Link to Discovery Responses: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan-discovery-data-requests.page															
Count	Party Name	Data Set	Data Request	Question No.	Question ID	Question Text	Requestor	Date Rec'd	Final Due Date	Date Sent	Number of Atchs	NDA Required	WMP Section	Category	Subcategory
1	CalPA	Set WMP-7	CalPA_Set WMP-7	1	CalPA_Set WMP-7_Q1	In the review of PG&E's WDRM v3 by Energy & Environmental Economics, Inc. ("E3 Review"), the authors note: "There were also several refreshes to PG&E asset data, now current to 2022-01- 01, and inclusion of updated internally sourced meteorology datasets." 3 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.	Joshua Borkowski	3/27/2023	3/30/2023	3/30/2023	0	N/A	6.2	Risk Methodology and Assessment	Risk Analysis Framework
2	CalPA	Set WMP-7	CalPA_Set WMP-7	2	CalPA_Set WMP-7_Q2	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. b) 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 given in question 1(b), please explain why they are different.	Joshua Borkowski	3/27/2023	3/30/2023	3/30/2023	0	N/A	6.2	Risk Methodology and Assessment	Risk Analysis Framework
3	CalPA	Set WMP-7	CalPA_Set WMP-7	3	CalPA_Set WMP-7_Q3	a) Please confirm the date that the WRDM v4 was finalized. If it has not been finalized, please provide an estimateddate 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.	Joshua Borkowski	3/27/2023	3/30/2023	3/30/2023	0	N/A	6.2	Risk Methodology and Assessment	Risk Analysis Framework
4	MGRA	Data Request No. 1	MGRA_Data Request No. 1	1	MGRA_Data Request No. 1_Q1	Please provide for Asset Point data for Camera, Fuse, Support Structure, and Weather Station.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
5	MGRA	Data Request No. 1	MGRA_Data Request No. 1	2	MGRA_Data Request No. 1_Q2	Provide Asset Line data for Transmission Line (as permitted as non-confidential), Primary Distribution Line, and Secondary Distribution Line.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
6	MGRA	Data Request No. 1	MGRA_Data Request No. 1	3	MGRA_Data Request No. 1_Q3	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.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
7	MGRA	Data Request No. 1	MGRA_Data Request No. 1	4	MGRA_Data Request No. 1_Q4	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.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
8	MGRA	Data Request No. 1	MGRA_Data Request No. 1	5	MGRA_Data Request No. 1_Q5	Provide photo data for Risk Events.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
9	MGRA	Data Request No. 1	MGRA_Data Request No. 1	6	MGRA_Data Request No. 1_Q6	Under Initiatives, please provide Grid Hardening data, including Hardening Log, Hardening Point, and Hardening Line data. Inspection data is not requested at this time.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
10	MGRA	Data Request No. 1	MGRA_Data Request No. 1	7	MGRA_Data Request No. 1_Q7	Under Initiatives, please provide Other Initiative data for point, line, polygon features and the Other Initiative Log.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
11	MGRA	Data Request No. 1	MGRA_Data Request No. 1	8	MGRA_Data Request No. 1_Q8	Under Other Required Data, please provide Red Flag Warning Day polygon data.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
12	MGRA	Data Request No. 1	MGRA_Data Request No. 1	9	MGRA_Data Request No. 1_Q9	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.	Joseph Mitchell	3/29/2023	4/10/2023				6.4	Risk Analysis Results and Presentation	N/A
13	CalPA	Set WMP-8	CalPA_Set WMP-8	1	CalPA_Set WMP-8_Q1	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 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 desired 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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.2.6	Vegetation Management Inspections	Discontinued Programs
14	CalPA	Set WMP-8	CalPA_Set WMP-8	2	CalPA_Set WMP-8_Q2	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.5 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 abovementioned "on-going re-inspection and evaluation work"? g) Please state the frequency of the "on-going reinspection and evaluation work". h) How many years will the abovementioned "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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.2.4	Vegetation Management Inspections	Tree Removal Inventory

15	CalPA	Set WMP-8	CalPA_Set WMP-8	3	CalPA_Set WMP-8_Q3	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. 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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.2.3	Vegetation Management Inspections	VM for Operational Mitigations
16	CalPA	Set WMP-8	CalPA_Set WMP-8	4	CalPA_Set WMP-8_Q4	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. 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, then please define it. c) Please describe PG&E's methodology for developing the abovementioned polygons. 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 h) 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 i) Please describe the steps that PG&E expects a "focused tree inspection" to include. j) 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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.2.5	Vegetation Management Inspections	Focused Tree Inspections
17	CalPA	Set WMP-8	CalPA_Set WMP-8	5	CalPA_Set WMP-8_Q5	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 of the EVM Program is less than the risk reduction from the EPSS program that was introduced in 2021.8 a) Please describe the abovementioned "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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.3.4	Vegetation and Fuels Management	Fall-In Mitigation
18	CalPA	Set WMP-8	CalPA_Set WMP-8	6	CalPA_Set WMP-8_Q6	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. a) Does "PVD" stand for "Partial Voltage Detection" in this instance? Please define if not. b) Does "DCD" stand for "Downed Conductor Detection" 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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.3.4	Vegetation and Fuels Management	Fall-In Mitigation
19	CalPA	Set WMP-8	CalPA_Set WMP-8	7	CalPA_Set WMP-8_Q7	On pp. 314-316 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: 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	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	7.2.3	Wildfire Mitigation Strategy	Interim Mitigation Initiatives

20	CalPA	Set WMP-8	CalPA_Set WMP-8	8	CalPA_Set WMP-8_Q8	On pp. 314-316 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 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	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	7.2.3	Wildfire Mitigation Strategy	Interim Mitigation Initiatives
21	CalPA	Set WMP-8	CalPA_Set WMP-8	9	CalPA_Set WMP-8_Q9	Regarding the new "Tree Removal Inventory Program" described in section 8.2.2.2.4 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 2025.11 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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.2.4	Vegetation Management Inspections	Tree Removal Inventory
22	CalPA	Set WMP-8	CalPA_Set WMP-8	10	CalPA_Set WMP-8_Q10	Per Table 8-12, Vegetation Management Implementation Objectives, PG&E's Focused Tree nspection 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?	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.2.5	Vegetation Management Inspections	Focused Tree Inspections
23	CalPA	Set WMP-8	CalPA_Set WMP-8	11	CalPA_Set WMP-8_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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.1.1	Vegetation Management Inspections	Routine Transmission NERC and Non-NERC
24	CalPA	Set WMP-8	CalPA_Set WMP-8	12	CalPA_Set WMP-8_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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.5	Vegetation Management and Inspections	Quality Assurance/Quality Control
25	CalPA	Set WMP-8	CalPA_Set WMP-8	13	CalPA_Set WMP-8_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: 90.3% a) 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. b) Please describe any actions PG&E has taken or plans to take to improve the Transmission VM audit results pass rate from 94.2% in 2022 to 95% in 2023. Please include the timeline for completing those actions. c) Please describe any actions PG&E has taken or plans to take to improve the Pole Clearing VM audit results pass rate from 90.3% in 2022 to 95% in 2023. Please include the timeline for	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.5.1	Vegetation Management and Inspections	Quality Assurance and Quality Verification
26	CalPA	Set WMP-8	CalPA_Set WMP-8	14	CalPA_Set WMP-8_Q14	Regarding the "Distribution Second Patrol" described in section 8.2.2.2.2 of PG&E's WMP, PG&E states: "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 timeframes? 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?	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.2.2	Vegetation Management and Inspections	Distribution Second Patrol
27	CalPA	Set WMP-8	CalPA_Set WMP-8	15	CalPA_Set WMP-8_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?	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.2.3.1	Vegetation Management and Inspections	Defensible Space Inspection

28	CalPA	Set WMP-8	CalPA_Set WMP-8	16	CalPA_Set WMP-8_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) Once a landowner opts 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?	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.3.2	Vegetation Management and Inspections	Wood and Slash Management
29	CalPA	Set WMP-8	CalPA_Set WMP-8	17	CalPA_Set WMP-8_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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.3.6	Vegetation Management and Inspections	High-Risk Species
30	CalPA	Set WMP-8	CalPA_Set WMP-8	18	CalPA_Set WMP-8_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.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	0	N/A	8.2.5.2	Vegetation Management and Inspections	Quality Control
31	CalPA	Set WMP-8	CalPA_Set WMP-8	19	CalPA_Set WMP-8_Q19	Table 8-19, Priority 1/Priority 2 and Second Patrol Trees Categorized By Age, shows 296 priority 1 or 2 trees that were inspected more than 180 days prior to February 28, 2023. Please provide a table with the following additional information for these 296 trees: a) The exact number of days since the last inspection, as of February 28, 2023 b) The current priority level of the tree c) The type of the most recent inspection d) The HFTD tier where the tree is located e) PG&E's expected remediation date for the tree.	Holly Wehrman	3/30/2023	4/5/2023	4/5/2023	1	N/A	8.2.6	Vegetation Management and Inspections	Open Work Orders
32	CalPA	Set WMP-9	CalPA_Set WMP-9	1	CalPA_Set WMP-9_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."	Holly Wehrman	4/4/2023	4/7/2023				1	Executive Summary & Overview	N/A
33	CalPA	Set WMP-9	CalPA_Set WMP-9	2	CalPA_Set WMP-9_Q2	P. 107 of PG&E's WMP states, "Increased temperatures can cause electric equipment to age more quickly which will increase the need for more frequent asset replacements. Higher temperatures may cause equipment to fail resulting in customer outages." a) What steps has PG&E taken to mitigate the increased risk of asset failure anticipated from rising temperatures? b) What steps does PG&E plan to take during the 2023-2025 WMP period to mitigate the increased risk of asset failure anticipated from rising temperatures?	Holly Wehrman	4/4/2023	4/7/2023				5.3.4.2	Environmental Settings	Climate Change Phenomena and Trends
34	CalPA	Set WMP-9	CalPA_Set WMP-9	3	CalPA_Set WMP-9_Q3	P. 598 of PG&E's WMP states: In 2022 we continued our assessment through the Electric Program Investment Charge 3.45, "Automated Fire Detection from Wildfire Alert Cameras," program. Through our assessment period we determined that AI detection on camera will improve our detection system and in 2023 we will select a vendor to install AI detection on our cameras. a) How did PG&E determine that AI detection would improve its detection system? b) Please quantify the extent to which PG&E anticipates AI detection will improve PG&E's detection system. c) Please provide any available studies, analyses or reports to support your statements in response to parts (a) and (b). d) As of the beginning of 2023, how much has PG&E spent on the Electric Program Investment Charge 3.45, "Automated Fire Detection from Wildfire Alert Cameras," program? e) How much does PG&E forecast spending on the Electric Program Investment Charge 3.45, "Automated Fire Detection from Wildfire Alert Cameras," program in each of the years 2023, 2024, and 2025? f) When is the earliest date that PG&E expects to realize benefits from automated fire detection?	Holly Wehrman	4/4/2023	4/7/2023				8.3.4.2	Ignition Detection Systems	Evaluation and Selection of New Detection Systems
35	CalPA	Set WMP-9	CalPA_Set WMP-9	4	CalPA_Set WMP-9_Q4	P. 174 of PG&E's WMP states, "The results of the PSPS Consequence Model are then calibrated to PG&E's Enterprise Risk Model's MAVF Risk Score for PSPS." For each component in PG&E's MAVF, explain how the results of the PSPS Consequence Model are calibrated to the MAVF.	Holly Wehrman	4/4/2023	4/7/2023				6.2.2.3	Risk Methodology and Assessment	Risk and Risk Components Calculation
36	CalPA	Set WMP-9	CalPA_Set WMP-9	5	CalPA_Set WMP-9_Q5	P. 161 of PG&E's WMP discusses Group G, Above-Grade Hardware, in the context of PG&E's WTRM. Group G has two sub-groups. PG&E states, "Sub-Group 1 consists of components where the life cycle closely aligns with that of the structure. These include the hanger plate and bolts." a) Does the WTRM apply the same hazards and threats to all components within a grouping? Please explain your answer. b) Does PG&E's grouping within the WTRM account for any hazards that may be unique to a subset of hardware within a group? Please explain your answer. c) Hanger plates may be subject to wear such as "keyholing" that the main structure may not experience. How does PG&E account for this potential difference in life cycle between hanger plates and the structure? d) Which group within the WTRM includes c-hooks?	Holly Wehrman	4/4/2023	4/7/2023				6.2.2.1	Risk Methodology and Assessment	Risk and Risk Components Calculation
37	CalPA	Set WMP-9	CalPA_Set WMP-9	6	CalPA_Set WMP-9_Q6	P. 193 of PG&E's WMP states, "top-risk areas are defined as the areas corresponding to those 100 x 100 m pixels that intersect PG&E overhead electrical infrastructure locations and that are in the upper 20th percentile based on WDRM v3 risk scores." a) By "upper 20th percentile," does PG&E mean the 80th through 100th percentiles, as percentiles are conventionally defined (in other words, the highest quintile of risk scores)? b) In the above statement, does "upper 20th percentile" refer to all WDRM v3 risk scores (which encompass most of PG&E's service territory), or a subset (for example, the upper 20th percentile of those WDRM v3 risk scores located within HFTD)? Please explain your answer. c) How many circuit-miles are included in the "upper 20th percentile" as this term is used in PG&E's WMP?	Holly Wehrman	4/4/2023	4/7/2023				6.4.1.2	Risk Methodology and Assessment	Top Risk Areas Within the HFRA
38	CalPA	Set WMP-9	CalPA_Set WMP-9	7	CalPA_Set WMP-9_Q7	P. 73 of PG&E's WMP states, "We created a species-specific stress index model for PG&E tree health and mortality." a) What is PG&E's species-specific stress index model for tree health and mortality? b) How does PG&E utilize its species-specific stress index model for tree health and mortality? c) Please describe the data inputs to this model. d) Please describe the outputs of this model.	Holly Wehrman	4/4/2023	4/7/2023				4.4	Overview of WMP	Risk-Informed Framework

39	CalPA	Set WMP-9	CalPA_Set WMP-9	8	CalPA_Set WMP-9_Q8	P. 129 of PG&E's WMP states: When conducting VM activities, PG&E employees and contractors must adhere to PG&E's Best Management Practices (BMP) where practicable. BMPs are considered practicable where physically possible and not conflicting with other regulatory obligations or safety considerations (GO 95 Rule 35 and Public Resources Codes 4292 and 4293) or emergency response situations. a) How do VM contractors determine when adherence to BMPs is not "physically possible." b) How does PG&E audit or review VM contractors to ensure they are adhering to BMPs where practicable? c) What actions does PG&E take if it determines that a VM contractor has not consistently adhered to BMPs where practicable? d) Please list all instances in 2022 where PG&E has determined that a VM contractor did not adhere to BMPs where BMPs were practicable, as defined above. e) Please list all instances in 2022 in which PG&E took action to reprimand or sanction a VM contractor for failing to adhere to BMPs where practicable.	Holly Wehrman	4/4/2023	4/7/2023				5.4.5	Community Values at Risk	Environmental Compliance and Permitting
40	CalPA	Set WMP-9	CalPA_Set WMP-9	9	CalPA_Set WMP-9_Q9	P. 526 of PG&E's WMP states, "The primary target for secondary patrols is HFTD and HFRA but exceptions and additional areas are included to appropriately address vegetation associated risks." P. 267 states, "Beginning in 2023, PG&E will use the annual review of AOC, that we committed to doing in RN_PG&E-22-09, to identify areas subject to Second Patrols." a) Is there a difference between "secondary patrols" and "Second Patrols" in the two passages quoted above? If so, please explain the difference(s). b) In 2022, did PG&E's secondary patrol cover the entire HFTD? Please explain your answer. c) In 2023, will PG&E's secondary patrol cover the entire HFTD? Please explain your answer. d) Is PG&E planning to cover fewer circuit miles with second patrols in 2023 than were covered in 2022? Please explain your answer.	Holly Wehrman	4/4/2023	4/7/2023				8.2.2.2.2	Vegetation Management and Inspections	Distribution Second Patrol
41	CalPA	Set WMP-9	CalPA_Set WMP-9	10	CalPA_Set WMP-9_Q10	P. 342 of PG&E's WMP states, "In July 2021, PG&E launched a multi-year program to underground 10,000 distribution circuit miles in high wildfire risk areas." a) Since the July 2021 announcement of its 10,000 mile undergrounding program, has PG&E performed any studies to determine whether the planned scope of 10,000 circuit miles should be revised? b) Please provide any available studies, analyses, reports, or workpapers pertinent to your answer to part (a). c) If the answer to part (a) is no, please explain why not. d) Does PG&E plan to perform any studies or analyses during the 2023-2025 WMP period to determine whether 10,000 circuit miles is still the appropriate scope to target for undergrounding? e) If the answer to part (d) is yes, please describe the planned scope and timing of such studies.	Holly Wehrman	4/4/2023	4/7/2023				8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
42	CalPA	Set WMP-9	CalPA_Set WMP-9	11	CalPA_Set WMP-9_Q11	P. 969 of PG&E's WMP states, "on average, it takes 1.25 UG install miles to replace 1 OH mile. However, at times, this multiplier can be 2-3 times greater." Does PG&E's target of 10,000 miles of undergrounding refer to the number of OH circuit-miles to be moved underground, or the number of underground circuit-miles to be installed?	Holly Wehrman	4/4/2023	4/7/2023				Appendix D	Areas for Continued Improvement	ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations
43	CalPA	Set WMP-9	CalPA_Set WMP-9	12	CalPA_Set WMP-9_Q12	a) What is PG&E's current forecast cost per circuit-mile for undergrounding projects completed in the second half of 2025? b) Please provide workpapers to support your answer to part (a).	Holly Wehrman	4/4/2023	4/7/2023				8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
44	CalPA	Set WMP-9	CalPA_Set WMP-9	13	CalPA_Set WMP-9_Q13	a) What is PG&E's forecast RSE for undergrounding completed in the second half of 2025? b) Please provide workpapers to support your answers to part (a).	Holly Wehrman	4/4/2023	4/7/2023				8.1.2.2	Grid Design and System Hardening	Undergrounding of Electric Lines and/or Equipment – Distribution
45	CalPA	Set WMP-9	CalPA_Set WMP-9	14	CalPA_Set WMP-9_Q14	a) What is PG&E's current forecast cost per circuit-mile for covered conductor projects completed in the second half of 2025? b) Please provide workpapers to support your answer to part (a).	Holly Wehrman	4/4/2023	4/7/2023				8.1.2.5	Grid Design and System Hardening	Traditional Overhead Hardening –Transmission Conductor and Distribution
46	CalPA	Set WMP-9	CalPA_Set WMP-9	15	CalPA_Set WMP-9_Q15	a) What is PG&E's forecast RSE for covered conductor system hardening completed in the second half of 2025? b) Please provide workpapers to support your answers to part (a).	Holly Wehrman	4/4/2023	4/7/2023				8.1.2.5	Grid Design and System Hardening	Traditional Overhead Hardening –Transmission Conductor and Distribution
47	CalPA	Set WMP-9	CalPA_Set WMP-9	16	CalPA_Set WMP-9_Q16	Question 16 In response to data request CalAdvocates-PGE-2023WMP-03, question 7c, PG&E states, "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 [Wildfire Feasibility Efficiency (WFE)]-ranked circuit segments based on the 2022 WDRM v3 and considering undergrounding feasibility." Provide an Excel table of the WFE-ranked circuit segments based on the 2022 WDRM v3, as described above. For each circuit segment, provide the following attributes as columns: a) Circuit name b) Circuit ID number c) Circuit segment name d) WDRM v3 risk score e) Feasibility factor f) WFE score as defined on p. 969 of PG&E's WMP g) WFE ranking.	Holly Wehrman	4/4/2023	4/7/2023				7.2	Wildfire Mitigation Strategy	N/A
48	CalPA	Set WMP-10	CalPA_Set WMP-10	1	CalPA_Set WMP-10_Q1	Table 8-3 on p. 332 of PG&E's WMP states that PG&E will make capable for Down Conductor Detection (DCD): • 500 devices in 2023, • 400 devices in 2024, and • 250 devices in 2025. a) Please explain the reasoning for the decreasing number of devices made capable for DCD from 2023-2025. b) Approximately how many circuit miles in the HFTD will be protected by DCD at the end of 2025?	Holly Wehrman	4/4/2023	4/10/2023				8.1.1.2	Grid Design, Operations, and Maintenance	Targets
49	CalPA	Set WMP-10	CalPA_Set WMP-10	2	CalPA_Set WMP-10_Q2	Table 8-5 on p. 336 of PG&E's WMP shows a forecast reduction in the number of EPSS events of one to two percent annually from 2022 to 2025. a) What factors does PG&E expect to contribute to the reduction in the number of EPSS events discussed above? b) Why is PG&E's forecast reduction in the number of EPSS events linear across the 2023-2025 period? c) Please provide any available workpapers that support PG&E's forecasts regarding the number of EPSS events annually in 2023-2025.	Holly Wehrman	4/4/2023	4/10/2023				8.1.13	Grid Design, Operations, and Maintenance	Performance Metrics Identified by the Electrical Corporation
50	CalPA	Set WMP-10	CalPA_Set WMP-10	3	CalPA_Set WMP-10_Q3	a) Does PG&E forecast a change in the average duration of EPSS events during the 2023-2025 period? b) If the answer to part (a) is yes, provide the expected average duration of EPSS events for 2023, 2024, and 2025. c) If the answer to part (a) is no, explain why not. d) Please provide any available workpapers that support PG&Es' forecasts regarding the duration of EPSS events in 2023-2025.	Holly Wehrman	4/4/2023	4/10/2023				8.1.13	Grid Design, Operations, and Maintenance	Performance Metrics Identified by the Electrical Corporation

51	CalPA	Set WMP-10	CalPA_Set WMP-10	4	CalPA_Set WMP-10_Q4	P. 358 of PG&E's WMP states, with regard to DTS-FAST: A prototype field test installation was completed on a 115kv tower in Martinez and a wood pole in Santa Cruz in 2021. The valuable lessons learned have been updated to streamline designs, increase scalability, and reduce costs. In 2022, we filed a non-provisional patent application for DTS-FAST. For 2023, we have no field installation plans but will be working through the patent examination process. a) Please provide data on the results of the field test installation in Martinez. b) Other than working through the patent examination process, what steps does PG&E plan to take in 2023 to further develop DTS-FAST? c) When does PG&E expect to begin additional DTS-FAST installations? d) Through the end of 2022, how much has PG&E spent on DTS-FAST? e) What portion of your response to part (d) is related to the patent application and examination process? f) What are your forecast costs for DTS-FAST through the 2023-2025 period? g) What portion of your response to part (f) is related to the patent application and examination	Holly Wehrman	4/4/2023	4/10/2023				8.1.2.6.2	Grid Design, Operations, and Maintenance	Emerging Grid Hardening Technology Installations and Pilots
52	CalPA	Set WMP-10	CalPA_Set WMP-10	5	CalPA_Set WMP-10_Q5	P. 357 of PG&E's WMP states, "If deployed, DTS-FAST could have a significant impact on wildfire risk where deployed." a) Please quantify the phrase "a significant impact on wildfire risk" in the above quote. b) Please provide any workpapers or studies to support your answer to part (a).	Holly Wehrman	4/4/2023	4/10/2023				8.1.2.6.1	Grid Design, Operations, and Maintenance	Emerging Grid Hardening Technology Installations and Pilots
53	CalPA	Set WMP-10	CalPA_Set WMP-10	6	CalPA_Set WMP-10_Q6	P. 464 of PG&E's WMP states, "In 2022, we reduced the Customer Average Interruption Duration Index (CAIDI) and Customers Experiencing a Sustained Outage (CESO) for customers served by EPSS-capable lines when compared to data from the 2021 program pilot." a) Please provide the CAIDI value for all HFTD customers for each year from 2018-2022. b) Please provide the CESO value for all HFTD customers for each year from 2018-2022.	Holly Wehrman	4/4/2023	4/10/2023				8.1.8.1.1	Grid Design, Operations, and Maintenance	Equipment Settings to Reduce Wildfire Risk
54	CalPA	Set WMP-10	CalPA_Set WMP-10	7	CalPA_Set WMP-10_Q7	P. 464 of PG&E's WMP states, "By the end of 2022, we responded to 89 percent of outages on EPSS-enabled lines within 60 minutes, responding on average within 42 minutes." The statement above refers to results achieved "by the end of 2022." What time period is this data drawn from? In other words, the 42-minute figure is an average of response times in what period of time?	Holly Wehrman	4/4/2023	4/10/2023				8.1.8.1.1	Grid Design, Operations, and Maintenance	Equipment Settings to Reduce Wildfire Risk
55	CalPA	Set WMP-10	CalPA_Set WMP-10	8	CalPA_Set WMP-10_Q8	P. 464 of PG&E's WMP states, "By the end of 2022, we responded to 89 percent of outages on EPSS-enabled lines within 60 minutes, responding on average within 42 minutes." For all outages on EPSS-enabled lines in all of 2022, provide the following: a) Average response time b) 25th percentile response time c) Median (50th percentile) response time d) 75th percentile response time e) Longest response time	Holly Wehrman	4/4/2023	4/10/2023				8.1.8.1.1	Grid Design, Operations, and Maintenance	Equipment Settings to Reduce Wildfire Risk
56	CalPA	Set WMP-10	CalPA_Set WMP-10	9	CalPA_Set WMP-10_Q9	P. 464 of PG&E's WMP states, "By the end of 2022, we responded to 89 percent of outages on EPSS-enabled lines within 60 minutes, responding on average within 42 minutes." For the 11 percent of outages (noted in this quote) on EPSS-enabled lines that PG&E did not respond to within 60 minutes, provide the following: a) Average response time b) Longest response time	Holly Wehrman	4/4/2023	4/10/2023				8.1.8.1.1	Grid Design, Operations, and Maintenance	Equipment Settings to Reduce Wildfire Risk
57	CalPA	Set WMP-10	CalPA_Set WMP-10	10	CalPA_Set WMP-10_Q10	P. 441 of PG&E's WMP states, "We plan to implement a QA [quality assurance] program for systems inspections." a) Please discuss the progress PG&E has made so far in implementing a QA program for systems inspections. b) When does PG&E expect to implement a QA program for systems inspections? c) Please describe the main features of the QA program that PG&E plans to implement. d) What are the probable limitations of the QA program that PG&E plans to implement?	Holly Wehrman	4/4/2023	4/10/2023				8.1.6.1	Asset Inspections and Maintenance	Quality Assurance
58	CalPA	Set WMP-10	CalPA_Set WMP-10	11	CalPA_Set WMP-10_Q11	P. 441 of PG&E's WMP states, "We plan to update existing QV [quality verification] procedures for systems inspections." a) Please discuss the progress PG&E has made so far in updating existing QV procedures for systems inspections. b) When does PG&E expect to complete its updates to existing QV procedures for systems inspections? c) Please describe how the planned updates will improve PG&E's existing QV procedures.	Holly Wehrman	4/4/2023	4/10/2023				8.1.6.1	Asset Inspections and Maintenance	Quality Assurance
59	CalPA	Set WMP-10	CalPA_Set WMP-10	12	CalPA_Set WMP-10_Q12	P. 450 of PG&E's WMP states, "Along with reducing wildfire risk related to backlog ignition risk-tags in HFTD/HFRA, new (EC notifications identified after January 1st, 2023) HFTD/HFRA ignition risk tags will be completed in compliance with GO 95 rule 18 timelines, barring external factors." a) What external factors does PG&E anticipate may prevent it from completing HFTD/HFRA ignition risk tags in compliance with GO 95 Rule 18 timelines? b) For each external factor identified in part (a), what is PG&E's plan to mitigate the effect the external factor may have? c) During the period from 2023-2025, will PG&E complete new ignition risk tags in compliance with GO 95 rule 18 timelines for those ignition risk tags located outside the HFTD/HFRA?	Holly Wehrman	4/4/2023	4/10/2023				8.1.7.2	Open Work Orders	Open Work Orders – Distribution Tags
60	CalPA	Set WMP-10	CalPA_Set WMP-10	13	CalPA_Set WMP-10_Q13	Table PG&E-8.1.7-1 on p. 451 of PG&E's WMP states, "Field Safety Reassessment (FSR) performed annually on time dependent tags to confirm Priority E Notification has not escalated to Priority A or B." a) Under PG&E's current procedures and policies, can a FSR de-escalate the priority of a notification? Please explain your answer. b) Under PG&E's current procedures and policies, can a FSR be used to extend the due date of a notification beyond GO 95 rule 18 timelines? Please explain your answer.	Holly Wehrman	4/4/2023	4/10/2023				8.1.7.2	Open Work Orders	Open Work Orders – Distribution Tags
61	CalPA	Set WMP-10	CalPA_Set WMP-10	14	CalPA_Set WMP-10_Q14	Table PG&E-8.1.7-3 on p. 456 of PG&E's WMP has empty cells in the HFRA row. a) Please explain why the HFRA row is empty in the above table. b) Please provide an updated version of PG&E-8.1.7-3 with the HFRA row filled in.	Holly Wehrman	4/4/2023	4/10/2023				8.1.7.2	Open Work Orders	Open Work Orders – Distribution Tags
62	CalPA	Set WMP-10	CalPA_Set WMP-10	15	CalPA_Set WMP-10_Q15	In response to data request CalAdvocates-PGE-2023WMP-05, question 3, PG&E states, "There is an inherent QC process that is part of the drone inspection, but there is no outside group that is looking at QC." a) Please describe the inherent QC process for drone inspections. What are the main features of this inherent QC process? b) What types of problems or flaws in drone inspections can the inherent QC process identify? c) Please identify the five most common problems or flaws in drone inspections that the inherent QC process identified in 2022. d) What are the limitations of this inherent QC process?	Holly Wehrman	4/4/2023	4/10/2023				8.1.3	Asset Inspections	N/A

63	TURN	001	TURN_001	1	TURN_001_Q1	1. Regarding ACI PG&E-22-34, which found that "PG&E's current process of prioritizing wildfire mitigations assigns a high priority to undergrounding and does not demonstrate adequate weight to risk model outputs or RSE estimates" and which detailed the showing that PG&E must make in this WMP to show the required progress: a. Does PG&E's 2023-2025 WMP or supporting documentation provide a comparison of the RSEs (either at a tranche level or more aggregated level) for undergrounding compared to the RSEs of alternative mitigation techniques, such as covered conductor? i. If so, please provide the relevant citations, identifying the specific content that provides this information by page number and specific paragraphs, tables or figures (i.e., not just a multi-range page citation). ii. If so, please describe what PG&E believes those RSE comparisons demonstrate. b. Referring to the third bullet under "Required Progress" on page 968 of PG&E's WMP, does PG&E's 2023-2025 WMP explain how PG&E incorporates RSE estimates and risk model outputs that compare undergrounding with alternative mitigation techniques, such as covered conductor, at a project level early in the decision-making process, to allow PG&E to adjust the scope and pace of PG&E's undergrounding program as necessary based on the analyses performed? i. If so, please provide the relevant citations, identifying the specific content that provides this information by page number and specific paragraphs, tables or figures (i.e., not just a multi-range page citation). ii. Whether or not this information is provided in PG&E's 2023-2025 WMP, please state whether, and if so, how PG&E incorporates RSE estimates and risk model outputs that compare undergrounding with alternative mitigation techniques, such as covered conductor, at a project level early in the decision-making process. Please provide all documents showing that this comparison of RSE estimates and risk model outputs is included in PG&E's decision-making process. c. Please explain whether and, if so, how PG&E's quantitative analysis takes into account the PSPS risk for a particular location when deciding whether to undertake an undergrounding project or an alternative mitigation technique in 3 that location. For example, all other things being equal, does undergrounding fare worse in the quantitative analysis for a location deemed to have no or low PSPS risk compared to a location deemed to have high PSPS risk, and, if so	Tom Long	4/4/2023	4/7/2023				Appendix D	Areas for Continued Improvement	ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations
64	TURN	002	TURN_002	1	TURN_002_Q1	Please provide the attachment to the response to CalAdvocates-PG&E-2023WMP-06-007, which PG&E has labeled as confidential	Tom Long	4/4/2023	4/7/2023				8.2.3	Vegetation Management and Inspections	Vegetation and Fuels Management
65	TURN	002	TURN_002	2	TURN_002_Q2	Please provide the attachment to the response to CalAdvocates-PG&E-2023WMP-06-008, which PG&E has labeled as confidential.	Tom Long	4/4/2023	4/7/2023				8.2.3	Vegetation Management and Inspections	Vegetation and Fuels Management
66	TURN	002	TURN_002	3	TURN_002_Q3	Please provide the attachment to the response to CalAdvocates-PG&E-2023WMP-06-009, which PG&E has labeled as confidential.	Tom Long	4/4/2023	4/7/2023				2022 WMP Section 7.3.5.2	Vegetation Management and Inspections	Enhanced Vegetation Management
67	TURN	002	TURN_002	4	TURN_002_Q4	Please provide the 2023-2026 Undergrounding Workplan referenced on page 911 of PG&E's WMP and in footnote 209, which indicates that PG&E has labeled the Workplan confidential.	Tom Long	4/4/2023	4/7/2023				Appendix D	Areas for Continued Improvement	ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization
68	CPUC - SPD (Safety Policy Division)	002	CPUC - SPD (Safety Policy Division)_002	1	CPUC - SPD (Safety Policy Division)_002_Q1	Provide Attachment 2023-03-27_PGE_2023_WMP_R0_Appendix D ACI PG&E-22-16_Atch01_CONF (PG&E's 2023-2026 Undergrounding Workplan).	Kevin Miller	4/4/2023	4/5/2023	4/4/2023	1	N/A	Appendix D	Areas for Continued Improvement	ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization
69	OEIS	001	OEIS_001	1	OEIS_001_Q1	Regarding PG&E's Tree Assessment Tool (TAT) Considering PG&E has discontinued its Enhanced Vegetation Management (EVM) program: a. How is PG&E using and planning to use its TAT? b. What inspection programs, if any, listed in Section 8.2.2 will use the TAT? c. If PG&E is not using its TAT, why has it discontinued its use?	Colin Lang	4/5/2023	4/10/2023				8.2.2	Vegetation Management and Inspections	Vegetation Management Inspections
70	OEIS	001	OEIS_001	2	OEIS_001_Q2	Regarding PG&E's Targeted Tree Species (TTS) Study and its Tree Assessment Tool (TAT) On page 784 of its 2022 WMP Update, PG&E states "The results of our Targeted Tree Species study in conjunction with improving the Tree Assessment Tool (TAT) will allow PG&E to more accurately identify and mitigate trees at elevated risk of failure, providing better visibility into risk." On page 579 of its 2023-2025 WMP, PG&E states "We have evaluated the recommendations in the final [Targeted Tree Species] report and continue to analyze them and consider our go-forward actions." a. Since the Target Tree Species study was completed on March 31, 2022, what actions has PG&E taken and will take to implement the nine recommendations? Respond specifically to each of the nine recommendations. b. What improvements have been and will be made to the TAT in response to these recommendations and generally (i.e., not in response to these recommendations)? c. If PG&E is not using or planning to use its TAT, did PG&E make changes/improvements to the TAT before it decided to end its use? If so, what were those changes/improvements?	Colin Lang	4/5/2023	4/10/2023				8.2.3.6	Vegetation Management and Inspections	High-Risk Species
71	OEIS	001	OEIS_001	3	OEIS_001_Q3	Regarding PG&E's Focused Tree Inspections pilot 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 counties to prioritize pilots(s)" (page 529) and the expected timeline for operationalization. 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 counties to prioritize pilots(s)" (page 529). c. What standards, processes, procedures, and tools are vegetation management personnel using/will use to perform tree risk assessments for this pilot? d. Will PG&E be using its One VM Tool for recordkeeping for this pilot? If not, what system will PG&E use for recording keeping for this pilot? 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? f. How many circuit miles are in scope for the pilot? g. Was the pilot area previously in-scope for Enhanced Vegetation Management (EVM)? h. For each Circuit Protection Zone (CPZ) in the pilot area provide the: i. CPZ name. ii. Tree Weighted Risk Score from PG&E's most recent version of its EVM Tree-Weighted Prioritization List. iii. Tree Weighted Rank from PG&E's most recent version of its EVM Tree-Weighted Prioritization List. iv. Risk Tranche i. 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. j. Provide a GIS layer of the pilot area, PG&E's Areas of Concern (AOC),1 and "polygons where focused vegetation inspection can be evaluated to determine appropriate counties to prioritize pilots(s)" (page 529). As applicable, provide the following attributes for each polygon: i. Number of overhead circuit miles within the polygon ii. Overall Utility Risk	Colin Lang	4/5/2023	4/10/2023				8.2.2.2.5	Vegetation Management and Inspections	Focused Tree Inspections
72	OEIS	001	OEIS_001	4	OEIS_001_Q4	Regarding PG&E's Tree Removal Inventory On page, 528, PG&E states that is will "remove, or re-inspect trees identified in the EVM program." a. How does PG&E decide whether a tree should be 1) simply abated based on the existing risk assessment or 2) re-inspected/assessed prior to abatement? b. What standards, processes, procedures, and tools are vegetation management personnel using/will use to perform tree risk assessments for this program?	Colin Lang	4/5/2023	4/10/2023				8.2.2.2.4	Vegetation Management and Inspections	Tree Removal Inventory

73	OEIS	001	OEIS_001	5	OEIS_001_Q5	Regarding Wood Management On page 536, PG&E says that its wood management program addresses large wood generated by PG&E's VM activities including post-fire work activities and wood generated by the EVM Program. a. Considering the EVM program has been discontinued, does the wood management program: i. Address large wood generated from the EVM program that has not already addressed? ii. Address large wood generated from PG&E's Tree Removal Inventory program, a remnant of the EVM program? b. How is large wood addressed when generated by other VM programs, including Distribution Routine/Second Patrol, VM for Operational Mitigations, and Focused Tree Inspections? c. When debris and/or large wood generated from PG&E's VM activities are left on site, what standards, protocols, processes, and procedures does PG&E use to ensure the debris and large wood are placed in a manner that does not: i. Block or hinder ingress or egress. ii. Infringe on PRC 4291 defensible space clearance. iii. Impede watercourses and drainages. iv. Conflict with property owner's interests. v. Otherwise create a hazard.	Colin Lang	4/5/2023	4/10/2023				8.2.3.2	Vegetation Management and Inspections	Wood and Slash Management
74	OEIS	001	OEIS_001	6	OEIS_001_Q6	Regarding Enhanced Clearances On page 537, PG&E says it "complies with Appendix E of GO 95," then goes on to describe the recommended minimum clearances set forth in Appendix E of GO 95. a. In the HFTD, does PG&E obtain the recommended clearances "where practicable"? b. If (a) does not describe how PG&E implements the recommended, "enhanced" clearances, clarify how PG&E operationalizes the recommended clearances set forth in Appendix E of GO 95.	Colin Lang	4/5/2023	4/10/2023				8.2.3.3	Vegetation Management and Inspections	Clearance
75	OEIS	001	OEIS_001	7	OEIS_001_Q7	Regarding Appendix B Items That Are Currently Optional Or "By Request" Only Provide the following, which are outlined in the 2023-2025 Wildfire Mitigation Plan Technical Guidelines, Appendix B. If the data is tabular (formulas, tables, graphs, charts) provide it in MS Excel. If the data is text-heavy, provide the information in MS Word. a. Detailed Model Documentation for each model and sub-model discussed in PG&E's response to Section 6.1.2 Summary of Risk Models (Technical documentation should be presented according to ASTM E 1472 – Standard Guide for Documenting Computer Software for Fire Models.). i. Include a list of assumptions and known model limitations according to ASTM E 1895 –Standard Guide for Determining Uses and Limitations of Deterministic Fire Models. ii. Present verification and validation documentation according to the SFPE's Guidelines for Substantiating a Fire Model for a Given Application or ASTM E 1355 – Standard Guide for Evaluating the Predicting Capability of Deterministic Fire Models. At a minimum, the documentation must include:2 (1) Purpose of the model/problem identification, (2) Model version, (3) Theoretical foundation, (4) Mathematical foundation, (5) External dependencies, (6) Model substantiation, and (7) Sensitivity b. Model Substantiation:3 i. For each model, provide documentation of the following model substantiation studies: (1) Validation data, (2) Model verification, (3) Model validation, and (4) Model calibration c. Additional Models Supporting Risk Calculation:4 i. For each additional model that supports the risk calculations, provide weather analysis and fuel conditions. d. Calculation of Risk and Risk Components: Likelihood5	Colin Lang	4/5/2023	4/10/2023				Appendix B	Supporting Documentation for Risk Methodology and Assessment Definitions	Detailed Model Documentation
76	OEIS	001	OEIS_001	8	OEIS_001_Q8	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 cycle of models working together and creating feedback for model adjustments and	Colin Lang	4/5/2023	4/10/2023				6.1.2	Risk Methodology and Assessment	Summary of Risk Models
77	OEIS	001	OEIS_001	9	OEIS_001_Q9	Regarding Portfolio Level Risk Analysis and Risk Spend Efficiency a. Provide an example of how risks are aggregated to a portfolio, and if and how interdependencies between the risks are explicitly captured in the portfolio. Response should be provided in Excel. Also include the level of organization for the portfolio (e.g., asset, geographical or business unit) b. Are tail-risks calculated on a portfolio of risks? If so, provide an example. c. Are probability distributions and interdependencies used as inputs to outputs for the bowties used in PG&E's WMP submission (see examples present in Appendix B)? If so, provide an example using the bowtie charts presented in PG&E's Appendix B submission. As appropriate, response should be provided in Excel. d. Provide an example of how risk spend efficiency (RSE) deals with interdependent risks, and mutually exclusive risks. As appropriate, response should be provided in Excel. e. Is RSE calculated for both average and tail? If so, provide an example. Response should be provided in Excel.	Colin Lang	4/5/2023	4/10/2023				7.1.4.1	Mitigation Selection Process	Identifying and Evaluating Mitigation
78	OEIS	001	OEIS_001	10	OEIS_001_Q10	Regarding Cost-Benefit within and Overall Decision-Making Framework a. If projects are justified based on a multi-attribute value functions/cost basis, what threshold or hurdle is used? b. How is the chance that a project exceeds the threshold computed? c. If projects are justified based on a multi-attribute value functions/cost basis, what threshold or hurdle is used?	Colin Lang	4/5/2023	4/10/2023				7.1.4.2	Mitigation Selection Process	Mitigation Initiative Prioritization

79	OEIS	001	OEIS_001	11	OEIS_001_Q11	Regarding PG&E's Response to ACI PG&E-22-10 PG&E describes an external study funded by California Energy Commission (CEC) grant EPC 18-026 to classify and identify areas with similar climate locations that already have weather stations, and areas with climate conditions that are not well measured by current stations. a. Provide the external party study which PG&E described and used to assess the statewide station similarity.	Colin Lang	4/5/2023	4/10/2023				Appendix D	Areas for Continued Improvement	ACI PG&E-22--10 Justification of Weather Station Network Density
80	OEIS	001	OEIS_001	12	OEIS_001_Q12	Regarding PG&E's Response to ACI PG&E-22-09 a. PG&E states that "363 [circuits] dropped to the lower 80 percent" (p. 891). For each of these circuit segments, provide the following information via Excel document: i. Name/ID of CPZ ii. V2 mileage of circuit segment iii. V3 mileage of circuit segment iv. Categorization in which movement each circuit segment falls under, as outlined on p. 891 (i.e., large shift in wildfire consequence value and rank; large shift in circuit segment mileage and wildfire consequence; or shift in ignition probability) v. V2 overall risk ranking (including a footnote/written response of the total number of CPZs included in the ranking) vi. V2 overall risk score vii. V2 risk score broken out by: (1) Ignition probability (2) Wildfire consequence viii.V3 overall risk ranking (including a footnote/written response of the total number of CPZs included in the ranking) ix. V3 overall risk score x. V3 risk score broken out by: (1) Ignition probability (2) Wildfire consequence b. For the 8 circuit segments that moved due to ignition probability, describe how such ignition probability changed. c. PG&E states that "As a result of these changes, previously approved system hardening projects have not yet initiated construction on CPZs that are now ranked as much lower risk." (p. 893) Provide the following information on each of these projects via Excel document: i. Name/ID of CPZ ii. Mileage of project iii. Type of project (i.e., covered conductor, undergrounding) iv. V2 overall risk ranking (including a footnote/written response of the total number of CPZs included in the ranking)	Colin Lang	4/5/2023	4/10/2023				Appendix D	Areas for Continued Improvement	ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas
81	OEIS	001	OEIS_001	13	OEIS_001_Q13	Regarding PG&E's Response to ACI PG&E-22-20 PG&E states that "Adding drones to the detailed GO 165 inspection slowed the inspection to roughly 20 to 25 poles per day, which is slower than both the stand-alone ground inspection as well as the image capture rate for both drone-only and helicopter-only" (page 920). a. Provide the daily inspection rates for stand-alone ground inspections, drone-only image capture, and helicopter-only capture.	Colin Lang	4/5/2023	4/10/2023				Appendix D	Areas for Continued Improvement	ACI PG&E-22--20 Asset Inspection Drone Program Pilot
82	OEIS	001	OEIS_001	14	OEIS_001_Q14	Regarding PG&E's Asset Management Upgrades On page 433, PG&E states that "PG&E has significantly advanced our data management practices and the quality of our asset inventory (Asset Registry) database over the last two years by applying the International Organization for Standardization (ISO) 55001 standards." a. Do the upgrades to PG&E's asset inventory database include the location of each piece of equipment (what pole it is attached to) for the distribution system, and also includes the equipment's manufacturer, model ID, and when the equipment was placed into service? i. If yes, how is this being done? ii. If no, explain why this is not the case? b. PG&E relies on inspection results for making decisions on whether equipment should be replaced. Does PG&E ever replace equipment proactively based on the equipment reaching its lifecycle end, as determined by the manufacture or industry standards? i. If yes, what equipment is being replaced for these reasons and why? ii. If no, why doesn't PG&E monitor and replace equipment at the end of its lifecycle? iii. Does PG&E have different decision-making policies when it comes to replacing equipment in the HFTDs as opposed to the rest of PG&E's territory? iv. Of the distribution equipment that utilities are required to report on (capacitors, conductors, connectors, fuses, splices, arrestors, reclosers, and transformers) what percentage is still operating in the HFTDs because the equipment has passed inspection but is being used beyond its predicted lifecycle? c. Does PG&E track the performance of different types of equipment by manufacture and model information? i. If yes, how does PG&E track this information and what decisions are made based on this data? ii. If no, explain why is equipment performance not being tracked?	Colin Lang	4/5/2023	4/10/2023				8.1.5	Grid Design, Operations, and Maintenance	Asset Management and Inspection Enterprise System(s)
83	OEIS	001	OEIS_001	15	OEIS_001_Q15	Regarding PG&E's Enhanced Powerline Safety Settings (EPSS) Program a. On page 464, PG&E states "…also referred to as high impedance faults, we plan to engineer, program, and install the Downed Conductor Detection (DCD) algorithm on recloser controllers. We will also evaluate high impedance fault detection algorithms for circuit breakers in 2023 and beyond." Then on page 374, PG&E states that the DCD Utility Initiative will likely continue from 2023-2025. i. What is the prioritization process for deciding which circuits will receive the DCD algorithm? ii. Will the number of outages, due to EPSS de-energizations, be looked at to identify which circuits should receive the DCD algorithm first? b. In figure 8.1.8-4: CPUC REPORTABLE IGNITIONS IN HFTDS (page 468) PG&E shows that through December 31, 2022, there was a greater than 36 percent reduction in CPUC reportable ignitions in HFTD-areas compared to the overall 2018-2020 average. PG&E claims that this reduction is a direct result of enabling EPSS in HFTDs. i. Was this data adjusted for circuits that have been hardened with covered conductor or other mitigations? ii. Did PG&E associate the ignition data to each individual circuit that was enabled showing a direct connection to the result, or is this data an assumption that has been made by looking at the overall HFTD areas and the overall reportable ignitions? iii. Were weather and vegetation conditions factored into this data conclusion?	Colin Lang	4/5/2023	4/10/2023				8.1.8.1.1	Grid Design, Operations, and Maintenance	Protective Equipment and Device Settings

84	CalPA	Set WMP-11	CalPA_Set WMP-11	1	CalPA_Set WMP-11_Q1	PG&E's Test Year 2023 GRC rebuttal testimony (Ex. PG&E-17 on July 11, 2022) states the following: Q 123 Does PG&E have experience with REFCL? A 123 Yes. PG&E initiated a REFCL pilot project in 2018 at the Calistoga substation. After initial positive tests, the Calistoga REFCL pilot demonstration was stalled due to the failure of the substation REFCL equipment. In addition, PG&E had difficulty obtaining replacement equipment from various overseas suppliers due to supply chain issues and the ongoing COVID-19 pandemic. Thus, the REFCL technology could not be fully evaluated beyond the initial testing because of the equipment failure and supply chain issues. More recently, PG&E has made progress on its REFCL pilot project including completing the changes to the substation equipment after encountering equipment failures. PG&E has performed successful staged fault tests of the REFCL system and is in the process of reviewing the test data to evaluate REFCL's wildfire risk reduction for ground faults on distribution circuits. PG&E is looking at opportunities for REFCL deployments in its distribution substations to mitigate wildfire risk and evaluating combinations of REFCL with EPSS and other mitigations.4 Regarding the Calistoga REFCL pilot demonstration, a) Please break down PG&E's annual spending on the Calistoga REFCL pilot demonstration since the project initiation in 2018: b) Please break down PG&E's annual spending on Major Work Category (MWC) 49R since the project initiation in 2018: c) Where are the costs in subpart (c) of this question recorded? Please provide the specific name(s) of the accounts and subaccounts, if applicable. d) What is the recovery mechanism for the costs in subpart (c) of this question? e) In the above quote, PG&E states that "[m]ore recently, PG&E has made progress on its REFCL pilot project including completing the changes to the substation equipment after encountering equipment failures." Since 2018, how much has PG&E spent on "changes to the substation equipment" and any other equipment changes in order to test or deploy REFCL at the Calistoga substation?	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
85	CalPA	Set WMP-11	CalPA_Set WMP-11	2	CalPA_Set WMP-11_Q2	Referring to PG&E's Electric Preliminary Statement Part FY (Tariff Sheet No. 52259-E), the Electric Program Investment Charge Balancing Account (EPICBA) has three subaccounts: The EPIC Program Administered by PG&E Subaccount tracks the actual program expenses to the authorized EPIC program budgets pursuant to D.12-05-037, D.20-08-042, and D.21-11-028 through December 31, 2030 or as authorized by the Commission. The EPIC Program Administered by California Energy Commission (CEC) Subaccount tracks the actual program expenses encumbered and remitted to the CEC and program administration expenses remitted to the CEC to the authorized budget pursuant to D.12-05-037, D.20-08-042, and D.21-11-028 through December 31, 2030 or as authorized by the Commission. The New Solar Home Partnership (NSHP) Program administered by the CEC Subaccount tracks the actual remittances to the CEC, or to program applicants, to the authorized NSHP Program budgets pursuant to D.16-06-006 encumbered by June 1, 2018 or spent by December 31, 2021.5 Please complete the following table by stating recorded costs (disaggregated into capital expenditures and O&M expenses) in the PG&E subaccount and CEC subaccount from 2018 to 2022.	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
86	CalPA	Set WMP-11	CalPA_Set WMP-11	3	CalPA_Set WMP-11_Q3	PG&E's 2022 WMP, Section 7.1.E, Attachment 1 (Attch_Q3.pdf) states the following regarding the project status of EPIC 3.15—Proactive Wires Down Mitigation Demonstration Project (Rapid Earth Fault Current Limiter) as of February 25, 2022: Evaluation of additional substations for suitability of additional REFCL installations has begun but is pending results and learnings of the initial EPIC project before design or field work starts on additional sites. After an initial screening process, 25 distribution substations with circuits in HFTDs are candidates for potential REFCL deployments.6 a) As of March 27, 2023, what is the status of PG&E's "[e]valuation of additional substations for suitability of additional REFCL installations"? b) Given the status in subpart (a) of this question, please fill in the following table: c) Given the status in subpart (a) of this question, what are PG&E's spending plans on: i. MWC 49R, and ii. the REFCL pilot? d) As of March 27, 2023, what conclusions or findings has PG&E reached based on its "evaluation of additional substations for suitability of additional REFCL installations"? e) Please provide the date(s) when PG&E started "design or field work on additional sites." f) Please identify each such site referred to in (e) and state the applicable dates for each. g) PG&E states that "25 distribution substations with circuits in HFTDs are candidates for potential REFCL deployments." As of March 27, 2023, how many of PG&E's distribution substations with circuits in HFTDs are currently candidates for potential REFCL deployments? h) For each of the candidate substations included in your response to part (e), please fill in the following table:	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
87	CalPA	Set WMP-11	CalPA_Set WMP-11	4	CalPA_Set WMP-11_Q4	Referring to Exhibit PG&E-04, February 25, 2022, version, PG&E states the following regarding REFCL: Based on our initial testing and the successful implementation in Australia, PG&E has developed a short-term strategy to install REFCLs in HFTD areas. PG&E forecasts deploying REFCLs at an additional two substations each year, but these plans could change pending pilot results and integration with other enhanced automation and wildfire mitigation efforts described in this chapter. a) As mentioned above, PG&E "forecasts deploying REFCLs at an additional two substations each year, but these plans could change …" Have these plans changed? b) If your answer to part (a) is yes, please describe PG&E's current plans regarding the future deployment of REFCLs. c) Please identify the additional substations where PG&E plans on deploying REFCLs in: i. 2023, iii. ii.2024, iv. iii. 2025, and v. iv. 2026	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
88	CalPA	Set WMP-11	CalPA_Set WMP-11	5	CalPA_Set WMP-11_Q5	Referring to Exhibit PG&E-17, p. 4.3-6, Table 4.3-3, line 6, served on July 11, 2022: Line 6 of the above table indicates that PG&E forecasts the capital expenditures to be $17.331 million in 2023, $17.800 million in 2024, $18.280 million in 2025, and $18.774 million in 2026. Given the current status of PG&E's evaluation of additional substations for suitability and PG&E's plans for future deployment of REFCLs, as of March 27, 2023, please indicate any adjustment to the forecast capital expenditures by completing the table below:	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
89	CalPA	Set WMP-11	CalPA_Set WMP-11	6	CalPA_Set WMP-11_Q6	In December 2021, PG&E presented at the EPIC Symposium. See Attch_Q6_EPIC_Presentation.pdf. The presentation slides state that: Rapid Earth Fault Current Limiter (REFCL) technology is an extension of resonant grounding at a distribution substation to neutralize ground fault current and pre[v]ent a spark. REFCL has been successfully deployed in Australia to reduce risk of fire from ground faults, but their substation designs are different from PG&E's. One type of REFCL is known as Ground Fault Neutralizer (GFN). REFCL could be applied to approx. 80% of PG&E HFTD distribution circuit miles (3-wire circuits). a) Is the statement quoted above accurate? b) If the answer to part (a) is no, please provide any needed corrections.	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter

90	CalPA	Set WMP-11	CalPA_Set WMP-11	7	CalPA_Set WMP-11_Q7	PG&E presents during the 2021 EPIC Symposium (Attch_Q6_EPIC_Presentation.pdf) that "REFCL could be applied to approx. 80% of PG&E HFTD distribution circuit miles (3-wire circuits)." However, PG&E's 2023 WMP, at page 275, states that:7 While PG&E is looking at opportunities for REFCL deployments in our distribution substations to mitigate wildfire risk and evaluating combinations of REFCL with EPSS and other mitigations, implementing it would require significant and costly changes to the grid. Instead of making costly changes to the grid, we are moving forward with more cost effective solutions such as DCD and Partial Voltage Detection. Why did PG&E state that "REFCL could be applied to approx. 80% of PG&E HFTD distribution circuit miles (3-wire circuits)" while stating that "implementing it would require significant and costly changes to the grid"?	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
91	CalPA	Set WMP-11	CalPA_Set WMP-11	8	CalPA_Set WMP-11_Q8	PG&E's 2023 WMP, at page 275, states that: "While PG&E is looking at opportunities for REFCL deployments in our distribution substations to mitigate wildfire risk and evaluating combinations of REFCL with EPSS and other mitigations, implementing it would require significant and costly changes to the grid." a) Please state the earliest date when PG&E reached the conclusion that "implementing [REFCL] would require significant and costly changes to the grid." b) Why did PG&E not foresee "significant and costly changes" earlier than the date provided in part (a) of this question? c) Please provide all available documentation, analyses, or studies evidencing PG&E's response to subpart (b) of this question. d) How did PG&E reach the conclusion that "implementing [REFCL] would require significant and costly changes to the grid"? e) State the basis of the conclusion that "implementing [REFCL] would require significant and costly changes to the grid". f) How did the Calistoga REFCL pilot demonstration contribute to or support the conclusion stated in the quotation above? g) Please provide all available documentation, analyses, or studies evidencing PG&E's response to parts (d) and (e) of this question. h) What "significant and cost changes to [PG&E's] grid" would REFCL require for its implementation? i) For each "change" to PG&E's grid, what is the cost estimate? j) What are the cost estimates for each "change to the grid" at the substation level? k) What are the cost estimates for each "change to the grid" on a per circuit-mile basis?	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
92	CalPA	Set WMP-11	CalPA_Set WMP-11	9	CalPA_Set WMP-11_Q9	At which substations, other than the Calistoga substation, has PG&E tested REFCL?	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
93	CalPA	Set WMP-11	CalPA_Set WMP-11	10	CalPA_Set WMP-11_Q10	Has PG&E done any benchmarking study on REFCL with Southern California Edison (SCE)?	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
94	CalPA	Set WMP-11	CalPA_Set WMP-11	11	CalPA_Set WMP-11_Q11	Has PG&E collaborated or exchanged with SCE on REFCL? If so, please detail the relevant activities.	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
95	CalPA	Set WMP-11	CalPA_Set WMP-11	12	CalPA_Set WMP-11_Q12	PG&E's 2023 WMP, at page 275, states that:8 Instead of making costly changes to the grid, we are moving forward with more cost-effective solutions such as DCD [Downed Conductor Detection] and Partial Voltage Detection. Regarding Downed Conductor Detection (DCD), a) What "changes to the grid" are required for PG&E to implement this technology? b) Is DCD viable on 3-wire systems, 4-wire systems, or both? c) Does PG&E have a cost estimate for the deployment of DCD? d) If the answer to part (c) is yes, please provide the cost estimate(s).	Pui-Wa Li	4/5/2023	4/10/2023				7.2.1	Wildfire Mitigation Strategy	Overview of Mitigation Initiatives and Activities
96	CalPA	Set WMP-11	CalPA_Set WMP-11	13	CalPA_Set WMP-11_Q13	PG&E's 2023 WMP, at page 275, states that:9 "Instead of making costly changes to the grid, we are moving forward with more cost-effective solutions such as DCD and Partial Voltage Detection." Regarding Partial Voltage Detection (PVD), a) What "changes to the grid" are required for PG&E to implement this technology? b) Is PVD viable on 3-wire systems, 4-wire systems, or both? c) Does PG&E have a cost estimate for the deployment of PVD? d) If the answer to part (c) is yes, please provide the cost estimate(s).	Pui-Wa Li	4/5/2023	4/10/2023				7.2.1	Wildfire Mitigation Strategy	Overview of Mitigation Initiatives and Activities
97	CalPA	Set WMP-11	CalPA_Set WMP-11	14	CalPA_Set WMP-11_Q14	Based on PG&E's evaluation of REFCLs: a) Please describe the significant changes to the grid required to implement REFCL technology, b) State PG&E's cost estimates for such changes, c) Describe the equipment installations required for such changes, and d) Describe the likely operational impacts resulting from the implementation of REFCLs on PG&E's system.	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
98	CalPA	Set WMP-11	CalPA_Set WMP-11	15	CalPA_Set WMP-11_Q15	Please state the dates when PG&E finished evaluating the following: a) The significant changes to the grid required to implement REFCL technology, b) The cost estimates for such changes, c) The equipment installations required due to such changes, and d) The likely operational impacts resulting from the implementation of REFCL on PG&E's system.	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
99	CalPA	Set WMP-11	CalPA_Set WMP-11	16	CalPA_Set WMP-11_Q16	Please provide all available documentation, studies, and analyses evidencing PG&E's conclusions on each of the following aspects of REFLC deployment: a) The significant changes to the grid required to implement REFCL technology, b) The cost estimates for such changes, c) The equipment installations required due to such changes, and d) The likely operational impacts resulting from the implementation of REFCL on PG&E's system.	Pui-Wa Li	4/5/2023	4/10/2023				8.1.8.1.3.1	Grid Operations and Procedures	Rapid Earth Fault Current Limiter
100	TURN	003	TURN_003	1	TURN_003_Q1	Please provide data in PG&E's possession that indicates the following: a. The SAIDI (System Average Interruption Duration Index) for the years 2018-2022 for underground distribution facilities; b. The MAIFI (Momentary Average Interruption Frequency Index) for the years 2018-2022 for underground distribution facilities; c. The SAIDI (System Average Interruption Duration Index) for the years 2018-2022 for overhead distribution facilities with covered conductor; d. The MAIFI (Momentary Average Interruption Frequency Index) for the years 2018-2022 for overhead distribution facilities with covered conductor; e. The SAIDI (System Average Interruption Duration Index) for the years 2018-2022 for overhead distribution facilities without covered conductor; f. The MAIFI (Momentary Average Interruption Frequency Index) for the years 2018-2022 for	Tom Long	4/5/2023	4/10/2023				N/A	N/A	N/A
101	TURN	003	TURN_003	2	TURN_003_Q2	Please provide all reports or studies in PG&E's possession prepared from January 1, 2018 to the present that discuss the reliability of underground distribution facilities, overhead distribution facilities with covered conductor, or overhead distribution facilities without covered conductor, including but not limited to a discussion of SAIDI and MAIFI data.	Tom Long	4/5/2023	4/10/2023				N/A	N/A	N/A

102	TURN	003	TURN_003	3	TURN_003_Q3	Regarding Table 7-3-2, p. 296, the bottom row re PSPS: a. Please confirm that the targets for reduced customer impacts in 2023, 2024 and 2025 are cumulative, i.e, that the 33,000 figure for 2024 includes the 15,000 reduced impacts for 2023, and so on. b. Please provide the supporting data for the estimates of reduced PSPS impacts in 2023 (15,000 customer events), 2024 (33,000 customer events), and 2025 (55,000 customer events). Provide the data in live Excel format if possible. c. The table states that the targeted reductions are "based on Wildfire mitigation projects including but not limited to MSO replacements and Underground miles . . .." For each of 2023, 2024 and 2025, please provide a breakdown of the reduced customer events by the mitigation measure to which PG&E attributes the reduced customer events, including but not limited to covered conductor installation. Explain how PG&E determined this breakdown. d. Provide equivalent data regarding reduced PSPS impacts for the years 2019 through 2022 and provide the supporting data for those figures in Live Excel format if possible. In addition, for each of these years, please provide a breakdown of the reduced customer events by the mitigation measure to which PG&E attributes the reduced customer events, including but not limited to covered conductor installation. Explain how PG&E determined this breakdown.	Tom Long	4/5/2023	4/10/2023			9.1.5	Public Safety Power Shutoff	Performance Metrics Identified by the Electrical Corporation
Pre-Discovery 01	CalPA	Set WMP-1	CalPA_Set WMP-1	1	CalPA_Set WMP-1_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 submittal 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).	Holly Wehrman	2/7/2023	2/14/2023	2/14/2023	0	N/A	N/A	N/A	N/A
Pre-Discovery 02	CalPA	Set WMP-1	CalPA_Set WMP-1	2	CalPA_Set WMP-1_Q2	Please provide a copy of your WMP pre-submission within two business days of its submission to Energy Safety.	Holly Wehrman	2/7/2023	2/15/2023	2/15/2023	1	N/A	N/A	N/A	N/A
Pre-Discovery 03	CalPA	Set WMP-1	CalPA_Set WMP-1	3	CalPA_Set WMP-1_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 all PDFs, spatial data files, non-spatial data files, and confidential attachments) on the same business day that the document is sent to Energy Safety.	Holly Wehrman	2/7/2023	2/14/2023	2/14/2023	0	N/A	N/A	N/A	N/A
Pre-Discovery 04	CalPA	Set WMP-1	CalPA_Set WMP-1	4	CalPA_Set WMP-1_Q4	Provide a copy to Cal Advocates of all your confidential responses to WMP discovery requests, on the same business day that you send 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.	Holly Wehrman	2/7/2023	2/14/2023	2/14/2023	0	N/A	N/A	N/A	N/A
Pre-Discovery 05	CalPA	Set WMP-2	CalPA_Set WMP-2	1	CalPA_Set WMP-2_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	Holly Wehrman	2/7/2023	3/7/2023	3/7/2023	6	N/A	N/A	N/A	N/A
Pre-Discovery 06	CalPA	Set WMP-2	CalPA_Set WMP-2	2	CalPA_Set WMP-2_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.	Holly Wehrman	2/7/2023	3/7/2023	3/7/2023	1	N/A	N/A	N/A	N/A
Pre-Discovery 07	CalPA	Set WMP-2	CalPA_Set WMP-2	3	CalPA_Set WMP-2_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	Holly Wehrman	2/7/2023	2/22/2023	2/22/2023	1	N/A	8.1.3	Asset Inspections	N/A
Pre-Discovery 08	CalPA	Set WMP-3	CalPA_Set WMP-3	1	CalPA_Set WMP-3_Q1	Provide an Excel table of all distribution circuits existing as of January 1, 2023 (as rows) that includes the following information in separate columns. a. Circuit name b. Circuit ID number c. Total circuit miles d. Circuit miles in Non-HFTD Areas e. Circuit miles in Other HFTD f. Circuit miles in HFTD Tier 2 g. Circuit miles in HFTD Tier 3 h. Circuit voltage i. Circuit SAIDI (System Average Interruption Duration Index) for 2021 j. Circuit SAIDI (System Average Interruption Duration Index) for 2022 k. Circuit SAIFI (System Average Interruption Frequency Index) for 2021 l. Circuit SAIFI (System Average Interruption Frequency Index) for 2022 m. Circuit MAIFI (Momentary Average Interruption Frequency Index) for 2021 n. Circuit MAIFI (Momentary Average Interruption Frequency Index) for 2022 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. Total customer-minutes of de-energization on the circuit due to PSPS events in 2022 (sum of customer-minutes across all PSPS events). q. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2021. r. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2022. s. Number of trees that were worked on for EVM in Non-HFTD in 2021 t. Number of trees that were worked on for EVM in Non-HFTD in 2022 u. Number of trees that were worked on for EVM in Other HFTD in 2021 v. Number of trees that were worked on for EVM in Other HFTD in 2022 w. Number of trees that were worked on for EVM in HFTD Tier 2 in 2021 x. Number of trees that were worked on for EVM in HFTD Tier 2 in 2022 y. Number of trees that were worked on for EVM in HFTD Tier 3 in 2021	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	2	N/A	8.1.3	Asset Inspections	Distribution

Pre-Discovery 09	CalPA	Set WMP-3	CalPA_Set WMP-3	2	CalPA_Set WMP-3_Q2	Provide an Excel table of all transmission circuits existing as of January 1, 2023 (as rows) that includes the following information in separate columns. a. Circuit name b. Circuit ID number c. Total circuit miles d. Circuit miles in Non-HFTD Areas e. Circuit miles in Other HFTD f. Circuit miles in HFTD Tier 2 g. Circuit miles in HFTD Tier 3 h. Circuit voltage i. Total customer-minutes of de-energization on the circuit due to PSPS events in 2021 (sum of customer-minutes across all PSPS events). j. Total customer-minutes of de-energization on the circuit due to PSPS events in 2022 (sum of customer-minutes across all PSPS events). k. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2021. l. Total customer-minutes of de-energization on the circuit due to fast-trip settings in 2022. m. Number of support structures replaced in Non-HFTD in 2021 n. Number of support structures replaced in Non-HFTD in 2022 o. Number of support structures replaced in Other HFTD in 2021 p. Number of support structures replaced in Other HFTD in 2022 q. Number of support structures replaced in HFTD Tier 2 in 2021 r. Number of support structures replaced in HFTD Tier 2 in 2022 s. Number of support structures replaced in HFTD Tier 3 in 2021 t. Number of support structures replaced in HFTD Tier 3 in 2022 u. Miles of LiDAR inspection in Non-HFTD in 2021 v. Miles of LiDAR inspection in Non-HFTD in 2022 w. Miles of LiDAR inspection in Other HFTD in 2021 x. Miles of LiDAR inspection in Other HFTD in 2022 y. Miles of LiDAR inspection in HFTD Tier 2 in 2021	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	0	N/A	8.1.3	Asset Inspections	Transmission
Pre-Discovery 10	CalPA	Set WMP-3	CalPA_Set WMP-3	3	CalPA_Set WMP-3_Q3	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. a. Circuit name b. Circuit ID number c. Circuit miles removed or decommissioned in Non-HFTD Areas d. Circuit miles removed or decommissioned in Other HFTD e. Circuit miles removed or decommissioned in HFTD Tier 2 f. Circuit miles removed or decommissioned in HFTD Tier 3 g. Poles(s) for overhead work circuits	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	1	N/A	8.1.2	System Hardening	Work Performed in 2022
Pre-Discovery 11	CalPA	Set WMP-3	CalPA_Set WMP-3	4	CalPA_Set WMP-3_Q4	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. Includes the following information in separate columns. a. Circuit name b. Circuit ID number c. Circuit miles removed or decommissioned in Non-HFTD Areas d. Circuit miles removed or decommissioned in Other HFTD e. Circuit miles removed or decommissioned in HFTD Tier 2 f. Circuit miles removed or decommissioned in HFTD Tier 3 g. Pole(s) for overhead work circuits	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	1	N/A	Grid Design and System Hardening	System Hardening	Work Performed in 2022
Pre-Discovery 12	CalPA	Set WMP-3	CalPA_Set WMP-3	5	CalPA_Set WMP-3_Q5	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. 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	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	0	N/A	2022 WMP Section 7.1	Wildfire Mitigation Strategy	N/A
Pre-Discovery 13	CalPA	Set WMP-3	CalPA_Set WMP-3	6	CalPA_Set WMP-3_Q6	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. 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	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	0	N/A	2022 WMP Section 7.1	Wildfire Mitigation Strategy	N/A
Pre-Discovery 14	CalPA	Set WMP-3	CalPA_Set WMP-3	7	CalPA_Set WMP-3_Q7	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. 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	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	0	N/A	7.2	Wildfire Mitigation Strategy	N/A

Pre-Discovery 15	CalPA	Set WMP-3	CalPA_Set WMP-3	8	CalPA_Set WMP-3_Q8	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. 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	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	0	N/A	7.2	Wildfire Mitigation Strategy	N/A
Pre-Discovery 16	CalPA	Set WMP-3	CalPA_Set WMP-3	9	CalPA_Set WMP-3_Q9	For each WMP initiative listed below, please state how the modeled Wildfire Risk Scores for eachcircuit or circuit-segment influence where you plan to perform work in 2024. 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	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	0	N/A	7.2	Wildfire Mitigation Strategy	N/A
Pre-Discovery 17	CalPA	Set WMP-3	CalPA_Set WMP-3	10	CalPA_Set WMP-3_Q10	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. 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	Holly Wehrman	2/7/2023	3/10/2023	3/10/2023	0	N/A	7.2	Wildfire Mitigation Strategy	N/A
Pre-Discovery 18	CalPA	Set WMP-4	CalPA_Set WMP-4	1	CalPA_Set WMP-4_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	Holly Wehrman	2/7/2023	3/7/2023	3/7/2023	0	N/A	Section 4.3	Proposed Expenditures	N/A
Pre-Discovery 19	CalPA	Set WMP-4	CalPA_Set WMP-4	2	CalPA_Set WMP-4_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	Holly Wehrman	2/7/2023	3/7/2023	3/7/2023	0	N/A	Section 4.3	Proposed Expenditures	N/A
Pre-Discovery 20	CalPA	Set WMP-4	CalPA_Set WMP-4	3	CalPA_Set WMP-4_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	Holly Wehrman	2/7/2023	3/7/2023	3/7/2023	0	N/A	Section 4.3	Proposed Expenditures	N/A
Pre-Discovery 21	CalPA	Set WMP-4	CalPA_Set WMP-4	4	CalPA_Set WMP-4_Q4	For each WMP initiative for which you forecast operating expenditures in 2024 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	Holly Wehrman	2/7/2023	3/7/2023	3/7/2023	0	N/A	Section 4.3	Proposed Expenditures	N/A
Pre-Discovery 22	CalPA	Set WMP-5	CalPA_Set WMP-5	1	CalPA_Set WMP-5_Q1	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.	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	0	N/A	2022 WMP Section 4.5	Model Metrics and Calculation Methodologies	WDRM v3
Pre-Discovery 23	CalPA	Set WMP-5	CalPA_Set WMP-5	2	CalPA_Set WMP-5_Q2	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? b) If the answer to part (a) is yes, please describe how you identify such transportation corridors. c) If available, please provide a geospatial data file that contains all current identified transportation corridors with ingress and egress hazards.	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	0	N/A	8.1.3	Asset inspections	N/A
Pre-Discovery 24	CalPA	Set WMP-5	CalPA_Set WMP-5	3	CalPA_Set WMP-5_Q3	Please fill out the attached spreadsheet, CalAdvocates-PGE-2023WMP-05 Attachment 1, requesting information regarding your asset inspections in 2022.	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	1	N/A	8.1.3	Asset inspections	Inspections completed in 2022
Pre-Discovery 25	CalPA	Set WMP-5	CalPA_Set WMP-5	4	CalPA_Set WMP-5_Q4	Please augment Table 13 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. a. Add the following information in separate columns: i. Name of the associated circuit ii. ID number of the associated circuit iii. Geographic latitude in decimal degrees, truncated to seven decimal places iv. Geographic longitude in decimal degrees, truncated to seven decimal places v. Priority of the original notification, using PG&E's internal priority level codes vi. Object/damage code or other internal description of defect b. Please complete column b ("Equipment type") of Table 13. c. Please complete or explain why each of the below columns is not applicable: i. Column i ii. Column j iii. Column k	Holly Wehrman	2/10/2023	3/10/2023	3/10/2023	2	N/A	2022 Q4 QDR	Asset inspections	tags

Pre-Discovery 26	CalPA	Set WMP-6	CalPA_Set WMP-6	1	CalPA_Set WMP-6_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.	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	2023-2025 WMP 8.2.3	Vegetation Management	EVM
Pre-Discovery 27	CalPA	Set WMP-6	CalPA_Set WMP-6	2	CalPA_Set WMP-6_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.	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	2023-2025 WMP 8.2.3	Vegetation Management	EVM
Pre-Discovery 28	CalPA	Set WMP-6	CalPA_Set WMP-6	3	CalPA_Set WMP-6_Q3	In response to Data Request CalAdvocates-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).	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	1	N/A	7.3.5.2	Vegetation Management and Inspections	Enhanced Vegetation Management
Pre-Discovery 29	CalPA	Set WMP-6	CalPA_Set WMP-6	4	CalPA_Set WMP-6_Q4	In response to Data Request CalAdvocates-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, overhang clearing and radial clearance. Starting in 2023, Enhanced VM only includes overhang 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.	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	7.3.5	Vegetation Management and Inspections	Program Costs
Pre-Discovery 30	CalPA	Set WMP-6	CalPA_Set WMP-6	5	CalPA_Set WMP-6_Q5	In response to Data Request CalAdvocates-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 forecasts for 2023. c) Add a column that shows PG&E’s current forecasts 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.	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	Vegetation Management	N/A	N/A
Pre-Discovery 31	CalPA	Set WMP-6	CalPA_Set WMP-6	6	CalPA_Set WMP-6_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	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	1	N/A	Vegetation Management	N/A	N/A
Pre-Discovery 32	CalPA	Set WMP-6	CalPA_Set WMP-6	7	CalPA_Set WMP-6_Q7	In response to Data Request CalAdvocates-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 not associated with new grid	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	1	N/A	2022 WMP Section 7.3.3.17	Grid Design and System Hardening	System Hardening
Pre-Discovery 33	CalPA	Set WMP-6	CalPA_Set WMP-6	8	CalPA_Set WMP-6_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 (if this is greater than zero, please describe the type of system hardening project).	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	1	N/A	2023 WMP Section 8.1.2.5	System Hardening	N/A

Pre-Discovery 34	CalPA	Set WMP-6	CalPA_Set WMP-6	9	CalPA_Set WMP-6_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).	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	2023 WMP Section 8.1.2.5	System Hardening	N/A
Pre-Discovery 35	CalPA	Set WMP-6	CalPA_Set WMP-6	10	CalPA_Set WMP-6_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, CalAdvocates PGE-2023WMP-06 Attachment 1. Add columns as needed.	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	1	N/A	2023 WMP Section 4.3	Proposed Expenditures	System Hardening
Pre-Discovery 36	CalPA	Set WMP-6	CalPA_Set WMP-6	11	CalPA_Set WMP-6_Q11	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): 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 costs5 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 project6 (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)	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	1	N/A	2023 WMP 8.1.2.2	Grid Design and System Hardening	Undergrounding
Pre-Discovery 37	CalPA	Set WMP-6	CalPA_Set WMP-6	12	CalPA_Set WMP-6_Q12	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: a) Project ID number or other identifier, matching part (a) of the previous question b) Circuit ID c) Project completion date	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	1	N/A	2023 WMP 8.1.2.2	Grid Design and System Hardening	Undergrounding
Pre-Discovery 38	CalPA	Set WMP-6	CalPA_Set WMP-6	13	CalPA_Set WMP-6_Q13	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: 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	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	2022 WMP Section 7.3.4	Asset Management and Inspections	N/A
Pre-Discovery 39	CalPA	Set WMP-6	CalPA_Set WMP-6	14	CalPA_Set WMP-6_Q14	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.	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	2022 WMP 7.3.7	Data Governance	Asset Failure Analysis
Pre-Discovery 40	CalPA	Set WMP-6	CalPA_Set WMP-6	15	CalPA_Set WMP-6_Q15	Per PG&E's response to Data Request CalAdvocates-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. 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.	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	2022 WMP 7.3.4.1 and 7.3.4.14	Asset Management and Inspections	N/A

Pre-Discovery 41	CalPA	Set WMP-6	CalPA_Set WMP-6	16	CalPA_Set WMP-6_Q16	Regarding your PSPS circuit modeling capabilities: 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 2023. 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	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	0	N/A	PSPS	N/A	N/A
Pre-Discovery 42	CalPA	Set WMP-6	CalPA_Set WMP-6	17	CalPA_Set WMP-6_Q17	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 geodatabase file containing, as line features, the most recent spatial data for all circuit segments 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) e) If the answer to part (a) is no, does PG&E intend to develop PSPS risk scores for circuit segments? f) If the answer to part (b) is no, does PG&E intend to develop EPSS risk scores for circuit segments?	Holly Wehrman	2/10/2023	3/29/2023	3/29/2023	2	N/A	PSPS/EPSS	N/A	N/A
Pre-Discovery 43	CPUC - SPD (Safety Policy Division)	001	SPD_001	1	SPD_001_Q1	REFCL Inquiries: •REFCL Pilot at Calistoga Circuit Segment ID 1102131531 oDescribe various active settings profiles. oDescribe how staged fault testing is planned to be conducted. oExplain how REFCL rides through momentary faults & 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	Wendy Al-Mukdad	2/23/2023	3/9/2023	3/9/2023	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	SPD_001	2	SPD_001_Q2	EPSS & Supporting Technologies (DCD & Partial Voltage Detection) Inquiries: •Explain all activities planned to mitigate EPSS reliability impacts. oAre 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. oExplain 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. oExplain 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	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	SPD_001	3	SPD_001_Q3	EPSS & REFCL Inquiries: •EPSS vs REFCL – Describe the major similarities and differences. oWhat 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. oExplain why EPSS is preferred if REFCL fault energy is less than 10% of EPSS fault energy for low impedance faults. oExplain the effectiveness of DCD vs REFCL on high impedance faults	Wendy Al-Mukdad	2/23/2023	3/9/2023	3/9/2023	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	SPD_001	4	SPD_001_Q4	General risk reduction inquiry: •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 undergrounded?	Wendy Al-Mukdad	2/23/2023	3/9/2023	3/9/2023	0	N/A	7.2.1	Wildfire Mitigation Strategy	Overview of Mitigation Initiatives and Activities
Pre-Discovery 47	Green Power Institute (GPI)	001	GPI_001	1	GPI_001_Q1	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.	Zoe Harrold	3/1/2023	3/14/2023	3/14/2023	0	N/A	All	All	All