain why the vast majority of the polygons show low risk (<25%), and why high risk polygons (>70%) are very rare.</p>	Joseph Mitchell	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_016.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA Proposed Updates to HFTD
297	MGRA	Data Request No. 4	MGRA_Data Request No. 4	4	MGRA_Data Request No. 4_04	<p>Please explain why isolated "hot polygons" appear in the data, as shown below, and whether these represent actual risk or an artifact.</p>	Joseph Mitchell	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_016.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA Proposed Updates to HFTD
299	MGRA	Data Request No. 4	MGRA_Data Request No. 4	6	MGRA_Data Request No. 4_06	<p>If the risk score for each polygon represents an average over the risk in the polygon, please provide an additional version in which the maximum numerical value in the polygon is provided instead.</p>	Joseph Mitchell	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_016.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA Proposed Updates to HFTD
301	MGRA	Data Request No. 4	MGRA_Data Request No. 4	8	MGRA_Data Request No. 4_08	<p>Please provide an excel spreadsheet giving the Distribution Outage ID for each outage occurring while EPSS was enabled in 2022.</p>	Joseph Mitchell	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_016.zip	0	N/A	8.1.8.1.1	Grid Operations and Procedures	Protective Equipment and Device Settings
302	TURN	010	TURN_010	1	TURN_010_01	<p>PG&E's WMP (R1) at page 3 states PG&E undergrounded 180 miles in 2022 and 73 miles in 2021. In each of these years, separately, please provide the number of overhead miles that were converted to underground related to these mileage figures.</p>	Tom Long	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_010.zip	0	N/A	8.1.2.2	Grid Design, Operations, and Maintenance	Undergrounding
303	TURN	010	TURN_010	2	TURN_010_02	<p>PG&E's WMP (R1) at page 4 states "Between 2023 and 2026, 87 percent of PG&E's undergrounding work is planned for the top 20 percent of risk-ranked circuit segments, as identified by our risk models."</p> <p>a. Please provide workpapers and data in Excel that supports the 87 percent figure.</p> <p>b. Please explain what "top 20 percent of risk-ranked circuit segments" means, and reference the data and response in part (a) to show how this is calculated.</p>	Tom Long	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_010.zip	1	Yes	8.1.2.2	Grid Design, Operations, and Maintenance	Undergrounding
304	TURN	010	TURN_010	3	TURN_010_03	<p>Following up on the response to TURN DR 7-4(c), in which TURN asked whether PG&E calculated circuit-segment level RSEs for the past and future work shown in Attachment 2023-04-09_PGE_2023_WMP_R2_Section 6.4.2_Alch01, an earlier version of which is referenced on page 195, fn. 77 of the WMP (R1):</p> <p>a. Whether or not OES is required PG&E to present such circuit-segment level RSEs in the 2023-2025 WMP, has PG&E calculated them? If so, please provide the RSEs, preferably as additional columns in the workbook provided as Alch01 to TURN DR 7-2. Please provide all supporting workpapers, calculations, input data, and assumptions regarding these RSE calculations.</p>	Tom Long	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_010.zip	1	N/A	6.4.2	Risk Methodology and Assessment	Top Risk-Contributing Circuits/Segments
306	TURN	010	TURN_010	5	TURN_010_05	<p>Please provide the number of miles of secondary overhead distribution lines versus primary overhead distribution lines in PG&E's HFTD, and separately for PG&E's self-identified HFRA.</p>	Tom Long	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_010.zip	1	N/A	8.1.2.5	Grid Design and System Hardening	Traditional Overhead Hardening
307	TURN	010	TURN_010	6	TURN_010_06	<p>PG&E's WMP (R1) at page 4 states "Recent data and analysis demonstrate that the Enhanced Vegetation Management (EVM) Program risk reduction is less than EPSS and additional Operational Mitigations such as Partial Voltage Detection capabilities." Please provide this recent data, including all supporting documents and quantitative analyses in Excel, that support this statement.</p>	Tom Long	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_010.zip	4	N/A	8.2.3	Vegetation Management and Inspections	Vegetation and Fuels Management
308	TURN	010	TURN_010	7	TURN_010_07	<p>PG&E WMP (R1) at page 251 states "The type of mitigation tradeoff and effectiveness analysis we conduct informed PG&E's decision to transition away from the Enhanced Vegetation Management (EVM) program."</p> <p>a. Please provide all documentation and internal communications regarding the transition away from the EVM program.</p> <p>b. Please provide the "effectiveness analysis" conducted by PG&E that informed its decision to discontinue the EVM program.</p> <p>c. Please provide annual total spending on the EVM program from 2018-2022.</p>	Tom Long	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_010.zip	3	Yes	8.2.3	Vegetation Management and Inspections	Vegetation and Fuels Management
275	CaPA	Set WMP-20	CaPA_Set WMP-20	1	CaPA_Set WMP-20_01	<p>a) Describe PG&E's standard process for retiring an asset from service.</p> <p>b) Describe how PG&E records the retirement of an asset from service.</p>	Holly Wehrman	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_020.zip	1	N/A	8.1.5	Asset Management and Inspection Enterprise System(s)	NA
276	CaPA	Set WMP-20	CaPA_Set WMP-20	2	CaPA_Set WMP-20_02	<p>a) In 2022, as part of its WMP system hardening activities, did PG&E retire from service (i.e., replace, remove, destroy, or decommission) any assets that had not been fully depreciated at the time of retirement?</p> <p>b) Please describe how PG&E recorded the retirement of assets during 2022 system hardening activities.</p>	Holly Wehrman	4/28/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_020.zip	0	N/A	8.1.2	Grid Design and System Hardening	All

277	CaPA	Set WMP-20	CaIPA_Set WMP-20	3	CaIPA_Set WMP-20_Q3	a) In 2023, as part of its WMP system hardening activities, does PG&E intend to retire from service (i.e., replace, remove, destroy, or decommission) any assets that are not fully depreciated at the time of retirement? b) Please describe how PG&E will record the retirement of assets during 2023 system hardening activities.	a) Not applicable. The assets to be replaced as part of WMP system hardening activities in 2023 follow group depreciation and retirement accounting. As such, there is no undepreciated value of the assets that will be retired. Please refer to our response to Question 005, Subpart (a) for additional information. b) See response to Question 001, Subparts (a) - (b) of this Data Request. The retirement of assets during 2023 system hardening activities follow PG&E's standard process for recording the retirement of assets. Please see the response to Question 001, Subpart (b) for information regarding the tracking of PG&E's retired assets. Please also see Question 005, Subpart (a) for information on group depreciation and retirement accounting, as established by the CPUC, FERC, and the National Association of Regulatory Utility Commissioners (NARUC), which PG&E follows.	Holly Wehman	4/26/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_020.zip	0	NA	8.1.2	Grid Design and System Hardening	All
278	CaPA	Set WMP-20	CaIPA_Set WMP-20	4	CaIPA_Set WMP-20_Q4	What is PG&E's standard practice for tracking assets that are retired from service before they are fully depreciated?	a) The premise of this question is incorrect. PG&E follows group depreciation and retirement accounting, as established by the CPUC, FERC, and the National Association of Regulatory Utility Commissioners (NARUC). Group depreciation accounting refers to the well-established regulatory accounting method for large groups of homogeneous assets. The premise of group depreciation accounting principles (which may be referred to as "mass asset accounting" or "group depreciation") is that assets retired are deemed fully depreciated at the time of their retirement, and hence their value in rate base going forward is zero. As such, there is no undepreciated value of WMP assets retired. PG&E follows group depreciation practices, which are based on the average service life of elements of plant and equipment. The average age takes into account the ages of assets whenever they retire (are removed from service) and computes the average. The average itself is a recognition that some retirements occur before the average service life and others after. b) PG&E complies with the requirements of the FERC Code of Federal Regulations (CFR) Uniform System of Accounts when retiring assets. Table 18, Part 101 of the CFR states in its Electric Plant Instruction, section 10(B)(2), that when depreciable plant is retired, the book cost of the unit retired is credited to the plant account and debited to the accumulated provision for depreciation. Thus there is no change in rate base when plant is retired. The Commission's Standard Practice U-4, "Determination of Straight-Line Remaining Life Depreciation Accruals" (SP U-4), dated January 3, 1961, provides the same accounting treatment for retirements. (SP U-4, p. 5, Ch. 1, § 4.) Authorized depreciation expense is calculated with the understanding that unrecovered depreciation expense due to earlier retirements is made up by depreciation expense on other units which outlive the average service life of an account. As later explained in the Commission's SP U-4: "In group accounting all units having like mortality characteristics or all units of an account are considered together. Accruals for the group are based on composite or weighted average values of salvage and service life expectancy. The resulting values are applied to the surviving plant balances each year, each according to its deficiency in ability." c) No. Please see the response to Question 005, Subpart (a) for a detailed explanation.	Holly Wehman	4/26/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_020.zip	0	NA	8.1.5	Asset Management and Inspection Enterprise System(s)	NA
279	CaPA	Set WMP-20	CaIPA_Set WMP-20	5	CaIPA_Set WMP-20_Q5	a) If PG&E retires from service an asset that has not been fully depreciated, does it remove the remaining undepreciated value of the asset from its rate base? b) How does PG&E determine the remaining undepreciated value of an asset at the time the asset is retired from service? c) Please describe any scenario in which PG&E would retire from service an asset that has not been fully depreciated, but would keep the remaining undepreciated value of the asset in its rate base.	a) PG&E follows group depreciation and retirement accounting, as established by the CPUC, FERC, and the National Association of Regulatory Utility Commissioners (NARUC). Group depreciation accounting refers to the well-established regulatory accounting method for large groups of homogeneous assets. The premise of group depreciation accounting principles (which may be referred to as "mass asset accounting" or "group depreciation") is that assets retired are deemed fully depreciated at the time of their retirement, and hence their value in rate base going forward is zero. As such, there is no undepreciated value of WMP assets retired. PG&E follows group depreciation practices, which are based on the average service life of elements of plant and equipment. The average age takes into account the ages of assets whenever they retire (are removed from service) and computes the average. The average itself is a recognition that some retirements occur before the average service life and others after. b) PG&E complies with the requirements of the FERC Code of Federal Regulations (CFR) Uniform System of Accounts when retiring assets. Table 18, Part 101 of the CFR states in its Electric Plant Instruction, section 10(B)(2), that when depreciable plant is retired, the book cost of the unit retired is credited to the plant account and debited to the accumulated provision for depreciation. Thus there is no change in rate base when plant is retired. The Commission's Standard Practice U-4, "Determination of Straight-Line Remaining Life Depreciation Accruals" (SP U-4), dated January 3, 1961, provides the same accounting treatment for retirements. (SP U-4, p. 5, Ch. 1, § 4.) Authorized depreciation expense is calculated with the understanding that unrecovered depreciation expense due to earlier retirements is made up by depreciation expense on other units which outlive the average service life of an account. As later explained in the Commission's SP U-4: "In group accounting all units having like mortality characteristics or all units of an account are considered together. Accruals for the group are based on composite or weighted average values of salvage and service life expectancy. The resulting values are applied to the surviving plant balances each year, each according to its deficiency in ability." c) No. Please see the response to Question 005, Subpart (a) for a detailed explanation.	Holly Wehman	4/26/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_020.zip	0	NA	8.1.5	Asset Management and Inspection Enterprise System(s)	NA
280	CaPA	Set WMP-20	CaIPA_Set WMP-20	6	CaIPA_Set WMP-20_Q6	a) As of the date of this data request, does PG&E's rate base currently include any portion of the value of any assets that are no longer in service? b) If the answer to part (a) is yes, please explain why. c) If the answer to part (a) is no, list the controls in place that ensure PG&E's rate base does not currently include any portion of the value of assets that are no longer in service.	a) No. Please see the response to Question 005, Subpart (a) for a detailed explanation. b) Not applicable, as described in subpart (a) of this response. c) PG&E follows group depreciation and retirement accounting established by the CPUC, FERC, and National Association of Regulatory Utility Commissioners (NARUC). As such, there is no undepreciated value of WMP retired assets in rate base or required controls. Please see the response to Question 005, Subpart (a), for a detailed explanation.	Holly Wehman	4/26/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_020.zip	0	NA	8.1.5	Asset Management and Inspection Enterprise System(s)	NA
281	CaPA	Set WMP-20	CaIPA_Set WMP-20	7	CaIPA_Set WMP-20_Q7	In its response to data request CalAdvocates-PGE-2023/WMP-14, questions 20-22, PG&E stated, "We cannot provide the requested data. Our asset registry and work execution systems are not set up to enable this cross-referenced data consolidation and we do not track the volume of assets replaced that have not been fully recovered." a) Please explain what is meant by the statement, "Our asset registry and work execution systems are not set up to enable this cross-referenced data consolidation." b) Please explain what is meant by the statement, "We do not track the volume of assets replaced that have not been fully recovered." c) Is PG&E able to determine the number of assets that have not been fully depreciated that it retired from service as part of its 2020-2022 WMP activities? d) Is PG&E able to determine the total remaining undepreciated value of assets that it retired from service as part of its 2020-2022 WMP activities?	a) PG&E follows group depreciation and retirement accounting established by the CPUC, FERC, and National Association of Regulatory Utility Commissioners (NARUC). As such, there is no undepreciated value of WMP retired assets in rate base or required controls. Please see the response to Question 005, Subpart (a), for a detailed explanation. b) Not applicable, as described in subpart (a) of this response. c) PG&E follows group depreciation and retirement accounting established by the CPUC, FERC, and National Association of Regulatory Utility Commissioners (NARUC). As such, there is no undepreciated value of WMP retired assets in rate base or required controls. Please see the response to Question 005, Subpart (a), for a detailed explanation. d) No. Please see the response to Question 005, Subpart (a) for a detailed explanation.	Holly Wehman	4/26/2023	5/3/2023	5/3/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_020.zip	0	NA	8.1	Grid Design, Operations, and Maintenance	Distribution Pole and Replacements Traditional Overhead Hardening Transformers
313	CaPA	Set WMP-22	CaIPA_Set WMP-22	1	CaIPA_Set WMP-22_Q1	During the panel discussion portion of the Grid Operation, Design, and Maintenance session of the WMP workshop held on April 27, 2023, PG&E estimated that, during wildfire season (May through November) in 2022, EPSS was enabled on approximately 40-60% of circuit days. a) Is the above estimate correct? If not, please provide an estimate of the percentage of circuit days that EPSS was enabled during fire season in 2022. b) Does PG&E have a forecast of the percentage of circuit days on which EPSS will be enabled during fire season in 2023? If so, please provide it. c) Please define "circuit days."	a) Yes, we calculated the number of High Fire Risk Area (HFRA) circuits that were protected by EPSS between May and November in 2022, which was 59.8% of circuit-days. Note that we did not include EPSS buffer circuits, which are only enabled during Fire Weather Watch, Red Flag Warning, or minimum Fire Potential Conditions. Including those circuits would reduce that percentage significantly (those circuits - or portions of circuits - are only enabled a few days per year, if at all). b) A forecast for 2023 would require forecasting weather and Fire Potential Index (FPI) at the circuit level for the full year, which is not possible. However, given that 2022 saw 31% more days than the 2018-20 3-year average in R3 FPI or greater conditions, it is reasonable to assume that 60% is on the higher end of the estimate, and that a reduction of a third would be approximately 40% of circuit mile days. c) One "Circuit-Day" is equivalent to one EPSS capable circuit in HFRA protected by EPSS for one day during the May to November timeframe. This unit was selected as PG&E enables EPSS and returns settings to normal based on localized wildfire and meteorological risk conditions as defined at the daily circuit level, up rock using expansive epoxy (e.g., drill holes in the hard rock and add epoxy to the holes to expand and crack the hard rock). At a minimum digging in hard rock is more time consuming and costly and may simply be infeasible in some cases. b) For rocky and/or steep terrain, PG&E is currently piloting an-grade construction where a cable "tray" is installed inside a casing at ground level to house the electric cables. PG&E has also engaged with some early-stage technologies to dig / drill / excavate in hard rock areas including "rock plasma blasting". Some existing technologies, like Rock Wheels and boring machines, can operate effectively in certain environments but not others ("cobble" environments with a collection of hard rock but not a uniform consistency can be particularly challenging). d) PG&E has estimated that it can cost up to three times as much to underground lines in areas that are steep and have hard rock as compared to "normal" environments. Of course, the exact conditions of any particular project are highly variable and it is very unlikely that any project would be completely in hard rock and/or steep terrain conditions. Another data point is that some PG&E contracts with the civil construction vendors performing undergrounding work identify a "cost adder" that is applied to the linear footage of trench installation when hard rock encountered, that adder could range from approximately \$50 - \$300 per linear foot (which could mean an adder of ~\$275K to \$1.6M per mile, just for the civil construction portion of the undergrounding project cost). e) All of PG&E's unit cost data or forecasts related to Undergrounding are based on the underground primary distribution circuit miles installed. f) We do not have an estimate of the total unit cost in rocky and steep terrain in part because, as noted in the response to subpart c) no project is completely made up of hard rock and steep terrain, most projects contain some mix of terrain and soil conditions. As noted in PG&E's GRC System Hardening Underground Unit cost forecast by year (Table 4-11), PG&E expects to reduce total unit cost of the portfolio of undergrounding work to less than \$3.0 million per mile in 2025. Those unit cost forecasts represent the average across the portfolio of all undergrounding work, meaning that some projects will still cost more than \$3 million per mile (including potentially hard rock or steep terrain projects) while others will be executed for less than the targeted unit cost (e.g. \$2.96 million per mile in 2025).	Holly Wehman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	NA	8.1.8.1.1	Grid Design and System Hardening	Protective Equipment and Device Settings
314	CaPA	Set WMP-22	CaIPA_Set WMP-22	2	CaIPA_Set WMP-22_Q2	During the Q&A portion of the Grid Operation, Design, and Maintenance session of the WMP workshop held on April 27, 2023, a caller raised concerns about the feasibility of undergrounding in rocky and steep terrain and in wetlands. In response, PG&E stated that it was evaluating tools and techniques to perform undergrounding in those areas. Regarding undergrounding in areas with steep and rocky terrain: a) Please list and describe the current difficulties or obstacles to undergrounding in rocky and steep terrain. b) What tools and techniques is PG&E evaluating to improve the feasibility of undergrounding in rocky and steep terrain? c) What is PG&E's estimate of the current unit cost of undergrounding in rocky and steep terrain? d) Please state whether the unit cost provided in response to part (c) is based on mileage of overhead circuits removed or mileage of underground circuits installed. e) Regarding the unit cost given in response to part (c) of this question, when does PG&E expect to be able to reduce the unit cost to less than \$3.0 million per mile? f) Of the WMP undergrounding projects that PG&E plans to execute in 2023-2024, do any involve installing a significant amount (greater than 0.1 miles) of underground conductor in rocky and steep terrain? g) If the answer to part (f) is yes, please list each such project.	a) PG&E follows group depreciation and retirement accounting established by the CPUC, FERC, and National Association of Regulatory Utility Commissioners (NARUC). As such, there is no undepreciated value of WMP retired assets in rate base or required controls. Please see the response to Question 005, Subpart (a), for a detailed explanation. b) Not applicable, as described in subpart (a) of this response. c) PG&E follows group depreciation and retirement accounting established by the CPUC, FERC, and National Association of Regulatory Utility Commissioners (NARUC). As such, there is no undepreciated value of WMP retired assets in rate base or required controls. Please see the response to Question 005, Subpart (a), for a detailed explanation. d) No. Please see the response to Question 005, Subpart (a) for a detailed explanation. e) All of PG&E's unit cost data or forecasts related to Undergrounding are based on the underground primary distribution circuit miles installed. f) We do not have an estimate of the total unit cost in rocky and steep terrain in part because, as noted in the response to subpart c) no project is completely made up of hard rock and steep terrain, most projects contain some mix of terrain and soil conditions. As noted in PG&E's GRC System Hardening Underground Unit cost forecast by year (Table 4-11), PG&E expects to reduce total unit cost of the portfolio of undergrounding work to less than \$3.0 million per mile in 2025. Those unit cost forecasts represent the average across the portfolio of all undergrounding work, meaning that some projects will still cost more than \$3 million per mile (including potentially hard rock or steep terrain projects) while others will be executed for less than the targeted unit cost (e.g. \$2.96 million per mile in 2025).	Holly Wehman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution
315	CaPA	Set WMP-22	CaIPA_Set WMP-22	3	CaIPA_Set WMP-22_Q3	During the Q&A portion of the Grid Operation, Design, and Maintenance session of the WMP workshop held on April 27, 2023, a caller raised concerns about the feasibility of undergrounding in rocky and steep terrain and in wetlands. In response, PG&E stated that it was evaluating tools and techniques to perform undergrounding in those areas. Regarding undergrounding in wetland areas: a) Please list and describe the current difficulties or obstacles to undergrounding in wetlands. b) What tools and techniques is PG&E evaluating to improve the feasibility of undergrounding in wetlands? c) What is PG&E's estimate of the current unit cost of undergrounding in wetlands? d) Please state whether the unit cost provided in response to part (c) is based on mileage of overhead circuits removed or mileage of underground circuits installed. e) Regarding the unit cost given in response to part (c) of this question, when does PG&E expect to be able to reduce the unit cost to less than \$3.0 million per mile? f) Of the WMP undergrounding projects that PG&E plans to execute in 2023-2024, do any involve installing a significant amount (greater than 0.1 miles) of underground conductor in wetlands? g) If the answer to part (f) is yes, please list each such project.	a) To the greatest extent possible, PG&E avoids construction in federal or state jurisdictional wetlands and we have generally found relatively few locations where it is unavoidable to underground in a "wetland" area. PG&E will first seek to relocate our distribution circuits to a less sensitive environmental location. However, undergrounding across water crossings - streams, rivers, etc. is not uncommon due to the linear nature of electric distribution circuits and the linear nature of streams and rivers. When needing to underground across a water crossing (or a wetland, if it were to be necessary), the significant obstacles are not disrupting the waterway and avoiding water intrusion into our trench / conduit path. Because of this, PG&E generally uses existing boring technology (also referred to as Horizontal Directional Drilling (HDD)) to drill significantly below ground (and under the waterway) to avoid impacts to the waterway (or wetland). In these cases where HDD is used, we have an environmental inspector and/or a biological monitor on site to ensure the construction is properly protecting the waterway or other sensitive environmental areas. b) See the response to subpart a). c) PG&E does not specifically track unit cost per terrain type by mile when undergrounding miles, and therefore does not have this available. The cost of installing conduit underground via boring (or HDD) varies significantly based on many factors including the depth of bore needed, the rock / geological makeup of the area (hard rock or "cobble" rock environments are more difficult to bore through), the accessibility of the boring site, etc. In some cases, boring can be performed at a lower cost per foot or per mile than traditional trenching installing but in other cases boring may cost significantly more on a per foot basis (but may be the only tool available, like for undergrounding across a water crossing). Due to this high variability, there is no standard unit cost for undergrounding under waterways. d) Not applicable, please see the response to subpart c). As noted in response to Question 2, subpart d) of this data request: all of PG&E's unit cost data or forecasts related to Undergrounding are based on the underground primary distribution circuit miles installed. e) PG&E does not have an estimate of the total unit cost for undergrounding in wetlands (or across waterways). As noted in PG&E's GRC System Hardening Underground Unit cost forecast by year (Table 4-11), PG&E expects to reduce total unit cost of the portfolio to less than \$3.0 million per mile in 2025. Those unit cost forecasts represent the average across the portfolio of all undergrounding work, meaning that some projects will still cost more than \$3 million per mile (including potentially hard rock or steep terrain projects) while others will be executed for less than the targeted unit cost (e.g. \$2.96 million per mile in 2025). f) PG&E does not track the terrain type by mile when undergrounding. As noted in response to subpart a), PG&E aims to avoid undergrounding in wetland terrain and the footage of undergrounding below water crossings tends to be relatively small in comparison to total project length. g) Not applicable. PG&E does not track the terrain type by mile when undergrounding miles.	Holly Wehman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution

316	CaPA	Set WMP-22	CaPA_Set WMP-22	4	CaPA_Set WMP-22_Q4	Table PG&E-22-11-3 on page 903 of PG&E's WMP states that the cost per circuit mile of covered conductor was \$825,698 in 2022. PG&E's response to data request CalAdvocates-PGE-2023WMP-19, question 10 confirms that "There are no additional costs associated with overhead hardening that were excluded from Table 22-11-3." In response to data request CalAdvocates-PGE-2023WMP-06, question 10, PG&E stated that its actual 2022 expenditures related to covered conductor were \$285,544,000 and that PG&E installed 335 miles. This results in \$851,860 per circuit mile of covered conductor in 2022. In response to data request CalAdvocates-PGE-2023WMP-09, question 14, PG&E provided a unit cost forecast of \$1,678 million per mile for overhead hardening in 2025. a) Please explain the discrepancy in 2022 covered conductor unit costs between PG&E's response to CalAdvocates-PGE-2023WMP-06, question 10 (\$851,860 per circuit mile) and Table PG&E-22-11-3 (\$825,698 per circuit mile). b) Why is PG&E's forecast of covered conductor unit cost in 2025 nearly double the actual unit cost in 2022? c) Please state the basis of your unit cost forecast of \$1,678 million per mile in 2025. d) Provide any workpapers or analyses that you used to develop your unit cost forecast of \$1,678 million per mile in 2025.	By the primary owner for this category, the unit cost forecast for the WMP is based on a cost of \$825,698 per mile using the cost-since-inception methodology to derive the true unit cost. Meaning, the costs for those projects include the whole lifecycle of costs from prior to 2022. The inferred unit cost calculation in this data request using data from CalAdvocates-PGE-2023WMP-06, question 10, does not give you the true unit cost since there are costs in 2022 that are specific to 2022 miles achieved—primarily close-out costs for 2021 completed projects—and readiness costs (Estimating/Design, Permitting, Materials, etc.) for 2023 and beyond projects. PG&E recommends avoiding calculating unit cost by using financials and units from the same year. b) With the reduction in overhead hardening mileage over the WMP period (as compared to prior years), PG&E anticipates an increase in the unit cost of covered conductor installations due to an assumed loss of economies of scale. c) PG&E's 2025 forecast for the unit cost of covered conductor in the WMP is aligned with PG&E's forecast in the 2023 GRC. The unit cost forecast from the 2023 GRC is provided in the table excerpt below. The 2023 unit cost forecast specifically reflects an escalation of the unit cost forecasts from 2023 and 2024, noting that the 2025 unit cost forecast is an ~29% increase from the 2024 unit cost forecast. So the driver of the 2025 unit cost is the 2023 unit cost which is \$1,56 million per mile. The 2023 unit cost is based on the 2020 recorded unit costs of approximately \$1.69 million per mile plus certain adjustments. The 2020 recorded unit costs included approximately \$250,000 to \$300,000 per mile for vegetation clearing. PG&E excluded these vegetation costs from the 2023 unit costs because work planned in future years is likely to occur in areas with much less vegetation. Excluding vegetation clearing reduced the unit costs to approximately \$1.69 million per mile to \$1.64 million per mile. PG&E further reduced the unit costs to address affordability concerns and increased costs to account for inflation. With these adjustments, the 2023 unit cost for System Hardening OH is \$1,56 million per mile. (In PG&E's initial 2023 GRC filing this figure was \$1.52 million per mile but with the increase in inflation observed during the proceeding it was updated to \$1.56 million in a February 2022 update to PG&E's 2023 GRC filing.) This 2023 unit cost was then escalated to forecast the 2024 and 2025 unit costs for overhead system hardening. d) The analysis used to develop the 2025 unit cost is provided in the response to subpart c above and aligns with PG&E's response to subpart (a).	Holly Wehrman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	N/A	8.1.2.1	Grid Design and System Hardening	Covered Conductor Installation – Distribution
318	CaPA	Set WMP-22	CaPA_Set WMP-22	6	CaPA_Set WMP-22_Q6	a) Given the best information now available to PG&E, is the expected useful life of newly installed covered conductor identical to that of newly installed bare overhead conductor? b) Does PG&E expect that asset management and maintenance needs for covered overhead conductor are identical to those of bare overhead conductor? c) Does PG&E intend, either now or at any point in the future, to apply different PPS criteria (such as wind speed thresholds) for circuit-segments that are hardened with covered conductor, relative to those with bare overhead conductor? d) If the answer to the previous part is yes, how will PG&E determine which PPS criteria to apply without having accurate information about where on its system it has installed covered conductor?	a) The expected life of newly installed Covered Conductor (CC) is not identical to the newly installed Bare Conductor (BC) because the failure modes are different between the two conductor types. At this time, PG&E does not have a set useful life expectancy for covered conductor due to ongoing evaluation of LV exposure and the possibility of accelerated corrosion from water intrusion to the protective jacket. These failure modes were documented in PG&E's Covered Conductor Testing. The Joint IOU effort is continuing to evaluate PG&E's testing results and the impacts of the expected useful life of newly installed covered conductor. b) PG&E uses the same inspection methods for CC and BC. As noted in the 2023 WMP Joint IOU CC Report, most inspection practices of BC also apply to CC. In addition, in 2023, PG&E updated the Detailed Ground Inspection Checklist to include prompts for identifying failure modes that are unique to CC, such as CC wire jacket cut into and internal conductor exposed, CC exposed and dead-end cover mis-alignment on CC construction. PG&E is continuing to evaluate test results, discussed in response to subpart (a), to assess if additional updates to inspection methods are required. c) As stated in response to ACQ PG&E-22-31 in the 2023-2025 WMP, due to PG&E's PPS modeling approach, PG&E would not manually adjust our PPS criteria (such as wind speed thresholds) for circuit-segments to account for covered conductor or any other program that reduces the probability of catastrophic outcomes. Our Catastrophic Fire Probability model (discussed in Section 9) is a risk-based assessment of the probability of ignition given an outage multiplied by the probability of catastrophic fires (Fire Potential Index). Thus, we would not adjust the threshold at which PPS is executed (each area is scored for PPS at the same risk threshold), but any program or external factor that results in a beneficial outcome would reduce the probability of ignitions and therefore decrease the chance of achieving the PPS threshold. We incorporate new outage data each year into our Outage Producing Winds (OPW) and Ignition Probability Weather (IPW) machine learning models. These updates account for any updated wind to outage to ignition responses in local areas of the grid. We are also exploring if adding covered conductor as a feature of the IPW model in future iterations provides benefits (see Objective SA-04). d) See the response to Subpart (c).	Holly Wehrman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	N/A	8.1.2.1	Grid Design and System Hardening	Covered Conductor Installation – Distribution
319	CaPA	Set WMP-22	CaPA_Set WMP-22	7	CaPA_Set WMP-22_Q7	Table 8-7-2 on page 446 of PG&E's WMP uses the term "Critical pass rate." Please define this term.	The attachment to this response is confidential as described in the confidentiality declaration of Richard Kneiber, dated May 5, 2023. Please see attachment "WMP-Discovery2023_DR_CalAdvocates_022-Q001AtoD1CCNF.pdf" for the requested information. Specifically, on pages 1-2 of the document, we identify three calculations that comprise the Quality Pass Rate: (1) the QV Distribution Pass Rate; (2) the QV Transmission Pass Rate; and (3) the Routine Vegetation Management Pass Rate. The Critical Pass Rate is comprised of two of these three calculations: (1) the QV Distribution Pass Rate; and (2) the QV Transmission Pass Rate.	Holly Wehrman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	1	N/A	8.1.6.2	Grid Design and System Hardening	Quality Control
320	CaPA	Set WMP-22	CaPA_Set WMP-22	8	CaPA_Set WMP-22_Q8	In response to data request CalAdvocates-PGE-2023WMP-05, question 3, PG&E provided the number of distribution inspections that failed QC review. Out of 52,894 inspections that underwent desktop quality control, 4,976 (9.4%) failed. Out of 4,096 inspections that underwent field quality control, 602 (14.7%) failed. The above numbers generate a pass rate of 90.6% for desktop quality control and 85.3% for field quality control. Table 8-7-2 on page 446 of PG&E's WMP lists a "critical pass rate" of 85.5% for distribution desktop audits, and 79.3% for distribution field audits. a) If any of the figures in the table above are inaccurate, please provide corrected figures. b) Please explain the apparent discrepancy between the failed inspection numbers provided in response to data request CalAdvocates-PGE-2023WMP-05, question 3, and the critical pass rate provided in Table 8-7-2 on page 446 of PG&E's WMP.	a) All numbers in the table above have been verified and are accurate per our 2022 data and dashboards. b) Critical pass rate is a subset of the overall pass rate, looking at specific, Critical priority ranked attributes. c) Pass rate, in this example, is defined as "The number of inspections that failed QC review was derived from the count of inspections with a Cause Code Description, compelling abnormal condition missed during inspection, or a maintenance notification was not created." d) Critical pass rate for this specific subset of work, which included only distribution, is defined as:	Holly Wehrman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	N/A	8.1.6.2	Grid Design and System Hardening	Quality Control
321	CaPA	Set WMP-22	CaPA_Set WMP-22	9	CaPA_Set WMP-22_Q9	In response to data request CalAdvocates-PGE-2023WMP-06, question 6, PG&E provided a list of incidents in 2022 where the actions of a VM contractor posed a safety risk to workers or the public. Please fill out the spreadsheet "CalAdvocates-PGE-2023WMP-23_AtoD1.xlsx" with the number of miles worked by each VM contractor in 2022 for each VM program/initiative. Note: the lists of contractors and programs come from columns L and G, respectively, of the attachment to PG&E's response to CalAdvocates-PGE-2023WMP-06, question 6. Please make any additions that are necessary for completeness and accuracy.	PG&E does not track the number of miles worked by each VM contractor. PG&E tracks the number of trees worked by vendor, or poles worked by vendor depending on the program in question. Please see "WMP-Discovery2023_DR_CalAdvocates_022-Q001AtoD1" spreadsheet for the number of miles worked by vendor for Routine/CEMA, EVM, Pole Work, and Wildfire Rebuild. The Systems Inspectors program does not work with VM contractors.	Holly Wehrman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	1	N/A	8.2	Vegetation Management and Inspections	various
323	CaPA	Set WMP-22	CaPA_Set WMP-22	11	CaPA_Set WMP-22_Q11	Table PG&E-8.1.2-3 on page 349 of PG&E's WMP lists the number of undergrounding miles to be performed in "Top 20 percent Risk-Ranked Circuit Segments" in 2023, 2024, 2025, and 2026. The table notes, "The 2023 risk rank for segments is based on the 2021 WDRM v2. The 2024-2026 risk rank for segments is based on the 2022 WDRM v3." a) Please define "Top 20 percent Risk-Ranked Circuit Segments" for each year from 2023-2026. b) How many circuit miles are contained within the "Top 20 percent Risk-Ranked Circuit Segments" for each year from 2023-2026? c) How many circuit segments are contained within the "Top 20 percent Risk-Ranked Circuit Segments" for each year from 2023-2026? d) Does the phrase "Top 20 percent Risk-Ranked Circuit Segments" refer to the top 20 percent of circuit segments across PG&E's entire service territory, across the HFTD, or another categorization? Please explain your answer.	a) As indicated in Table PG&E-8.1.2.3, the "top 20% Risk-Ranked Circuit Segments" miles can come from either the WDRM v2 or v3 Risk Rank Models. The 2023 risk rank for segments is based on the 2021 WDRM v2. The 2024-2026 risk rank for segments is based on the 2022 WDRM v3. The "v3 Top 20% Risk-Ranked Circuit Segments" are miles selected from the WDRM v3 risk model with a v3 Risk Rank between 1 and 720. Any miles with a v3 Risk Rank above 720 that are completed as part of the program would then be considered outside "the top 20 percent of risk-ranked circuit segments." The "v2 Top 20% Risk-Ranked Circuit Segments" are miles selected from the WDRM v2 risk model with a v2 Risk Rank between 1 and 727. Any miles with a v2 Risk Rank above 727 that are completed as part of the program would then be considered outside "the top 20 percent of risk-ranked circuit segments." b) Based on WDRM v2, the total overhead HFTD circuit miles that are in the top 20% Risk-Ranked Circuit Segments is 8,780. Based on WDRM v3, the total overhead HFTD/HFRA circuit miles that are in the top 20% Risk-Ranked Circuit Segments is 8,876 miles. c) Based on WDRM v2, there are 727 total circuit segments that are in the top 20% Risk-Ranked Circuit Segments. Based on WDRM v3, there are 720 total circuit segments that are in the top 20% Risk-Ranked Circuit Segments. d) The "Top 20 percent of Risk-Ranked Circuit Segments" refers to the top 20% of circuit segments as set forth below: -For WDRM v2, this includes HFTD circuit miles in WDRM v2, this includes HFTD, HFRA, and HFRA miles in WDRM v2. b) The average, median, minimum and maximum age of poles (in years) replaced in 2020, 2021, and 2022 are as follows: 2020 2021 2022 Average 49 48 49 Median 49 47 48 Minimum 4 5 7 Maximum 95 97 98 c) PG&E's form of pole repair discussed in Section 8.1.2.3 of the WMP is to reinforce the pole with a steel truss. As such, the age of poles provided below is specific to poles reinforced. 2020 2021 2022 Average 51 50 51 Median 51	Holly Wehrman	5/2/2023	5/5/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	N/A	8.1.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
324	CaPA	Set WMP-23	CaPA_Set WMP-23	1	CaPA_Set WMP-23_Q1	PG&E states in its WMP p. 751, "Based on our updated 2021 PPS Protocols, some of the circuits below would not have been de-energized three or more times in any calendar year from 2019 to 2022. These circuits are noted below as "mitigated with PPS Protocols." Please explain in detail how circuit ID 152481106 (circuit name Brunswick 1106) would have been mitigated by PPS Protocols.	See response to WMP-Discovery2023_DR_CalAdvocates_012-Q001AtoD1 full list of circuits mitigated by PPS Protocols and the Distribution customer-events that would have been mitigated.	Holly Wehrman	5/3/2023	5/8/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_023.zip	0	N/A	9.2	Public Safety Power Shutoff	Protocols on PPS
325	CaPA	Set WMP-23	CaPA_Set WMP-23	2	CaPA_Set WMP-23_Q2	Regarding PG&E's October 26-29, 2019, Post-PPS Event Report, please explain in detail how PG&E's 2021 PPS Protocols, as mentioned in Question 1, would have mitigated customers served by each of the affected circuits during this PPS de-energization event.	See response to question 1 in this data request set for explanation on how the current PPS Protocols would mitigate customers.	Holly Wehrman	5/3/2023	5/8/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_023.zip	0	N/A	9.2	Public Safety Power Shutoff	Protocols on PPS
326	CaPA	Set WMP-23	CaPA_Set WMP-23	3	CaPA_Set WMP-23_Q3	Regarding PG&E's AFN Plan, Appendix C "Program/Assistance Participation by Census Tract", p. A-9, please provide the demographics (especially racial/ethnic breakdown and income distribution), if known, for each census tract that received benefits of the following programs: a) Self-Generation Incentive Program b) Portable Battery Program c) Generator and Battery Rebate Program (GBRP).	PG&E provides three tables – one for each of the Self-Generation Incentive Program, Portable Battery Program, and Generator and Battery Rebate Program – that provides the number of CARE participants within the total number of Service Point IDs (SPIDs) for each census tract. See: • WMP-Discovery2023_DR_CalAdvocates_023-Q003AtoD1.csv for the Self-Generation Incentive Program • WMP-Discovery2023_DR_CalAdvocates_023-Q003AtoD2.csv for the Portable Battery Program • WMP-Discovery2023_DR_CalAdvocates_023-Q003AtoD3.csv for the Generator and Battery Rebate Program Note that the tables in this response reflect customer account statuses as of May 4, 2023, and therefore may not match the customer counts and census tracts in the AFN Plan (effective as of January 2023) due to accounts becoming established and closed since that time.	Holly Wehrman	5/3/2023	5/8/2023	5/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_023.zip	3	N/A	8.5.3	Community Outreach and Engagement	Engagement with Access and Functional Needs Population
311	TURN	011	TURN_011	3	TURN_011_Q3	3. Regarding DR response TURN-7, attachment: "WMP-Discovery2023_DR_TURN_007-Q001AtoD1CCNF.xlsx" please add a column to this spreadsheet, for tab "PG&E UG Workplan 2023-26_Conf", with the unique identifier for each circuit segment provided in 1d(i) and 2(a) above. b. Please provide the supporting data and calculations for tab "PG&E UG Workplan 2023-26_Conf" column AC "HF_WFE Score." The formula looks up a value in a confidential data request sent to Cal PA. Please provide in Excel with formulas intact and with internal references to calculations, not external workbooks. c. Please provide "WMP-Discovery2023_DR_CalAdvocates_009-Q016AtoD1CCNF" in Excel not provided in response to part (b) of this question. Please provide in Excel with formulas intact and with internal references to calculations, not external workbooks.	a. The circuit segment identifier is the name of the circuit segments as previously shared in our workshop. In attachment "WMP-Discovery2023_DR_TURN_007-Q001AtoD1CCNF.xlsx", see column O for WDRM v2 circuit segment identifiers, and column R for WDRM v3 circuit segment identifiers. b. Please see attachment "WMP-Discovery2023_DR_TURN_010-Q004AtoD1.xlsx". Note, the calculation to determine High Fire WFE score is as follows: High Fire WFE score (column E, "HF_WFE score") = Line Weighted Risk per Mile (column B, "v3_line_weighted_risk_per_mile") / High Fire Feasibility Cost Multiplier (column C, "HF_feasibility_score"). c. Please see "WMP-Discovery2023_DR_CalAdvocates_009-Q016AtoD1CCNF.xlsx".	Tom Long	5/1/2023	5/8/2023	5/8/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_011.zip	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution

312	TURN	011	TURN_011	4	TURN_011_04	<p>4. Regarding Attachment 2023-04-06_PGE_2023_WMP_R2_Section 6.4.2_Altch01, an earlier version of which is referenced on page 195, fn. 77 of the WMP (RT):</p> <p>a. Please add a column to this spreadsheet and provide the unique circuit segment identifier requested in 1(b)(i) above and 2(a) and 3 above.</p> <p>b. In Excel, please provide all supporting data and properly link cells in this spreadsheet to support the "mitigated risk" calculations in tab "Data_RR" (columns L, O, R, and U for undergrounding). Many of them link to documents on PG&E's internal server/workbooks.</p> <p>c. Please define and explain the following column headings on the "Data_RR" tab: i. "weighted_composite_for_system_hardening_wildfire_risk_mean"; ii. "HFTD mileage (please indicate whether this is overhead or underground mileage)"; iii. "Baseline wildfire risk (and please indicate if this is the same as the WDRM3 model)"; d. If "HFTD Mileage" is not overhead circuit miles, please add a column to this spreadsheet that provides overhead circuit miles for each circuit segment.</p> <p>e. Please explain how, and whether, PG&E has incorporated an overhead to underground conversion ratio in its calculation of mitigated risk. Please provide cell references for where this is incorporated.</p> <p>f. Please confirm that the sum of all risk mitigated for undergrounding in 2023, 2024, and 2025, is 2,321 units, which represents 10 percent of baseline wildfire risk.</p> <p>g. If not confirmed, please provide a corrected calculation, and an explanation of the percentage of total wildfire risk mitigated by undergrounding indicated by these calculations.</p> <p>h. If confirmed, does PG&E agree that this means these calculations indicate PG&E will reduce wildfire risk by 10 percent through its undergrounding program from 2023-2025? Please explain why or why not.</p> <p>1. If PG&E disagrees with the 10 percent figure, please provide the correct percentage of wildfire risk PG&E expects to mitigate through its undergrounding program.</p> <p>Please provide all supporting workpapers, calculations, and assumptions in Excel.</p>	Tom Long	5/1/2023	5/8/2023	5/8/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_011.zip	1	NA	6.4.2	Risk Methodology and Assessment	Top Risk-Contributing Circuits/Segments
327	OEIS	004	OEIS_004	1	OEIS_004_01	<p>Regarding Ignition Probability Weather Model</p> <p>In PG&E's WMP, it states its "IPW framework analyzes positive and negative changes in grid performance and reliability year-over-year and applies a time-weighted approach to weigh more recent years of learned performance more heavily in the final model output." (p. 769)</p> <p>a. What metrics are used to analyze the year-over-year changes in grid performance and reliability?</p> <p>b. Provide a description (i.e. changes in event, ignition, and outage numbers) and locations of changes PG&E has observed in grid performance based on implementing system hardening mitigations, including the amount of time it took to observe any statistical changes that would account for changes in PSPS decision-making.</p> <p>c. How is year-to-year weather variation accounted for in the analysis of year-over-year changes in grid performance and reliability?</p>	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	0	NA	9.2.1	Public Safety Power Shutoff	Risk Thresholds (e.g., WS, FPI, etc.) and Decision-Making Process That Determine the Need for a PSPS.
328	OEIS	004	OEIS_004	2	OEIS_004_02	<p>Regarding EPSS in IPW Model</p> <p>PG&E discusses its Ignition Probability Weather (IPW) Model on p. 769 of its WMP</p> <p>a. How does the IPW Model analyze and consider outages from EPSS (i.e. differentiating analysis completed)?</p> <p>b. How does the IPW Model account for EPSS-enabled circuits?</p>	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	0	NA	9.2.1	Public Safety Power Shutoff	Risk Thresholds (e.g., WS, FPI, etc.) and Decision-Making Process That Determine the Need for a PSPS.
329	OEIS	004	OEIS_004	3	OEIS_004_03	<p>Regarding After Action Reports for Emergency Preparedness</p> <p>Provide the most recent After Action Report from emergency training exercises for the following exercises:</p> <ul style="list-style-type: none"> Table 8-39 Personnel Training EP&R Emergency Preparedness Training Program PSPS Restoration Process PSPS Execution for Distribution Control Center (DCC) Operators Table 8-40 External Contractor Training TD-1464S Table 8-41 Internal Drill, Simulation, and Tabletop Exercise Program Operations Based Wildfire FE Operations Based PSPS FSE Table 8-42 External Drill, Simulation, and Tabletop Exercise Program Operations Based Wildfire FE Operations Based PSPS FSE 	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	2	NA	8.4.2.2.2	Emergency Preparedness	Personnel Training
330	OEIS	004	OEIS_004	4	OEIS_004_04	<p>Regarding Customer Group in PSPS Objective PS-05</p> <p>In PSPS objective PS-05, PG&E states that it will focus on a group of customers "not limited to AFN, MBL and self-identified vulnerable populations."</p> <p>a. How does PG&E define this group of customers it is focusing on?</p> <p>b. What is the size of this group of customers that PG&E is focusing on?</p>	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	0	NA	8.5.3	Community Outreach and Engagement	Engagement With Access and Functional Needs Populations
331	OEIS	004	OEIS_004	5	OEIS_004_05	<p>Regarding Areas of Concern and Focused Tree Inspections (FTI)</p> <p>a. How will PG&E address risk from green hazard trees (those not obviously dead, dying, or declining) in non-Areas of Concern?</p> <p>b. P-WMP_2023-PG&E-003, Question 7, PG&E indicated that its BRAQ form is not digitized and will be used as a guide for FTI. During FTI, what information is recorded into OneView? Provide a copy of the form(s) within OneView inspectors are required to populate during FTI.</p> <p>c. During FTI, are all overstrike trees within the AOC inspected?</p> <p>d. If so, are inspections required to perform both a level 1 and level 2 inspection on each overstrike tree?</p> <p>e. If not, what overstrike trees are inspected and how is the level 2 inspection determined?</p> <p>f. How many circuit miles within PG&E's AOCs were treated under the EVM program?</p> <p>g. On page 56 of PG&E's WMP it states, "Our Operational Mitigations include programs such as Enhanced Powerline Safety Settings (EPSS) and Focused Tree Inspections." FTI is not described as an "operational mitigation" elsewhere in the WMP. Clarify this statement.</p>	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	1	NA	8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
332	OEIS	004	OEIS_004	6	OEIS_004_06	<p>Regarding Enhanced Vegetation Management</p> <p>a. Populate the following table with information regarding EVM:</p> <p>Year</p> <p>HFTD Miles Completed</p> <p>Inspected Strike Potential Trees</p> <p>Trees Worked</p> <p>Average Trees Per Mile</p> <p>% of Miles in Top 20% of Risk</p> <p>2019</p> <p>2020</p> <p>2021</p> <p>2022</p> <p>Total</p> <p>b. Provide a GIS layer of line features showing where EVM work was completed.</p>	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	1	NA	8.2.2.2.6	Vegetation Management and Inspections	Discontinued Programs
333	OEIS	004	OEIS_004	7	OEIS_004_07	<p>Regarding vegetation-caused outages</p> <p>a. Does PG&E have data on vegetation hazards mitigated by PSPS? If so, populate the following table of vegetation hazards mitigated by mode of failure in the HFTD between 2015 and 2022, broken out by year. PG&E may add additional rows (i.e., mode of failure) if needed.</p> <p>VEGETATION CAUSED OUTAGE MODE OF FAILURE</p> <p>2015</p> <p>2016</p> <p>2017</p> <p>2018</p> <p>2019</p> <p>2020</p> <p>2021</p> <p>2022</p> <p>Branch (radial, > 12ft)</p> <p>Branch (within radial, 4-12ft)</p> <p>Branch (radial, distance Unknown)</p> <p>Branch (overhang)</p> <p>Dead Tree</p> <p>Tree Fall (moderate-severe defect)</p> <p>Tree Fall (slight defect)</p> <p>Tree Fall (no defect)</p> <p>Tree Grow Into</p> <p>Other/Unknown</p>	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	1	NA	Appendix D	Areas for Continued Improvement	ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study
334	OEIS	004	OEIS_004	8	OEIS_004_08	<p>Regarding vegetation-caused outages</p> <p>a. Does PG&E have data on vegetation hazards mitigated by PSPS? If so, populate the following table of vegetation hazards mitigated by mode of failure in the HFTD between 2015 and 2022, broken out by year. PG&E may add additional rows (i.e., mode of failure) if needed.</p> <p>MODE OF FAILURE FOR VEGETATION HAZARDS MITIGATED BY PSPS</p> <p>2015</p> <p>2016</p> <p>2017</p> <p>2018</p> <p>2019</p> <p>2020</p> <p>2021</p> <p>2022</p> <p>Branch (radial, > 12ft)</p> <p>Branch (within radial, 4-12ft)</p> <p>Branch (radial, < 4ft)</p> <p>Branch (radial, distance Unknown)</p> <p>Branch (overhang)</p> <p>Dead Tree</p> <p>Tree Fall (moderate-severe defect)</p> <p>Tree Fall (slight defect)</p> <p>Tree Fall (no defect)</p> <p>Tree Grow Into</p> <p>Other/Unknown</p>	Colin Lang	5/4/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	0	NA	9.2.2	Public Safety Power Shutoff	Method Used to Compare and Evaluate the Relative Consequences of PSPS and Wildfires

335	OEIS	004	OEIS_004	9	OEIS_004_Q9	Regarding Coordination with Other Utilities on PSPS Wind Thresholds In its response to ACI PG&E 22-31, PG&E states: "In collaboration with the joint IOU team, PG&E has performed effectiveness studies to evaluate how covered conductors can reduce ignition risk compared to bare conductor." a. Is the collaboration referenced the Covered Conductor Effectiveness Study (Table 8-63, Line 1)? b. List PG&E's other, if any, collaboration efforts with the investor-owned utilities at evaluating the effect of covered conductor on PSPS risk. c. Has PG&E specifically discussed raising of PSPS wind thresholds in any of its covered conductor collaboration efforts? d. List the collaboration efforts, if any, where adjusting PSPS wind thresholds for covered conductor was discussed. e. Provide a list of PG&E's circuits that are fully hardened with covered conductor.	a. The Joint IOU Covered Conductor Working Group Report was provided in the original submission as part of attachment "Attachment 2023-05-27_PGE_2023_WMP_R0_Appendix D ACI PG&E-22-11_Ach01.pdf". b. PG&E did not collaborate with the investor-owned utilities to evaluate the effectiveness of covered conductors related to PSPS. c. As stated in response to ACI PG&E 22-31 in the 2023-2025 WMP, due to our PSPS modeling approach, we would not adjust our final PSPS risk thresholds to account for covered conductor. Our Catastrophic Fire Probability model (discussed in Section 9) is a risk-based assessment of the probability of ignition given an outage multiplied by the probability of catastrophic fires (Fire Potential Index). Thus, we would not adjust the threshold at which PSPS is executed (each area is scoped for PSPS at the same risk threshold) based on covered conductor. d. PG&E does, however, incorporate new outage data each year into our Outage Producing Winds (OPW) and Ignition Probability Weather (IPW) machine learning models. These updates account for any updated wind to outage to ignition responses in local areas of the grid, including those due to asset upgrades like covered conductor. In addition, PG&E is also exploring if adding covered conductor as a feature of the IPW model in future iterations provides benefits (see Objective SA-04). e. Please reference "WMP-Discovery2023_DR_OEIS_004-Q009Ach01.xlsx" for a list of historical OH covered conductor projects as well as a list of forecasted projects to be added.	Colin Lang	5/4/2023	5/9/2023	5/9/2023	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations
336	OEIS	004	OEIS_004	10	OEIS_004_Q10	Regarding Tree Fall in and PSPS In its response to ACI PG&E 22-31, PG&E states "based on collaboration with the joint IOU team, one of the biggest hazards during PSPS event is the potential for tree fall into line" (p. 956). a. Explain "one of the biggest hazards during PSPS event" in terms of risk (e.g., likelihood, consequence).	Based on PG&E's review of potential ignition events during a PSPS event, vegetation related hazards pose the highest risk for ignitions. Please reference Table 5 and Table 6 of the Quarterly Data Report PG&E submits to the OEIS, where all of the ignitions are listed, including those that pose the highest risk for ignition. PG&E has incorporated tree strike potential and vegetation tags into its PSPS guidance (Catastrophic Fire Probability (CFP)). Please see WMP Section 9.2.1 "Risk Thresholds and Decision-Making Process that Determine the Need for a PSPS" for additional information regarding DCDs. b. Data as of May 4th, 2023 for 2022-2023 DCD Outages: i. 17 outages have occurred with DCD settings enabled. ii. The table below matches outage causes to the Ignition Drivers used in Table 6 of the 2022 Q4 Quarterly Data Report. iii. DCD is an additional protection element as part of EPSS. PG&E will enable DCD on capable devices when EPSS is enabled to help detect lower current fault conditions. iv. 4,732,936 Minutes. v. DCD outages and circuits are already considered in our existing EPSS Reliability program. Specific to DCD, PG&E is adding more DCD capable devices on circuits to, where feasible, increase sectionalization of DCD protection that will reduce outage size and restoration patrol areas while maintaining the ignition reduction benefit. Furthermore, in cases of unknown cause DCD outages, or with multiple DCD outages on a single device, our engineering and system protection team may conduct specific reviews of the protection settings of these devices. b. Data as of May 4th, 2023 for 2022-2023 Partial Voltage Force Outages (PVFO): i. 33 outages have occurred from PVFO. ii. The number of outages broken down by cause (based on ignition drivers listed in Table 6 of the QDR) that occurred due to PVFO in 2022 is shown below. WMP-Discovery2023_DR_OEIS_004-Q014 Page 3 i. Partial Voltage Force Out is a manual action taken by a distribution control center operator in response to more than one partial voltage alarms detected at the fuse level or above. ii. 9,488,701 minutes. v. These circuits are included in the scope of PG&E's existing EPSS Reliability Mitigation programs. In addition, PG&E's PV alarm configuration is designed to prevent nuisance alerts from transient conditions by sending the distribution control center operator a PV alarm when multiple meters aggregating to a fuse level indicate a partial voltage condition, and further we will clear PV alarms if normal voltage returns.	Colin Lang	5/4/2023	5/9/2023	5/9/2023	0	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations
340	OEIS	004	OEIS_004	14	OEIS_004_Q14	Regarding PG&E's Use of Downed Conductor Detection (DCD) and Partial Voltage Detection (PVD) a. Provide any analysis completed on reliability impacts due to DCD, including: i. The number of outages that occurred due to DCD in 2022 and 2023 ii. The number of outages broken down by cause (based on ignition drivers listed in Table 6 of the QDR) that occurred due to DCD in 2022 and 2023 iii. Criteria used for DCD enablement (if applicable) iv. The number of total customer minutes interrupted from DCD outages v. Any mitigations PG&E is using to reduce reliability impacts from DCD implementation, including lessons learned from any piloting b. Provide any analysis completed on reliability impacts due to PVD, including: i. The number of outages that occurred due to PVD in 2022 and 2023 ii. Criteria used for PVD enablement (if applicable) iii. The number of total customer minutes interrupted from PVD outages iv. Any mitigations PG&E is using to reduce reliability impacts from PVD implementation, including lessons learned from any piloting c. When evaluating outages due to EPSS, are DCD and PVD outages included as part of that evaluation? d. If so, what is the number of additional outages caused by PVD and DCD respectively in 2022? e. If not, how does PG&E account for and track any associated reliability and safety impacts from DCD and PVD implementation, and how does that inform changes to the two programs?	a. Data as of May 4th, 2023 for 2022-2023 DCD Outages: i. 17 outages have occurred with DCD settings enabled. ii. The table below matches outage causes to the Ignition Drivers used in Table 6 of the 2022 Q4 Quarterly Data Report. iii. DCD is an additional protection element as part of EPSS. PG&E will enable DCD on capable devices when EPSS is enabled to help detect lower current fault conditions. iv. 4,732,936 Minutes. v. DCD outages and circuits are already considered in our existing EPSS Reliability program. Specific to DCD, PG&E is adding more DCD capable devices on circuits to, where feasible, increase sectionalization of DCD protection that will reduce outage size and restoration patrol areas while maintaining the ignition reduction benefit. Furthermore, in cases of unknown cause DCD outages, or with multiple DCD outages on a single device, our engineering and system protection team may conduct specific reviews of the protection settings of these devices. b. Data as of May 4th, 2023 for 2022-2023 Partial Voltage Force Outages (PVFO): i. 33 outages have occurred from PVFO. ii. The number of outages broken down by cause (based on ignition drivers listed in Table 6 of the QDR) that occurred due to PVFO in 2022 is shown below. WMP-Discovery2023_DR_OEIS_004-Q014 Page 3 i. Partial Voltage Force Out is a manual action taken by a distribution control center operator in response to more than one partial voltage alarms detected at the fuse level or above. ii. 9,488,701 minutes. v. These circuits are included in the scope of PG&E's existing EPSS Reliability Mitigation programs. In addition, PG&E's PV alarm configuration is designed to prevent nuisance alerts from transient conditions by sending the distribution control center operator a PV alarm when multiple meters aggregating to a fuse level indicate a partial voltage condition, and further we will clear PV alarms if normal voltage returns.	Colin Lang	5/4/2023	5/9/2023	5/9/2023	0	N/A	8.1.2.10.1	Grid Design and System Hardening	Downed Conductor Detection Devices
341	OEIS	004	OEIS_004	15	OEIS_004_Q15	Regarding Feasibility Constraints PG&E must provide an explanation of how, if at all, feasibility constraints impact the decision making of its Wildfire Governance Steering Committee in selecting a portfolio of mitigation measures that deviates from the risk informed prioritization. This should include: a. A flowchart or explanation of decision-making as processed by the Wildfire Governance Steering Committee, including where feasibility constraints are accounted for b. The correlation between raw V2 risk outputs and WFE c. The correlation between WFE and feasibility d. Any associated shifts in prioritization due to implementing feasibility constraints e. A list of any projects not included within US scope due to feasibility constraints	a. Yes. A DCD outage is an EPSS outage. PG&E also evaluates PVD outages. PG&E does not use a "risk-informed prioritization" when selecting wildfire mitigations. As described throughout the 2023-2025 WMP, and specifically in Section 7.1.4.2, we begin developing our list of proposed mitigations by analyzing risk events, risk drivers, and consequences. Subject to and without waiving these objections, PG&E responds as follows: a. Please see attachment "WMP-Discovery2023_DR_OEIS_004-Q015Ach01.pdf". This decision tree reflects the process we followed to further analyze our highest risk undergrounding circuits included in the WMP. The process, as shown on the decision tree attachment and described below, is split into four key phases: 1. Circuit Segment Risk Ranking (purple box): First prioritize circuit segments in the locations where wildfire risk is the highest based on the latest wildfire distribution risk model (currently WDRM v3). 2. Circuit Selection Prioritization Process (blue boxes): Then identify potential environmental conditions that impact feasibility of undergrounding (water crossing, rock type, gradient), and calculate wildfire feasibility (WFE) by circuit segment to prioritize undergrounding in the locations where WFE is the highest. 3. Feasibility Study (green boxes): First, we confirm the segment identified is not already completed or included in existing work. Then, engineering review identifies opportunities to improve efficiencies and mitigate additional impacts, including adjusting the project to mitigate PSPS or EPSS impacts, determining if undergrounding is unfeasible (if so, identifying alternatives such as overhead, remote grid or hybrid), and confirming if there are any recent changes to the electric assets. 4. Field Scoping (orange boxes): Field scoping then takes place, which is focused on identifying impediments to the proposed project route and determining if a route or scope change is needed. If so, an alternative route is developed. Then, we sequence bundled miles and begin the planning phase of work. b. As discussed in the 2023 WMP, the 2023 WMP, PG&E evaluated the statistical significance of the 2022 EPSS Ignition Reduction as calculated using the formula below: 1 - (2018 - 2020) Where WDRM v3 is applicable ignitions are CPUC HFTD Reportable Fire Ignitions in High Fire Threat Districts (HFTD) on primary conductor with EPSS enabled, or for 2018-2020, during the weather-conditions when EPSS would have been enabled (i.e., the ignition reduction calculation is weather-normalized). b. We understand "EPSS Risk" to be the aggregated risk of unplanned outages resulting from EPSS enablement. EPSS is a wildfire mitigation that is targeted only in PG&E's high fire-risk areas (HFRAs) as well as select HFRAs-adjacent areas where, if an ignition were to occur, could propagate into the HFRAs. By definition, since the HFRAs represents places that have high wildfire risk, this scoring already demonstrates that EPSS as a mitigation is directly addressing places of wildfire risk. WMP-Discovery2023_DR_OEIS_004-Q016 Page 2 c. Please reference "WMP-Discovery2023_DR_OEIS_004-Q016Ach01.xlsx". PG&E has identified the Circuit Protection Zones (CPZs) to be addressed as part of the Vegetation Management and Animal Mitigation EPSS CEMI 8+ proactive mitigation programs. Resources to support EPSS proactive vegetation management work on CEMI 8+ circuit protection zones are being redirected as part of the transition of Enhanced Vegetation Management to more effective wildfire mitigation strategy, as noted in the 2023 WMP. The workplan for Animal Mitigation and identification of the minimal number of required resources to support the plan is currently being finalized. In addition to vegetation management and animal mitigation on EPSS CEMI 8+ CPZs, EPSS targeted equipment repairs are incorporated into the Open Work Orders Tag program as described in Section 8.1.7 of the WMP. EPSS targeted equipment repairs can be either EC, ER, or CE Notification. Work planning and resourcing for the work is managed according to the Open Work Orders Tag program as noted in Section 8.1.7 and is prioritized based on circuit risk rankings. Please also reference "WMP-Discovery2023_DR_OEIS_004-Q016Ach02.xlsx" for a. PG&E interprets cumulative risk score as total risk score of each circuit segment based on the 2021 WDRM v2 and the 2022 WDRM v3. Please note, for the 2022 WMP and 2023 WMP workplans, the total risk scores are provided at the CPZ-level, however, the entire CPZ may not be scoped in the workplan. For the 2023 WMP, please reference "WMP-Discovery2023_DR_OEIS_004-Q017Ach01CONF.xlsx" for the project workplan of the undergrounding scope for 2023-2026 with total risk scores from v2 (column AC) and v3 (column AB) provided. Applicable Risk Model (column M), indicates if the project was selected based on WDRM v2 or WDRM v3. For the 2022 WMP, please reference attachment "WMP-Discovery2023_DR_OEIS_004-Q017Ach02CONF.xlsx". Please reference column J and K that identify the forecasted miles by 2023, and 2024-2026, respectively. PG&E added the total risk scores from v2 (column AC) and v3 (Column AB) to the originally submitted 2022 WMP Undergrounding workplan. Some circuit segments show a blank in total risk score based on WDRM v2 (column AC) where those projects were not in an HFTD and therefore were not included in the WDRM v2 model (i.e., projects in an HFRAs, and community rebuild projects). WMP-Discovery2023_DR_OEIS_004-Q017 Page 2 b. i. The following interim mitigation measures are used as on-going wildfire safety work on all assets in HFTD areas, including those scoped for undergrounding in the future: • Using enhanced powerline safety settings (EPSS) that automatically turn off power within one-tenth of a second if a wildfire threat is detected. • Deploying PSPS to reduce wildfire risk during extreme weather conditions while reducing impacts from PSPS outages through targeted grid sectionalizing and reconfiguration in weather-impacted areas, thereby preventing power outages for customers who are not directly impacted, and • Conducting asset inspections and repairs, and vegetation management. ii. At the time of filing the WMP and preparing the workplan dated January 3, 2023, we did not have any projects planned in 2027. Based on continued scoping of additional future undergrounding projects, the model was created to date the	Colin Lang	5/4/2023	5/9/2023	5/9/2023	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-34 – Review Process of Prioritizing Wildfire Mitigations
342	OEIS	004	OEIS_004	16	OEIS_004_Q16	Regarding Effectiveness of EPSS a. Provide the formulas and calculations used by PG&E to determine the effectiveness of EPSS. b. Provide analysis demonstrating adequate overlap between EPSS risk and wildfire risk to ensure PG&E's mitigations are directly addressing wildfire risk opposed to reliability. c. Provide PG&E's workplan for resourcing EPSS-directed mitigation measures, including ratios and work hour shifted around from wildfire risk mitigations. This should also include asset management related mitigations.	a. As discussed in the 2023 WMP, the 2023 WMP, PG&E evaluated the statistical significance of the 2022 EPSS Ignition Reduction as calculated using the formula below: 1 - (2018 - 2020) Where WDRM v3 is applicable ignitions are CPUC HFTD Reportable Fire Ignitions in High Fire Threat Districts (HFTD) on primary conductor with EPSS enabled, or for 2018-2020, during the weather-conditions when EPSS would have been enabled (i.e., the ignition reduction calculation is weather-normalized). b. We understand "EPSS Risk" to be the aggregated risk of unplanned outages resulting from EPSS enablement. EPSS is a wildfire mitigation that is targeted only in PG&E's high fire-risk areas (HFRAs) as well as select HFRAs-adjacent areas where, if an ignition were to occur, could propagate into the HFRAs. By definition, since the HFRAs represents places that have high wildfire risk, this scoring already demonstrates that EPSS as a mitigation is directly addressing places of wildfire risk. WMP-Discovery2023_DR_OEIS_004-Q016 Page 2 c. Please reference "WMP-Discovery2023_DR_OEIS_004-Q016Ach01.xlsx". PG&E has identified the Circuit Protection Zones (CPZs) to be addressed as part of the Vegetation Management and Animal Mitigation EPSS CEMI 8+ proactive mitigation programs. Resources to support EPSS proactive vegetation management work on CEMI 8+ circuit protection zones are being redirected as part of the transition of Enhanced Vegetation Management to more effective wildfire mitigation strategy, as noted in the 2023 WMP. The workplan for Animal Mitigation and identification of the minimal number of required resources to support the plan is currently being finalized. In addition to vegetation management and animal mitigation on EPSS CEMI 8+ CPZs, EPSS targeted equipment repairs are incorporated into the Open Work Orders Tag program as described in Section 8.1.7 of the WMP. EPSS targeted equipment repairs can be either EC, ER, or CE Notification. Work planning and resourcing for the work is managed according to the Open Work Orders Tag program as noted in Section 8.1.7 and is prioritized based on circuit risk rankings. Please also reference "WMP-Discovery2023_DR_OEIS_004-Q016Ach02.xlsx" for a. PG&E interprets cumulative risk score as total risk score of each circuit segment based on the 2021 WDRM v2 and the 2022 WDRM v3. Please note, for the 2022 WMP and 2023 WMP workplans, the total risk scores are provided at the CPZ-level, however, the entire CPZ may not be scoped in the workplan. For the 2023 WMP, please reference "WMP-Discovery2023_DR_OEIS_004-Q017Ach01CONF.xlsx" for the project workplan of the undergrounding scope for 2023-2026 with total risk scores from v2 (column AC) and v3 (column AB) provided. Applicable Risk Model (column M), indicates if the project was selected based on WDRM v2 or WDRM v3. For the 2022 WMP, please reference attachment "WMP-Discovery2023_DR_OEIS_004-Q017Ach02CONF.xlsx". Please reference column J and K that identify the forecasted miles by 2023, and 2024-2026, respectively. PG&E added the total risk scores from v2 (column AC) and v3 (Column AB) to the originally submitted 2022 WMP Undergrounding workplan. Some circuit segments show a blank in total risk score based on WDRM v2 (column AC) where those projects were not in an HFTD and therefore were not included in the WDRM v2 model (i.e., projects in an HFRAs, and community rebuild projects). WMP-Discovery2023_DR_OEIS_004-Q017 Page 2 b. i. The following interim mitigation measures are used as on-going wildfire safety work on all assets in HFTD areas, including those scoped for undergrounding in the future: • Using enhanced powerline safety settings (EPSS) that automatically turn off power within one-tenth of a second if a wildfire threat is detected. • Deploying PSPS to reduce wildfire risk during extreme weather conditions while reducing impacts from PSPS outages through targeted grid sectionalizing and reconfiguration in weather-impacted areas, thereby preventing power outages for customers who are not directly impacted, and • Conducting asset inspections and repairs, and vegetation management. ii. At the time of filing the WMP and preparing the workplan dated January 3, 2023, we did not have any projects planned in 2027. Based on continued scoping of additional future undergrounding projects, the model was created to date the	Colin Lang	5/4/2023	5/9/2023	5/9/2023	2	N/A	8.1.8.1.1	Grid Design, Operations, and Maintenance	Protective Equipment and Device Settings
343	OEIS	004	OEIS_004	17	OEIS_004_Q17	Regarding PG&E's Undergrounding Program a. Provide the cumulative V2 and V3 risk scores of the 2022 WMP vs. 2023 WMP undergrounding scope for 2023-2026. This should not include not account for feasibility. b. Provide the analysis on the remaining risk of the miles no longer scoped for undergrounding, including: i. Interim mitigations being put into place if scoped for undergrounding in the future ii. The number of miles scoped for the future (past 2026) iii. Alternative mitigations being used if no longer scoped for undergrounding	a. As discussed in the 2023 WMP, the 2023 WMP, PG&E evaluated the statistical significance of the 2022 EPSS Ignition Reduction as calculated using the formula below: 1 - (2018 - 2020) Where WDRM v3 is applicable ignitions are CPUC HFTD Reportable Fire Ignitions in High Fire Threat Districts (HFTD) on primary conductor with EPSS enabled, or for 2018-2020, during the weather-conditions when EPSS would have been enabled (i.e., the ignition reduction calculation is weather-normalized). b. We understand "EPSS Risk" to be the aggregated risk of unplanned outages resulting from EPSS enablement. EPSS is a wildfire mitigation that is targeted only in PG&E's high fire-risk areas (HFRAs) as well as select HFRAs-adjacent areas where, if an ignition were to occur, could propagate into the HFRAs. By definition, since the HFRAs represents places that have high wildfire risk, this scoring already demonstrates that EPSS as a mitigation is directly addressing places of wildfire risk. WMP-Discovery2023_DR_OEIS_004-Q016 Page 2 c. Please reference "WMP-Discovery2023_DR_OEIS_004-Q016Ach01.xlsx". PG&E has identified the Circuit Protection Zones (CPZs) to be addressed as part of the Vegetation Management and Animal Mitigation EPSS CEMI 8+ proactive mitigation programs. Resources to support EPSS proactive vegetation management work on CEMI 8+ circuit protection zones are being redirected as part of the transition of Enhanced Vegetation Management to more effective wildfire mitigation strategy, as noted in the 2023 WMP. The workplan for Animal Mitigation and identification of the minimal number of required resources to support the plan is currently being finalized. In addition to vegetation management and animal mitigation on EPSS CEMI 8+ CPZs, EPSS targeted equipment repairs are incorporated into the Open Work Orders Tag program as described in Section 8.1.7 of the WMP. EPSS targeted equipment repairs can be either EC, ER, or CE Notification. 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Please reference column J and K that identify the forecasted miles by 2023, and 2024-2026, respectively. PG&E added the total risk scores from v2 (column AC) and v3 (Column AB) to the originally submitted 2022 WMP Undergrounding workplan. Some circuit segments show a blank in total risk score based on WDRM v2 (column AC) where those projects were not in an HFTD and therefore were not included in the WDRM v2 model (i.e., projects in an HFRAs, and community rebuild projects). WMP-Discovery2023_DR_OEIS_004-Q017 Page 2 b. i. The following interim mitigation measures are used as on-going wildfire safety work on all assets in HFTD areas, including those scoped for undergrounding in the future: • Using enhanced powerline safety settings (EPSS) that automatically turn off power within one-tenth of a second if a wildfire threat is detected. • Deploying PSPS to reduce wildfire risk during extreme weather conditions while reducing impacts from PSPS outages through targeted grid sectionalizing and reconfiguration in weather-impacted areas, thereby preventing power outages for customers who are not directly impacted, and • Conducting asset inspections and repairs, and vegetation management. ii. At the time of filing the WMP and preparing the workplan dated January 3, 2023, we did not have any projects planned in 2027. Based on continued scoping of additional future undergrounding projects, the model was created to date the	Colin Lang	5/4/2023	5/9/2023	5/10/2023	2	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution

309	TURN	011	TURN_011	1	TURN_011_01	<p>1. PG&E's WMP (R1) at page 4 references WDRM v3.</p> <p>a. Please explain and quantify the difference in risk ranking results between WDRM v2 and WDRM v3. Please provide all supporting data and analysis in Excel with working formulas.</p> <p>b. Please provide all results of WDRM v3 in Excel at the circuit segment, circuit protection zone, or most granular level available. This should include, at minimum, the following information in separate columns for all overhead HFTD and self-identified HFRA miles that have been evaluated:</p> <p>i. A unique circuit segment identifier that can be used to cross-reference with PG&E's undergrounding workplan provided in worksheet "2023-04-06_PGE_2023_WMP_R1_Appendix D ACI PG&E-22-16_AltCh01". Please add this unique identifier to the workplan if necessary and provide in Excel if not already available. This unique identifier should also be incorporated into the response to question 2.</p> <p>ii. Total wildfire risk score.</p> <p>iii. Total overall risk score (wildfire + PSPS).</p> <p>iv. Total PSPS risk score.</p> <p>v. Mean wildfire risk score (please explain in the response how this is calculated).</p> <p>vi. Mean PSPS risk score (please explain in the response how this is calculated).</p> <p>vii. Risk Rank (please explain in the response how this is determined).</p> <p>viii. Overhead circuit miles of the circuit segment.</p> <p>ix. Expected number of underground miles to underground the circuit (if available for currently scoped projects).</p> <p>c. Please add 4 columns to the spreadsheet provided in part (b) for the number of overhead miles expected to be underground in 2023, 2024, and 2025, respectively, corresponding to each circuit segment.</p>	<p>a) An explanation and quantification of the differences between the top 20% risk-ranked circuit segments between WDRM v2 and WDRM v3 models is provided in the response to ACI 22-09 on pages 885-892 of the 2023 PG&E WMP. The worksheet supporting this work is provided in attachment "WMP-Discovery2023_DR_TURN_011-Q001AltCh01.xlsx." Within the worksheet, the Readme tab directs the reader through the analysis supporting ACI 22-09 and specifically the waterfall chart and circuit segment counts provide on page 889 of the 2023 PG&E WMP.</p> <p>b) Please see attachment "WMP-Discovery2023_DR_TURN_011-Q001AltCh02.xlsx" workbook SH_composite_cs_summary.</p> <p>i. See Column A</p> <p>ii. See Column P</p> <p>* Note, in the context of the request, the total wildfire risk score for the overall risk score is calibrated by the Enterprise MAVF factor. As referenced, Column O shows the Wildfire Risk scores from WDRM v3 without the MAVF calibration.</p> <p>iii. See Column R</p> <p>iv. See Column Q</p> <p>v. See Column M</p> <p>* This is the sum of the wildfire risk for all pixels along that circuit segment divided by the number of pixels along that circuit segment, which was previously presented on column M.</p> <p>* Note, this column is not MAVF calibrated for risk scoring, since this value is only used for risk ranking.</p> <p>* N/A, added as Column T</p> <p>* PSPS risk scores are not calculated at a risk pixel level since the PSPS risk scores are calculated at the customer level and aggregated to the circuit segment level.</p> <p>vi. See Column N</p> <p>* The Risk Rank order is described in Section 6.4.2 of the 2023 WMP. PG&E ranked circuit segments from highest to lowest mean wildfire ignition risk. By sorting in this method, the risk of a circuit segment is proportional to its length.</p> <p>vii. See Column AC</p> <p>viii. See Column AD</p> <p>e. The Risk Rank order is described in Section 6.4.2 of the 2023 WMP. PG&E ranked circuit segments from highest to lowest mean wildfire ignition risk. By sorting in this method, the risk of a circuit segment is proportional to its length of the circuit segment. Alternatively, circuit segments can be sorted in other methods such as total overall utility risk; however, the results would be significantly impacted by the length of the circuit segment (i.e. longer circuit segments would have larger total risk scores in general).</p> <p>f. We currently do not track the overhead miles removed and replaced through undergrounding.</p> <p>g. As described in more detail in response to TURN Data Request 09, PG&E's Wildfire Feasibility (WFE) scores incorporate the elements of RSE calculations with the feasibility element used to modify the spend factor to account for operational and executability factors.</p> <p>For example: Location 1 = 1.0 feasibility. Location 2 = 1.2 feasibility. The forecasted cost is expected to be 20% higher in Location 2 than in Location 1 due to feasibility impacts (e.g. hard rock, water crossing, or gradient). Because the unit cost of undergrounding can vary year to year, this is treated as 1 and does not impact the calculation of WFE. Overall, it is expected that the average feasibility across the entire portfolio will be managed within the expected unit cost, as PG&E optimizes based on operational and executability factors. After miles are selected based on WFE, locations are assessed in further detail during the project design or later phases.</p>	Tom Long	5/1/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_011.zip	2	N/A	6.2	Risk Methodology and Assessment	Risk Analysis Framework
310	TURN	011	TURN_011	2	TURN_011_02	<p>2. Re PG&E's undergrounding workplan, "2023-04-06_PGE_2023_WMP_R1_Appendix D ACI PG&E-22-16_AltCh01".</p> <p>a. Please add a column that provides the unique circuit segment identifier requested in 1(b)(i) above.</p> <p>b. Please add a column to this spreadsheet that provides the total wildfire risk of each circuit segment as calculated by WDRM v3.</p> <p>c. Please add a column to this spreadsheet that provides the total wildfire risk of each circuit segment as calculated by WDRM v2.</p> <p>d. Please add a column that provides the total overhead circuit miles of each circuit segment.</p> <p>e. Please explain why PG&E ranks circuit segments by "mean risk" rather than total risk of each segment.</p> <p>f. Please provide the total number of overhead miles that correspond to each year's total underground miles (cells WA:AA4).</p> <p>g. Column U provides the "feasibility score by CPZ" which is defined in the definitions tab as a "Cost multiplier indicating the difficulty of undergrounding the circuit segment (Circuit Protection Zone (CPZ))."</p> <p>i. Please explain what the multiplier is applied to. For example, what is the baseline cost of undergrounding per mile (multiplier of 1.0) for 2023, 2024, 2025, and 2026, respectively?</p> <p>ii. Please provide an illustration of how the multiplier is used to estimate costs. For example, if a CPZ has a feasibility score of 2.0, what is the estimated total cost? Please explain and provide the calculation for this example.</p> <p>iii. Please provide the estimated costs forecast related to this workplan for 2023-2026, annually. Please provide at the circuit segment level if available, and in total. Please provide all supporting workpapers and calculations in Excel.</p> <p>iv. Please provide recorded 2022 costs for undergrounding miles shown here.</p>	<p>For subparts A-D, please see attachment "WMP-Discovery2023_DR_TURN_011-Q002AltCh01CONN.xlsx".</p> <p>ii. See column N for WDRM v2 circuit segment identifiers. See column Q for WDRM v3 circuit segment identifiers.</p> <p>b. See column AB.</p> <p>c. See column AC.</p> <p>d. See column AD.</p> <p>e. The Risk Rank order is described in Section 6.4.2 of the 2023 WMP. PG&E ranked circuit segments from highest to lowest mean wildfire ignition risk. By sorting in this method, the risk of a circuit segment is proportional to its length of the circuit segment. Alternatively, circuit segments can be sorted in other methods such as total overall utility risk; however, the results would be significantly impacted by the length of the circuit segment (i.e. longer circuit segments would have larger total risk scores in general).</p> <p>f. We currently do not track the overhead miles removed and replaced through undergrounding.</p> <p>g. As described in more detail in response to TURN Data Request 09, PG&E's Wildfire Feasibility (WFE) scores incorporate the elements of RSE calculations with the feasibility element used to modify the spend factor to account for operational and executability factors.</p> <p>For example: Location 1 = 1.0 feasibility. Location 2 = 1.2 feasibility. The forecasted cost is expected to be 20% higher in Location 2 than in Location 1 due to feasibility impacts (e.g. hard rock, water crossing, or gradient). Because the unit cost of undergrounding can vary year to year, this is treated as 1 and does not impact the calculation of WFE. Overall, it is expected that the average feasibility across the entire portfolio will be managed within the expected unit cost, as PG&E optimizes based on operational and executability factors. After miles are selected based on WFE, locations are assessed in further detail during the project design or later phases.</p>	Tom Long	5/1/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_011.zip	3	Yes	Appendix D	Areas for Continued Improvement	ACI PG&E-22-16 - Progress and Updates on Undergrounding and Risk Prioritization
296	MGRA	Data Request No. 4	MGRA_Data Request No. 4	3	MGRA_Data Request No. 4_03	<p>Explain why the polygons do not cover all of the primary distribution lines in the HFTD. Example below:</p>	<p>Upon review, PG&E has confirmed that the original Attachment 2023-03-27_PGE_2023_WMP_R1_Appendix C_AltCh01.docx file inadvertently dropped some risk pixels. Please see "WMP-Discovery2023_DR_MGRA_004-Q003AltCh01.zip" for an updated GDB file. We will reach out to Energy Safety to provide this updated information pursuant to Energy Safety's guidelines.</p>	Joseph Mitchell	4/28/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_004.zip	1	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA
298	MGRA	Data Request No. 4	MGRA_Data Request No. 4	5	MGRA_Data Request No. 4_05	<p>Please provide an alternative and more complete version of this data set in which:</p> <p>a. Raw numeric data is provided rather than a 5% binning. This will allow a rescaling of "low" and "high" risks to be more relative and show any gradients across the PG&E territory.</p> <p>b. Coverage extends to all circuits in the HFTD.</p>	<p>a. Please find the requested data in "WMP-Discovery2023_DR_MGRA_004-Q003AltCh01.zip." Results from analysis at the pixel level are provided in the attached spreadsheet.</p> <p>b. Specific to this request, the attached file provides risk pixels and associated requested values for all locations in the HFTD and HFRA.</p>	Joseph Mitchell	4/28/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_004.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA
300	MGRA	Data Request No. 4	MGRA_Data Request No. 4	7	MGRA_Data Request No. 4_07	<p>If possible, provide two additional sets of GIS data in identical format to the original, one representing the POI component of the WDRM model and a separate set showing the consequence component of the WDRM score. Output should be in numerical format and not binned.</p>	<p>The file provided in "WMP-Discovery2023_DR_MGRA_004-Q003AltCh01.zip" contains the additionally requested Risk, POI, and Wildfire Consequence data.</p>	Joseph Mitchell	4/28/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_004.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA
291	CalPA	Set WMP-21	CalPA_Set WMP-21	2	CalPA_Set WMP-21_02	<p>Per Table 2 in PG&E's Revised Quarterly Data Report for quarter 4 of 2022, PG&E had the following numbers of level 2 and level 3 findings from distribution inspections in the HFTD in 2020, 2021, and 2022:</p> <p>Detailed Inspection</p> <p>Level 2 Findings</p> <p>48,309</p> <p>21,193</p> <p>4,542</p> <p>Detailed Inspection</p> <p>Level 3 Findings</p> <p>13,024</p> <p>823</p> <p>107</p> <p>Patrol Inspection</p> <p>Level 2 Findings</p> <p>200</p> <p>104</p> <p>20</p> <p>Patrol Inspection</p> <p>Level 3 Findings</p> <p>15</p> <p>2</p> <p>0</p> <p>Other Inspection</p> <p>Level 2 Findings</p> <p>10,131</p> <p>12,195</p> <p>0,031</p> <p>Other Inspection</p> <p>Level 3 Findings</p> <p>1</p> <p>0</p> <p>0</p>	<p>After reviewing the data to provide a response to this request, PG&E realized that the data provided in our prior submission was incorrect. This discrepancy was the result of an Excel error that occurred when PG&E revised Table 2 with the additional inspection type details required for Q4 2022. Please see attachment "WMP-Discovery2023_DR_CalAdvocates_021-Q002AltCh01.docx" for updated distribution inspection findings in HFTD from 2020 to 2022. Based on this corrected data, PG&E address the patterns in the findings below.</p> <p>(a) & (b) For our detailed ground inspections, increases in findings over these three years (particularly in 2022) in both Tier 2 and Tier 3 HFTD areas can be attributed to our renewed focus on training and quality of inspections. These key improvements to our inspection process included the following:</p> <ul style="list-style-type: none"> The addition of indicators for ignition risk conditions on training material Fully deployed desk and field review by the in-house inspection team Weekly sessions with supervisors to review findings and misses The increased prominence of certain questions on the inspection checklist in 2022 likely increased certain level 2 findings <p>(c) & (d) For our patrol inspections, given the overall very low numbers of L2 and Level 3 findings in HFTD areas from patrols, we cannot conclude that there are any patterns over these three years in Tier 2 or Tier 3.</p> <p>(e) & (f) For our other inspections, the increases in tag findings in 2021 were a result of two inspection validation efforts:</p> <ul style="list-style-type: none"> PG&E inspectors field validated a tree connect inventory and identified dead and dying trees for replacement, and PG&E troubleshooters field checked metered site facilities. <p>(g) "Other Inspections" include distribution notifications generated from PG&E's pole test and treat inspection and aerial pilot as well as notifications that are not from inspection programs, which include notifications generated by the construction, restoration, estimating, and work verification teams.</p>	Holly Wehrman	4/27/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_021.zip	1	N/A	QDR	N/A	N/A
187	OEIS	002	OEIS_002	10	OEIS_002_Q10	<p>a. Please see the "Table 13 - Closed" tab in attachment "WMP-Discovery2023_DR_OEIS_002-Q010AltCh01.xlsx" for the requested information.</p> <p>Please note, this data was pulled on January 31, 2023.</p> <p>b. Please see the "Table 13 - Open" tab in attachment "WMP-Discovery2023_DR_OEIS_002-Q010AltCh01.xlsx" for the requested information.</p> <p>Please note, this data was pulled on February 20, 2023.</p>	<p>a. Please see the "Table 13 - Closed" tab in attachment "WMP-Discovery2023_DR_OEIS_002-Q010AltCh01.xlsx" for the requested information.</p> <p>Please note, this data was pulled on January 31, 2023.</p> <p>b. Please see the "Table 13 - Open" tab in attachment "WMP-Discovery2023_DR_OEIS_002-Q010AltCh01.xlsx" for the requested information.</p> <p>Please note, this data was pulled on February 20, 2023.</p>	Colin Lang	4/13/2023	5/9/2023	5/9/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_002.zip	1	N/A	8.1.7	Open Work Orders	N/A
317	CalPA	Set WMP-22	CalPA_Set WMP-22	5	CalPA_Set WMP-22_Q5	<p>In response to data request CalAdvocates-PGE-2023WMP-19, question 3, PG&E stated:</p> <p>In addition, our GIS system does not include an attribute to distinguish between covered and bare conductor. As a result, we are only able to provide the total overhead distribution line circuit-miles, not the breakdown between covered and bare conductor.</p> <p>a) Is PG&E unable to determine the number of circuit miles of covered conductor in its system? Please explain your answer.</p> <p>b) Does PG&E plan to modify its GIS system to include an attribute that distinguishes between covered and bare conductor?</p> <p>c) How does PG&E currently validate its estimates of the effectiveness of covered conductor in its system?</p> <p>d) How does PG&E plan to validate its estimates of the effectiveness of covered conductor in its system over the 2023-2025 WMP period?</p>	<p>PG&E is amending CalAdvocates-PGE-2023WMP-19, question 3, subparts b, d and f of our original response. Although there is not a specific attribute in GIS to distinguish covered and bare conductors, we were able to utilize the conductor type codes to differentiate between covered and bare conductors.</p> <p>a) Please reference PG&E's revision to CalAdvocates-PGE-2023WMP-19, Question 3, where PG&E has provided the volume of circuit-miles of distribution covered conductor lines from January 2022.</p> <p>b) No, PG&E currently does not plan to add a specific attribute to GIS because we are able to utilize the conductor type codes to differentiate between covered and bare conductors.</p> <p>c) As most distribution outages typically involve a fault condition, PG&E assumes that all distribution outages can potentially result in an ignition, regardless of other prevailing conditions. Therefore, PG&E is measuring the recorded effectiveness of WMP-Discovery2023_DR_CalAdvocates_022-Q005 Page 2 CC by comparing the outages on the circuit segments with CCs to outages on circuit segments with bare conductors. PG&E has further validated its effectiveness studies by looking at ignitions caused by CC compared to results of the Joint IOU testing efforts. In the Joint IOU testing effort, data was gathered of possible fault conditions of CC in a controlled lab environment. PG&E's analysis of ignition data has further informed the testing results of tree fall-in failure modes. This is reflected in PG&E's contribution of the Covered Conductor Recorded Effectiveness section (p. 901 - 902) of the 2023-2025 Wildfire Mitigation Plan, Revision 1, and the Joint IOU Covered Conductor Report. As stated in the Joint IOU Covered Conductor Report, the number of ignitions observed on the CC lines do not provide statistically significant data for calculating effectiveness with respect to ignitions.</p> <p>d) As discussed in the Joint IOU Covered Conductor Report, in 2023, the utilities will continue to meet on a regular basis, provide updates on risk event recorded data, discuss the methods used to measure the effectiveness of CC in the field, and continue to work towards developing consistent methods to measure the effectiveness of CC for better comparability. The utilities also plan to discuss outage data, customer notification and response, these efforts will continue in 2024.</p>	Holly Wehrman	5/2/2023	5/10/2023	5/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	0	N/A	8.1.2.1	Grid Design and System Hardening	Covered Conductor Installation - Distribution

305	TURN	010	TURN_010	4	TURN_010_Q4	<p>Re Figure 22-34-1 on p. 969 (R1).</p> <p>a. Please provide the Figure in Excel with supporting data and calculations.</p> <p>b. Please explain what "line weighted risk per mile" means and how it is calculated.</p> <p>c. If not provided in part (a), in Excel please provide all circuit segments in PG&E's HFTD and HFRA and the corresponding WFE score and simplified WFRSE. Please provide supporting data and calculations in Excel. Please include as part of the response to part (a).</p>	Tom Long	4/29/2023	5/10/2023	5/8/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_010.zip	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-34 - Revise Process of Prioritizing Wildfire Mitigations
261	CaPA	Set WMP-19	CaPA_Set WMP-19	3SUPP	CaPA_Set WMP-19_03SUPP	<p>a) State the total costs that PG&E incurred in 2022 for asset inspections and maintenance on covered conductor distribution lines installed in the HFTD.</p> <p>b) State the total number of circuit-miles of covered conductor distribution lines that PG&E had in the HFTD as of January 1, 2022.</p> <p>c) State the total costs that PG&E incurred in 2022 for asset inspections and maintenance on underground distribution lines installed in the HFTD.</p> <p>d) State the total number of circuit-miles of underground distribution lines that PG&E had in the HFTD as of January 1, 2022.</p> <p>e) State the total costs that PG&E incurred in 2022 for asset inspections and maintenance on bare overhead distribution lines installed in the HFTD.</p> <p>f) State the total number of circuit-miles of bare overhead distribution lines that PG&E had in the HFTD as of January 1, 2022.</p>	Holly Wehrman	4/25/2023	5/10/2023	5/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_019.zip	0	N/A	8.1.2	Grid Design, Operations and Maintenance	Grid Design and System Hardening
224	OEIS	003	OEIS_003	10	OEIS_003_010	<p>Regarding PG&E's Asset Inventory</p> <p>a. Provide a list of all fields that PG&E's asset inventory captures (i.e. equipment, equipment type, age, installation date).</p> <p>b. Provide a list of all types of equipment captured within PG&E's asset inventory.</p> <p>c. Provide a percentage in which PG&E is missing data for each data field listed in part (a) within its asset inventory.</p> <p>d. Provide an estimated percentage for the amount of assets missing from PG&E's asset inventory.</p>	Colin Lang	4/21/2023	5/10/2023	5/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_003.zip	2	N/A	8.1.5	Asset Management and Inspection Enterprise Systems	NA
344	TURN	012	TURN_012	1	TURN_012_Q1	<p>1. Please confirm that the Simplified Wildfire Risk Spend Efficiency (SWRSE) and Wildfire Feasibility Expenditure (WFE) measures discussed on page 968 of PG&E's WMP.</p> <p>a. Are only calculated by PG&E for underground projects; and</p> <p>b. Cannot be used to compare the cost-effectiveness of underground projects with any other projects.</p> <p>c. If PG&E does not unequivocally agree with "a" and "b" above, please explain why it does not.</p>	Tom Long	5/5/2023	5/11/2023	5/11/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_012.zip	0	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-34 - Revise Process of Prioritizing Wildfire Mitigations
352	CaPA	Set WMP-24	CaPA_Set WMP-24	1	CaPA_Set WMP-24_Q1	<p>In reference to your response to Question 11 of DR CalAdvocates-PGE-2023WMP-16, on the excel spreadsheet WMP-Discovery 2023_DR_016-Q011A0c01.</p> <p>a) On tabs (d) through (e), please identify the circuits with OH to UG conversion projects that have no adjacent circuit ties.</p> <p>b) On tabs (f) and (g), please identify the adjacent circuits that tie to the circuits with OH to UG conversion projects in Tabs (a) through (e).</p>	Holly Wehrman	5/9/2023	5/12/2023	5/11/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_024.zip	2	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment
345	TURN	012	TURN_012	2	TURN_012_Q2	<p>2. Comparing the wildfire mitigation work proposed in PG&E's WMP with the wildfire mitigation work proposed in PG&E's last year 2023 GRC (A-21-08-Z1).</p> <p>a. Please describe any differences in wildfire mitigation programs proposed or volume of wildfire mitigation work proposed between the WMP and GRC for the years 2023-2025; and</p> <p>b. For any differences (as described in subpart "a"), please provide a table that shows, on a program by program basis, the WMP proposal, the GRC proposal, and a description of the difference(s) between the two, including without limitation differences in volume or units of work. The table should include any wildfire mitigation programs that are proposed in one of the proceedings but not in the other.</p>	Tom Long	5/5/2023	5/12/2023	5/12/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_012.zip	0	N/A	7.2.1	Wildfire Mitigation Strategy Development	Overview of Mitigation Initiatives and Activities
322	CaPA	Set WMP-22	CaPA_Set WMP-22	10	CaPA_Set WMP-22_Q10	<p>In response to data request CalAdvocates-PGE-2023WMP-02, question 1, PG&E provided its 2022 Quality Verification Distribution Audit report (WMP-Discovery2023_DR_CalAdvocates_022-Q010A0c01CONF.pdf).</p> <p>a) For each of the 15 "zero tolerance & high-risk findings" identified on page 4 of the above report, what actions has PG&E taken to mitigate these nonconformances in the future?</p> <p>b) For each of the 15 "zero tolerance & high-risk findings" identified on page 4 of the above report, describe when and how PG&E addressed the nonconformances to mitigate wildfire risk.</p> <p>c) For each category of the "Top three Critical attribute findings" identified on page 4 of the above report, what actions has PG&E taken to mitigate these nonconformances in the future?</p> <p>d) For each category of the "Top three Critical attribute findings" identified on page 4 of the above report, describe how PG&E addressed the nonconformances to mitigate wildfire risk.</p> <p>e) For each category of the "Top three non-Critical attribute findings" identified on page 4 of the above report, what actions has PG&E taken to mitigate these nonconformances in the future?</p> <p>f) Please describe all actions PG&E has taken to reduce the rate of critical attribute nonconformances in future distribution system inspections.</p> <p>g) What is PG&E's target Quality Pass Rate for 2023?</p> <p>h) Please compare and contrast the 2022 Quality Verification Distribution Audit mentioned above and the QA program for systems inspectors that PG&E plans to implement (section 8.1.6.1 in PG&E's WMP).</p>	Holly Wehrman	5/2/2023	5/12/2023	5/12/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_022.zip	2	N/A	8.1.6.1	Grid Design and System Hardening	Quality Assurance and Quality Control
353	MGRA	Data Request No. 5	MGRA_Data Request No. 5	1	MGRA_Data Request No. 5_D1	<p>Is the sole source of this POI data the machine learning algorithms described in WDRM documentation? If not what other inputs go into the POI?</p>	Joseph Mitchell	5/10/2023	5/15/2023	5/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_005.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRA Proposed Updates to HFTD

354	MGRA	Data Request No. 5	MGRA_Data Request No. 5	2	MGRA_Data Request No. 5_Q2	Is the fine-grained POI distribution a result of the localization of specific historical outages, characteristics of assets or environment, or both?	The fine-grained features (sharp contrasts in values between neighboring pixels) in PG&E's risk model outputs are a product of finely grained predictive covariates, including asset characteristics and environmental attributes. Please see PG&E's response to Question 4 of this Data Request for an explanation of how historical outages may influence fine-grained localization. As mentioned in the response to MGRA 004 Q004, "At the pixel-by-pixel level, the model does exhibit some level of noise that can result in high-risk hot spots in an area of generally lower risk pixels. For this reason, workplan development is generally guided by broad segment level associations that provide an increased indication of risk level."	Joseph Mitchell	5/10/2023	5/15/2023	5/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_005.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRAs Proposed Updates to HFTD
355	MGRA	Data Request No. 5	MGRA_Data Request No. 5	3	MGRA_Data Request No. 5_Q3	Which of the following characteristics is known or suspected to contribute to the fine-grained localization of POI shown above, and to what degree: a. Vegetation b. Tree density and height c. Asset health d. Asset age e. Asset type f. Hardening/Mitigation history	The data representing the items listed in parts a through e all contribute, in varying degrees depending on location and geography, to the fine-grained localization seen in PG&E's risk modeling outputs, including the spatial view provided by MGRA. Fine grained localization may result where locations of significant covariate variability exist in PG&E's service territory (e.g. a heavily forested area next to a non-forested area). The causal effects of part f, hardening/mitigation history, were not directly estimated for the WDRM V3. To the extent an asset is replaced as part of a wildfire mitigation project, the asset health, age, and type would be reflected in WDRM V3 and may contribute to fine grained localization.	Joseph Mitchell	5/10/2023	5/15/2023	5/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_005.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRAs Proposed Updates to HFTD
356	MGRA	Data Request No. 5	MGRA_Data Request No. 5	4	MGRA_Data Request No. 5_Q4	As an example of "isolated outage" effects, if a vehicle were to collide with a utility pole and cause an outage in the boundary of the image above, and if the POI were to be recalculated, would the area where the outage occurred show an elevated POI? Or would conversely the incremental increase risk of vehicle collision outage be generally distributed over the entire landscape, or a portion of the landscape?	This type of outage would be classified into the Contact From Object "third party vehicle" subset as listed in Table PG&E-6.2.1.1. In reality, a single accident does not have very much sway over the third-party vehicle model one way or another because there are hundreds of historical events already contributing to the result. However, we can say that the additional data point would enhance the POI in locations that share the same covariate characteristics as the accident location. So, the resulting adjustments would not be localized to the accident location, but they would not be spread evenly across all locations either.	Joseph Mitchell	5/10/2023	5/15/2023	5/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_005.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRAs Proposed Updates to HFTD
357	MGRA	Data Request No. 5	MGRA_Data Request No. 5	5	MGRA_Data Request No. 5_Q5	Are fire weather winds included in the WDRM v3 POI model in any other manner than that described in WDRM v2 discussion, in which aggregated yearly variables such as annual maximum or annual days over peak are used as explanatory variables?	Yes. In WDRM v3, day-of-event wind speed and fuel conditions are significant covariates in the probability of ignition given an outage model, which is trained on the conditions at the locations and on the day of each outage. Wind and other contributors to "fire weather" conditions are also prominent in the consequence calculations in WDRM v3.	Joseph Mitchell	5/10/2023	5/15/2023	5/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/MGRA_005.zip	0	N/A	Appendix C / 6.4.1.1, 6.4.1.2	Risk Methodology and Assessment	Geospatial Maps of Top Risk Areas Within the HFRAs Proposed Updates to HFTD
332	OEIS	004	OEIS_004	6REV	OEIS_004_Q0REV	Regarding Enhanced Vegetation Management a. Populate the following table with information regarding EVM: Year HFTD Miles Completed Inspected Strike Potential Trees Trees Worked Average Trees Per Mile % of Miles in Top 20% of Risk 2019 2020 2021 2022 Total b. Provide a GIS layer of line features showing where EVM work was completed.	We would like to amend our response to "WMP-Discovery2023_DR_OEIS_004Q006.pdf," submitted to the Office of Energy Infrastructure Safety on May 9, 2023. In our response, we miscalculated the number of "Trees Worked" and the "Average Trees Per Mile" in 2022. Please see revised chart below with the updated numbers highlighted. Year HFTD Miles Completed Inspected Strike Potential Trees Trees Worked Average Trees Per Mile % of Miles in Top 20% of Risk 2019 2020 2021 2022 Total 2019 2494 miles 1,119,969 196,243 79 55% 2020 1978 miles 1,192,242 167,221 89 43% 2021 1983 miles 1,246,174 336,018 169 98% 2022 1924 miles 1,519,099 396,502 208 99.9% Total a. Please note, for column "average trees per mile," we interpreted that as average number of trees worked per mile. We obtained this number by taking the number of trees worked divided by HFTD Miles completed for the corresponding year. Please note, for "% of Miles in Top 20% of Risk", the 2019 percentage was based upon 2019-2020 risk ranking and the 2020 percentage was based upon 2020 risk ranking. b. Please see supporting attachment "WMP-Discovery2023_DR_OEIS_004-Q006Atch01.pdf.zip" for GIS file of EVM work.	Colin Lang	5/4/2023	5/15/2023	5/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	0	N/A	8.2.2.6	Vegetation Management and Inspections	Discontinued Programs
359	OEIS	005	OEIS_005	1	OEIS_005_Q1	Regarding Maturity Survey response to Section 6.1.2 Question #8 Regarding the Maturity Survey response to Section 6.1.2, Question #8, PG&E answered "yes". What sections of its Company Emergency Response Plan (CERP) does PG&E provide a discussion of gaps, limitations, and improvement areas with remedial or corrective action plans as it relates to wildfire and PSPSP? If its discussion contained in other documents, provide those and clarify what sections the discussion is contained in.	Please reference Section Six "After Action Reports" in the 2022 CERP Wildfire Annex (published April 1, 2022), included as attachment "WMP-Discovery2023_DR_OEIS_005-Q001Atch01CONF.pdf." Regarding the Maturity Survey response to Section 6.1.4 Question #7, PG&E answered "yes". What sections of its Company Emergency Response Plan (CERP) does PG&E provide a discussion of gaps, limitations, and improvement areas with remedial or corrective action plans as it relates to wildfire and PSPSP? If its discussion contained in other documents, provide those and clarify what sections the discussion is contained in. (lastly, please also reference the After Action Report Standard, included as attachment "WMP-Discovery2023_DR_OEIS_005-Q001Atch03CONF.pdf" for a further discussion of gaps, limitations, and improvement areas.)	Colin Lang	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_005.zip	3	N/A	Maturity Survey	Maturity Survey	Maturity Survey
360	OEIS	005	OEIS_005	2	OEIS_005_Q2	Regarding Maturity Survey response to Section 6.1.4 Question #2 Regarding the Maturity Survey response to Section 6.1.4 Question #2, PG&E answered "yes" that an external third party evaluation is conducted every five years. Please provide a copy of the most recent third party evaluation.	PG&E conducts internal public meetings with public safety partners, elected officials, and other interested parties, to solicit feedback related to the company's emergency response plan (CERP). Although feedback has been solicited no formal evaluations have been received. Please reference Section 1.9 of the CERP, located on PG&E's website at the following link: www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/safety-reporting-documents/emer-2001to-2023-cerp.pdf for additional information regarding the CERP review.	Colin Lang	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_005.zip	0	N/A	Maturity Survey	Maturity Survey	Maturity Survey
361	OEIS	005	OEIS_005	3	OEIS_005_Q3	Regarding Maturity Survey response to Section 6.1.4 Question #7 Regarding the Maturity Survey response to Section 6.1.4 Question #7, PG&E answered "yes" that Subject Matter Expert (SME) partners review and evaluate its plan every five years. Please provide a copy of the most recent SME evaluator(s).	PG&E conducts annual reviews with Subject Matter Experts to evaluate the CERP and its associated functional and hazard specific annexes. The process for this annual review is documented in "WMP-Discovery2023_DR_OEIS_005-Q003Atch01CONF.pdf" Please note, these review sessions are considered working meetings and do not result in a formal evaluation or report.	Colin Lang	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_005.zip	1	N/A	Maturity Survey	Maturity Survey	Maturity Survey
362	TURN	013	TURN_013	1	TURN_013_Q1	1. Following up on TURN DR 10-2(b) and PG&E's response: a. Please explain how PG&E determined that a risk rank per the V3 risk model above 720 constitutes the top 20% of risk ranked segments? Why does 720 represent the 20% threshold? Please explain. Please provide workpapers, calculations, and data in Excel that support your response. b. Please explain how PG&E determined that a risk rank per the V2 risk model above 727 constitutes the top 20% of risk ranked segments? Why does 727 represent the 20% threshold? Please explain. Please provide workpapers, calculations and data in Excel that support your response.	a. The top 20 percent of risk ranked circuit segments is dependent on the number of circuit segments analyzed in each WDRM model. For WDRM v3, the model includes all circuit segments across PG&E's entire overhead distribution system, which is 11,172 circuit segments (see WMP-Discovery2023_DR_TURN_011-Q001Atch01, tab: SH_composite_os_summary). To determine a comparable methodology as shown in WDRM v2 (described in part (b) below), PG&E identified the number of HFTD and HFRAs circuit segments which equated 3,583 at the time of the analysis. The top 20 percent of risk ranked circuit segments in this analysis are 727 which PG&E rounded up to 720. PG&E's response to WMP-2023_DR_TURN_010-Q006Atch01 lists the 3,583 circuit segments in HFTD and HFRAs. b. Similar to the response to subpart a, the top 20 percent of risk ranked segments is dependent on the number of circuit segments in each WDRM model. Unlike WDRM v2 that included both HFTD and HFRAs (and non-HFTD line segments as well), WDRM v2 only included HFTD circuit segments which totaled 3,635 circuit segments – see WMP-Discovery2023_DR_TURN_011-Q001Atch01, tab: http://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/turn_013.zip . The top 20 percent of the WDRM v2 circuit segments is 727.	Tom Long	5/11/2023	5/16/2023	5/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/TURN_013.zip	0	N/A	8.1.2.2	Grid Design, Operations, and Maintenance	Undergrounding of Electric Lines and/or Equipment
363	Green Power Institute (GPI)	002	Green Power Institute (GPI)_002	1	Green Power Institute (GPI)_002_Q1	Please provide: - The number of trees removed in each year from 2019-2022 and the program under which the removals occurred. - The number of planned tree removals for 2023, 2024, and 2025, and the program under which the removals will occur. - The number of remaining trees in PG&E's tree inventory that are listed for removal.	a. Year Routine Second Patrol EVM 2019 187,357 46,600 116,491 2020 191,728 65,402 120,879 2021 179,908 22,416 276,336 2022 191,538 41,100 346,538 b. As of February 2022, our forecast for Distribution program tree removals is approximately 332,000 trees in 2023, 331,000 trees in 2024, and 329,000 trees in 2025. For our Tree Removal Inventory Program, we are planning to remove 15,000 trees in 2023, 20,000 trees in 2024, and 25,000 trees in 2025. c. Please see table below for the count of trees in PG&E tree inventory that are listed for removal: Year Routine Second Patrol EVM 2019 187,357 46,600	Zoe Harrold	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/GPI_002.zip	0	N/A	8.2.2.4	Vegetation Management and Inspections	Tree Removal Inventory
364	Green Power Institute (GPI)	002	Green Power Institute (GPI)_002	2	Green Power Institute (GPI)_002_Q2	Please provide the number of distribution line miles PG&E will perform trimming on to achieve enhanced clearances (> 12').	There are approximately 40,000 HFTD and HFRAs miles in PG&E service territory. PG&E performs inspection on all line miles within HFRAs and HFTD areas. While PG&E does not have a program dedicated to enhanced clearances, we are following the prescription in General Order 95, Rule 35 and our Distribution Standards which recommends a minimum 12-foot of clearance at time of trim in High Fire-Threat District (HFTD). PG&E also extends this minimum clearance recommendation to tree work within HFRAs.	Zoe Harrold	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/GPI_002.zip	0	N/A	8.2.3.3	Vegetation Management and Inspections	Clearance
365	Green Power Institute (GPI)	002	Green Power Institute (GPI)_002	3	Green Power Institute (GPI)_002_Q3	Please provide any existing quantitative metrics (e.g. kg, truckloads, etc.) on the total amount of vegetation management "waste" (or residues) produced each year from 2020 – 2022, and the annual amounts that are disposed of at recycling facilities, landfills, biomass facilities, or other facilities.	PG&E does not track vegetation management "waste" data for all VM programs. Vegetation management "waste" data is available for PG&E contracted wood yards, which include wood debris from various programs, and the Wildfire Wood Management program. This data is not available prior to 2021. The following is the existing data on tonnage of waste wood that came through PG&E's contracted wood yards: • 2021 - 151,033 tons Specific to Wildfire Wood Management, we estimate the following volumes of waste wood have been managed based on the conversion rate of 1.6 tons per unit: • 2022 - 39,067 tons • 2021 - 35,880 tons	Zoe Harrold	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/GPI_002.zip	0	N/A	8.2.3.2	Vegetation Management and Inspections	Wood and Slash Management
366	Green Power Institute (GPI)	002	Green Power Institute (GPI)_002	4	Green Power Institute (GPI)_002_Q4	Please provide the number of customer requests to retain woody biomass resulting from vegetation management activities on private property, state property, and federal property.	We do not track customer requests to retain woody biomass resulting from Vegetation Management activities.	Zoe Harrold	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/GPI_002.zip	0	N/A	8.2.3.2	Vegetation Management and Inspections	Wood and Slash Management
367	Green Power Institute (GPI)	002	Green Power Institute (GPI)_002	5	Green Power Institute (GPI)_002_Q5	Please describe current agreements and any recent (2021-Present) communications with state and federal agencies regarding fuels and slash management practices on state and federal lands, respectively.	The U.S. Forest Service (USFS), Bureau of Land Management (BLM), National Park Service (NPS), and California State Parks (CASP) have the authority to require specific wood and debris management (e.g., wood or log removal, decking, chipping up to a certain diameter, piling) be incorporated into proposals for Vegetation Management work on their lands. Several public agencies, including USFS, have provided PG&E with their expectations for wood and debris management, which are included in our Land Management Agreements. In addition to written specifications, some agencies have provided GIS files showing locations where all debris must be removed. We communicate regularly with our agency partners to address any immediate questions, requests or concerns. We also hold comprehensive annual coordination meetings to ensure continuous improvement.	Zoe Harrold	5/11/2023	5/16/2023	5/16/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/GPI_002.zip	0	N/A	8.2.3.2	Vegetation Management and Inspections	Wood and Slash Management

351	CPUC - SPD (Safety Policy Division)	004	CPUC - SPD (Safety Policy Division)_004	6	CPUC - SPD (Safety Policy Division)_004_06	<p>to generate, we have been increasingly using performance metrics to assess the status of elevated FPI days (e.g., RD and above) for the last several years as well as red flag warning days.</p> <p>To provide a more specific example, we are normalizing for weather in the EPSS effectiveness/performance in the following ways:</p> <ul style="list-style-type: none"> For 2022, EPSS effectiveness was calculated by comparing the number of current-year ignitions that occurred while EPSS was enabled, divided by the average number of ignitions that occurred each year from 2018-2020 that would have met EPSS criteria using an FPI back cast. In order to normalize for variances in fire potential conditions (as quantified by the Fire Potential Index), ignition counts for each year are divided by the total number of "Circuit Mile Days" for the year. Circuit Mile Days are defined as the circuit miles in HFTD/HFRA for a circuit, multiplied by the number of days the circuit had EPSS activated (or would have met EPSS criteria). This calculation is performed for every day of the year, for every EPSS circuit, and added together to determine the total Circuit Mile Days for the year. Note: If the calculation was performed mid-year, the normalization calculation was only performed through the target date used. E.g., if effectiveness was measured through 6/30/22, prior years would only be normalized by Circuit Mile Days through 6/30/18, 6/30/19, and 6/30/20 respectively. This calculation accounts for the increased fire potential risk exposure on the system for each year, using the same criteria used to determine when EPSS was enabled. 	Henry Swait	5/5/2023	5/19/2023	5/17/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_004_06	0	N/A	8.3.6	Situational Awareness and Forecasting	Fire Potential Index
337	OEIS	004	OEIS_004	11	OEIS_004_011	<p>Regarding RSE (Risk Buy-down) information required by the WMP Guidelines The 2023-2025 WMP Guidelines make specific requests for RSE. Optimization of risk reduction and cost, and prioritization decisions.</p> <p>7.1.4.1 Identifying and Evaluating Mitigation Initiatives</p> <p>(a) The procedures for identifying and evaluating mitigation initiatives (comparable to 2018 S-MAP Settlement Agreement, row 26), including the use of risk buy-down estimates (e.g., risk-spend efficiency) and evaluating the benefits and drawbacks of mitigations.</p> <p>7.1.4.2 Mitigation Initiative Prioritization</p> <p>(b) Explain how the electrical corporation is optimizing its resources to maximize risk reduction. Describe how the proposed initiatives are an efficient use of electrical corporation resources and focus on achieving the greatest risk reduction with the most efficient use of funds and workforce resources.</p> <p>(c) The electrical corporation must describe how it prioritizes mitigation initiatives to reduce both wildfire and PSPS risk. This discussion must include the following:</p> <p>(i) A high-level schematic showing the procedures and evaluation criteria used to evaluate potential mitigation initiatives. At a minimum, the schematic must demonstrate the roles of quantitative risk assessment, resource allocation, evaluation of other performance objectives (e.g., cost, timing) identified by the electrical corporation, and SME judgment.</p> <p>PG&E does provide a graph of HFRA WDRM v3 System Hardening Buydown, Figure 6.6.1-1, but the detail provided does not allow an evaluator to reconcile with content from section 7 and it is also missing important components of RSE. In particular, a detailed description of RSE (the risk buy-down process) is needed to reconcile with the information provided in tables 7-2 and 7-4. Please complete the following, including via Excel file as applicable:</p> <p>a. Provide RSE (Risk Buy-down) information in a new RSE table as follows, ranked in descending order of RSE Mitigation (reference Section 2, Table 7-3-1) Initiative Tracking ID</p> <p>WMP Category</p> <p>Circuit Segments Impacted (reference Table 7-2)</p> <p>Estimated Risk Reduction</p> <p>Estimated Cost</p> <p>RSE (Risk Reduction/Cost)</p> <p>b. Update Table 7.4 to cross-reference the new RSE Table. This can be completed by adding an index number to each Mitigation Initiative, where the index number is the RSE rank of the initiative from the RSE Table.</p>	Colin Lang	5/4/2023	5/19/2023	5/19/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004_11	1	N/A	7.1.4	Wildfire Mitigation Strategy Development	Identifying and Evaluating Mitigation Initiatives
381	CPUC - SPD (Safety Policy Division)	006	CPUC - SPD (Safety Policy Division)_006	1	CPUC - SPD (Safety Policy Division)_006_01	<p>1. After it was pointed out by SPD that there appeared to be a discrepancy in the methodologies used to calculate the risk mitigation effectiveness of EPSS, Undergrounding and Covered Conductor (CC), PG&E stated that CC is probably the most "mature" mitigation effectiveness as the effectiveness based on empirical data and cross utility collaboration, EPSS is the second most as it is based on empirical data, and that UG is the least mature mitigation effectiveness as its based purely on SME judgement. PG&E agreed to update its undergrounding mitigation effectiveness percentage calculation to account for secondary/service drop ignitions. A provide this analysis or provide an update on when this analysis will be finished and submit the analysis when it is finished.</p>	Kevin Miller	5/17/2023	5/22/2023	5/22/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_006_01	0	N/A	8.1.8.1.1	Grid Design, Operations, and Maintenance	Protective Equipment and Device Settings
382	CPUC - SPD (Safety Policy Division)	006	CPUC - SPD (Safety Policy Division)_006	2	CPUC - SPD (Safety Policy Division)_006_02	<p>2. PG&E asserted that PG&E is addressing the risk from secondary lines and service drops in part via replacing the secondary with covered aerial conductor and breakaway connectors at service drops (see PG&E's response to Question 4-b of SPD PG&E_2024_003 for additional description). PG&E also stated that there may need to be a messaging update because the 99% mitigation effectiveness is only meant to apply to primary lines not their entire wildfire risk.</p> <p>a. How does PG&E foresee clarifying this information in its messaging?</p> <p>b. To whom?</p>	Kevin Miller	5/17/2023	5/22/2023	5/22/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_006_02	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution
384	OEIS	006	OEIS_006	1	OEIS_006_01	<p>Regarding PG&E's response to OEIS DR 2 Question 10, Attachment 1:</p> <p>a. Explain the difference between a Field Safety Reassessment and a Planned Field Safety Reassessment.</p> <p>b. In what instances would PG&E enter a work order due date through a Field Safety Reassessment? Provide all supporting documentation and criteria, including any procedures and inspection protocols demonstrating decision-making.</p> <p>c. In what instances would a Standards Change lead to extending a work order due date? Provide all supporting documentation and criteria, including any procedures and inspection protocols demonstrating decision-making. Additionally, provide examples in which this has occurred, including any sweeping changes.</p> <p>d. Include any criteria that would fall under "Other reassessment" as seen in Column 1 "Reason for reinspection (if applicable)".</p> <p>e. PG&E included three Priority A level work orders within the tab labeled "Table 13 - Open".</p> <p>f. Provide the work order documentation associated with each of these tags (i.e. Electric Connective notification).</p> <p>g. Are these tags still open? If not, provide the respective completion date for when each tag was closed, as applicable.</p> <p>h. Within non-HFTD, PG&E included 13 Priority H level work orders that were closed in 2022 and 52 that are still open.</p> <p>i. Explain what circumstances would lead to a Priority H tag within non-HFTD.</p> <p>ii. Provide a list of the projects in which the 13 closed work orders were associated with, including details on the associated mitigation being used.</p> <p>iii. Provide a list of the projects in which the 52 work orders were associated with, including details on the associated mitigation being used.</p> <p>g. Regarding PG&E's ignition risk notifications:</p> <p>i. Provide documentation and/or procedures PG&E uses to determine whether or not a work order meets ignition risk criteria, including any relevant thresholds (equipment type, risk score, etc.). This should also include an explanation as to how PG&E prioritizes within the categorization of ignition risk tags (i.e. planning for timing correction based on known risk).</p> <p>ii. Provide PG&E's list of Facility-Damage-Action (FDA) codes for determining which ones present an ignition risk, as discussed in response to CalAdvocates Data Request 19 Question 8.</p>	Dakota Smith	5/18/2023	5/23/2023	5/25/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_006_01	8	N/A	8.1.7	Open Work Orders	N/A
385	OEIS	006	OEIS_006	2	OEIS_006_02	<p>Regarding PG&E's Other Data Requests:</p> <p>a. Provide the following confidential attachments from CalAdvocates Data Requests:</p> <p>i. Attachment 1 in response to Data Request 19 Question 13.</p> <p>ii. Attachment 1 in response to Data Request 21 Question 3.</p> <p>iii. Attachment 1 in response to Data Request 22 Question 7.</p> <p>b. Provide the following confidential attachments from TURN Data Requests:</p> <p>i. Attachment 1 in response to Data Request 4 Question 1.</p> <p>ii. Attachment 1 in response to Data Request 7 Question 1.</p> <p>iii. Attachment 1 in response to Data Request 7 Question 3.</p> <p>iv. Attachment 1 in response to Data Request 10 Question 2.</p> <p>v. Attachment 1 in response to Data Request 10 Question 7.</p> <p>vi. Attachment 3 in response to Data Request 10 Question 7.</p>	Dakota Smith	5/18/2023	5/23/2023	5/23/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_006_02	2	N/A	N/A	N/A	N/A
386	OEIS	006	OEIS_006	3	OEIS_006_03	<p>Regarding PG&E's response to TURN's Data Request 7, Question 3:</p> <p>a. For each of the circuit segments listed in part (b), provide the following via Excel:</p> <p>i. WFE score</p> <p>ii. SWRSE</p> <p>iii. Feasibility scores</p> <p>iv. V3 risk score</p> <p>v. V3 risk ranking</p> <p>vi. V2 risk score</p> <p>vii. V2 risk ranking</p> <p>viii. PG&E's plans to mitigate risk, including mitigation type(s)</p> <p>ix. Year(s) of mitigation implementation, as applicable.</p>	Dakota Smith	5/18/2023	5/23/2023	5/23/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_006_03	1	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution

339	OEIS	004	OEIS_004	13	OEIS_004_D13	<p>Regarding PG&E's Asset Tracking Database</p> <p>While PG&E provided information in the 2023-25 WMP's Appendix F on its overall progress in Asset Inventory Data Gaps, it is not clear what PG&E's progress is on the high-risk electric distribution assets, such as primary conductors and poles, that are not in the Asset Registry and therefore not included in the WMP's initiatives. In regards to PG&E's plans and progress on the Asset Registry Data Quality Program (ARDQ), please provide the following, including via Excel file as applicable:</p> <p>a. Greater detail on plans for identifying and correcting missing electric distribution asset types in High Fire Risk Districts (HFRD).</p> <p>b. Greater details regarding plans and timelines on the known gaps on the twelve T&D risk prioritized asset types (Footnote 217, pg. 966) in the HFRD. The content provided should address specific actions being taken and the timeline to address the gaps in the historical data on service-aged poles and primary conductor risk-prioritized asset types located in the HFRD.</p> <p>c. Does the Asset Data Quality Remediation initiative (pg. 966) include a discrete project aimed at addressing specific gaps in the high-risk electric distribution asset types in the HFRD?</p> <p>d. On pg. 966, it states that in 2022, "...over 570 Critical Data Elements (CDE)" were identified. Did this number include any poles and/or primary conductors in HFRD?</p> <p>e. Please describe what actions are taken after missing assets are found, i.e., are immediate field inspections performed? Does the ARDQ Program expedite entering the assets found into the Asset Registry?</p> <p>f. Is the data shown in "Appendix F.5.1 - PG&E-22-33 Progress on Filing Asset Inventory Data Gaps" include electric assets in PG&E's entire service territory? If so, please provide a breakdown of the number of assets in the HFRD.</p> <p>g. Which of the Data Quality Programs (Table 22-33-2) are responsible for finding the missing historical high-risk asset types in the HFRD?</p> <p>h. What is PG&E's estimated number of poles and primary conductors that are missing from the "Asset Count" in Table 22-33-1 "Current Fill Rates"? Of the poles and primary conductors that are missing, how many are in the HFRD?</p> <p>TABLE PG&E-22-33-1: CURRENT FILL RATES 168</p> <p>ID Asset Family Asset Type Asset Component Asset Count</p>	<p>In responding to this request, PG&E is unfamiliar with the term "High Fire Risk Districts" and assumes this is a reference to "High Fire Risk Areas" (HFRA).</p> <p>a. As stated in response to Subpart (d) of "WMP-Discovery2023_DR_OEIS_003-0010.pdf", PG&E is not presently able to quantify the number of assets missing from the asset inventory. However, when missing assets are identified, the assets are added to the inventory.</p> <p>PG&E's asset registry program identifies and addresses asset inventory completeness (missing asset) improvements in the following ways:</p> <ul style="list-style-type: none"> • Timely processing of as-built documents associated with completed construction work into the asset registry; • Asset data inventory corrections (Map Corrections) provided by field inspectors; and • Asset data projects designed to assess and improve the completeness of records and attribute data for critical assets. <p>Due to the criticality of distribution primary structure assets to wildfire risk management activities and historical mapping practices, PG&E's primary focus has been to ensure the completeness of that asset registry. To date, greater than 98% of PG&E wildfire areas (HFTD and HFRA) have undergone an assessment using LIDAR data to identify any missing distribution primary structures (poles). Approximately 3,000 structures have been added to the asset registry as part of this four-year project. The remaining approximately 2% of wildfire areas not yet completed are planned for completion in 2023.</p> <p>As referenced above, PG&E also leverages inspection activities to identify and correct any critical missing or inaccurate asset data attributes.</p> <p>b. In its response to the 2023 WMP Utility survey, PG&E made a commitment (A1-11: Data Fill Rates) to increase the fill rate for missing age data from 88% to 90% (weighted average) across 12 asset component types by end of 2025. These component types are: Transmission Poles, Transmission Towers, Transmission Conductors, Transmission Insulators, Distribution Poles, Distribution Primary Overhead Conductor, Distribution Dynamic Protective Device, Distribution Fuse, Distribution Surge Arrestor, Distribution Capacitor Bank, Distribution Voltage Regulator, and Distribution OH Transformer.</p>	Colin Lang	5/4/2023	5/23/2023	5/23/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_004.zip	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-33 – Progress on Filing Asset Inventory Data Gaps
387	OEIS	007	OEIS_007	1	OEIS_007_D1	<p>Services provided to customers due to PSPS and wildfire emergencies</p> <p>In Section 4.6, the full extent of services PG&E provides to customers due to PSPS and wildfire emergencies is unclear. Describe PG&E's full scope of services for each service listed (a, b, c, etc.) below as it relates to PSPS and wildfire emergencies and the segment of customers served for that service. In its discussion of each service, address the questions under each listed service. If a service is provided due to a regulation, reference the governing rule. Where applicable, reference the customer class (residential, business, etc.) to which the service is offered.</p> <p>a. Support for Low Income Customers PG&E discusses its services for red tagged customers.</p> <p>i. What service(s) does PG&E provide to non-red tagged customers if their service has been disrupted or degraded?</p> <p>b. Suspension of Disconnection and Non-payment Fees PG&E discusses its services for red tagged customers if an emergency proclamation is made.</p> <p>i. What service(s) does PG&E provide to non-red tagged customers if their service has been disrupted or degraded?</p> <p>ii. What service(s) does PG&E offer if an emergency proclamation is not made?</p> <p>c. Repair Processing and Timing i. Demonstrate how PG&E offered "repair processing and timely assistance" for each wildfire from 2020-2022. Its discussion should include a narration of the overall damage to the community including the number of customers impacted.</p> <p>ii. Of those impacted how many of those were red-tagged?</p> <p>iii. What support does PG&E provide to those customers that are not red tagged customers if their service has been disrupted or degraded?</p> <p>d. Medical Baseline Support Services i. How does PG&E communicate with Medical Baseline (MBL) customers before and during Wildfire and PSPS events?</p> <p>ii. How does PG&E communicate with MBL customers outside of Wildfire and PSPS events?</p> <p>iii. What PG&E emergency-related programs are MBL customers eligible for? Describe the programs.</p> <p>iv. What agencies or partners does PG&E work with to support the needs of its MBL customers?</p> <p>v. List what follow up services PG&E provides its MBL customers after it makes a referral to an outside agency or partner during a Wildfire or PSPS emergency event.</p> <p>Access to PG&E Emergency Services</p> <p>SPD appreciates your timely response and provision of citation data as requested, via "WMP-Discovery2023_DR_SPD_004-0001A1ch01." However, it appears the data in Columns U ("Outage Date") and V ("Outage Time") were provided in an incorrect format for rows beyond row 469. PG&E needs to resubmit the data with correct outage date and time information. Please provide a corrected data file with rows beyond row 469 in the correct format (U as date format, V as time format). Rows 1-469 of the spreadsheet are in the correct format. Provide corrections in the spreadsheet and resubmit.</p>	<p>i. The CPUC issued (D.) 19-07-015, adopting an emergency disaster relief program for utility customers. The trigger to implement the program is an emergency declaration by the governor of California or president of the United States. We Red-Tag customers when the disaster has resulted in the destruction or damage of a structure, such that utility service is disrupted voluntarily or involuntarily due to safety concerns or reconstruction activities to address damages.</p> <p>Customers who experience service disruptions or degradations but are not red-tagged also have their California Alternate Rates for Energy Program (CARE) / Family Electric Rate Assistance Program (FERA) Post Enrollment Verification (PEV) recertification process postponed for 12 months, and PG&E contacts Community-Based Organizations to share the impacted customers for prioritized support with assistance programs, such as Relief for Energy Assistance through Community Help (REACH) Program and Low Income Home Energy Assistance Program (LIHEAP) for payment/pledge support.</p> <p>All customers (residential or non-residential) would be offered flexible payment arrangements. For residential, the payment arrangement is for up to 8 months (associated with the consumer protections decision) and residential customers would be offered up to a 12-month payment arrangement (a result from the disconnection OR D.20-003) PG&E also offers residential customers any applicable programs and services that they may be eligible for AMP, CARE, FERA, LIHEAP, etc.</p> <p>Lastly, during large emergency incidents, such as a wildfire, additional customer and community support offerings may be considered when our Emergency Operations Center is activated for a level 4 "Severe" event or higher and the county or local agency in command is requesting additional support. Enhanced Customer and Community Support offerings may include:</p> <ul style="list-style-type: none"> • Supplemental communications via additional channels, such as email, text • Temporary backup power support to County/Agency operated warning/coordination centers • Local PG&E staff deployed nearby or in-person to support these 	Alan Solomon	5/24/2023	5/30/2023	5/30/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_007.zip	0	N/A	8.4.6	Emergency Preparedness	Customer Support in Wildfire and PSPS Emergencies
392	CPUC - SPD (Safety Policy Division)	008	CPUC - SPD (Safety Policy Division)_008	IREV	SPD (Safety Policy Division)_008	<p>SPD appreciates your timely response and provision of citation data as requested, via "WMP-Discovery2023_DR_SPD_004-0001A1ch01." However, it appears the data in Columns U ("Outage Date") and V ("Outage Time") were provided in an incorrect format for rows beyond row 469. PG&E needs to resubmit the data with correct outage date and time information. Please provide a corrected data file with rows beyond row 469 in the correct format (U as date format, V as time format). Rows 1-469 of the spreadsheet are in the correct format. Provide corrections in the spreadsheet and resubmit.</p>	<p>Please see "WMP-Discovery2023_DR_SPD_008-0001A1ch01.xlsx" for the updated spreadsheet with the requested corrections to columns U and V.</p>	Kevin Miller	5/26/2023	5/31/2023	5/31/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_008.zip	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-06 – Addressing Increase in Risk Events
388	OEIS	008	OEIS_008	1	OEIS_008_D1	<p>Regarding Vegetation Management Objectives</p> <p>In Table 8-12 of PG&E's 2023-2025 WMP, it states that one of its objectives is to "Determine value of a multi-year historical tree data set."</p> <p>a. Expand on what is meant by "a multi-year historical tree data set."</p> <p>b. How might the data for this set be gathered? (e.g., inspection reports, remote sensing, etc.)</p> <p>c. Would this data set be like SCE and SDG&E's tree inventories?</p>	<p>a. A multi-year historical tree data set in this context is a data set compiled from all relevant year-over-year tree data available over a period of time. This would be intended to inform decision makers at various steps of the vegetation management cycle, for trees that remain unmitigated through removal. The tree data can inform risk analyses, planning, and forecasting. This information can inform inspectors on tree response to previous pruning activities. It can provide insight on various factors such as (but not limited to) growth rates of specific individual trees based on historical inspection. The tree specific data can also improve remote sensing data or outage trend or more broadly, observed failure patterns at the species level.</p> <p>b. The data initially would be gathered by utilizing inspection records and coordinates. This data will get updated with each tree's next inspection(s). Tree-specific data captured through other remote sensing would require subsequent field verification to confirm accuracy before the data could be relied upon for multi-year historical analysis.</p> <p>c. The utilities would need to benchmark in order to accurately address this question.</p>	Dakota Smith	5/25/2023	5/31/2023	5/31/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_008.zip	0	N/A	8.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
389	OEIS	008	OEIS_008	2	OEIS_008_Q2	<p>Regarding Undergrounding Workplan Targets</p> <p>a. Explain why PG&E has reduced undergrounding targets provided within its workplan when comparing PG&E's 2022 WMP to the 2023-2025 WMP.</p> <p>b. Provide two versions of an updated Table PG&E-8.1.2-3 from PG&E's 2023-2025 WMP in which the Top 20% is based on risk model output scores from V2 and V3 respectively, opposed to WFE. Both mileage and % of Portfolio columns should be updated for each respective year and total.</p>	<p>In the 2023-2025 WMP, PG&E has reduced its plan to underground 10,000 distribution circuit miles in and near high wildfire risk areas which included an initial goal of undergrounding 3,400 miles from 2023-2025. PG&E submitted a workplan that included 3,716 miles for that time period. (2022 WMP Table RN-PG&E-22-03-02).</p> <p>In the 2023-2025 WMP, PG&E has reiterated its commitment to underground 10,000 circuit miles in and near high wildfire risk areas. In the 2023-2025 WMP, PG&E has targeted undergrounding 2,100 miles from 2023-2025. The plan it submitted contains 2,687 miles to ensure it can meet its targets. (2023-2025 WMP, Table PG&E-8.1.2-3).</p> <p>Along with the 2022 WMP and 2023 WMP, PG&E also presented its 10,000 mile undergrounding plan in its Test Year 2023 General Rate Case (TY 2023 GRC, A. 21-06-021). Similar to the update from our 2022 WMP to our 2023 WMP, PG&E reduced its forecast mileage (and cost) targets for 2023-2025 in its TY2023 GRC (A. 21-06-021, PG&E's Reply Brief, Table 4-8 and Table 4-9). The mileage targets in PG&E's Reply Brief are aligned to the mileage targets in its 2023-2025 WMP. PG&E recognizes, and has stated from the beginning, that its 10,000 mile undergrounding plan will evolve in light of: (1) the ongoing work and learnings from our project management team, engineers, operators, construction workers, and other experts; (2) input from external stakeholders; (3) the undergrounding plan reviews pursuant to Senate Bill (SB) 854; (4) the permitting process under state, county, and local laws; and (5) other factors such as economic and market conditions, and supply chain dynamics.</p> <p>Commissioner John Reynolds, in his opening remarks at the start of PG&E's TY2023 GRC evidentiary hearings, highlighted, in particular, the timing challenges presented in connection with PG&E's forecasting in the GRC while at the same time submitting annual wildfire mitigation plans for review by the Office of Energy Infrastructure Safety (Energy Safety). Commissioner Reynolds noted that in light of this timing, it is reasonable to expect PG&E's plans to evolve and to allow for potential changes in the GRC.</p> <p>The Wildfire Mitigation Plan process remains relatively new and we expect PG&E, like other utilities, to continue adjusting its approaches to wildfire mitigation in light of developments and</p>	Dakota Smith	5/25/2023	5/31/2023	5/31/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_008.zip	1	N/A	8.1.2.3	Grid Design and System Hardening	Distribution Pole Replacements and Reinforcements
391	OEIS	008	OEIS_008	4	OEIS_008_Q4	<p>Regarding PG&E's response to TURN DR 10 Question 4</p> <p>a. Provide Attachment 1 with the following additional columns:</p> <p>i. Length of line (m)</p> <p>ii. V3 Risk Score</p> <p>iii. V3 Risk Rank</p> <p>b. If not included above, provide the V3 risk rank for the following CPZs, and explain why they are not included in the above:</p> <p>i. BRUNSWICK 111063100</p> <p>ii. GREEN VALLEY 210111054</p> <p>iii. GREEN VALLEY 210112106</p> <p>iv. GREEN VALLEY 210136820</p> <p>v. JAMESON 110546348</p> <p>vi. LAURIES 11112020</p> <p>vii. MADISON 21011606</p> <p>viii. MC ARTHUR 11011544</p> <p>ix. MORGAN HILL 2111X0398</p> <p>x. NARROWS 2102220</p> <p>xi. NARROWS 21052216</p> <p>xii. NARROWS 21052426</p> <p>xiii. NARROWS 21052748</p> <p>xiv. PANORAMA 11021342</p> <p>xv. PANORAMA 11021526</p> <p>xvi. POSSO MOUNTAIN 2102181</p> <p>xvii. SHINGLE SPRINGS 210913322</p> <p>xviii. SHINGLE SPRINGS 21099372</p> <p>xix. SILVERADO 21024926</p> <p>xx. TEMPLETON 2110901690</p>	<p>a. Please see attachment "WMP-Discovery2023_DR_OEIS_008-0004A1ch01.xlsx" for the requested updates. Length of line (m), V3 Mean Risk Score, V3 Total Risk Score, and V3 Risk Rank can be found in Columns F-I, respectively. Length of line (m) is represented by the field unhardened overhead high fire (HFTD + HFRA) miles, as the original data request requested for HFTD and HFRA circuit segments.</p> <p>b. Information was included for all the requested CPZs listed in the question, with the exception of the three CPZs listed below. The following three CPZs were not included in the file "WMP-Discovery2023_DR_TURN_010-0004A1ch01.xlsx" because these specific circuit segments have no miles associated in HFTD and HFRA, TURN DR 10. Question 004 specifically asked for HFTD and HFRA circuit segments:</p> <p>iii. GREEN VALLEY 210136820</p> <p>xiv. PANORAMA 11021342</p> <p>xv. PANORAMA 11021526</p>	Dakota Smith	5/25/2023	5/31/2023	5/31/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_008.zip	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations

390	OEIS	008	OEIS_008	3	OEIS_008_Q3	Regarding Inspection Find Rates a. Provide PG&E's work order find rate for distribution detailed and patrol inspections respectively, broken down by quarter from 2018 to 2022.	<p>Please find PG&E's find rate for distribution overhead (OH) detailed and patrol inspections in the tables below. Please note that inspections are not evenly distributed by quarter, so PG&E has also provided the annual find rate for each inspection type. PG&E provides a few notes about the data below:</p> <ul style="list-style-type: none"> Find rates are counted by unique notifications, so in some cases more than one notification is present for a single structure. Find rates for 2019 include only findings from PG&E's WSIP inspections, not GO 165 inspections. Find rates for 2020-2022 for overhead inspections utilize a slightly different set of filters compared to PG&E's QDR reporting. These find rates exclude findings that were made through PG&E's Inspect app but were not part of the inspections program or vice versa. Based on the specific year, this data may also exclude any findings that were made before the first day of inspections each year. We are currently standardizing our find rate reporting for future QDR submissions and data requests by creating a formal Job Aid for this process. We will also create a single source of data for inspections and findings. <p>Patrol Find Rates Q1 Q2 Q3 Q4 Annual Find Rate 2018 0.07% 0.06% 0.07% 0.20% 0.08% 2019 0.11% 0.14% 0.13% 0.21% 0.14% 2020 0.12% 0.11% 0.11% 0.10% 0.11% 2021 0.07% 0.12% 0.10% 0.08% 0.09% 2022 0.14% 0.09% 0.12% 0.08% 0.10%</p> <p>DH Inspections Find Rates Q1 Q2 Q3 Q4 Annual Find Rate 2018 9.33% 7.37% 8.50% 14.08% 9.24% 2019 36.09% 29.04% 48.98% 26.78% 30.82% 2020 34.09% 22.11% 23.51% 22.97% 23.98% 2021 18.98% 18.19% 22.48% 25.93% 20.72%</p>	Dakota Smith	5/25/2023	6/5/2023	6/5/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_008.zip	0	N/A	8.1.3.2	Asset Inspections	Distribution Asset Inspections
393	OEIS	009	OEIS_009	1	OEIS_009_Q1	Q01 Regarding PG&E's Secondary and Service Lines a. What percentage of PG&E's scoped 2023-2026 undergrounding projects have associated secondary or service lines? What is the mileage of such lines? b. What is the ratio of undergrounding mileage to secondary or service lines for PG&E's scoped 2023-2026 undergrounding projects? (i.e. for every mile of line undergrounded, how many miles of secondary or service lines remain)	<p>Undergrounding projects have associated secondary and service lines because our customers are served through those facilities. PG&E's GIS system does not accurately represent all secondary and service conductors in such a way that we could calculate the mileage of secondary and service conductor adjacent to scoped underground projects. It would be very difficult and of limited value to calculate secondary and service conductor mileage in GIS.</p> <p>Please see the response to subpart (a) above. Currently, PG&E is planning to only underground secondary and service where it is adjacent to the existing primary trench and depending on where the new pad-mounted transformer is installed. Remaining secondary and service wire is hardened by replacing open-wire secondary, gray services, tree connects, and installing breakaway connectors with the appropriate type of hardware.</p> <p>Undergrounding projects have associated secondary and service lines because our customers are served through those facilities. PG&E's GIS system does not accurately represent all secondary and service conductors in such a way that we could calculate the mileage of secondary and service conductor adjacent to scoped underground projects. It would be very difficult and of limited value to calculate secondary and service conductor mileage in GIS.</p> <p>Please see the response to subpart (a) above. Currently, PG&E is planning to only underground secondary and service where it is adjacent to the existing primary trench and depending on where the new pad-mounted transformer is installed. Remaining secondary and service wire is hardened by replacing open-wire secondary, gray services, tree connects, and installing breakaway connectors with the appropriate type of hardware.</p>	Dakota Smith	6/1/2023	6/6/2023	6/6/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_009.zip	0	N/A	8.1.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
394	CPUC - SPD (Safety Policy Division)	009	CPUC - SPD (Safety Policy Division)_009	1	CPUC - SPD (Safety Policy Division)	1)On pages 346-347 of the 2023 WMP PG&E discusses its risk reduction from undergrounding work and states "this plan will allow PG&E to target risk reduction in the highest wildfire risk areas to eliminate approximately 18 percent of existing wildfire risk by the end of 2026." Please elaborate and show how PG&E calculated 18 percent in wildfire risk reduction from undergrounding work. 2)Which year baseline of risk did PG&E use? 3)How much risk reduction was assumed for each year? 4)Which version(s) of the WDRM was used? 5)Was one version used for some years' risk reduction and another version used for other year(s)? 6)Was any other model used to calculate risk reduction and if so, how?	<p>Note: this data response relates specifically to wildfire risk, and not to the total overall utility risk as described in the rest of Section 7.2.2 and the 2023-2025 WMP. Also, the annual percentage risk reduction calculation for our undergrounding target (GHI-05) in the 2023-2025 WMP is based on total utility risk.</p> <p>PG&E uses the baseline year of 2023 based on the starting risk scores from the WDRM v3 risk model. Note, WDRM v3 is based on circuit segment geometries of as January 2022. To arrive at the 2023 baseline, PG&E incorporated the known 2022 underground and overhead hardening work in order to calculate the 18 percent wildfire risk reduction.</p> <p>Risk reduction was calculated, not assumed, as described in the preface of the response to this question (above). See the following table for the results of the calculations for each year.</p> <p>Year Risk Reduction 2022 0.38% 2023 1.72% 2024 3.38% 2025 4.96% 2026 7.99% Total: 18.42%</p> <p>WDRM v3 was used for this calculation. In these instances where an underground project was selected based on WDRM v2, PG&E matched the associated v3 circuit segment and calculated risk reduction based on WDRM v3 risk scores.</p>	Kevin Miller	6/2/2023	6/8/2023	6/7/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_009.zip	1	N/A	8.1.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
395	CPUC - SPD (Safety Policy Division)	009	CPUC - SPD (Safety Policy Division)_009	2	CPUC - SPD (Safety Policy Division)	2)On page 643 of its 2023 WMP PG&E states there has been a "Reduced size and duration of PPS events" and claims "This is an indicator of increased operational maturity, flexibility, and system resilience." a. Is this claim directed toward PPS? b. If yes, is it not at least in part or perhaps implied, that PG&E's increased operational maturity, flexibility, and resilience is also relying on other processes such as EPSS (fast trip)?	<p>Yes, the claim is directed toward PPS.</p> <p>Making extensive use of Advanced Notifications and outreach tools to notify impacted customers of the expected de-energization (see section 8.4.4.2 of PG&E's 2023 WMP).</p> <p>Using an extensive camera, weather station, and satellite weather monitoring network and on-the-ground personnel to collect real-time observations to inform and speed the identification of Weather "All-Clear" times in more precise, smaller areas to get customers back in service faster (see section 7.3.2.1 of PG&E's 2023 WMP).</p> <p>Readying and increasing resources for restoration efforts, including use of helicopters and fixed wing aircraft to conduct line safety patrols after the Weather "All-Clear", restoring service to safe lines as quickly as possible subject to operational safety and ability to access equipment for patrol and any needed repairs (see section 7.3.9.5 of PG&E's 2023 WMP).</p> <p>Supporting vulnerable customers through California Foundation for Independent Judge Centers (CJIC) and Community Based Organizations (CBO) resources.</p>	Kevin Miller	6/2/2023	6/8/2023	6/7/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_009.zip	0	N/A	9.1.2	Public Safety Power Shutoff	Identification of Frequently De-Energized Circuits
396	CPUC - SPD (Safety Policy Division)	009	CPUC - SPD (Safety Policy Division)_009	3	CPUC - SPD (Safety Policy Division)	3)PG&E has less than the required number of personnel with required training for several categories in Table 8-39: PG&E's Personnel Training Programs for Wildfire and PPS Events. Other tables related to staffing indicate if, for example, all staffing will complete training on time and reasons for not all being completed is the timing of table's required provision. Why are there less than required values of personnel not completing the training?	<p>PG&E has a constant inflow and outflow of new personnel in its Emergency Operations Center (EOC). As such, we are at various stages of training completion. In addition, different positions within the EOC require different levels of training. Some of the more advanced level are instructor led and offered quarterly. PG&E is increasing the number of instructors this year to be able to increase these offerings in 2024.</p>	Kevin Miller	6/2/2023	6/8/2023	6/7/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_009.zip	0	N/A	8.1.8.3	Grid Operations and Procedures	Personnel Work Procedures and Training in Conditions of Elevated Fire Risk
397	CPUC - SPD (Safety Policy Division)	009	CPUC - SPD (Safety Policy Division)_009	4	CPUC - SPD (Safety Policy Division)	4)PG&E provides means to verify message receipt in Table 8-49: PG&E's Protocols for Emergency Communication to Stakeholder Groups. How accurate is this receipt information with regard to verifying messages are reaching intended recipient/resident to aid in intended safety outcomes (e.g., including, but not limited to, messages not being sent to a new number or persons no longer in the household)?	<p>PG&E is able to verify that a message was delivered to the phone number and/or email address on file for the customer of record associated with the premise identified as impacted by a potential PPS, EPSS outage, and/or outage due to a wildfire. Phone number and/or email address are requested at the time an account is established and are verified when a customer logs into My Account at pge.com on an annual basis and/or if a customer speaks with a Contact Center Customer Service Representative (CSR) and has not verified contact information in the past 60 days via CSR. To ensure we have the most updated contact information for customers of record, wildfire safety-related outreach material includes a standard call to action to update contact information. In addition, Business Energy Solutions Account Reqs engage with critical facilities and infrastructure, telecommunications and water providers and transmission level entities in high fire risk areas and likely to be impacted by PPS and/or EPSS annually to confirm contact information for the purposes of outage notification. Contact information for CBOs and Paratransit agencies is maintained via regular engagement by the AFN Affinity Outreach Principal. For customers that are MBL and/or SIV, in addition to specific campaigns via mail and email to encourage contact information updates, we conduct a weekly review to identify customers with either missing or invalid contact information as documented in our Customer Care and Billing System (CCAB). Additionally, we cross-reference contact information submitted through our other program applications (e.g., CARE/FERA and rebates) to run a daily sync between our Salesforce Application (used to process these program applications) and MBL database within the CCAB system. These weekly and daily processes are conducted year-round to help ensure the MBL and SIV contact information is current. Local and state agencies and first responders are engaged by Local Government Affairs and Public Safety Specialists annually to confirm contact information/identify new customers. If an email address is not provided by the customer) between March and August, to reinforce the importance of having up-to-date contact information on file and encourage them to provide an alternative means of contact for PPS notifications. MBL and SIV information is updated automatically and in real-time when a customer logs into their PG&E account and updates their information or when it is provided to a PG&E representative. Requests to change contact information can be submitted via multiple channels, therefore, there is no dedicated staffing member or department that implements changes. For example, contact information can be changed by customers via our website, which updates our systems of record directly. To Quality Assure and Quality Control (QA/QC) the MBL and SIV customer contact information, we conduct a weekly review to identify customers with either missing or invalid contact information as documented in our Customer Care and Billing System (CCAB). Additionally, we cross-reference contact information submitted through our other program applications (e.g., CARE/FERA and rebates) to run a daily sync between our Salesforce Application (used to process these program applications) and MBL database within the CCAB system. These weekly and daily processes are conducted year-round to help ensure the MBL and SIV contact information is current. PG&E considers PPS notifications for medical baseline customer as "received" if one of the following occurs: Customer answers the phone, text confirmation is received back from the customer, e-mail is opened or a link within the e-mail is clicked, or the</p>	Kevin Miller	6/2/2023	6/8/2023	6/7/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_009.zip	0	N/A	8.4.4.1	Emergency Preparedness	Protocols for Emergency Communications
398	CPUC - SPD (Safety Policy Division)	009	CPUC - SPD (Safety Policy Division)_009	5	CPUC - SPD (Safety Policy Division)	5)PG&E issues notifications to AFNMB ratemakers. How does PG&E know that these notifications are received and that contact information is up to date? 6)Does PG&E have a way to continuously/periodically verify that the contact information on file is current to help ensure such important notices are being received by the intended recipients?	<p>PG&E issues notifications to AFNMB ratemakers. How does PG&E know that these notifications are received and that contact information is up to date? 6)Does PG&E have a way to continuously/periodically verify that the contact information on file is current to help ensure such important notices are being received by the intended recipients?</p>	Kevin Miller	6/2/2023	6/8/2023	6/7/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_009.zip	0	N/A	8.5.3	Community Outreach and Engagement	Engagement With Access and Functional Needs Populations

406	CaPA	Set WMP-26	CaIPA_Set WMP-26	2	CaIPA_Set WMP-26_Q2	(a) Do you consider load growth projections when you determine which system hardening measures to deploy for wildfire mitigation purposes? (b) If the answer to (a) is "yes", explain how load growth projections influence your mitigation selection process. (c) If the answer to (a) is "no", explain why not.	a) No. The choice of which system hardening measure is deployed for wildfire mitigation purposes is not influenced by either load forecasts or load growth projections in an area. b) Not applicable. c) System hardening measures are selected based on wildfire risk and ignition risk mitigation needs, not loading. However, any loading concerns (including load growth projections) are addressed during the system hardening project scoping and design phases, such as the application of new mainline cable/conductor, additional reactive power or voltage control equipment, upgraded protection, or additional devices.	Holly Wehrman	7/27/2023	8/10/2023	8/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q26.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
407	CaPA	Set WMP-26	CaIPA_Set WMP-26	3	CaIPA_Set WMP-26_Q3	(a) When you plan system hardening projects for wildfire mitigation purposes, do you design projects to accommodate forecasted load growth? (b) If yes, what degree of load growth do you design for? (c) Describe your process for incorporating forecasted load growth into the design of system hardening projects (for instance, which scenarios of possible load growth are considered).	a) Yes. When we plan system hardening projects for wildfire mitigation purposes the scope and design of the project may be influenced by forecasted load growth. b) The design takes into account a 13-year substation transformer and distribution circuit breaker forecast and a three-year distribution line-section forecast. c) Only one scenario is used for load forecasting. This scenario uses known load applications for service as well as the most-recently-adopted California Energy Commission Integrated Energy Policy Report forecast for load and Distributed Energy Resource growth. Our Electric Distribution Planning team provides input and review for the Grid Design team throughout the scoping process ensuring that adequate capacity, voltage control, and protection is incorporated with the system hardening project scope. There is also an additional touchpoint later in the estimating process where the Electric Distribution Planning and Grid Design engineering teams review the Circuit Map Change Sheet (CMCS) and approve the final design. At that point, if any changes are required due to new forecasted load growth, the design can be updated to account for that.	Holly Wehrman	7/27/2023	8/10/2023	8/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q26.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
408	CaPA	Set WMP-26	CaIPA_Set WMP-26	4	CaIPA_Set WMP-26_Q4	(a) In a typical bare conductor to covered conductor conversion project, is the intention to maintain, increase, or decrease the load capacity at peak operating temperatures? (b) Explain the reasoning for your response to part (a).	a) The design can be updated to account for that. b) The design can be updated to account for that. c) The design can be updated to account for that. d) The design can be updated to account for that. e) The design can be updated to account for that. f) The design can be updated to account for that. g) The design can be updated to account for that. h) The design can be updated to account for that. i) The design can be updated to account for that. j) The design can be updated to account for that. k) The design can be updated to account for that. l) The design can be updated to account for that. m) The design can be updated to account for that. n) The design can be updated to account for that. o) The design can be updated to account for that. p) The design can be updated to account for that. q) The design can be updated to account for that. r) The design can be updated to account for that. s) The design can be updated to account for that. t) The design can be updated to account for that. u) The design can be updated to account for that. v) The design can be updated to account for that. w) The design can be updated to account for that. x) The design can be updated to account for that. y) The design can be updated to account for that. z) The design can be updated to account for that.	Holly Wehrman	7/27/2023	8/10/2023	8/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q26.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
409	CaPA	Set WMP-26	CaIPA_Set WMP-26	5	CaIPA_Set WMP-26_Q5	(a) Are all new covered conductor installation projects designed to accommodate loads greater than current capacity for the same circuit? (b) If the answer to (a) is "yes", explain how. (c) If the answer to (a) is "no", explain why not.	a) In general, new covered conductor systems are designed to accommodate forecasted growth in an area, where applicable, and for operational capacity requirements to support switching and regular maintenance. However, not all areas are forecasted to require additional capacity for regular or emergency loads. b) Please see our response to subpart (a). c) Please see our response to subpart (a).	Holly Wehrman	7/27/2023	8/10/2023	8/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q26.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
410	CaPA	Set WMP-26	CaIPA_Set WMP-26	6	CaIPA_Set WMP-26_Q6	(a) Are all overhead to underground conductor conversion projects designed to accommodate loads greater than current capacity for the same circuit? (b) If the answer to (a) is "yes", explain how. (c) If the answer to (a) is "no", explain why not.	a) In general, new underground systems are designed to accommodate forecasted growth in an area, where applicable, as well as for operational capacity requirements to support switching and regular maintenance. However, not all areas are forecasted to require additional capacity for regular or emergency loads. b) Please see our response to subpart (a). c) Please see our response to subpart (a).	Holly Wehrman	7/27/2023	8/10/2023	8/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q26.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
411	CaPA	Set WMP-26	CaIPA_Set WMP-26	7	CaIPA_Set WMP-26_Q7	Describe the challenges or advantages entailed in increasing load capacity on a circuit that has previously been hardened with covered conductor.	There are no significant differences to increasing load capacity on a circuit that has been hardened with covered conductor as compared to one that has not been hardened. In each case, the systems' structures and components will have to be replaced as required to support larger conductor or an additional underbait circuit. It might be possible for a hardened system to require fewer protection upgrades and, to a lesser extent, pole replacements to increase load capacity. It might also be possible for new load growth not to require physical system changes on a hardened system if it was already upgraded to support forecasted growth.	Holly Wehrman	7/27/2023	8/10/2023	8/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q26.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
412	CaPA	Set WMP-26	CaIPA_Set WMP-26	8	CaIPA_Set WMP-26_Q8	Describe the challenges or advantages entailed in increasing load capacity on a circuit that has previously been hardened with underground conductor.	There are no significant differences to increasing load capacity on a circuit that has been hardened with covered conductor as compared to one that has not been hardened. In each case, the systems' structures and components will have to be replaced as required to support larger conductor or an additional underbait circuit. It might be possible for a hardened system to require fewer protection upgrades and, to a lesser extent, pole replacements to increase load capacity. It might also be possible for new load growth not to require physical system changes on a hardened system if it was already upgraded to support forecasted growth.	Holly Wehrman	7/27/2023	8/10/2023	8/10/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q26.zip	0	NA	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
422	CaPA	Set WMP-28	CaIPA_Set WMP-28	1	CaIPA_Set WMP-28_Q1	Describe the process from start to finish, from any QA actions that occur prior to the inspection, continuing through the inspection, and ending when QC and QA are both complete. a) Describe how PG&E will integrate QC with execution processes. b) Describe the QC and QA processes in place at the beginning of 2023 for a detailed distribution inspection. c) Describe the QC and QA processes that PG&E is proposing—in which QC will be integrated with execution processes—for a detailed distribution inspection. As specified in the previous part, describe the process from start to finish. d) State the percentage of distribution asset inspections that will undergo the integrated QC process that PG&E is proposing.	QC is integrating with execution processes by completing QC on a shorter timeline than has been historically executed, allowing for timelier opportunities for re-training inspectors, sharing learnings, and making corrections, as necessary. By targeting shorter timelines to review and identify issues, PG&E can work with stakeholders while work has been recently completed, enabling both more timely corrective actions and additional operational efficiencies (e.g., bringing the prior inspector back to a failed location before the inspector has departed the area). Below is the process that QC and QA follow in 2023: o System Inspections (SI) execution completes the scheduled distribution asset inspection; o Completed inspection locations enter the queue of QC-eligible locations; o QC completes their review of the QC-eligible locations through desktop and/or field reviews; o QC shares any QC failures with the SI execution team; o QC completed locations become eligible for QA sampling; o QA performs statistical sampling of QC completed locations per the 95% confidence and 5% margin of error criteria described in the WMP; o QA auditors perform the field audits as identified during the sampling process; o QA audits are reviewed by QA subject matter experts (SME) for accuracy and completeness; o Once approved by a QA SME, a QA audit location is marked as complete; o QA shares any findings data back to the SI QC and SI execution teams. c) Please see the responses to subparts (a) and (b) for a description of our QC and QA processes. We intend to further integrate QC with execution, as described in subpart (a), during the second and third bullets of the processes described in subpart (b). PG&E is continuing to explore additional opportunities for further integration of the execution and QC functions. d) PG&E is targeting QC on 30% of all System Inspections following the to-be-integrated model within HFTD, barring external	Holly Wehrman	8/10/2023	8/15/2023	8/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q28.zip	0	NA	8.1.6	Quality Assurance and Quality Control	NA
423	CaPA	Set WMP-28	CaIPA_Set WMP-28	2	CaIPA_Set WMP-28_Q2	How will PG&E track the quality of asset inspection work under the integrated QC process (which was previously tracked as a QC pass rate)? What metrics or measures will PG&E use to identify a possible downward trend in the quality of asset inspection work?	The quality of asset inspection work is being tracked by using data on QC failures to inform dashboards and plans which give visibility into opportunities for improvement in initial work execution, driving quality at the source. Where applicable, PG&E will also continue to track QC pass rates as we have done previously. PG&E utilizes Pareto charts, among other tools, to track top finding types which are reviewed with stakeholders to formulate data-driven plans of action. Where applicable, PG&E will also continue to review QC pass rates.	Holly Wehrman	8/10/2023	8/15/2023	8/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q28.zip	0	NA	8.1.6	Quality Assurance and Quality Control	NA
424	CaPA	Set WMP-28	CaIPA_Set WMP-28	3	CaIPA_Set WMP-28_Q3	Provide a breakdown of the 1500 transmission locations by inspection type. For example, how many of these locations will audit detailed ground inspectors, how many will audit aerial inspectors, etc. Provide a breakdown of the 1500 distribution locations by inspection type. For example, how many of these locations will audit detailed ground inspectors, how many will audit aerial inspectors, etc.	All QA audit locations are sourced from completed QC ground or desktop audit locations. Both ground and desktop QC locations have an equal but random likelihood of appearing in the QA sample. Due to the random nature of the sampling, it is not possible to determine in advance the quantities of each inspection type which may appear in the QA sample. Please see the response to subpart (a) for an explanation of how distribution locations are sourced. The process is the same for distribution locations as it is for transmission locations.	Holly Wehrman	8/10/2023	8/15/2023	8/15/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfire/wildfire-mitigation-plan/reference-docs/2023/CalAdvocates_Q28.zip	0	NA	8.1.6	Quality Assurance and Quality Control	NA

436	CaPA	Set WMP-28	CaIPA_Set WMP-28	15	CaIPA_Set WMP-28_Q15	<p>RN-PG&E-23-04 Page 63 of PG&E's response states, "For example, we have found certain splices (e.g., splices within two feet of an insulator, and number of splices per span) do not pose an increased risk of ignition. Instead of issuing a non-ignition risk maintenance tag, the splices are better addressed by the asset management team as they are a potential indicator of a holistic asset health issue." a) Describe how the asset management team will track splices if a maintenance tag is not issued. b) Describe the circumstances under which PG&E would repair splices that do not pose an ignition risk, and therefore do not have a maintenance tag. c) How does PG&E's asset management team use splices as an indicator of "holistic asset health" and under what circumstances does the asset management team take action based on this indicator?</p>	Holly Wehman	8/10/2023	8/15/2023	8/15/2023	0	N/A	8.1.8	Grid Operations and Procedures	NA
437	CaPA	Set WMP-28	CaIPA_Set WMP-28	16	CaIPA_Set WMP-28_Q16	<p>RN-PG&E-23-05 Page 68 of PG&E's response states, "There are 79 circuit segments that are not included in an underground plan and have not been hardened. In place of these circuit segments, PG&E chose to add different circuit segments to the portfolio that could be undergrounded more efficiently. PG&E manages wildfire risk on these 79 circuit segments through our portfolio of Comprehensive Monitoring and Data Collection and Operational Mitigations described above." a) Has PG&E considered overhead hardening on the 79 circuit segments described in the operation? b) If the answer to part (a) is yes, why did PG&E not list overhead hardening as a mitigation for these 79 circuit segments? c) If the answer to part (a) is no, explain why not.</p>	Holly Wehman	8/10/2023	8/15/2023	8/15/2023	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of electric lines and/or equipment
438	CaPA	Set WMP-28	CaIPA_Set WMP-28	17	CaIPA_Set WMP-28_Q17	<p>RN-PG&E-23-05 Table RN-PG&E-23-05-2 on page 72 of PG&E's response compares the mileage in the top 20% of WFE, the top 20% of WDRM v3, and the top 20% of WDRM v2. It is our understanding (from PG&E's response to ACI PG&E-23-34 in its 2023-2025 WMP) that the list of circuit segments ranked by WFE is based on the risk score from WDRM v3 and the feasibility score in the numerator and the feasibility of undergrounding appears in the denominator. a) Please confirm or correct the understanding stated above. b) Does the list of circuit segments ranked by WFE incorporate risk scores from WDRM v2? If yes, describe how so.</p>	Holly Wehman	8/10/2023	8/15/2023	8/15/2023	0	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of electric lines and/or equipment
439	CaPA	Set WMP-28	CaIPA_Set WMP-28	18	CaIPA_Set WMP-28_Q18	<p>RN-PG&E-23-05 Page 73 of PG&E's response states, "Based on our further evaluation, the preliminary, updated mitigation effectiveness for undergrounding, considering the residual risk from secondary and service lines, is approximately 97.7 percent compared to the 99 percent." a) Describe how PG&E calculated the effectiveness of 97.7 percent. b) Provide supporting data and worksheets for your response to part (a).</p>	Holly Wehman	8/10/2023	8/15/2023	8/15/2023	1	N/A	8.2.2	Vegetation Management and Inspections	Vegetation Management Inspections
440	CaPA	Set WMP-28	CaIPA_Set WMP-28	19	CaIPA_Set WMP-28_Q19	<p>RN-PG&E-23-07 Page 103 of PG&E's response states, "The TAT was developed to fit the scope of the EVM Program. With the conclusion of EVM, PG&E has decided to discontinue the use of the TAT and will be moving forward with industry accepted assessments using the TRAQ form." a) Given that, beginning in 2024, the scope of FTI will be similar to the scope of EVM (approximately 1,800 miles), please explain why the TAT is not appropriate for the scope of FTI. b) Describe the ways in which the TAT and TRAQ form are similar. c) Describe the ways in which the TAT and TRAQ form are different.</p>	Holly Wehman	8/10/2023	8/15/2023	8/15/2023	2	N/A	8.2.2	Vegetation Management and Inspections	Vegetation Management Inspections
441	CaPA	Set WMP-28	CaIPA_Set WMP-28	20	CaIPA_Set WMP-28_Q20	<p>RN-PG&E-23-07 Page 104 of PG&E's response states, "Given that we began working with the ISA TRAQ in 2023, data does not exist to objectively compare effectiveness differences between ISA TRAQ and the TAT." a) Does PG&E plan to perform a study or analysis to compare the effectiveness of the TAT and the ISA TRAQ? The may include, for example, performing a subset of FTI work using both tools. b) If the answer to part (a) is yes, please describe the study PG&E plans to perform, and the date PG&E plans to conclude the study. c) If the answer to part (a) is no, please explain why not.</p>	Holly Wehman	8/10/2023	8/15/2023	8/15/2023	0	N/A	8.2.2	Vegetation Management and Inspections	Vegetation Management Inspections
434	CaPA	Set WMP-28	CaIPA_Set WMP-28	13	CaIPA_Set WMP-28_Q13	<p>RN-PG&E-23-04 Page 55 of PG&E's response states, with regard to field safety reassessments, "Inspectors can also recommend that a notification be canceled if they believe it was created in error or if it was already completed." a) Describe the process by which an inspector performing a field safety reassessment can recommend a notification be canceled. b) If an inspector performing a field safety reassessment recommends that a notification be canceled, do any additional checks or verifications take place prior to canceling the notification? c) If the answer to part (b) is yes, describe such additional checks or verifications. d) If the answer to part (b) is no, explain why not.</p>	Holly Wehman	8/10/2023	8/16/2023	8/16/2023	0	N/A	8.1.8	Grid Operations and Procedures	NA
413	CaPA	Set WMP-26	CaIPA_Set WMP-26	9	CaIPA_Set WMP-26_Q9	<p>Provide a list of all circuits in your system. For each circuit, provide: a) Circuit ID Number b) Peak load in Amperes observed since January 1, 2014. c) Circuit Capacity in Amperes</p>	Holly Wehman	7/27/2023	8/17/2023	8/17/2023	1	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
414	CaPA	Set WMP-26	CaIPA_Set WMP-26	10	CaIPA_Set WMP-26_Q10	<p>Provide updated GIS layers of primary distribution, secondary distribution, and transmission lines, with the following attributes: a) Circuit ID Number b) Peak load in Amperes observed since January 1, 2014. c) Circuit Capacity in Amperes</p>	Holly Wehman	7/27/2023	8/17/2023	8/17/2023	1	N/A	8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
415	CaPA	Set WMP-27	CaIPA_Set WMP-27	1	CaIPA_Set WMP-27_Q1	<p>The article states the following: The California utility company PG&E spent about \$2.5 billion on a yearslong effort aimed at reducing wildfire risk by cutting or clearing more than a million trees growing alongside power lines. It now says that work was largely ineffective and is eliminating the program, according to an internal analysis reviewed by the Wall Street Journal and interviews with utility executives. a) Did PG&E provide an internal analysis to the Wall Street Journal as described in the article? b) If the answer to part (a) is yes, please provide a copy of the internal analysis described in the article. c) If the answer to part (a) is yes, please state when PG&E provided a copy of the internal analysis to the Wall Street Journal. d) If the answer to part (a) is no, is PG&E aware of the internal analysis described in the article? e) If the answer to part (a) is yes, please provide a copy of the internal analysis described in the article.</p>	Holly Wehman	8/4/2023	8/18/2023	8/18/2023	1	N/A	8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
416	CaPA	Set WMP-27	CaIPA_Set WMP-27	2	CaIPA_Set WMP-27_Q2	<p>The article states the following: The California utility company PG&E spent about \$2.5 billion on a yearslong effort aimed at reducing wildfire risk by cutting or clearing more than a million trees growing alongside power lines. It now says that work was largely ineffective and is eliminating the program, according to an internal analysis reviewed by the Wall Street Journal and interviews with utility executives. a) Please list the utility executives who were interviewed by the Wall Street Journal as described in the article. b) For each executive listed in part (a), provide the date or dates the interview occurred. c) For each executive listed in part (a), please provide transcripts of the interviews, if available.</p>	Holly Wehman	8/4/2023	8/18/2023	8/18/2023	1	N/A	8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
417	CaPA	Set WMP-27	CaIPA_Set WMP-27	3	CaIPA_Set WMP-27_Q3	<p>The article states the following: PG&E now says that work was largely ineffective and is eliminating the program, according to an internal analysis reviewed by the Wall Street Journal and interviews with utility executives. a) Please explain what is meant by the statement quoted above that the work described in the article was "largely ineffective." b) Please quantify "largely ineffective."</p>	Holly Wehman	8/4/2023	8/18/2023	8/18/2023	0	N/A	8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections

418	CaPA	Set WMP-27	CaPA_Set WMP-27	4	CaPA_Set WMP-27_Q4	<p>The article states the following: The California utility giant says the program, which involved creating wide spaces between live wires and potentially hazardous trees, resulted in a 13% reduction in ignitions during periods when fire risk is highest, typically in autumn, according to the company's internal analysis. Measured across a full year, the work resulted in a 7% reduction in ignitions.</p> <p>a) Please provide the analysis and data to support the 13% reduction in ignitions during periods when fire risk was highest. b) Please provide the analysis and data to support the 7% reduction in ignitions across a full year.</p>	Holly Wehrman	8/4/2023	8/18/2023	8/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_Q27.zip	2	NA	8.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
419	CaPA	Set WMP-27	CaPA_Set WMP-27	5	CaPA_Set WMP-27_Q5	<p>In response to data request CaAdvocates-PGE-2023WMP-14, question 1, on April 17, 2023, PG&E stated that it expected to complete the Substation Animal Abatement Effectiveness Study by July 19, 2023.</p> <p>a) Has PG&E completed the Substation Animal Abatement Effectiveness Study? b) If the answer to part (a) is yes, please provide a copy of any reports or other output from the Substation Animal Abatement Effectiveness Study. c) If the answer to part (a) is no, please state when PG&E currently expects to complete the Substation Animal Abatement Effectiveness Study.</p>	Holly Wehrman	8/4/2023	8/18/2023	8/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_Q27.zip	0	NA	8.1.2.12.2	Grid Design and System Hardening	Other Technologies and Systems - Substation Animal Abatement
420	CaPA	Set WMP-27	CaPA_Set WMP-27	6	CaPA_Set WMP-27_Q6	<p>In response to data request TURN-PG&E-3, question 2, on April 10, 2023, PG&E stated the following: Additionally, we are in the process of finalizing a study that is planned to be completed by June 30, 2023. This study will assess the recorded reliability improvements at locations that have been undergrounded and/or have been hardened with covered conductor.</p> <p>a) Has PG&E completed the study described above? b) If the answer to part (a) is yes, please provide a copy of any reports or other output from the study described above. c) If the answer to part (a) is no, please state when PG&E currently expects to complete the study described above.</p>	Holly Wehrman	8/4/2023	8/18/2023	8/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_Q27.zip	0	NA	NA	NA	NA
421	CaPA	Set WMP-27	CaPA_Set WMP-27	7	CaPA_Set WMP-27_Q7	<p>Please provide a copy of PG&E's 2022 Annual Electric Reliability Report. This should be similar to the documents provided to TURN in response to TURN-PG&E-3, question 2, on April 10, 2023.</p>	Holly Wehrman	8/4/2023	8/18/2023	8/18/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_Q27.zip	1	NA	NA	NA	NA
442	OEIS	011	OEIS_011	1	OEIS_011_Q1	<p>Regarding distribution detailed ground inspections a. On page 464 of its revised WMP, PGE states that it will shift from inspecting all HFTD tier 3 distribution assets annually and tier 2 assets every three years, to inspecting severe and extreme consequence plant maps annually and high consequence plant maps every two years. i. Please provide the number of assets/structures (using the same asset/structure definition as WMP R2 table 8.1.3-3, page 465) located in HFTD tier 3. ii. Please provide the number of assets/structures (using the same asset/structure definition as WMP R2 table 8.1.3-3, page 465) located in HFTD tier 2.</p>	Dakota Smith	8/18/2023	8/23/2023	8/23/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_011.zip	0	NA	8.1.3.2.1	Asset Inspections	Detailed Ground Inspection
443	OEIS	011	OEIS_011	2	OEIS_011_Q2	<p>Regarding PG&E's Grid Design and Maintenance Quality Control a. In its Revision Notice Response, PG&E states that it is "working to integrate QC with [its] execution processes... this approach will create real-time learnings to coach and guide workers..." and that minimum sample sizes and pass rate target "would hinder PG&E's flexibility." (Page 35) i. Describe this approach, including the similarities and differences from the current and previous approach to QC. ii. Provide the timeline for integrating this approach. iii. Provide the estimated sample size for this approach. These sample sizes may either represent physical assets PG&E will QC per year (e.g., PG&E will QA/QC 3,000 circuit miles in each year of the WMP cycle), or how PG&E determines the sample size for QC (i.e., the criteria for when and where PG&E performs QC). iv. Describe any performance metrics PG&E has developed related to this approach and any targets for performance for 2023-2025. b. Explain why PG&E can provide year-to-date pass rate results for its QC program (Table RN-PG&E-23-02-1) but not pass rate targets for the 2023-2025 WMP cycle.</p>	Dakota Smith	8/18/2023	8/23/2023	8/23/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_011.zip	0	NA	8.1.6	Quality Assurance and Quality Control	NA
444	OEIS	011	OEIS_011	3	OEIS_011_Q3	<p>Regarding PG&E's Vegetation Management Quality Control a. In its Revision Notice Response, PG&E states that it is "working to integrate QC with [its] execution processes... this approach will create real-time learnings to coach and guide workers..." and that minimum sample sizes and pass rate target "would hinder PG&E's flexibility." (Page 38) i. Describe this approach, including the similarities and differences from the current and previous approach to QC. ii. Provide the timeline for integrating this approach. iii. Provide the estimated sample size for this approach. These sample sizes may either represent physical assets PG&E will QC per year (e.g., PG&E will QA/QC 3,000 circuit miles in each year of the WMP cycle), or how PG&E determines the sample size for QC (i.e., the criteria for when and where PG&E performs QC). iv. Describe any performance metrics PG&E has developed related to this approach and any targets for performance for 2023-2025. b. Explain why PG&E can provide year-to-date pass rate results for its QC program (Table RN-PG&E-23-02-2) but not pass rate targets for the 2023-2025 WMP cycle.</p>	Dakota Smith	8/18/2023	8/23/2023	8/23/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_011.zip	0	NA	8.1.6	Quality Assurance and Quality Control	NA
413	CaPA	Set WMP-26	CaPA_Set WMP-26	8SUPP	CaPA_Set WMP-26_Q8SUPP	<p>Provide a list of all circuits in your system. For each circuit, provide: (a) Circuit ID Number (b) Peak load in Amperes observed since January 1, 2014. (c) Circuit Capacity in Amperes</p>	Holly Wehrman	7/27/2023	8/24/2023	8/24/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_Q26.zip	1	NA	8.1.2.2.	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution
414	CaPA	Set WMP-26	CaPA_Set WMP-26	10SUPP	CaPA_Set WMP-26_Q10SUPP	<p>Provide updated GIS layers of primary distribution, secondary distribution, and transmission lines, with the following attributes: (a) Circuit ID Number (b) Peak load in Amperes observed since January 1, 2014. (c) Circuit Capacity in Amperes</p>	Holly Wehrman	7/27/2023	8/24/2023	8/24/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/CaAdvocates_Q26.zip	1	NA	8.1.2.2.	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment - Distribution
445	CPUC - SPD (Safety Policy Division)	010	CPUC - SPD (Safety Policy Division)_010	1	SPD (Safety Policy Division)_010	<p>Populate the attached spreadsheet with information summarized from Table 11 of PG&E's most recently submitted GDR (Q1 2023 submitted Aug 1, 2023).</p>	Kevin Miller	8/24/2023	9/1/2023	8/31/2023	https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/SPD_010.zip	1	NA	GDR	NA	NA

446	OEIS	012	OEIS_012	1	OEIS_012_Q1	<p>Q01. Regarding PG&E's Response to RN-PG&E-23-07</p> <p>a. Considering that there are no fields in OneView to collect Level 2 inspection data, 1 the TRAQ form will not be digitized, 2 and the Focused Tree Inspection procedure does not require inspectors to take a photo of completed TRAQ forms, 3 what data and information do PG&E plan to use to perform field-based quality control on Level 2 inspections performed under Focused Tree Inspections?</p> <p>b. Describe the quality control procedure for Focused Tree Inspections.</p> <p>c. How are the paper TRAQ forms generated through Focused Tree Inspections collected and stored by PG&E?</p> <p>d. For Focused Tree Inspections, Routine, and Second Patrol:</p> <p>i. How and where does the inspector document relevant factors that contributed to an inspector's designation of a tree as a hazard, or not a hazard, and any resulting abatement prescription?</p> <p>ii. If PG&E does not record this information, justify why it does not record this information.</p> <p>e. In response to remedy c., PG&E states that it plans to only inspect part of its Areas of Concern through the Focused Tree Inspections. What is PG&E's purpose in identifying all 4,612 circuit miles that comprise the Areas of Concern if it only plans to perform Focused Tree Inspections on 43% of those miles by the end of 2024?</p> <p>f. In PG&E's response to Data Request P-WMP_2023-PG&E-001, Question 2, PG&E describes updates it made to its Tree Assessment Tool (TAT) in 2022.</p> <p>g. Was this updated TAT ever operationalized?</p> <p>(1) If so, when was it operationalized? (i.e., used by all inspectors in the field to perform tree risk assessment under EVM)</p> <p>(2) If not, why was it not operationalized?</p> <p>h. Provide the most recent version of the updated TAT, even if that version was not operationalized.</p> <p>i. Provide any reports regarding the 2022 update of the TAT, including, but not limited, documentation of methodologies, application, internal reviews, and external reviews.</p> <p>j. In response to remedy c., PG&E states that the current residual risk due to Tree Removal Inventory trees is 7% of vegetation risk in the HFTD. 4 Does PG&E's analysis regarding the "percent of vegetation risk" assume that 100% of the vegetation risk in the HFTD can be mitigated?</p> <p>k. If so, justify this assumption.</p> <p>l. If not, what percentage of vegetation risk does PG&E estimate it can mitigate in the HFTD?</p> <p>m. In response to remedy l, PG&E states that it expects its updated Distribution Inspection Procedure to achieve improved risk reduction of approximately 3 percent over the legacy Distribution Inspection Procedure. 5 Populate the empty cells of the following table:</p> <p>See table.</p>	Dakota Smith	8/30/2023	TBD	<p>https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/OEIS_012.zip</p>	8.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections		
447	OEIS	012	OEIS_012	2	OEIS_012_Q2	<p>Q02. Regarding PG&E's Response to RN-PG&E-23-03</p> <p>a. In its response relating to EPSS, PG&E states that it "does not have detailed mitigation effectiveness analysis at this time. These analyses are being developed based on subject matter expertise while empirical data is being collected."</p> <p>b. Explain what is meant by this statement, particularly given PG&E has provided effectiveness estimates for EPSS previously.</p> <p>c. In PG&E's 2023-2025 WMP, PG&E provides an estimated effectiveness of 68% for EPSS in 2022. Is this still an accurate effectiveness estimate? If not, why?</p> <p>d. When does PG&E plan on calculating a more updated effectiveness estimate? What factors is PG&E including for this calculation?</p>	Dakota Smith	8/30/2023	9/5/2023	9/5/2023	0	NA	8.1.2.10	Grid Design and System Hardening	Downed Conductor Detection Devices
448	OEIS	012	OEIS_012	3	OEIS_012_Q3	<p>Q03. Regarding PG&E's Response to RN-PG&E-23-04</p> <p>a. Table RN-PG&E-23-04-1 uses "Aged Backlog Units Executed" and "Aged Backlog Units Remaining". Provide these same numbers for each year, broken down by non-pole ignition risk, ignition risk, and non-ignition risk respectively.</p> <p>b. Since PG&E's initiation of FSRs, provide the following data broken down annually:</p> <p>i. The number of instances in which PG&E cancelled a work order in response to an FSR.</p> <p>ii. The number of instances in which PG&E created a new work order in place of an existing work order in response to an FSR.</p> <p>iii. The number of instances in which PG&E combined work orders in response to an FSR.</p> <p>iv. Details on how PG&E tracks the above (i) through (iii) within its databases. If PG&E does not currently track such instances, explain why.</p> <p>c. Will PG&E continue to conduct annual FSRs on all Priority E tags?</p> <p>d. Provide all of PG&E's workplans for workforce and resources relating to handling its backlog. This should include, but not be limited to:</p> <p>i. Balancing, retaining, and obtaining workforce and personnel</p> <p>ii. Resource limitations, such as obtaining needed equipment and supply chain issues, and how PG&E intends on handling them</p> <p>iii. Training for personnel working on backlog, including details on how to identify, prioritize, and respond to repairs</p> <p>iv. How PG&E tracks and addresses backlog risk from the top Priority E tags.</p>	Dakota Smith	8/30/2023	TBD			8.1.7.2	Open Work Orders	Open Work Orders – Distribution Tags	
449	OEIS	012	OEIS_012	4	OEIS_012_Q4	<p>Q04. Regarding PG&E's Response to RN-PG&E-23-05</p> <p>a. For the 79 circuit segments not included in an undergrounding plan and that have not been hardened, provide the following information via spreadsheet:</p> <p>i. Circuit Name</p> <p>ii. Circuit segment/CPZ Name</p> <p>iii. Length of circuit segment</p> <p>iv. V2 Risk Score</p> <p>v. V2 Risk Ranking</p> <p>vi. V3 Risk Ranking</p> <p>vii. V4 Risk Ranking (if available)</p> <p>viii. V4 Risk Score (if available)</p> <p>ix. V4 Risk Ranking (if available)</p> <p>x. WFE Score</p> <p>xi. WFE Ranking</p> <p>xii. Feasibility Score</p> <p>xiii. Reason for why the circuit segment is not included in undergrounding plan</p> <p>xiv. Other mitigation options being used for the circuit segment currently</p> <p>xv. Other mitigation options being considered for the circuit segment in the future, if such differs from (x)</p>	Dakota Smith	8/30/2023	9/5/2023	9/5/2023	1	NA	7.2.1	Wildfire Mitigation Strategy Development	Overview of Mitigation Initiatives and Activities
450	CaPA	Set WMP-29	CaPA_Set WMP-29	1	CaPA_Set WMP-29_Q1	<p>Page 35 of PG&E's response states, "PG&E is currently working to integrate QC with our execution processes to drive quality during initial work execution."</p> <p>a) Provide the approximate date by which PG&E plans to implement its integrated QC process, described above.</p> <p>b) Please provide any internal protocols, presentations, reports, or other documentation that describe(s) PG&E's proposed integrated QC process.</p> <p>c) Please provide any procedures, handbooks, checklists, or job aids that personnel will use when implementing PG&E's proposed integrated QC process.</p>	Holly Wehrman	9/7/2023	9/21/2023			8.1.6	Quality Assurance and Quality Control	NA	
451	CaPA	Set WMP-29	CaPA_Set WMP-29	2	CaPA_Set WMP-29_Q2	<p>PG&E's response to Data Request P-WMP_2023-PG&E-001, Question 10, states "QC is integrating with execution processes by completing QC on a shorter timeline than has been historically executed, allowing for timelier opportunities for re-training inspectors, sharing learnings, and making corrections, as necessary."</p> <p>a) What was the minimum, maximum and average QC completion timeline for detailed ground distribution inspections in 2020?</p> <p>b) What was the minimum, maximum and average QC completion timeline for detailed ground distribution inspections in 2021?</p> <p>c) What was the minimum, maximum and average QC completion timeline for detailed ground distribution inspections in 2022?</p> <p>d) What are the expected/target minimum, maximum, and average QC completion timelines for detailed ground distribution inspections in 2023?</p>	Holly Wehrman	9/7/2023	9/21/2023			8.1.6	Quality Assurance and Quality Control	NA	
452	CaPA	Set WMP-29	CaPA_Set WMP-29	3	CaPA_Set WMP-29_Q3	<p>PG&E's response to Data Request P-WMP_2023-PG&E-001, Question 10, states "QC is integrating with execution processes by completing QC on a shorter timeline than has been historically executed, allowing for timelier opportunities for re-training inspectors, sharing learnings, and making corrections, as necessary."</p> <p>a) Does PG&E have an internal standard for the maximum amount of time between a detailed ground distribution inspection and subsequent QC?</p> <p>b) If the answer to part (a) is yes, provide any procedures, handbooks, checklists, or job aids that define the amount of time between a detailed ground distribution inspection and subsequent QC under PG&E's current QC process.</p> <p>c) If the answer to part (a) is no, how does PG&E determine when to perform QC following a detailed ground distribution inspection?</p>	Holly Wehrman	9/7/2023	9/21/2023			8.1.6	Quality Assurance and Quality Control	NA	

453	CaPA	Set WMP-29	CaPA_Set WMP-29	4	CaPA_Set WMP-29_Q4	<p>Page 63 of PG&E's response states, "For example, we have found certain splices (e.g., splices within two feet of an insulator, and number of splices per span) do not pose an increased risk of ignition. Instead of issuing a non-ignition risk maintenance tag, the splices are better addressed by the asset management team as they are a potential indicator of a holistic asset health issue."</p> <p>PG&E's 2021 Electric Asset Management Plan for Electric Distribution Overhead Assets (referred to as AMP, provided in response to Data Request No. GIE004 Cal Advocates-PGE-Down Power Lines, question 3, on June 29, 2022), showed a high correlation between the presence of splices and the likelihood of wires down for small conductor (4 ACSR, 4 Cu, 6 Cu). See slides 12-14 of the AMP.</p> <p>a) Has PG&E performed a study on the correlation between the presence of splices and the likelihood of wires down for larger conductor types? If yes, please provide the results of this study.</p> <p>b) If the answer to part (a) is no, does PG&E plan to perform such a study? If yes, please provide the approximate date the study will be completed.</p> <p>c) If the answer to part (b) is no, please explain why.</p> <p>d) How did PG&E come to the conclusion that splices within two feet of an insulator did not pose an increased risk of ignition?</p> <p>e) How did PG&E come to the conclusion that the number of splices per span did not pose an increased risk of ignition?</p> <p>f) Please provide any studies, analyses, or reports to support your response to part (d).</p> <p>g) Please provide any studies, analyses, or reports to support your response to part (e).</p> <p>h) PG&E's response quoted above refers to "certain splices" and names two examples. Are there other types of splices that PG&E has concluded "do not pose an increased risk of ignition?"</p>	Holly Wehrman	9/7/2023	9/21/2023				NA	NA	NA	
454	CaPA	Set WMP-29	CaPA_Set WMP-29	5	CaPA_Set WMP-29_Q5	<p>Please provide a copy of PG&E's 2022 Electric Asset Management Plan for Electric Distribution Overhead Assets, if available. If not available, please provide the date it will become available.</p> <p>b) Please provide a copy of PG&E's 2023 Electric Asset Management Plan for Electric Distribution Overhead Assets, if available. If not available, please provide the date it will become available.</p>	Holly Wehrman	9/7/2023	9/21/2023				NA	NA	NA	
455	CaPA	Set WMP-29	CaPA_Set WMP-29	6	CaPA_Set WMP-29_Q6	<p>Page 11 of PG&E's response states, "Detection of partial voltage conditions allows center center operators to dispatch field personnel to locations where equipment may be in a condition that increases wildfire risk. This technology helps PG&E detect and locate a wire down condition within minutes that may reduce the amount of time a line is energized while down (where it can cause an ignition) and allow first responders to extinguish wire-down related ignitions more quickly if they occur."</p> <p>a) Has PG&E performed a study to determine whether detection of partial voltage conditions has reduced the amount of time a line is energized while down? Please provide the results of this study if yes.</p> <p>b) If the answer to part (a) is no, does PG&E plan to perform such a study? Please provide the approximate date the study will be completed if yes.</p> <p>c) If the answer to part (b) is no, please explain why.</p> <p>d) Since January 2022, how many wires down events has PG&E experienced in its HFTDI/HFRA areas on lines that have partial voltage detection enabled?</p>	Holly Wehrman	9/7/2023	9/21/2023				8.2.3.4	Vegetation Management and Inspections	Fail-In Mitigation	
456	CaPA	Set WMP-29	CaPA_Set WMP-29	7	CaPA_Set WMP-29_Q7	<p>For the purpose of this request, what was the response from the time response was generated until closure?</p> <p>Page 2 of PG&E's reply comments filed on September 1, 2022, states, "PSSS generally does not create outage events that would not have otherwise occurred. EPSS settings enable a line to trip more quickly than standard settings, but EPSS settings do not increase the number of outage events on their own."</p> <p>a) Please state the basis for the above claim that EPSS generally does not create outage events that would not have otherwise occurred.</p> <p>b) Please provide any supporting studies, analyses, reports, or other documentation to support your response to part (a).</p>	Holly Wehrman	9/7/2023	9/21/2023				8.1.8.1.1	Grid Operations and Procedures	Protective Equipment and Device Settings	
457	CaPA	Set WMP-29	CaPA_Set WMP-29	8	CaPA_Set WMP-29_Q8	<p>Page 2 of PG&E's reply comments filed on September 1, 2022, states, "The number of outages in the HFRA from May to October decreased significantly from 2021 to 2022. Additionally, the number of outages in the HFRA during the same time period was only slightly higher in 2022 (6,140 outage events) than in 2020 (6,128 outage events) before EPSS was enabled. Per PG&E's quarterly data reports, PG&E generally experienced fewer RFW circuit mile days in 2022 than in 2020:</p> <p>2020: 20226 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Red Flag Warning overhead circuit mile days - HFTD tier 2 0 14,708 85,128 105,136 0.00 38,182 2,774 0 Red Flag Warning overhead circuit mile days - HFTD tier 3 0 3,346 29,214 56,324 0.00 8,339 749 0</p> <p>a) Has PG&E performed a study to compare the weather-normalized number of outages in 2020, 2021, and 2022 to determine changes in the weather-normalized outage count across the three years? This may include, for example, normalizing the number of outages by RFW days, high wind days, high temperature days, or some other metric or set of metrics.</p> <p>b) If the answer to part (a) is yes, please explain how PG&E normalized the outage counts by weather.</p> <p>c) If the answer to part (a) is yes, please provide the results of any such study or analysis.</p>	Holly Wehrman	9/7/2023	9/21/2023				7.2.1	Wildfire Mitigation Strategy Development	Overview of Mitigation Initiatives and Activities	
458	OEIS	013	OEIS_013	1	OEIS_013_Q1	<p>These explanations of how consequences are calculated in section 6 appears inconsistent with Table 9.2.2.1 on page 898 (section 9); the table states maximum population impact from Technosylva simulation is used to calculate safety consequence and that maximum buildings impact from Technosylva simulation is used to calculate financial consequence.</p> <p>To address this data request:</p> <p>1. Please indicate whether the consequence component of PG&E's risk score calculations (CoRE) uses averages or maximum values.</p> <p>2. If PG&E uses maximum values in the consequence component of its risk score calculations, please indicate</p>	Dakota Smith	9/8/2023	9/13/2023	9/13/2023	<p>https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/reference-docs/2023/0415_013-zip</p>	0	NA	6.1.1.1	Risk Score Calculations	