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Witness: Thomas Long/Sylvie Ashford

PREPARED TESTIMONY OF
THOMAS LONG AND SYLVIE ASHFORD

ADDRESSING PG&E'S REQUEST TO ADD TO RATES COSTS BOOKED TO WILDFIRE MITIGATION PLAN AND FIRE RISK MITIGATION MEMORANDUM ACCOUNTS

ATTACHMENTS

Submitted on Behalf of

THE UTILITY REFORM NETWORK

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KIRKLAND & ELLIS LLP

PG&E Independent Monitor Report of November 19, 2021

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I. INTRODUCTION

A. Factual Background

On September 9, 2010 PG&E's 30-inch gas transmission line in San Bruno ruptured, exploded, and burned uncontrollably for hours while PG&E employees attempted to shut off the gas. The explosion destroyed the Crestmoor neighborhood in San Bruno and killed eight people: Lavonne Bullis, 82; Greg Bullis, 50; William Bullis, 17; James Franco, 58; Jacqueline Greig, 44; Janessa Greig, 13; Jessica Morales, 20; and Elizabeth Torres, 81.

Six years later, PG&E was found guilty by a federal jury after a multi-week trial of six felony violations. These included various felony violations related to Gas Operations recordkeeping and another felony violation for obstruction of justice concerning a National Transportation Safety Board investigation of gas pipeline testing. The guilty verdict resulted in the imposition of a federal monitor and the creation of this Monitorship in 2017. The initial foci of the Monitorship, as set forth in a January 26, 2017 judgment and Court order (Dkt. 916), were: (1) 15 technical requirements related to PG&E's Gas Operations; (2) PG&E's Compliance and Ethics program; and (3) PG&E's efforts to become a safer utility. Those areas are discussed below at Sections III-V.

The Monitorship proceeded along those lines from 2017 to 2018. In late 2018 and early 2019, the Court expanded the scope of the Monitorship to include an assessment of PG&E's wildfire mitigation efforts following the 22 deaths and destruction caused by PG&E in the 2017 Northern California wildfires (including the Wine Country Fires and the North Country Fires), as well as the Camp Fire of 2018, in which 84 people were killed and the city of Paradise in Butte County was destroyed. Including the Camp Fire fatalities, over 110 people have died as a result of wildfires where CAL FIRE has determined PG&E equipment was involved since the San Bruno incident.[1]

[1] During the course of the Monitorship, the Monitor team did not investigate or make any determinations about the cause and origin of fires. Those issues were the province of many other authorities, including regulators and law enforcement agencies which took possession of certain evidence and sometimes initiated prosecutions, and numerous

Appended as Exhibit 1 is a list of the victims of those wildfires.

The Court's oversight of PG&E's wildfire mitigation efforts substantially augmented the scope of the January 2017 order. Since that time, the Monitor team's evaluation of PG&E's wildfire mitigation efforts has focused on four core areas: (1) vegetation management ("VM"); (2) infrastructure inspections and repairs; (3) system hardening; and (4) emergency preparedness and response. Those areas are discussed in Sections VII-X below.

PG&E wildfire mitigation efforts the past few years have been insufficient to stop wildfires caused by PG&E equipment. Each year since 2017, PG&E equipment has been associated with at least one catastrophic wildfire. That is obviously unacceptable, and PG&E must improve and fix this situation.

B. Overarching Themes

As explained below, PG&E has demonstrated progress within the scope of the Monitorship, and sometimes substantial progress. Regarding Gas Operations, PG&E's reform and improvement work, some of which began after San Bruno and before the Monitorship started, has been sustained and substantial. There has also been sustained and substantial improvement in the Compliance and Ethics area, although the Company needs to continue to try to overcome worker skepticism, particularly among longer-tenured employees, that the Company does not want to hear bad news and will retaliate for it, and that PG&E admonitions to "Speak Up" are not sincere.

Progress regarding wildfire mitigation obviously has been inadequate, and we doubt anyone would seriously dispute that, given the ongoing and profound safety issues in that area of operations.

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civil litigants and their attorneys with their own due process rights to present their own claims. The numbers here of deaths caused by PG&E come from data such as PG&E's 84 guilty pleas in June 2020 to involuntary manslaughter in connection with the Camp Fire and deaths, as well as CAL FIRE determinations on cause and origin of fires.

Nothing in this report purports to assert a factual finding or evidence concerning any pending or future litigation. These observations are intended to be candid comments based on our work as a Monitor team, but we did not conduct that work in a manner structured by state or federal adjudicatory rules or process.

As we have documented in prior Court filings, PG&E's initial steps in the wake of recent catastrophic fires were not planned and executed well. However, some of the key leaders who drove improvements in Gas Operations are now working on wildfire efforts, and hopefully they can drive similar positive change going forward.

We relate progress and issues in the various operational areas below. We also will discuss the six most salient challenges PG&E faces going forward, which are:

1. Retaining a core leadership team, in the wake of near constant turnover in recent years. During the four-and-a-half year Monitorship period alone, the Company has had five CEOs, six heads of Gas Operations, four heads of Electric Operations, and five heads of the Safety organization. Multiple other senior officers have otherwise turned over. PG&E also has had no less than 45 different board members during that time.

2. Continuing to improve records integrity, which has been an issue for PG&E for many years and remains a central challenge.

3. Continuing to improve contractor management, because contractors are a critical workforce base, including on the wildfire mitigation front.

4. Adhering to commitments to invest in long-term safety projects, including undergrounding efforts for electrical distribution lines and the repair and replacement of at-risk electrical equipment, and sustaining completion dates and not letting them slide.

5. Improving planning and execution of wildfire mitigation efforts.

6. Ensuring the employment of resources to improve wildfire safety does not result in cannibalization of gas safety teams and results that have been achieved during recent years.

II. SAFETY OBSERVATIONS

Safety observations are presented in roughly chronological order by subject matter. That is, the topics that were the subject of the original Monitorship are presented first. Newer subjects that were added by the Court in the aftermath of the Camp Fire and thereafter are presented second. Then observations of ongoing challenges are discussed.

Before proceeding, we wish to acknowledge the assistance and cooperation of several relevant parties during the period of the Monitorship. These include present and former government officials in San Bruno; family members of those killed in the San Bruno tragedy; federal law

enforcement officials, including agents, task force officers, and federal prosecutors; PG&E's United States Probation Officer; local officials in Paradise; and leaders and employees at PG&E, as well as its outside counsel on the Monitorship, Jenner & Block. The issues that arose under this Monitorship were and remain profound. There were many serious and extended discussions about progress or the lack thereof. During that entire period of time, we were met with professional and honest input from all of the persons listed above. We also wish to thank the external experts who assisted the Monitor team. They are some of the best safety experts in their respective fields, and we are grateful for their contributions.

III. GAS OPERATIONS

A. Introduction

This Monitorship was the result of PG&E's 2016 jury conviction in the U.S. District Court for the Northern District of California. That prosecution took place in the wake of the San Bruno gas explosion, which killed eight people, injured 58 more, and destroyed many peoples' homes. As a result, the original scope of the Monitorship naturally centered on PG&E's Gas Operations and ethics and integrity functions. Wildfire issues were not part of that scope.

After the Monitorship was established, we met with family members of some of the victims of the San Bruno explosion. The overwhelming message from them was they hoped the San Bruno tragedy would spur meaningful reform and change in PG&E's Gas Operations, so that no one would again suffer the losses that their loved ones and they had experienced.

The tragic deaths of the San Bruno victims and the federal prosecution have led to substantial progress in PG&E's Gas Operations since 2010. Since that time, there have been no customer fatalities or injuries caused by gas pipeline explosions, and as explained below, the Compliance and Ethics functions at the Company have improved. Measured within the confines of the original

Monitorship, the reforms and improvements in Gas Operations and ethics have been real and significant.

B. The 15 Technical Requirements

A substantial focus of the Monitorship as framed in the wake of the 2016 federal trial concerned 15 technical requirements designed to promote safer Gas Operations. PG&E has successfully completed several of these requirements, including some long ago. The other requirements are not of the nature that they are ever "completed," but rather focus on certain important safety practices that always admit of continuous improvement. As to these requirements, PG&E also has made substantial progress and is positioned to make more with sustained focus and effort. The challenge will be to maintain that focus, commitment of resources and talent, and continuous improvement once federal probation ends.

C. Progress Across the 15 Technical Requirements

Each of the 15 technical requirements is discussed here. The full list of technical requirements as set forth in the judgment is provided in Exhibit 2.

Requirement One focuses on PG&E's self-reporting system in Gas Operations. California Public Utilities Commission ("CPUC") regulations require PG&E to evaluate and self-report potential violations that it identifies. The Monitor team believes that PG&E's self-reporting system satisfies Requirement One. The self-report program includes appropriate information for evaluations, including submissions to the Corrective Action Program, employee notifications, internal and external audits, and submissions to PG&E's ethics hotline. The self-report team evaluates between six and twelve potential self-reports each week, and the evaluations are typically thorough and complete. Participants in self-report meetings include engineers, regulatory personnel, internal legal counsel, and other relevant stakeholders. Subject matter experts are engaged and consulted as necessary for technical issues. The self-report team's recommendations regarding self-

report letters, other notification to the Safety Enforcement Division, or "no notification" determinations are accepted by Gas Operations and not overturned or second-guessed. Regulatory Compliance personnel handle disposition of regulatory safety citations effectively and with appropriate priority and urgency.

Requirement Two is focused on PG&E's traceable, verifiable, and complete ("TVC") records supporting the Maximum Allowable Operating Pressure ("MAOP") of its transmission pipeline. PG&E initiated work in this area in advance of the start of the Monitorship, implementing multiple quality control and assurance steps. The Monitor team believes PG&E's efforts have been reasonable and consistent with the goal of identifying TVC records for MAOP validation. The NTSB also found PG&E's efforts to identify TVC records satisfactory and, on March 14, 2013, it issued a "Closed—Acceptable Action" letter for Urgent Action P-10-03.

Requirement Three sets forth a goal of strength testing at least 500 miles of gas transmission pipeline in 2017 and 2018. Requirement Three was closed out in early 2019 after the Monitor team confirmed that PG&E properly strength tested 540 miles of its transmission pipeline: 253 miles in 2017 and 287 miles in 2018. The Monitor team attended several of the strength tests and reviewed the results to confirm the accuracy of PG&E's mileage calculations. The Monitor team and our experts are also satisfied that PG&E properly utilizes strength testing as an ongoing integrity management tool for its transmission pipeline.

Requirement Four required upgrading and/or retrofitting 300 miles of gas transmission pipeline to accommodate in-line inspection tools in 2017 and 2018. As with Requirement Three, this requirement was closed out in early 2019 after the Monitor team confirmed that PG&E upgraded 397 miles of transmission pipeline: 154 miles in 2017 and 243 miles in 2018. The Monitor team and our experts inspected several upgrade projects in 2017 and 2018, evaluated project as-builts, and met with PG&E specialists to confirm scope of work completed.

Requirement Five focuses on data gaps in PG&E's transmission pipeline records and requires PG&E to make conservative, supportable assumptions when TVC data are not available. Prior to the Monitorship, PG&E had developed and implemented initial policies to address this requirement, including issuing the Procedure for Resolution of Unknown Pipeline Features ("PRUPF"). PRUPF is PG&E's guidance document concerning the use of conservative, supportable assumptions and includes mandatory assumptions for unknown specifications based on subject matter expert judgments and industry data. PG&E reviews PRUPF on an annual basis to determine if revisions are needed. The Monitor team believes PRUPF sets forth a conservative approach for missing data and that PG&E has satisfied Requirement Five.

Requirement Six requires PG&E to collect and incorporate leak data in one database for use in gas pipeline integrity management. PG&E has made progress to satisfy this requirement and adequately incorporates transmission pipe leak data into its database of record. PG&E currently holds monthly leak review meetings where members of the Transmission Integrity Management Program ("TIMP") group meet to evaluate transmission line leaks. While progress has been made, at its core, this is a records issue that needs continual effort and work. PG&E should enhance this process to reduce the need for a manual evaluation by improving its digital records and automating the incorporation of transmission leaks directly into its database of record.

Requirement Seven focuses on PG&E's efforts to ensure that it is collecting adequate and quality data as inputs for its Gas Transmission Integrity Management Program. Over the course of the Monitorship, the Monitor team evaluated PG&E's data gathering, collection, and review processes across relevant gas data sources for its Integrity Management Program. At this time, the Monitor team believes that those efforts substantially meet the requirements of 49 C.F.R. Part 192.917(b) and ASME B31.8S. The Monitor team concluded that PG&E properly identifies the individual data elements required for its threat and risk modeling work, and PG&E has conducted

gap analyses to inform its remediation of observed deficits in its data gathering requirements. PG&E's Gas Operations models appropriately identify the necessary data and the organization is focused on improving the data inputs for those elements. This is a "continuous improvement" area, and it merits sustained focus because of its impact on gas pipeline safety.

Requirement Eight required PG&E to develop and update an Integrity Management Program that is "effectively assessing and evaluating the integrity of each covered segment" of gas transmission pipeline. The Monitor team believes that PG&E has an appropriate Integrity Management transmission risk model for Gas Operations which satisfies the requirements of ASME B31.8S and meets NTSB recommendation P-11-29. The risk model is comprehensive and properly incorporates data consistent with ASME B31.8S.

Additionally, the Monitor team has seen improvement in the annual update cycle for the risk model each year. In the 2018 annual model update cycle, the Monitor team observed process deficiencies and a lack of rigor in PG&E discussions and analyses and we raised our concerns with the TIMP organization. In 2019, TIMP made substantial improvements to the process and those have been maintained and developed in each of the past two update cycles, through 2021. The TIMP program is on the right course, particularly with the implementation of its recently issued five-year roadmap for the risk model's development. This is a "continuous improvement" area, and it merits sustained focus because of its impact on gas pipeline safety.

Requirement Nine focuses on PG&E's efforts to reclaim and maintain its right of way over its gas transmission pipeline. As with some other requirements, PG&E implemented procedural reforms related to encroachments even prior to the Monitorship. Currently, PG&E has not yet completed its remediation of encroachments identified as part of the 2010 centerline survey, although the gap is modest and the function of forces beyond PG&E's control. More specifically, as of June 2021, 99% of legacy structural and vegetative encroachments have been removed and

there are 9.28 miles of vegetative encroachments (out of 1,544 miles initially identified) and eight structural encroachments (out of 2,613 initially identified structures) remaining. In the remaining instances, corrective measures have been delayed by litigation or municipalities blocking the work. Nonetheless, the Company plans to address the remaining structural encroachments by the end of 2021 and to remove the remaining vegetation by the end of 2022.

In addition to remediating legacy encroachments, PG&E's ongoing program to ensure that no new encroachments occur is appropriate. Employees conduct annual patrols, and PG&E leverages its aviation technology to assess the centerline and any potential encroachments.

Requirement Ten focuses on PG&E's assessment and evaluation of stress corrosion cracking in its gas transmission pipeline. The Monitor team and our experts have reviewed PG&E's Stress Corrosion Cracking ("SCC") threat assessment model and analysis and concluded that PG&E properly identifies, evaluates, and addresses the SCC threat. Additionally, the Monitor team assessed four gas transmission pipeline segments that had SCC-related leaks and found that PG&E's procedures properly account for risks on those segments.

Requirement Eleven requires PG&E to implement procedures to ensure that relevant data are incorporated into gas threat identification and assessment procedures. PG&E's threat logic and assessment procedures appropriately consider relevant data for purposes of identifying threats recognized pursuant to applicable regulations and standards. In the past year, under new leadership within TIMP, PG&E has undertaken an effort to improve the accuracy and stability of its threat identification logic to better reflect real-world mileage subject to various threats, which was a necessary improvement. The new initiative aims to align threat identification and field assessments to calibrate PG&E's Integrity Management Program with real-world risk. The new initiative reflects a focus on continual improvement of data, records, and risk modeling in Gas Operations, which must continue in the future.

Requirement Twelve focuses on PG&E's efforts to identify High Consequence Areas ("HCAs") across its gas system. Since San Bruno, PG&E has developed a thorough process for identifying class locations, HCAs, and, under the new federal PHMSA Mega-Rule, Medium Consequence Areas ("MCAs"). PG&E reported in its 2020 HCA study that there were a total of 1,593 miles of HCAs and 821.3 miles of MCAs, which will help in risk assessment and oversight prioritization. In 2020, an additional 1,985 pipeline sections (totaling 19.02 miles) were added to HCAs, and 24 pipeline sections (totaling 0.32 miles) were de-designated as HCAs. The Monitor team and our experts assessed two pipeline segments for which the HCA designation was removed, and we are comfortable with PG&E's decisions.

PG&E has taken several steps to improve its HCA and MCA determination processes such as using enhanced structures databases. This is the sort of continual improvement that PG&E must sustain and that the people of California should expect.

Requirement Thirteen focuses on PG&E's ability to incorporate changed circumstances into its risk planning, consistent with ASME B31.8S. The Monitor team believes that PG&E has satisfied this requirement, although there is opportunity for continued progress. Over the course of the Monitorship, the Monitor team has seen improvements in PG&E's efforts and ability to incorporate changed circumstances. Within TIMP there is now a dedicated Continual Evaluation ("CE") Group specifically tasked with this function. The CE Group evaluates Company and industry trends and is conducting longer-term pilot projects to calibrate threat models with field data (for example, third-party damage) through machine learning applications. These are examples of positive, continual improvement under this requirement.

Requirement Fourteen focused on ensuring that PG&E ceased its ill-advised legacy practice of raising pressure in its pipeline to the perceived maximum allowable pressure to re-establish "system MAOP." This requirement was successfully completed. The Monitor team and

our experts verified PG&E's representations that it had ceased this practice shortly after the San Bruno tragedy through an independent audit of pressure data in various PG&E pipelines. There was no indication in any of the reviewed data that any planned pressure increases were taking place. Additionally, the Monitor team verified that any pipeline traditionally put through the "planned pressure increase" program to establish system MAOP had been assessed through: (a) strength testing, (b) replacement, or (c) down-rating of applicable operating pressure.

Requirement Fifteen focuses on proper calculation of cyclic fatigue and fatigue life of the gas pipeline system. The Monitor team and our experts believe PG&E's methodology for calculating fatigue life, which was designed and implemented by external consultants, is consistent with and more conservative than industry standards, which enhances the safety of PG&E's gas transmission system. The Monitor team collected data for 11 pipeline segments and performed an independent fatigue life calculation in accordance with industry standards. This data and analysis supports the Monitor team's conclusion that the cyclic fatigue calculation methodologies employed are consistent with and more conservative than industry standards.

D. Gas Operations Challenges

While Gas Operations has done a good job in focusing on the technical requirements and making progress against those targets, it has faced challenges as well. These episodes reflect the need for continued vigilance. Our hope is that the efforts to work together through the issues discussed below and others have enhanced the capacity of PG&E Gas Operations to successfully confront similar issues alone in the future.

For instance, there was a rise in overpressure events in 2019 and through mid-year 2020. Overpressure events, even small ones, are significant issues, and because the numbers were above PG&E's targets and the trend was moving in the wrong direction, the Monitor team flagged the issue in the fall of 2020. At that time, there was an Overpressure Elimination Program ("OEP")

with a goal of changing training and workflow by the spring of 2021. Because 2020 had already seen nine large overpressure events (defined by PG&E as an exceedance more than 10% beyond MAOP), that timeline required more urgency and we notified and engaged with senior management in Gas leadership to secure that commitment. Once senior Gas leadership became directly involved, that timeline quickly accelerated and the OEP rolled out additional training earlier, worked on identifying root causes and root cause trends across the overpressure events, and continued work on pipeline design changes. So far, 2021 has seen a reduced number of large overpressure events and, when they do occur, cause evaluations are conducted promptly and lessons learned are distributed quickly. Overall, this is a positive story.

As another example, over the summer and fall of 2018, PG&E personnel reviewed all leak cancellation notifications entered from January 1, 2014 through August 1, 2018 because of a concern that leak notifications that had been improperly canceled (for example, cancelled without documentation supporting a conclusion that a leak was no longer emitting pipeline gas). Given the uncertainty regarding the leak records, the Company expeditiously re-inspected approximately 47,600 canceled leak notifications. Coming out of this process, in Q4 2018, PG&E created a working group to assess its leak survey and closure process, and thereby to identify opportunities for improvement across all leak survey work and leak survey tools.

One of the instructions coming out of this working group was that a "Leak Cancellation Desk" should be established. Although efforts were made within PG&E's Leak Survey group to establish the Leak Cancellation Desk, these efforts foundered such that, by the summer of 2019, the Leak Cancellation Desk still had not been created. Because it failed to timely establish the Leak Cancellation Desk, PG&E again had to conduct a re-review and re-survey process for approximately 8,000 canceled leak notifications, this time for the period between September 1, 2018 and June 30,

2019. After the second re-review project, the Leak Cancellation Desk was actually established, it has been refined over time, and its work continues today.

Overall, the recent history of reform and improvement in Gas Operations is positive. There are two main risk factors to this improvement. The first is the risk of complacency—of assuming that things will remain good when, in fact, every day requires constant vigilance. The second risk is that the people who drove much of the reform and improvement in Gas Operations (including the current Chief Risk Officer, Sumeet Singh) have often been moved to wildfire issues related to Electric Operations. This is to some degree inevitable and prudent given recent lethal problems and issues with wildfires. However, thoughtful analyses and assessments must be made as to when additional resources are needed overall, including in Gas Operations, to prevent cannibalization of the efforts to drive progress in Gas Operations since San Bruno.

IV. COMPLIANCE AND ETHICS

In addition to the 15 individual requirements, the Monitor team was tasked by the January 26, 2017 Court order "to assure PG&E's compliance with the goals outlined in the United States Sentencing Guidelines Section 8B2.1: Effective Compliance and Ethics Program." (Dkt. 916). The Federal Sentencing Guidelines require measures to prevent, detect, and address criminal misconduct and to promote an organizational culture that encourages ethical conduct and a commitment to compliance with the law. U.S. Sentencing Guidelines Manual § 8B2.1 (2021). Such a compliance and ethics program "shall be reasonably designed, implemented, and enforced so that the program is generally effective in preventing and detecting criminal conduct." *Id.* § 8B2.1(a). The Monitor team believes that PG&E's Compliance and Ethics ("C&E") program is consistent now with these requirements.

PG&E's central C&E department promotes legal compliance and ethical behavior, guides Lines of Business ("LOBs") in implementing PG&E's C&E agendas, and reports on C&E

performance. During the course of the Monitorship, and under the leadership of people like Julie Kane, John Simon, and Alex Vallejo, PG&E has established an appropriate governance structure to foster communications with the LOBs. PG&E's C&E-related governing bodies and senior leaders, including its Board of Directors and Compliance and Public Policy Committee at the Board-level, and its Compliance, Ethics, and Audit Committee at the operational level, are engaged in understanding and providing oversight and guidance for PG&E's C&E program. Monthly joint Compliance and Ethics Leadership Team ("CELT") and Compliance Liaisons meetings, focused on day-to-day implementation of C&E strategies, provide an efficient means for discussing and shaping the C&E agenda and coordinating among C&E stakeholders. PG&E should continue to make conversations between LOB leaders and their designated C&E professionals a regular feature of the LOBs' C&E activities to ensure adequate messaging and alignment and to help PG&E's C&E program gain traction in the field. Such direct coordination with and support from senior leadership are essential to empowering CELT members and Liaisons to effectively execute on and drive PG&E's C&E agenda, including into the broader workforce.

PG&E's C&E programs and practices are guided by and assessed under a compliance "Maturity Model." The Maturity Model establishes a C&E framework with eight elements based on the Federal Sentencing Guidelines. The C&E team has also developed an oversight model for PG&E's top 35 compliance risks, assigning each to one of four levels of central C&E oversight. PG&E's recent shift to risk-informed compliance work is consistent with heightened focus on such an approach by PG&E's regulators. While adapting to regulatory trends and changing circumstances is appropriate and consistent with the DOJ's emphasis on having an evolving and tailored C&E program, PG&E should ensure that its new approach includes sufficiently objective, systematic oversight of PG&E's C&E performance.

Promoting a compliant and ethical culture, particularly through PG&E's "Speak Up, Listen Up, Follow Up" initiative, has been an appropriate and central focus for the C&E team throughout the Monitorship. One highlight of efforts is PG&E's roughly 80-member Ethics Council, comprised of employees from all levels of PG&E— including critically, field personnel—which meets monthly with the goal of promoting a culture that embraces and advances ethical behavior in PG&E's operations and employee relationships. These meetings provide an important opportunity for employees across the organization to have frank discussions about C&E issues with senior leaders, and PG&E should continue to promote such openness. Although the Company continues to face impediments to a culture of speaking up, including employee fear of retaliation, the Monitor team believes PG&E is committed to and making meaningful strides toward effecting culture change.

The Monitor team encourages PG&E's C&E leaders to continue to amplify and drive forward PG&E's core C&E agenda and messages to make clear that they are enduring and that the Company is committed to their effective implementation. It is imperative that PG&E work assiduously to earn the trust of its workforce, who (especially among longer-serving PG&E personnel) often doubt whether their managers and supervisors actually want to hear bad news. This commitment also includes ensuring that PG&E's C&E program is resourced and empowered to function effectively and that PG&E has objective, systematic means for ensuring accountability and assessing and monitoring its C&E program and performance. New and unexpected challenges will continue to arise. PG&E's C&E program must be adequately resourced and cultivated to withstand those challenges.

V. SAFETY AT PG&E

At the outset of the Monitorship, it is likely that nobody anticipated the scope of the Company's profound public safety issues, with more than 110 PG&E customers killed in recent years due to wildfires associated with PG&E equipment. PG&E needs to take complete ownership

of those deaths—by focusing on public safety, and by doing all that it can to protect its employees and contractors from the risks they face in their jobs and the public from the risks it faces when PG&E employees and contractors do not do their jobs effectively.

PG&E's Safety program now sits at the enterprise level and is managed and overseen by the Chief Safety Officer and Senior Vice President of Enterprise Health and Safety ("EH&S"). In June 2021, PG&E began implementing a regionalized model for the EH&S organization, which includes Regional Safety Directors with LOB, functional, and regional responsibilities. The Regional Safety Director for the Central Coast Region is responsible for supporting safety in Gas Operations, and the Regional Safety Director for the North Coast Region is responsible for supporting safety in Electric Operations.

In addition to organizational changes, PG&E is implementing a comprehensive, long-term plan, the "2025 Safety Plan," which, at a high level, aims to improve safety by addressing both PG&E's existing systems and its safety culture. In terms of systems, the plan primarily focuses on incorporating critical risk management into the Company's work, refining and improving safety standards, ensuring the universal use of effective safety tailboards, and managing public safety. This also includes a focus on contractor management, which is essential to improving safety in the future. In parallel, PG&E has continued its efforts to implement an Enterprise Safety Management System, which, after significant delays, the Company developed and began to implement throughout 2020 and 2021. To improve safety culture, the 2025 Safety Plan aims to increase and improve safety observations in the field; incorporate safety into hiring decisions, performance appraisals, and trainings; and assess and improve PG&E's safety culture using the National Safety Council's Safety Barometer Survey and associated action development and management template. It is important that PG&E stay committed to a strategic long-term safety plan and allocate sufficient resources to that plan. Additionally, given PG&E's ongoing leadership turnover, it is important that incoming

leaders in all roles fully commit to PG&E's plans. No organization can sustain long-term progress if there is substantial turnover of senior leaders, with each wave of leaders having their own particular priorities, even if each wave and individual operated during their respective brief tenures in good faith.

Further, management engagement with field-level employees is essential to improving safety, including by reducing injuries and fatalities. PG&E's emphasis on grassroots safety teams and engagement with its workforce as changes to policies and work procedures are made are important steps in becoming a safer organization. While PG&E has made progress, the Monitor team encourages the Company to continue its efforts to empower employees and contractors to raise safety issues, such that employees and contractors feel confident in their obligation and ability to stop work if they are concerned about safety. Importantly, the Company should also continue to provide employees contractors with the tools and support needed to mitigate safety issues.

VI. WILDFIRE MITIGATION EFFORTS

The Monitor team's work concerning PG&E's Electric Operations and wildfire mitigation efforts substantially began in early 2019, following multiple years of horrific wildfires. At that time, the Court imposed a number of probation conditions designed to promote safer and more thorough wildfire abatement efforts by PG&E. These included requiring PG&E to comply with all vegetation management laws; to meet the targets in its state-approved wildfire mitigation plan; to maintain traceable, verifiable, accurate and complete records; and to ensure that sufficient resources, both financial and personnel, were devoted to achieving the conditions of probation. The Court also ordered the Monitor team to conduct field inspections of PG&E's vegetation management and electric equipment work. (Apr. 3, 2019 Order, Dkt. 1040). The Court has since modified and augmented PG&E's conditions of probation on several occasions. *See* Exhibit 3.

PG&E's performance in Electric Operations has not matched its performance in Gas Operations and Compliance and Ethics. As detailed in prior reports to the Court, PG&E made many errors in design and execution of wildfire abatement efforts from the beginning of probationary review. *See, e.g.,* July 26, 2019 Letter to the Court, Dkt. 1089 (highlighting substantial numbers of missed trees and recordkeeping issues within PG&E's EVM program); Oct. 16, 2020 Letter to the Court, Dkt. 1247-1 (highlighting the lack of risk prioritization of PG&E's EVM work and deficiencies in PG&E's System Inspections program). Much more progress is required, both quickly and over a sustained period of years, as detailed below.

We doubt anyone would seriously contend that PG&E's performance has been even adequate, or that substantial improvement is not still imperative, given the staggering losses of life and property caused by recent wildfires for which the Company has either pleaded guilty criminally or otherwise been determined responsible. While progress is occurring, and should be recognized, there is a long way to go. Sustained, focused, and unwavering commitment in the future will be required to achieve stated goals.

By way of background, PG&E conducts its wildfire mitigation work pursuant to a Wildfire Mitigation Plan ("WMP") submitted to and approved by the CPUC, and this year, the California Office of Energy Infrastructure Safety. That WMP contains targets and metrics that form the basis of PG&E's annual wildfire mitigation work. The Monitor team does not only focus on whether PG&E meets the CPUC approved targets (the Company largely has, despite the tremendous wildfire damage caused). Rather, we focus also on *how* PG&E meets those targets and metrics, in terms of the quality of the work, and whether work is performed so as to reasonably maximize risk-mitigation. We evaluate those efforts through regular discussions with PG&E leadership, employees, and contractors performing the work (both in the office and in the field), as well as our

own field inspections of PG&E work. Information collected from that work forms the basis of our observations discussed herein.

As stated, PG&E substantially complies with the numerical targets set forth in the WMP, and where there are misses from CPUC requirements, they are oftentimes not far off. This is important because despite substantial compliance with the mitigation plans, PG&E's equipment continues to cause wildfires. We understand that the WMP process was meant to be a multi-year process, with the goal of substantially reducing wildfire risk over time. While that may be the case, the Monitor team emphasizes that achieving the targets and metrics in the WMP, as they have been set since 2019, has been insufficient to stop lethal wildfires. And since 2019, some core WMP targets, as submitted and approved, have been *decreasing* year over year, not increasing, including in PG&E's Enhanced Vegetation Management ("EVM") program. So while the path to success under the WMP process is an extended one, the Company would be well served to take a more aggressive approach to wildfire mitigation than it has in the past to stop wildfires today, understanding there are longer term initiatives that are also key, such as infrastructure replacement, which PG&E has identified is one of its most important safety steps going forward.

Notwithstanding the shortcomings and needed improvements in PG&E's wildfire mitigation efforts described below, there have been some positive steps. Perhaps one of the largest and most important improvements we saw during the Monitorship was the amount of resources and leadership brought to bear on the Company's risk-based planning and prioritization of wildfire mitigation work. There was a turning point in the fall of 2020, when PG&E's then new Chief Risk Officer Sumeet Singh established the Wildfire Risk Governance Steering Committee, comprised of various Company leaders whose divisions perform wildfire mitigation work. As a result of the efforts of this Committee and the Chief Risk Officer, all wildfire mitigation work performed by PG&E pursuant to the WMP underwent project-level selection, planning, scrutiny, and deliberation before

a committee whose focus, in sum, was to ensure the highest risk work was being addressed sooner rather than later according to PG&E's models.

This was important because addressing the highest risk work sooner rather than later was PG&E's stated goal when it first published its 2019 WMP, but that is not what was happening until PG&E's Chief Risk Officer changed the trajectory and focus of the Company's wildfire mitigation efforts in the fall of 2020. Prior to that time we raised to both PG&E and the Court that the Company had been completing the majority of its EVM work on lower priority circuits according to its own risk models. *See* Oct. 16, 2020 Letter to the Court, Dkt. 1247-1. That is no longer the case, and PG&E is on a better path now from a risk based planning and work execution perspective. That makes the people and State of California safer, but continued vigilance over the risk-based planning and execution of work will be necessary. Otherwise, work can get "done" and state requirements and targets can be "met," but with suboptimal corresponding risk-reduction.

VII. VEGETATION MANAGEMENT

VM is a critically important aspect of wildfire mitigation. From 2017-2021, as of October 13, 2021 data, PG&E has reported approximately 259 ignitions caused by vegetation striking PG&E's distribution assets in high fire-threat district ("HFTD") areas. Given the very real and catastrophic potential consequences of an ignition in PG&E's HFTD service territory, there is little room for error in vegetation management work, and the Company should promote a culture that does not tolerate any error in VM. To be sure, VM work is complex given the volume and dynamic nature of trees that threaten PG&E's electric lines. Tree growth and tree failure cannot be precisely predicted. But the reality of that challenge underscores the importance of devoting sufficient resources to ensure that vegetation risks are mitigated effectively, including by adopting more conservative trimming measures that remove guesswork and subjectivity as much as possible, while also maintaining vegetation in accordance with applicable regulations and PG&E policy. PG&E

would also benefit from adopting a uniform, territory-wide, and year-round approach to vegetation management scope and trimming in high fire-threat areas—one that exceeds regulatory minimum requirements.

Our work in vegetation management has focused on five main areas: (1) quality of work execution; (2) prioritization of work in terms of risk abatement; (3) scope of work; (4) recordkeeping; and (5) contractor management. The field inspection component of the Monitor team's review of PG&E's VM efforts began in the summer of 2019.

PG&E's VM organization has improved work quality since 2019. The Monitor team's field inspections have revealed that the percentage of trees missed by PG&E's EVM workers has decreased. PG&E has also taken significant recent steps to align the work being performed in the field with the risk-based priorities established by the Company's leadership—an alignment that was unacceptably missing in 2019 and 2020. However, in other areas, such as enhanced hazard tree assessments in HFTD areas and needed records improvements, PG&E concedes the need for improvements but has not yet effectively established or demonstrated sufficient reforms.

A. Background

PG&E's transmission and distribution lines receive annual vegetation inspections as a part of the Company's Routine VM program. During Routine VM work, PG&E is supposed to trim trees with potential to grow within the minimum clearance distance delimited by California regulations and remove hazard trees that pose a risk of striking the lines. In 2019, PG&E included EVM as a more robust component of its WMP commitments, pursuant to which PG&E agreed to perform enhanced tree work on select distribution circuits within HFTDs, with the ultimate goal of performing enhanced work on all 25,500 HFTD miles at some point during the multi-year EVM program. Enhanced work includes tree removals based upon region-specific tree-species analysis

and clearance of limbs overhanging primary distribution conductors. EVM records are largely administered through software referred to as Arc Collector.

B. Quality of Work Execution

The Monitor team assessed the quality of PG&E's VM work execution via various means, including unannounced field inspections performed in HFTDs as specified in the Court's probation order (Apr. 3, 2019 Order, Dkt. 1040). Field inspections are performed on distribution conductor segments subject to EVM and segments subject to Routine VM, that is, areas where EVM has yet to be performed, which includes the vast majority of PG&E's high threat areas.

As a general matter, the Monitor team sought to inspect at least 10% of PG&E's annual EVM mileage goal each year, but the mileage inspected was higher in 2019 due to PG&E's EVM scope changes and lower in 2020 due to COVID travel restrictions and statewide stay-at-home orders. When the Monitor team began inspecting PG&E's fieldwork in summer 2019, we inspected 130.49 miles and identified a substantial number of trees that were out of compliance with PG&E's EVM scope of work as reported in detail in a letter to the Court dated July 26, 2019, Dkt. 1089. Over half of the segments we inspected did not conform to the EVM scope. After several discussions between PG&E and the Monitor team in July and August 2019 regarding these deficiencies, PG&E implemented a new scope of work, new training materials, and a new training program. Since then, the Monitor team has noticed improvement. In fall 2019, the Monitor team inspected 323.93 miles of EVM work. Out of 25,165 trees inspected in fall 2019, the Monitor team identified 203 hazard trees, 33 radial clearance issues, and 119 overhang issues. In other words, 98.6% of strike trees—trees tall enough to strike electric assets—inspected by the Monitor team were in compliance with the EVM scope. In 2020, the Monitor team inspected 42.03 miles of EVM work. Out of 11,280 trees inspected in 2020, the Monitor team identified 83 hazard trees, 34 radial clearance issues, and 32 overhang issues. 98.7% of strike trees were thus in compliance with the

EVM scope. So far in 2021, the Monitor team inspected 199.75 miles of EVM work. Out of 32,269 trees inspected in 2021, the Monitor team identified 77 hazard trees, 24 radial clearance issues, and 53 overhang issues. That is, 99.5% of strike trees have been compliant with EVM scope in 2021. For additional year-over-year statistics from Monitor team EVM inspections, *see* Exhibit 4.

For areas not subject to EVM work, but still within the HFTD service territory (Routine VM), the Monitor team inspected 13.95 miles in summer 2019; 22.32 miles in fall 2019; 20.13 miles in 2020; and 138.71 miles in 2021. The Monitor team increased its mileage in 2021 because prior years' inspection results indicated that additional attention to Routine VM in HFTDs was warranted because of underperformance in that program as compared to EVM. Out of 4,661 trees inspected by the Monitor team in fall 2019, the Monitor team identified 59 hazard trees and 41 radial clearance issues. That is, 97.85% of strike trees were in compliance with the Routine VM scope in fall 2019. Out of 2,645 trees inspected in 2020, the Monitor team identified 19 hazard trees and 20 radial clearance issues. In 2020, 98.53% of strike trees were in compliance with the Routine VM scope. Thus far in 2021, out of 23,025 trees inspected, the Monitor team identified 268 hazard trees and 55 radial clearance issues. That is, 98.6% of trees have been in compliance with the Routine VM scope in 2021. For additional year-over-year statistics from Monitor team Routine VM inspections, *see* Exhibit 5. The Quality Management inspections performed by PG&E's internal group have identified a similar percentage of missed trees. PG&E's internal VM Quality team efforts are an improvement by PG&E during the last couple years. That is, PG&E recently has self-identified shortcomings and instituted corrections better than it historically has.

While PG&E's improvement from 2019 to 2021 on EVM is encouraging, these results are currently inadequate because they still allow very substantial wildfire risks even in EVM-worked areas. The Monitor team continues to find hazardous trees in the field missed by PG&E's workers. *See* Exhibit 6. While the analogy is admittedly imperfect, we doubt that a vehicle brake

manufacturer, or even officials in PG&E's nuclear or gas operations, would be satisfied with a 1.5% miss rate on important safety work. Moreover, extrapolating the Monitor team's inspection statistics across PG&E's full HFTD service territory suggests that approximately 60,000 trees were missed by PG&E in 2021, even after Enhanced and Routine vegetation management work. That is an unacceptably high number, given the threat each missed tree poses and the collective threat posed by such a volume of misses. As discussed further in Section VII.D below, enhancements to PG&E's scope of work, and better contractor management, may allow for greater risk mitigation.[2]

C. Prioritization of Work

The Monitor team's findings from our field observations and data analyses suggested that PG&E completed the majority of its 2019 EVM work in relatively low-risk portions of its HFTDs according to the Company's risk model. That unsatisfactory dynamic continued in 2020, with work spread roughly evenly across the highest and lowest ranked circuits under applicable risk models. *See* Oct. 16, 2020 Letter to the Court, Dkt. 1247-1. Put differently, while PG&E was "meeting state requirements" by doing sufficient EVM work in HFTDs, the parts of the HFTDs where actual work was being completed were not the highest risk portions of the HFTD. As a result, the "meeting requirements" approach achieved formalistic compliance with CPUC requirements without reducing risk in a commensurate way.

As noted, in the wake of concerns raised by the Monitor team about this approach (*see, e.g.,* Oct. 16, 2020 Letter to the Court, Dkt. 1247-1), PG&E has made significant improvement in the risk-based prioritization and execution of work in 2021. The Company developed a tree-weighted risk model for 2021 and committed to performing nearly all 2021 EVM work within the top 100

[2] To be clear, not every fire can be prevented through vegetation management; for example, a terrible wildfire could be caused by lightning alone and neither PG&E (nor any utility) would be responsible. There are other examples (irresponsible campers, animals, and large birds, etc.). However, when PG&E and its contractors perform vegetation work in high-threat areas, it is important that results are as close to 100% correct as is humanly possible, given the role EVM and VM play in risk mitigation and wildfire deaths.

circuit protection zones. This year, for example, PG&E has performed over 80% of EVM work in the top 10% of riskiest areas—to put that number in perspective, that percentage was only 18.6% in 2019, and even lower, 6.3% in 2020. *See* Exhibit 7 (showing percentage of EVM miles completed in 2019-2021 within the top 10% of risk-ranked circuit miles under PG&E's models each year). The Monitor team commends PG&E, and in particular its Chief Risk Officer, for the quick pivot to ensuring consistent use of a risk-based approach for EVM work in 2021 and, we expect, beyond.

D. Scope of Work

PG&E's scopes of work in both Routine VM and EVM could be improved to ensure that vegetation risks are better mitigated. First, PG&E limits radial clearance trimming to trees capable of growing within the minimum clearance distance within one year and limits Routine VM hazard tree removals to trees that could fail within one year. A more conservative approach would help ensure that risks are mitigated before they materialize, while further reducing potential error in what is oftentimes a difficult, subjective determination.[3]

Second, PG&E's EVM work—which goes above and beyond the minimum compliance requirements of Routine VM—is being performed slowly, that is, on *less than 10%* of the HFTD annually. Put another way, despite all of the emphasis the Company places on EVM, 90% (or more) of PG&E's HFTD territory annually is left untouched by the EVM program. The Company stated in 2019 that it expected to perform at least 2,450 miles of EVM work per year, with the goal of finishing EVM on all HFTD circuits by the end of 2026. But PG&E's annual targets decreased in 2020 and 2021 to 1,800 miles (and were approved at those levels by the CPUC). If this pace continues, the Company will need more than 10 years to complete EVM work on the HFTDs. Given

[3] We appreciate that state regulators may have views about the appropriate amount of clearance distances PG&E can create. We do not purport to speak for the CPUC and other regulators of course. However, given the severity and ferocity of recent wildfires, we would hope everyone would keep an open mind about more aggressive fire prevention efforts and whether regulations may need to be modified in light of tragic recent history.

the threat of wildfires in California, and the existence of a more effective EVM program, the Monitor team respectfully believes that PG&E should not limit its EVM targets to 1,800 miles per year out of the 25,500 HFTD miles.

One consequence of PG&E's limited annual target for EVM is that most trees across its HFTD service territory are not receiving detailed hazard tree assessments, which presently do not occur under the Routine VM program. PG&E developed a Tree Assessment Tool ("TAT") for EVM, which requires thorough inspection of trees—including, for example, 360-degree assessments. Because EVM is only performed annually on approximately 10% (now less) of PG&E's HFTD service territory, the great majority of trees to date have not received detailed 360-degree or TAT inspections on an annual basis. The Monitor team was also concerned that, after segments completed EVM, PG&E was not maintaining those segments to the EVM scope in future years. For example, vegetation "overhanging" the primary conductors was being cleared to the sky under EVM, but that conductor-to-sky clearance was not being maintained in future years. After discussing these issues with the Monitor team, PG&E recently informed the Monitor team that it soon will require 360-degree tree assessments in all HFTD areas by augmenting its Routine pre-inspection program and will maintain EVM-completed segments to the EVM scope going forward. Both are prudent initiatives, and demonstrate significant commitments, improvements, and investments.

Another consideration for PG&E is to implement a single, enhanced scope of vegetation work applicable to all HFTDs that applies year-round and exceeds regulatory requirements. This would bring uniformity to the vegetation management approach in HFTD areas, eliminate contractor confusion regarding scope, improve recordkeeping and, most importantly, result in greater annual risk reduction in HFTD areas.

E. Recordkeeping

Traceable, verifiable, accurate, and complete records are essential for ensuring public safety. From the beginning of the Monitor team's review of VM work, we have identified significant recordkeeping issues—which, to be fair, are often the result of decades of issues and conflicting systems, not merely recent developments or lack thereof. Nonetheless, that is an explanation and not an excuse, and this is an area where improvement will promote safer operations.

In 2019, we observed that PG&E's electronic Arc Collector maps sometimes reflected that electric conductor segments and trees were in the wrong location, inconsistent data was often recorded (such as trees assessed for removal as hazards but then given a prescription of "no work required"), and EVM work verification data was sometimes being deleted from the Arc Collector system. *See* July 26, 2019 Letter to the Court, Dkt. 1089, at 21-27.

In response to the Monitor team's recordkeeping feedback, PG&E made significant changes to its system in September 2019. Those changes included modifying how work was recorded, so that EVM work verification data would not be deleted, and instituting data checks to ensure that certain conflicting or missing data are fixed. PG&E also collected aerial Light Detection and Ranging ("LiDAR") data in early 2020 to improve the location of its electric conductor segments.

PG&E's technology team often fixes data issues, once identified, quickly. For example, in October 2020, as described in a letter to the Court dated Oct. 16, 2020, Dkt. 1247-1, the Monitor team observed a tree singed from contact with a primary conductor. A pre-inspector had twice flagged the tree as a "Priority 2 tag" to be worked within 30 days, but that pre-inspector did not have access to the database used to generate Priority 2 tags, and the work request was never generated. After the Monitor team raised this issue, the Company immediately identified the gap in its process and, in relatively short order, built a new mobile application through which any VM worker can

generate Priority tags. That is certainly helpful, but the goal must be to have a system where self-correction (without an external force) is routine.

Despite these improvements, PG&E's records are still not sufficiently reliable. First, PG&E plans to unify its fragmented VM records databases into a single tool, but the tool has not yet been developed and will not be applied to all VM programs until 2023 or 2024. Second, approximately one-third of the circuit maps were never updated from the inaccurate versions used in 2019. PG&E is undertaking a circuit-by-circuit process of updating the maps yet again, but the Monitor team continues to observe inaccuracies in even the newest maps. *See* Exhibit 8. Third, the Monitor team continues to observe inconsistent data within PG&E's records systems. *See* Exhibit 9. In sum, PG&E's progress in addressing the accuracy and integrity of its VM records has been slow. Given the history of recordkeeping issues with the Company, improvement here needs to remain a focus and priority.

F. Contractor Management

PG&E relies on contractors to perform its VM work. Accordingly, effective contractor management is critical to the success of PG&E's VM program (and other programs). The Court imposed a new probation condition on August 7, 2020 pursuant to which PG&E was required to staff an in-house VM inspector workforce of at least 30 inspectors by January 2021. (Aug. 7, 2020 Order, Dkt. 1243). These inspectors are important to PG&E contractor oversight. PG&E not only met that condition but has also significantly expanded its commitment to field monitoring work through in-house Vegetation Management Inspectors ("VMIs") and work verifiers. Both programs have generated actionable feedback in 2021 that PG&E used to clarify and materially improve its procedures. PG&E has also acknowledged that its VMI and work verification programs are not yet fully developed, so continued improvement and attention are and will be required.

To drive additional improvement in VM work quality, PG&E should (1) make procedures, scopes of work, and recordkeeping tools simpler for contractors to understand and (2) require ongoing, annual trainings and rigorous assessments for all pre-inspectors and work verifiers to ensure that hazard tree assessments are performed consistently across HFTDs.

VIII. ELECTRIC INFRASTRUCTURE INSPECTIONS AND REMEDIATION WORK

As explained below, while PG&E has made improvements to its electric infrastructure inspection and remediation programs, it has struggled to execute plans in a timely manner. PG&E needs to dedicate more resources to remediating identified risks, because its lack of emphasis on timely remediating lower priority repairs, and even some priority repairs, has produced a significant repair backlog. Recordkeeping issues persist, posing challenges to electric infrastructure inspection and remediation efforts. And the Monitor team's field review of PG&E inspections revealed ongoing quality issues, suggesting the need for more oversight and training. Our field reviews, however, typically do not identify imminent hazards, suggesting that PG&E inspectors are at least identifying and addressing the highest priority issues.

In 2019, PG&E established an enhanced inspection protocol to identify conditions that could present fire ignition risk. When launching its enhanced inspection program, PG&E undertook an unprecedented amount of work, inspecting all of its approximately 685,000 distribution poles, 50,000 transmission structures, and 200 substations in HFTDs in a calendar year. That 2019 effort led to an unprecedented number of orders (673,968) for remediation work ("tags"). There are over 500,000 tags from 2019 to present that remain unresolved to date. For 2020 and 2021, PG&E continued to inspect all infrastructure in Tier 3 HFTDs annually (although we understand PG&E may be considering to reduce the frequency of Tier 3 inspections—the riskiest areas—which we would not support in the near-term). PG&E moved to a three-year rotating inspection cycle for

infrastructure in Tier 2 HFTDs (one-third each year) and a five-year rotating inspection cycle for infrastructure outside of Tier 3 and 2 HFTDs (one-fifth each year).

A. PG&E's Wildfire Mitigation Plan Commitments to the CPUC

For each year since 2019, PG&E has set forth specific, annual inspection commitments in its WMP, in addition to internal goals. In 2019 and 2020, PG&E did not meet its inspection targets, which are largely aimed at ensuring that identified priority repairs are made in advance of fire season. In 2021, PG&E failed to inspect 5,107 distribution structures by the deadline. This was due to 41,000 structures that were added to the work plan in July, largely because of incomplete records identified through PG&E internal validation efforts. Since July, PG&E has continued to identify additional structures that should have been inspected by the July 31, 2021 deadline but were not mostly because of faulty records which do not accurately reflect assets in the field, including at least 995 distribution and two transmission structures.

In sum, in no year has PG&E met all of the inspection commitments in its WMP. PG&E would benefit from additional planning, resource, recordkeeping improvements, and procedural enhancements to ensure it meets all external and internal inspection commitments going forward. These inspections are important because they are a part of an integrated wildfire risk-abatement program that cannot function most effectively if one component is lagging.

B. Quality of Work

The success of PG&E's enhanced electric equipment inspections depends not only on timeliness, but also on quality. Since 2019, the Monitor team has conducted field inspections of a sample of PG&E's inspected electric structures across the high threat service territory. After the inspections, the Monitor team identified and reported to PG&E "potential exceptions," that is, field conditions that should have been identified by an inspector in accordance with PG&E guidance but were not, or a recordkeeping question that was answered inaccurately by a PG&E inspector. The

frequency and nature of the Monitor team's findings suggest ongoing quality concerns, and a continued need to improve PG&E's oversight of its contract workforce.

1. Distribution Inspection Results

In 2019, the Monitor team conducted an in-field review of 1,652 electric distribution structures in HFTDs that had been inspected by PG&E. Approximately 12% of the structures inspected by the Monitor team had potential exceptions related to field conditions, for a total of 222 missed field issues by PG&E inspectors across 201 structures. Approximately 34% of the structures had potential exceptions related to recordkeeping, for a total of 522 missed recordkeeping issues across 377 structures.

In 2020, due to COVID restrictions, the Monitor team conducted an in-field review of a much smaller sample of 94 distribution structures in HFTDs that were inspected by PG&E. Recognizing "small sample size" dynamics can skew outcomes, nonetheless approximately 48% of the sampled structures had potential exceptions related to field conditions, totaling 75 missed field issues by PG&E inspectors across 45 structures. Approximately 53% of structures had potential exceptions related to recordkeeping, for a total of 60 missed recordkeeping issues by PG&E inspectors across 50 structures.

In 2021, the Monitor team conducted an in-field review of 1,628 distribution structures in HFTDs that had been inspected by PG&E. Approximately 27% of the structures had potential exceptions related to field conditions, for a total of 583 missed field issues by PG&E inspectors across 435 structures. Approximately 31% of the structures had potential exceptions related to recordkeeping, for a total of 642 potential exceptions by PG&E inspectors across 507 structures. While these figures represent an improvement over the limited sample from 2020, there is a significant increase in the frequency of field condition-related potential exceptions (27%) as compared to 2019 (12%). For example, the number of field conditions related to pole damage

identified by the Monitor team in 2021 (164 potential exceptions) was substantially higher than 2019 (50 potential exceptions), suggesting that there may still be issues with the clarity of PG&E's pole damage criteria or with PG&E's training on that subject. The same holds true for field conditions where the PG&E inspector failed to identify structures with equipment deemed non-exempt by CAL FIRE and with dried vegetation present within a ten-foot radius of the pole (55 potential exceptions in 2021 compared to five in 2019). While the Monitor team has observed relatively few emergency conditions (that is, those that would require immediate attention from PG&E), it continues to find many conditions that could present fire ignition risk based on PG&E's own inspection criteria and guidance, including pole damage, guy wire clearance, and the proximity of splices to the structure. *See* Exhibit 10 for additional detail on observations.

2. Transmission Inspection Results

In 2020, the Monitor team established an inspections program whereby it conducted photographic inspections of PG&E's transmission assets using PG&E's aerial photography database. This method was used by the Monitor team because it was not realistic or safe for us to conduct in-field inspections of high towers, for example, either directly via ascents or by the Monitor team operating drones. The Monitor team reviewed 297 transmission structures that had been subject to aerial inspections by PG&E, meaning that the Monitor team reviewed the same helicopter and drone photographs that PG&E's AIR+ inspectors used in their aerial inspections. Approximately 83% of the steel structures inspected had potential exceptions that were not identified by PG&E, for a total of 291 missed issues across 123 structures. Approximately 78% of the wood structures also had potential exceptions, for a total of 243 missed issues across 116 structures. We acknowledge that PG&E uses additional inspection methodologies for transmission assets that may catch some of the issues missed by PG&E's AIR+ team, including ground and

climbing inspections, but those additional methods do not eliminate concerns raised by the potential exception numbers noted immediately above.

In 2021, the Monitor team inspected 304 electric transmission structures via PG&E aerial photography records. Approximately 47% of the steel structures inspected had potential exceptions, for a total of 160 missed issues across 88 structures. Approximately 53% of the wood structures also had potential exceptions, for a total of 136 missed issues across 76 structures. This decrease in the rate of potential exceptions coincided with improvements in the AIR+ training program and efforts to clarify the guidance materials utilized by inspectors, as well as a continuing accumulation of experience by AIR+ inspectors, but the numbers were still quite high. To be clear, in both 2020 and 2021, potential exceptions overwhelmingly were comprised of non-emergent conditions (e.g., non-acute contamination on an insulator), recordkeeping errors (e.g., failure to identify a structure as located near a dwelling), and situations where the Monitor team was unable to properly assess the condition of a component due to the insufficient quality of PG&E's aerial photographs. *See* Exhibit 11 for additional detail on the Monitor team's observations. Nonetheless, greater precision and performance can fairly be expected, given the safety impact the inspections have.

3. PG&E Quality Control Efforts

In 2021, PG&E made significant progress in developing and implementing additional quality control measures, including field verification for electric transmission and distribution asset inspections. PG&E also engaged external resources to complete a review of all of its tags involving C-hooks. PG&E has also been leveraging automated technologies and machine learning to further bolster its inspections programs, including through photographic analysis to "train" computers to spot equipment issues that warrant additional review. The efforts are a positive development in verifying and supplementing the quality of inspections.

C. Inspection Guidance Materials, Resources and Training

The quality of PG&E's enhanced inspections depends in large part on the clarity and objectivity of the questions asked of inspectors via checklists and the detail provided in job aids. In 2019, the Monitor team identified certain questions in PG&E's distribution checklist that were unclear and noted that PG&E's job aid was not tailored to conducting enhanced electric inspections. In 2020, PG&E made some improvements to its program, including revising its electric distribution inspection checklist to reduce ambiguities. PG&E also created a job aid specifically for enhanced distribution inspections that contained additional detail and illustrative photographs to improve consistency in identifying field conditions. In 2021, PG&E has further improved its job aids for both electric distribution and transmission inspections with additional details, diagrams, and photographs. There is still room for improvement. In particular, the guidance in the job aids is not well-tailored to the questions as worded on the inspection checklists. Additionally, System Inspections is responsible only for execution of inspection commitments, and it is not clear that inspectors have regular and meaningful access to other teams that could provide additional clarity on standards. Lastly, one of the most common issues identified by the Monitor team had to do with failure of PG&E inspectors to identify an asset as being located within 600 feet of a structure or dwelling. The high failure rate on an objective question like this indicates that inspectors may not be paying the requisite attention to detail throughout the inspection process, and that further training and oversight is required.

The quality of enhanced electric inspections also depends on the effectiveness of PG&E's inspector training program. As part of its onboarding process, PG&E provides inspectors with a multi-day training for enhanced inspections, including classroom and field sessions. From 2019 to 2021, the Monitor team has attended several of PG&E's in-person and virtual training sessions for enhanced electric distribution and transmission inspections. The Monitor team found these training

sessions generally informative, well-run, and critical to the success of PG&E's enhanced inspections. For further improvement, PG&E should incorporate more experiential field training into the curriculum and further utilize testing both during and at the end of trainings to ensure comprehension and retention of information.

D. Maintenance and Construction

While PG&E has improved in addressing high priority tags, there continues to be a high volume of outstanding remediation work, for which PG&E lacks a clear plan on which it has been able to effectively execute.

1. Volume and Timeliness of Remediation Work

PG&E's backlog of infrastructure-related remediation work has increased significantly since the start of enhanced inspections in 2019, although PG&E generally remains current on high priority tags (those requiring action immediately or within 90 days). For example, the overall number of pending, unresolved electric transmission and distribution tags increased by over 90,000 in 2019 and 60,000 in both 2020 and 2021. *See* Exhibit 12 for a visual representation of the backlog. As of June 30, 2021, there were 66,107 pending, unresolved transmission tags (25,013 in HFTDs) and 450,404 pending, unresolved distribution tags (222,058 in HFTDs). *See* Exhibit 13 for additional detail on the number of pending, unresolved electric infrastructure-related tags. Despite ongoing prioritization and remediation efforts, PG&E lacks a clear execution plan to address the increasing backlog in a timely way and has been constrained by available budget and resources in its ability to do so. Furthermore, conditions that are meant to be addressed within six months per PG&E guidance could sit unmitigated for several years. While PG&E has taken steps to address this, including implementing a "strike team" in 2021 focused on executing repairs and reassessing strategies related to tag prioritization and bundling, resource constraints continue to limit progress. As of July 2021, the estimated cost to address all existing tags was over $3 billion.

2. Effects of Pending, Unresolved Tags

PG&E, for the most part, resolves its Priority A tags (highest priority) in a timely way. PG&E's timeliness in addressing Priority B tags has needed improvement, and there is a tendency at PG&E to postpone mitigating its lower Priority E and F tags, contributing to backlog. Unresolved tags can collectively contribute to safety risks, including ignitions. The work of PG&E's Asset Failure Analysis Team may help to inform the prioritization of remedial work, by identifying conditions more likely to result in an ignition event. In any event, until PG&E resolves its significant backlog of remediation work, risky conditions will remain in the field.

For example, PG&E's recently established Asset Failure Analysis Team causally connected a June 2021 ignition to a broken cross arm. The cross arm was first identified in connection with an August 19, 2019 patrol. The tag had a due date of February 19, 2020 (a 6-month Priority E tag). The repair was permitted and ready for construction in April 2020 (which was already late), but was never completed. On September 10, 2020, the notification was reassessed and the crew lead requested that the work be expedited before the 2021 fire season (that is, August 30, 2021). On June 16, 2021, there was an ignition, which PG&E's Preliminary Ignition Investigation Report ("PIIR") attributed to "a rotten and decayed secondary, wooden cross arm failing and igniting the light, flashy fuels below the pole." As of the date of the PIIR, there were 1290 open notifications on the same circuit associated with common ignition drivers, of which 886 were past due and 256 were due within six months. Of these, 66 open notifications were associated with cross arms, of which 55 were past due and 11 were due within six months. The Monitor team recognizes PG&E's Asset Failure Analysis Team and the candid analysis contained in PIIRs, but until more is done by PG&E with the information in such reports, that is, actually addressing these risks in the field, PG&E's equipment will continue to cause unnecessary ignitions.

3. Field Safety Reassessments ("FSRs")

The FSR process, by which structures with pending, unresolved tags are periodically reviewed, is a stopgap measure put in place by PG&E to ensure that conditions do not further deteriorate while electric remediation work is pending, given the significant backlog of such work. While the Monitor team understands the need to reassess conditions when they are not timely remediated, FSRs divert resources away from enhanced inspections and execution of electric remediation work, and would, for the most part, be altogether unnecessary if PG&E were to address its asset repair tags in a timely way. In essence, while the FSR process is necessary, it has served to somewhat normalize the practice of not timely addressing "lower priority" repair tags, which can and do result in ignitions, as exemplified by the June 16, 2021 ignition identified above. While that ignition was small, had weather, moisture, or location circumstances been different, so too could have the outcome—PG&E cannot leave these matters to luck.

E. Recordkeeping

Recordkeeping issues that affect other operations also exist for electric infrastructure assets. PG&E has various recordkeeping issues that limit its electric infrastructure inspections and remediation programs, as PG&E does not maintain traceable, verifiable, accurate, and complete records of its electric infrastructure.

1. Paper Records

PG&E has migrated to mobile devices and applications for many aspects of its inspections program. This is an improvement. However, PG&E still uses paper records to document remediation work performed, for idle facilities, and to redline as-built drawings. This use of paper records can result in inaccuracies when information is migrated to electronic records due to transposition errors. Use of paper records also delays information transmission to the electronic

system of record, which can result in data discrepancies between the paper and electronic databases until the transposition occurs. Data analysis is also more difficult with paper records.

2. Asset Location Issues

PG&E records do not always accurately reflect the existence and/or location of its assets. In some instances, records misidentify the location, type, or even the existence of an asset, resulting in inefficient and missed inspections. In both 2019 and 2020, there were issues with the accuracy of asset geo-location data provided to inspectors. These issues have existed for years, and until recently, PG&E has been slow to remediate the problem. In 2021, PG&E worked on pilots to identify these inaccuracies and verify location data prior to inspections to minimize disruptions to inspection execution. Efforts to validate the asset registry in 2021 resulted in the addition of thousands of assets to PG&E's inspections work plan, that is, assets that were supposed to be in the 2021 plan but were not initially due to faulty records. Given the large number of structures and the need for field personnel to verify electric asset location data and reconcile internally conflicting records databases, PG&E estimates it could take years to verify the accuracy of all structure location data and for its records to accurately reflect the existence of all electric assets in its service territory. The Monitor team suggests that greater resources be dedicated to these efforts moving forward as PG&E over the past several years has not devoted an appropriate level of attention and resources to these issues.

3. Asset Component Age

Probation Condition No. 9, imposed by Judge Alsup in 2020, requires PG&E to record the age of critical electric transmission tower components in HFTDs; to make conservative assumptions where age is unknown; to implement a program to determine the expected useful life of critical components; and incorporate that information into its risk-based asset management programs. (Apr. 29, 2020 Order Modifying Conditions of Probation, Dkt. 1186). The purpose of this probation

condition is, in essence, to prevent wildfires by alerting PG&E that a transmission structure component, the failure of which could cause an ignition, is approaching the end of its useful life and should be replaced—like, according to state authorities, the C-hook that should have been replaced but instead failed and caused the Camp Fire and related 84 deaths and property damage. While PG&E experienced some delays in compliance with this probation condition, PG&E is now on track to comply. This is a substantial positive development.

PG&E's effort to collect component-level age data and to apply conservative assumptions where such data are not available is ongoing, and PG&E plans to complete its work for all 550 HFTD transmission circuits by the end of 2022. Currently, PG&E projects that by March 31, 2022 it will have developed risk models for each critical component grouping, incorporating component age, certain hazards, and wind threats to calculate expected useful life, while incorporating that data into its electric asset management plan. It is important that PG&E maintain focus and sustain progress to ensure this project is timely completed after probation ends.

4. Other Recordkeeping Issues

Recordkeeping issues have caused other problems in the electric space. A 2020 audit indicated there were 41,000 structures with missing or incomplete inspection records. In March 2021, PG&E self-reported to the CPUC that enhanced inspections were not performed on 24 hydroelectric substations. Recordkeeping gaps caused this oversight.

It bears mention that PG&E, for the most part, is now self-identifying many of these issues. Continuing to provide resources to internal teams to identify and remediate recordkeeping issues will be critical, as well as empowering those employees to raise matters and address them as they are identified, after probation ends.

IX. SYSTEM HARDENING PROGRAM

PG&E's system hardening program is a multi-year project aimed at reducing wildfire risk by enhancing PG&E's electric distribution system infrastructure through asset replacements, upgrades, undergrounding, and other means. According to the Company, system hardening is one of the most, if not the most, impactful wildfire mitigation initiatives the Company can undertake.

Over the past three years, PG&E's system hardening program has increasingly revolved around mitigating wildfire risk. Importantly, PG&E takes into account wildfire risk at several points in the process from identifying, scoping, and approving system hardening projects. While system hardening mileage targets have decreased over the past couple years, PG&E is on track to meet its target for 2021 and plans to ramp up mileage in 2022 and 2023.

PG&E faces certain challenges with respect to system hardening. In particular, PG&E personnel report that cities and counties can take a very long time to review and grant permits. Additionally, PG&E's ability to scale up annual system hardening mileage is subject to the impact of potential wildfires (that is, PG&E's annual hardening plans are oftentimes impacted by the need to rebuild areas destroyed by wildfires), and PG&E's ability to secure necessary resources, both personnel and financial.

A. System Hardening Approval Process

PG&E's system hardening planning function identifies potential electric system hardening projects using risk-based criteria, for example: (1) risk models that identify high-risk areas; (2) downed wires; (3) clusters of repair tags in the same geographic area; (4) whether system hardening in certain areas can help prevent Public Safety Power Shutoff ("PSPS") events; and (5) whether an area needs to be rebuilt due to wildfire damage. In addition, PG&E is increasingly seeking to underground its assets, thereby significantly mitigating future risk. PG&E has also engaged Public Safety Specialists (PSSs), who identify high-risk areas through on-the-ground review of PG&E's

service territory and electric assets. PG&E then incorporates those learnings into system hardening planning and project selection.

B. Decreasing Targets

In 2019, PG&E set a target of hardening all electric distribution assets in Tier 2 and Tier 3 HFTD areas (spanning approximately 7,100 miles) by approximately 2029. As part of this initial plan, PG&E set a target of hardening 150 miles in 2019 and forecasted 600 miles per year for 2020-2022. PG&E later reduced its 2020 forecast mileage to a target of 220 miles and then later PG&E reduced its 2021 target to 180 miles.

This trend of reducing system hardening mileage targets over the past couple of years does not comport with the Company's position that system hardening is the most effective wildfire mitigation measure. Using the initial 2019 Wildfire Safety Plan as a benchmark, if anything, the Monitor team would have expected to see these targets increase, not decrease, given the increasing threat of wildfires. PG&E's reasoning for decreasing the targets in 2020 from the original forecast—that the original forecasts were ambitious to begin with—is unsatisfactory, given that these were PG&E's own proposed goals. Had the Company planned and allocated sufficient resources, it could have made more progress.

C. 2021 System Hardening

For 2021-2023, PG&E's criteria for its system hardening program includes: (1) 80% of system hardening miles constructed by PG&E in 2021-2023 must be (a) located in the top 20% of the riskiest areas according to the new risk model, (b) fire rebuild miles, or (c) PSPS mitigation miles; and (2) 10% of all system hardening miles in 2021-2023 must be underground or line removal work. This year, PG&E has hardened approximately 168 miles, as of November 4, 2021. Notably, only approximately 36.5 of the 168 miles were located in the top 20% of the riskiest areas in this first year of PG&E's three year plan. Nevertheless, PG&E personnel anticipate that PG&E will

harden approximately 200 total miles in 2021 (including traditional hardening in place, fire rebuild work, and PSPS mitigation work), thereby exceeding the 2021 target of 180 miles.

Out of the approximately 168 miles currently constructed, approximately 30% of the miles are either underground or line removal projects, which far exceeds PG&E's target for at least 10% of its system hardening work to be undergrounded miles (or removal of lines altogether). By the end of 2021, PG&E expects that approximately 32% of its system hardening miles will be either underground or line removal projects. These metrics represent a significant improvement and risk reduction over years past. Sustained aggregate progress in the future will also be important, in addition to percentages going forward.

D. Undergrounding Initiative

In July 2021, PG&E announced an initiative to underground approximately 10,000 miles of electric distribution lines in HFTDs. The Monitor team applauds PG&E's commitment to undergrounding to mitigate wildfire risk but notes that some serious questions and issues remain regarding PG&E's implementation of the undergrounding initiative.

For example, PG&E did not specify a timeframe by which it expects to complete the undergrounding of 10,000 miles, but indicated an intention to harden up to 1,000 miles per year as part of the program. As of October 20, 2021, PG&E expects to underground approximately 66 miles in 2021 and a total of 327 miles from 2021-2023. Notably, there is substantial skepticism among PG&E field personnel that PG&E can feasibly underground more than 500 miles per year using current technology and hardening methodologies. Other open questions and issues are discussed below, and relate to matters of permitting, resources (both personnel and financial), and diversion of resources as a result of wildfire rebuild efforts.

E. Challenges

1. Permitting

While traditional system hardening projects typically take approximately 12 to 18 months from planning to completion of construction, PG&E typically completes fire rebuild projects within a few months. PG&E personnel report that the timing discrepancy is attributable to two factors: (1) for traditional system hardening projects, cities and counties can take a very long time to review and grant permits; and (2) for fire rebuild projects, California governmental agencies assist with expediting permitting to help restore power. PG&E should attempt to work with governmental agencies to expedite permitting for traditional system hardening projects, not just those involving areas damaged by fires.

2. Scaling of the Distribution Hardening Program

PG&E personnel report that scaling up from 200-300 miles per year (i.e., 2020-2021) to approximately 1,000 miles per year in later years will likely present two substantial challenges. One challenge is that PG&E may have difficulty securing the necessary volume of qualified contractors to complete the work. Additionally, system hardening is the most expensive mitigation effort, and increasing annual system hardening funding by more than twofold could mean that other risk mitigation work receives less funding. So while PG&E makes investments into its long-term hardening program, it will remain important to ensure that near-term wildfire mitigation measures receive appropriate resources.

3. Fire Rebuild Work

Like many other types of risk mitigation work, system hardening work is often delayed or de-prioritized by annual wildfires. PG&E must divert resources to rebuild fire damaged areas, which impacts PG&E's ability to carry out hardening efforts according to its plans and risk models. In mid-2019, PG&E began counting projects built to the fire rebuild standard toward its annual

system hardening goal. These projects involve replacing and rebuilding assets burned by a wildfire (including those caused by PG&E). Notably, without including the fire rebuild miles in the total system hardening miles—including those in the footprint of the Camp Fire in Butte County—PG&E would not have satisfied its annual system hardening WMP target for 2019 or 2020.

X. WILDFIRE EMERGENCY PREPAREDNESS AND RESPONSE

Since the 2017 wildfires, PG&E has worked to improve its emergency response and situational awareness capabilities to address fire risk. PG&E has made significant progress and refinements to its PSPS program, which has prevented over one thousand potential ignitions. The Company has also innovated through its enhanced power line safety settings program ("EPSS").

A. PSPS

The PSPS program is often unpopular but it is effective and has almost certainly saved lives. According to PG&E records, since PG&E began its PSPS program in 2018, it has reported roughly 1,450 damage or hazard incidents across 19 actual PSPS events, each of which could have resulted in an ignition. The Monitor team understands that a more ideal situation would be that PG&E had historically (that is, over the last generation at least) invested more in hardening infrastructure and in maintaining vegetation in a way that would obviate the need for proactive deenergization on the scale used by PG&E today. Unfortunately, however, the current state of affairs requires PG&E to preemptively deenergize assets in areas with forecasted adverse weather conditions of sufficient severity and high fire potential. The Monitor team fully acknowledges the burden PSPS places on affected customers. But again, there is little dispute that PSPS has saved lives, and potentially many lives, in the current wildfire environment.

Since launching the PSPS program in 2018, PG&E has continued to develop, improve, and automate it. For example, PG&E has: (1) enhanced the granularity and resolution of its weather and fire potential forecasting models; (2) improved its customer impact mapping accuracy; (3) utilized

PSPS impact mitigation measures; (4) improved customer notifications; (5) increased the number of Public Safety Specialists to better coordinate with external parties; (6) created the Safety and Infrastructure Protection Team to assist with field observation and mitigation efforts; (7) shortened post-event restoration times; and (8) most recently, incorporated vegetation management and asset data into its scoping decisions.

Notwithstanding this progress on the PSPS program, certain aspects of the PSPS program warrant additional attention.[4] First, during multiple 2019, 2020, and 2021 PSPS events, PG&E failed to notify all account holders at impacted service points in advance of deenergization—including critical facilities and members of PG&E's medical baseline program. The Monitor team recognizes that it may not be possible to notify every single customer, but PG&E must continue improving its notification success rates. Late or no notice is not merely an inconvenience; for some customers, especially those in the medical baseline program, notification is critical.

Second, while PG&E now offers many services to impacted customers during deenergization, including Customer Resource Centers, 55% of customers recently surveyed by PG&E indicated that they were unsure or unaware of the resources PG&E provides during PSPS events to customers with disabilities or other medical and acute needs. For these critical services to be useful, customers must know about them.

B. Enhanced Power Line Safety Settings

PG&E took quick action in the wake of the Dixie Fire to reduce ignitions by adjusting settings on line reclosers and circuit breakers to reduce fault energy flowing through lines, thereby reducing the potential for ignition events. This process is referred to as EPSS or "fast-tripping." Since the implementation of this program in late July of this year, PG&E is reporting a 46%

[4] Nothing in this report is intended to, nor should be interpreted to, conflict with or supersede any guidelines, opinions, findings, or corrective actions issued by the CPUC or any other regulator with jurisdiction over PG&E's implementation of PSPS events.

reduction in PG&E attributable ignitions in HFTDs as compared to its three year average. As a new program, there is more data to be collected and analyzed, but the early indications are that this measure, which does result in more frequent and longer outages for customers, is preventing fires.

XI. CONTINUING CHALLENGES

PG&E needs to continue to make meaningful improvements across all aspects of its operations to protect the citizens of California as well its employees and contractors. Those improvements are more challenging given the continuing challenges PG&E faces.

A. Leadership Turnover

One overarching item across the entire Monitorship is that virtually all areas of the Company have seen substantial and repeated turnover in leadership. There have been five Chief Executive Officers; six heads of Gas Operations; four heads of Electric Operations; and five heads of the Safety Organization, with the current head in an interim role, during the Monitorship. The Company also has implemented numerous changes to its organizational structure that have variously altered management and employee reporting relationships. In addition to the management, reporting, and leadership changes, there have been no less than 45 different members of the Board of Directors since 2017.

These leadership changes have an impact on the organization and can make necessary culture changes even more difficult. Employees who have been with PG&E for 20 or 30 years can become disillusioned with what they see as ever-changing direction and messaging, and a lack of continuity of programs and priorities. Those employees need to understand that the core values of safety, speaking up, and doing the right thing remain unchanged.

As an initial step, it is important that PG&E's Board of Directors focus on hiring and retaining the right set of leaders to move PG&E forward. It is important for PG&E to have real stability in the coming years in each aspect of its leadership.

B. Records Integrity

PG&E still struggles with records. PG&E needs to continue to devote substantial resources to enhancing its records, particularly in Electric Operations. Traceable, verifiable, accurate, and complete records underpin safe operations, from permitting employees to accurately understand asset health and inform repair decisions, to ensuring that vegetation issues are appropriately logged, communicated, and remediated. The lack of traceable, verifiable, accurate, and complete records was at the heart of the issues that led to the San Bruno gas explosion. In the wake of San Bruno, PG&E undertook an effort to overhaul its Gas Operations system of record to ensure its accuracy. However, no such effort was successfully implemented in Electric Operations and PG&E is still playing catch-up to achieve in Electric what it sought to do in Gas years ago—build an accurate system of record that reflects the reality of what is in the field.

C. Contractor Management

PG&E, consistent with industry practice, substantially relies on its contract workforce to perform wildfire mitigation efforts. PG&E needs to continue to focus on enhancing its relationship, communications, oversight, and expectations of its contract workforce. PG&E must also do more to try to achieve continuity of the contract workforce. Whether it be vegetation management or electric infrastructure inspections, PG&E's contract workforce has experienced high turnover in the past several years. For example, there has been a different group of contractors involved in electric equipment inspections each year since PG&E implemented its WMP. Similarly, the vegetation management contractor workforce regularly turns over. That turnover, like leadership turnover, prevents continuity in PG&E's programs, and results in a lack of familiarity and understanding of PG&E's service territory and equipment. With the high turnover, there is little opportunity to instill necessary cultural values into that workforce, including a "safety first" mentality, as described in greater detail below.

D. Long-Term Safety Projects

PG&E is demonstrating a willingness to take an unprecedented and significant step to make its infrastructure more fire resilient—such as its announcement to underground over 10,000 miles of distribution line in high threat areas. However, it will likely take at least 15 to 20 years (even assuming an ambitious and accelerated 500 miles, even 700 miles, of undergrounding per year) for these efforts to be completed. PG&E must commit to these long-term projects through its planning, budgeting and operations. It cannot put forth lofty goals and then let progress slow or deadlines slip once probation ends.

E. Near-Term Execution of Work

During those 15 to 20 years, progress on long-term projects alone will not be a panacea. Near- and intermediate-term planning and execution of other work will remain critical. The safety of the residents of PG&E's service territory requires that current PG&E wildfire mitigation efforts be executed with precision. This is not an easy task—especially given the vast contract workforce that PG&E utilizes to conduct so much of its wildfire mitigation work—but it is necessary due to the unforgiving and wildfire-prone service territory in which PG&E operates. In the vast majority of the country, the consequences of vegetation contact with a power line or the failure of electrical equipment are oftentimes reliability issues, that is, potential power outages. In PG&E's service territory, the consequences of a single misstep—a missed hazard tree, the failure to replace a corroded C-hook—can be death and destruction. Currently, as reflected by our inspections findings reported above, there are too many missteps.

Achieving flawless execution of work will take more than just technical skill and oversight of work in the field—it will require the adoption of a safety first mentality that permeates the entire organization and becomes embedded in the DNA of PG&E's employees and its contractors. Such a mentality is currently missing. A safety first mentality cannot just be a talking point at meetings

or some mantra that is repeated to the point that it loses meaning with employees. For example, PG&E has a stated mission to be the safest utility in the United States—it has been saying that for some time. However, our field inspections of PG&E's vegetation management work and electric equipment continue to find issues that were missed by PG&E workers in the field, year over year. Many of these issues, like the identification of a missed hazard tree, or the assessment of pole damage, can present "close call" situations where someone not erring on the side of caution might decide to leave the risk in the field instead of mitigate the problem. PG&E must instill in its workforce, including its management, to err on the side of caution, regardless of any cost-cutting initiatives or budget targets. And PG&E must empower employees to remove the risk without being second-guessed. Too many employees have expressed skepticism about PG&E's actual commitment to safety, being able to stop jobs and deliver bad news. It does not matter if the employees are "correct" or not today; their broad perception itself is a risk factor. PG&E has attempted to change the DNA of its workforce on these issues, but it must sustain those efforts going forward.

F. Attention to Resources in Gas Operations

In its efforts to overcome all of these challenges, PG&E must also be cognizant of and careful of focusing too much on electric and wildfire mitigation and allowing backsliding on the progress made to date in Gas Operations. Specifically, PG&E cannot pull too many resources from Gas Operations without cannibalizing the talent necessary to maintain operations. Numerous gas leaders and managers have moved over to focus on wildfire mitigation efforts—both on a temporary and permanent basis. While that work is critically important, PG&E must ensure that there is an appropriate depth of talent and experience in Gas Operations as well.

XII. CONCLUDING REMARKS

There is no doubt that PG&E has improved during the term of the Monitorship in both Gas and Electric Operations and the Company's practices are becoming safer. Unsurprisingly, much more progress has been made on the Gas Operations side of the Company during the more than eleven years since San Bruno than in Electric Operations in the fewer years since the Wine Country wildfires of 2017. The Monitor team does not doubt the sincerity of the efforts of PG&E leaders facing these safety challenges. But results on the Electric Operations side have been inadequate and substantial additional improvement and investment is required after probation ends. Further progress will require sustained commitment in the face of real challenges. And it cannot come at the expense of cannibalizing substantial progress made in Gas Operations and Compliance and Ethics.

The first people we met with after the Monitorship effort was underway were the surviving family members of some of the San Bruno victims. They should know that the tragic deaths of their loved ones did prompt change that hopefully will spare others from experiencing the losses they and their loved ones endured from prior PG&E failings in Gas Operations. We also hope that the initial progress we have seen on the Electric Operations side will over time substantially reduce risk from wildfires and the death and destruction they can cause.

On a final note, we strongly encourage policymakers to keep an open mind about whether reforms are possible in state regulations and oversight policies. Again, we do not doubt the sincerity of efforts. But doing "more of the same" may not be enough on its own, given that often PG&E substantially complied with state mandates and goals, in important respects at least, and terrible fires, deaths, and destruction nonetheless occurred. Perhaps regulatory changes, or experiments with new approaches, may yield better results in light of recent history and learnings.

TABLE OF EXHIBITS

EXHIBIT 1: SAN BRUNO GAS EXPLOSION VICTIMS & WILDFIRE VICTIMS FROM WILDFIRES ATTRIBUTED TO PG&E BY CAL FIRE

San Bruno Gas Explosion Victims (2010)[1]

1. Lavonne Bullis, 82
2. Greg Bullis, 50
3. William Bullis, 17
4. James Franco, 58
5. Jacqueline Greig, 44
6. Janessa Greig, 13
7. Jessica Morales, 20
8. Elizabeth Torres, 81

Butte Fire (September 9 – October 15, 2015, Butte County)[2]

877 Structures Destroyed, 70,868 Acres Burned, 2 Killed

1. Owen Goldsmith, 80
2. Mark McCloud, 65

Atlas Fire (October 8, 2017 – February 19, 2018, Napa County)[3]

120 Structures Destroyed, 51,624 Acres Burned, 6 Killed

1. George Chaney, 89
2. Sally Lewis, 90
3. Charles Rippey, 100
4. Sara Rippey, 98
5. Teresa Santos, 50
6. Edward Stone, 79

Cascade Fire (October 8, 2017 – February 19, 2018, Yuba County)[4]

264 Structures Destroyed, 9,989 Acres Burned, 4 Killed

1. Stanley Coolidge, 78
2. David Patrick Culp, 76
3. Roseann Hannah, 53
4. Sandra Picciano, 77

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[1] http://www.cnn.com/2010/US/09/22/california.pipeline.explosion/index.html; https://abc7news.com/archive/7694483/; https://abc7news.com/archive/7660103/; https://www.mercurynews.com/2010/09/13/san-bruno-fire-victim-jessica-morales-20-wanted-to-be-a-fashion-designer/; https://latimesblogs.latimes.com/lanow/2010/09/81-year-old-woman-named-as-fourth-fatality-victim-in-san-bruno-gas-explosion.html.

[2] https://www.fire.ca.gov/incidents/2015/9/9/butte-fire/; https://www.kcra.com/article/coroner-80-year-old-identified-as-2nd-man-killed-in-butte-fire/6424962.

[3] https://www.fire.ca.gov/incidents/2017/10/8/atlas-fire-southern-lnu-complex/; https://www.kqed.org/forum/2010101862302/remembering-those-who-died-in-the-north-bay-wildfires.

[4] https://www.fire.ca.gov/incident/?incident=608ed849-d1ec-4b0d-a477-d1b8e9c7e6dd; https://www.kqed.org/forum/2010101862302/remembering-those-who-died-in-the-north-bay-wildfires,

Nuns Fire[5] (October 8, 2017 – February 19, 2018, Sonoma County)[6]
1,355 Structures Destroyed, 56,556 Acres Burned, 3 Killed

1. Garrett Paiz, 38
2. Lee Chadwick Rogers, 72
3. Daniel Southard, 71

Redwood Valley Fire (October 8, 2017 – February 19, 2018, Mendocino County)[7]
546 Structures Destroyed, 36,523 Acres Burned, 9 Killed

1. Irma Bowman, 88
2. Roy Bowman, 87
3. Janet Kay Costanzo, 71
4. Elizabeth Charlene Foster, 64
5. Jane Gardiner, 83
6. Kai Shepherd, 14
7. Kressa Shepherd, 17
8. Steve Bruce Stelter, 56
9. Margaret Stephenson, 86

Camp Fire (November 8-15, 2018, Butte County)[8]
18,804 Structures Destroyed, 153,336 Acres Burned, 84 Killed

1. Joyce Acheson, 78
2. Herbert Alderman, 80
3. Teresa Ammons, 82
4. Rafaela Andrade, 84
5. Carol Ann Arrington, 88
6. Julian Binstock, 88
7. David Bradburd, 70
8. Cheryl Marie Brown, 75
9. Larry Alan Brown, 72
10. Richard Clayton Brown, 74
11. Andrew Burt, 36
12. Joanne Caddy, 75
13. Barbara Jean Carlson, 71
14. Vincent Mario Carota, 65
15. Dennis Clark Jr., 49
16. Evelyn Cline, 81
17. John Arthur Digby, 78
43. T.K. Huff, 71
44. Gary Lee Hunter, 67
45. James Warner Kinner, 83
46. Warren Lessard, 68
47. Dorothy Lee Mack, 88
48. Sara Magnuson, 75
49. Joanne Dolores Malarkey, 90
50. John Malarkey, 89
51. Christopher Maltby, 69
52. David William Marbury, 66
53. Deborah Morningstar, 65
54. Helen Pace, 84
55. Joy Porter, 72
56. Beverly Powers, 64
57. Robert Quinn, 74
58. Joseph Rabetoy, 39
59. Forrest Rea, 89

[5] Note that CAL FIRE reports the Nuns fire along with the Adobe, Norrbom, Pressley, Partrick, and Oakmont fires, collectively also referred to as the "Central LNU Complex" fires.

[6] https://www.fire.ca.gov/incidents/2017/10/8/nuns-adobe-norrbom-pressley-partrick-fires-oakmont-central-lnu-complex/; https://www.kqed.org/forum/2010101862302/remembering-those-who-died-in-the-north-bay-wildfires.

[7] https://www.fire.ca.gov/incidents/2017/10/8/redwood-valley-fire-mendocino-lake-complex/; https://www.kqed.org/forum/2010101862302/remembering-those-who-died-in-the-north-bay-wildfires.

[8] https://www.fire.ca.gov/incidents/2018/11/8/camp-fire/; https://www.buttecounty.net/Portals/30/CFReport/PGE-THE-CAMP-FIRE-PUBLIC-REPORT.pdf?ver=2020-06-15-190515-977; http://extras.chicoer.com/campfireremembrances/.

18. Gordon Dise, 66
19. Paula Susan Dodge, 70
20. Randall Paul Dodge, 66
21. Andrew James Downer, 54
22. Robert John DuVall, 76
23. Paul Ernest, 72
24. Rose Farrell, 99
25. Jesus Pedro Fernandez, 48
26. Jean Forsman, 83
27. Ernest Foss, Jr., 63
28. Elizabeth Gaal, 80
29. Sally Gamboa, 69
30. James Doyle Garner, 63
31. Richard Jay Garrett, 58
32. William Godbout, 79
33. Shirley Haley, 67
34. Dennis Hanko, 56
35. Anna Irene Hastings, 67
36. Jennifer Lynn Hayes, 53
37. Christina Heffern, 40
38. Ishka Heffern, 20
39. Matilde Heffern, 68
40. Dorothy Lee-Herrera, 93
41. Louis Herrera, 86
42. Evva Holt, 85
60. Vernice Mathilda Regan, 95
61. Ethel Colleen Riggs, 96
62. Lolene Rios, 56
63. Gerald Rodrigues, 74
64. Frederick Salazar Jr., 76
65. Phyllis Salazar, 72
66. Sheila Santos, 64
67. Ronald Schenk, 74
68. Berniece Schmidt, 93
69. John Sedwick, 82
70. Donald Shores, 70
71. Kathy Lynn Shores, 65
72. Judith Sipher, 68
73. Larry Smith, 80
74. Russell Stewart, 63
75. Victoria Taft, 67
76. Shirlee Teays, 90
77. Joan Carol Tracy, 82
78. Ellen Walker, 72
79. Donna Ware, 86
80. Isabel Webb, 68
81. Marie Wehe, 78
82. Kimberly Wehr, 53
83. Carl James Wiley, 77
84. David Young, 69

Zogg Fire (September 27 – October 13, 2020, Shasta County)[9]
204 Structures Destroyed, 56,338 Acres Burned, 4 Killed

1. Karin King, 79
2. Alaina Rowe McLeod, 46
3. Feyla McLeod, 8
4. Kenneth Vossen, 52

Dixie Fire (July 13 – Oct. 25, 2021, Butte, Plumas, Lassen, Shasta, and Tehama Counties)[10]
1,329 Structures Destroyed, 963,309 Acres Burned, 1 Killed

1. Marcus Pacheco, 53 (complications from COVID-19)

[9] https://www.fire.ca.gov/incidents/2020/9/27/zogg-fire/; https://www.latimes.com/california/story/2020-10-22/zogg-fire-lives-lost-shasta-county-california-wildfire.

[10] https://www.fire.ca.gov/incidents/2021/7/13/dixie-fire/; https://www.fs.usda.gov/inside-fs/memorial/remembering-marcus-pacheco. There has been no public report from CAL FIRE attributing the Dixie Fire to PG&E, and the Monitor team takes no position on fire cause or origin. This fire is included here due to the significant media and other attention on PG&E's equipment and the Dixie Fire.

EXHIBIT 2: FIFTEEN ORIGINAL TECHNICAL GAS ORDER REQUIREMENTS (DKT. 916)

Requirement One

Implementation of policies and procedures sufficient to comply with CPUC Decision 16-09-055 (effective Sept. 30, 2016) relating to the handling of safety citations and timely reporting of self-identified potential violations.

Requirement Two

Completion of the collection and organization of the necessary pipeline strength test records and pipeline features information for validation of the Maximum Allowable Operating Pressure for PG&E's gas transmission pipeline, consistent with the NTSB's recommendations for maintaining asset records to a "traceable, verifiable, and complete" requirement, and in accordance with CPUC Resolution L-410 (Jan. 13, 2011), Decision 11-06-017, and Decision 12-12-030.

Requirement Three

Confirmation of satisfactory strength testing of at least 500 miles of gas transmission pipelines in 2017 and 2018.

Requirement Four

Upgrading and/or retrofitting approximately 300 miles of gas transmission pipelines to accommodate in-line inspection tools in 2017 and 2018.

Requirement Five

Consistent with CPUC Decision 15-04-024, Appx E at 1 (San Bruno OII Remedy 4), implementation of Integrity Management procedures that ensure where data is missing, direct the Company to use conservative, supportable assumptions as required by ASME B31.8S.

Requirement Six

Consistent with CPUC Decision 15-04-024, Appx E at 1 (San Bruno OII Remedy 3), completion of records search to include gas transmission pipeline historical leak data into a single database of transmission leak record data.

Requirement Seven

Consistent with CPUC Decision 15-04-024, Appx. E at 1 (San Bruno OII Remedy 2), implementation of Integrity Management procedures sufficient to ensure that the data gathering processes, the data elements collected and reviewed, and company data sources meet the requirements of 49 CFR Part 192.917(b) and ASME B31.8S.

Requirement Eight

Consistent with NTSB Recommendation P-11-29, implementation of Integrity Management revisions to include (1) a revised risk model, reflecting actual recent data on leaks, failures, and incidents; (2) consideration of defect and leak data for the life of each pipeline; (3) revised risk methodology to ensure assessment methods are selected for each pipeline segment; and (4) improved self-assessment that adequately measures whether the program is effectively assessing and evaluating the integrity of each covered segment.

Requirement Nine

Implementation of policies and procedures that address threats caused by vegetation and structural encroachments on gas transmission pipelines.

Requirement Ten

Implementation of processes and procedures that for each segment of gas transmission line in High-Consequence Areas, enable PG&E to calculate the expected life of the pipe using a fracture control analysis that (1) estimates maximum flaw sizes remaining after inspections and/or strength testing; (2) estimates potential crack growth rate based on the past history of and potential pressure cycles; (3) assesses the remaining life calculations; and (4) determines appropriate methods of reassessment and frequency of reassessment of each such segment.

Requirement Eleven

Consistent with CPUC Decision 15-04-024, Appx. E at 2 (San Bruno OII Remedy 6), implementation of policies and procedures such that relevant data is incorporated in threat identification and assessment procedures for both covered and non-covered segments, including but not limited to potential manufacturing and construction threats, and leak data.

Requirement Twelve

Consistent with CPUC Decision 15-04-024, Appx. E at 2 (San Bruno OII Remedy 9), implementation of threat identification and assessment procedures such that High-Consequence Areas are prioritized consistent with 49 CFR Part 192.917(e)(3)-(4).

Requirement Thirteen

Implementation of policies designed to incorporate changed circumstances into assessment methodologies and prioritization, including Risk Management Procedure 16 ("Threat Identification") and TD 4810B-001 ("Changes to Integrity Management Pressure Testing Requirements for Unstable Manufacturing Threats"), consistent with ASME B31.8S.

Requirement Fourteen

Consistent with CPUC Decision 15-04-024, Appx. E at 2 (San Bruno OII Remedy 8), cessation of regularly increasing pipeline pressure up to a "system MAOP" to eliminate the need to consider manufacturing and construction threats, and analysis of segments that were subjected to the planned pressure increases to determine the risk of failure from manufacturing threats under 49 CRF Part 192.917(e)(3), including review of strength-testing of all segments identified as having an unstable manufacturing threat.

Requirement Fifteen

Consistent with CPUC Decision 15-04-024, Appx. E at 2 (San Bruno OII Remedy 10), implementation of threat identification and assessment policies and procedures such that cyclic fatigue and other loading conditions are incorporated into segment-specific threat assessments and risk ranking algorithm, including review of risk management procedures for appropriate treatment of cyclic fatigue and loading.

EXHIBIT 3: PG&E CONDITIONS OF PROBATION

April 3, 2019 Order, Dkt. 1040

- **Condition 1:** PG&E must fully comply with all applicable laws concerning vegetation management and clearance requirements, including Sections 4292 and 4293 of the California Public Resources Code, CPUC General Order 95, and FERC FAC-003-4.

- **Condition 2:** PG&E must fully comply with the specific targets and metrics set forth in its wildfire mitigation plan, including with respect to enhanced vegetation management. Compliance with these targets and metrics, however, will not excuse any failure to fully comply with the vegetation laws as required in paragraph 1.

- **Condition 3:** The Monitor shall assess PG&E's wildfire mitigation and wildfire safety work, including through regular, unannounced inspections of PG&E's vegetation management efforts and equipment inspection, enhancement, and repair efforts. The inspections will include both inspections of segments of power lines where PG&E has conducted its enhanced vegetation management efforts pursuant to its wildfire mitigation plan, as well as areas where enhanced vegetation management has yet to occur. The inspections will further include field interviews and questioning of PG&E employees and contractors.

- **Condition 4:** PG&E shall maintain traceable, verifiable, accurate, and complete records of its vegetation management efforts. PG&E shall report to the Monitor on the first business day of every month on its vegetation management status and progress, and make available for inspection all related records at the Monitor's request.

- **Condition 5:** PG&E shall ensure that sufficient resources, financial and personnel, including contractors and employees, are allocated to achieve the foregoing. If PG&E cannot find enough contractors, then PG&E must hire and train its own crews to trim and remove trees. To ensure that sufficient financial resources are available for this purpose, PG&E may not issue any dividends until it is in compliance with all applicable vegetation management requirements as set forth above.

May 14, 2019 Order, Dkt. 1070

- **Condition 6:** By no later than July 15, 2019, the PG&E Board of Directors, PG&E's Chief Executive Officer and certain other PG&E senior executive leaders, the Monitor, and Probation shall visit Paradise and San Bruno to gain a firsthand understanding of the harm inflicted on those communities and meet with victims and other stakeholders, such as fire-fighting personnel and/or city officials.

- **Condition 7:** A committee of the PG&E Board of Directors shall assume responsibility for tracking progress against PG&E's Wildfire Safety Improvement Plan, as approved by the California Public Utilities Commission, and the new terms of probation imposed on April 3 regarding wildfire safety. The committee is to report in writing to the Board at least quarterly, and also present orally to the Board at least quarterly, PG&E's progress in meeting the terms

of the approved Wildfire Safety Improvement Plan and the April 3 terms of probation and, to the extent there are shortfalls, how PG&E will address the shortfalls.

August 7, 2020 Order, Dkt. 1243

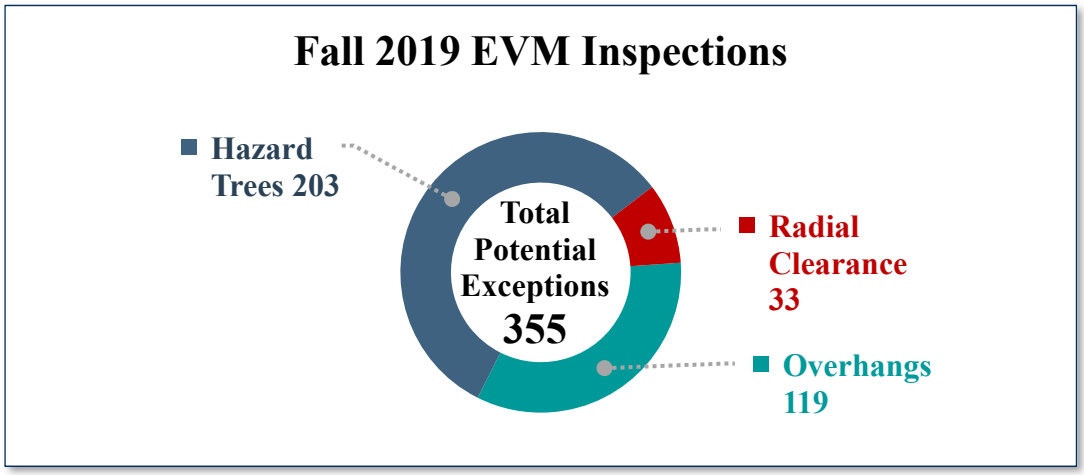
- **Condition 8:** Vegetation Condition: PG&E shall, by September 1, 2020, staff an in-house vegetation management inspection manager to oversee a number of workforce resources who will provide in-field oversight of all stages of the vegetation management process, including the enhanced vegetation management program work, to be deployed throughout PG&E's territory, including High Fire-Threat Districts (HFTDs). By the end of September 2020, PG&E will extend offers to 10 in-house field supervisors and/or inspectors, an additional 10 inspectors by the end of November, and the remaining approximately 10 inspectors by the end of January 2021. The inspectors shall conduct in-field oversight of PG&E contractors while the work is being performed, verifying and correcting any deviation from applicable scopes of work pursuant to PG&E policies and legal requirements. The inspectors shall also oversee pre-inspectors to help ensure they are clearly marking and designating trees for trimming and removal, and that tree-trimming contractors are appropriately performing their duties. Deviations from applicable scopes of work shall also be accurately recorded and reported to PG&E and the Monitor team to be used for, among other things, ongoing training of PG&E's contract workforce.

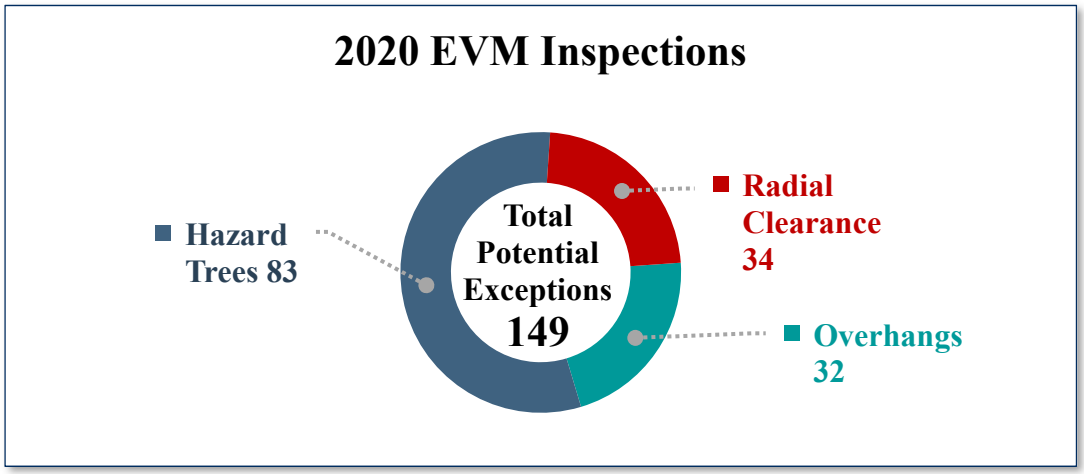
- **Condition 9:** Asset Age Condition: For certain critical transmission tower components in High Fire-Threat Districts, the failure of which may result in an ignition, PG&E shall conduct a reasonable search and, where available, record the age and date of installation of those components. For all other such critical transmission components and where asset-age records are not reasonably available, PG&E shall make conservative assumptions of such ages and dates of installation. PG&E shall also implement a program to determine the expected useful life of critical components factoring in field conditions and incorporate that information into its risk-based asset management programs. PG&E shall begin this effort (or supplement any existing or planned initiatives) immediately and provide monthly progress reports to the Monitor team.

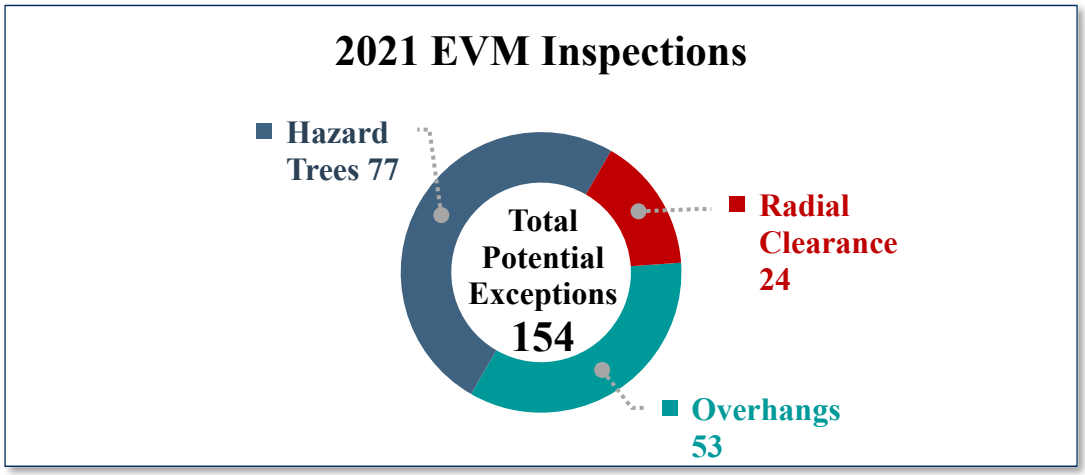
- **Condition 10:** Transmission Inspection Program Condition: PG&E shall, by the end of 2020, supplement its transmission-asset inspections program to include the following measures: (1) hire a crew of in-house and/or contract inspectors, independent from inspectors conducting transmission inspections, to oversee in the field transmission inspections while they are being conducted; (2) going forward, and subject to CAISO clearances and/or other external dependencies, revise the material loss threshold for the replacement of cold-end hardware (including C-hooks and hanger plates) in HFTDs to create a 90-day replacement requirement for such hardware with an observed material loss approaching 50%; and (3) make the prior two years of inspection reports available to transmission post-inspection review teams starting in 2021, and one year of inspection reports available in 2020.

EXHIBIT 4: EVM INSPECTION STATISTICS

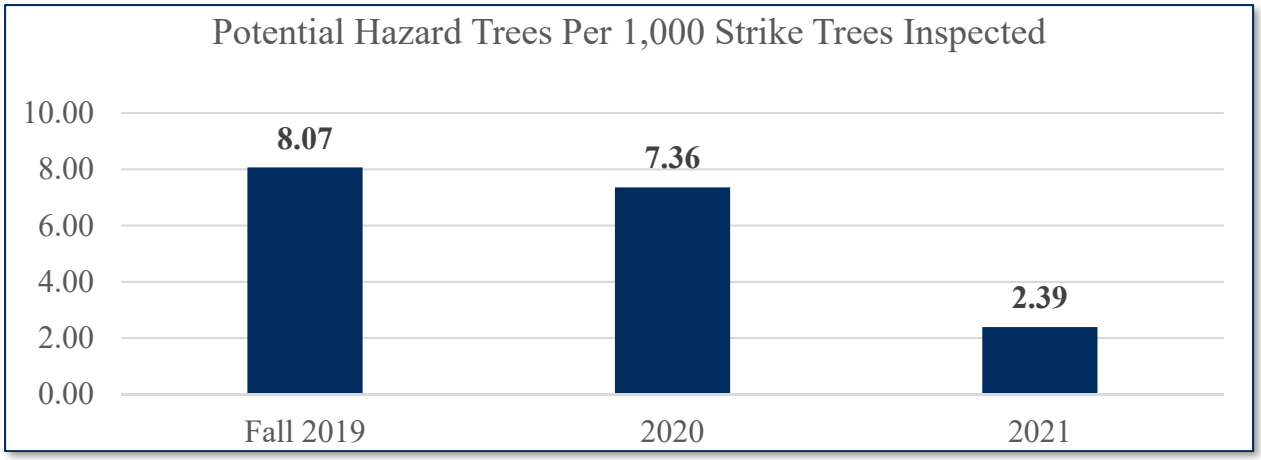
For Monitor team inspections of EVM areas from 2019-2021, the three graphs below show the number of potential exceptions observed.

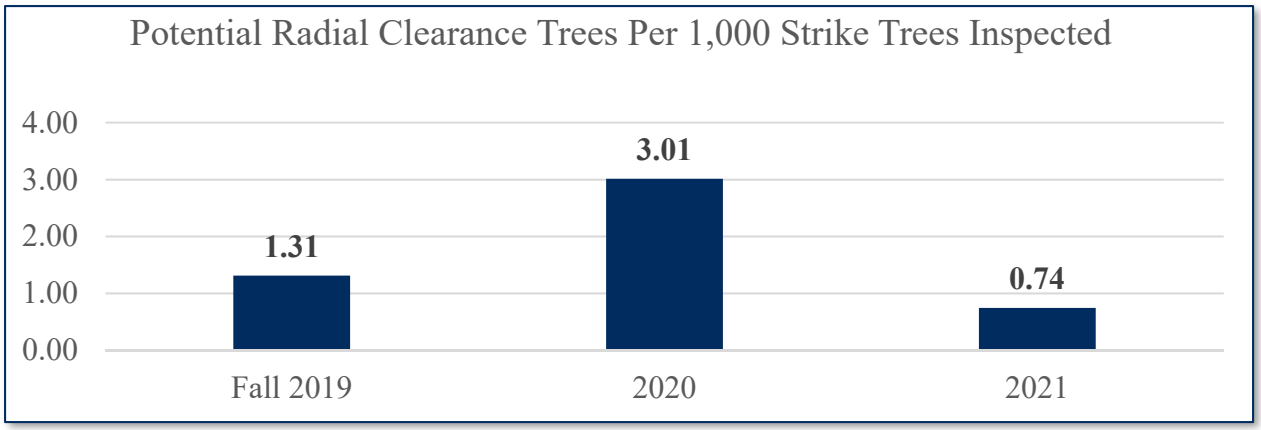






For Monitor team inspections of EVM areas from 2019-2021, the first graph shows the number of potential hazard trees observed per 1,000 strike trees inspected, the second graph shows the number of potential radial clearance issues observed per 1,000 strike trees inspected, and the third graph shows the number of potential overhang trees observed per 1,000 strike trees inspected.





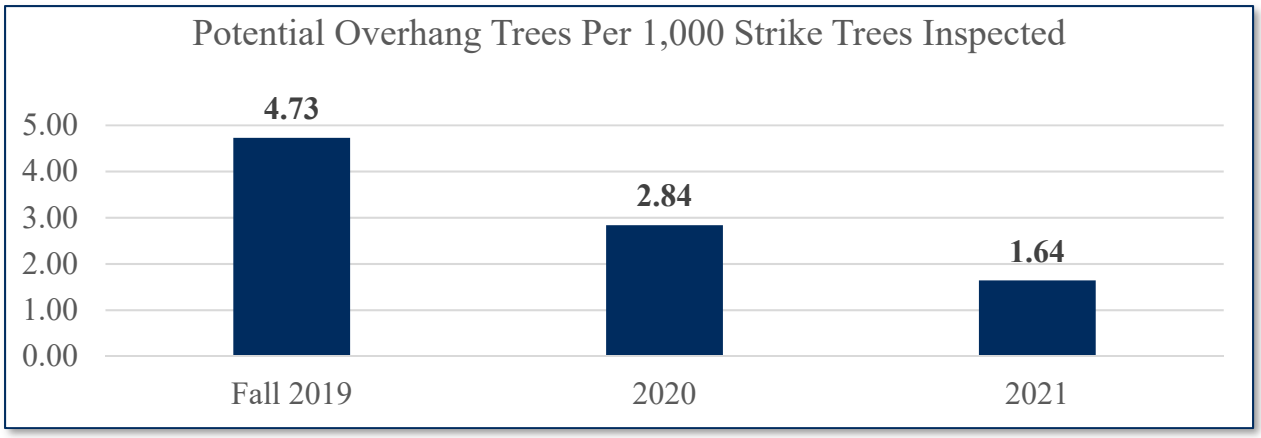
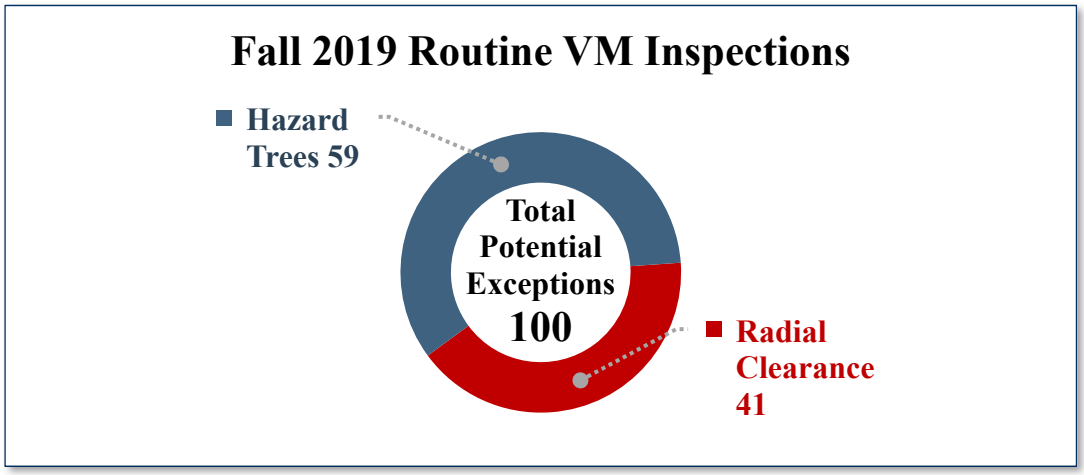
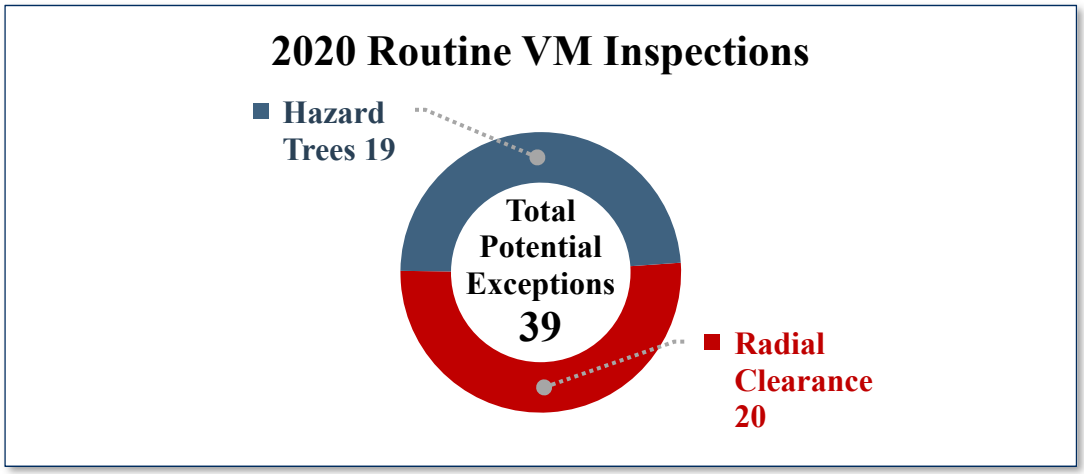
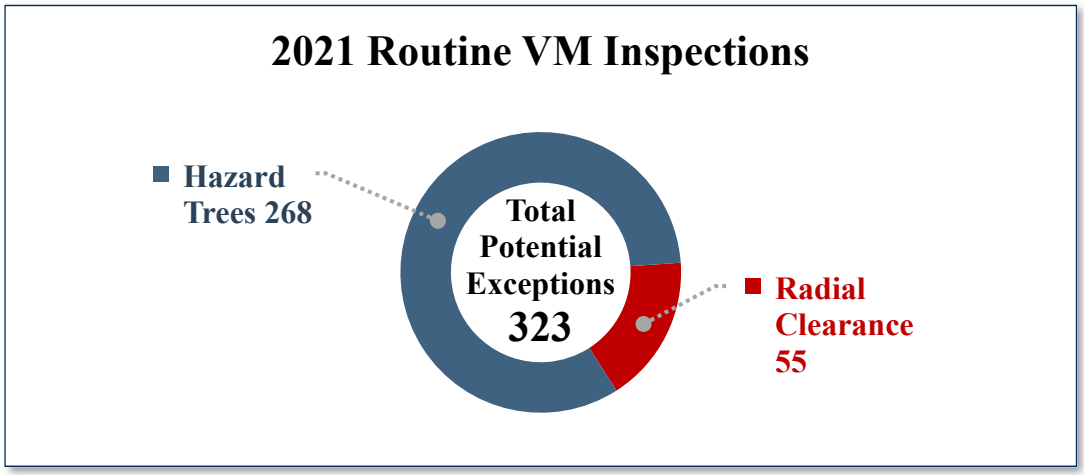


EXHIBIT 5: ROUTINE VM INSPECTION STATISTICS

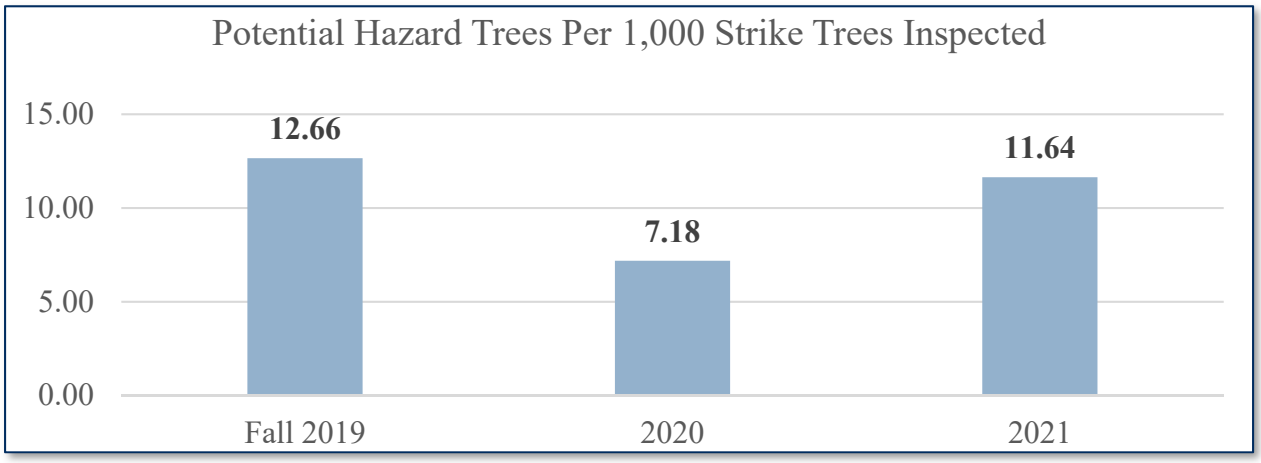
For Monitor team inspections of Routine VM areas from 2019-2021, the three graphs below show the number of potential exceptions observed.







For Monitor team inspections of Routine VM areas from 2019-2021, the first graph shows the number of potential hazard trees observed per 1,000 strike trees inspected, and the second graph shows the number of potential radial clearance issues observed per 1,000 strike trees inspected.



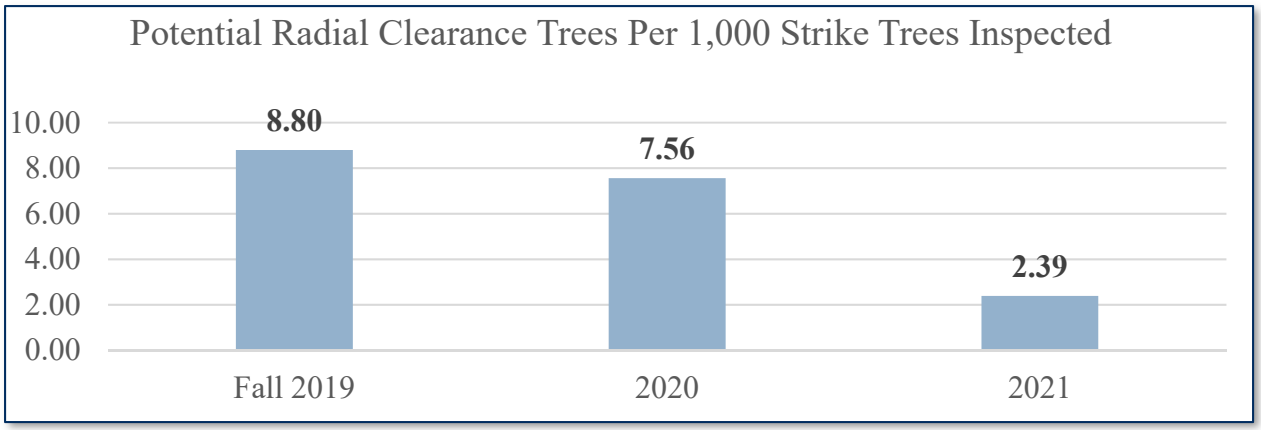
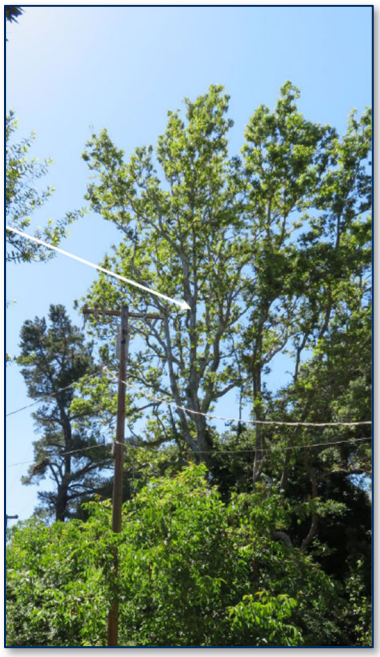


EXHIBIT 6: HAZARD TREES

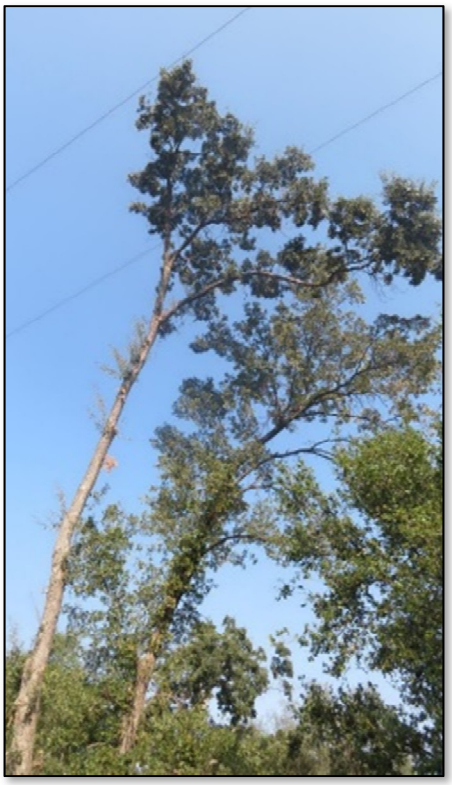
Below is a hazard tree with fire damage identified by the Monitor team.

Below is a hazard tree that was dead or dying identified by the Monitor team.

Below is a hazard tree with decayed cavities identified by the Monitor team.



Below is a hazard tree with poor taper identified by the Monitor team.

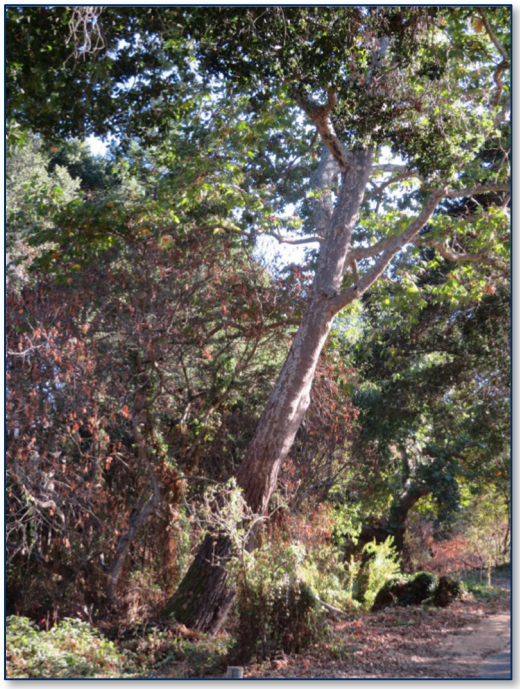


Below is a hazard tree with branch dieback and decayed cavities identified by the Monitor team.

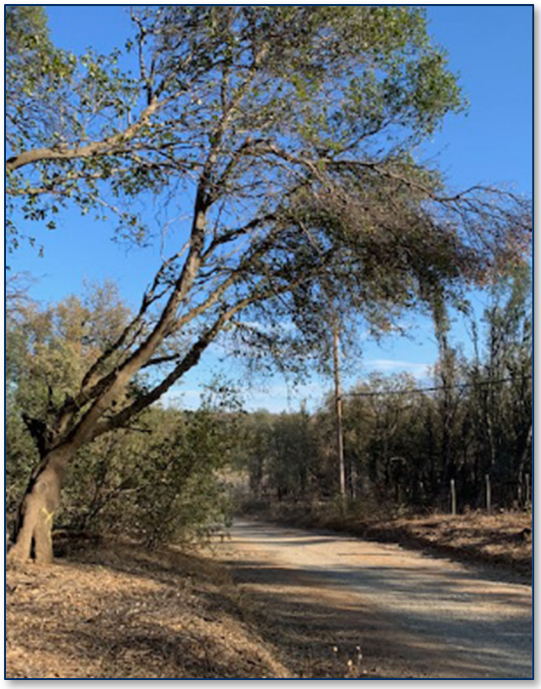
Below is a hazard tree with exposed roots identified by the Monitor team.

Below is a hazard tree with mechanical damage identified by the Monitor team

Below is a hazard tree uprooting at the base identified by the Monitor team.



Below is a hazard tree with cavities, heart rot, and cracking identified by the Monitor team.



Below is a hazard tree with cavities and rotting identified by the Monitor team.

Below is a hazard tree with severe lean towards primary conductor identified by the Monitor team.

EXHIBIT 7: VM RISK PRIORITIZATION STATISTICS

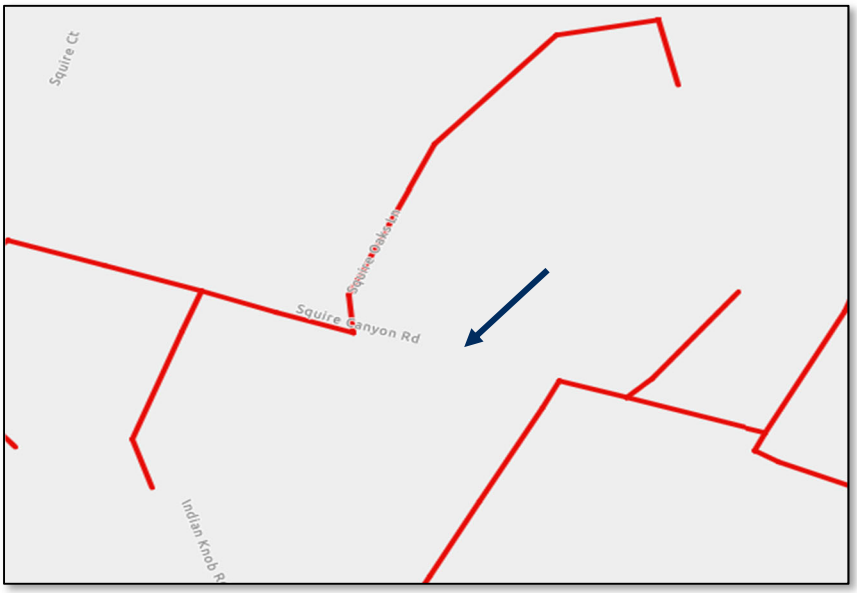
The chart below shows the percentage of EVM mileage in 2019-2021 completed in the top 10% of risk-ranked HFTD circuit miles, according to PG&E's stated risk models in those years.

	2019	2020	2021 YTD
Total EVM Work Verification Pass Miles	2,499.29	1,877.94	1,303.96
EVM Work Verification Pass Miles Within the Top 10% of HFTD Miles on the Stated Risk Model	463.94	118.93	1,079.83
Percentage of EVM Work Verification Pass Miles Within the Top 10% of HFTD Miles on the Stated Risk Model	18.6%	6.3%	82.8%

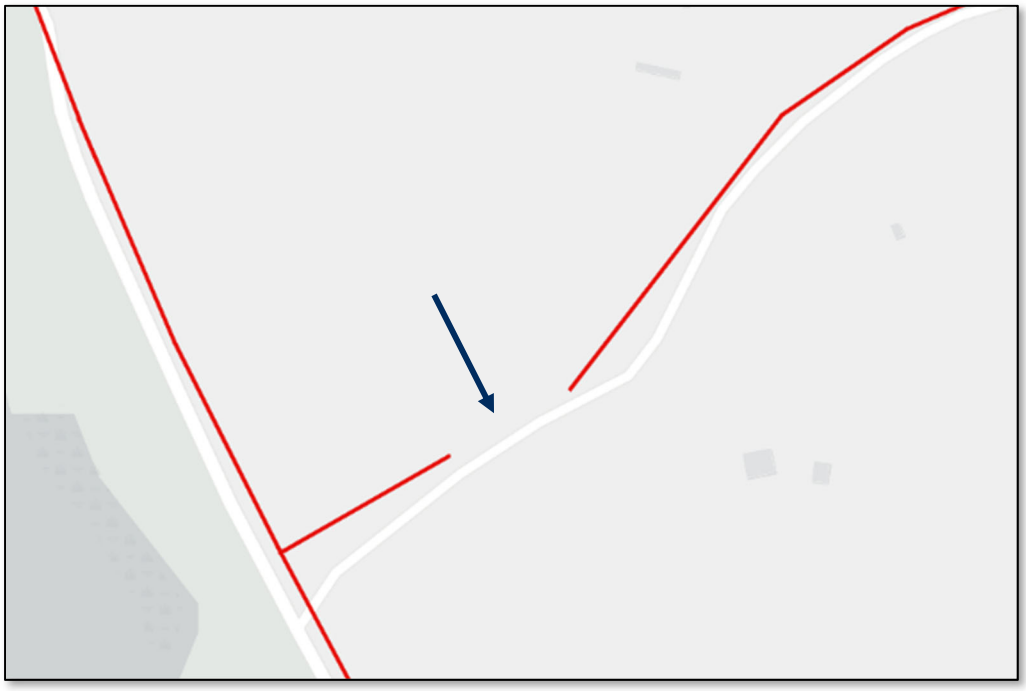
EXHIBIT 8: VM MAP INACCURACIES

On CIP_BF126-A14_638206, the actual location of a pole (blue circle with white arrow) was ~200 feet away from the location of that pole on the Arc Collector map (red circle).

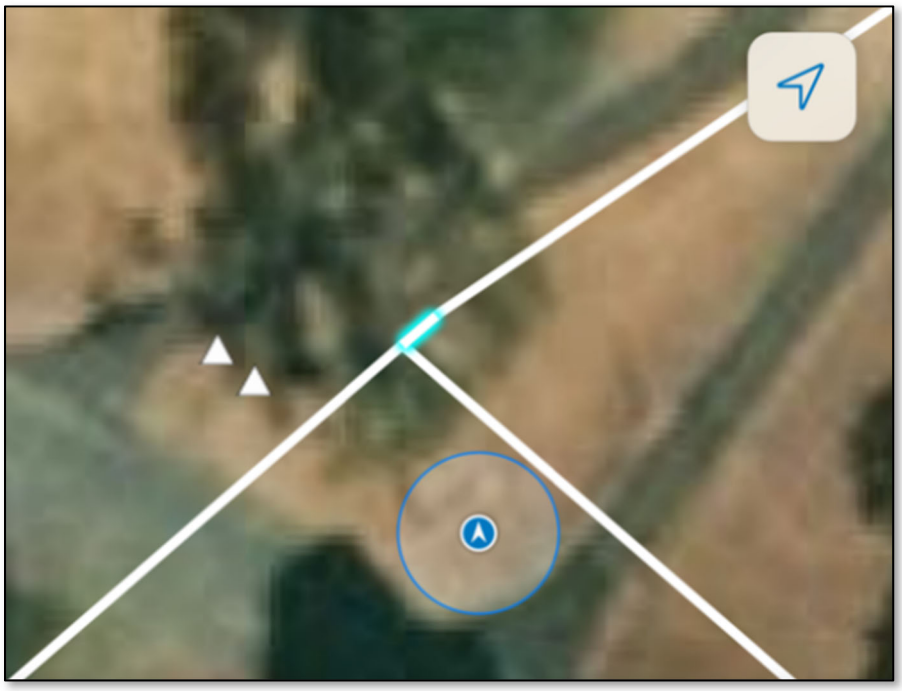
Near CIL_AY138-L08_143892, the Monitor team informed PG&E on 10/30/20 of a radial clearance issue on a segment that was missing from the Arc Collector map. That segment is still missing in 2021.



Near CIE_AJ120-I16_1746168, a segment was observed as missing from the Arc Collector map.



CIE_B127-B19_1727589 is a seven-foot long segment that does not correspond to a full span of primary conductor.



CIE_AO108-B15_1774125 (and the adjacent L-shaped segment) do not exist in the field.

CIE_AP120-K24_1757184 appears curved on Arc Collector, but the segment is a straight line in the field.

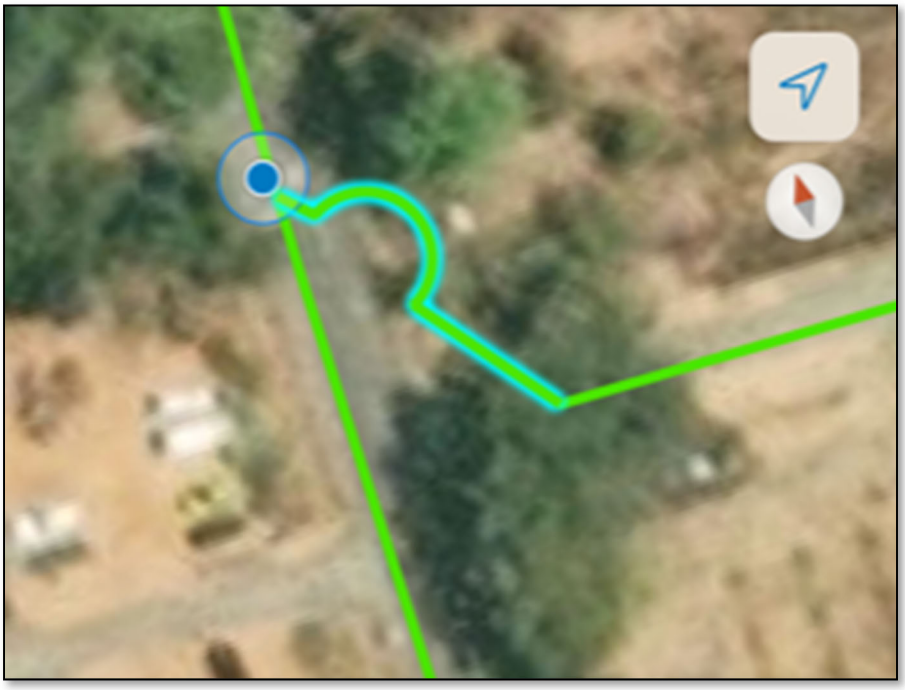
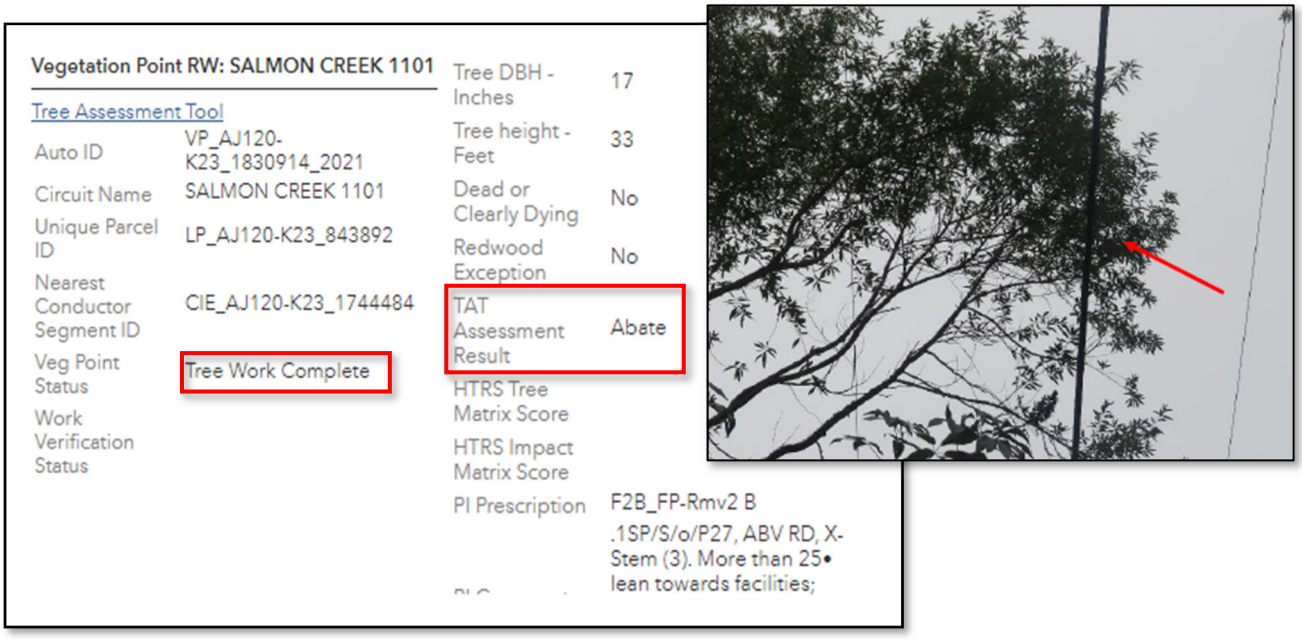


EXHIBIT 9: INCONSISTENT VM DATA

Near CIE_AJ120-K23_1744484, the Monitor team observed five trees that had been marked as "Tree Work Complete," but the Monitor team observed that the prescribed tree work had not been performed.

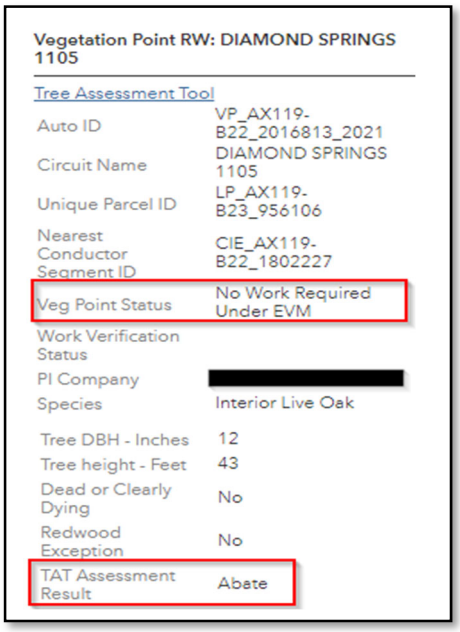


Vegetation Point RW: SALMON CREEK 1101

Tree Assessment Tool

Auto ID	VP_AJ120-K23_1830914_2021	Tree DBH - Inches	17
Circuit Name	SALMON CREEK 1101	Tree height - Feet	33
Unique Parcel ID	LP_AJ120-K23_843892	Dead or Clearly Dying	No
Nearest Conductor Segment ID	CIE_AJ120-K23_1744484	Redwood Exception	No
Veg Point Status	Tree Work Complete	TAT Assessment Result	Abate
Work Verification Status		HTRS Tree Matrix Score	
		HTRS Impact Matrix Score	
		PI Prescription	F2B_FP-Rmv2 B .1SP/S/o/P27, ABV RD, X-Stem (3). More than 25• lean towards facilities;

The below vegetation point record shows a tree with a Tree Assessment Tool result of "Abate" but a Status of "No Work Required Under EVM." The map shows 1,541 vegetation point records in Arc Collector with the same discrepancy between the Tree Assessment Tool result and the Status.



Vegetation Point RW: DIAMOND SPRINGS 1105

Tree Assessment Tool

Auto ID	VP_AX119-B22_2016813_2021
Circuit Name	DIAMOND SPRINGS 1105
Unique Parcel ID	LP_AX119-B23_956106
Nearest Conductor Segment ID	CIE_AX119-B22_1802227
Veg Point Status	No Work Required Under EVM
Work Verification Status	
PI Company	[redacted]
Species	Interior Live Oak
Tree DBH - Inches	12
Tree height - Feet	43
Dead or Clearly Dying	No
Redwood Exception	No
TAT Assessment Result	Abate

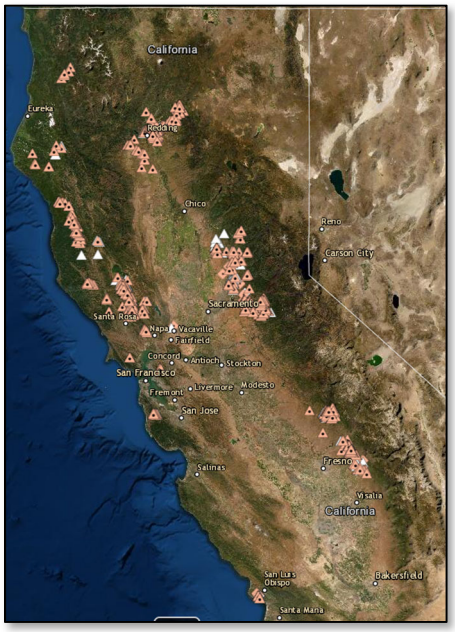
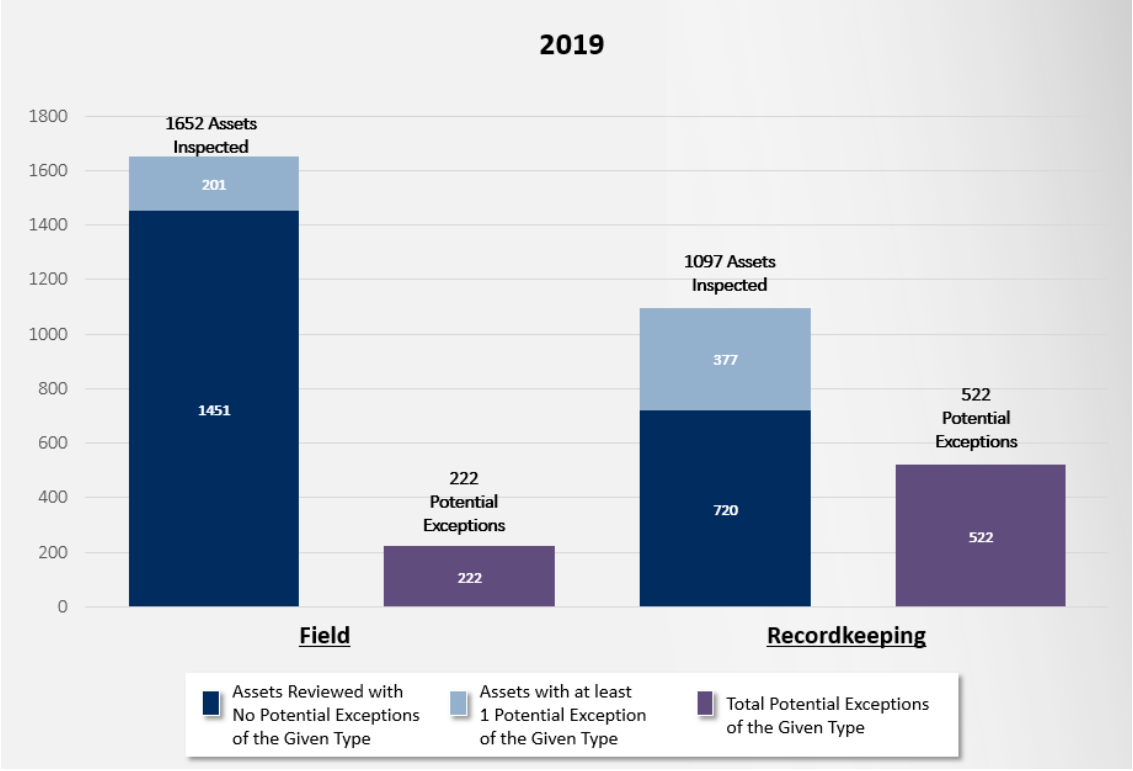
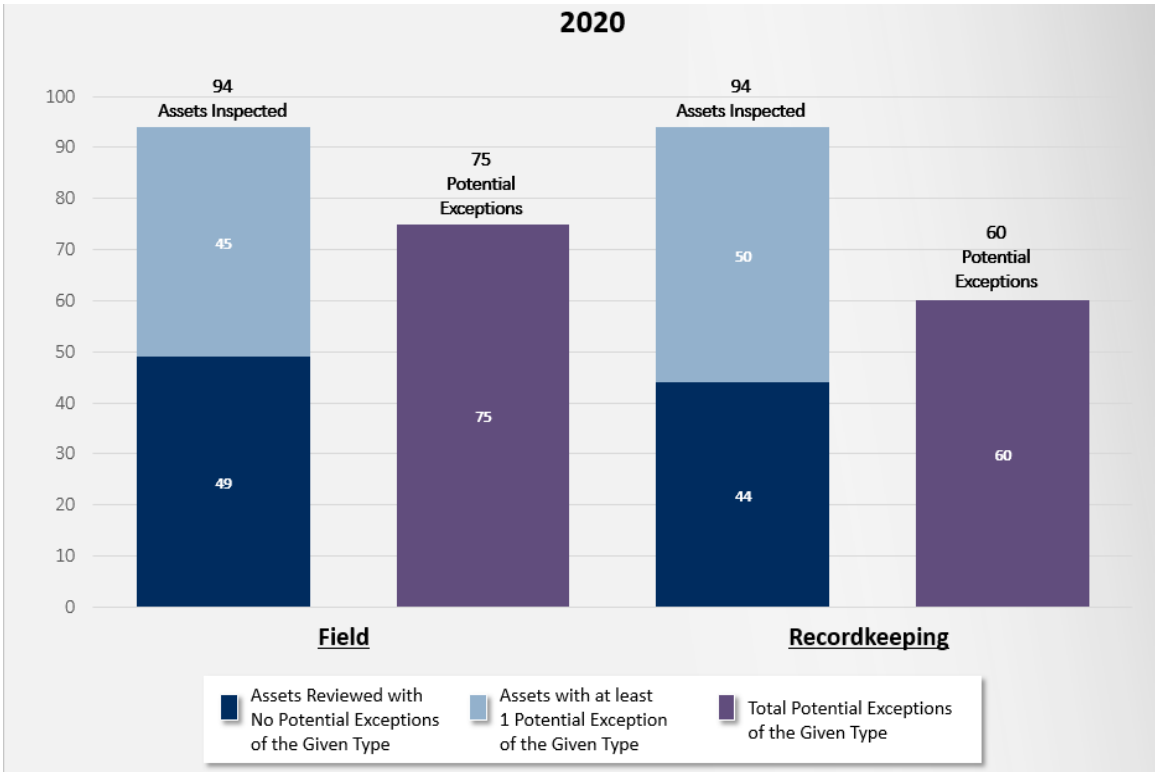
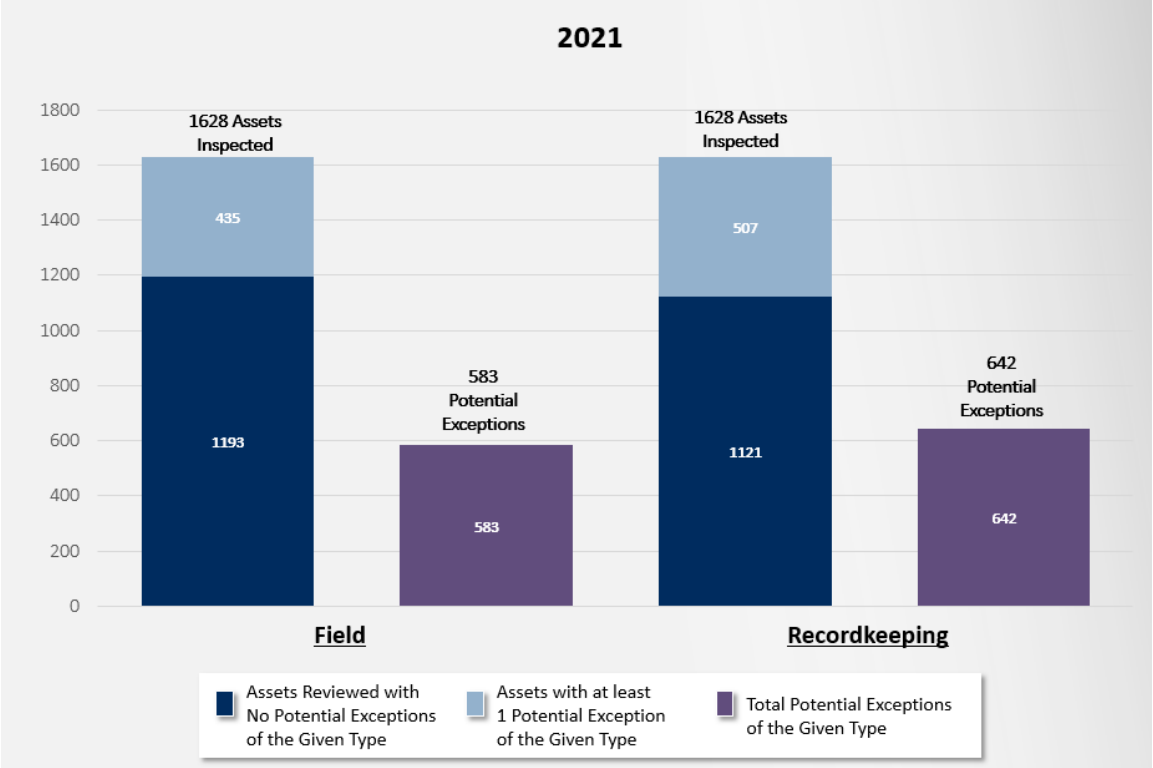


EXHIBIT 10: REVIEW OF DISTRIBUTION INSPECTION FINDINGS (2019 - 2021)

The graphics below show the number of distribution inspections reviewed by the Monitor team each year, as well as the number of potential exceptions recorded.




2020
94
Assets Inspected
45
49
75
Potential
Exceptions
75
94
Assets Inspected
50
44
60
Potential
Exceptions
60
100
90
80
70
60
50
40
30
20
10
0
Field
Recordkeeping
Assets Reviewed with No Potential Exceptions of the Given Type
Assets with at least 1 Potential Exception of the Given Type
Total Potential Exceptions of the Given Type


2021
1628 Assets
Inspected
435
1193
583
Potential
Exceptions
583
1628 Assets
Inspected
507
1121
642
Potential
Exceptions
642
1800
1600
1400
1200
1000
800
600
400
200
0
Field
Recordkeeping
Assets Reviewed with No Potential Exceptions of the Given Type
Assets with at least 1 Potential Exception of the Given Type
Total Potential Exceptions of the Given Type

The tables below show the number of potential exceptions recorded by the Monitor team for the most prevalent field conditions (i.e., those that should have been identified by an inspector per PG&E guidance) on distribution structures.

Top Field Conditions - 2019

Condition	# of Conditions Identified
Poles: Is pole damaged, broken, burnt, or showing signs of cracking or decay?	50
Guys/Anchors: Is guy/anchor broken, damaged, corroded, covered by vegetation, or overgrown; or is soil eroded, or guy/anchor graded or buried; or is there strain or abrasion?	36
Tree/Vine: Is there improper clearance on conductor, pole or cross arm due to vegetation?	28
Connector: Are mini-wedge or Insulink connectors used in primary conductors? Or is there an incorrect use of secondary connectors (mini-wedge or Insulink) in primary conductor?	14
Guys/Anchors: Does pole have any unbalanced or unsupported strain at primary or communication level? Are necessary guys missing or loose?	13

Top Field Conditions - 2020

Condition	# of Conditions Identified
Conductor: Conductor has splices tied in within 2' of insulator preventing free movement of splice with conductor	18
Structure: Pole broken, damaged, burnt, deformed, corroded, gunshot, or showing signs of cracking, rotten or decay	8
Anchor and Guys: Guy wire broken, damaged, clearance issues, corroded, covered by vegetation, overgrown, strain or abrasion	8
Hardware and Framing: Hardware Framing molding missing, broken, damaged, or loose	4
Vegetation: Tree causing strain or abrasion to secondary or service	4

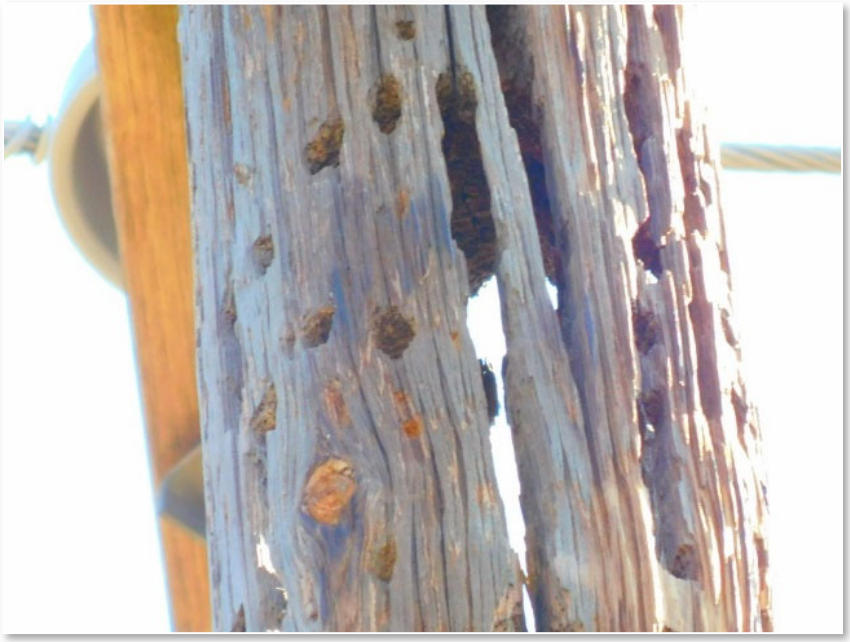
Top Field Conditions - 2021

Condition	# of Conditions Identified
Structure: Pole broken, damaged, burnt, deformed, corroded, gunshot, or showing signs of cracking, rotten or decay	164
Vegetation: Support Structure with non-exempt equipment, has dried ground vegetation within 10' radius of Support Structure base	55
Conductor: Conductor has splices tied in proximity to insulator preventing free movement of splice with conductor	53
Anchor and Guys: Guy wire broken, damaged, clearance issues, corroded, covered by vegetation, overgrown, strain or abrasion	37
Hardware and Framing: Tap clamps installed incorrectly	34

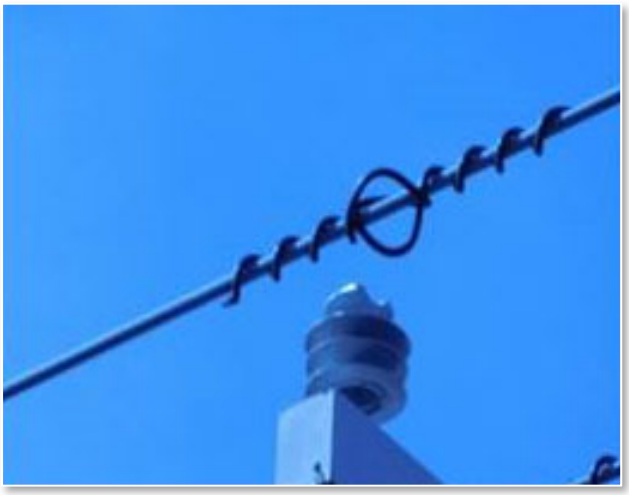
The graphics below show conditions identified by the Monitor team in its review of distribution inspections.

Below is a severely damaged crossarm the Monitor encountered in a Tier 3 HFTD. The Monitor team immediately reported this condition to PG&E, which then dispatched a field team that arrived on site within approximately two hours.

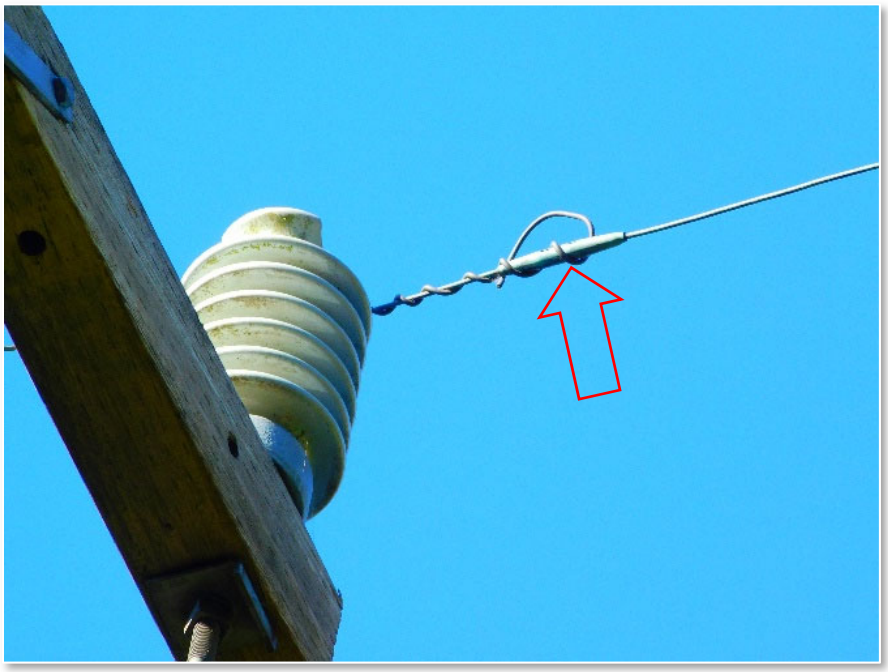
Below is a pole with severe cracking and decay that the Monitor team found in a Tier 2 area and immediately reported to PG&E. The Monitor team confirmed that PG&E replaced the pole the same day.



Below are floating conductors the Monitor team identified in Tier 3 areas and immediately reported to PG&E.



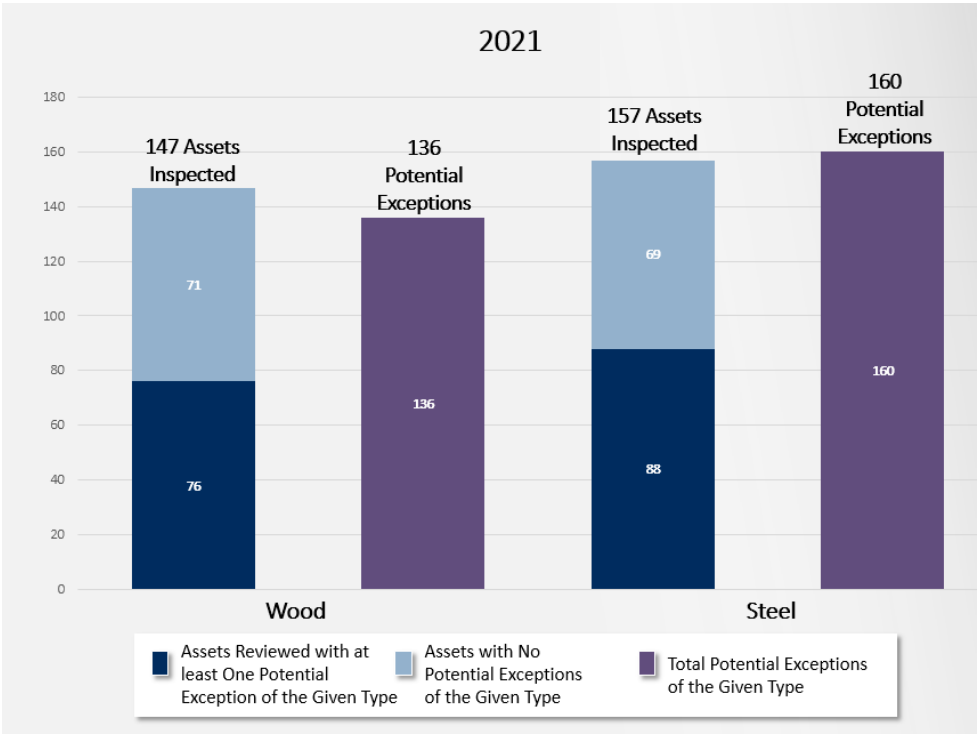
Below are conductors the Monitor team identified with splices tied in within 2’ of an insulator.



Below are examples found by the Monitor team where the guy wire was overgrown by vegetation.

EXHIBIT 11: REVIEW OF TRANSMISSION INSPECTION FINDINGS (2020 - 2021)

The graphic below shows the number of transmission inspections reviewed by the Monitor team each year, as well as the number of potential exceptions recorded.



The tables below show the number of potential exceptions recorded by the Monitor team for the most prevalent conditions in transmission steel and wood structures in 2020 and 2021.

Top Steel Structure Conditions - 2020

Condition	# of Conditions Identified
Structure Location: Is the structure in a rural area and within 600 ft of a frequently traveled road/trail?	68
Structure Location: Is the structure in a rural area and within 600 ft of a dwelling or camp?	31
Steel Structure: Steel Structure Hardware Loose or missing	18
Insulators: Insulators' hardware cold-end in poor condition (e.g. C-hook)	17
Steel Structure: Insulator hanger (eye) plate in poor condition	13

Top Steel Structure Conditions - 2021

Condition	# of Conditions Identified
General: Rural area and structure within 600 ft of a frequently traveled road/trail	23
Conductors & Insulators: Is there OPGW or Shield Wire Present?	21
Steel Structure: Steel Structure hardware loose or missing (e.g vibrating members)	9
General: Vegetation present?	7
General: High voltage signs missing, damaged, or installed incorrectly (see E.D. 022168 further details see GO 95)	7

Top Wood Structure Conditions - 2020

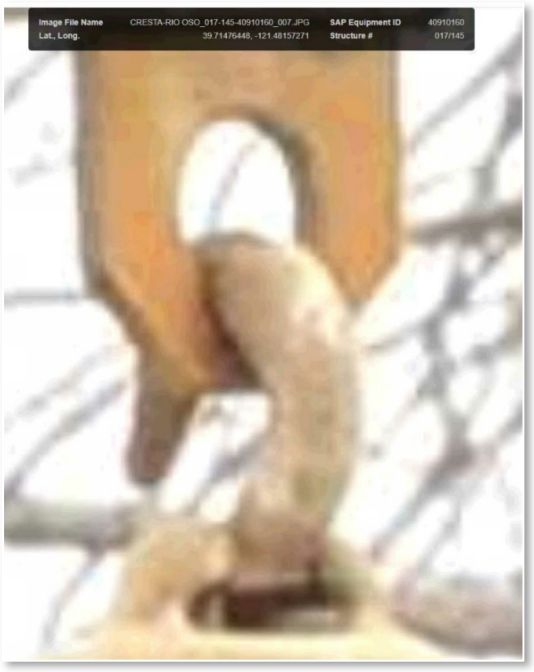
Condition	# of Conditions Identified
Structure Location: Is the structure in a rural area and within 600 ft of a frequently traveled road/trail?	58
Structure Location: Is the structure in a rural area and within 600 ft of a dwelling or camp?	31
Non-Steel Structure: Pole-top damage or split-top	22
Non-Steel Structure: Breaks or cracks or split in pole	18
Non-Steel Structure: Bird, animal or insect damage (e.g., woodpecker)	12

Top Wood Structure Conditions - 2021

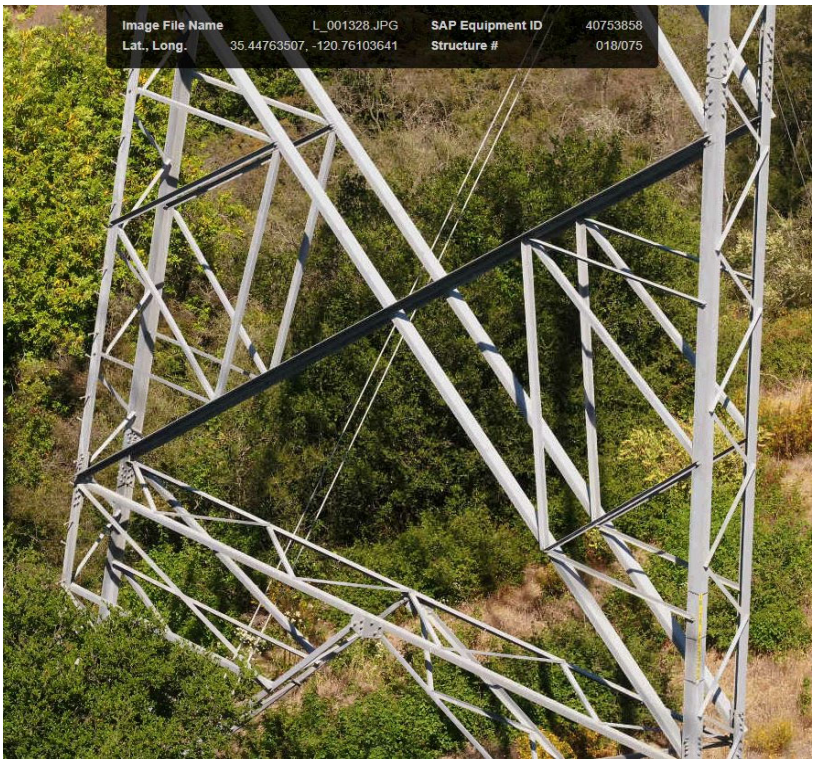
Condition	# of Conditions Identified
General: Rural area and structure within 600 ft of a frequently traveled road/trail	29
General: Rural area and within 600 feet of a dwelling or camp	11
Non-Steel Structure: Does this structure have a guy?	11
General: High voltage signs missing, damaged, or installed incorrectly (see E.D. 022168 further details see GO 95)	10
Conductors & Insulators: Polymer	7
General: Distribution underbuilt present	7

The graphics below show conditions identified by the Monitor team in its review of transmission inspections.

Below is a transmission structure on which the Monitor team observed a partially deteriorated C-hook and hanger plate.



Below are structures the Monitor team identified that appeared to have vegetation present where PG&E inspectors did not note it.



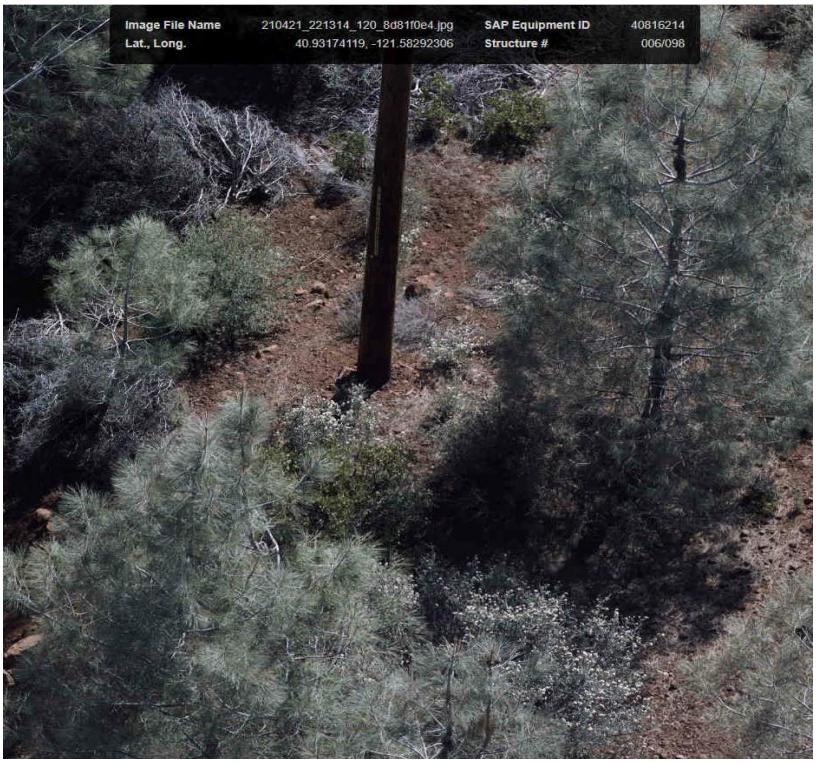


EXHIBIT 12: INCREASING BACKLOG OF INFRASTRUCTURE-RELATED REMEDIATION WORK

This graphic shows the increasing backlog of outstanding transmission and distribution tags through June 2021.

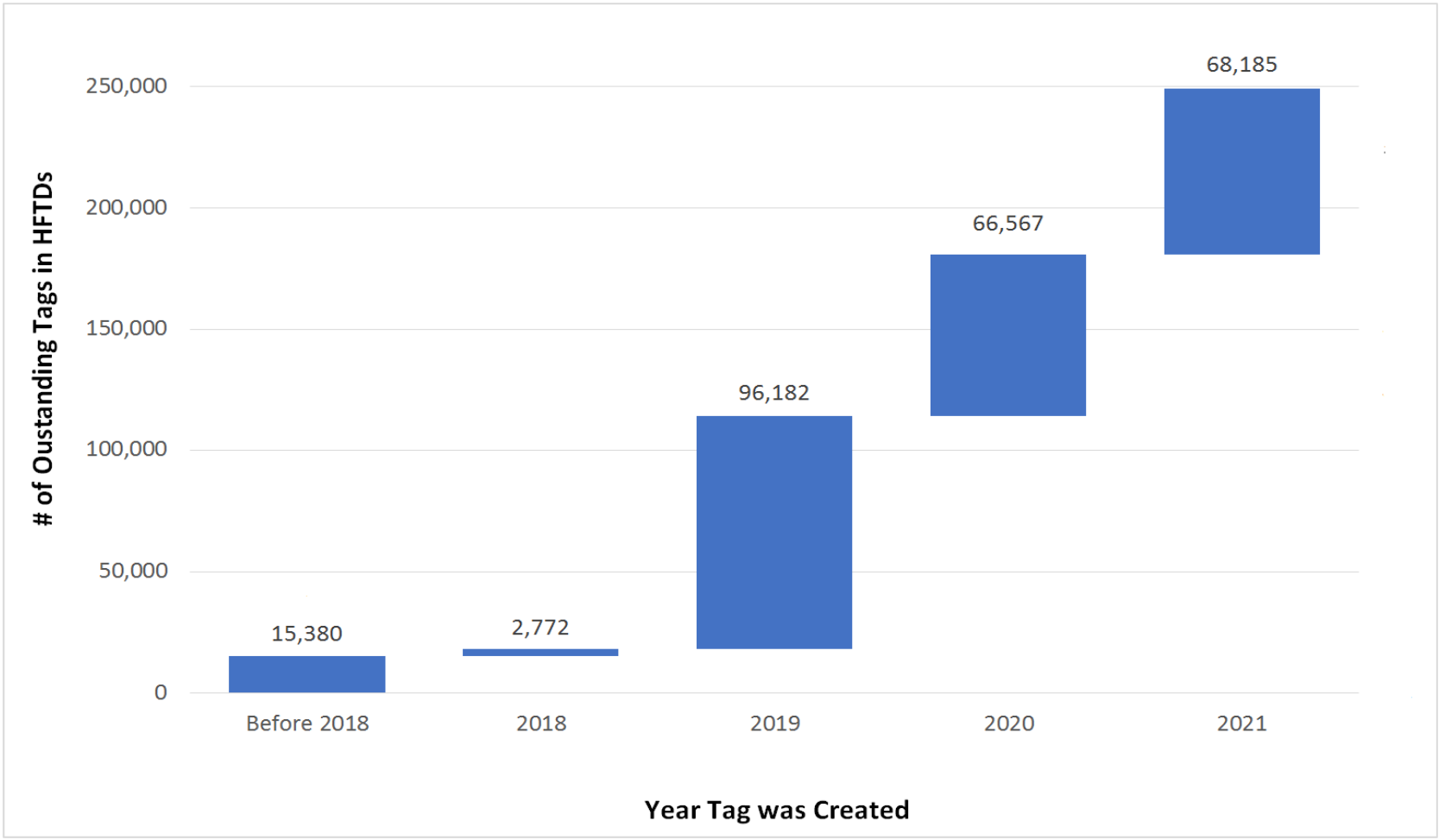


EXHIBIT 13: PENDING, UNRESOLVED INFRASTRUCTURE-RELATED TAGS

This table shows the pending, unresolved ("open") tags by repair tag priority that had not been addressed by June 30, 2021. Priority A tags are generated for conditions that require immediate mitigation and a full repair within 30 days. Priority B tags must be remediated within 90 days. Priority E and F tags must be remediated within one year (six months if in HFTD Tier 3) and five years, respectively. Priority H tags, which are only in distribution, refer to tags related to system hardening or proactive removal projects. WSIP refers to PG&E's 2019 Wildfire Safety Inspections Program, which was an accelerated ignition-based inspection program that evaluated every PG&E asset in areas of extreme (Tier 3) and elevate (Tier 2) wildfire risk, as defined by the CPUC HFTD map. Therefore, WSIP tags refer to tags identified through WSIP as opposed to PG&E's subsequent inspections.

Asset Type	Inspection Source [8,12]		Total Created Tags (21Q2)[1, 14] (carry-forward from Table 3)						Tags Closed (C) [13] (data as of 06/30/21)						Total Open Tags (O = 21Q2-C)[2] (data as of 06/30/21)					
			A[10]	B	E	F	H[11]	Sub-total	A[10]	B	E	F	H[11]	Sub-total	A[10]	B [15]	E	F	H[11]	Sub-total
Electric Distribution	HFTD	WISP	996	8,630	174,557	10,016	11,030	**205,229**	996	7,586	105,355	6,458	4,383	124,778	-	1,044	69,202	3,558	6,647	80,451
		Non-WISP	11,134	21,795	107,265	26,671	1,024	**167,889**	11,075	13,573	15,741	3,288	158	43,835	59	8,276	92,268	39,339	1,665	141,607
	Non-HFTD / Non-WSIP		35,713	32,126	139,956	49,444	46	**257,285**	35,602	28,501	29,736	4,038	6	97,883	111	3,665	110,936	113,575	59	228,346
	Subtotal		**47,843**	**62,551**	**421,778**	**86,131**	**12,100**	**630,403**	**47,673**	**49,660**	**150,832**	**13,784**	**4,547**	**266,496**	**170**	**12,985**	**272,406**	**156,472**	**8,371**	**450,404**
Electric Transmission	HFTD	WISP	69	4,344	42,992	5,186	-	**52,591**	69	4,336	40,972	3,869	-	**49,246**	-	8	2,020	1,317	-	**3,345**
		Non-WISP	688	3,453	20,125	12,920	-	**37,186**	688	2,696	8,568	3,851	-	**15,803**	-	758	11,819	9,091	-	**21,668**
	Non-HFTD / Non-WSIP		1,393	9,414	41,321	19,925	-	**72,053**	1,392	8,994	16,368	4,513	-	**31,267**	1	420	25,194	15,479	-	**41,094**
	Subtotal		2,150	17,211	104,438	38,031	-	**161,830**	**2,149**	**16,026**	**65,908**	**12,233**	**-**	**96,316**	**1**	**1,186**	**39,033**	**25,887**	**-**	**66,107**
Electric Substation	HFTD	WISP	107	728	2,828	-	-	**3,663**	107	728	2,791	-	-	**3,626**	-	-	37	-	-	**37**
		Non-WISP	509	1,894	6,266	119	-	**8,788**	508	1,620	3,924	15	-	**6,067**	1	274	2,343	117	-	**2,735**
	Non-HFTD / Non-WSIP		1,501	5,281	11,897	166	-	**18,845**	1,500	5,056	10,080	56	-	**16,692**	1	225	1,825	126	-	**2,177**
	Subtotal		2,117	7,903	20,991	285	-	**31,296**	2,115	7,404	16,795	71	-	**26,385**	**2**	**499**	**4,205**	**243**	**-**	**4,949**
Grand Total	HFTD	WISP	1,172	13,702	220,377	15,202	11,030	**261,483**	1,172	12,650	149,118	10,327	4,383	**177,650**	-	1,052	71,259	4,875	6,647	**83,833**
		Non-WISP	12,331	27,142	133,656	39,710	1,024	**213,863**	12,271	17,889	28,233	7,154	158	**65,705**	60	9,308	106,430	48,547	1,665	**166,010**
	Non-HFTD / Non-WSIP		38,607	46,821	193,174	69,535	46	**348,183**	38,494	42,551	56,184	8,607	6	**145,842**	113	4,310	137,955	129,180	59	**271,617**
	Subtotal		**52,110**	**87,665**	**547,207**	**124,447**	**12,100**	**823,529**	**51,937**	**73,090**	**233,535**	**26,088**	**4,547**	**389,197**	**173**	**14,670**	**315,644**	**182,602**	**8,371**	**521,460**

[12] W = WSIP, NW = Non-WSIP, NH/NW = Non-HFTD/Non-WSIP
[13] Closed tags include cancelled, deleted, or tags moved out of scope, in addition to physically completed work; reflects new tags closed since January 1, 2019.
[14] Created Tags reflects the summation of tags open and closed since January 1, 2019, consistent with prior quarterly reports, and not does reflect open tags created prior to 2019.
[15] All B tags initially identified through the WSIP were completed by year 2020; open WSIP B tags reflected below are tags that have had their priority upgraded since the tags were created.

Source: PG&E Q2 2021 Compliance Plan Quarterly Update, dated August 16, 2021

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_005-Q003		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01		
Request Date:	December 5, 2023	Requester DR No.:	TURN_DR_PGE-005
Date Sent:	December 19, 2023 Rev01: January 24, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Various	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – PG&E-1 GENERAL

The following questions relate to general matters addressed in Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 003

On p. 11-11, lines 23-24, PG&E states that "for each wildfire mitigation program, PG&E has developed quality monitoring and audit plans tailored to each program." Please provide:

a. The quality monitoring plans related to:
   i. Inspections
   ii. Pole repair and replacement
   iii. Distribution line repair and replacement
b. All reports from January 1, 2019 to the present resulting from execution of the quality monitoring plans related to:
   i. Inspections
   ii. Pole repair and replacement
   iii. Distribution line repair and replacement
c. The audit plans related to:
   i. Inspections
   ii. Pole repair and replacement
   iii. Distribution line repair and replacement
d. All reports from January 1, 2019 to the present of internal audits conducted related to:
   i. Inspections
   ii. Pole repair and replacement
   iii. Distribution line repair and replacement

ANSWER 003 REVISED 01

Attachments to this response contain CONFIDENTIAL information provided pursuant to the Non-Disclosure Agreement between PG&E and TURN in this proceeding.

a. See below for requested information for the quality monitoring plans for:

i. Inspections

The System Inspections Quality Control (SIQC) program team was created in Q2 of 2020, after the completion of 2019's Wildfire Safety Inspection Program (WSIP). The program was in the discovery and define phase of development in 2020 and a successful pilot was conducted in 2021. The SIQC program focused on Enhanced Overhead Distribution and Transmission Ground Asset Inspections in 2022. The four main inspection programs within the SIQC program are: 1) Distribution Desktop QC, 2) Distribution Field QC, 3) Transmission Desktop QC, and 4) Transmission Field QC. The procedures for the SIQC team are provided in "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch01.pdf*."

The SIQC program reviews completed field inspection records for completeness, accuracy and adherence to the inspection guidance provided in the PG&E standards and procedures. The QC Specialist uses an inspection checklist to complete review and document discrepancies. A statistically valid minimum QC sampling plan is generated at the beginning of each program year based on the total planned volume of inspections for the year. Power BI Dashboards with quality findings and trend data are shared with stakeholders to communicate results.

The Electric Distribution Maintenance Requirements Standards are included in attachment "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch02.pdf*".

ii. Pole Repair and Replacement

The QC team of the Pole Replacement Program performs a field inspection after construction is complete. The field team verifies that the construction meets PG&E standards. PG&E standards are designed to meet or exceed GO95. Once the field inspection is complete, the result is sent to a construction specialist to review. After the construction specialist completes their review, the inspection report is sent back to the contractor for any corrective action, if an infraction is identified. If no infractions are identified, the inspection report would be sent to clerical for order closure in SAP. A copy of the passed inspection is uploaded into SAP.

iii. Distribution line repair and replacement

The QC team of the Distribution Line Repair and Replacement program reviews 100% of the locations where work was performed. It begins with a quality control check prior to energization of the conductor. This allows us to identify any non-conformance issues and have them addressed prior to energization. Once the job is complete, the paperwork is turned in for a final inspection. This quality monitoring check is used to verify that all locations are built to PG&E standards and photo evidence is collected at each location. The results are then

sent to a construction specialist to review the paperwork. Upon completion of review, the results are sent back to the contractor for any corrective action due to non-conformance issues. If no infractions are identified, the report is sent to clerical for order closure in SAP. A copy of the passed inspection is uploaded into SAP.

b. In regard to providing all reports of the quality monitoring plans from January 1, 2019 to present, PG&E objects to this request as unduly burdensome and oppressive.

   i. As explained in response subpart a i. above, the SIQC program was established in 2020 with the discovery and define phase and then was in pilot phase in 2021. Since 2021, the SIQC program has performed and generated more than 250,000 Distribution related quality monitoring findings reports[1]. Due to the large volume of the reports and the considerable time it will take to extract and provide all of the 250,000 plus reports, we are instead providing a summary list of all QC reviews performed from 2022 to present, along with four representative samples from each of the inspection categories of the SIQC program, in the following attachments.

   See table below for each category of quality monitoring programs (Column A) and the associated count of 2022 and 2023 quality monitoring findings (Column B). The listing of all quality monitoring inspections findings for each distribution program for 2022 and 2023 are provided in four attachments (Column C). The representative samples of the quality monitoring findings are provided as attachments for each of the two types of distribution programs (Column D).

A) Quality Monitoring Distribution Inspection Programs	B) Count of Quality Monitoring Distribution Findings	C) List of Quality Monitoring Distribution Findings (Attachment Name)	D) Quality Monitoring Distribution Samples (Attachment Name)
Distribution Desktop QC	2022: 37,144 2023: 194,518	WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch03.xlsx WildfireandGasSafetyCosts_DR_TURN_005-Q003Atch05.xlsx	WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch07.pdf
Distribution Field QC	2022: 3,529 2023: 42,771	WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch04.xlsx WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch06.xlsx	WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch08.pdf

1 The SIQC team also does quality monitoring of Transmission Desktop and Field work. The count of Transmission QC findings was not included, as Transmission work is out of scope for the WGSC.

ii. Pole Repair and Replacement

Subject to and notwithstanding this objection, PG&E is providing a sample of a Pole replacement audit report *"WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch09.pdf."*

iii. Distribution Line Repair and Replacement

Subject to and notwithstanding this objection, PG&E is providing a sample of a Pole replacement audit report *"WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch10.pdf."*

c. Please find the attached file "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch11.xlsx*" which includes a list of audits plans from the 2019 to 2023 for the programs of (i) inspections, (ii) pole repair and replacement, and (iii) line repair and replacement.

d. Please find the attached file "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch12.xlsx*" which includes a list of audit reports from January 1, 2019 to present that relates to electric distribution (i) inspections, (ii) pole repair and replacement, and (iii) line repair and replacement programs. Please also find attached files, which include copies of the responsive audit reports from 2019-2023:

- 2019 audits: "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch13.zip*"
- 2020 audits: "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch14.zip*"
- 2021 audits: "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch15.zip*"
- 2022 audits: "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch16.zip*"
- 2023 audits: "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch17.zip*"

Please also see *WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch18CONF.pdf* for a confidential 2022 audit and *WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch19CONF.pdf* for a confidential 2023 audit.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch01.pdf

WildfireandGasSafetyCosts_DR_TURN_005-Q003Atch02.pdf

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch03.xlsx

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch04.xlsx

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch05.xlsx

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch06.xlsx

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch07.pdf

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch08.pdf

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch09.pdf

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch10.pdf

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch11.xlsx

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch12.xlsx

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch13.zip

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch14.zip

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch15.zip

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch16.zip

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch17.zip

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch18CONF.pdf

WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch19CONF.pdf

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_007-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_007-Q002		
Request Date:	December 5, 2023	Requester DR No.:	TURN_DR_PGE-007
Date Sent:	December 21, 2023	Requesting Party:	The Utility Reform Network
PG&E Witness:	Heather Duncan	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAP. 2

The following questions relate to Chapter 2 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 002

On page 2-3, PG&E states the Enhanced Detailed Inspection Program exceeded the requirements of GO 165.

a. Please describe each and every way that the following work exceeded the requirements of GO 165:
   i. Work under MAT Code BFA in 2020;
   ii. Work under MAT Code BFA in 2021;
   iii. Work under MAT Code BFA in 2022;
   iv. Work under MAT Code BFB in 2020:
   v. Work under MAT Code BFB in 2021;
   vi. Work under MAT Code BFB in 2022;
   vii. Work under MAT Code BFC in 2020;
   viii. Work under MAT Code BFC in 2021;
   ix. Work under MAT Code BFC in 2022.
b. Please provide real-time documents substantiating the responses in subpart (a).
c. With respect to Table 2-3 on page 2-7, does PG&E contend that the numbers of inspections and patrols indicated in that table exceed the numbers of inspections and patrols required by GO 165? If so:
   i. Please use the format of Table 2-3 to indicate how many of the patrols and inspections shown in Table 2-3 were required by GO 165 and how many were in excess of GO 165 requirements.

ANSWER 002

a.

Please See "*WildfireandGasSafetyCosts_DR_TURN_007-Q002Atch01.pdf*" for General Order 165, which is the State of California Inspection Requirements for Electric Distribution and Transmission Facilities Adopted March 31, 1997, and amended in December 2017 by D.17-12-024 in R.15.05-006.

The purpose of the General Order is to establish requirements for electric distribution and transmission facilities (excluding those facilities contained in a substation) regarding inspections to ensure safe and high-quality electrical service. The General Order includes very general guidance on Standards for Inspections, Record Keeping and Reporting, but is focused on time-driven distribution inspection cycles and frequency. Under GO165, overhead facilities are required to be inspected every five years and patrolled annually when not inspected.

Table 1
Distribution Inspection Cycles (Maximum Intervals in Years)

	Patrol		Detailed		Intrusive	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Switching/Protective Devices						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Regulators/Capacitors						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Overhead Conductor and Cables	1	2[1]	5	5	---	---
Streetlighting	1	2	x	x	---	---
Wood Poles under 15 years	1	2	x	x	---	---
Wood Poles over 15 years which have not been subject to intrusive inspection	1	2	x	x	10	10
Wood poles which passed intrusive inspection	---	---	---	---	20	20

(1) Patrol inspections in rural areas shall be increased to once per year in Tier 2 and Tier 3 of the High Fire-Threat District. (See GO 95, Rule 21.2-D)

Note: This General Order does not apply to cathodic protection systems associated with natural gas facilities.

Note: For the purpose of implementing the patrol and detailed inspection intervals in Table 1 above, the term "year" is defined as 12 consecutive calendar months starting the first full calendar month after an inspection is performed, plus three full calendar months, not to exceed the end of the calendar year in which the next inspection is due. A required inspection may be completed any time before the expiration of the associated inspection interval using this definition of "year," but not after. The completion of an inspection starts a new inspection interval that must be completed within the prescribed timeframe using this definition of "year." However, inspection intervals may be extended by up to six months in areas where the Governor of California or the President of the United States has declared an emergency or a disaster following a major earthquake or other catastrophe using the procedure set forth in Decision 13-06-011 issued in Rulemaking 08-11-005. The extension shall not exceed six months from the date that an emergency is declared or the date that a disaster is declared, whichever is earlier.

Note: For wood pole intrusive inspections, the term "year" is defined as a calendar year.

Please see "*WildfireandGasSafetyCosts_DR_TURN_007-Q002Atch02.pdf*" "Wildfire Safety Inspections Program, Changes to the GO 165/EC Program" for a

comparison of previous GO 165 Program Guidance and the guidance as of March 2019 presented in the OH Job Aid TD 2305M-JA92, Rev. 5.8.

i-iii. There is no difference in practice relative to GO 165 for the patrols activities (MAT BFA) recorded to WMPMA as compared to the activities recorded to the GRC orders. Patrol inspections of distribution electric lines and equipment are routinely undertaken for assets not scheduled for a detailed inspection within the calendar year. PG&E performs patrols on years when a detailed inspection is not scheduled for all overhead assets (i.e., two of every three years).

iv-vi. The amount recorded to WMPMA under MAT BFB represents inspection activities on overhead poles that exceeded GO 165 requirements using a risk-informed approach for inspection cycles and frequencies.

Prior to the WSIP in 2019, PG&E utilized a time driven cycle to prescribe and complete patrol/inspection activities. Under GO165, overhead facilities in HFTD areas are required to be inspected every five years and patrolled annually when not inspected.

For 2020 to 2022, PG&E performed detailed overhead inspections on 100 percent of HFTD Tier 3 assets (annually) and 33 percent of HFTD Tier 2 assets every year. This practice exceeds the GO 165 requirements for inspection cycles and frequencies.

In 2020 and 2021, enhanced inspection baseline frequencies were primarily based on geographic boundaries in the high fire threat districts (HFTDs) and high fire risk areas (HFRAs). Starting in 2022, with the increased availability of wildfire risk data, inspections are informed by wildfire consequence and asset health. Inspection frequencies guidelines will continue to evolve with improved risk data.

Prior to 2019, inspectors were instructed to write up abnormal conditions that need to be addressed within 12 months. Beginning in 2019, inspectors were instructed to write up abnormal conditions that need to be addressed over a longer-time span, in the next five years.

PG&E's pre2019 (GO 165) Overhead Inspections Program utilized distribution plat maps (maps drawn to scale, showing the divisions of a piece of land) to facilitate patrols and inspections. Compliance Inspectors documented patrols and inspections on a paper map by highlighting completed assets, poles and overhead conductors. In 2020, PG&E made the following changes:

- Moved to mobile technology to conduct an inspection using a detailed checklist.
- Moved to a risk-informed approach to identify, on an accelerated and enhanced basis, damaged or deteriorated electrical equipment that could cause a wildfire ignition or reduce safety and reliability.
- Adopted the WSIP enhanced inspection methodology of using more frequent and in-depth inspection process as the going forward best practice for all overhead distribution assets that posed the highest risk, including beyond the HFTD areas.

In 2021 and 2022, PG&E leveraged the 2021 Wildfire Distribution Risk Model to drive the selection of assets to be inspected and work planning.

For 2020 through 2022, “enhanced” inspections of overhead distribution assets included the following expanded scope: (1) digitized capture of detailed visual inspection via checklists and photographic documentation from a ground vantage point; and (2) digital checklists that align to the Failure Modes and Effects Analysis (FMEA) that identified failure mechanisms that could be inspected for and repaired as part of the accelerated inspection program focused on fire ignition risk.

With more elements to inspect per pole, greater inspection cycles and frequencies, and accelerated schedules in HFTDs, PG&E utilized more contractors. Contractor safety measures, quality control and verification procedures and training needs increased with the program’s enhanced scope. Enhanced QA/QC practices and training are highlighted below:

- **Quality Assurance and Quality Control (QA/QC):** In 2020, to drive consistency in inspection results, PG&E established a consolidated CIRT team under the System Inspections Department to conduct secondary reviews and validate all non-emergency maintenance findings prior to recording the finding as an Electric Corrective (EC) notification. Prior to 2020, distribution compliance had a “centralized gatekeeper” position that performed this function, with four employees on this team.
- **Training:** Inspector training increased from one day of classroom training to three days, due to the new curriculum on the expanded checklist of inspection elements per the Failure Modes and Effect Analysis (FMEA)[1] and utilizing new mobile technology to facilitate inspections and to create unique digitized inspection records at every pole.

vii-ix. Work under MAT Code BFC in 2020-2022

There is no GO 165 requirement related to Infrared Inspections. PG&E uses infrared inspections on distribution circuits in the HFTD to help detect and correct abnormal conditions. Infrared technology provides the opportunity to identify abnormal conditions “hot spots” by utilizing infrared imaging and temperature measuring systems to detect and record heat radiation from a target relative to its surrounding measurements.

In 2019, PG&E completed a multi-year program of infrared inspections and splice inventory of all PG&E circuits. The program consisted of the following work activities:

[1] FMEA identified equipment failure modes that could cause an ignition as well as related inspection questions and methods. FMEA was used to create inspection job aids and establish techniques and protocols to validate the condition of specific equipment and components.

- Infrared Inspections: Overhead electric distribution facilities are inspected using infrared technology and all abnormal conditions are assessed and corrected through the electric distribution maintenance process.

- Splice Inventory: When three or more splices are found in a single overhead span the GPS location and total splices per phase are documented. Splice location and splice count data are leveraged to inform decision making on proactive conductor replacement projects.

Beginning in 2020, PG&E refocused the program to perform infrared inspections on approximately 14,000 miles of overhead electric distribution facilities per year. Each year, the revised program targeted one-third of the overhead electric distribution circuitry located in the Tier 2 and Tier 3 HFTD areas and up to approximately 10 percent of the remaining overhead electric distribution circuitry in non-HFTD areas.

The 2020 HFTD infrared distribution circuit plan utilized the 2019 REAX fire spread modeling scoring component to rank each circuit and was used to the select the 2020 HFTD infrared circuit list. For 2021, PG&E's HFTD infrared plan evaluated which circuits to inspect using the 2021 Wildfire Consequence Model instead of REAX based modeling. Unlike the circuit scoring model used in 2020, the 2021 Wildfire Consequence Model for overhead conductor was used to rank and prioritize circuits based on potential consequence at the circuit level.

b. Please See WildfireandGasSafetyCosts_DR_TURN_007-Q001 attachments for the real-time documents describing the Patrols, Inspections and Infrared Inspections work activities from 2019-2022.

c. The Patrols and Inspections presented in Table 2-3 represent patrols and inspections in HFTD areas associated with the WSIP program's new risk-informed cycles for patrols and inspections.

As PG&E transitioned from a 5-year inspection cycle (GO 165) in HFTD areas to a risk informed approach where inspections happen more frequently, fewer patrols were required and patrol volume decreased. The number of inspections (including Infrared) presented in Table 2-3 exceed the numbers of inspections required under the time driven cycles of GO 165.

For each of the years from 2020 to 2022, PG&E performed detailed overhead inspections on 100 percent of HFTD Tier 3 assets (annually) and 33 percent of HFTD Tier 2 assets every year (3-year cycle), exceeding the number of inspections required by GO 165. No Infrared Inspections are required per GO 165 and thus all exceed that requirement.

C. TABLE 2-3
OVERHEAD INSPECTIONS AND PATROLS COMPLETED IN HFTDS
2020-2022

Line No.	MAT Code/Work Type	Units	2020	2021	2022
1	BFA – OH Poles Patrolled-*required by GO 165*	# of Poles	445,113	352,120	363,928
2	BFB – OH Poles Inspected-*exceeded GO 165*	# of Poles	339,713	480,749	398,184
3	BFC – OH Infrared Inspections-*exceeded GO 165*	Circuit Miles Inspected	5,450	10,093	9,560

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_007-Q003		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_007-Q003		
Request Date:	December 5, 2023	Requester DR No.:	TURN_DR_PGE-007
Date Sent:	December 21, 2023	Requesting Party:	The Utility Reform Network
PG&E Witness:	Heather Duncan	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAP. 2

The following questions relate to Chapter 2 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 003

The phrases “enhanced scope” and increased “frequency” of performed inspections, on pages 2-9 and 2-10, are relative to what alternative scenario(s)?

ANSWER 003

Please refer to the response in WildfireandGasSafetyCosts_DR_TURN_007-Q002 for further details how the enhanced scope and increased frequency of detailed inspections differs from the pre-2019 GO 165 standards for inspections, the alternative scenario.

- **Enhanced scope** refers to the detailed inspection checklist, expanded documentation requirements, and digitized record keeping - as compared to the plat map based paper documentation of pre-2019 inspections**.**
- **Increased frequency refers to the** risk-informed approach to proactively identify and address potential sources of wildfire ignition, as well as threats to safety and reliability as compared to the **prior practice of time-driven inspection cycles** and the accelerated schedule in HFTDs.

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PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_008-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_008-Q002Rev01		
Request Date:	December 6, 2023	Requester DR No.:	TURN-PG&E-008
Date Sent:	December 20, 2023 Rev01: January 29, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Bryon Winget	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 4

The following question relates to Chapter 4 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 002

Please provide historical data on pole replacements for each year from 2010-2022, including:

a. Number of poles replaced, broken down by MAT code;

b. Average per unit cost of pole replacement, broken down by costs for materials, labor, overhead, and all other cost elements for which PG&E has data, and further broken down by MAT code;

c. Total cost of pole replacement, broken down by MAT code;

d. Number of poles replaced by age of pole (in years), and the average age of poles replaced in each year;

e. For each of the years 2020-2022, please provide a breakdown of the number of poles replaced as follows:

   i. By replacements to comply with GO 165, broken down by MAT code; and

   ii. By replacements that exceed the requirements of GO 165, broken down by MAT code.

f. For each of the years 2020-2022, please identify the number of pole replacements for which PG&E seeks cost recovery in this case, broken down by MAT code.

ANSWER 002 REVISED 01

PG&E objects to this request as unduly burdensome and oppressive and is requesting information that is not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving same, please note that where subparts request historical data from 2010-2022, data from 2016-2022 is provided. A change in the cost model was made in 2016 and thus comparing units and costs would not be reasonably calculated to lead to the discovery of admissible evidence.

a. Please see *WildfireandGasSafetyCosts_DR_TURN_008-Q002Atch01.xlsx*.

b. Please see *WildfireandGasSafetyCosts_DR_TURN_008-Q002Atch01.xlsx*.

c. Please see *WildfireandGasSafetyCosts_DR_TURN_008-Q002Atch01.xlsx*.

d. The data is currently being processed and will be provided as a supplement to this response.

e.

   i. GO 165 does not provide a requirement or criteria on when pole replacements are required.

   ii. Please see response to part 2.e.i.

f. Please see *WildfireandGasSafetyCosts_DR_TURN_008-Q001Atch01.xlsx*.

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_008-Q002Atch01.xlsx

Completed Units

MAT	2016	2017	2018	2019	2020	2021	2022	Grand Total
07C						402	987	1389
07D	6018	6451	12446	12510	9774	15603	18418	81220
07O			141	170	296	562	416	1585
Grand Total	**6018**	**6451**	**12587**	**12680**	**10070**	**16567**	**19821**	**84194**

Unit count is based on completion year

Completed Units

MAT	2016	2017	2018	2019	2020	2021	2022	Grand Total
07C						402	987	1389
07D	6018	6451	12446	12510	9774	15603	18418	81220
07O			141	170	296	562	416	1585
Grand Total	**6018**	**6451**	**12587**	**12680**	**10070**	**16567**	**19821**	**84194**

Unit count is based on completion year

Costs in Dollars

	Sum of 2016	2016 Unit Cost	Sum of 2017	2017 Unit Cost	Sum of 2018	2018 Unit Cost	Sum of 2019	2019 Unit Cost	Sum of 2020	2020 Unit Cost	Sum of 2021	2021 Unit Cost	Sum of 2022	2022 Unit Cost
07C											**$ 11,673,942**	**$ 29,040**	**$ 21,345,327**	**$ 21,626**
Contract											$ 6,065,224	$ 15,088	$ 15,683,017	$ 15,890
Labor External											$ 85,916	$ 214	$ 641,335	$ 650
Labor Internal											$ 2,339,602	$ 5,820	$ 2,093,679	$ 2,121
Materials											$ 1,363,460	$ 3,392	$ 1,549,978	$ 1,570
Other											$ 1,819,740	$ 4,527	$ 1,377,318	$ 1,395
07D	**$ 80,060,995**	**$ 13,304**	**$ 98,321,054**	**$ 15,241**	**$ 222,544,511**	**$ 17,881**	**$ 347,372,203**	**$ 27,768**	**$ 240,341,937**	**$ 24,590**	**$ 379,450,904**	**$ 24,319**	**$ 468,402,115**	**$ 25,432**
Contract	$ 32,941,412	$ 5,474	$ 53,470,958	$ 8,289	$ 114,395,741	$ 9,191	$ 249,831,325	$ 19,971	$ 134,463,178	$ 13,757	$ 237,168,280	$ 15,200	$ 350,726,445	$ 19,043
Labor External	$ 2,387,574	$ 397	$ 1,448,774	$ 225	$ 8,831,618	$ 710	$ 6,155,052	$ 492	$ 10,209,587	$ 1,045	$ 11,604,037	$ 744	$ 11,443,976	$ 621
Labor Internal	$ 27,163,636	$ 4,514	$ 30,054,875	$ 4,659	$ 59,748,520	$ 4,801	$ 47,772,063	$ 3,819	$ 48,634,662	$ 4,976	$ 63,570,306	$ 4,074	$ 63,999,244	$ 3,475
Materials	$ 9,468,898	$ 1,573	$ 12,071,702	$ 1,871	$ 22,661,243	$ 1,821	$ 29,247,300	$ 2,338	$ 23,755,693	$ 2,430	$ 54,272,585	$ 3,478	$ 67,318,827	$ 3,655
Other	$ 8,099,474	$ 1,346	$ 1,274,745	$ 198	$ 16,907,389	$ 1,358	$ 14,366,463	$ 1,148	$ 23,278,816	$ 2,382	$ 12,835,695	$ 823	$ (25,086,378)	$ (1,362)
07O					**$ 3,385,308**	**$ 24,009**	**$ 4,556,759**	**$ 26,804**	**$ 11,142,029**	**$ 37,642**	**$ 19,423,738**	**$ 34,562**	**$ 16,379,624**	**$ 39,374**
Contract					$ 912,882	$ 6,474	$ 2,621,538	$ 15,421	$ 5,801,089	$ 19,598	$ 10,791,437	$ 19,202	$ 9,885,751	$ 23,764
Labor External					$ 121,631	$ 863	$ 81,816	$ 481	$ 542,559	$ 1,833	$ 543,662	$ 967	$ 302,176	$ 726
Labor Internal					$ 1,077,849	$ 7,644	$ 982,471	$ 5,779	$ 2,250,454	$ 7,603	$ 3,239,364	$ 5,764	$ 2,761,886	$ 6,639
Materials					$ 545,679	$ 3,870	$ 558,508	$ 3,285	$ 1,213,834	$ 4,101	$ 2,694,408	$ 4,794	$ 1,725,690	$ 4,148
Other					$ 727,266	$ 5,158	$ 312,427	$ 1,838	$ 1,334,093	$ 4,507	$ 2,154,867	$ 3,834	$ 1,704,122	$ 4,096
Total	**$ 80,060,995**	**$ 13,304**	**$ 98,321,054**	**$ 15,241**	**$ 225,929,818**	**$ 17,949**	**$ 351,928,962**	**$ 27,755**	**$ 251,483,966**	**$ 24,974**	**$ 410,548,584**	**$ 24,781**	**$ 506,127,066**	**$ 25,535**

Prior to 2021, MAT 07C was not used to capture costs associated with tree attachment replacements
Prior to 2018, MAT 07O was not used to capture costs associated with replacement of overloaded poles
Costs are based on dollars recorded to each MAT each year. Units are based on the completion year. The average unit cost is calculated based on the costs allocated to each MAT for each year divided by the number of units completed that year.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_008-Q006		
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Request Date:	December 6, 2023	Requester DR No.:	TURN-PG&E-008
Date Sent:	January 10, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Bryon Winget	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 4

The following question relates to Chapter 4 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 006

The testimony on page 4-14, lines 6-7 states that PG&E prioritized the pole replacement work "based on ignition risk and the level of consequence of such an ignition."

a. Please describe how PG&E prioritized the work, including but not limited to an explanation of each category/level by which the work was categorized/prioritized.

b. Please provide the document(s) on which the response to subpart (a) is based.

c. Please provide the number of tags created in each of the years 2020, 2021, and 2022 (as shown in Figure 4-1), broken down by priority level.

d. Please provide the number of tags completed in each of the years 2020, 2021, and 2022 (as shown in Figure 4-1) , broken down by priority level.

e. Please provide the most current 2023 data on number of tags created and completed, broken down by level of priority.

ANSWER 006

a. As discussed in Exhibit (PG&E-1), Chapter 11, p.11-20, PG&E is continually evolving and improving its risk models due to the dynamic nature of wildfire risk. This is evidenced by the numerous risk models PG&E has used over time to prioritize work during this filing period: 2019-2020 Wildfire Risk Model, 2021 Wildfire Distribution Risk Model (Version 2), and 2022 Wildfire Distribution Risk Model (Version 3).[1] The models seek to quantify the risk of wildfire represented by the probability of electric grid infrastructure caused ignitions combined with the consequences if that ignition propagates to a wildfire.

[1] 2021 PG&E Revised Wildfire Mitigation Plan (WMP) (https://www.pge.com/content/dam/pge/docs/outages-and-safety/outage-preparedness-and-support/2021-Wildfire-Safety-Plan-Revised-060321.pdf) ; 2022 PG&E WMP (https://www.pge.com/content/dam/pge/docs/outages-and-safety/outage-preparedness-and-support/072622-wmp-update.pdf)

The Electric Corrective (EC) maintenance notifications (also known as "tags") are generated through the different inspection programs and are assigned a priority based on the potential safety impact. The tag priority classifications are defined in Exhibit (PG&E-1) Table 2-1, and are also reproduced below:

TABLE 2-1
TAG PRIORITY CLASSIFICATION

Line No.	Tag Priority	Description
1	A	The condition is of immediate risk of high potential impact to safety or reliability and requires immediate response and continued action until the condition is repaired and no longer presents a potential hazard ("make safe").
2	B	The condition is of moderate potential impact to safety or reliability. Corrective action is required within three months from the date the condition is identified.
3	E	The condition is of moderate potential impact to safety or reliability. Corrective action is required within 12 months from the date the condition is identified (or within six months if tag creates potential fire ignition risk within HFTD Tier 3).
4	F	The condition is of low potential impact to safety or reliability (corrective actions for distribution facilities is recommended to be addressed within five years from the date the condition is identified).
5	H	H priority tags refer to E and/or F tags that were re-assigned to a planned or existing System Hardening project.

As noted in the 2022 Wildfire Mitigation Plan, PG&E prioritizes pole replacements initially by notification type (priority B tags are considered urgent and typically executed within 90 days of creation whereas priority E tags are considered routine). Priority E tags are prioritized using the Wildfire Risk Model based on the wildfire ignition likelihood and wildfire consequence. The ignition likelihood is based on CPUC reportable ignitions in HFTD and the wildfire consequence is based on the locational Technosylva score. The details of how the risk scores are calculated are provided in the 2021 and 2022 WMPs as well as a presentation to the Office of Energy Infrastructure Safety Workshop on October 5, 2021[2] and the 2021 Wildfire Distribution Risk Model Overview report[3].

b. Please see footnotes 1-3 for related documents.

c. As Table 4-1 is specific to HFTD/Buffer pole replacements, non-HFTD pole replacements are excluded in the table below. This table shows the number of tags created in HFTD/Buffer by priority:

Priority	2020	2021	2022
A	4	1	0

[2] https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=51784&shareable=true
[3] https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=51800&shareable=true

B	1,637	2,072	1,250
E	15,132	18,849	27,412
F	27	19	4
H	178	93	19
Total	**16,978**	**21,034**	**28,685**

d. As Table 4-1 is specific to HFTD/Buffer pole replacements, non-HFTD pole replacements are excluded in the table below. This table shows the number of tags completed in HFTD/Buffer by priority4:

Priority	2020	2021	2022
A	1	2	0
B	2,853	2,674	4,319
E	4,699	11,224	11,320
F	32	75	46
H	9	63	55
Total	**7,594**	**14,038**	**15,740**

e. The table below provides the data for distribution pole tags created and completed in HFTD/Buffer in 2023 up until December 19, 2023:

Priority	Created in 2023	Completed in 2023
A	1	1
B	6,281	7,243
E	14,094	6,411
F	11	59
H	239	31
Total	**20,626**	**13,745**

4 E/F tags can be escalated to a B tag during a field safety reassessment (FSR) if it is deemed that the condition has deteriorated between the original finding and the present date.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_008-Q007		
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Request Date:	December 6, 2023	Requester DR No.:	TURN-PG&E-008
Date Sent:	December 22, 2023	Requesting Party:	The Utility Reform Network
PG&E Witness:	Bryon Winget/ Joshua Fredriksson	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 4

The following question relates to Chapter 4 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 007

For each program listed in Tables 4-1 and 4-2, please:

a. Describe in detail the analysis that PG&E performed before implementing the program to determine whether the program was cost-effective. Please identify the date each referenced analysis was performed.

b. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (a) is based.

c. Describe in detail any and all analyses PG&E has performed since it began implementing the program regarding the cost-effectiveness of the program. Please identify the date each referenced analysis was performed.

d. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (c) is based.

ANSWER 007

a. The programs described in this chapter were implemented to comply with General Order (GO) 165 and GO 95 requirements. GO 165 provides the maximum interval for inspection cycles including intrusive inspections. GO 95 Rule 18 provides the required corrective actions and timelines based on priority levels. For example, for priority Level 2, specific timelines are provided to remedy non-conformances in Tier 3 of the High Fire-Threat District (HFTD) (six months) and Tier 2 of the HFTD (12 months). The objective of these programs is to meet the regulatory requirements.

b. GO 165 can be found here:

https://docs.cpuc.ca.gov/word_pdf/GENERAL_ORDER/159182.pdf

GO 95 Rule 18 can be found here:

https://ia.cpuc.ca.gov/GO95/go_95_rule.pdf.

c. As described in the response to 7.a above, the programs described in Chapter 4 are related to compliance activities. Details regarding risk-spend efficiency of the pole assessment and replacement programs were provided in the 2023 GRC proceeding.

   Please see the following:

   - 2023 GRC Exhibit (PG&E-4), Chapter 3 WP 3-2, lines 15-16, and WP 3-8, lines 14-15 for the RSE for MATs 07D and 07O (*WildfireandGasSafetyCosts_DR_TURN_008-Q007Atch01.pdf*).
   - 2023 GRC Exhibit (PG&E-4), Chapter 3 WP 3-4, line 23, for the RSE for MAT 07C (*WildfireandGasSafetyCosts_DR_TURN_008-Q007Atch01.pdf*).
   - 2023 GRC Exhibit (PG&E-4), Chapter 3 WP 3-3, lines 15 and 17, and WP 3-9, lines 17-18 for the RSE for MATs GAA, GAD; Chapter 3 WP 3-3, line 16, for the RSE for MAT GAC (*WildfireandGasSafetyCosts_DR_TURN_008-Q007Atch01.pdf*).
   - PG&E's RSE input file, *WildfireandGasSafetyCosts_DR_TURN_008-Q007Atch02.xlsm*, tab C12C.

d. Please see response to 7.c above.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_008-Q007Atch01.pdf

WildfireandGasSafetyCosts_DR_TURN_008-Q007Atch02.xlsm

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_009-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_009-Q001Supp01		
Request Date:	December 6, 2023	Requester DR No.:	TURN_DR_PGE-009
Date Sent:	December 26, 2023 Supp01: January 5, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Heather Duncan	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 2

The following question relates to Chapter 2 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 001

For each program listed in Table 2-2, please:

a. Describe in detail the analysis that PG&E performed before implementing the program to determine whether the program was cost-effective. Please identify the date each referenced analysis was performed.

b. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (a) is based.

c. Describe in detail any and all analyses PG&E has performed since it began implementing the program regarding the cost-effectiveness of the program. Please identify the date each referenced analysis was performed.

d. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (c) is based.

ANSWER 001 SUPPLEMENTAL 01

Please see the following attachments:

Attachment Name	Description
WildfireandGasSafetyCosts_DR_TURN_009-Q001Supp01Atch01.pdf	2023 GRC Exhibit (PG&E-4), Chapter 3
WildfireandGasSafetyCosts_DR_TURN_009-Q001Supp01Atch02.pdf	2023 GRC Exhibit (PG&E-4), WP 3-2 to 3-17
WildfireandGasSafetyCosts_DR_TURN_009-Q001Supp01Atch03.pdf	2023 GRC Exhibit (PG&E-4), Chapter 10, Section B.2 – Risk Integration
WildfireandGasSafetyCosts_DR_TURN_009-Q001Supp01Atch04.pdf	2023 GRC Exhibit (PG&E-4), Chapter 3, WP 3-3

ANSWER 001

a. The transition of the Patrols and Inspections program to a risk informed approach with increased inspection cycles and frequencies, was implemented for wildfire safety and risk mitigation reasons, and driven primarily by CPUC directives and approved WMP commitments[1]. PG&E also considers many factors in evaluating future program implementation or changes to approaches or practices and is informed by industry best practices/benchmarking, operational efficiencies, overall authorized GRC funding, the availability of PG&E and contractor resources, synergies with other work activities, and dependencies and requirements such as permitting and the various rules for working with California's counties and cities.

b. Please see PG&E's response to subpart a. above. There are no additional documents to provide.

c. As described in the response to subpart a above, the enhanced patrols and inspections program was implemented for wildfire safety and risk mitigation reasons. PG&E calculates Risk Spend Efficiency (RSE) scores for inspections that are considered risk mitigations and/or risk controls. RSEs are one type of risk informed cost benefit analysis PG&E performs, but not the only factor PG&E evaluates related to the value of performing asset inspections as mentioned above.

d. 2023 GRC Exhibit (PG&E-4), Chapter 3, Prepared Testimony provides PG&E's approach to managing risks associated with its electric facilities which was used to justify wildfire mitigation efforts.

   - PG&E provides RSEs for all Electric Operations mitigations and controls in its 2023 GRC at Exhibit (PG&E-4), WP 3-2 to 3-17.

   For details regarding risk mitigation of the overhead electric distribution inspections program were provided in the 2023 GRC proceeding. See the following:

   - 2023 GRC Exhibit (PG&E-4), Chapter 10, Prepared Testimony section B.2 – Risk Integration.
   - 2023 GRC Exhibit (PG&E-4), Chapter 3, WP 3-3, lines 1-3 for RSE information for MATs, BFA, BFB and BFC respectively.
   - There is no RSE for BFH as it is considered foundational and is excluded from the RSE calculation.

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1 PG&E Amended 2019 Wildfire Safety Plan, (Feb. 6, 2019), pp. 55-56, Section 4.2.1.
2020 Wildfire Mitigation Plan (WMP) Report Updated (Feb. 28, 2020), Section 5.3.4.1, Section 5.3.4.4, and Section 5.3.4.11.
2021 WMP Revised (Jun. 3, 2021), Section 7.3.4.1, Section 7.3.4.4, and Section 7.3.4.11.
2022 WMP Update Revised (Jul. 26, 2022), Section 7.3.4.1, Section 7.3.4.4, and Section 7.3.4.11.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_010-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_010-Q002		
Request Date:	December 7, 2023	Requester DR No.:	TURN-PG&E-010
Date Sent:	January 12, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Ryan Blake	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 5

The following question relates to Chapter 5 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 002

PG&E's testimony states on pp. 5-4 to 5-5 that PG&E's 2020 GRC included forecasts for work in MWC 2A and MWC KA but that it "undertook a substantially higher volume of work on an accelerated schedule" than was forecast.

a. For each MAT code listed in Tables 5-1 and 5-2 on pages 5-6 and 5-7, please provide:
   i. The authorized forecasts and, where applicable, units of work for each year in the period 2020-2022;
   ii. The recorded costs, and where applicable, units of work for each year in the period 2020-2022;
   iii. A reconciliation of the information provided in response to subparts (i) and (ii) with the information provided in Tables 5-1 and 5-2.

ANSWER 002

a. See below for response on each MAT code listed in Tables 5-1 and 5-2:
   i. See attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q002Atch01.xlsx*" for the 2020 – 2022 imputed adopted regulatory values for the routine or baseline work authorized from the 2020 General Rate Case (GRC). It should be noted that KAQ is a non-unitized program, and AB#, KA# and 21# are non-unitized support expenses and therefore no applicable units were authorized or provided in this response.
   ii. See attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q002Atch02.xlsx*" for the 2020-2022 total recorded costs and units which is the sum of a) the incremental activities recorded to the WMPMA/FRMMA (e.g., Non-GRC activities), and b) the routine / baseline activities described and approved in the GRC. We are only seeking cost recovery of the incremental

costs as shown in Exhibit (PG&E-1), Chapter 5, Table 5-1 and 5-2 on pages 5-6 and 5-7.

iii. The amounts in testimony Tables 5-1 and 5-2 represent the incremental costs recorded to the WMPMA/FRMMA associated with work not included in the 2020 GRC or included in other cost-recovery mechanisms. The incremental costs in Tables 5-1 and 5-2 are embedded in the total costs provided in subpart ii) above.

See also Exhibit (PG&E-1), Chapter 15, for a detailed explanation of PG&E's incrementality approach, methodology and analysis.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_010-Q002Atch01.xlsx

WildfireandGasSafetyCosts_DR_TURN_010-Q002Atch02.xlsx

Distribution Line Repairs and Replacements
2020 - 2022 Imputed Adopted by MAT Per 2020 GRC[1]
(Thousands of Nominal Dollars)

	Imputed Adopted per 2020 GRC					
MAT	**2020 Cost**	**2021 Cost**	**2022 Cost**	**2020 Units**	**2021 Units**	**2022 Units**
KA#	$ 723	$ 742	$ 747	N/A	N/A	N/A
KAA	$ 18,599	$ 19,075	$ 19,213	31,412	31,412	30,850
KAC	$ 739	$ 758	$ 764	1,013	1,013	995
KAD	$ 730	$ 749	$ 754	1,000	1,000	982
KAF	$ 7,164	$ 7,347	$ 7,401	1,419	1,419	1,394
KAQ	$ 27	$ 28	$ 28	N/A	N/A	N/A
2AA	$ 58,169	$ 60,078	$ 60,394	12,079	12,135	11,855
2AB	$ 3,084	$ 3,167	$ 3,252	1,211	1,209	1,207
2AE	$ 31,209	$ 32,042	$ 32,902	1,465	1,463	1,460
2AF	$ 9,810	$ 10,669	$ 3,646	2,219	2,347	780
21#	$ -	$ -	$ -	N/A	N/A	N/A
AB#[2]	$ -	$ -	$ -	N/A	N/A	N/A

[1] Source: PG&E's 2022 annual GRC Risk Spending Accountability Report (RSAR).

[2] MAT AB# is a shared MAT code that many programs use and charge into. As such, the amount provided above reflects only the imputed adopted amount of the programs that have a wildire mitigation component to it (e.g. , Pole Loading & Wind Loading Program in Chapter 4, Remote Grid Pilot Program in Chapter 9 etc.) relevant to this application.

Distribution Line Repairs and Replacements
2020 - 2022 Total Recorded[1]
(Thousands of Nominal Dollars)

	Total Recorded					
MAT	2020 Total Cost	2021 Total Cost	2022 Total Cost	2020 Units	2021 Units	2022 Units
KA#	$ 1,821	$ 318	$ 52	N/A	N/A	N/A
KAA	$ 93,917	$ 89,786	$ 76,277	40,176	37,211	30,107
KAC	$ 756	$ 957	$ 792	507	591	475
KAD	$ 439	$ 569	$ 771	292	223	191
KAF	$ 6,272	$ 7,787	$ 7,480	1,203	1,358	1,124
KAQ	$ 21	$ 77	$ 198	N/A	N/A	N/A
2AA	$ 179,549	$ 261,998	$ 254,950	13,716	20,340	17,586
2AB	$ 1,997	$ 3,131	$ 2,687	500	822	601
2AE	$ 44,510	$ 58,059	$ 61,261	1,102	1,365	1,101
2AF	$ 5,867	$ 15,250	$ 13,265	673	1,714	1,035
21#	$ -	$ 6,441	$ 10,837	N/A	N/A	N/A
AB#[2]	$ 298	$ 46,421	$ 41,444	N/A	N/A	N/A

Notes:

[1] Total Recorded costs reflect the sum of a) the incremental activities recorded to the WMPMA/FRMMA (non-GRC activities), and b) the routine / baseline activities described and approved in the GRC. Only the incremental costs shown in Table 5-1 and 5-2 are seeking for cost recovery in this application.
Data Source: PG&E's 2022 annual GRC Risk Spending Accountability Report (RSAR)

[2] MAT AB# is a shared MAT code that many programs use and charge into. As such, the amount provided above reflects only total recorded amount of the programs that have a wildire mitigation component to it (e.g. , Pole Loading & Wind Loading Program in Chapter 4, Remote Grid Pilot Program in Chapter 9 etc.) relevant to this application.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_010-Q003		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_010-Q003		
Request Date:	December 7, 2023	Requester DR No.:	TURN-PG&E-010
Date Sent:	January 12, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Ryan Blake	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 5

The following question relates to Chapter 5 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 003

With respect to each program listed in Tables 5-1 and 5-2 on pages 5-6 to 5-7:

a. For each program for which PG&E identifies units of work performed, please provide, for each year in the period 2015-2022, the average per unit cost of the work, broken down by costs for materials, labor, overhead, and all other cost elements for which PG&E has data, and further broken down by MAT code;

b. For each program for which PG&E does not identify units of work and therefore did not address in response to subpart (a), please provide, for each year in the period 2015-2022, the recorded costs broken down by MAT code.

ANSWER 003

PG&E objects to this request as overbroad to the extent it seeks information on recorded data prior to 2020, which are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

a. We do not manage or track unit costs of work by cost element[1]. Our SAP system only stores and reports costs at the cost element level and not by unit or unit cost. As such, the average unit costs provided in attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch01.xlsx*" are calculated values which will not be consistent across various jobs. Each cost element (i.e., material, labor) amount incurred for the job will vary from job to job based on variables such as the equipment repaired or replaced, location (HFTD vs Non-HFTD), terrain, schedule and/or available resources and skills needed for each job. For this question, in order to derive the average unit cost values by cost element, we applied the cost element profile of the annual actual cost per MAT code (e.g., 60% of the 2020 total cost attributed to contracts and the rest 40% attributed to

[1] This is not a requirement under the FERC Uniform System of Accounts

materials, labors and others) as currently stated in the SAP system to the historical MAT level average annual unit cost[2] proportionally.

It should be noted that MAT KA#, AB# and 21# were for non-unitized activities and have no historical unit cost information to provide and are consequently not included in the attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch01.xlsx*"

b. As stated in subpart a. above, costs recorded to MAT KA#, AB# and 21# are non-unitized activities. See attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch02.xlsx*" for the recorded cost of these three MAT codes in 2015 – 2022.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch01.xlsx

WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch02.xlsx

[2] The historical annual average unit costs were presented in A.18-12-009, PG&E, 2020 General Rate Case; A. 21-06-021, PG&E, 2023 General Rate Case; and PG&E's 2022 annual GRC Risk Spending Accountability Report (RSAR).

		Average Unit Cost by Cost Elements - Calculated							
MAT	Cost Element	2015	2016	2017	2018	2019	2020	2021	2022
2AA	Contract	$ 320	$ 654	$ 981	$ 2,102	$ 6,785	$ 6,395	$ 6,400	$ 6,845
	Labor External	$ 79	$ 67	$ 45	$ 236	$ 174	$ 559	$ 389	$ 444
	Labor Internal	$ 3,156	$ 2,279	$ 2,188	$ 2,120	$ 1,626	$ 3,049	$ 2,718	$ 3,403
	Materials	$ 452	$ 501	$ 483	$ 702	$ 1,116	$ 1,346	$ 1,516	$ 1,646
	Other	$ 332	$ 1,490	$ 1,241	$ 1,411	$ 1,187	$ 1,769	$ 1,858	$ 2,159
	2AA Subtotal	**$ 4,339**	**$ 4,990**	**$ 4,938**	**$ 6,570**	**$ 10,889**	**$ 13,120**	**$ 12,881**	**$ 14,497**
2AB	Contract	$ 64	$ 57	$ 182	$ 326	$ 995	$ 481	$ 1,076	$ 848
	Labor External	$ 0	$ 2	$ -	$ -	$ 4	$ 3	$ 5	$ 68
	Labor Internal	$ 1,829	$ 1,089	$ 1,222	$ 1,274	$ 1,500	$ 2,110	$ 1,519	$ 1,862
	Materials	$ 269	$ 174	$ 221	$ 175	$ 250	$ 292	$ 217	$ 426
	Other	$ 233	$ 728	$ 757	$ 878	$ 952	$ 1,064	$ 992	$ 1,267
	2AB Subtotal	**$ 2,395**	**$ 2,049**	**$ 2,382**	**$ 2,652**	**$ 3,700**	**$ 3,950**	**$ 3,809**	**$ 4,471**
2AE	Contract	$ 599	$ 1,087	$ 1,339	$ 3,162	$ 4,149	$ 7,597	$ 8,668	$ 12,817
	Labor External	$ 35	$ 33	$ 27	$ 26	$ 81	$ 91	$ 131	$ 967
	Labor Internal	$ 9,007	$ 5,747	$ 6,629	$ 6,816	$ 8,483	$ 11,314	$ 10,919	$ 14,622
	Materials	$ 6,012	$ 6,635	$ 7,965	$ 9,508	$ 9,579	$ 13,174	$ 14,243	$ 16,473
	Other	$ 1,238	$ 4,481	$ 4,788	$ 5,481	$ 6,270	$ 7,902	$ 8,573	$ 10,761
	2AE Subtotal	**$ 16,891**	**$ 17,984**	**$ 20,748**	**$ 24,993**	**$ 28,562**	**$ 40,078**	**$ 42,534**	**$ 55,641**
2AF	Contract	$ 180	$ 1,678	$ 590	$ 1,025	$ 2,122	$ 3,220	$ 5,630	$ 6,641
	Labor External	$ 191	$ 225	$ 56	$ 63	$ 36	$ 22	$ 61	$ 428
	Labor Internal	$ 2,570	$ 3,318	$ 1,731	$ 1,423	$ 1,874	$ 2,474	$ 1,615	$ 3,006
	Materials	$ 341	$ 493	$ 259	$ 317	$ 395	$ 520	$ 645	$ 1,053
	Other	$ 325	$ 2,241	$ 1,054	$ 972	$ 2,193	$ 1,143	$ 946	$ 1,688
	2AF Subtotal	**$ 3,607**	**$ 7,955**	**$ 3,691**	**$ 3,800**	**$ 6,620**	**$ 7,378**	**$ 8,897**	**$ 12,816**
KAA	Contract	$ 86	$ 163	$ 189	$ 299	$ 1,243	$ 1,630	$ 1,779	$ 1,480
	Labor External	$ 1	$ 2	$ 0	$ 0	$ 4	$ 10	$ 21	$ 111
	Labor Internal	$ 509	$ 415	$ 351	$ 338	$ 266	$ 443	$ 486	$ 680
	Materials	$ 50	$ 67	$ 61	$ 78	$ 242	$ 223	$ 193	$ 214
	Other	$ 1	$ 7	$ 5	$ 6	$ 16	$ 151	$ (65)	$ 49
	KAA Subtotal	**$ 646**	**$ 655**	**$ 606**	**$ 721**	**$ 1,771**	**$ 2,457**	**$ 2,413**	**$ 2,534**
KAC	Contract	$ 14	$ 46	$ 29	$ 178	$ 630	$ 360	$ 421	$ 417
	Labor External	$ 0	$ 1	$ -	$ -	$ 3	$ 3	$ 13	$ 131
	Labor Internal	$ 586	$ 624	$ 526	$ 663	$ 727	$ 977	$ 1,047	$ 968
	Materials	$ 67	$ 91	$ 90	$ 106	$ 169	$ 138	$ 114	$ 122
	Other	$ 0	$ 11	$ 6	$ 9	$ 11	$ 14	$ 24	$ 30
	KAC Subtotal	**$ 668**	**$ 773**	**$ 650**	**$ 955**	**$ 1,540**	**$ 1,491**	**$ 1,619**	**$ 1,667**
KAD	Contract	$ 15	$ 35	$ 39	$ 645	$ 218	$ 377	$ 1,205	$ 2,019
	Labor External	$ -	$ -	$ 0	$ -	$ -	$ -	$ 7	$ 221
	Labor Internal	$ 596	$ 525	$ 418	$ 507	$ 1,074	$ 974	$ 1,138	$ 1,246
	Materials	$ 78	$ 79	$ 93	$ 267	$ 57	$ 137	$ 189	$ 487
	Other	$ (0)	$ 8	$ 4	$ 19	$ 4	$ 15	$ 14	$ 64
	KAD Subtotal	**$ 689**	**$ 647**	**$ 554**	**$ 1,439**	**$ 1,353**	**$ 1,503**	**$ 2,553**	**$ 4,036**
KAF	Contract	$ 71	$ 162	$ 166	$ 260	$ 457	$ 545	$ 772	$ 839
	Labor External	$ -	$ 3	$ 1	$ 3	$ 7	$ 16	$ 64	$ 87
	Labor Internal	$ 1,805	$ 1,585	$ 2,051	$ 2,006	$ 2,340	$ 2,689	$ 2,982	$ 3,205
	Materials	$ 956	$ 2,484	$ 1,869	$ 1,274	$ 1,422	$ 1,745	$ 1,621	$ 2,059
	Other	$ (66)	$ 241	$ 154	$ 100	$ 135	$ 208	$ 295	$ 465
	KAF Subtotal	**$ 2,766**	**$ 4,475**	**$ 4,240**	**$ 3,643**	**$ 4,361**	**$ 5,203**	**$ 5,734**	**$ 6,655**
KAQ	Contract	$ -	$ -	$ -	$ -	$ -	$ 1,388	$ 1,949	$ 2,865
	Labor External	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 630
	Labor Internal	$ -	$ -	$ 3,448	$ -	$ -	$ 816	$ 355	$ 2,095
	Materials	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1
	Other	$ -	$ -	$ -	$ -	$ -	$ -	$ 30	$ 409
	KAQ Subtotal	**$ -**	**$ -**	**$ 3,448**	**$ -**	**$ -**	**$ 2,204**	**$ 2,333**	**$ 6,000**

Distribution Line Repairs and Replacements
2015 - 2022 Total Recorded[1]
(Thousands of Nominal Dollars)

Total Recorded

MAT	2015 Total Cost ($000s)[2]	2016 Total Cost ($000s)	2017 Total Cost ($000s)	2018 Total Cost ($000s)	2019 Total Cost ($000s)	2020 Total Cost ($000s)	2021 Total Cost ($000s)	2022 Total Cost ($000s)
KA#	$ 0	$ 605	$ 664	$ 915	$ (377)	$ 1,821	$ 318	$ 52
AB#[3]	$ -	$ -	$ -	$ -	$ -	$ 298	$ 46,421	$ 41,444
21#	$ -	$ -	$ -	$ 1,124	$ 2,225	$ -	$ 6,441	$ 10,837

Notes:

[1] Total Recorded costs reflect the sum of a) the incremental activities recorded to the WMPMA/FRMMA (non-GRC activities), and b) the routine / baseline activities described and approved in the GRC. Only the incremental costs shown in Table 5-1 and 5-2 are seeking for cost recovery in this application.
Data Source: A.18-12-009, PG&E, 2020 General Rate Case; A. 21-06-021, PG&E, 2023 General Rate Case; and PG&E's 2022 annual GRC Risk Spending Accountability Report (RSAR).

[2] In 2016 PG&E implemented a methodology change for the assignment of certain types of costs. As a result of this change, pre-2016 recorded costs reflect a different cost model methodology than post-2016 recorded costs. A detailed discussion of PGE's cost model change is included in PG&E's 2020 General Rate Case (A.18-12-009), Exhibit (PG&E-12), Chapter 3.

[3] MAT AB# is a shared MAT code that many programs use and charge into. As such, the amount provided above reflects only total recorded amount of the programs that have a wildire mitigation component to it, relevant to this application.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_010-Q006		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_010-Q006		
Request Date:	December 7, 2023	Requester DR No.:	TURN-PG&E-010
Date Sent:	January 19, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Ryan Blake	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 5

The following question relates to Chapter 5 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 006

P. 5-11 states that for overhead non-pole replacement and corrective maintenance, "external contractors who completed the majority of the 2020-2022 replacement work were more expensive than external contractors in prior years." Please provide:

a. The source document(s) on which this testimony is based;

b. The average per unit cost for external contractors to perform this work in each year in the period 2015 through 2022;

c. The average per unit cost for PG&E employees to perform this work in each year in the period 2015 through 2022;

d. With respect to the testimony on page 5-11 referencing "overtime premiums":

   i. Please provide the source document(s) on which this testimony is based;

   ii. The specific overtime premiums paid to contractors in each year from 2020-2022, in average incremental cost per unit (e.g. hours) and total cost.

ANSWER 006

a. Please see *WildfireandGasSafetyCosts_DR_TURN_010-Q003* subpart a, attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch01.xlsx*" to observe the increasing historical unit costs from 2015 through 2022, the corresponding increase in the combined contract and external labor costs, and the proportionate increase of the combined amounts to the total unit costs.

b-c. PG&E objects to this request as overbroad to the extent it seeks information on recorded data prior to 2020, which are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

We do not manage or track unit costs of work by cost element (e.g. external contractor). Our SAP system only stores and reports costs at the cost element level and not by unit or unit cost. As such, the average unit costs provided in attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch01.xlsx*" are calculated

values which will not be consistent across various jobs. The external contractor or internal labor amount incurred for each individual job will vary from job to job based on variables such as the equipment repaired or replaced, location (HFTD vs Non-HFTD), terrain, schedule and/or available resources and skills needed for each job.

d. PG&E objects to this request as overbroad. Subject to and notwithstanding this objection, PG&E responds as follows:

PG&E maintenance contracts for labor resources include time and material contracts that provide for overtime charges, but PG&E is unable to provide the actual amounts of overtime premiums paid to contractors in each year from 2020-2022 because contractor labor costs are not required to be broken down by labor rates (e.g. overtime premiums paid versus straight time labor costs) when recorded in our systems. For us to determine total overtime premiums paid in each year 2020-2022 requires pulling the contractor invoices related to external contractor labor costs in that year, identifying the hours associated with overtime pay, and to pull the relevant contracts to verify that year's hourly overtime rate.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_012-Q003		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_012-Q003Rev01		
Request Date:	December 7, 2023	Requester DR No.:	TURN-PG&E-012
Date Sent:	December 20, 2023 Rev01: Dec 27, 2023	Requesting Party:	The Utility Reform Network
PG&E Witness:	Maria Ly/Tracie Avila	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – CHAPTER 6

The following question relates to Chapter 6 of Wildfire and Gas Safety Costs, Exhibit (PG&E-1), Wildfire Costs.

QUESTION 003

For each MAT code listed in Tables 6-1 and 6-2, please provide:

a. The authorized forecasts and, where applicable, units of work for each year in the period 2020-2022;

b. The recorded costs, and where applicable, units of work for each year in the period 2020-2022;

c. A reconciliation of the information provided in response to subparts (a) and (b) with the information provided in Tables 6-1 and 6-2; and

d. The recorded costs for the period 2015 through 2019.

ANSWER 003 REVISION 01

See updated attachments *"WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch01Rev01.xlsx"* and *"WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch03Rev01.xlsx"*.

ANSWER 003

a. See attachment "*WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch01.xlsx*" for the 2020 – 2022 imputed adopted regulatory values for the routine or baseline work authorized from the 2020 General Rate Case. It should be noted that the Substation Repairs and Replacement, And Temporary Generation Programs described in Chapter 6 are non-unitized programs presented in the 2020 GRC, and therefore no applicable units were authorized or provided in the attachment to this response.

b. See attachment "*WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch02.xlsx*" for the 2020 – 2022 total recorded costs which is the sum of a) the incremental activities recorded to the WMPMA/FRMMA (non-GRC activities), and b) the routine

/ baseline activities described and approved in the GRC. We're only seeking cost recovery on the incremental costs shown in Table 6-1 and 6-2 for this Chapter.

c. The amounts in Tables 6-1 and 6-2 represent the incremental costs recorded to the WMPMA that associated with work had not been included in the 2020 GRC or other cost-recovery mechanism. The incremental costs in Table 6-1 and 6-2 are embedded in the total costs provided in subpart b above. Please see attachments to response a. and b. above.

   See also Exhibit (PG&E-1), Chapter 15, for a detailed explanation of PG&E's incrementality approach, methodology and analysis.

d. See attachment "*WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch03.xlsx*" for the 2015 – 2019 total recorded cost.

   Please note that this response includes recorded cost data prior to 2016. In 2016 PG&E implemented a methodology change for the assignment of certain types of costs. As a result of this change, pre-2016 recorded costs reflect a different cost model methodology than post-2016 recorded costs. A detailed discussion of PGE's cost model change is included in PG&E's 2020 General Rate Case (A.18-12-009), Exhibit (PG&E-12), Chapter 3.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch01.xlsx

WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch02.xlsx

WildfireandGasSafetyCosts_DR_TURN_012-Q003Atch03.xlsx

Substation Repairs and Replacements, and Temporary Generation
2015 - 2020 Total Recorded[1]
(Thousands of Nominal Dollars)

	Total Recorded				
MAT	**2015 Total Cost ($000s)2**	**2016 Total Cost ($000s)**	**2017 Total Cost ($000s)**	**2018 Total Cost ($000s)**	**2019 Total Cost ($000s)**
GC2	$ 3,409	$ 2,475	$ 3,816	$ 3,617	$ 9,020
GC5	$ -	$ -	$ -	$ 7	$ 8,148
GCG	$ 1,341	$ 1,379	$ 1,499	$ 1,914	$ 9,391
IG#[3]	$ -	$ -	$ -	$ -	$ -
48A	$ 3,206	$ 2,042	$ 4,393	$ 3,669	$ 4,762
48D	$ 7,952	$ 2,991	$ 9,901	$ 11,096	$ 14,176
48L	$ 145	$ 883	$ 6,988	$ 17,740	$ 15,030
59F	$ 11,605	$ 16,249	$ 19,265	$ 20,105	$ 35,160

Notes:

[1] Total Recorded costs reflect the sum of a) the incremental activities recorded to the WMPMA/FRMMA (non-GRC activities), and b) the routine / baseline activities described and approved in the GRC. Only the incremental costs shown in Table 6-1 and 6-2 are seeking for cost recovery in this application.
Data Source: A. 21-06-021, PG&E, 2023 General Rate Case and A. XX-XX-XXX, PG&E, 2020 General Rate Case

[2] In 2016 PG&E implemented a methodology change for the assignment of certain types of costs. As a result of this change, pre-2016 recorded costs reflect a different cost model methodology than post-2016 recorded costs. A detailed discussion of PGE's cost model change is included in PG&E's 2020 General Rate Case (A.18-12-009), Exhibit (PG&E-12), Chapter 3.

[3] MAT IG# is a shared MAT code that many programs use and charge into. As such, the amount provided above reflects only total recorded amount of the programs that have a wildire mitigation component to it, relevant to this application.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_013-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_013-Q001		
Request Date:	January 19, 2024	Requester DR No.:	TURN-PG&E-013
Date Sent:	February 7, 2024 Supp01: Feb 12, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Various	Requester:	Thomas Long

SUBJECT: WILDFIRE COSTS – QC AND AUDITS

The following questions relate to data responses to TURN_DR_PGE-005 on wildfire costs.

QUESTION 001

In TURN_DR_PGE-005, Question 3(b) TURN requested all reports from January 1, 2019 to the present resulting from executing quality monitoring plans related to inspections, pole repair and replacement, and distribution line repair and replacement. In response "WildfireandGasSafetyCosts_DR_TURN_005-Q003," PG&E provided a list of quality monitoring findings on inspections for 2022 and 2023, as well as example audit reports on pole replacement and distribution line replacement. Regarding this response, please:

a. Define and describe the activities that are involved in each of the two types of inspection programs: "distribution desktop QC" and "distribution field QC" which are referenced in the response to Question 5-3(a)(i).

b. The SIQC procedure describes a selection methodology for assessing inspections that includes random sampling, targeted, and probable cause cases (Attachment 1). How many of each case type were reviewed by the SIQC each year, and what percentage of total inspections were reviewed each year?

c. Please explain the information that is provided in the summary lists of quality monitoring findings (Attachments 3-6).

   i. Does each "finding" represent a problem identified during QC monitoring? If not, what does a "finding" mean?

   ii. What was the total number of QC reviews of WGSC-related inspections conducted in the period covered by each attachment?

   iii. Is there a system of ranking or grouping the findings based on level of concern or need for follow-up actions? If so, please provide documentation describing such system and please identify how each of the findings in Attachments 3-6 were classified under such system.

d. Please explain the activity that is being reported in the quality monitoring distribution samples (Confidential Attachments 7-8). For example, the samples seem to be

records of an inspection, not a Quality Control report of whether the original inspection was conducted correctly. Please explain.

e. Please provide all documents reflecting the QC findings that are summarized in the following:
   i. Attachment 3, Row 39
   ii. Attachment 3, Row 124
   iii. Attachment 4, Row 42
   iv. Attachment 4, Row 228
   v. Attachment 4, Row 337.

f. Regarding the response to Question 5-3(b)(i): i. Were any SIQC inspections conducted in 2020 and 2021? If so, please provide a summary list of the findings from such inspections comparable to what has been provided in Attachments 3-6. ii. On what date were SIQC inspections begun in 2022? Please explain why there are many fewer QC findings listed for 2022 than 2023 (e.g. 37,144 vs. 194,518 Distribution Desktop QC findings), as stated in response to Question 5-3(b)(i).

g. Please provide a list of the quality monitoring findings, comparable to the information provided in Attachments 3-6 for the SIQC work, for the activities below, from January 1, 2019 to the present:
   i. Pole repair and replacement
   ii. Distribution line repair and replacement

ANSWER 001 SUPPLEMENTAL 01

g. Please find the list of quality monitoring findings for i.) pole repair and replacement and ii.) distribution line repair and replacement for the years 2019-2023 in attachment "*WildfireandGasSafetyCosts_DR_TURN_013-Q001Supp01Atch01.xlsx".* The attached file includes all Quality Verification Distribution findings (field and record findings) related to audits of locations with Notification Tags related to Pole Repair / Replacement or Distribution Line Repair / Replacement. "Job Type" (Column Q) conveys Pole Repair/Replacement or Line Repair/Replacement while HFTD (Column F) conveys HFTD designation. Below is a summary of the data presented.

Notification Type Audited	Number of Notifications Audited	Number of Findings
Pole Repair / Replacement	1,184	3,411
Conductor Repair / Replacement	649	1,377

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_013-Q001Supp01Atch01.xlsx

ANSWER 001

a. Definitions and descriptions of the referenced programs are:

- Distribution Field QC – A QC review conducted by a QC specialist reviewing the inspection subject on location in the field, in addition to reviewing inspection subject photographs, imagery, and other available sources of information.
- Distribution Desktop QC – A computer-based QC review that is conducted remotely by a QC specialist reviewing inspection subject photographs, imagery, and other available sources of information.

b. Please see the below breakout by case type reviewed by SIQC by year. For these tables "standard" refers to "random sampling".

2022:

2022 SI Distribution QC Desktop		
QC Sample Type	**Equipment ID Reviewed**	**% Total QC Reviews**
Standard	39,283	74.27%
Targeted	13,612	25.73%
Total	**52,895**	**100%**

2022 SI Distribution QC Field		
QC Sample Type	**Equipment ID Reviewed**	**% Total QC Reviews**
Standard	4,096	100.00%

For 2023, 100% of quality monitoring was Standard (Random Sampling).

c.

i. Yes, a finding represents that a problem was identified during QC monitoring.

ii. Please see the below table for the breakout of reviews in HFTD and Non-HFTD.

File Name	Reviews in HFTD	Reviews in Non-HFTD
WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch03	12,509	10,902
WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch04	1,556	392
WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch05	186,140	0
WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch06	38,880	0

iii. For 2022 and 2023, PG&E used a system of ranking for findings based on level of concern. The ranking levels include Critical Attribute, High, Medium, and Low. PG&E identified attributes/conditions in the system inspection checklist that posed the potential for wildfire risk if the condition existed in the field. Critical Attribute ranked findings are directly related to wildfire risk and represent the highest-level concerns. High, Medium, and low findings represent non-wildfire risk concerns related to administrative errors, documentation issues, equipment reliability, public safety, etc.

An Electric Corrective (EC) Notification is created in SAP to document, prioritize, assign, and track the issue to resolution for findings that identify an issue requiring maintenance.

Please refer to the column "M" called "DiscrepancRiskRank" in "*WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch01.xlsx*" and "*WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch02.xlsx*" for finding risk rank and EC notification priority, if applicable.

Please refer to the column "N" called "RiskRank" in "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch05*" and "*WildfireandGasSafetyCosts_DR_TURN_005-Q003Rev01Atch06*" for finding risk rank and EC notification priority, if applicable.

d. Confidential Attachment 7 is an inspection record. Confidential Attachment 8 is a Quality Control report with quality findings (discrepancies) identified on pages 7-8.

e. Please see table below.

TURN's Selection	**QC Findings Documents**
Attachment 3, Row 39	WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch03
Attachment 3, Row 124	WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch04
Attachment 4, Row 42	WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch05
Attachment 4, Row 228	WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch06
Attachment 4, Row 337	WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch07

f.

i. In 2020, the SIQC program was in the design and discover phase of development and did not conduct inspections. In 2021, SIQC conducted inspections under the pilot program. The data acquired during the 2021 pilot is not representative of the 2022 and 2023 SIQC programs.

ii. For 2022, SIQC completed its first QC review with findings on April 8, 2022. The 2022 data provided (Attachments 3 and 4) only represents QC reviews that identified findings. The 2023 data provided (Attachments 5 and 6) represents the entire population of QC reviews performed which includes reviews that identified findings and reviews that did not identify any findings.

g. PG&E will supplement this response as soon as possible with the requested information. We will provide an update on status by end of day Friday, February 9, 2024.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch01.xlsx

WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch02.xlsx

WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch03.pdf

WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch04.pdf

WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch05.pdf

WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch06.pdf

WildfireandGasSafetyCosts_DR_TURN_013-Q001Atch07.pdf

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_015-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_015-Q001		
Request Date:	January 19, 2024	Requester DR No.:	TURN-PG&E-015
Date Sent:	February 8, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Ryan Blake	Requester:	Thomas Long

SUBJECT: CHAPTER 4 AND 5

QUESTION 001

The following questions follow up on PG&E's response to TURN DR 10-5, relating to Chapter 5:

a. Provide the date (month/day/year) when PG&E began assigning HFTD designation to EC tags.

b. Why did PG&E not assign HFTD designation to EC tags before the date indicated in response to (a) above?

c. Why does PG&E state that "HFTD designation was not assigned to tags before WSIP program launched in 2019" while, in Figure 4-1 on p. 4-14, PG&E shows Pole Replacement tags created and completed in 2018 and 2019? Please reconcile these two statements. If PG&E had different procedures with respect to HFTD designation for Pole Replacement tags and other types of tags, please explain why.

d. Please provide the information in Table 1 of that response for all non-pole replacement and corrective maintenance tags for the period 2015 through 2022, whether or not completed in HFTD areas (in other words, including both HFTD and non-HFTD areas).

ANSWER 001

a. PG&E began assigning HFTD designation to EC tags on May 15, 2018. TD-2305B-002 was published 5/15/2018 which was the first change to assigned HFTD identifier to EC tags.

Prior to this time, PG&E assigned Urban Wildfire identifier to EC tags. The designation aligned with Urban Wildland Fire Area, Other Wildland Fire Area, and Santa Barbara Wildfire maps.

On December 21, 2017, the Commission issued Decision (D.) 17-12-024 adopting regulations to enhance fire-safety in the HFTD. On January 19, 2018, the Commission adopted, via Safety and Enforcement Division's (SED) disposition of a Tier 1 Advice Letter, the final CPUC Fire-Threat Map where stricter fire-safety regulations apply.

b. As explained in our response to subpart a. above, we used Urban Wildfire identifier instead of HFTD designation to EC tags prior to May 15, 2018. By Q4 of 2018 HFTD designation was consistently applied to EC notifications. It should be noted that, we incorrectly stated that the HFTD identification did not start until after the WSIP program launched in 2019 in our response to TURN_10-Q005. We will revise our response TURN_010-Q005.

c. See response to subpart b. above.

d. Please See Tables below for the non-pole replacement and corrective maintenance tags completed for the period 2015 through 2022 including both HFTD and non-HFTD areas by priority.

These figures may not match exactly our historically reported units due to data settling over time.

Maintenance – EC & ER Notification (Non-Pole)

MAT & Priority	2015	2016	2017	2018	2019	2020	2021	2022
2AA	**10,398**	**10,121**	**11,407**	**14,684**	**21,096**	**14,123**	**20,579**	**17,835**
B	1,040	870	1,011	1,417	2,447	4,073	3,633	5,754
E	8,337	8,087	8,670	10,082	15,141	8,779	13,928	10,335
F	1,020	1,163	1,726	3,184	2,870	1,249	3,007	1,743
G	1	1		1	1			
H					637	22	11	3
2AB	**1,245**	**1,193**	**904**	**746**	**664**	**501**	**827**	**604**
B	729	538	506	399	378	401	759	589
E	516	655	398	347	285	100	67	14
F					1		1	1
2AF	**575**	**695**	**1,051**	**1,481**	**1,649**	**695**	**1,519**	**1,061**
B	18	15	24	55	70	101	77	146
E	343	312	320	243	275	168	571	357
F	214	368	707	1,183	1,301	403	859	554
H					3	23	12	4
KAA	**18,873**	**20,968**	**26,954**	**29,514**	**49,438**	**42,895**	**37,211**	**30,596**
B	2,462	2,315	2,483	3,288	11,278	6,070	6,401	7,833
E	10,332	8,888	10,056	10,923	18,474	26,787	25,235	18,049
F	6,078	9,764	14,415	15,303	18,790	9,792	5,538	4,702
G	1	1				1		
H					896	245	37	12
B	672	371	469	372	279	445	541	471
E	427	359	308	360	249	63	51	11
F		1						
KAQ			**2**	**2**	**3**	**9**	**37**	**42**
B					1	1	14	5
E			2	2	2	8	23	36
F								1
KAC	**1,142**	**765**	**812**	**742**	**558**	**553**	**635**	**522**
B	699	387	491	377	296	483	571	505
E	443	377	320	365	262	70	64	17
F		1	1					
KAD	**934**	**846**	**984**	**995**	**276**	**300**	**250**	**245**
G	934	846	984	995	276	300	250	245

COE – CE Notifications:

MAT & Priority	2015	2016	2017	2018	2019	2020	2021	2022
2AE	**1,292**	**1,580**	**1,331**	**1,492**	**1,242**	**1,132**	**1,398**	**1,105**
B	658	677	666	732	662	616	741	657
E	234	331	249	226	167	161	219	226
F	400	572	416	534	413	355	438	222
KAF	**1,624**	**1,481**	**1,288**	**1,321**	**1,295**	**1,220**	**1,375**	**1,141**
B	790	597	537	445	447	452	537	554
E	237	258	284	237	229	272	285	334
F	597	626	467	639	619	496	553	253
Grand Total	**2,916**	**3,061**	**2,619**	**2,813**	**2,537**	**2,352**	**2,773**	**2,246**

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_015-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_015-Q002		
Request Date:	January 19, 2024	Requester DR No.:	TURN-PG&E-015
Date Sent:	February 7, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Bryon Winget	Requester:	Thomas Long

SUBJECT: CHAPTER 4 AND 5

QUESTION 002

The following questions relate to PG&E's response to TURN DR 8-6, related to Chapter 4:

a. Please provide the information in the tables in the responses to subparts (c), (d) and (e) for the period 2015 through 2019.

b. Please provide, in the same format as the tables provided in response to subparts (c), (d) and (e), data for distribution pole tags created and completed, by priority level, in 2015 through 2022, whether or not the tags relate to HFTD/Buffer areas (in other words, including both HFTD/Buffer and nonHFTD/Buffer areas)

ANSWER 002

PG&E objects to this request as overbroad to the extent it seeks information on recorded data prior to 2020, which are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

a. The tables below are limited to MATs 07C, 07D, and 07O pole replacements tags in HFTD/Buffer, consistent with the previous responses to TURN_08-Q006 subparts (c), (d), and (e). Note, as discussed in our response to TURN_15-Q001 subpart (b), the HFTD maps were not adopted by the Commission until January 2018 and not implemented by PG&E until later in 2018 and therefore 2015-2017 data are not applicable. In addition, the count in 2018 is based on a partial year of implementation of the HFTD definition.

Created MATs 07C, 07D, 07O HFTD/Buffer Pole Replacement Tags

Priority	2015	2016	2017	2018	2019
A	N/A	N/A	N/A	2	3
B	N/A	N/A	N/A	112	8,495
E	N/A	N/A	N/A	5,076	74,246
F	N/A	N/A	N/A	20	206
H	N/A	N/A	N/A	17	4250
Total	N/A	N/A	N/A	5,227	87,200

Note: N/A stands for not applicable

The following table includes pole replacement units in HFTD/Buffer in MATs 07C, 07D, and 07O with a completed notification user status:

Completed HFTD/Buffer MATs 07C, 07D, and 07O Pole Replacement Tags

Priority	2015	2016	2017	2018	2019
A	N/A	N/A	N/A	0	1
B	N/A	N/A	N/A	45	1,515
E	N/A	N/A	N/A	3,407	5,307
F	N/A	N/A	N/A	67	39
H	N/A	N/A	N/A	0	44
Total	N/A	N/A	N/A	3,519	6,906

Note: N/A stands for not applicable

b. The tables below are limited to MATs 07C, 07D, and 07O pole replacements.

Created MATs 07C, 07D, and 07O Pole Replacement Tags

Priority	2015	2016	2017	2018	2019	2020	2021	2022
A	0	4	3	3	5	7	1	0
B	203	201	328	244	10,097	3,493	4,012	3,596
E	7,253	11,663	9,026	11,907	88,393	33,253	38,734	66,672
F	114	48	41	29	225	34	25	6
H	2	2	1	18	4,292	183	94	20
Total	**7,572**	**11,918**	**9,399**	**12,201**	**103,012**	**36,970**	**42,866**	**70,294**

The following table includes pole replacement units in MATs 07C, 07D, and 07O with a completed notification user status:

Completed MATs 07C, 07D, and 07O Pole Replacement Tags

Priority	2015	2016	2017	2018	2019	2020	2021	2022
A	0	1	1	0	1	2	2	0
B	60	37	45	128	1,768	4,307	4,041	6,993
E	7,993	5,694	6,180	12,115	10,836	5,701	12,396	12,699
F	506	286	225	345	81	57	114	75
H	0	0	0	0	44	11	65	56
Total	**8,559**	**6,018**	**6,451**	**12,587**	**12,680**	**10,070**	**16,567**	**19,821**

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_016-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_016-Q001		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-016
Date Sent:	February 14, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Paayal Murti	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

QUESTION 001

Page 1-14 of Exhibit PG&E-01 states that: "In accordance with D.20-12-005, PG&E has removed expense overheads from the FRMMA and the WMPMA expense orders.

PG&E has removed $9.6 million in expense overheads."

a. Please provide the page citation and quoted language from D.20-12-005 that is being referenced and explain why the cited/quoted language led PG&E to remove expense overheads.

b. Please confirm that none of the $725,991,000 of expenses shown in Table 1-2 of Ex. PG&E-1 consist of expense overheads. If this statement is not correct, please square this response with the above quoted testimony on p. 1-14.

c. Referring to the capital costs column in Table 1-2 of Ex. PG&E-1:

i. Does the total of $1,533,954,000 of capital costs shown in this table include overheads? If so, why are capital overheads included in PG&E's request while expense overheads are removed? ii. For each row of capital costs in Table 1-2 of Ex. PG&E-1, please identify the amount that consists of overhead costs.

ANSWER 001

a. In PG&E's 2020 GRC testimony in Exhibit (PG&E-12), Chapter 3, PG&E included changes to cost allocation methodology, referred to as the "Cost Model", with revision of expense overhead allocation as the key feature.[1] No party objected to this approach in the 2020 GRC and D.20-12-005 did not disallow or modify it. Therefore, PG&E implemented the Cost Model change as proposed in testimony.

b. We can confirm that none of the $725,991,000 of expenses shown in Table 1-2 of Exhibit (PG&E-1) consist of expense overheads. This is explained in Section 1 on page 17-4 of the Exhibit (PG&E-1).

[1] 2020 GRC Phase 1 testimony, Exhibit 12, Chapter 3, Section B.2 through D, pages, 3-8 through 3-16. The testimony is available here: http://pgera.azurewebsites.net/Regulation/ValidateDocAccess?docID=545396

c. Referring to the capital costs column in Table 1-2 of Ex. PG&E-1:

i. The total of $1,533,954,000 of capital costs shown in Table 1-2 of Exhibit (PG&E-1) does include overheads. Unlike expense orders, the amounts allocated to individual capital orders and projects follow a similar methodology to allocations made under the old Cost Model; based on labor.[2] To properly account for the cost of a unit of property, capital expenditure orders must follow Generally Accepted Accounting Principles (GAAP) and regulatory requirements (such as Uniform Systems of Accounts, adopted by FERC).

As defined under Title 18 of Code of Federal Regulations, Part 101, Electric Plant Instruction ("EPI") No.3(A), *Components of construction cost*, there are various categories of expenditures incurred by a utility that are to be included as components of the cost of construction of electric plant. The underlying accounting concept supporting this definition of construction costs is that all costs associated with constructing an asset and preparing it for use, are to be included in the cost of that asset. Labor, materials and supplies, and transportation make up majority of the costs of construction. It also includes necessary support costs such as Special machine service and Shop service, Protection, Injuries and damages, insurance, and training costs related to operation and maintenance of the property under construction. Various other indirect costs which are allocations of overhead costs, primarily, Engineering and supervision, and General administration capitalized are considered components of construction costs as well.[3]

Application of Overheads as presented in Exhibit (PG&E-1), Chapter 16 – Accounting Adjustments (Figure 16-1)

	2018-2019						2020+					
	EXPENSE			CAPITAL			EXPENSE			CAPITAL		
Overheads	Base Expense	Balancing Account Non-Earnings Expense (GRC/Non-CEMA)	Non-Earnings Expense (CEMA)	Base Capital	Balancing Account Non-Earnings Expense (GRC/Non-CEMA)	Balancing Account Capital (CEMA)	Base Expense	Balancing Account Non-Earnings Expense (GRC/Non-CEMA)	Balancing Account Non-Earnings Expense (CEMA)	Base Capital	Balancing Account Non-Earnings Expense (GRC/Non-CEMA)	Balancing Account Capital (CEMA)
Capitalized A&G				x	x	x				x	x	
Paid Time Off	x	x	x	x	x	x	x	x		x	x	
Indirect Labor	x	x	x	x	x	x	x	x		x	x	
Operational Management and Support		x	x	x	x	x				x	x	
Fleet		x	x	x	x	x				x	x	x
Material Burden	x	x	x	x	x	x	x	x		x	x	
Building Services		x	x	x	x	x				x	x	
IT Device Services		x	x	x	x	x				x	x	
Benefits		x	x	x	x	x				x	x	
Payroll Taxes		x	x	x	x	x				x	x	x
Minor Materials	x	x	x	x	x	x	x	x		x	x	x

ii. Please reference "WildfireandGasSafetyCosts_DR_TURN_016-Q001Atch01.xlsx" for overhead costs that are part of the capital costs in Table 1-2 of Ex. PG&E-1.

[2] The old and new Cost Model are discussed at length in the 2020 GRC Phase 1 testimony, Exhibit 12, Chapter 3.

[3] See "18 CFR 101, Electric Plant Instruction No.3", for a comprehensive list of expenditures that are to be included as components of the cost of construction.

TABLE 1-2 - CAPITAL OVERHEAD COSTS [RESPONSE FOR TURN-PG&E-016, SUBPART C(II)]
SUMMARY OF INCREMENTAL WILDFIRE COST RECOVERY REQUEST
(THOUSANDS OF DOLLARS)

Line No.	Chapter	Chapter Description	Capital Overheads	Mjr Resource Grp (other than overheads)	Grand Total
1	Chapter 2	Overhead Electric Distribution Asset Inspections	$ -	$ -	$ -
2	Chapter 3	Emergency Repairs and Replacements	$ 13,514	$ 20,473	$ 33,986
3	Chapter 4	Pole Assessments & Replacements	$ 139,689	$ 718,740	$ 858,429
4	Chapter 5	Line Repairs and Replacements	$ 92,048	$ 294,937	$ 386,985
5	Chapter 6	Substation Repairs and Replacements and Temporary Generation	$ 10,500	$ 22,506	$ 33,006
6	Chapter 7	Power Generation	$ 313	$ 554	$ 867
7	Chapter 8	Enhanced Powerline Safety Settings	$ 7,453	$ 13,332	$ 20,785
8	Chapter 9	Enhanced Automation and Remote Grid	$ 7,785	$ 27,058	$ 34,843
9	Chapter 10	Data Management & Analytics and Mapping	$ -	$ -	$ -
10	Chapter 11	Wildfire Support	$ 1,473	$ 8,352	$ 9,825
11	Chapter 12	Shared Services	$ 4,206	$ 92,286	$ 96,491
12	Chapter 13	Information Technology	$ 9,380	$ 43,477	$ 52,857
13	Chapter 14	Customer and Communications	$ 1,193	$ 4,686	$ 5,878
14	**Grand Total**		**$ 287,554**	**$ 1,246,399**	**$ 1,533,954**

PACIFIC GAS AND ELECTRIC COMPANY
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Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_016-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_016-Q002		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-016
Date Sent:	February 16, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Heather Duncan	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

QUESTION 002

The following questions follow up on PG&E's response to TURN DR 7-4, relating to Chapter 2 (Inspections):

a. PG&E states that it is "unable to identify exactly the number of external Overhead (OH) inspectors employed by our individual contractors." However, on page 2-11 of PG&E's direct testimony, the company notes that 75 percent of inspectors in 2020 were external contractors and that in 2021 and 2022, PG&E continued to rely heavily on contracted labor for inspectors.
    i. How did PG&E calculate this 75 percent figure? Please provide all documents on which the 75% figure was based.
    ii. Please provide PG&E's best estimate of the number and percentage of inspectors, broken down by internal and contracted, in each of 2020, 2021 and 2022 and provide the documents on which this estimate is based.
    iii. For comparison purposes, please provide PG&E's best estimate of the number and percentage of inspectors, broken down by internal and contracted, for each year in the period 2015 through 2019, and provide the documents on which this estimate is based.

b. PG&E states that "there is no standard hourly rate for contracted inspectors."
    i. Does PG&E have an imputed hourly rate for contracted inspectors that it uses to compare with the hourly rates for internal inspectors? Please share the best estimates of such imputed rates, for 2020, 2021 and 2022.

c. Did PG&E conduct a cost comparison between internal and external inspectors at any point in 2019-2022?
    i. If so, please explain how PG&E compared cost and provide all documents reflecting such cost comparisons, including without limitation documents showing the underlying calculations and cost assumptions.
    ii. If not, please explain why not.

ANSWER 002

a. Regarding the statement in testimony that "75 percent of inspectors in 2020 were external contractors and that in 2021 and 2022, PG&E continued to rely heavily on contracted labor for inspectors.";

i. The 75 percent figure was a best estimate, as our systems do not record the number of external / contract inspectors at a certain point in time and we may not know, the number of inspectors utilized under an individual contract. Our estimate was based on matching the unique identifiers (or the "LAN ID") in the Inspection App against an onboarding list of all contracted inspectors for the same period. The Inspection App is a tool we use since 2020 to log all inspection jobs that contains the unique identifier ("LAN ID") of the person who performs the job, including contractors (contractors were assigned a PG&E "LAN ID" too). With this matching exercise, we were able to quantify the estimated the number of unique contract inspectors conducting inspections vs. the number of internal resources for that time period.

ii-iii. PG&E objects to this request as overbroad to the extent it seeks information on recorded data prior to 2020, which are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

Please see the table below "Table 1, Number and Percent Inspectors by Contractor and Internal" for estimated number and percentage of inspectors, broken down by internal employees and contracted resources, from 2015 - 2022.

Table 1, Number and Percent Inspectors by Contractor and Internal

Year	Contractor Total	Internal Total	Contractor %	Internal %
2015	52	138	27%	73%
2016	47	141	25%	75%
2017	26	141	16%	84%
2018	10	15	16%	84%
2019	51	161	24%	76%
2020	469	130	78%	22%
2021	390	126	76%	24%
2022	454	155	75%	25%

We are unable to provide backup documents as the documents contain confidential information (e.g., the inspector's PG&E LAN IDs), which we do not provide to be consistent with California privacy law.

b. We do not have an imputed hourly rate for contracted inspectors, as all costs are done by unit pricing.

c. We did not conduct a cost comparison between internal and external inspectors at any point during 2019-2022 due to urgency and work priority of needed to mitigate wildfire risk. The situation does not allow a comprehensive cost comparison to be completed. In addition, we can't conduct unit cost comparison because the contractors are paid on a unit pricing schedule which is different than internal employees.

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PG&E Data Request No.:	TURN_016-Q005		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_016-Q005Supp02		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-016
Date Sent:	February 13, 2024 Supp02: May 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Ryan Blake	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

QUESTION 005

Regarding the average unit costs provided in PG&E's response to TURN DR 10 Q3 DR_TURN_010-Q003Atch01:

a. Please explain each reason for the increases in unit costs over the period 2015-2022 for each of the MATs for which average unit costs are provided in that attachment.

b. For each of the MATs for which average unit costs are provided in that attachment, please provide all documents in the period 2019 through 2022 that discuss concerns with increases in costs.

ANSWER 005 SUPPLEMENTAL 02

Please be advised the CONFIDENTIAL attachments are being provided pursuant to a signed NDA between TURN and PG&E in this proceeding.

PG&E is providing responsive documents for 2021 and 2022 in *WildfireandGasSafetyCosts_DR_TURN_016-Q005Supp02Atch01CONF.zip.* Months that are not included in the data set did not include the requested material.

ANSWER 005 SUPPLEMENTAL 01

Please be advised the CONFIDENTIAL attachments are being provided pursuant to a signed NDA between TURN and PG&E in this proceeding.

TURN's March 15, 2024 email revised this question to the following:

"b. For each of the MATs for which average unit costs are provided in that attachment, please provide all documents consisting of internal communications, including but not limited to presentations, prepared or received (including as a "cc" recipient) by individuals at the vice president level and above (including regional vice presidents), in the period 2019 through 2022 that discuss concerns with increases in costs, including but not limited to budget discussions."

PG&E is providing responsive documents for 2019 and 2020 in *WildfireandGasSafetyCosts_DR_TURN_016-Q005Supp01Atch01CONF.zip*. The documents provided are from the Distribution Portfolio Council and Distribution Work, Resource and Financial Review meetings that include material on costs for Distribution Line Repair and Replacement work. Months that are not included in the data set did not include the requested material.

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_016-Q005Supp01Atch01.zip

ANSWER 005

a. A primary driver of the increases in unit costs in the 2015 to 2022 period was the increased reliance on external contractors to complete the Distribution Line Repair and Replacement work. The increases in unit costs over the period reflect a changing cost structure. Historically contractors were used for larger project work and were not reflected in the historical unit costs on which the forecasts were based on, and the PG&E internal labor conducted majority of the work. The wildfire mitigation program WSIP, as well as the changes to overall inspection programs due to the wildfire mitigation need, resulted in a significant increase in the volume of corrective actions required in 2020, 2021, and 2022. As such, PG&E needed to utilize external resources heavily with the right qualifications and skills to conduct the work that resulted in major increases of the unit cost in 2020 – 2022 as compared to prior period 2015 - 2019.

   For reference, see below for the % breakdown of actual recorded costs by cost element based on the data provided in our response to TURN_010-Q003, subpart a. attachment "*WildfireandGasSafetyCosts_DR_TURN_010-Q003Atch01.xlsx*", that highlights the increasing proportion of costs attributed to contractor costs.

Table 1 - Contract Costs as a % of Total Recorded Costs 2015-2022

	Forecast Period Basis					Years at Issue		
MAT	2015	2016	2017	2018	2019	2020	2021	2022
2AA	7%	13%	20%	32%	62%	49%	50%	47%
2AB	3%	3%	8%	12%	27%	12%	28%	19%
2AE	4%	6%	6%	13%	15%	19%	20%	23%
2AF	5%	21%	16%	27%	32%	44%	63%	52%
KAA	13%	25%	31%	41%	70%	66%	74%	58%
KAC	2%	6%	4%	19%	41%	24%	26%	25%
KAD	2%	5%	7%	45%	16%	25%	47%	50%
KAF	3%	4%	4%	7%	10%	10%	13%	13%
KAQ	N/A	N/A	0%	0%	0%	63%	84%	48%

b. PG&E objects to this request as vague, ambiguous, unduly burdensome, and oppressive in regards to providing "all documents" that discuss "concerns" with increases in costs for all MAT codes within the Line Repairs and Replacements chapter.

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Data Response

PG&E Data Request No.:	TURN_017-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_017-Q001		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-017
Date Sent:	February 13, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Lakshmi Kumar	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

QUESTION 001

For each program listed in Tables 3-1 and 3-2, page 3-4, in Chapter 3 (Emergency Repairs and Replacement), please:

a. Describe in detail the analysis that PG&E performed before implementing the work for which recovery is requested in this case to determine whether the work was cost-effective. Please identify the date each referenced analysis was performed.

b. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (a) is based.

c. Describe in detail any and all analyses PG&E has performed since it began implementing the work for which recovery is requested in this case regarding the cost-effectiveness of the work. Please identify the date each referenced analysis was performed.

d. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (c) is based.

ANSWER 001

The work performed in Chapter 3 was performed by the Emergency program to mitigate the risk of wildfire. The accelerated emergency repair and replacement activities of the damaged distribution facilities support PG&E's wildfire mitigation efforts and were described in detail in PG&E's 2020-2022 Wildfire Mitigation Plan (WMP)[1]. PG&E does not perform any efficiency analysis for emergency work since the nature of Emergency work is emerging and required work.

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1 2020 WMP Report Updated (Feb. 28, 2020), Section 5.3.3.1, Section 5.3.3.5, Section 5.3.3.6, Section 5.3.3.12 and Section 5.3.3.14.
2021 WMP Revised (June 3, 2021), Section 7.3.3.1, Section 7.3.3.5, Section 7.3.3.6, Section 7.3.3.12.4 and Section 7.3.3.14.
2022 WMP Update Revised (July 26, 2022), Section 7.3.3.1, Section 7.3.3.5, Section 7.3.3.6, Section 7.3.3.12.4 and Section 7.3.3.14.
All referenced WMPs available at: Wildfire Mitigation Plan (pge.com)

a. No cost-effective analysis was performed for Emergency work.
b. No risk spend efficiency or related analysis was performed for Emergency work.
c. No cost-effective analysis was performed for Emergency work.
d. No risk spend efficiency or related analysis was performed for Emergency work.

PACIFIC GAS AND ELECTRIC COMPANY
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Data Response

PG&E Data Request No.:	TURN_017-Q006		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_017-Q006		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-017
Date Sent:	February 14, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Andrew P. Abranches	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

QUESTION 006

For each program listed in Tables 11-1 and 11-2, pages 11-4 and 11-5, in Chapter 11 (Wildfire Support Activities), please:

a. Describe in detail the analysis that PG&E performed before implementing the work for which recovery is requested in this case to determine whether the work was cost-effective. Please identify the date each referenced analysis was performed.

b. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (a) is based.

c. Describe in detail any and all analyses PG&E has performed since it began implementing the work for which recovery is requested in this case regarding the cost-effectiveness of the work. Please identify the date each referenced analysis was performed.

d. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (c) is based.

ANSWER 006

a. The costs incurred in Chapter 11 are predominantly labor related costs to support various wildfire initiatives with the focus of improving safety and risk reduction in the near term (i.e., between one fire season and the next fire season). PG&E considers many factors in evaluating future program implementation or changes to approaches or practices and is informed by industry best practices/benchmarking, operational efficiencies, overall authorized GRC funding, the availability of PG&E and contractor resources, synergies with other work activities, and dependencies and requirements such as permitting and the various rules for working with California's counties and cities. Given that the focus of these activities is for near term/immediate implementation, assessing cost effectiveness of this work prior to implementation could not be done. See also the responses to subparts c and d below.

b. Please see PG&E's response to subpart a. above. There are no additional documents to provide.

c. While the costs incurred in Chapter 11 are predominantly labor related costs to support various wildfire initiatives with the focus of improving safety and risk reduction in the near term, if the safety and risk reduction benefits of wildfire activities did not materialize, the programs were discontinued. For example, in 2021, PG&E piloted various mitigation activities to address the high risk from dry vegetation fires due to the extremely dry year, including the Preventative Fire Retardant Program (PFRP) and Enhanced Powerline Safety Settings (EPSS). As mentioned in our Q4 2021 Quarterly Initiative Update (QIU), PG&E determined that the EPSS program was more effective than PFRP in reducing ignition potential during the wildfire season and thus decided to continue the EPSS program while ending PFRP. PG&E prepared a Preventative Fire Retardant Program 2021 Summary on November 4, 2021.

d. See attachment "*WildfireandGasSafetyCosts_DR_TURN_017-Q006Atch01.pdf*." for PG&E's 2021 Program Summary of its Preventative Fire Retardant Program.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_017-Q006Atch01.pdf

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
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Data Response

PG&E Data Request No.:	TURN_017-Q007		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_017-Q007		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-017
Date Sent:	February 14, 2024	Requesting Party:	The Utility Reform Network
PG&E Witnesses:	Bahar Hajian, Dave Kevane, Tom Crowley, Andy Williams	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

QUESTION 007

For each program listed in Tables 12-1 and 12-2, page 12-2, in Chapter 12 (Shared Services), please:

a. Describe in detail the analysis that PG&E performed before implementing the work for which recovery is requested in this case to determine whether the work was cost-effective. Please identify the date each referenced analysis was performed.

b. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (a) is based.

c. Describe in detail any and all analyses PG&E has performed since it began implementing the work for which recovery is requested in this case regarding the cost-effectiveness of the work. Please identify the date each referenced analysis was performed.

d. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (c) is based.

ANSWER 007

a-d. Please see "*WildfireandGasSafetyCosts_DR_TURN_017-Q007Atch01.xlsx*".

PACIFIC GAS AND ELECTRIC COMPANY
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Data Response

PG&E Data Request No.:	TURN_017-Q010		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_017-Q010Rev01		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-017
Date Sent:	February 14, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Heather Duncan	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

The bolded language in the following question modifies DR TURN-PGE-009, Question 1.

QUESTION 010

For each program listed in Table 2-2, page 2-6, in Chapter 2 (Inspections), please:

a. Describe in detail the analysis that PG&E performed before implementing the work for which recovery is requested in this case to determine whether the work was cost-effective. Please identify the date each referenced analysis was performed.

b. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (a) is based.

c. Describe in detail any and all analyses PG&E has performed since it began implementing the work for which recovery is requested in this case regarding the cost-effectiveness of the work. Please identify the date each referenced analysis was performed.

d. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (c) is based.

ANSWER 010 REVISION 01

d. See the "RSE Results" tab in attachment "*WildfireandGasSafetyCosts_DR_TURN_017-Q010Atch01.xlsx*" for a copy of the RSE analysis and results performed for the Distribution overhead inspection program in 2022, which was included as the workpaper in PG&E's 2022 Wildfire Mitigation Plan (WMP) initiatives 7.3.4.1 "Detailed inspections of distribution electric lines and equipment", 7.3.4.4 "Infrared inspections of distribution electric lines and equipment", and 7.3.4.11 "Patrol inspections of distribution electric lines and equipment".

Subsequent to the 2022 WMP, we updated our RSE analysis for 2023 – 2026 and provided them in the 2023 General Rate Case (GRC), Exhibit (PG&E-4), Chapter 3 workpaper where we included RSEs for all Electric Operations mitigations and controls. See our response to TURN_017-Q003, subpart d. attachment "*WildfireandGasSafetyCosts_DR_TURN_017-Q003_Atch02.pdf*" for a copy of the

Chapter 3 workpaper. Refer to **WP 3-3, lines 1-3**, Exhibit (PG&E-4) for specific RSE information for MATs BFA, BFB and BFC respectively. There is no RSE for BFH as it is considered foundational and is excluded from the RSE calculation.

ANSWER 010

a. The Overhead distribution asset inspection work for which recovery is requested in this case was implemented for wildfire safety and risk mitigation reasons, and driven primarily by CPUC directives and approved WMP commitments[1]. PG&E also considers many factors in evaluating future program implementation or changes to approaches or practices and is informed by industry best practices/benchmarking, operational efficiencies, overall authorized GRC funding, the availability of PG&E and contractor resources, synergies with other work activities, and dependencies and requirements such as permitting and the various rules for working with California's counties and cities. Also see our responses to subparts c and d below.

b. Please see PG&E's response to subpart a. above. There are no additional documents to provide.

c. Since we have enhanced the Patrols and Inspection program to a risk informed approach, we have performed Risk Spend Efficiency (RSE)[2] analysis and calculation for inspections that are considered risk mitigations and/or risk controls. RSE is one type of risk informed cost benefit analysis PG&E performs, but not the only factor PG&E evaluates related to the value of performing program activities.

   RSE analysis for Distribution overhead inspection program was included in PG&E's 2022 Wildfire Mitigation Plan (WMP), which was submitted on February 18, 2022 and some analysis was supplemented on April 8, 2022.

d. See the "RSE Results" tab in attachment "*WildfireandGasSafetyCosts_DR_TURN_017-Q010Atch01.xlsx*" for a copy of the RSE analysis and results performed for the Distribution overhead inspection program in 2022, which was included as the workpaper in PG&E's 2022 Wildfire Mitigation Plan (WMP) initiatives 7.3.4.1 "Detailed inspections of distribution electric lines and equipment", 7.3.4.4 "Infrared inspections of distribution electric lines and equipment", and 7.3.4.11 "Patrol inspections of distribution electric lines and equipment".

   Subsequent to the 2022 WMP, we updated our RSE analysis for 2023 – 2026 and provided them in the 2023 General Rate Case (GRC), Exhibit (PG&E-4), Chapter 3 workpaper where we included RSEs for all Electric Operations mitigations and

1 PG&E Amended 2019 Wildfire Safety Plan, (Feb. 6, 2019), pp. 55-56, Section 4.2.1.
2020 Wildfire Mitigation Plan (WMP) Report Updated (Feb. 28, 2020), Section 5.3.4.1, Section 5.3.4.4, and Section 5.3.4.11.
2021 WMP Revised (Jun. 3, 2021), Section 7.3.4.1, Section 7.3.4.4, and Section 7.3.4.11.
2022 WMP Update Revised (Jul. 26, 2022), Section 7.3.4.1, Section 7.3.4.4, and Section 7.3.4.11.

2 RSE is defined as "An estimate of the cost-effectiveness of initiative, calculated by dividing the mitigation risk reduction benefit by the mitigation cost estimate based on the full set of risk reduction benefits estimated from the incurred costs."

controls. See our response to TURN_017-Q003, subpart d. attachment "*WildfireandGasSafetyCosts_DR_TURN_017-Q003_Atch02.pdf*" for a copy of the Chapter 3 workpaper. Refer to WP 3-5, line 30, Exhibit (PG&E-4) for specific RSE information for MATs BFA, BFB and BFC respectively. There is no RSE for BFH as it is considered foundational and is excluded from the RSE calculation.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_017-Q010Atch01.xlsx

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
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Data Response

PG&E Data Request No.:	TURN_017-Q011		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_017-Q011		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-017
Date Sent:	February 14, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Bryon Winget / Joshua Fredriksson	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

The bolded language in the following question modifies DR TURN-PGE-008, Question 7.

QUESTION 011

For each program listed in Tables 4-1 and 4-2, pages 4-5 to 4-6, in Chapter 4 (Pole Assessments and Replacements), please:

a. Describe in detail the analysis that PG&E performed before implementing the **work for which recovery is requested in this case** to determine whether the work was cost-effective. Please identify the date each referenced analysis was performed.

b. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (a) is based.

c. Describe in detail any and all analyses PG&E has performed since it began implementing the **work for which recovery is requested in this case** regarding the cost-effectiveness of the work. Please identify the date each referenced analysis was performed.

d. Please provide the document(s), including but not limited to any risk spend efficiency or related analysis, on which the response to subpart (c) is based.

ANSWER 011

a. The Pole assessments and replacement work for which recovery is requested in this case was implemented to comply with General Order (GO) 165 and GO 95 requirements and to mitigate the wildfire risks with increased volume. GO 165 provides the maximum interval for inspection cycles including intrusive inspections. GO 95 Rule 18 provides the required corrective actions and timelines based on priority levels. For example, for priority Level 2, specific timelines are provided to remedy non-conformances in Tier 3 of the High Fire-Threat District (HFTD) (six months) and Tier 2 of the HFTD (12 months). The objective of these programs is to meet the regulatory requirements.

The 2022 Wildfire Distribution Risk Model (version 3) estimates whether specific mitigations (i.e., pole replacement) may be most effective for specific asset types in specific locations by estimating the wildfire risk reduction achieved by performing a given mitigation at a given location or on a given asset. Pole replacements are prioritized based on the wildfire ignition likelihood and consequence. In addition, pole replacements are also prioritized based on CPUC commitments, self-reports, or other regulatory conditions. Also see the responses to subparts c and d below.

b. GO 165 can be found here:

https://docs.cpuc.ca.gov/word_pdf/GENERAL_ORDER/159182.pdf

GO 95 Rule 18 can be found here:

https://ia.cpuc.ca.gov/GO95/go_95_rule.pdf.

c. Since we implemented the Pole Assessment and Replacement program, we have performed risk-spend efficiency (RSE)[1] analysis for the pole assessment and replacement programs and those were provided in the 2022 WMP and the 2023 General Rate Case (GRC) proceeding. RSE analysis for Distribution pole replacement and reinforcement was included in PG&E's 2022 Wildfire Mitigation Plan (WMP), which was submitted on February 18, 2022, and some analysis was supplemented on April 8, 2022.

d. See the "RSE Results" tab in attachments "*WildfireandGasSafetyCosts_DR_TURN_017-Q011Atch01.xlsx*" for a copy of the RSE analysis and results performed for the Distribution pole assessments and replacements program in 2022, which was included as the workpaper in PG&E's 2022 Wildfire Mitigation Plan (WMP) for initiative 7.3.3.6 "Distribution pole replacement and reinforcement, including with composite poles".

See our response to TURN_017-Q010, subpart d. attachment "*WildfireandGasSafetyCosts_DR_TURN_017-Q010Atch01.xlsx*", tab "RSE Results" for a copy of the RSE analysis and results performed for the Distribution Intrusive pole inspection program in 2022, which was included as the workpaper in PG&E's 2022 Wildfire Mitigation Plan (WMP) for initiative 7.3.4.6.1 "Intrusive pole inspections, Distribution".

Subsequent to the 2022 WMP, we updated our RSE analysis for 2023 – 2026 and provided them in the 2023 GRC, Exhibit (PG&E-4), Chapter 3 workpaper where we included RSEs for all Electric Operations mitigations and controls. See our response to TURN_017-Q003, subpart d. attachment "*WildfireandGasSafetyCosts_DR_TURN_017-Q003_Atch02.pdf*" for a copy of the Chapter 3 workpaper. See below for the specific 2023 GRC references of the Distribution pole assessments and replacements program.

- A. 21-06-021, PG&E, 2023 General Rate Case, Prepared Workpaper, WP 3-4, line 23, Exhibit (PG&E-4) for RSE information for MAT 07C.

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1 RSE is defined as "An estimate of the cost-effectiveness of initiative, calculated by dividing the mitigation risk reduction benefit by the mitigation cost estimate based on the full set of risk reduction benefits estimated from the incurred costs."

- A. 21-06-021, PG&E, 2023 General Rate Case, Prepared Workpaper, WP 3-2, lines 15-16, and WP 3-8, lines 14-15 Exhibit (PG&E-4) for RSE information for MATs 07D and 07O.
- A. 21-06-021, PG&E, 2023 General Rate Case, Prepared Workpaper, WP 3-3, lines 15 and 17, and WP 3-9, lines 17-18, Exhibit (PG&E-4) for RSE information for MATs GAA and GAD.
- A. 21-06-021, PG&E, 2023 General Rate Case, Prepared Workpaper, WP 3-3, line 16, Exhibit (PG&E-4) for RSE information for MAT GAC.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_017-Q011Atch01.xlsx

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_018-Q005		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_018-Q005		
Request Date:	January 31, 2024	Requester DR No.:	TURN-PG&E-018
Date Sent:	February 13, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Paayal Murti	Requester:	Tom Long

SUBJECT: WILDFIRE COSTS – CHAPTER 16

QUESTION 005

Regarding Chapter 16 of Ex. PG&E-1, Section C(1):

a. Regarding the statement on pp. 16-9 to 16-10 that, "in accordance with D.20-05-019 all expense disallowances have been applied," please provide an accounting demonstrating the accuracy of this statement.

b. Regarding the $234 million in disallowances related to D.20-05-019 that PG&E has excluded from this application, please explain the methodology that PG&E used to decide how to apply the disallowance across categories of costs as shown in Table 16-4, and provide the supporting documents on which the response is based.

ANSWER 005

a. Please see "*WildfireandGasSafetyCosts_DR_TURN_018-Q005Atch01.xlsx"* for a detailed walk showing how PG&E has applied or will apply the full Wildfire OII Disallowance amounts towards all the proceedings identified as part of the initial Settlement Agreement (D.20-05-019, Appendix A, Agreement, Table A - *"No Recovery of Certain Wildfire-Related Expenditures*", Page 2-3) and as imposed and ordered per the Decision Different (D.20-05-019, Ordering Paragraph 1.(a)., Page 81). Column O labelled "WMPMA/FRMMA (2020 Recorded Costs)", and Column P labelled "WMPMA/FRMMA (2021 Recorded Costs)" presents the total $234 million in disallowances that PG&E has excluded from this application.
Please see "*WildfireandGasSafetyCosts_DR_TURN_018-Q005Atch02.xlsx"* delineating the chapter breakout of the wild-fire related costs removed.

b. The $234 million in disallowances related to D.20-05-019 that PG&E has excluded from this application is the result of the remaining balance of approximately $35.5 million of the $1.625 billion wildfire-related expense disallowance. This was applied in full towards Distribution Safety Inspections and Repairs that PG&E had agreed to not seek rate recovery of as settled under Commission proceeding I.19-06-015 entitled *"Order Instituting Investigation on the Commission's Own Motion into the*

Maintenance, Operations and Practices of Pacific Gas and Electric Company with Respect to its Electric Facilities" ("2017/2018 Wildfire OII" or "proceeding").[1] The exclusion also includes the Decision Different of $198 million disallowance added by the Commission in D.20-09-019[2] towards wildfire mitigation expenses recorded in the FRMMA/WMPMA. PG&E initially applied all the costs of Microgrid programs (i.e., Temporary Generation, Red Bluff work, etc.) to the $198 million Decision Different Wildfire OII disallowances. These costs did not meet the $198 million total required for disallowance. PG&E then applied costs chronologically from other categories (i.e., Inspections, Repairs, Situational Awareness, Vegetation Management Work, etc.) to meet the $198 million total disallowance. Chronological application of disallowances was for costs dated May 2020 (effective date of the Decision Different Wildfire OII disallowance order) to approximately mid-May 2021 which is when total costs reached $198 million.

Please see second attachment provided in response Question 005(a) above.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_018-Q005Atch01.xlsx

WildfireandGasSafetyCosts_DR_TURN_018-Q005Atch02.xlsx"

[1] I.19-06-015, Appendix A, Section III – Agreement, p.2-3

[2] D.20-05-019, p. 81, Ordering Paragraph (OP) 1

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_019-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_019-Q002		
Request Date:	February 1, 2024	Requester DR No.:	TURN-PG&E-019
Date Sent:	March 15, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Bryon Winget / Lakshmi Kumar / Ryan Blake	Requester:	Tom Long

SUBJECT: WILDFIRE COSTS

QUESTION 002

For each MAT code in this application with work orders related to Electric Corrective (EC) notifications and for which cost recovery is requested, please provide the number of work orders completed on-time and late, according to the headers in the following table for each of the years 2020, 2021, and 2022:

	MAT Code	Description of MAT Code	Priority Code	Work Orders Completed On-Time	Work Orders Completed Late	Work Orders Completed > 182 days late	Work Orders Completed > 365 days late	Average Number of Days of Delay for Late Work Orders
2020			A					
			B					
			E					
			F					
			Total					
2021			A					
			B					
			E					
			F					
			Total					
2022			A					
			B					
			E					
			F					
			Total					

ANSWER 002

Please see attachment "*WildfireandGasSafetyCosts_DR_TURN_019-Q002Atch01.xlsx*" for the requested information. Note that the due date is based on Table PG&E 8.1.7-1 of the PG&E 2023-2025 Wildfire Mitigation Plan R4, which is consistent with or more restrictive than the CPUC General Order 95 Rule 18 timelines for corrective actions.

As discussed in the 2023 WMP-Update_R4, PG&E has a known backlog of maintenance tags in High Fire Threat Districts (HFTD) and High Fire Risk Areas (HFRA). In response to the 2017 and 2018 wildfires, PG&E initiated the Wildfire Safety Inspection Program (WSIP) to perform accelerated and enhanced inspections of PG&E's distribution, transmission, and substation facilities with the objective of

identifying and repairing non-conformances on its facilities that posed a wildfire and/or reliability risk. However, the WSIP that was launched in HFTD areas between 2018 and 2019, identified more non-conformances (approximately four times the average annual inspection find rate) than what were able to be repaired. PG&E has proposed a plan to reduce all risk associated with the distribution backlog by the end of 2029. In addition, PG&E provides a quarterly update on the WSIP Compliance Plan and the Interim Controls to the CPUC, which summarizes the number of open, created, and closed tags.

ATTACHMENT

WildfireandGasSafetyCosts_DR_TURN_019-Q002Atch01.xlsx

Year	MAT	Description of MAT Code	Priority	On Time	Late	Late>182 days	Late>365 days	Average late days
2020	07D	Pole Replacement	B*	148	2407	1219	381	193
2020			E	57	2459	1572	263	221
2020			F	-	11	2	-	127
2020			H	-	5	5	-	278
2020	07O	Overloaded Pole Replacement	B*	4	32	11	3	149
2020			E	12	66	38	-	185
2020			F	-	3	2	1	269
2020	2AA	OH General Replace	B*	456	560	103	17	102
2020			E	1235	4152	1730	208	170
2020			F	49	26	16	2	204
2020			H	1	15	8	2	209
2020	2AF	OH Idle Facility Remove	E	-	2	2	-	253
2020			F	1	-	-	-	-
2020	KAA	OH General CM Tag	B*	1106	763	40	6	60
2020			E	3598	18311	6311	285	148
2020			F	2572	182	67	16	167
2020			H	20	155	38	-	135
2020	KAC	Bird Safe Retrofit	B	1	-	-	-	-
2020			E	-	1	-	-	12
2020	KAQ	Wood Pole Bridge Bonding	B*	-	1	-	-	52
2020			E	1	7	1	-	135
2020	17B	Repl Plnt Corr-E-OH	A	409	46	0	0	5
2020	BHB	CM-E OH	A	224	17	1	0	30
2021	07C	Special Criteria Pole Replace - Tree Attachments	B	1	-	-	-	-
2021	07D	Pole Replacement	B*	298	2032	1698	1440	435
2021			E	255	10086	9790	8332	477
2021			F	1	44	43	37	491
2021			H	2	49	49	49	557
2021	07O	Overloaded Pole Replacements	B*	7	37	19	13	252
2021			E	18	296	215	132	338
2021			F	1	2	2	2	536
2021	2AA	OH General Replace	B*	775	299	202	113	305
2021			E	613	7312	6222	3158	351
2021			F	91	81	79	55	432
2021			H	-	6	6	4	391
2021	2AB	Bird Safe Install/Replacement	B	1	-	-	-	-
2021	2AF	OH Idle Facility Remove	B*	14	9	5	4	299
2021			E	38	215	164	100	346
2021			F	103	9	8	5	373
2021			H	-	3	3	3	596
2021	KAA	OH General CM Tag	B*	1149	397	119	62	137
2021			E	2437	18531	14682	7129	319
2021			F	1267	257	245	155	412
2021			H	4	17	16	11	430
2021	KAC	Bird Safe Retrofit	B*	71	6	4		247
2021			E	-	3	1	1	188
2021	KAQ	Wood Pole Bridge Bonding	B	10	-	-	-	-
2021			E	-	11	11	4	336
2021	17B	Repl Plnt Corr-E-OH	A	883	61	4	0	24
2021	17P	ED Emgcy>25K excl Major Events	A	1	0	0	0	0
2021	BHB	CM-E OH	A	422	16	1	0	41
2022	07C	Special Criteria Pole Replace - Tree Attachments	B*	-	13	11	7	597
2022			E	-	5	5	4	701
2022	07D	Pole Replacement	B*	343	3145	2496	2293	658
2022			E	173	10456	10191	9678	758
2022			F	3	29	29	28	840
2022			H	1	49	49	48	756
2022	07O	Overloaded Pole Replacements	B*	10	31	13	11	325
2022			E	16	189	178	133	549
2022			F	-	1	1	1	389
2022			H	-	2	1	-	197
2022	2AA	OH General Replace	B*	970	812	377	277	305
2022			E	1209	5034	3623	2353	402
2022			F	473	34	34	32	801
2022			H	-	1	1	1	984
2022	2AF	OH Idle Facility Remove	B*	15	19	6	5	244
2022			E	41	88	81	60	582
2022			F	171	4	4	4	756
2022			H	-	1	1	1	812
2022	KAA	OH General CM Tag	B*	1796	598	192	109	193
2022			E	1993	12313	9780	6203	430
2022			F	585	145	143	137	741
2022			H	-	6	5	5	741
2022	KAQ	Wood Pole Bridge Bonding	B*	1	1	-	-	4
2022			E	7	14	2	-	86
2022			F	1	-	-	-	NA
2022	17B	Repl Plnt Corr-E-OH	A	1261	33	0	0	3
2022	BHB	CM-E OH	A	733	20	0	0	2

*The count for late B tags includes tags that have had their priority upgraded since the tags were created. The escalation generally occurs at the time of reassessments, but retains the original notification date.

Note:

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN 019-Q004		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_019-Q004		
Request Date:	February 1, 2024	Requester DR No.:	TURN-PG&E-019
Date Sent:	February 26, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Heather Duncan	Requester:	Tom Long

SUBJECT: WILDFIRE COSTS

QUESTION 004

Please provide the total number of late inspections or patrols related to costs requested in this application for each of the years 2020, 2021, and 2022 in PG&E's service territory. If this data is available in PG&E's annual GO 165 report filings, please provide copies of those filings and page number references, in addition to reproducing these numbers as requested. The following table demonstrates the requested format:

	Inspection Type	Inspections Completed On-Time	Inspections Completed Late	Inspections Completed > 182 days late	Inspections Completed > 365 days late	Average Number of Days of Delay for Late Inspections
2020	Overhead Poles Patrolled					
	Overhead Poles Inspected					
	Overhead Infrared Inspections					
2021	Overhead Poles Patrolled					
	Overhead Poles Inspected					
	Overhead Infrared Inspections					
2022	Overhead Poles Patrolled					
	Overhead Poles Inspected					
	Overhead Infrared Inspections					

ANSWER 004

Please reference the attachment, "*WildfireandGasSafetyCosts_DR_TURN_019-Q004Atch01.xlsx*" for populated information on late inspections or patrols related to costs requested in this application for each of the years 2020, 2021, and 2022. Please note that there is no data on infrared inspections' timeliness included in the attachment because it is not part of the GO-165 compliance requirement, and we do not track infrared inspection by the breakdown requested. Instead, we are providing the table below with the total number of circuit miles we inspected by year during 2020 to 2022.

Table 1, Overhead Infrared Inspection Circuit Miles Inspected[1]

Year	Circuit Miles Inspected
2020	5,450
2021	10,093
2022	9,560

ATTACHMENT

WildfireandGasSafetyCosts_DR_TURN_019-Q004Atch01.xlsx

[1] Exhibit (PG&E-1), Chapter 2, p. 2-7, Table 2-3

	Inspection Type	Inspections Completed On-Time	Inspections Completed Late	Inspections Completed > 182 days late	Inspections Completed > 365 days late	Average Number of Days of Delay for Late Inspections
2020	Overhead Poles Patrolled	422,632	22,481	0	0	39.65
	Overhead Poles inspected	325,821	13,892	0	0	49.16
	Overhead Infrared Inspection	NA	NA	NA	NA	NA
2021	Overhead Poles Patrolled	348,978	3,142	0	0	48.79
	Overhead Poles inspected	466,242	14,507	0	0	48.12
	Overhead Infrared Inspection	NA	NA	NA	NA	NA
2022	Overhead Poles Patrolled	363,928	-	0	0	0.00
	Overhead Poles inspected	398,065	119	0	0	65.50
	Overhead Infrared Inspection	NA	NA	NA	NA	NA

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_020-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_020-Q002		
Request Date:	February 14, 2024	Requester DR No.:	TURN-PG&E-020
Date Sent:	February 29, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Paayal Murti	Requester:	Tom Long

SUBJECT: WILDFIRE COSTS, CHAP. 16

QUESTION 002

With respect to the response to TURN Data Request 18-5(b), which states that PG&E "initially applied all the costs of Microgrid programs (i.e., Temporary Generation, Red Bluff work, etc.) to the $198 million Decision Different Wildfire OII disallowances":

a. Please explain why PG&E elected to apply the $198 Decision Different disallowance to this category of expenses first.

b. Please provide the language and page citation(s) in D.20-05-019 that support this choice by PG&E.

ANSWER 002

a. In accordance with D.20-05-019, PG&E identified eligible expenses to apply the $198 million Decision Different disallowance. PG&E selected wildfire mitigation and other wildfire related program expenses that we implemented in good faith. These expenses include wildfire safety inspections, repairs, and Microgrid. PG&E had the discretion to choose expenses for disallowance, as D.20-05-019 did not prescribe a process by which PG&E was to apply the $198 million disallowance.

b. D.20-05-019, Ordering Paragraph 1. (a)., Page 81 states, "The proposed settlement in this proceeding is approved with the following modifications: (a) The financial obligations to be imposed on Pacific Gas and Electric Company (PG&E) is increased by an additional $462 million of which: (i) $198 million shall go toward future wildfire mitigation expenses that would have otherwise been recovered from ratepayers but for this decision, (ii) $64 million shall go toward expanding the System Enhancement Initiatives, and (iii) $200 million shall be in the form of a fine payable to the General Fund, which shall be permanently suspended. The $198 million shall be applied to wildfire mitigation expenses recorded in the Fire Risk Mitigation Memorandum Account or the Wildfire Mitigation Plan Memorandum Account within four years of the effective date of the settlement agreement."

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_021-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_021-Q001		
Request Date:	February 27, 2024	Requester DR No.:	021
Date Sent:	March 12, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Heather Duncan	Requester:	Reina Yanagiba

SUBJECT: WILDFIRE COSTS

The following questions relate to data responses to TURN_DR_PGE-013.

QUESTION 001

In WildfireandGasSafetyCosts_DR_TURN_013-Q001b, TURN's question included the request that SIQC reviews be provided as a percentage of total inspections, i.e., what percentage of *all completed inspections* were the subject of an SIQC review? Please provide the number of completed SIQC reviews in 2022 and 2023, *and* the total number of inspections that were completed in those years.

ANSWER 001

Please see the tables below for the total number of inspections completed in 2022 and 2023, the number of SIQC Distribution QC reviews performed (Desktop + Field) in those years, and the percentage of inspections QC reviewed for each year.

Year	Completed Distribution Inspections (HFTD + Non-HFTD)	Distribution QC Reviews (Desktop + Field) (HFTD + Non-HFTD)	% of Inspections QC Reviewed
2022	775,177	56,991	7.4%

The 2022 data above includes inspections performed in both HFTD and Non-HFTD areas. In 2022 SIQC used a sampling plan[1] resulting in vastly different coverage of inspections reviewed than in 2023 (as shown below).

[1] Instead of performing quality reviews on the whole population of inspections, SIQC sampled the population aiming for a 95% confidence level that our data is representative of the true population, with a margin of error of 5%.

Year	Completed Distribution Inspections (HFTD + Non-HFTD)	Distribution QC Reviews (Desktop + Field) (HFTD Only)	% of Inspections QC Reviewed
2023	530,116	225,020	42.4%

In 2023, SIQC shifted their approach and aspired to increase audits in HFTD.

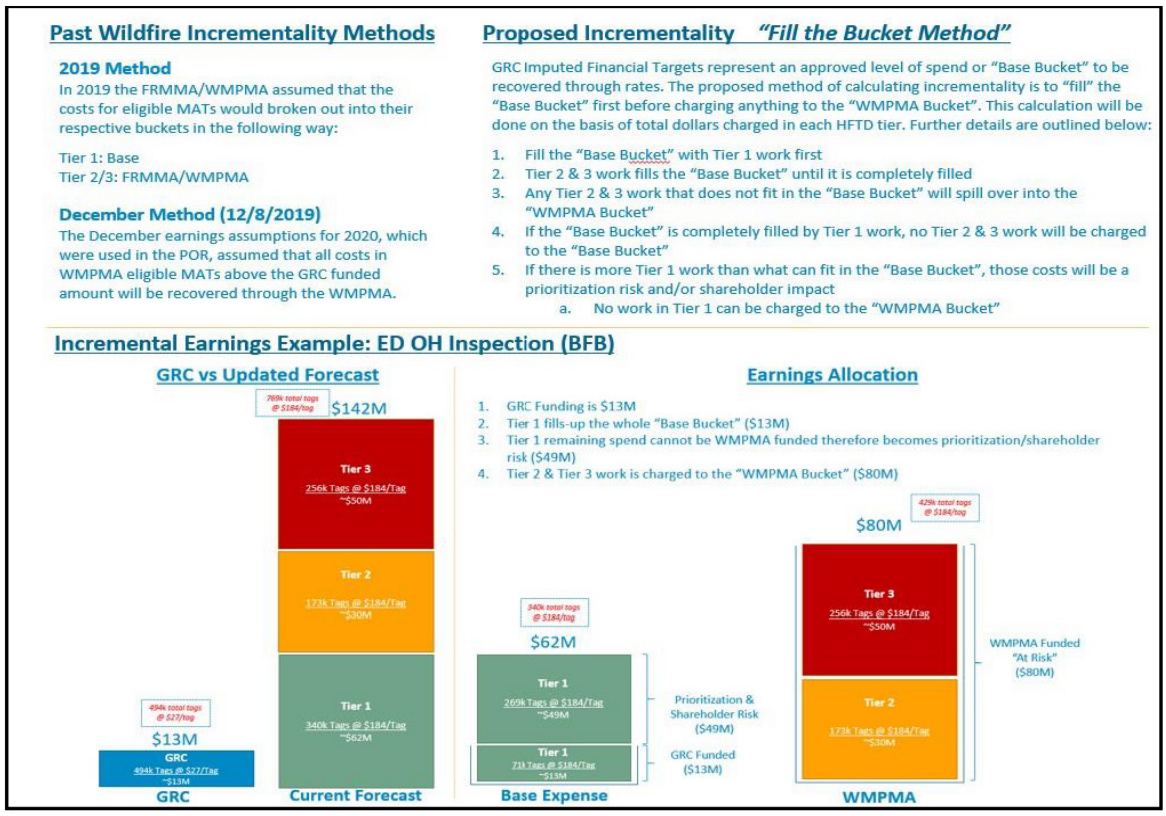
PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_024-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_024-Q001		
Request Date:	March 26, 2024	Requester DR No.:	TURN-PG&E-024
Date Sent:	April 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Matt Whorton	Requester:	Tom Long

SUBJECT: WILDFIRE COSTS – INCREMENTALITY

QUESTION 001

In PG&E's Response to DR TURN-PG&E-13, Question 6, Attachment 5, PG&E includes the following screenshot (Tab "Notes"):



a. With respect to this screenshot, please:
   i. Identify the author(s) by name, title and organizational function;
   ii. Identify the date it was prepared;

iii. Identify the recipient(s) by name, title, and organizational function, indicating who were the direct recipients and who were "cc" recipients; and

iv. If the information in the screenshot was part of a longer document, provide the full document.

b. Please define each of the three tiers (e.g. "Tier 1") discussed in the screenshot above.

c. Please explain how each of the three methods described in the screenshot differ from one another.

d. Please identify the time period in which PG&E utilized each of the described methods.

e. Is the "Incremental Earnings Example" shown in the screenshot an example of the "Fill the Bucket Method"? If not, what method is it illustrating?

f. What is the relationship between each of the incrementality methods discussed in the screenshot and the method described in Chapter 15 of PG&E's direct testimony (Ex-01)? If the method described in Chapter 15 is different from each of the screenshot methods, please identify the time period in which PG&E utilized the Chapter 15 method.

ANSWER 001

The screenshot shown above in response to DR TURN-PG&E-13, Question 6, Attachment 5, was part of a methodology proposal to ensure 2020 GRC imputed adopted amounts are fully utilized so that PG&E only sought recovery of incremental costs recorded in the WMPMA and FRMMA. This methodology proposal was a pre-cursor to the GRC Spend Analysis (previously called the "fill the bucket" methodology) as described in PG&E's testimony.[1] The screen shot above can be considered a working document that led to the final methodology that provides a straightforward, quantifiable way to demonstrate that costs recorded to the FRMMA and WMPMA are incremental.

a. PG&E objects to the request with respective to the screenshot above to provide employee names and specific details on who this document was shared with as unduly burdensome and oppressive. Subject to and without waiving this objection, PG&E notes the following:

i. The document was prepared by the Electric Business Finance Department.

ii. The document was prepared in early 2020 and distributed on February 14, 2020.

iii. The document was shared with the Electric Business Finance Department, the Law Department, the GRC Regulatory Proceedings team, and Electric Business Operations team.

iv. See attachment "*WildfireandGasSafetyCosts_DR_TURN_024-Q001Atch01.pdf*" for the complete document.

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[1] Please see Exhibit (PG&E-1), Chapter 15, pages 15-11 through 15-14.

b. Tier 2 and Tier 3 in the screen shot above refer to incremental wildfire mitigation activities performed in High Fire Threat Districts that were to be recorded to the WMPMA / FRMMA. Tier 1 represents work activities performed in Non-High Fire Thread Districts and would be recorded to base GRC.

c. Please see below for additional details on the three methods mentioned in the screen shot above.

   i. 2019 Method – method used in the 2017 GRC rate case period (2017-2019).

   ii. December method – method was only used to model out POR (Plan of Reorganization) earnings vs non earnings projections as described in the screenshot. This was not a methodology used in any cost recovery filing.

   iii. Proposed Fill the Bucket Method – This methodology proposal was a pre-cursor to the GRC Spend Analysis (previously called the "fill the bucket" methodology) as described in PG&E's WGSC testimony[2]. The screen shot above can be considered a working document that led to the final methodology that provides a straightforward, quantifiable way to demonstrate that costs recorded to the FRMMA and WMPMA are incremental to the 2020 GRC.

d. As explained above, the methods in the screen shot above were working documents that ultimately led to the "Fill the Bucket" approach as detailed in testimony,[2] which was used over the 2020-2022 time period.

e. Yes, it is illustrating the "Proposed Fill the Bucket Method" using GRC forecasts and comparing them against a point in time forecast for MAT BFB Overhead Inspections.

f. Please refer to our answers to subpart c. and d. above.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_024-Q001Atch01.pdf

[2] Please see Exhibit (PG&E-1), Chapter 15, pages 15-11 through 15-14.

Electric Operations Earnings Calculation Methodology

2020 GRC Settlement WMPMA Incrementality

14 February 2020

Together, Building
a Better California

ELECTRIC OPERATIONS

Past Incrementality Methods & Proposal

2020 GRC & WMPMA Eligibility

GRC

The GRC was filed using traditional work breakouts by Program, MWC, and MAT. No calculation or estimate was made of how many units or how much funding was forecasted in each HFTD Tier. At the time, our work was not broken out in that way.

WMPMA Eligibility

MATs eligible for the Wildfire Mitigation Plan Memorandum Account "WMPMA" include the following:

- BFB
- BFH
- BHB
- KAA
- AB# *(Specific Items)*
- 2AA
- 07D
- 07O
- 17B
- 49T
- 48A
- 21# *(Specific Items)*

Past Incrementality Methods

2019 Method

In 2019 the FRMMA/WMPMA assumed that the costs for eligible MATs would broken out into their respective buckets in the following way:

Tier 1: Base
Tier 2/3: FRMMA/WMPMA

December Method (12/8/2019)

The December earnings assumptions assumed that all costs in WMPMA eligible MATs above the GRC funded amount will be recovered through the WMPMA.

Proposed Incrementality *"Fill the Bucket Method"*

GRC Imputed Financial Targets represent an approved level of spend or "Base Bucket" to be recovered through rates. The proposed method of calculating incrementality is to "fill" the "Base Bucket" first before charging anything to the "WMPMA Bucket". This calculation will be done on the basis of total dollars charged in each tier. Further details are outlined below:

1. Fill the "base bucket" with Tier 1 work first
2. Tier 2 & 3 work fills the "Base Bucket" until it is completely filled
3. Any Tier 2 & 3 work that does not fit in the "Base Bucket" will spill over into the "WMPMA Bucket"
4. If the "Base Bucket" is completely filled by Tier 1 work, no Tier 2 & 3 work will be charged to the "Base Bucket"
5. If there is more Tier 1 work than what can fit in the "Base Bucket", those costs will be a shareholder impact
    a. No work in Tier 1 can be charged to the "WMPMA Bucket"

ELECTRIC OPERATIONS

Example 1: Distribution Pole (07D)

GRC vs Updated Forecast

Earnings Allocation

1. GRC Funding is $109M
2. Tier 1 fills-up ½ of the "Base Bucket" ($56M)
3. Tier 2 fills-up the other ½ of the "Base Bucket" ($53M)
4. The remaining Tier 2 & all of the Tier 3 work is charged to the "WMPMA Bucket"

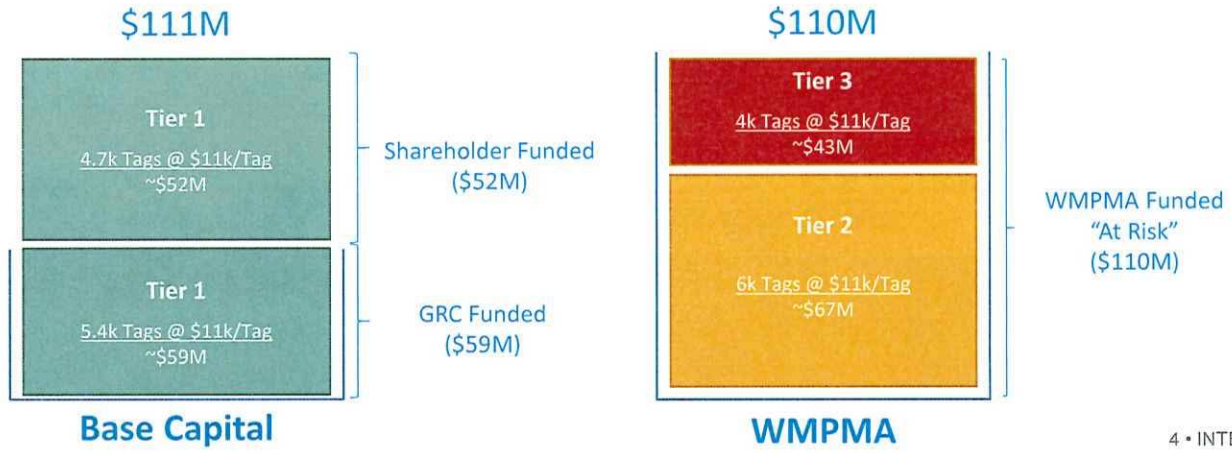
ELECTRIC OPERATIONS

Example 2: ED OH Maintenance (2AA)

GRC vs Updated Forecast

Earnings Allocation

1. GRC Funding is $59M
2. Tier 1 fills-up the whole "Base Bucket" ($59M)
3. Tier 1 remaining spend cannot be WMPMA funded therefore becomes shareholder funded ($52M)
   Tier 2 & Tier 3 work is charged to the "WMPMA Bucket" ($110M)



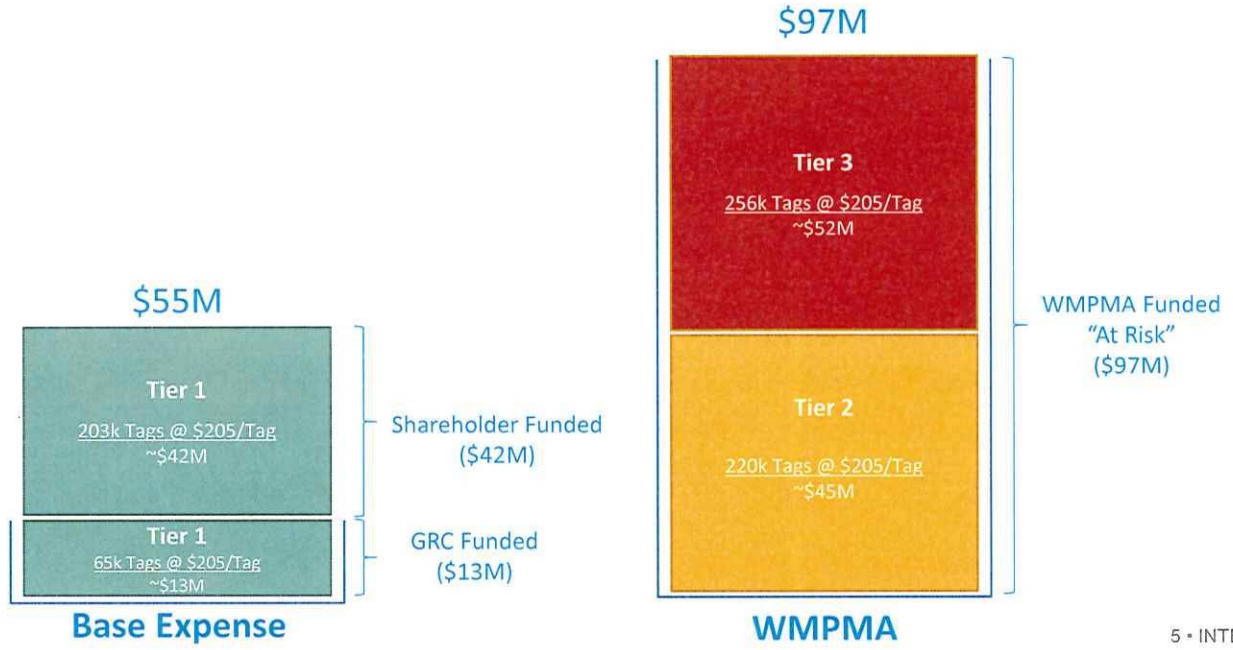
ELECTRIC OPERATIONS

Example 3: ED OH Inspection (BFB)

GRC vs Updated Forecast

Earnings Allocation

1. GRC Funding is $13M
2. Tier 1 fills-up the whole "Base Bucket" ($13M)
3. Tier 1 remaining spend cannot be WMPMA funded therefore becomes shareholder funded ($42M)
   Tier 2 & Tier 3 work is charged to the "WMPMA Bucket" ($97M)



PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_027-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_027-Q001Supp01Rev01		
Request Date:	March 27, 2024	Requester DR No.:	TURN-PG&E-027
Date Sent:	April 10, 2024 Supp01Rev01: April 22, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Matt Whorton	Requester:	Tom Long

SUBJECT: INCREMENTALITY

QUESTION 001

Ex. PG&E-1, p. 15-8 states that certain programs that are included in this application (such as inspection and maintenance programs) are expansions of GRC funded programs in that they saw a significant increase in scope or speed. This testimony refers to these programs as Increased Work and the programs that fall into this category are listed in Table 15-1 beginning on page 15-9. Table 15-1 shows that the Increased Work programs share the same MWC and MAT codes as GRC-funded programs. In addition, the testimony on page 15-16 suggests that, at the time work was ordered and performed, PG&E made a determination whether the work was GRC-related or should be tracked in the WMPMA or FRMMA.

a. Is TURN's understanding of this testimony correct that PG&E made the determination of whether a work order should be treated as GRC work or WMPMA or FRMMA work at the time of creating the work order? If TURN's understanding is not precisely correct, please explain why and identify the point at which PG&E decided to which account (GRC, WMPMA, FRMMA, another account) to book the work. If that point varied based on program or work, please explain how and why it varied.

b. For the programs identified as Increased Work in Table 15-1, please explain how PG&E determined whether or not the work should be booked to the GRC account. If this explanation differs based on MWC or MAT, please provide a separate explanation by MWC/MAT as needed to provide a complete explanation. In addition to this explanation:

    i. Please provide the document(s) containing the written instructions that PG&E followed to determine whether or not work that shares the same MWC or MAT code as GRC funded work should be booked to the GRC account or to some other account.

    ii. If these instructions differed by program (e.g., by MWC or MAT), please provide each document containing each set of instructions for each program.

    iii. If these instructions changed over time with respect to 2020-2022 costs, please provide each document containing each set of instructions and identify the time period during which the instructions applied.

c. For the programs identified as Increased Work in Table 15-1, please explain how PG&E determined whether or not the work should be booked to the WMPMA or to the FRMMA account. In addition to this explanation:

   i. Please provide the document(s) containing the written instructions that PG&E followed to determine when work should be booked to the WMPMA and when it should be booked to the FRMMA.

   ii. If these instructions differed by program (e.g., by MWC or MAT), please provide each document containing each set of instructions for each program.

   iii. If these instructions changed over time with respect to 2020-2022 costs, please provide each document containing each set of instructions and identify the time period during which the instructions applied.

ANSWER 001 SUPPLEMENTAL 01 REVISION 01

Please see PG&E's response to data request TURN_031 for additional information that is responsive to this data request.

ANSWER 001

a. TURN's understanding of when work is determined to be recorded into either the WMPMA or FRMMA is not accurate. Rather a process for the determination of eligibility for inclusion of work being recorded into the WMPMA or FRMMA was established in advance of order creation and work execution as described below.

   - With the filing of the first Wildfire Mitigation Plan in 2019 and establishment of the WMPMA and FRMMA accounts, PG&E undertook a process to determine what work activities would be eligible for inclusion. In the case of work activities to be recorded in the WMPMA, they were incurred in accordance with PG&E's approved Wildfire Mitigation Plan (WMP)., In the case of work activities recorded in the FRMMA, they were incurred for other wildfire mitigation activities not specifically described in the WMP.
   - A WMPMA / FRMMA Regulatory Accounting Document (RAD) was created to document these determinations.
   - Additionally, a Wildfire Regulatory and Legal Panel was established to review any potential inclusions into the WMPMA / FRMMA based on any changes included in PG&E's annual WMP filing. The Wildfire Regulatory and Legal Panel consists of representatives from Legal, Regulatory, Finance, Accounting, and the Wildfire Program Management Office.
   - PG&E's Annual Planning Process takes into consideration of work that will be recorded to the WMPMA / FRMMA Accounts so we have an upfront understanding on how much volume and cost will be recorded to these accounts before the start of the next annual year.
   - On an annual basis after WMP approval, PG&E stops recording incremental wildfire mitigation costs to the FRMMA for activities approved in PG&E's WMP and instead records these costs to the WMPMA. Cost for activities not

approved in the WMP that were already recorded to the FRMMA remain in the FRMMA.

b. PG&E objects on the basis of attorney client privilege and attorney work product. Subject to and without waiving the same, please see attachment "*WildfireandGasSafetyCosts_DR_TURN_027-Q001Atch01.pdf*" for a copy of the WMPMA / FRMMA RAD that provides guidance on what costs can be recorded to the WMPMA / FRMMA. This guidance is consistent for all programs (e.g., by MWC or MAT), as well as for all years 2020-2022. Work that shares MWC / MAT codes that is not eligible for the WMPMA / FRMMA accounts (see answer a) is recorded to the GRC and is consistent with all other programs that are GRC funded.

c. Please see our response to subpart b. above.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_027-Q001Atch01.pdf

Pacific Gas and Electric Company
Regulatory Affairs
Regulatory Accounting Document (RAD)

This document demonstrates concurrence of the under-signed on the regulatory, legal, business, and accounting treatment of a regulatory event.

Issue Title: Fire Risk Mitigation Memorandum Account (FRMMA), Wildfire Mitigation Plan Memorandum Account (WMPMA)

Regulatory Section

Proceeding: Senate Bill (SB) 901; R.18-10-007

Decision or Resolution: Non-Standard Disposition Letter (FRMMA); Disposition Letter (WMPMA)

Applicable Advice Filing: Advice 5419-E, Approved March 12, 2019 (FRMMA); Advice 5555-E, Approved August 8, 2019

Balancing or Other Account(s) Affected: FRMMA and WMPMA

Regulatory Background and Recovery Mechanism:

This RAD is being revised to add the WMPMA to the previously prepared FRMMA RAD and provides guidance on allocating costs between the FRMMA and WMPMA.

Pursuant to SB 901, PG&E submitted Advice 5419-E to establish the Fire Risk Mitigation Memorandum Account (FRMMA) effective January 1, 2019. The purpose of the FRMMA is "to track costs incurred for fire risk mitigation that are not otherwise covered in [PG&E's] revenue requirements," as required by SB 901.[1]

Governor Edmund G. Brown Jr. signed SB 901 on September 21, 2018. The legislation, which went into effect January 1, 2019, sets in motion activities to strengthen California's ability to prevent and recover from catastrophic wildfires. In addition to measures directed at other entities, SB 901 mandates additional requirements for utility operations, maintenance, and infrastructure improvements to address wildfire risk, including the implementation of comprehensive fire prevention plans.

SB 901 describes the requirements of an annual Wildfire Mitigation Plan (also referred to as the WMP, Wildfire Safety Plan, or WSP) to be submitted by the California electric investor-owned utilities to the CPUC and sets forth the timing and cost recovery related to those plans.[2] In compliance with the CPUC Rulemaking issued on October 25, 2018,[3] PG&E submitted its first WMP in compliance with the legislation on February 6, 2019.

SB 901 includes two memorandum accounts to record costs incurred to mitigate wildfire risk. The FRMMA is intended to "track costs incurred for fire risk mitigation ***that are not otherwise covered in the electrical corporation's revenue requirement***."[4] An additional memorandum account (the WMPMA) is required to be established upon approval of a utility's WMP ". . . to track costs incurred to implement the plan."[5]

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[1] Public Utilities (PU) Code § 8386 (j) (effective Jan. 1, 2019).
[2] PU Code § 8386 (c) (effective Jan. 1, 2019).
[3] Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation Plans Pursuant to Senate Bill 901, R. 18-10-007 (2018).
[4] PU Code § 8386 (j) (effective Jan. 1, 2019) (emphasis added).
[5] PU Code § 8386 (e) (effective Jan. 1, 2019).

On May 30, 2019 the Commission approved PG&E's 2019 WMP and the decision[6] includes ordering paragraph 21,
Pacific Gas and Electric Company may open the memorandum account described in Public Utilities Code Section 8386(e), which provides: "At the time it approves each plan, the commission shall authorize the utility to establish a memorandum account to track costs incurred to implement the plan." PG&E filed Advice Letter 5555-E on June 5, 2019 to establish the WMPMA. This advice letter was approved on August 8, 2019, with the effective date of June 5, 2019, for WMPMA.

The purpose of the Wildfire Mitigation Plan Memorandum Account (WMPMA) is to record, pursuant to Senate Bill (SB) 901 (Public Utilities Code Section 8386.4 (a)) and the Wildfire Mitigation Plan (also known as the Wildfire Safety Plan) approved by the Commission, incremental costs incurred to implement an approved wildfire mitigation plan that are not otherwise recovered in PG&E's adopted revenue requirements. Such costs may include expense and capital expenditures for activities including but not limited to: operational practices, inspection programs, system hardening, enhanced vegetation management, enhanced situational awareness, public safety power shutoffs, and alternative technologies. Costs recorded to the WMPMA will not include costs approved for recovery in PG&E General Rate Cases (GRCs) or recovered through PG&E's Catastrophic Event Memorandum Account (CEMA), Fire Hazard Prevention Memorandum Account (FHPMA), Fire Risk Mitigation Memorandum Account (FRMMA), or other cost recovery mechanisms.[7]

Consistent with SB 901, PG&E proposes to continue to use the FRMMA to record the costs of wildfire mitigation activities, if any, that are not included in the approved annual WMP. These activities could fall into the categories described above or could include new areas, including additional vegetation management activities, not already reflected in the FHPMA, GRC, or other cost recovery mechanisms.[8]

PG&E will stop recording incremental wildfire mitigation costs for activities approved in PG&E's WMP to the FRMMA and instead will record these costs to the WMPMA. PG&E has proposed that, upon approval of the WMPMA, the FRMMA would remain open to record costs of additional wildfire mitigation activities not included in the approved WMP and of activities identified where the scope had significantly expanded after approval of the WMP. Note that the costs of activities proposed but not approved in the WMP would not be eligible to continue to be recorded in the FRMMA. The costs of activities approved in the WMP that were already recorded to the FRMMA will remain in the FRMMA except for the costs incurred/accrued after the approval of the WMP, which will be recorded to the WMPMA. Also, the costs for activities not approved in the WMP that were already recorded to the FRMMA will also remain in the FRMMA. PG&E will seek recovery of the FRMMA balance in a future application.

In its November 21, 2018 protest of Advice 5419-E, TURN did not oppose the establishment of the FRMMA effective January 1, 2019. However, among other concerns, TURN took the position that SB 901 did not intend to create two memorandum accounts – the FRMMA and the WMPMA. While Energy Division found that it had the authority to approve the FRMMA effective January 1, 2019, it determined that the continuation of the FRMMA after the WMPMA is approved "may be appropriate for determination in the Wildfire Mitigation Plan proceeding, R.18-10-007."[9] In addition, Assembly Bill (AB) 1054, which took effect July 12, 2019, modified the statutory provisions promulgated by SB 901 which authorized the FRMMA and the WMPMA. The Commission may evaluate whether AB 1054 has modified the post-July 12, 2019 use of the memorandum accounts. This RAD will be updated pending the outcome of these issues in the Wildfire Mitigation Plan proceeding.

PG&E is significantly enhancing its wildfire risk mitigation efforts. These efforts go beyond what was included in PG&E's 2017 General Rate Case Application (A. 15-09-001) and 2018 Catastrophic Event Memorandum Account Application (A.18-03-015). PG&E's efforts also exceed the activities required by the Fire Safety OIR (R. 08-11-005), the costs of which are recorded in the Fire Hazard Prevention Memorandum Account.

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[6] D.19-05-037
[7] Advice 5555-E
[8] Advice 5419-E
[9] See March 12, 2019 Non-Standard Disposition Letter.

PG&E's additional currently planned activities, the costs of which would be recorded to the FRMMA, fall within broad categories set forth in SB 901 as further described in the Business Section below.

PG&E anticipates that the recovery of the costs recorded to the FRMMA and WMPMA would occur through a future application at which time the Commission would review the costs for reasonableness as required by SB 901.

Effective Date:

January 1, 2019 (FRMMA); June 5, 2019 (WMPMA)

Does this document establish a new Balancing Account, Memorandum Account, Program Cycle or result in a significant change to existing accounts or programs? *Yes*

Business Section

Line of Business Implementation:

PG&E's WMP (Wildfire Mitigation Plan or Wildfire Safety Plan) was submitted to the CPUC in February of 2019 to outline PG&E's efforts to reduce the risk of catastrophic wildfires caused by electrical equipment in California. The WMP describes the enhanced, accelerated, and new programs PG&E is implementing and will continue to implement to reduce the risk of catastrophic wildfires in 2019 and beyond, as additional precautionary measures following the 2017 and 2018 wildfires. Some of the major mitigations that will be part of the FRMMA include:

- **Inspections**
  - **Expanded Inspections**: PG&E will perform enhanced inspections of its electrical assets in High Fire Threat District (HFTD) areas, including approximately 700,000 distribution poles, 50,000 transmission structures,[10] and 200 substations. These enhanced inspections include ground inspections, drone and helicopter inspections where needed, and climbing inspections of every transmission tower.
  - **Corrective Actions**: PG&E will take immediate action to address any issues identified as an imminent risk to public or employee safety. Identified issues that do not pose an imminent risk will be corrected on an established follow-up timeline.

- **System Hardening**
  - System hardening reduces potential fire risk associated with the overhead distribution system through various methods that include replacing bare overhead conductor with covered conductor, select undergrounding where appropriate, replacing existing equipment with equipment that has been certified by the California Department of Forestry and Fire Protection (CAL FIRE) as low fire risk, upgrading or replacing transformers to operate with more fire-resistant fluids, and installing more resilient poles to increase pole strength and fire resistance.

- **Situational Awareness**
  - PG&E is swiftly increasing its situational awareness—its knowledge of local weather and environmental conditions—to obtain real time information on a more granular level. This type of information is critical for both wildfire prevention and consideration of Public Safety Power Shutoff (PSPS) events and is accessible to fire response agencies.

- **Enhanced Controls**
  - **Reclosers**: PG&E is adding Supervisory Control and Data Acquisition (SCADA) capability to allow for remote reclose blocking. The expanded SCADA capability will focus on enabling remote operation of line reclosers in Tier 2 and 3 HFTD areas.
  - **Additional Measures**: PG&E has introduced other measures to reduce the risk of potential ignitions, including strengthened personnel work procedures, deploying Safety and Infrastructure Protection Teams (SIPT), and operating heavy-lift helicopters for enhanced fire suppression and restoration efforts, available at CAL FIRE's discretion. Many of these measures will be in place by June 1, 2019.

- **Public Safety Power Shut Off**
  - **Program Initiation (2018):** PG&E implemented its PSPS Program to proactively de-energize lines that traverse Tier 3 HFTD areas under elevated fire risk conditions in 2018. To develop the PSPS Program, PG&E benchmarked extensively with SDG&E to understand and

[10] Costs related to transmission assets are recovered through Federal Energy Regulatory Commission rates and will not be recorded to the FRMMA.

implement best practices from SDG&E's de-energization program, while addressing unique issues presented by PG&E's service area (which differs in terrain, weather, and population).

- **Program Expansion and Criteria Evolution (2019):** PG&E continues to evolve its PSPS Program for 2019 and beyond. In 2019 PG&E is significantly expanding the PSPS Program scope to include high voltage transmission lines and more fire risk areas (Tier 2 - elevated fire risk and Tier 3 - extreme fire risk) as referenced in the HFTD Map adopted by the CPUC in 2018.
- **Working with Customers:** PG&E will be working with customers to provide them with information regarding PSPS events generally, and to provide the most up to date information before and during PSPS events. This includes alerting all 5.4 million PG&E electric customer premises of the potential to be impacted by a PSPS event. Extensive customer outreach will begin in the first half of 2019 and will continue throughout the year. When and where possible, PG&E will alert customers that a PSPS event could occur within 48 hours. PG&E is actively exploring additional services and programs to support our customers during PSPS events with a focus in the short term on customers who require a continuous electric supply for medical needs, as well as critical services providers (i.e., first responders, hospitals, telecom, and water agencies).

While PG&E's 2019 WMP captures the majority of wildfire risk mitigation efforts, it is a filing based on one point in time. This FRMMA is intended to include any new wildfire program/mitigation that commenced prior to WMP approval, may be established after the WMP filing date, or that significantly expands upon the scope of activities included in the WMP.

Business Finance has created an "FRMMA" "Current Year LOB Organization / Next Year LOB Organization" designation for additional clarity of reporting. Business Finance has also created dedicated program orders for the project team to use in tracking all WMP and FRMMA-related work.

Expenditures will be monitored regarding financial activities incurred during the prior month for labor, contractor charges, technology charges, etc. Charges will be periodically reviewed including details by resource name, vendor, and expense type. When charges are found in the recorded actuals which do not belong in the FRMMA, the CWSP (Community Wildfire Safety Program) team will coordinate with Business Finance to reverse the charges out of the FRMMA and notify the impacted resources not to charge the account in the future.

LOB and BF will use the same set of orders for wildfire mitigation activities as the activities are same whether recorded in the FRMMA or in the WMPMA, except where additional or significantly expanded activities are undertaken and recorded only to FRMMA via FRMMA-dedicated orders. Where one same set of orders is used, costs will be allocated between the FRMMA and the WMPMA at the "back-end" by Energy Accounting (see Accounting Section for allocation methodology).

Business Finance Section:

Business Finance will leverage existing program MWCs (i.e., 08W for System Hardening, 09A Recloser Automation) and monitor program spend via stand-alone planning orders. A memo account Receiver Cost Center 15932 has been created to track the non-rate case approved expenditures to create sufficient delineation from existing base work. This 15932 Reciever Cost Center is also referred to as a Balancing Account Receiver Cost Center. This function also serves to categorize any linked order structure as "Non-Earnings Expense" and "Separately Funded Capital" for the purposes of reporting, rate base and recovery. Costs will be aligned under the new "FRMMA Current Year LOB Organization / Next Year LOB Organization" designation for additional clarity of reporting.

Specific expense and capital orders will be created, as appropriate. Any further changes or additions to SAP order attributes required for purposes of tracking program expenditures and budget will be coordinated by Business Finance, engaging stakeholders party to this RAD. Business Finance will utilize the existing cost

model change process, including providing cost model change and/or request forms as documentation and gaining approval from the Cost Model Panel.

Business Finance will monitor adherence to program cost caps and charging guidelines through the integrated planning process, annual detail planning, monthly re-forecasting, and monthly variance analysis. SAP will serve as the system of record for financial reporting purposes.

Accounting Section

As stated in the Regulatory Section on page 1, costs recorded to the FRMMA will not include costs approved for recovery in PG&E's General Rate Cases (GRCs) or recovered through PG&E's Catastrophic Event Memorandum Account (CEMA), Fire Hazard Prevention Memorandum Account (FHPMA), or other cost recovery mechanisms including the memorandum account approved as part of PG&E's annual Wildfire Mitigation Plan, as set forth in SB 901.

As described in the Regulatory Section, SB 901 includes the establishment of two memorandum accounts to record costs incurred to mitigate wildfire risk. The FRMMA will be in effect prior to the Commission's approval of PG&E WMP. The WMPMA was established upon approval of PG&E WMP to track the costs approved by the WMP. Upon approval of PG&E WMP, PG&E would stop recording costs approved in its WMP to the FRMMA and instead would record these costs to the WMPMA. PG&E has proposed that, upon approval of the WMPMA, the FRMMA would remain open to record costs of any additional wildfire mitigation activities not included in the approved WMP. Energy Division has indicated that the continuation of the FRMMA after approval of the WMPMA may be addressed in the Wildfire Mitigation Plan proceeding.

As noted in the LOB section, PG&E will use the same set of orders for both FRMMA and WMPMA as the wildfire mitigation activities are same whether recorded in the FRMMA or in the WMPMA, except where additional or significantly expanded activities are undertaken and recorded only to FRMMA via FRMMA-dedicated orders.

Energy Accounting will allocate the wildfire mitigation costs (revenue requirement) as follows where one same set of orders is used for the wildfire mitigation activities:

	FRMMA	WMPMA
Expense	YTD 05/2019 and 4/30th of 06/2019	26/30th of 06/2019, 100% of 07/2019 and forward
Capital Revenue Requirement (CapRRQ)	YTD 05/2019 CapRRQ	100% of 06/2019 CapRRQ and forward

If PG&E creates FRMMA-dedicated orders for "additional or significantly expanded activities", such costs will be recorded to the FRMMA only.

Energy Accounting (EA) shall record the following FRMMA entries as appropriate:

Expenses

On a monthly basis, EA shall record to FRMMA an entry equal to the monthly expenses incurred related to fire risk mitigation work charged to FRMMA Balancing Account Receiver Cost Center (BA RCC) 15932.

Capital

Upon a FRMMA capital project becoming operative, the Capital Recovery and Analysis group in Capital Accounting shall prepare the monthly Capital Revenue Requirement (Cap RRQ) model and shall provide it to EA for EA to record the monthly Cap RRQ to the FRMMA. The Cap RRQ represents depreciation, return on rate base, income taxes, and property taxes, net of RF&U.

When recording Cap RRQ to FRMMA, Return on Equity shall be excluded. This is because Return on Equity is not an incurred cost and cannot be recognized until the time of CPUC approval of recovery.

Every capital balancing/memorandum account (FRMMA included) must have a Revenue Requirement Model Parameters (RRMP) document prepared and approved by Capital Accounting, Tax, and Business Finance. The RRMP will document and demonstrate agreement of the regulatory, tax, accounting and capital recovery model parameters (including tax repairs deduction) for the capital model supporting the Balancing/memorandum Account.

Interest
On a monthly basis, Accounting shall record an entry equal to the interest on the average monthly balance of this account at a rate equal to 1/12th the interest rate on three-month non-financial commercial paper for the previous month, as reported in the Federal Reserve Statistical Release, H.15, or its successor.

Reserve
Advice Letter 5419-E states "PG&E anticipates that the recovery of the costs recorded to the FRMMA would occur through a future application at which time the Commission would review the costs for reasonableness as required by SB901." EA shall reserve the costs related to activities PG&E's Legal team determines not at least 80% probable of recovery. For any costs currently deemed at least 80% probable that become not at least 80% probable in the future, EA shall place a reserve on such costs upon becoming less than 80% probable. Reserved expenses will be reported as "Separately Funded Expense" on the ECS reports.

EVM costs transfer from FHPMA
EA shall transfer the 2019 EVM costs from the FHPMA to the FRMMA per Legal's recommendation. The 2019 EVM costs were previously recorded to FHPMA with 15% Reserve through 05/2019. Per Legal opinion, EA shall reverse the 15% Reserve on 2019 EVM costs and transfer the YTD 05/2019 costs from FHPMA to FRMMA. Future EVM costs recorded directly to the FRMMA will not be reserved. Note AWRR VM costs from 2018 will remain in FHPMA with 15% reserve, including any carryover 2018 costs recorded in January 2019.

Transfer for Recovery
Upon CPUC approval of recovery, all or the approved portion of the balance in the FRMMA will be transferred to other accounts, as appropriate, for rate recovery.

The following illustrates accounting entries by Energy Accounting. *All amounts are hypothetical for illustrative purposes:*

Accounting entries for the WMPMA will be same as the FRMMA entries below, except that SAP balance sheet account for the WMPMA will be newly created for 08/2019 and will be used for the WMPMA entries.

While PG&E performs the FRMMA-related work and before CPUC approval of the FRMMA recovery

(1) To record the monthly expenses to FRMMA and Reserve in accordance with legal opinion. Assume monthly expenses of $20M, of which $15M are deemed less than 80% probable.

Debit	1823255	FRMMA	$20M
Credit	5599097	Cost Deferral (593)	($20M)
Debit	5599097	Cost Deferral (593)	$15M
Credit	1823110	B/A Reserve-Electric	($15M)

(2) To record the monthly Cap RRQ to the FRMMA. Assume $5M depreciation expense, $4M return on rate base, $2M income taxes, and $1M property taxes for a total monthly Cap RRQ of $12M. For $4M return on rate base, assume $1.2M return on debt and $2.8M return on equity. So, the total without return on equity is $9.2M (= 12 – 2.8). Note the breakdown/details of Cap RRQ will be reflected in the T-account section below. Return on equity is not an incurred cost and therefore no entry. Assume all capital activities here are at least 80% probable.

Debit	1823255	FRMMA	$9.2M
Credit	5599097	Cost Deferral (593)	($9.2M)

(3) To record and reserve the monthly interest to the FRMMA and Reserve as appropriate. Assume monthly interest of $100K, of which $75K requires the reserve.

Debit	1823255	FRMMA	$0.1M

Credit	4103032	Interest Income	($0.1M)
Debit	4103032	Interest Income	$0.075M
Credit	1823110	B/A Reserve-Electric	($0.075M)

EVM costs: Reversal of 15% reserve and transfer from FHPMA to FRMMA

(4) To reverse the 15% reserve previously recorded in FHPMA. Assume YTD 05/2019 total EVM costs of $90M. So, the previously recorded 15% reserve is $13.5M. Assume $0.1M interest.

Debit	1823110	B/A Reserve-Electric	$13.5M
Credit	5599097	Cost Deferral (593)	($13.5M)
Debit	1823110	B/A Reserve-Electric	$0.1M
Credit	4103032	Interest Income	($0.1M)

(5) To transfer the 05/2019 YTD EVM costs without Reserve from FHPMA to FRMMA. Assume YTD 05/2019 total EVM costs of $90M and interest of $0.7M.

Debit	1823255	FRMMA	$90.7M
Credit	1823188	FHPMA	($90.7M)

Upon CPUC approval of the FRMMA recovery

(6) To reverse the previously-recorded reserve. Assume total accumulated reserves of $75M reserve on wild fire mitigation costs and $1M reserve on interest.

Debit	1823110	B/A Reserve-Electric	$75M
Credit	5599097	Cost Deferral (593)	($75M)
Debit	1823110	B/A Reserve-Electric	$1M
Credit	4103032	Interest Income	($1M)

(7) To transfer the authorized amount from FRMMA for recovery and reverse the disallowed amount from FRMMA. Assume $328M accumulated balance of FRMMA, which is made of $325M from wild fire mitigation costs including EVM and $3M from interest. Also assume, of $325M request, CPUC approves only $240M for recovery via DRAM and disallowance of $85M.

Debit	1823078	DRAM	$242.2M
Credit	1823255	FRMMA	($242.2M)

($242.2M = $240M approval + $2.2M associated interest)

Debit	5599097	Cost Deferral (593)	$85M
Debit	4103032	Interest Income	$0.8M
Credit	1823255	FRMMA	($85.8M)

(8) To gross up the transfer to the DRAM for RF&U. Assume RF&U rate of 0.011349 which is 2019 rate.

Debit	1823078	DRAM	$2.75M
Credit	4000946	RF&U Revenue-Electric	($2.75M)

($242.2 x 0.011349 = $2.75)

<T-account section starting on the next page>

T-Accounts (in millions)
The following T-accounts correspond to the journal entries described above.

FRMMA
1823255

(1-b)	20		
(2-d)	9.2		
(3-a)	0.1		
(5)	90.7		
		242.2	(7-a)
		85.8	(7-b)

Cost Deferral (593)
5599097

		20	(1-b)
(1-c)	15		
		9.2	(2-d)
		13.5	(4-a)
		75	(6-a)
(7-b)	85		

Interest Income
4103032

		0.1	(3-a)
(3-b)	0.075		
		0.1	(4-b)
		1	(6-b)
(7-b)	0.8		

O&M Expenses

(1-a)	20		

Cash / AP

		20	(1-a)
		2	(2-b)
		1	(2-b)
		1.2	(2-c)

B/A Reserve-Electric
1823110

		15	(1-c)
		0.075	(3-b)
(4-a)	13.5		
(4-b)	0.1		
(6-a)	75		
(6-b)	1		

<T-account to continue next page>

Depreciation Exp <Account Number>			
(2-a)	5		

Accum Depreciation <Account Number>			
		5	(2-a)

Income & Property Tax Exp <Account Number>			
(2-b)	2		
(2-b)	1		

Interest Exp on Debts <Account Number>			
(2-c)	1.2		

<Account Name> <Account Number>			

<Account Name> <Account Number>			

DRAM 1823078			
(7-a)	242.2		
(8)	2.75		

RF&U Revenue-E 4000946			
		2.75	(8)

<Account Name> <Account Number>			

FHPMA <1823188 >			
		90.7	(5)

<Account Name> <Account Number>			

<Account Name> <Account Number>			

Description of Trigger Initiating Accounting Entries:
Non-Standard Disposition Letter Issued March 12, 2019, Approving Advice 5419-E for FRMMA / August 08, 2019, approval of WMPMA AL 5555-E effective June 5, 2019

Implementation Schedule:
June 2019 Business Cycle Close for the FRMMA / August 2019 Business Cycle Close for the WMPMA

Does the regulatory event result in a financial impact of at least $1M to the Income Statement or $10M to the Balance Sheet?
Yes for FRMMA / No for WMPMA

Are there capital revenue requirement implications?
Yes

Signature Page

The signature provided below on this RAD represents the following:

1) **I have read all sections of the RAD and have a general understanding of the implementation of the CPUC Directive.**
2) **For the section I am RESPONSIBLE for implementing, I have a complete and full understanding of the CPUC Directive and its impact.**
3) **By providing my signature I am confirming the implementation discussed in this RAD complies with the CPUC directive.**

Regulatory and Legal Department Sign-Off:

[redacted]
Director, CPUC Electric Proceedings

Approved 8/27/19
Date

[redacted]
Lead Attorney, Law Department

Approved 8/27/19
Date

Business Sign-Off:

Line of Business:

[redacted]
Director, CWSP PMO

Approved 9/10/19
Date

Business Finance:

[redacted]
Senior Director, Business Finance

Approved 8/27/19
Date

Business Finance:

[redacted]
Sr. Director, Business Finance

Approved 8/27/19
Date

Accounting Department Sign-Off:

[redacted]
Manager, Energy Accounting

Approved 8/27/19
Date

[redacted]
Director, Corporate Accounting

Approved 8/29/19
Date

[redacted]
Director, Tax Department

Approved 8/27/19
Date

[redacted]
Manager, Capital Recovery

Approved 8/27/19
Date

[redacted]
Director, Capital Accounting

Approved 8/27/19
Date

Attachment 1 – PGE Non-Standard Disposition Letter 5419-E

Attachment 2 – 2019 FRMMA Incrementality White Paper

Attachment 3 – CWSP Cost Recovery June 2019 Assessment

Attachment 4 – ELEC_5555-E

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

March 12, 2019 Advice Letter 5419-E

Erik Jacobsen
Director of Regulatory Operations
Pacific Gas & Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, CA 94177

Subject: Fire Risk Mitigation Memorandum Account, Pursuant to Senate Bill 901

Dear Mr. Jacobsen:

Summary

The Energy Division has determined that Advice Letter (AL) 5419-E is in compliance with Public Utilities Code Section 8386, as amended by Senate Bill (SB) 901 (2018, Dodd) and is effective as of January 1, 2019.

The Utility Reform Network (TURN) filed a protest in response to this advice letter raising several concerns. In its reply, Pacific Gas & Electric Company (PG&E) responded to the issues raised by TURN. Based on PG&E's response and our review, the Energy Division approves PG&E Advice Letter 5419-E as it complies with Public Utilities Code Section 8386(j).

Background

On August 31, 2018, the California Legislature passed SB 901, and Governor Edmund Brown Jr. signed it into law on September 21, 2018. SB 901 addresses numerous issues surrounding wildfire prevention, response, and recovery. Among other things, SB 901 amends Public Utilities Code Section 8386, requiring each electric investor-owned utility to submit an annual Wildfire Mitigation Plan to the Commission. The Commission opened Rulemaking (R.) 18-10-007 to consider the Wildfire Mitigation Plans in compliance with the legislation.

On November 1, 2018, PG&E submitted Advice Letter 5419-E to open a Fire Risk Mitigation Memorandum Account (FRMMA) effective January 1, 2019. PG&E proposes the FRMMA will track costs incurred for fire risk reduction that are not otherwise covered in the utility's revenue requirement, pursuant to SB 901.[1]

Public Utilities Code Section 8386 contains two provisions regarding memorandum accounts to record costs to mitigate wildfire risk. The first memorandum account described in SB 901

[1] Public Utilities Code Section 8386(j)

relates to the Wildfire Mitigation Plan being considered in R.18-10-007. Section 8386(e) provides that "[a]t the time it approves each plan, the commission shall authorize the utility to establish a memorandum account to track costs incurred to implement the plan." Additionally, Section 8386(j) provides that "[e]ach electrical corporation shall establish a memorandum account to track costs incurred for fire risk mitigation that are not otherwise covered in the electrical corporation's revenue requirements." In the instant advice letter, PG&E requests a memorandum account pursuant to Section 8386(j) to track costs not otherwise included in its 2017 GRC or other wildfire-related mitigation memorandum accounts.

Protest

TURN filed a timely protest on November 21, 2018. TURN does not oppose the establishment of the FRMMA, effective January 1, 2019, but raises several issues with PG&E's request. Namely, TURN outlines concerns regarding: 1) the proper procedural vehicle for request and approval of PG&E's FRMMA; 2) the interpretation of the two provisions of SB 901 that address memorandum accounts; 3) the potential for "double recovery" of costs booked to the FRMMA; and 4) the appropriate duration of the FRMMA.

PG&E filed a reply to the protest on November 30, 2018. PG&E contests TURN's first claim that Advice Letter 5419-E should have been filed as a motion in R.18-10-007. PG&E argues there is no provision in Public Utilities Code Section 8386 requiring the memorandum account requested in this advice letter filing to be addressed in conjunction with the Wildfire Mitigation Plan.

PG&E also expresses its disagreement with TURN's interpretation that SB 901 only requires one memorandum account per utility. PG&E points to the two separate descriptions of memorandum accounts, and the need to start tracking costs before the Wildfire Mitigation Plans are finalized.

In response to the third concern raised by TURN, PG&E agrees the legislature did not intend to allow double recovery of fire mitigation expenses in its direction to open two memorandum accounts.

PG&E disagrees with TURN's final requests that the Commission: 1) reject PG&E's request to allow the FRMMA to remain open after adoption of PG&E's Wildfire Mitigation Plan and related memorandum account; and 2) transfer the balance in the FRMMA to the new Wildfire Mitigation Plan memorandum account once approved. PG&E argues the FRMMA should be allowed to remain open to record any costs not captured in the Wildfire Mitigation Plan.

Discussion

First, Energy Division finds that PG&E's request for a fire risk mitigation memorandum account pursuant to Pub. Util. Code Section 8386(j) through an advice letter is consistent with General Order (GO) 96-B Section 5.1. GO 96-B states that matters appropriate to advice letters include the "review [of] a utility's request to change its tariffs in a manner previously authorized by ***statute*** or Commission order [...]" (emphasis added). Pub. Util. Code Section 8386(j) does not refer to the Wildfire Mitigation Plan or include a procedural requirement for a motion in that proceeding.

TURN's protest expresses its view that SB 901 only intended to create one new memorandum account per utility. TURN does not oppose the creation of the FRMMA as a bridge to the memorandum account to be created upon Commission adoption of the Wildfire Mitigation Plan. At that time, TURN proposes the FRMMA be closed and its balance transferred to the new account. Conversely, PG&E requests that upon approval of the memorandum account authorized in conjunction with the Wildfire Mitigation Plan, PG&E would stop recording costs for work approved in its Wildfire Mitigation Plan to the FRMMA. The FRMMA would remain open to record costs of any additional wildfire mitigation activities not included in the approved Wildfire Mitigation Plan.

Energy Division finds that Pub. Util. Code Section 8386(j) provides for one memorandum account that Energy Division may approve by disposition letter. This letter approves PG&E's request to establish an account to track fire mitigation costs pursuant to Pub. Util. Code Section 8386(j). Reconciliation of TURN and PG&E's positions regarding whether an additional account should be opened and whether the FRMMA should at that time be closed may be appropriate for determination in the Wildfire Mitigation Plan proceeding, R.18-10-007.

Disposition

PG&E submitted AL 5419-E as a tier 2 advice letter. Upon review, the Energy Division has determined that this AL should be processed as a tier 1 AL that is effective on the requested date of January 1, 2019. While pursuant to GO 96-B, General Rule 7.3.3, a tier 1 advice letter is usually effective on the date of submittal, in this case the law allowing for the establishment of this memorandum account did not go into effect until January 1, 2019. As such, we find the effective date is January 1, 2019 instead of the earlier date of advice letter submission. Additionally, PG&E requested an effective date later than the submission date which is allowable under GO 96-B General Rule 7.3.2.

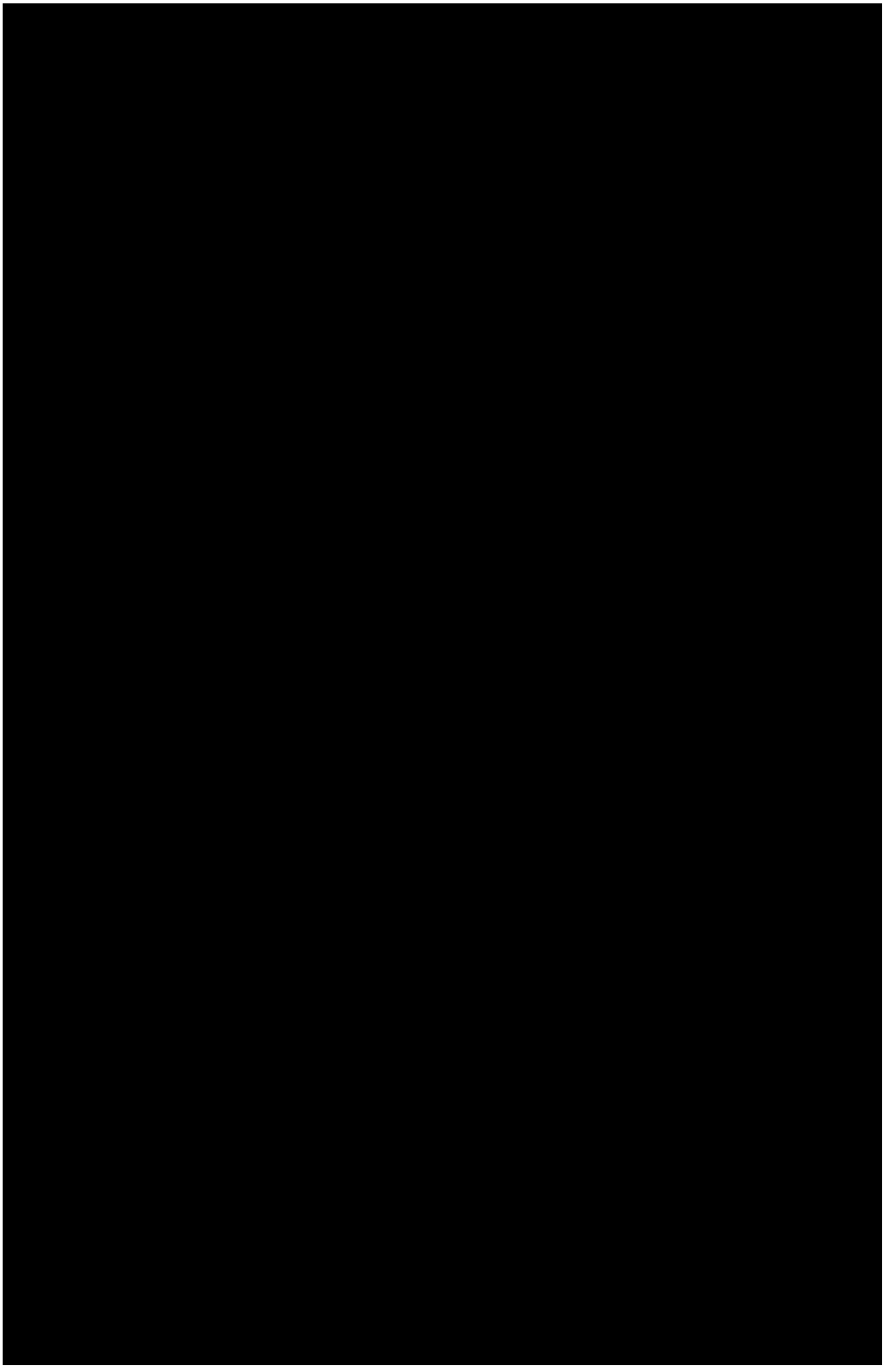
Energy Division also notes that the tier in which an advice letter is submitted is not binding upon the reviewing Industry Division. (GO 96-B, General Rule 7.6.1 ("The utility's designation is not binding on the reviewing Industry Division.").) In this instance, the Energy Division finds that AL 5419-E should be processed as a tier 1 advice letter because: (1) there is an urgent need to reasonably remove any possible hindrance an electric utility may assert in delaying fire risk mitigation measures; (2) the January 1, 2019 start date was not protested; (3) processing AL 5419-E, which has been officially suspended by the reviewing Industry Division, as a tier 2 advice letter would delay the start of the memorandum account until the date of this letter pursuant to GO 96-B General Rule 7.3.4(2); and, (4) GO 96-B Energy Division Industry Rule 5.1(1) read in conjunction with GO 96-B General Rule 1.3 allows the Energy Division to construe the wording of this advice letter such that it follows directly Public Utilities Code Section 8386(j) in order to secure a just, speedy, and inexpensive handling of this matter for the reasons listed herein.

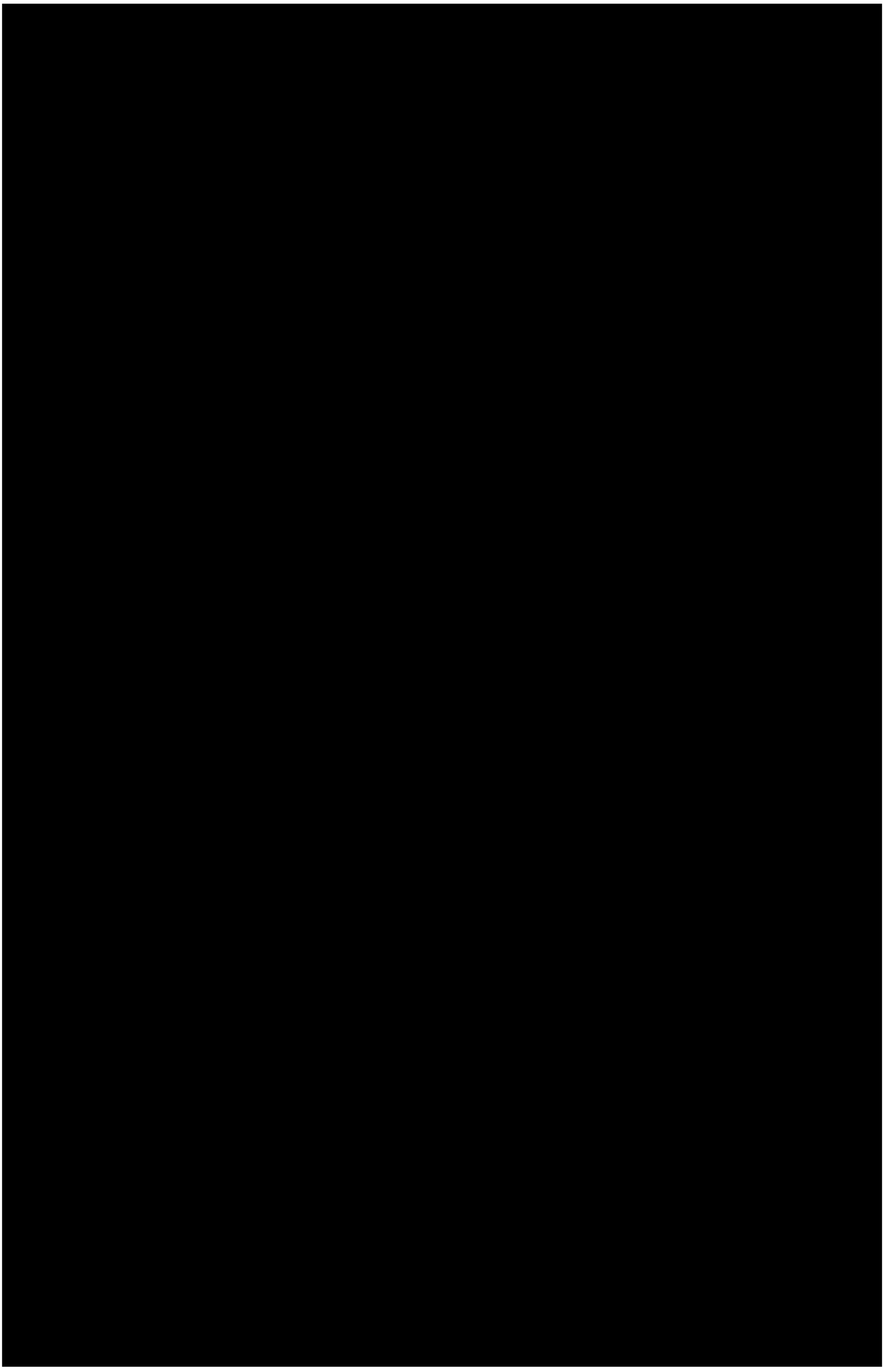
The Energy Division has determined that Advice Letter (AL) 5419-E complies with Public Utilities Code Section 8386(j), as enacted by Senate Bill 901. AL 5419-E is approved and is effective as of January 1, 2019.

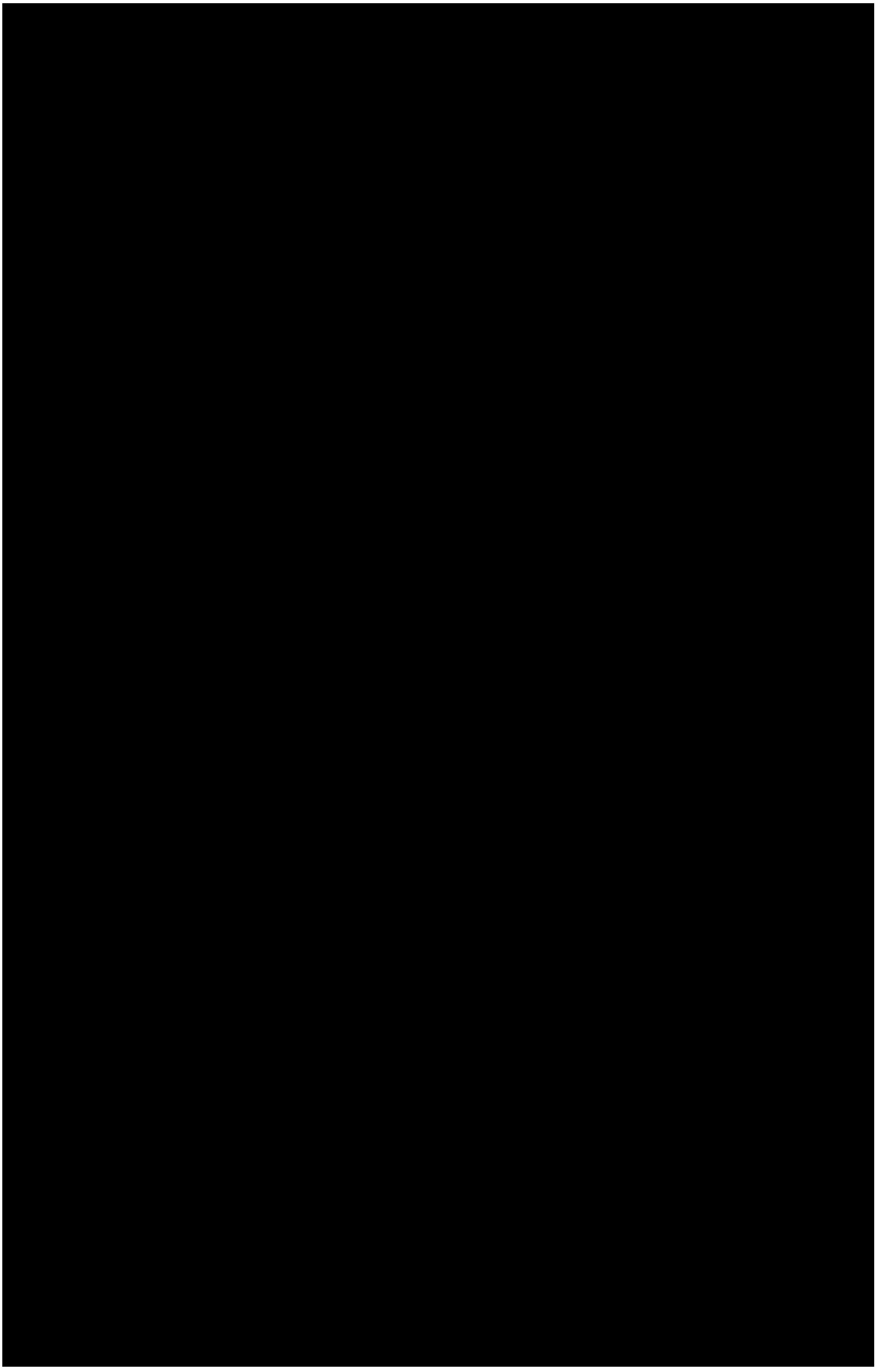
Sincerely,

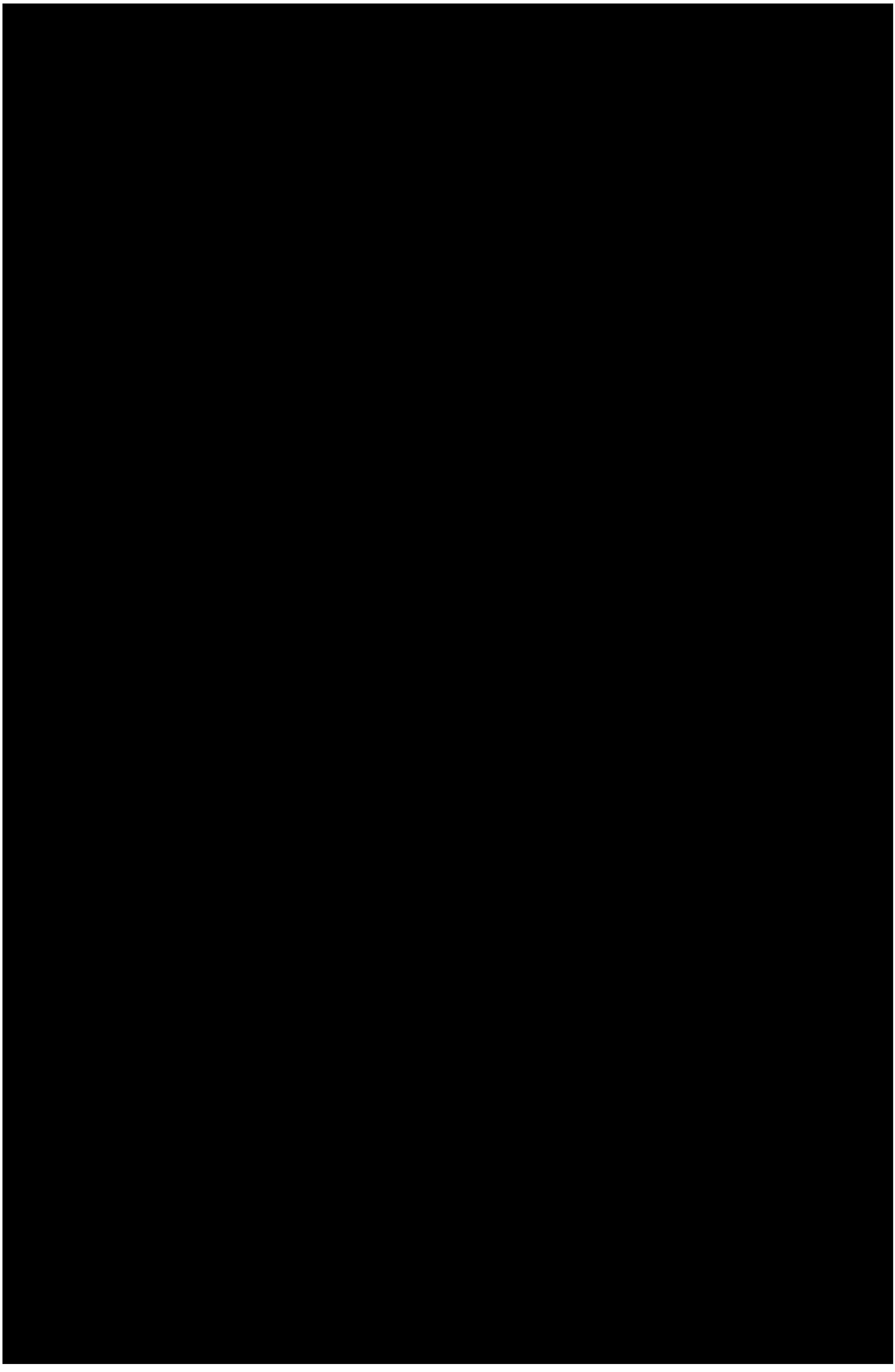
FOR

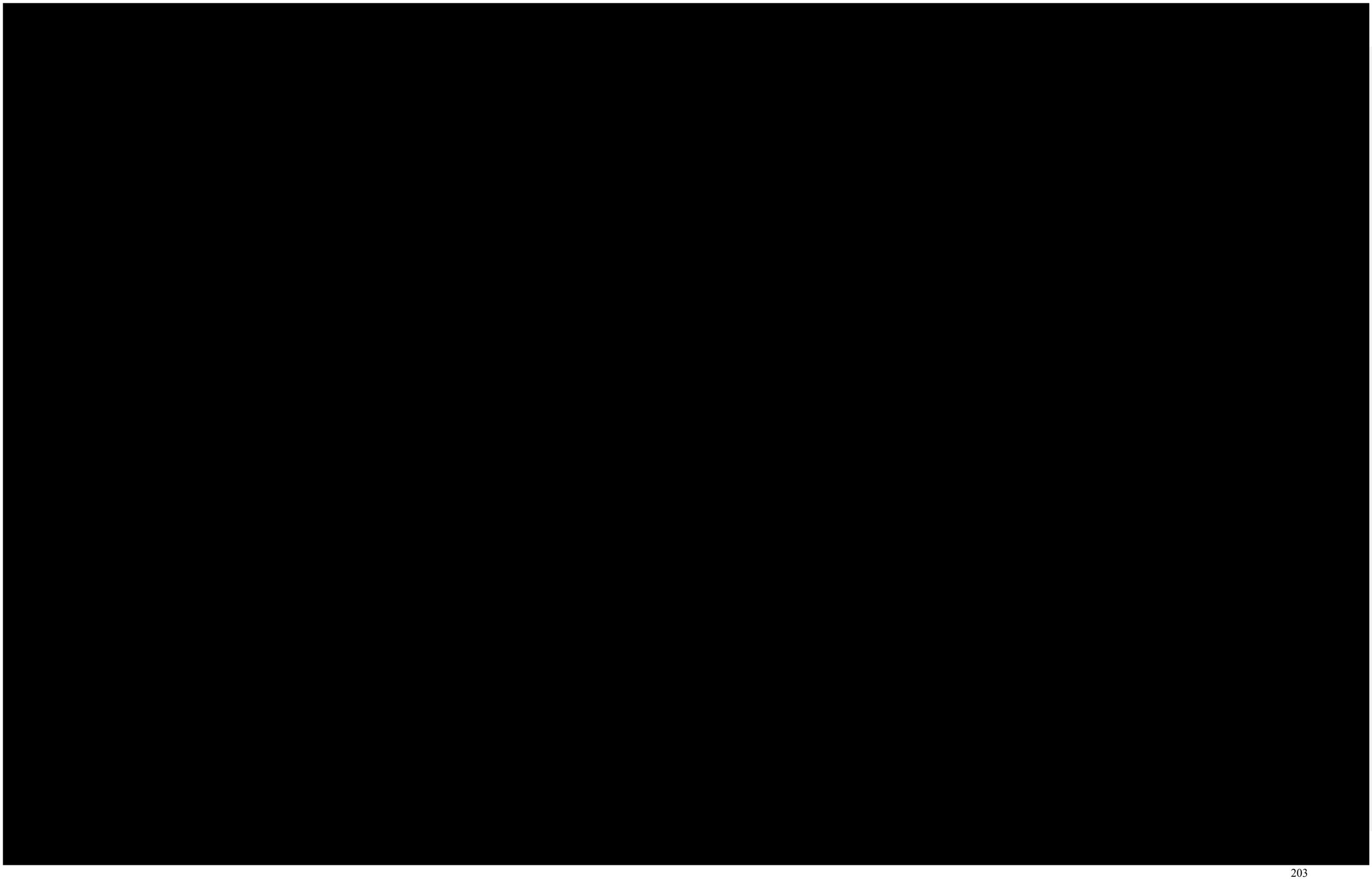
Edward Randolph
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division
California Public Utilities Commission











PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE

August 8, 2019

Advice Letter 5555-E

Erik Jacobson
Director, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

SUBJECT: Wildfire Plan Memorandum Account Pursuant to Senate Bill 901 and CPUC Decision 19-05-037

Dear Mr. Jacobson:

Advice Letter 5555-E is effective as of June 05, 2019.

Sincerely,

Edward Randolph

Edward Randolph
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division

Pacific Gas and Electric Company®

Erik Jacobson
Director
Regulatory Relations

Pacific Gas and Electric Company
77 Beale St., Mail Code B13U
P.O. Box 770000
San Francisco, CA 94177

Fax: 415-973-3582

June 5, 2019

Advice 5555-E
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: **Wildfire Mitigation Plan Memorandum Account Pursuant to Senate Bill 901 and CPUC Decision 19-05-037**

Purpose

Pursuant to Senate Bill (SB) 901 and California Public Utilities Commission (CPUC or Commission) Decision (D.) 19-05-037, dated June 4, 2019, Pacific Gas and Electric Company (PG&E) submits this advice letter to establish the Wildfire Mitigation Plan Memorandum Account (WMPMA) effective May 30, 2019.[1] The purpose of the WMPMA is to track costs incurred to implement PG&E's Wildfire Safety Plan (Plan), as required by SB 901.[2]

Background

Governor Edmund G. Brown Jr. signed SB 901 on September 21, 2018. The legislation sets in motion activities to strengthen California's ability to prevent and recover from catastrophic wildfires. In addition to measures directed at other entities, SB 901 mandates additional requirements for utility operations, maintenance, and infrastructure improvements to address wildfire risk, including the implementation of comprehensive wildfire mitigation plans.

SB 901 describes the requirements of the annual wildfire mitigation plans to be submitted by California electrical corporations to the CPUC and sets forth the timing and cost recovery related to those plans.[3] The CPUC opened a rulemaking on October 25, 2018,[4]

---

[1] Section 5.1 of General Order 96-B states that the advice letter process is appropriate "to review a utility's request to change its tariffs in a manner previously authorized by statute or Commission order."
[2] Public Utilities (PU) Code § 8386.4 (a)
[3] PU Code § 8386.
[4] Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation Plans Pursuant to Senate Bill 901, R. 18-10-007 (2018).

to implement provisions of SB 901, and PG&E submitted its first Plan on February 6, 2019.

The legislation includes two memorandum accounts to record costs incurred to mitigate wildfire risk. One memorandum account (Fire Risk Reduction Memorandum Account or FRMMA), which PG&E submitted in Advice Letter (AL) 5419-E, is intended to "track costs incurred for fire risk mitigation that are not otherwise covered in the electrical corporation's revenue requirement."[5] The second account, WMPMA, which PG&E requests in this AL, is required to be established upon approval of a utility's wildfire mitigation plan ". . . to track costs incurred to implement the plan."[6] Upon approval of the memorandum account in conjunction with the Commission's approval of the Plan, PG&E would stop recording costs for work approved in its Plan to the FRMMA and, instead, would record any costs not included in rates to the WMPMA. The FRMMA would remain open to record costs of any additional wildfire mitigation activities not included in an approved wildfire mitigation plan.

PG&E anticipates that the recovery of the costs recorded to the WMPMA would occur through a general rate case or future application at which time the Commission would review the costs for reasonableness as required by SB 901.[7]

Tariff Revisions

Attachment 1 is a proposed Electric Preliminary Statement Part HX that describes the purpose of and accounting procedures for the WMPMA.

This submittal would not increase any current rate or charge, cause the withdrawal of service, or conflict with any rate schedule or rule.

Protests

Anyone wishing to protest this submittal may do so by letter sent via U.S. mail, facsimile or E-mail, no later than June 25, 2019, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

[5] PU Code § 8386 (j).
[6] PU Code § 8386.4 (a).
[7] PU Code § 8386 (g).

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to PG&E either via E-mail or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

Erik Jacobson
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-3582
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

Effective Date

PG&E requests that this Tier 1 advice submittal become effective on May 30, 2019, the approval date of PG&E's Plan.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and the parties on the service list for R.18-10-007. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: http://www.pge.com/tariffs/.

/S/
Erik Jacobson
Director, Regulatory Relations

Attachments

cc: Service List R.18-10-007

California Public Utilities Commission

ADVICE LETTER SUMMARY

ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39E)

Utility type:
☑ ELC ☐ GAS ☐ WATER
☐ PLC ☐ HEAT

Contact Person: Yvonne Yang
Phone #: (415)973-2094
E-mail: PGETariffs@pge.com
E-mail Disposition Notice to: Yvonne.Yang@pge.com

EXPLANATION OF UTILITY TYPE
ELC = Electric GAS = Gas WATER = Water
PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 5555-E

Tier Designation: 1

Subject of AL: Wildfire Mitigation Plan Memorandum Account Pursuant to Senate Bill 901 and CPUC Decision 19-05-037

Keywords (choose from CPUC listing): Memorandum Account, Compliance

AL Type: ☐ Monthly ☐ Quarterly ☐ Annual ☑ One-Time ☐ Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.19-05-037

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested? ☐ Yes ☑ No

If yes, specification of confidential information:
Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? ☐ Yes ☑ No

Requested effective date: 5/30/19

No. of tariff sheets: 3

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: Electric Preliminary Statement Part HX - Wildfire Mitigation Plan Memorandum Account

Service affected and changes proposed[1]: N/A

Pending advice letters that revise the same tariff sheets: N/A

[1]Discuss in AL if more space is needed.

Clear Form

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

Name: Erik Jacobson, c/o Megan Lawson
Title: Director, Regulatory Relations
Utility Name: Pacific Gas and Electric Company
Address: 77 Beale Street, Mail Code B13U
City: San Francisco, CA 94177
State: California Zip: 94177
Telephone (xxx) xxx-xxxx: (415)973-2093
Facsimile (xxx) xxx-xxxx: (415)973-3582
Email: PGETariffs@pge.com

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Clear Form

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
44450-E*	ELECTRIC PRELIMINARY STATEMENT PART HX WILDFIRE MITIGATION PLAN MEMORANDUM ACCOUNT (WMPMA) Sheet 1	
44451-E*	ELECTRIC TABLE OF CONTENTS Sheet 1	44170-E*
44452-E*	ELECTRIC TABLE OF CONTENTS Sheet 17	44218-E

ELECTRIC PRELIMINARY STATEMENT PART HX Sheet 1 (N)
WILDFIRE MITIGATION PLAN MEMORANDUM ACCOUNT (WMPMA) (N)

HX. Wildfire Mitigation Plan Memorandum Account (WMPMA) (N)

1. PURPOSE: The purpose of the Wildfire Mitigation Plan Memorandum Account (WMPMA) is to record, pursuant to Senate Bill (SB) 901 (Public Utilities Code Section 8386.4 (a)) and the Wildfire Mitigation Plan (also known as the Wildfire Safety Plan) approved by the Commission, incremental costs incurred to implement an approved wildfire mitigation plan that are not otherwise recovered in PG&E's adopted revenue requirements. Such costs may include expense and capital expenditures for activities including but not limited to: operational practices, inspection programs, system hardening, enhanced vegetation management, enhanced situational awareness, public safety power shutoffs, and alternative technologies. Costs recorded to the WMPMA will not include costs approved for recovery in PG&E General Rate Cases (GRCs) or recovered through PG&E's Catastrophic Event Memorandum Account (CEMA), Fire Hazard Prevention Memorandum Account (FHPMA), Fire Risk Mitigation Memorandum Account (FRMMA), or other cost recovery mechanisms.

2. APPLICABILITY: The WMPMA applies to all customer classes, except for those specifically excluded by the Commission.

3. REVISION DATE: Disposition of the balance in this account will be established by a Commission decision through a GRC application or through other appropriate filing as otherwise authorized by the Commission.

4. RATES: The WMPMA does not have a rate component.

5. ACCOUNTING PROCEDURE: PG&E shall maintain the WMPMA by making entries to this account at the end of each month, or as applicable, as follows:

   a. A debit entry equal to the expenses, net of RF&U, incurred related to implementation of an approved wildfire mitigation plan.

   b. A debit or credit entry equal to the revenue requirement based on the recorded capital costs, net of RF&U, associated with the incremental costs of plant related to wildfire reduction work. Capital revenue requirements include depreciation expense, return on investment, federal and state income taxes, and property taxes associated with the costs of installed equipment.

   c. A credit entry to transfer all or a portion of the balance in this WMPMA to other adjustment clauses for future rate recovery, as may be approved by the CPUC.

   d. An entry equal to the interest on the average of the balance in the account at the beginning of the month and the balance in the account after the above entries, at a rate equal to one-twelfth the interest rate on three-month Commercial Paper for the previous month, as reported in the Federal Reserve Statistical Release, H.15, or its successor. (N)

ELECTRIC TABLE OF CONTENTS Sheet 1

TABLE OF CONTENTS

(Continued)

ELECTRIC TABLE OF CONTENTS

(Continued)

PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV

AT&T
Albion Power Company
Alcantar & Kahl LLP

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
P.C. CalCom Solar
California Cotton Ginners & Growers Assn
California Energy Commission
California Public Utilities Commission
California State Association of Counties
Calpine

Cameron-Daniel, P.C.
Casner, Steve
Cenergy Power
Center for Biological Diversity
City of Palo Alto

City of San Jose
Clean Power Research
Coast Economic Consulting
Commercial Energy
County of Tehama - Department of Public Works
Crossborder Energy
Crown Road Energy, LLC
Davis Wright Tremaine LLP
Day Carter Murphy

Dept of General Services
Don Pickett & Associates, Inc.
Douglass & Liddell

Downey & Brand
East Bay Community Energy
Ellison Schneider & Harris LLP
Energy Management Service
Engineers and Scientists of California
Evaluation + Strategy for Social Innovation
GenOn Energy, Inc.
Goodin, MacBride, Squeri, Schlotz & Ritchie
Green Charge Networks
Green Power Institute
Hanna & Morton
ICF
International Power Technology
Intestate Gas Services, Inc.
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc. Linde
Los Angeles County Integrated Waste Management Task Force
Los Angeles Dept of Water & Power
MRW & Associates
Manatt Phelps Phillips
Marin Energy Authority
McKenzie & Associates

Modesto Irrigation District
Morgan Stanley
NLine Energy, Inc.
NRG Solar

Office of Ratepayer Advocates
OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy
Praxair
Regulatory & Cogeneration Service, Inc.
SCD Energy Solutions

SCE
SDG&E and SoCalGas

SPURR
San Francisco Water Power and Sewer
Seattle City Light
Sempra Utilities
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

TransCanada
Troutman Sanders LLP
Utility Cost Management
Utility Power Solutions
Utility Specialists

Verizon
Water and Energy Consulting
Wellhead Electric Company
Western Manufactured Housing Communities Association (WMA)
Yep Energy

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_028-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_028-Q001		
Request Date:	March 28, 2024	Requester DR No.:	TURN-PG&E-028
Date Sent:	April 10, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Andy Abranches	Requester:	Tom Long

SUBJECT: INCREMENTALITY

QUESTION 001

PG&E's Application, pp. 9-10, states that

> " . . . the legislature enacted new wildfire mitigation plan requirements, which increased the scope and speed of wildfire mitigation activities PG&E was required to perform to combat wildfire risk."

a. With respect to the statement that the new requirements increased the "scope" of wildfire mitigation activities, please identify with specificity each new wildfire mitigation activity that the legislature required, and provide a citation to the specific statutory section (including subsection citations) and bill number for each new activity that was required.

b. With respect to the statement that the new requirements increased the "speed" of wildfire mitigation activities, please identify with specificity each statutory provision (including subsection citation) that required PG&E to increase the speed of wildfire mitigation activities, including an identification of the bill number that included each identified provision.

ANSWER 001

The Legislature and the Commission, recognizing the need for bold and immediate action, provided utilities with several mechanisms to facilitate urgent wildfire mitigation efforts, which impacted the scope and speed of our efforts. The wildfire mitigation work described in the WGSC reduces fire risk in California, improves the safety and reliability of PG&E's system, and protects our customers.

SB 901, enacted in September 2018, required utilities to submit annual Wildfire Mitigation Plans (WMPs) for approval by the CPUC, as directed by the CPUC in R.18-10-007. The WMP identifies and prioritizes wildfire risks and the drivers of those risks. It describes plans for important wildfire mitigations such as overhead inspections, asset inspections, preparation for and response to wildfire events, and protocols for disabling reclosers and deenergizing the electric system.

SB 901 prescribed specific requirements for these annual plans, including the timing and process for cost recovery, and the creation of memorandum accounts to track costs

incurred to implement annual WMPs.[1] The Commission approved two memorandum accounts for PG&E to record incremental costs incurred to implement its plans. One memorandum account, the FRMMA[2], is intended to "track costs incurred for fire risk mitigation that are not otherwise covered in the electrical corporation's revenue requirement"[3]. The second memorandum account, the WMPMA, is used "to track costs incurred to implement [a utility's wildfire mitigation plan]"[4]. PG&E records costs incremental to the General Rate Case (GRC) to these accounts. Specifically, PG&E records incremental costs incurred to implement the approved WMP in the WMPMA, while mitigation activities in addition to those activities are recorded in the FRMMA. Both accounts record costs incurred for fire mitigation activities that are not otherwise recovered in PG&E's adopted revenue requirements.

Subsequent bills, including AB 1054, AB 111, SB 70, SB 167, SB 247, and SB 560, modified the WMP requirements, expanding the plan coverage to three years, adding requirements, and transferring review of the plans to the OEIS.

Through the formation of the WMP process established by SB 901 and the review of PG&E's WMPs by the Office of Infrastructure Safety (OEIS)[5], there were many requirements that impacted the scope and speed of PG&E's wildfire mitigation programs.

a. Below is a listing of some of the specific requirements that impacted the scope of PG&E's wildfire mitigation programs stemming from OEIS's reviews of PG&Es WMPs:

    - Increase the scope and speed of repairs/replacements/remediations identified:
        - **2022 WMP Critical Issue RN-PG&E-22-05: PG&E Has a Significant Backlog of Repairs and Needs a More Aggressive Plan to Address the Poor Health of Its Infrastructure.** OEIS required PG&E to create a plan that demonstrates consistent progress on reducing the number of open work tags and improves the health of its infrastructure. To ensure that PG&E is reducing its backlog of work tags, Energy Safety required PG&E to develop a plan to remediate more work tags than it creates[6].
    - Increase the scope of quality assurance / quality control of overhead inspections:

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1 Public Utilities Code (Pub. Util. Code), § 8386(c) (effective Jan. 1, 2022).

2 On November 1, 2018, PG&E submitted AL 5419-E to establish the FRMMA to track costs incurred for fire risk reduction that are not otherwise encompassed in our revenue requirement. The Commission approved AL 5419-E on March 12, 2019, effective January 1, 2019.

3 PG&E Advice Letter (AL) 5419-E.

4 In Ordering Paragraph (OP) 21, D.19-05-037 authorized PG&E to open the WMPMA to track incremental wildfire-related costs incurred while implementing approved programs within the 2019 WMP. On June 5, 2019, PG&E submitted AL 5555-E to establish the WMPMA. The AL was approved by the Commission on August 8, 2019, with an effective date of June 5, 2019.

5 Formerly known as the Wildfire Safety Division

6 Revision Notice for Pacific Gas and Electric Company's 2022 Wildfire Mitigation Plan Update, pages 11-14: 2022 WMP PG&E Revision Notice

- **2021 WMP Key Areas for Improvement PG&E-21-17: Insufficient evidence of QA/QC for work performed by contractors.** OEIS required PG&E to demonstrate that it is tracking the quality of contractor work; describe how it is addressing underperforming contractors; and describe how it is expanding quality control of work performed by contractors.[7]
- **2022 WMP Critical Issue RN-PG&E-22-08: PG&E has high find and failure rates in its quality assurance and quality control of asset inspections.** OEIS required PG&E to increase the quality of its asset inspections, provide an update on progress and timeline for implementation and provide actions to improve training for both internal inspectors and contractors in PG&E's asset inspection and management program based on repeat QA/QC findings[8].

- Increase the scope of EPSS program analysis:
  - **2022 Critical Issue RN-PG&E-22-12: PG&E has failed to provide sufficient evidence to support its extensive use of Enhanced Powerline Safety Settings and instead relies on the findings of a time-limited pilot deployed in 2021.** OEIS required PG&E to submit a reassessment of the impacts associated with the widespread use of EPSS. This reassessment should include a consideration of additional factors, such as existing asset health (based on open repair tags, equipment risk, etc.) and public safety impacts to determine the circuits that will be most impacted by EPSS.[9]
- Increase the scope of risk calculation:
  - **Decision on PG&E's 2019 WMP:** Decision required PG&Es 2020 WMP should use the quantitative risk assessment framework adopted in D.18-12-014 in the Safety Model Assessment Proceeding to evaluate and compare the cost effectiveness of each of the mitigations that were under consideration in developing the WMP. The WMP should provide the risk spend efficiency (RSE) results of the quantitative risk analysis and include an explanation of the Multiple Attribute Value Framework that was used and how it was constructed."[10]
  - **2020 WMP Final Action Statement Deficiency PG&E-9: How PG&E weighs egress as a risk factor.** OEIS required PG&E to detail how egress factors into its risk assessment, including how egress is

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7 Final Action Statement on 2021 Wildfire Mitigation Plan Update - Pacific Gas and Electric, page 18: 2021 PG&E WMP Action Statement

8 Revision Notice for Pacific Gas and Electric Company's 2022 Wildfire Mitigation Plan Update, pages 19-20: 2022 WMP PG&E Revision Notice

9 Revision Notice for Pacific Gas and Electric Company's 2022 Wildfire Mitigation Plan Update, pages 29-33: 2022 WMP PG&E Revision Notice

10 Decision on PG&E's 2019 WMP, page 56: 2019 WMP Decision

weighted against other factors; and how egress impacts the prioritization and deployment of initiatives.[11]

b. Below is a listing of some of the requirements that impacted the speed of PG&E's wildfire mitigation programs stemming from OEIS's reviews of PG&Es WMPs:

- Increase the speed of improvements made to risk modeling:
  - **2021 WMP Key Areas for Improvement PG&E-21-03: Inadequate speed of improvements made to risk modeling.** OEIS required PG&E to demonstrate that it is applying automation as quickly as possible to risk modeling.[12]
- Increase the speed of risk model calculation:
  - **2020 WMP Final Action Statement Deficiency PG&E-8: Annual risk ranking is quickly out of date.** OEIS required PG&E to list and describe all plans related to timely incorporation of maintenance status across its grid into risk analysis and to include a timeline and sequence of activities that will be required to increase the frequency of these updates.[13]

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11 Final Action Statement on 2021 Wildfire Mitigation Plan Update - Pacific Gas and Electric, page A8: 2020 WMP Final Action Statement - Appendix A

12 Final Action Statement on 2021 Wildfire Mitigation Plan Update - Pacific Gas and Electric, page 12: 2021 PG&E WMP Action Statement

13 Final Action Statement on 2021 Wildfire Mitigation Plan Update - Pacific Gas and Electric, page A7: 2020 WMP Final Action Statement - Appendix A

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_030-Q003		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_030-Q003		
Request Date:	April 8, 2024	Requester DR No.:	TURN-PG&E-030
Date Sent:	May 1, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Libby O'Connell	Requester:	Tom Long

SUBJECT: CHAPTER 14

QUESTION 003

Please answer the following questions with respect to all versions of the PG&E video advertisement titled "Undergrounding 10,000 miles of Powerlines for Safety", one version of which can be found at the following YouTube link, https://www.youtube.com/watch?v=AxzW6TvEv8o

a. Are any costs associated with this advertisement (including costs to which PG&E has applied the Wildfire OII disallowance) included in this application?

b. If the answer to (a) is anything other than an unequivocal no:

   i. Please identify the Chapter, MAT Code and Planning Order (identify by year) in which the costs are included;

   ii. Please provide the associated costs, broken down by the years and categories shown in Table 14-4 on p. 14-5 of Ex. PG&E-1.

ANSWER 003

a. PG&E is seeking recovery for the 2022 recorded costs associated with various media content in this application, including the media content identified above that communicates, among other things, the importance of undergrounding power lines in the highest fire threat areas to mitigate wildfire risk.

b.

   i. The media costs are included in: 1) Chapter 14 Customer and Communications; 2) MWC IG[1]; and 3) Planning Order #5049478 (2022 Recorded Costs)

   ii. PG&E is unable to provide the 2022 recorded costs for this media content broken down by the categories shown in Table 14-4 on p. 14-5 of Ex. PG&E-1.

   PG&E is unable to specify a corresponding line item category cost for each media piece such as the undergrounding media content identified above, because each line item does not represent the cost to produce and distribute a specific message to customers. As described in PG&E's Opening Testimony,

[1] PG&E's Customer and Communications functional area does not record costs by MAT Code.

more than 90% of the 2022 recorded costs for Wildfire Communications relate to Media Out-of-Pocket expenditures. Media Out-of-Pocket costs include media planning, buying, optimization, and reporting. In this capacity, PG&E's third-party media planning and buying vendor (the vendor) brings wildfire safety content and PG&E's media buying guidelines[2] to the marketplace of entities that sell the opportunity to show wildfire safety content to those who are most likely to be a PG&E customer. This includes working with direct sellers of media space, media buyers who aggregate media placement opportunities across different formats, and technology solutions that leverage automation and data algorithms to show digital messaging to the target audience across different digital domains they are likely to visit ("programmatic" buying). In developing a media buying plan, the vendor helps PG&E determine the right mix of channels, frequency, and timing to achieve PG&E's overall objectives. When executing the media buying process, the vendor commonly pays for "impressions," which represent the total amount of exposures that a message will have to the intended audience. Under this model, the actual media that is shown to customers may vary over time because the vendor is buying the ability to reach a certain audience, not the ability to show a specific message. For these reasons, the vendor's Media Out-of-Pocket costs can be broken down by channel but not by media piece as is the case with this undergrounding media content.

Second, Time-of-Staff Agency Fees cannot be tied to a specific media piece because the vendor's staff work to plan, buy, and report on media placements by media channel, not by media message. Production Out-of-Pocket Expenditures also cannot be tied to the placement of specific content because they relate only to the production of that content and not to the placement of that media piece. PG&E also aims to re-use content in different formats, so the production cost of a set of videos such as the undergrounding media content may actually result in content that can be used for social media content, radio, and other media channels.

Third, PG&E frequently re-uses content across quarters and years because the messaging continues to remain relevant such as the importance of undergrounding to mitigate wildfire risk in high fire threat areas.

[2] PG&E's media buying guidelines establish parameters to determine when and where PG&E's Wildfire Communications messaging is delivered. For instance, for television, this includes determining the type of programming that commercials about wildfire safety will be shown and the time of the day that they should air.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_030-Q006		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_030-Q006		
Request Date:	April 8, 2024	Requester DR No.:	TURN-PG&E-030
Date Sent:	May 1, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Libby O'Connell	Requester:	Tom Long

SUBJECT: CHAPTER 14

QUESTION 006

Please answer the following questions with respect to all versions of the PG&E video advertisement titled "An affordable energy future for California", one version of which can be found at the following YouTube link,
https://www.youtube.com/watch?v=Ga050z_92bs

a. Are any costs associated with this advertisement (including costs to which PG&E has applied the Wildfire OII disallowance) included in this application?

b. If the answer to (a) is anything other than an unequivocal no:

   i. Please identify the Chapter, MAT Code and Planning Order (identify by year) in which the costs are included;

   ii. Please provide the associated costs, broken down by the years and categories shown in Table 14-4 on p. 14-5 of Ex. PG&E-1.

ANSWER 006

a. PG&E is seeking recovery for the 2022 recorded costs associated with various media content in this application, including the media content identified above that, among several things, communicates the importance of undergrounding power lines for safety, i.e., to mitigate wildfire risk.

b.

   i. See the response to Q003 b.i.

   ii. See the response to Q003 b.ii.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
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Data Response

PG&E Data Request No.:	TURN_031-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_031-Q001		
Request Date:	April 12, 2024	Requester DR No.:	TURN-PG&E-031
Date Sent:	April 19, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Matthew Whorton	Requester:	Tom Long

SUBJECT: INCREMENTALITY

QUESTION 001

The following questions refer to PG&E's responses to TURN-PG&E-24 and TURN-PG&E-27:

In response to TURN-PG&E-024, Question 1 (c), PG&E explains that the "Proposed Fill the Bucket Method" was a "pre-cursor" to the "GRC Spend Analysis" in PG&E's testimony.

a. In the screenshot that was part of TURN DR 24-1, under the heading "Proposed Incrementality – Fill the Bucket Method", PG&E lists six elements (counting 5 and 5(a) as separate elements) for how this method would work. Separately, for each of those six elements, please indicate whether the element is used as stated in the screenshot in the GRC Spend Analysis. For any element for which PG&E says the element is not used as stated in the screenshot, please explain how the GRC Spend Analysis differs with respect to that element.

b. In the response to TURN DR 24-1(b), PG&E states that, in the screenshot, "Tier 1" refers to non-HFTD work and "Tier 2" and "Tier 3" refer to work in HFTDs. In the "GRC Spend Analysis", does PG&E use these same definitions for Tier 1, Tier 2, and Tier 3 work? If not, please explain how and why the GRC Spend Analysis differs with respect to these definitions.

c. Attachment 5 to the response to TURN DR 13-6 (Tab "Notes"), from which the screenshot in DR 24-1 was taken, provides examples of the "Fill the Bucket Method" that apply that method on a MAT-by-MAT basis.

    i. Is TURN correct in understanding that the "GRC Spend Analysis," as described in Ex. PG&E-1, Chapter 15, Item 4 at the bottom of page 15-12 to top of page 15-13, does not perform the analysis on a MAT-by-MAT basis? If TURN's understanding is not correct, please explain each and every way in which TURN's understanding is not correct.

    ii. Please explain why the "GRC Spend Analysis", as described in Ex. PG&E-1, Chapter 15, Item 4 at the bottom of page 15-12 to top of page 15-13, does not perform the analysis on a MAT-by-MAT basis.

d. When did PG&E first begin using the "GRC Spend Analysis"? Please provide the source document on which this response is based.

ANSWER 001

a. Below is how PG&E applied the six elements – 1 through 5a – in the GRC Spend Analysis:

   1. Fill the "Base Bucket" with Tier 1 first: PG&E pulled all Tier 1 activity for each year and each cost type – Capital and Expense – to determine total Tier 1 spend in the portfolio.
   2. Tier 2 & 3 work fills the "Base Bucket" until it is completely filled: In the portfolio, Tier 1 work completely filled the base so there was no need to add Tier 2 & 3 work to fill the bucket. #4 below applies.
   3. Any Tier 2 & 3 work that does not fit the "Base Bucket" will spill over into the "WMPMA Bucket": As stated in #2 above, all Tier 2 & 3 work met the condition that it was incremental to Base work.
   4. If the "Base Bucket" is completely filled by Tier 1 work, no Tier 2 & 3 work will be charted to the "Base Bucket": As stated in #2 above this applies.
   5. If there is more Tier 1 work than what can fit in the "Base Bucket", those costs will be a prioritization risk and/or shareholder impact: This applies, no Tier 1 work is being requested in this filing (this applies to 5a as well).

b. Yes, PG&E's use of Tier 1 to refer to non-HFTD and Tiers 2 & 3 to refer to HFTD are used throughout the testimony and used in the GRC Spend Analysis.

c. See below for our response:

   i. Yes, that is correct. The GRC Spend Analysis was ultimately done at the portfolio-level not at the MAT code level.

   ii. PG&E determined that the portfolio-level analysis was more appropriate. Making the assessment at the portfolio-level is appropriate because the GRC allows flexibility to prioritize work which can result in overspend in some GRC programs and underspend in others.

d. PG&E's application of the GRC Spend Analysis (at the portfolio level) occurred in 2021 and 2022 given that we determined it was a more appropriate methodology to determine incrementality. There is no source documentation available.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
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Data Response

PG&E Data Request No.:	TURN_031-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_031-Q002Supp01		
Request Date:	April 12, 2024	Requester DR No.:	TURN-PG&E-031
Date Sent:	April 19, 2024 Supp01: April 23, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Matthew Whorton	Requester:	Tom Long

SUBJECT: INCREMENTALITY

QUESTION 002

In response to TURN-PG&E-024, Question 1 (c), PG&E explains that DR TURN-PG&E-13, Question 6, Attachment 5 (Tab "Notes"), is "a working document that led to the final methodology" used in this proceeding. Attachment 5 shows that, under the "Fill the Bucket Method," PG&E would not know whether work could be charged to the WMPMA until it was determined whether Tier 1 work would "fill the bucket", as shown in Example 1, regarding MAT 07D.

a. How would PG&E's accountants achieve this order of operations if, since 2019, PG&E has been determining the eligible account designation for costs in advance of order creation and work execution (per TURN-PG&E-027, Question 1 (a))?

b. Under the process PG&E used to implement the "GRC Spend Analysis," for a particular work order, at what point in the process did PG&E first determine whether the costs in that work order should be charged to: (a) the GRC (base) or (b) either of the WMPMA/FRMMA? How was this determination made? Please provide the source document on which this response is based.

ANSWER 002 SUPPLEMENTAL 01

As set forth in the Regulatory Accounting Document (RAD), the criteria to determine inclusion in the WMPMA and FRMMA accounts versus the GRC is that the work was: 1) conducted within High Fire Threat Districts (HFTD) Tier 2 & Tier 3 and Zone 1, and additional buffer zone areas, 2) in support of our wildfire mitigation activities, and 3) consistent with how they were described in the 2020 – 2022 Wildfire Mitigation Plans (WMPs) (for work recorded to the WMPMA). If the work does not meet these criteria it is recorded as GRC base work.

ANSWER 002

a. The order of operations is:

- After wildfire mitigation plan legislation was passed and approval was obtained to utilize the FRMMA, and subsequently the WMPMA, PG&E started to track

wildfire mitigation work eligible for inclusion in the memorandum accounts separate from other work.

- After the legislation was approved and approval was obtained to utilize the FRMMA, and subsequently the WMPMA, PG&E's legal and regulatory group developed guidance on what are recoverable wildfire mitigation costs through the memo accounts. This guidance is memorialized in a Regulatory Accounting Document (RAD). Generally, the criteria to determine inclusion in the WMPMA and FRMMA accounts versus the GRC is that the work was: 1) conducted within High Fire Threat Districts (HFTD) Tier 2 & Tier 3 and Zone 1, and additional buffer zone areas 2) in support of our wildfire mitigation activities, and 3) consistent with how they were described in the 2020 – 2022 Wildfire Mitigation Plans (WMPs) (for work recorded to the WMPMA).
- Before the start of work Business Finance creates Planning Orders (POs) based on the type of work and whether it's properly recorded in the WMPMA or FRMMA in accordance with the legal and regulatory guidance described above. These POs are tagged with unique memo account qualifiers to differentiate them between memorandum account or other GRC base work.
- Those responsible for execution will create actual orders under each type of PO.
- Thus, the determination of whether the work is recorded to the WMPMA, FRMMA, or GRC base work is made in advance of order creation and work execution.

Furthermore, the final determination of the costs in the WMPMA/FRMMA was verified with the following step:

- At the end of 2022, we performed the GRC Spend Analysis to determine if PG&E under-spent its GRC amounts and confirmed that the GRC funding was fully utilized before we developed this incremental cost recovery application. See Exhibit (PG&E-1), Chapter 15 (starting page 15-11) for more details.

b. As described in "a" above, PG&E does not do the spend analysis by work order but for the portfolio of work, as described in greater detail in Chapter 15. The WMPMA/FRMMA RAD that was previously provided is the source documentation used for this determination.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_035-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_035-Q001Supp01Rev01		
Request Date:	June 6, 2024	Requester DR No.:	TURN-PG&E-035
Date Sent:	June 27, 2024 Rev01: July 19, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Various	Requester:	Tom Long

SUBJECT: TURN-PG&E-025

The following question refers to PG&E's response to TURN-PGE-025, Question 1.

QUESTION 001

For any of the MWC/MAT groupings that have costs included in PG&E's WGSC application, did PG&E book any 2020-2022 costs incurred for work in HFTD areas to the "base"/GRC account?

a. If no, please confirm that only non-HFTD work was considered 'base', and all costs incurred for work in HFTD areas were recorded to other accounts.

b. If yes, for each tab in "WildfireandGasSafetyCosts_DR_TURN_025-Q001Supp01Atch01," please:

   i. Add a column which states whether the 'base' costs for each row include any costs in HFTD areas ('yes') or not ('no').

   ii. Add columns that separate the 'base' costs and units columns by HFTD and non-HFTD work (columns S – X on tab 'Cost and Units', columns M-O on remaining tabs, labelled vi. Base GRC Cost).

ANSWER 001 SUPPLEMENTAL 01 REVISION 01

In addition to Chapter 4 and 5, Chapter 3 (Emergency Repairs and Replacement) and Chapter 6 (Substation Repairs and Replacement) also recorded some costs to the "base"/GRC account for works in the HFTD areas. See attachment "*WildfireandGasSafetyCosts_DR_TURN_035-Q001Supp01Rev01Atch01.xlsx*" for the updated list of base costs with work in the HFTD areas.

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_035-Q001Supp01Rev01Atch01.xlsx

ANSWER 001

Yes, PG&E did record some costs incurred for work in HFTD areas to the "base"/GRC account.

The majority of the "Base GRC Costs" shown for various MWC/MAT groupings in our response to TURN_025-Q001, attachment "WildfireandGasSafetyCosts_DR_TURN_025- Q001Supp01Atch01.xlsx[1]" are for work incurred in non-HFTD areas. However, some MAT codes did have costs for work performed in HFTD areas recorded to the "base"/GRC account as noted below. These include:

- Pole Replacement Program (Chapter 4), which includes MATs 07C, 07D, and 07O.
- Distribution Line Repairs and Replacements (Chapter 5), which includes MAT KAA, KAQ, 2AA, KAC, 2AB and 2AF.
- As detailed below, for Emergency Repairs and Replacement (Chapter 3) and Substation Repairs and Replacement (Chapter 6) we are working to confirm whether work performed in HFTD areas were recorded to the "base"/GRC account and the amount thereof, if any.

Please note that not all work activities were categorized by location. Some MWC/MAT groupings are for activities where work was not attributed to a specific location in PG&E's service territory (e.g., Mapping or Governance/PMO). If this type of work was not performed as a wildfire mitigation activity or was not described in the WMP, it was recorded to a base/GRC account. An example of this is MATs 2AE and KAF for Critical Operating Equipment (COE) work, where COE replacements were not tracked by HFTD / non-HFTD areas until 2022 because the COE components impact an overall geographical area that can contain these HFTD and/or non-HFTD areas. This COE corrective maintenance replacement work was part of PG&E's routine maintenance work conducted in all areas of PG&E territory in 2020 and 2021 regardless of the location of the circuit impacted.

a. See our response above.

b. See attachment "*WildfireandGasSafetyCosts_DR_TURN_035-Q001Atch01.xlsx*", column AI on the "Costs and Units" tab for indication if any Base GRC 2020-2022 costs are in HFTD areas[2]; and Columns AJ-AU on the "Costs and Units" tab for the

[1] In preparing the response to this data request, we identified an error in the attachment provided to the previous supplemental response for TURN_025-Q001, impacting the "MAT IG#" table included in that attachment. As a result of the error, the "Base GRC Cost" and "Total Recorded Cost" for MAT IG# were incorrect. We have since updated the table with the appropriate values in this response TURN_035-Q001, attachment "WildfireandGasSafetyCosts_DR_TURN_035-Q001Atch01.xlsx", tab "MAT IG#". We will also submit a revision to TURN-025 to correct the erroneous values.

[2] HFTD includes HFTD Zone 1, Tier 2, Tier 3, and Buffer

breakout of the associated 2020-2022 units and costs between HFTD and non-HFTD areas at the MWC/MAT level.[3]

Please also note that we're still working to confirm and provide any applicable HFTD data for the Emergency Repairs and Replacement (Chapter 3) and Substation Repairs and Replacement (Chapter 6) and will supplement the response as soon as the analysis is completed.

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_035-Q001Atch01.xlsx

[3] For MATs 07C, 07D, 07O, 2AA, 2AB, 2AF, KAA, KAC, and KAQ the 2020-2022 units and costs are based on data that was used for the initial WGSC filing (pulled March 24, 2023). The costs are the in-year costs for the year the unit was completed (i.e., they do not include carry-over costs from prior years). Additionally, for orders that have hybrid notifications (contain both non-HFTD and HFTD notifications), the costs were distributed evenly amongst each notification and then summed to get the associated HFTD cost for each MAT.

PACIFIC GAS AND ELECTRIC COMPANY
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Data Response

PG&E Data Request No.:	TURN_037-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_037-Q001		
Request Date:	June 17, 2024	Requester DR No.:	TURN-PG&E-037
Date Sent:	July 5, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Various	Requester:	Tom Long

SUBJECT: WILDFIRE COSTS

QUESTION 001

With respect to PG&E's October 27, 2023 response to the ALJ ruling in this proceeding, particularly the discussion of the 2020-2022 authorized and recorded WMBA and VMBA costs in response to question 1:

a. Please provide a breakdown by MAT code of the authorized 2020-2022 WMBA and VMBA costs, separately by year, shown in Tables 2 and 3 on page 9 of that response.

b. Please provide PG&E's corresponding recorded 2020-2022 WMBA and VMBA costs, separately by year, broken down by MAT code.

c. For the MAT-by-MAT recorded costs provided in response to (b) above, please indicate for each MAT the amounts that PG&E has requested to recover in rates, indicating the advice letter or application in which the request was made and whether the request has been decided by the CPUC.

d. If any MAT showing recorded costs in response to (b) and (c) also has pre-adjustment (e.g., pre Wildfire OII disallowance, pre-EY adjustments) costs that are claimed in this case (i.e, MATs that have both WMBA/VMBA costs and WMPMA/FRMMA costs), for each such MAT, please: (i) explain how the costs claimed in this case differ from the costs included in the WMBA and VMBA; (ii) explain all efforts PG&E made to prevent double counting of costs and to assess whether those efforts were successful; and (iii) reconcile the total amount of WMBA, VMBA, WMPMA, and FRMMA costs with the total costs for the MAT shown on PG&E's RSARs covering each of 2020, 2021 and 2022.

ANSWER 001

PG&E objects to the request as seeking information that is beyond the scope of this proceeding, which concerns the recovery of costs recorded to the WMPMA, FRMMA, and other gas safety and electric modernization memorandum accounts. WMBA and VMBA recorded costs are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

a-b. See attachment "*WildfireandGasSafetyCosts_DR_TURN_037-Q001Atch01.xlsx*" for the WMBA and VMBA authorized and recorded[1] costs by MAT code and associated mitigation program. The WMBA and Enhanced Vegetation Management work of the VMBA were adopted by the Commission at the mitigation program level, and thus we are providing both the authorized and recorded costs by the mitigation program with the associated MAT codes. Please note that each mitigation program can be associated with one or many MAT codes; and a MAT code can also be shared amongst multiple programs.

In preparing the response to this data request, we identified a few errors in our response to TURN_004-Q006, impacting the total recorded WMBA expense and capital costs provided in that response. We have since incorporated the appropriate values which are reflected in the attachment to this response. We will also submit a revision to TURN_004-Q006 to correct the errors.

c. See the tables below for the amounts that PG&E has requested to recover in rates for the WMBA and VMBA, showing the associated MATs for the requested amounts, and indicating the advice letter or application in which the request was made and whether the request has been decided by the CPUC.

All information provided below is consistent with our WMCE applications. Accordingly, we have provided the list of MAT codes associated with the WMBA and VMBA recorded and requested amounts, as WMCE applications are not prepared by individual MAT code level.

Of these two accounts, only the 2020 WMBA incremental expenses have been approved by the Commission. In the 2021 WMCE, the Commission approved a proposed settlement reduction of $23 million, resulting in PG&E's recovery of $132.233 million of 2020 WMBA incremental costs.

Decisions regarding the 2020-2022 incremental VMBA expenses in the 2021, 2022, and 2023 WMCEs are still pending – as well as the decision on the 2021 and 2022 WMBA incremental expenses.

[1] The recorded costs are generally consistent with PG&E's 2020, 2021 and 2022 RSAR. The numbers reported in the RSAR reflect data as of the time pulled for the annual reports and may not reflect the balancing account amounted recorded or requested net of adjustments.

WMBA Associated MATs: AB#, AB6, HG#, IG#, IGA, JL#

WMBA Cost Recovery Requests for Incremental costs over 100% up to 115% GRC Adopted Amount			WMBA Cost Recovery Requests for Incremental costs over 115% GRC Adopted Amount			
Account	CPUC Juris. Portion Requested	Tier 2 True Up Advice Letter (Recovered via AET)	WMCE CPUC Juris. Portion Requested (after Adjustments)	WMCE Application	WMCE Status	Total Adopted Cost Per Settlement Agreement
WMBA 2020	**$7,510**	Advice 4392-G/6100-E, 2/23/2021	**$155,233**	2021 WMCE, A.21-09-008, 9/16/2021	Decided	**$132,233**
WMBA 2021	**$7,780**	Advice 6357-E, 10/8/2021	**$101,457**	2022 WMCE, A.22-12-009, 12/15/2022	Undecided	N/A
WMBA 2022	**$8,078**	Advice 4657-G/6712-E, 9/26/2022	**$76,384**	2023 WMCE, A.23-12-001, 12/1/2023	Undecided	N/A

VMBA Associated MATs: HNA, HN#, IGJ, IGI, IG#

VMBA Cost Recovery Requests for Incremental costs over 100% up to 120% GRC Adopted Amount			VMBA Cost Recovery Requests for Incremental costs over 120% GRC Adopted Amount		
Account	Amount Requested	Tier 2 True Up Advice Letter (Recovered via AET)	WMCE Recovery Request (after Adjustments)	WMCE Application	WMCE Status
VMBA 2020	**$109,603**	Advice 4392-G/6100-E, 2/23/2021	**$591,890**	2021 WMCE, A.21-09-008, 9/16/2021	Undecided
VMBA 2021	**$120,563**	Advice 6357-E, 10/8/2021	**$814,724**	2022 WMCE, A.22-12-009, 12/15/2022	Undecided
VMBA 2022	**$132,619**	Advice 6661-E, 7/22/2022	**$833,496**	2023 WMCE, A.23-12-001, 12/1/2023	Undecided

d. See our response below:

(i). The costs included in the WMPMA and FRMMA represent wildfire mitigation activities that were not otherwise recovered in PG&E's General Rate Case (GRC) revenue requirement or other cost-recovery mechanisms. The activities included in the WMBA and VMBA were requested for recovery in the GRC.

(ii). All costs for which PG&E seeks recovery in this application were tracked in distinct orders that were tagged with identifiers different from those that are included in PG&E's GRC or other cost recovery mechanisms. PG&E uses specific fields in its accounting system (SAP) to track order costs and direct them into specific accounts for recovery. For example, PG&E uses a field called Balancing Account Receiver Cost Center (BARCC) that assigns each order to a specific account such as FRMMA, WMPMA, GRC, and all other base, balancing, and memorandum accounts. Each order can only be assigned

to one account in the BARCC field, and each account is recovered in a specific cost recovery proceeding.

Furthermore, PG&E conducts quality assurance at the order level to ensure the work in each order is appropriate for the rate case being prepared. The costs included in this application have been quality assured by PG&E SMEs for the WMPMA and FRMMA.

PG&E also retained EY to analyze the orders for the WMPMA and FRMMA, and EY found no evidence of costs being recorded in more than one account.

(iii). See attachment "*WildfireandGasSafetyCosts_DR_TURN_037-Q001Atch02.xlsx*" for the reconciliation of PG&E's 2020, 2021 and 2022 RSAR with WMBA, VMBA, WMPMA and FRMMA for the MAT codes shown in subpart a. and b.

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_037-Q001Atch01.xlsx

WildfireandGasSafetyCosts_DR_TURN_037-Q001Atch02.xlsx

Pacific Gas and Electric Company
Wildfire and Gas Safety Costs (WGSC) A.23-06-008
TURN_037-Q001 a. & b.
Amounts in Thousands of Dollars

WMBA				a. Authorized Costs			b. Recorded Costs[1]		
Mitigation #	Mitigation Program Name	MAT[2]	Cost Type	2020 Authorized	2021 Authorized	2022 Authorized	2020 Actuals	2021 Actuals	2022 Actuals
M12	Wildfire System Hardening	IG#	Expense	$ -	$ -	$ -	$ 255	$ -	$ -
M12	Wildfire System Hardening	AB#	Expense	$ -	$ -	$ -	$ -	$ 89	$ 317
M13	Public Safety Power Shutoff	AB6	Expense	$ 6,095	$ 6,314	$ 6,560	$ 25	$ 70,793	$ 33,870
M13	Public Safety Power Shutoff	AB#	Expense	$ -	$ -	$ -	$ 4,359	$ -	$ -
M13	Public Safety Power Shutoff	IG#	Expense	$ -	$ -	$ -	$ 157,507	$ 34,996	$ 30,568
M15	Automation & Protection	HG#	Expense	$ 350	$ 362	$ 377	$ -	$ 59	$ -
M15	Automation & Protection	IG#	Expense	$ -	$ -	$ -	$ 10	$ -	$ -
M18	Wildfire Safety Operations Center	AB6	Expense	$ 6,003	$ 6,219	$ 6,461	$ -	$ 4,847	$ 7,029
M18	Wildfire Safety Operations Center	IG#	Expense	$ -	$ -	$ -	$ 4,348	$ (1)	$ 325
M19	Expanded Weather Station Deployment	AB6	Expense	$ 559	$ 579	$ 601	$ -	$ 145	$ 99
M19	Expanded Weather Station Deployment	IG#	Expense	$ -	$ -	$ -	$ 111	$ -	$ -
M20	SOPP Model Automation	AB6	Expense	$ 293	$ 303	$ 315	$ -	$ 1,977	$ 1,921
M20	SOPP Model Automation	IG#	Expense	$ -	$ -	$ -	$ 1,627	$ -	$ -
M21	Advanced Fire Modeling	AB6	Expense	$ 1,154	$ 1,196	$ 1,243	$ -	$ 4,833	$ 5,639
M21	Advanced Fire Modeling	IG#	Expense	$ -	$ -	$ -	$ 5,541	$ -	$ -
M22	Wildfire Cameras	AB6	Expense	$ 14,363	$ 14,879	$ 15,460	$ -	$ 8,051	$ 11,878
M22	Wildfire Cameras	IG#	Expense	$ -	$ -	$ -	$ 6,956	$ -	$ -
M23	Satellite Fire Detection System	AB6	Expense	$ 293	$ 303	$ 315	$ -	$ 195	$ 312
M24	Enhanced Wire Down Detection	AB6	Expense	$ 213	$ 220	$ 229	$ -	$ -	$ -
M24	Enhanced Wire Down Detection	IG#	Expense	$ -	$ -	$ -	$ 4	$ 2	$ -
M25	Wildfire & Infrastructure Protection Teams	AB6	Expense	$ 13,326	$ 13,806	$ 14,344	$ -	$ 17,112	$ 17,025
M25	Wildfire & Infrastructure Protection Teams	IG#	Expense	$ -	$ -	$ -	$ 15,342	$ -	$ -
M26	Aviation Resources	BP#	Expense	$ 1,274	$ 1,320	$ 1,372	$ -	$ -	$ -
M26	Aviation Resources	AB#	Expense	$ -	$ -	$ -	$ 5,398	$ 3,349	$ 2,569
M27	Employee Engagement, Training, and Tools	N/A	Expense	$ 1,200	$ 1,243	$ 1,292	$ 840	$ 966	$ 808
M28	CWSP Program Management Office	AB#	Expense	$ 8,250	$ 8,547	$ 8,880	$ -	$ 15,818	$ 7,105
M28	CWSP Program Management Office	IG#	Expense	$ -	$ -	$ -	$ 17,753	$ -	$ -
M28	CWSP Program Management Office	JL#	Expense	$ -	$ -	$ -	$ -	$ 509	$ 2,490
	WMBA Expense Mitigations Subtotal			**$ 53,371**	**$ 55,292**	**$ 57,448**	**$ 220,075**	**$ 163,741**	**$ 121,957**
M5	Non-exempt Surge Arrester Replacement Program	2AR	Capital	$ 73,486	$ 75,433	$ 77,445	$ 63,498	$ 74,191	$ 37,297
M10	Resilience Zones	49M	Capital	$ 12,847	$ 13,188	$ 8,018	$ 13,718	$ 13,747	$ 4,922
M12	Wildfire System Hardening	08W	Capital	$ 493,225	$ 822,167	$ 1,045,058	$ 484,755	$ 319,486	$ 785,547
M12	Wildfire System Hardening - Non-Exempt Fuses	2AP	Capital	$ 5,285	$ 5,425	$ 5,570	$ 7,847	$ 11,295	$ 50
M12	Wildfire System Hardening - Non-Exempt Fuses	2AJ	Capital	$ -	$ -	$ -	$ -	$ -	$ 23,064
M13	Public Safety Power Shutoff	04	Capital	$ -	$ -	$ -	$ -	$ 461	$ 4
M13	Public Safety Power Shutoff	21#	Capital	$ -	$ -	$ -	$ 2,397	$ 1,362	$ 1,234
M13	Public Safety Power Shutoff	2F	Capital	$ -	$ -	$ -	$ -	$ -	$ 18,067
M15	Automation & Protection (FuseSavers)	49T	Capital	$ 2,157	$ 2,215	$ 2,274	$ -	$ 6,461	$ 10,692
M15	Automation & Protection (Granular Sectionalizing)	49H	Capital	$ 5,285	$ 5,425	$ 5,570	$ 70,164	$ 29,277	$ 19,829
M15	Automation & Protection (SCADA)	09A	Capital	$ -	$ -	$ -	$ -	$ -	$ -
M15	Automation & Protection (SCADA)	49A	Capital	$ -	$ -	$ -	$ 1,456	$ 6,028	$ 230
M18	Wildfire Safety Operations Center	21#	Capital	$ -	$ -	$ -	$ (34)	$ 141	$ 22
M19	Expanded Weather Station Deployment	21#	Capital	$ 6,300	$ 6,438	$ 6,588	$ 8,315	$ 7,720	$ 5,625
M20	SOPP Model Automation	21#	Capital	$ -	$ -	$ -	$ -	$ 975	$ 729
M21	Advanced Fire Modeling	21#	Capital	$ 4,200	$ -	$ -	$ 899	$ 14	$ 4
M24	Enhanced Wire Down Detection	21#	Capital	$ -	$ -	$ -	$ 1,216	$ 608	$ 7
M25	Wildfire & Infrastructure Protection Teams	21#	Capital	$ -	$ -	$ -	$ 1,254	$ 59	$ 43
M26	Aviation Resources	21#	Capital	$ -	$ -	$ -	$ 481	$ -	$ -
M28	CWSP Program Management Office	21#	Capital	$ 555	$ 570	$ 585	$ -	$ 0	$ 29
	WMBA Capital Mitigations Subtotal			**$ 603,341**	**$ 930,860**	**$ 1,151,108**	**$ 655,964**	**$ 471,824**	**$ 907,394**
	TOTAL WMBA			**$ 656,712**	**$ 986,152**	**$ 1,208,556**	**$ 876,040**	**$ 635,565**	**$ 1,029,351**

VMBA				a. Authorized Costs			b. Recorded Costs[1]		
Mitigation #	Mitigation Program Name	MAT[2]	Cost Type	2020 Authorized	2021 Authorized	2022 Authorized	2020 Actuals	2021 Actuals	2022 Actuals
M16	Enhanced Vegetation Management	IGJ	Expense	$ 318,742	$ 350,616	$ 385,678	$ 454,705	$ 770,435	$ 816,983
N/A	N/A	HN#	Expense	$ 229,270	$ 252,197	$ 277,417	$ 736,320	$ 682,525	$ 695,730
N/A	N/A	IGI	Expense	$ -	$ -	$ -	$ 87,803	$ 87,022	$ 117,466
N/A	N/A	IG#	Expense	$ -	$ -	$ -	$ 1,461	$ -	$ 1,195
	TOTAL VMBA			**$ 548,012**	**$ 602,814**	**$ 663,095**	**$ 1,280,289**	**$ 1,539,982**	**$ 1,631,375**

NOTE:

1 The recorded costs are generally consistent with PG&E's 2020, 2021 and 2022 RSAR sections covering Electric Distribution, Energy Supply, Customer Care, Shared Services and Human Resources.
The numbers reported in the RSAR reflect data as of the time pulled for the annual reports and may not reflect the final balancing account amounted recorded or requested net of adjustments.

2 The MAT codes used to record the wildfire mitigation work may or may not be the same MAT codes they were initially adopted in.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN 037-Q2		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_037-Q002		
Request Date:	June 17, 2024	Requester DR No.:	TURN-PG&E-037
Date Sent:	July 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:		Requester:	Tom Long

SUBJECT: WILDFIRE COSTS

QUESTION 002

Table 4-1(p. 73) in PG&E's 2023-2025 WMP (R5) identifies the following total WMP expenditures for 2020-2022:

Year	Actual WMP Costs ($000)
2020	$4,287,104
2021	$4,673,631
2022	$5,310,302
Total	**$14,271,037**

a. Please provide PG&E's workpapers showing how it calculated these annual totals.

b. Please provide a breakdown of these annual figures between CPUC jurisdictional costs and FERC jurisdictional costs.

c. Please provide a breakdown of these annual costs by cost recovery mechanism, including without limitation, the recovery mechanisms listed on page 74 (R5) of PG&E's 2023-2025 WMP (e.g., WMPMA, FRMMA, Microgrid Memorandum Account, etc.).

d. If available, please provide a breakdown of the 2020-2022 actual costs in Table 4-1 by MWC.

e. If available, please provide a breakdown of the 2020-2022 actual costs in Table 4-1 by MAT.

ANSWER 002

a-e. Please see attachment "*WildfireandGasSafetyCosts_DR_TURN_037-Q002Atch01.xlsx*".

Please reference Column C of the attachment for the underlying drivers (if applicable) for each of the WMP initiatives, Columns Q and R indicate if the work is expense or capital and the associated MWC/MAT, Column S lists the cost recovery mechanism for each line item, and Column T provides the breakdown between CPUC and FERC jurisdiction with the sub-total of each listed in Rows 4 and 5 of the

attachment. Please also note that WMBA activities are authorized through the General Rate Case (GRC) and are generally CPUC-jurisdictional, except for the Administrative and General (A&G) portion of the expense costs. For the period of 2020 - 2022, approximately 6.38% of the total company A&G costs are allocated to and collected from the Transmission customers (FERC-jurisdictional) per the labor factors approved in the 2020 GRC.

ATTACHMENTS:

WildfireandGasSafetyCosts_DR_TURN_037-Q002Atch01.xlsx

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_038-Q004		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_038-Q004		
Request Date:	June 20, 2024	Requester DR No.:	TURN-PG&E-038
Date Sent:	July 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:		Requester:	Tom Long

SUBJECT: GRANT THORNTON AUDIT

QUESTION 004

Please provide PG&E's understanding of the answers to the following questions about the Grant Thornton audit report, with supporting documentation:

a. What is the "sample basis" that Grant Thornton utilized? What was the total dollar amount of the 816 transactions sampled? What was the number of transactions and costs in the population? How were sample transactions selected? Were any groups of costs in the relevant memorandum accounts excluded from sampling?

b. How did Grant Thornton define "properly recorded and reported" costs in the context of PG&E's memorandum accounts?

c. How did Grant Thornton assess whether the costs in PG&E's memorandum accounts were "incremental to costs previously authorized"? Please provide an example.

d. Did Grant Thornton assess whether costs might be incremental to or duplicative with future applications or authorizations?

e. How did Grant Thornton assess whether costs "appeared to fit the criteria established for costs to be included in these accounts"? Please provide an example.

ANSWER 004

a. PG&E is not in possession, custody, or control of this information. Rather, Grant Thornton conducted the audit at the direction of the California Public Utilities Commission. PG&E provided 827 sampled transactions to Grant Thornton, for a total dollar amount of about $511 million. Please reference "*WildfireandGasSafetyCosts_DR_TURN_038-Q004_Atch01 and Atch02*" for the detailed transactions provided to Grant Thornton. There were some samples identified as duplicates by PG&E that resulted in Grant Thornton focusing on 816 samples. PG&E does not know which of the 827 samples Grant Thornton references in their final report. The total number of detailed transactions provided to Grant Thornton for their audit was about 11.3 million. PG&E's understanding of the approach Grant Thornton took to selecting the samples was provided in their final audit report on Page 1, under the heading "Approach." Based on our

knowledge, Grant Thornton did not exclude any costs when selecting the 816 samples.

b. PG&E is not in possession, custody, or control of this information. Rather, Grant Thornton conducted the audit at the direction of the California Public Utilities Commission. It is PG&E's understanding of what Grant Thornton meant by "properly recorded and reported" is that the costs were accurately booked to the memorandum accounts based on their review of the transactions.

c. PG&E is not in possession, custody, or control of this information. Rather, Grant Thornton conducted the audit at the direction of the California Public Utilities Commission. It is PG&E's understanding that Grant Thornton performed a duplicate transaction test to ensure the costs were not included more than once between 2019 and 2022.

d. PG&E is not in possession, custody, or control of this information. Rather, Grant Thornton conducted the audit at the direction of the California Public Utilities Commission. It is PG&E's understanding that the duplicate testing they performed and described in response to bullet c. above assessed whether costs over 2019-2022 might be incremental to or duplicative with future applications or authorizations.

e. PG&E is not in possession, custody, or control of this information. Rather, Grant Thornton conducted the audit at the direction of the California Public Utilities Commission. It is PG&E's understanding that they asked questions about why certain transactions were wildfire mitigation related. As an example, they asked about why PG&E rented space for laydown yards would be fire mitigation related. These are spaces that are used to provide materials and equipment closer to the job site for work associated with fire mitigation efforts.

ATTACHMENTS:

Attachment Name	Description
WildfireandGasSafetyCosts_DR_TURN_038-Q004Atch01.xlsx	Tracker Spreadsheet (2022 WildfireOII Grant Thornton)
WildfireandGasSafetyCosts_DR_TURN_038-Q004Atch02.xlsx	Tracker Spreadsheet (2023 WildfireOII Grant Thornton Phase II)

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_038-Q008		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_038-Q008		
Request Date:	June 20, 2024	Requester DR No.:	TURN-PG&E-038
Date Sent:	July 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:		Requester:	Tom Long

SUBJECT: GRANT THORNTON AUDIT

QUESTION 008

In an email from PG&E to Grant Thornton, dated January 24, 2024, shared in response to TURN-PG&E-022, Question 1, on March 29, 2024, Grant Thornton is quoted asking the following question:

> *For MWC 07, can you please provide an explanation on the difference between the average pole replacement per unit costs we're calculating off of PG&Es data vs. what other utilities in California seem to average year over year? a. If you note in our analysis, SCE's costs are relatively consistent, but PG&Es jumps $9K in 2021 and 2022.*

Please provide a copy of the referenced analysis.

ANSWER 008

Please reference "*WildfireandGasSafetyCosts_DR_TURN_038-Q008Atch01.xlsx*" for the analysis that was prepared by Grant Thornton for MWC 07 and provided to PG&E. Please note that PG&E does not know if this was their final version. Also, Atch02 was PG&E's response that highlighted the reasons why there were differences with the SCE's unit costs.

ATTACHMENTS:

Attachment Name	Description
WildfireandGasSafetyCosts_DR_TURN_038-Q008Atch01.xlsx	Copy of WPXX_PGE_MWC_07_Analytical_Procedures
WildfireandGasSafetyCosts_DR_TURN_038-Q008Atch02.pdf	DRU12886.001_Grant Thornton Finance Response

PACIFIC GAS AND ELECTRIC COMPANY
2017 Wildfires Order Instituting Investigation I.19-06-015
System Enhancement Initiative #14 – Grant Thornton Finance Audit

DRU Index No.:	DRU-12886	**External Party / Requestor Name:**	Grant Thornton/ [redacted]
PG&E Received Date:	12/20/2023	**Requested Due Date:**	1/5/2024
Date Sent:	1/24/2024		

Question No. 1 - DRU-12886.001:

1. For MWC 07, can you please provide an explanation on the difference between the average pole replacement per unit costs we're calculating off of PG&Es data vs. what other utilities in California seem to average year over year?
    a. If you note in our analysis, SCE's costs are relatively consistent, but PG&Es jumps $9K in 2021 and 2022.
2. For MWC 07, is GT's recalculation of PG&E's average pole cost reasonable and in line with what you calculate for 2019 and 2020?
    a. Just want to confirm that 2019 and 2020 are in fact conclusive observations and that the analysis is sound since the data appears to indicate that your spend is comparable to what others are incurring.

Please schedule a meeting with the subject matter expert(s) for MWC 07 (Electric Distribution Install/Replace Poles). We would like to talk with someone about performing analytics around this MWC and will have some high-level questions about the various MAT codes.

Response to Question No. 1 - DRU- 12886.001:

1. It is difficult to explain the reasons for differences between our unit costs versus the other utilities without completing a detailed analysis. We include all costs associated with the work as part of the unit cost, whereas Southern California Edison (SCE) did not based on the documents used by Grant Thornton (GT). Based on SCE's Unit Cost Table assumptions, the possible reasons for any differences between their unit costs and ours could be attributed to the following:

    a. SCE's unit costs exclude corporate overhead costs, including pension & benefits, A&G, payroll tax, and AFUDC. We include all overheads in the unit costs.
    b. SCE's unit costs assume facilities are constructed under an Engineering, Procurement, and Construction (EPC) agreement. We do not follow an EPC methodology, which could be an area of cost savings for SCE. The reason we do not follow an EPC agreement approach for Major Work Category (MWC) 07 is because unit cost analysis on an EPC Poles Pilot showed minimal savings. As a result, management preferred to keep all pole replacements under the same organization/contracts within Engineering and Construction.
    c. SCE's unit costs exclude environmental monitoring, licensing, and mitigations, whereas our unit costs are inclusive of environmental and all permitting costs.
    d. SCE's unit costs do not include right of way and easement requirements or permitting, whereas we include all permitting costs in the unit costs. Caltrans Design Standard Decision Document permits can cost about $10,000 per job to prepare the application and obtain the permit. Easements can cost upwards of $10,000 per job depending on negotiations with property owners.
    e. SCE's unit costs only include costs to procure materials, installation, engineering, project management costs, home office costs, and contingency, whereas our unit costs include all

costs for the work, including but not limited to, closeout tasks (e.g., mapping, updating GIS, records management)

In addition, our unit costs you are calculating are for wildfire related efforts only. We would expect that the unit costs associated with wildfire mitigation efforts would be higher than a total company view for SCE. This is because of the geographical challenges within our service territory for High Fire Threat Districts (HFTDs).

The main drivers for the increase in the unit costs from 2019 to 2022, are as follows:

a. We established the enhanced inspection program in 2020, that inspects all poles annually in HFTD Tier 3 areas, 1/3 of the poles in HFTD Tier 2 areas, and 1/5 of poles in non-HFTD areas. This resulted in a significant uptick in the generation of urgent notifications. We had to complete more units in a shorter time, which resulted in more overtime and double-time internally, as well as hiring of contractors that had to be brought in from outside the state.
b. New union contract which increased internal labor costs by 6% in 2021.
c. Material costs went up by about 20%.
d. In 2021, vegetation management associated with this poles program was previously under a different MAT code within MWC 95 (Electric Distribution Major Emergency). This change was part of the 2020 GRC that moved vegetation management for dead or dying trees under MWC 07.

2. GT's recalculation of our average pole cost is reasonable and is in line with what GT calculated for 2019 and 2020. Although the calculation of the unit costs are not significantly impacted, the costs reflected in your analysis for MWC 07 are for all Maintenance Activity Type (MAT) codes, whereas the units are for MAT code 07D. The amounts in thousands of dollars for 07D recorded in the Wildfire memo accounts would be $107,186 for 2019, $128,679 for 2020, $327,195 for 2021, and $394,839 for 2022. These amounts represent the total of the detailed transactions provided to GT.

Please review the responses provided and confirm if a follow-up meeting is still required.

Attachments:
None

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_039-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_039-Q001		
Request Date:	June 25, 2024	Requester DR No.:	TURN-PG&E-039
Date Sent:	July 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Josh Fredriksson	Requester:	Tom Long

SUBJECT: POLE LOADING

The following questions pertain to the Pole Loading and Wind Load Analysis Program in Chapter 4 of PG&E-01:

QUESTION 001

To which MAT code and account (e.g. 'base', specific memorandum account) did PG&E record the $53,758 in expenses for its Pole Loading Program in 2019, as reflected in its 2023 GRC workpapers?[1] Please also enumerate this activity's recorded costs, broken down by MAT code and account(s) in the years 2020-2022.

ANSWER 001

PG&E objects to this request as overbroad to the extent it seeks information on recorded data prior to 2020, which are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

The 2019 Pole Loading Program expense of $53,758 was recorded to MAT code GAC to the FRMMA, as reported in the 2023 GRC workpaper.

As stated in our testimony, Exhibit (PG&E-1), Chapter 4, p. 4-9, Table 4-3, line 1, the 2020 – 2022 Pole Loading program expenses[2] are recorded to MAT codes GAC and BFH for $19.7 million, $20.6 million, and $18.3 million respectively in WMPMA.

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1 Pacific Gas and Electric Company 2023 General Rate Case Exhibit (PG&E-4) Electric Distribution Workpapers Supporting Chapter 12, Pole Asset Management, Page 12-8.

2 This includes the LiDAR expenses utilized in the pole loading analysis within the Pole Loading Program.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_039-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_039-Q002		
Request Date:	June 25, 2024	Requester DR No.:	TURN-PG&E-039
Date Sent:	July 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Josh Fredriksson	Requester:	Tom Long

SUBJECT: POLE LOADING

The following questions pertain to the Pole Loading and Wind Load Analysis Program in Chapter 4 of PG&E-01:

QUESTION 002

To which MAT code and account (e.g. 'base', specific memorandum account) did PG&E record the $228 thousand in expenses for Wind Loading Analysis in 2019, as reflected in its 2023 GRC workpapers?[1] Please also enumerate this activity's recorded costs, broken down by MAT code and account(s) in the years 2020-2022.

ANSWER 002

PG&E objects to this request as overbroad to the extent it seeks information on recorded data prior to 2020, which are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

The 2019 Wind Loading Analysis expense of $228 thousands was recorded to MAT code AB# to the FRMMA, as reported in the 2023 GRC workpaper.

The 2020 – 2022 Wind Loading Analysis Program expenses are recorded to MAT code AB# for $61 thousand, $0.4 thousand, and $0 respectively in WMPMA, consistent with the amounts included in Chapter 4 of this Wildfire and Gas Safety Costs (WGSC) filing.

1 Pacific Gas and Electric Company 2023 General Rate Case Exhibit (PG&E-4) Electric Distribution Workpapers Supporting Chapter 12, Pole Asset Management, Page 12-5.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_039-Q003		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_039-Q003		
Request Date:	June 25, 2024	Requester DR No.:	TURN-PG&E-039
Date Sent:	July 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Josh Fredriksson	Requester:	Tom Long

SUBJECT: POLE LOADING

The following questions pertain to the Pole Loading and Wind Load Analysis Program in Chapter 4 of PG&E-01:

QUESTION 003

To which MAT code and account (e.g. 'base', specific memorandum account) did PG&E record the $3.644 million in capital for Wind Loading Analysis in 2019, as reflected in its 2023 GRC workpapers?[1] Please also enumerate this activity's recorded costs, broken down by MAT code and account(s) in the years 2020-2022.

ANSWER 003

PG&E objects to this request as overbroad to the extent it seeks information on recorded data prior to 2020, which are not at issue in this proceeding. Subject to and without waiving this objection, PG&E responds as follows:

The 2019 Wind Loading Analysis capital expenditures of $3.644 million was recorded to MAT code 21A to the FRMMA, as reported in the 2023 GRC workpaper.

The 2020 – 2022 capital Wind Loading Analysis Program costs are recorded to MAT code 21A for 2.656 million, $0.594 million, and $0 respectively in WMPMA, consistent with the amounts included in Chapter 4 of this Wildfire and Gas Safety Costs (WGSC) filing.

[1] Pacific Gas and Electric Company 2023 General Rate Case Exhibit (PG&E-4) Electric Distribution Workpapers Supporting Chapter 12, Pole Asset Management, Page 12-19.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_039-Q004		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_039-Q004		
Request Date:	June 25, 2024	Requester DR No.:	TURN-PG&E-039
Date Sent:	July 9, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:	Josh Fredricksson	Requester:	Tom Long

SUBJECT: POLE LOADING

The following questions pertain to the Pole Loading and Wind Load Analysis Program in Chapter 4 of PG&E-01:

QUESTION 004

To which MAT code and account (e.g. 'base', specific memorandum account) did PG&E record the $2,205,791 in expenses for its LiDAR program within the Pole Loading Program in 2020, as reflected in its 2023 GRC workpapers?[1] Please also enumerate this activity's recorded costs, broken down by MAT code and account(s) in the years 2021-2022.

ANSWER 004

The 2020 LiDAR expense of $2.2 million within the Pole Loading Program was recorded to MAT code GAC to the FRMMA, as reported in the 2023 GRC workpaper.

The 2021– 2022 LiDAR program expenses are recorded to MAT code GAC for $10.3 million and $8.6 million respectively in the WMPMA, consistent with the amount included in Chapter 4 of this Wildfire and Gas Safety Costs (WGSC) filing.

1 Pacific Gas and Electric Company 2023 General Rate Case Exhibit (PG&E-4) Electric Distribution Workpapers Supporting Chapter 12, Pole Asset Management, Page 12-8.

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_040-Q001		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_040-Q001		
Request Date:	July 1, 2024	Requester DR No.:	TURN-PG&E-040
Date Sent:	July 16, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:		Requester:	Tom Long

SUBJECT: INCREMENTALITY

QUESTION 001

TURN's upcoming testimony may recommend that the Commission find that none of the capital expenditures for the "Idle Facilities Removal" program (MAT 2AF)[1] are incremental. If the Commission agrees with this recommendation and disallows rate recovery based on that finding:

a. Should the associated disallowance be a standard permanent disallowance, i.e, the costs for this program shown in Table 5-2 should not be put into rate base for the 2020-2022 period or in any other GRC?

b. If the answer to (a) is anything other than an unequivocal yes, please state PG&E's position regarding whether the disallowance should be a standard permanent disallowance and all reasons for that position.

c. Should the associated disallowance be something other than a standard permanent disallowance? If so, please describe how the disallowance should be structured, including but not limited to an explanation of how the impact of the disallowance on rate recovery in 2020-2022 and in other rate case periods should be determined.

d. Please provide PG&E's best estimate of the impact of a finding that the above described capital expenditures are not incremental on PG&E's revenue requirement for each year of the period 2020-2022. For any year of the period 2020-2022, would the revenue requirement increase, notwithstanding a Commission finding that PG&E improperly treated the costs as incremental? Please also provide supporting workpapers in support of the estimates.

e. Please explain the basis for PG&E's responses to the questions in (d). For example, are the responses based on the RO model? Or are the responses based on an estimate and, if so, how was the revenue requirement impact estimated? Also, to the extent the responses are tied to tax implications, please identify and briefly describe the associated tax implications.

1 Ex. PG&E-01, p. 5-7, Table 5-2, line 4.

ANSWER 001

a. PG&E assumes that this question is asking whether a determination that these costs are not incremental to the 2020 GRC should result in a permanent exclusion from rate base. No. If these costs are determined by the Commission not to be incremental to the 2020 GRC, that would mean the Commission determined that these were GRC base activities for the period of 2020-2022. In that case the result would be no additional recovery in the WGSC filing only for years 2020-2022 and the costs should be treated the same as any GRC base cost category as to which PG&E overspent authorized amounts. Such a determination would not, therefore, affect recovery for the periods after 2022. Capital costs for GRC base activities are recovered over the entire life of the asset, so these costs should appropriately continue to be part of GRC rate base in the future. There is no basis for a permanent disallowance because the work was prudent and reasonable. These assets are used and useful and customers benefit from them. A lack of incrementality alone is not grounds for a permanent disallowance for used and useful capital assets.

b. See our response to subpart a. above.

c. If costs in this filing are determined not to be incremental to the 2020 GRC, then there would be no additional recovery in the WGSC filing for years 2020-2022. This would not impact recovery beyond 2022. As described in subpart a, these capital costs will still be recovered over the entire asset life in future GRC proceedings.

d. PG&E's best estimate of the capital revenue requirement is an increase of $911,400 for the period from 2020 to 2022, if these costs are deemed to be not incremental to 2020 GRC.

   See attachment "*WildfireandGasSafetyCosts_DR_TURN_040-Q001Atch01.xlsx*" for the supporting RO workpapers in support of the estimates.

e. PG&E's response to the question in (d) is based on the WGSC Track 1 WMPMA Errata RO model in response to Cal Advocate Oral Data Request. The RO model inputs are the 2020-2022 capital additions and costs of removal associated with the $8.417 million capital expenditure (MAT: 2AF), as shown in Table 5-2. For this revenue requirement estimation purpose, the RO model parameters and assumption (including Book Depreciation Rate, Tax Repair Factor, Federal and State Income Tax Rate, Property Tax Rate, Cost of Capital, etc.) remain unchanged.

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_040-Q001Atch01.xlsx

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire and Gas Safety Costs
Application 23-06-008
Data Response

PG&E Data Request No.:	TURN_040-Q002		
PG&E File Name:	WildfireandGasSafetyCosts_DR_TURN_040-Q002		
Request Date:	July 1, 2024	Requester DR No.:	TURN-PG&E-040
Date Sent:	July 16, 2024	Requesting Party:	The Utility Reform Network
PG&E Witness:		Requester:	Tom Long

SUBJECT: INCREMENTALITY

QUESTION 002

TURN's upcoming testimony may recommend that the Commission find that none of the capital expenditures for the "Pole Replacement" program (MATs 07O, 07D, and 07C)[1] are incremental. If the Commission agrees with this recommendation and disallows rate recovery based on that finding:

a. Should the associated disallowance be a standard permanent disallowance, i.e, the costs for this program shown in Table 4-2 should not be put into rate base for the 2020-2022 period or in any other GRC?

b. If the answer to (a) is anything other than an unequivocal yes, please state PG&E's position regarding whether the disallowance should be a standard permanent disallowance and all reasons for that position.

c. Should the associated disallowance be something other than a standard permanent disallowance? If so, please describe how the disallowance should be structured, including but not limited to an explanation of how the impact of the disallowance on rate recovery in 2020-2022 and in other rate case periods should be determined.

d. Please provide PG&E's best estimate of the impact of a finding that the above-described capital expenditures are not incremental on PG&E's revenue requirement for each year of the period 2020-2022. For any year of the period 2020-2022, would the revenue requirement increase, notwithstanding a Commission finding that PG&E improperly treated the costs as incremental? Please also provide supporting workpapers in support of the estimates.

e. Please explain the basis for PG&E's responses to the questions in (d). For example, are the responses based on the RO model? Or are the responses based on an estimate and, if so, how was the revenue requirement impact estimated? Also, to the extent the responses are tied to tax implications, please identify and briefly describe the associated tax implications

[1] Ex. PG&E-01, p. 4-6, Table 4-2, line 2.

ANSWER 002

a. PG&E assumes that this question is asking whether a determination that these costs are not incremental to the 2020 GRC should result in a permanent exclusion from rate base. No. If these costs are determined by the Commission not to be incremental to the 2020 GRC, that would mean the Commission determined that these were GRC base activities for the period of 2020-2022. In that case the result would be no additional recovery in the WGSC filing only for years 2020-2022 and the costs should be treated the same as any GRC base cost category as to which PG&E overspent authorized amounts. Such a determination would not, therefore, affect recovery for the periods after 2022. Capital costs for GRC base activities are recovered over the entire life of the asset, so these costs should appropriately continue to be part of GRC rate base in the future. There is no basis for a permanent disallowance because the work was prudent and reasonable. These assets are used and useful and customers benefit from them. A lack of incrementality alone is not grounds for a permanent disallowance of used and useful capital assets.

b. See our response to subpart a. above.

c. If costs in this filing are determined not to be incremental to the 2020 GRC, then there would be no additional recovery in the WGSC filing for years 2020-2022. This would not impact recovery beyond 2022. As described in subpart a, these capital costs will still be recovered over the entire asset life in future GRC proceedings.

d. PG&E's best estimate of the capital revenue requirement is an increase of $118,796,602 for the period from 2020 to 2022, if these costs are deemed to be not incremental to 2020 GRC.

   See attachment "*WildfireandGasSafetyCosts_DR_TURN_040-Q002Atch01.xlsx*" for the supporting RO workpapers in support of the estimates.

e. PG&E's response to the question in (d) is based on the WGSC Track 1 WMPMA and FRMMA Errata RO model in response to Cal Advocate Oral Data Request. The RO model inputs are the 2020-2022 capital additions and costs of removal associated with the $855.2 million capital expenditure (MATs: 07O, 07D and 07C), as shown in Table 4-2. For this revenue requirement estimation purpose, the RO models parameters and assumption (including Book Depreciation Rate, Tax Repair Factor, Federal and State Income Tax Rate, Property Tax Rate, Cost of Capital, etc.) remain unchanged.

ATTACHMENT:

WildfireandGasSafetyCosts_DR_TURN_040-Q002Atch01.xlsx