

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Further
Develop a Risk-Based Decision-Making
Framework for Electric and Gas
Utilities.

Rulemaking 20-07-013

**PACIFIC GAS AND ELECTRIC COMPANY'S (U39M)
2022 SAFETY PERFORMANCE METRICS REPORT
IN COMPLIANCE WITH CALIFORNIA PUBLIC UTILITIES COMMISSION
DECISIONS 19-04-020 AND 21-11-009**

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Dated: April 3, 2023

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Pacific Gas and Electric Company (PG&E) submits its 2022 Safety Performance Metrics Report in compliance with Decisions (D.) 19-04-020 and 21-11-009.

In 19-04-020, the *Phase Two Decision Adopting Risk Spending Accountability Report Requirements and Safety Performance Metrics For Investor-Owned Utilities And Adopting A Safety Model Approach For Small And Multi-Jurisdictional Utilities*, the California Public Utilities Commission (Commission) directed the large investor owned utilities to annually file a Safety Performance Metrics Report on March 31.¹ The Safety Performance Metrics Report must include:

- The last ten years for all Safety Performance Metrics for which such data exists;
- A narrative context about the value of the safety metrics;
- Identification of the metrics linked to or used for purposes of determining executive compensation levels for positions director-level and above;
- Descriptions of bias controls that the utility has in place for reporting of the metrics;
- Examples of how the metrics have informed training and supported risk-informed decision-making;
- Explanations of how the metrics reflect progress against safety goals included in the utility’s General Rate Case; and
- A high-level summary of the total estimated and recorded risk-related spend.²

¹ D.19-04-020, p. 26.

² D.19-04-020, pp. 25-27, p. 63, Ordering Paragraph 6.

In the *Order Instituting Rulemaking to Further Develop a Risk-Based Decision-Making Framework for Electric and Gas Utilities*, the Commission reassessed the Safety Performance Metrics adopted in D.19-04-020.³ At the conclusion of Phase I of that proceeding, the Commission adopted 32 Safety Performance Metrics in D.21-11-009. The report attached hereto covers the revised set of Safety Performance Metrics.

PG&E's 2022 Safety Performance Metrics Report is provided as Attachment.

Respectfully Submitted,

By: /s/ Steven W. Frank

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³ See Assigned Commissioner's Scoping Memo and Ruling, p. 5, dated November 2, 2020.

PACIFIC GAS AND ELECTRIC COMPANY

ATTACHMENT

PACIFIC GAS AND ELECTRIC COMPANY

**2022 SAFETY PERFORMANCE METRICS REPORT IN
COMPLIANCE WITH CALIFORNIA PUBLIC UTILITIES COMMISSION
DECISION 19-04-020 AND DECISION 21-11-009**

APRIL 3, 2023



PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT

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PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
SECTION 1
INTRODUCTION

1 **PACIFIC GAS AND ELECTRIC COMPANY**
2 **2022 SAFETY PERFORMANCE METRICS REPORT**
3 **SECTION 1**
4 **INTRODUCTION**

5 **I. Introduction**

6 Pacific Gas and Electric Company (PG&E) submits its 2022 Safety
7 Performance Metrics Report (SPMR) in compliance with Decision (D.) 19-04-020
8 and D.21-11-009 concerning the Risk-Based Decision-Making Framework
9 proceeding, Rulemaking 20-07-013. The purpose of the SPMR is to provide the
10 Commission and interested parties' information on PG&E's performance related
11 to key safety metrics.

12 Safety is PG&E's most important responsibility. Our customers and
13 communities deserve the assurance that we will deliver electricity and natural
14 gas safely and reliably.

15 PG&E is committed to continuing to improve the safety of our workforce and
16 the public. Benchmarking and safety metrics are measured and analyzed to
17 drive business decisions and the right behavior as we continue to strengthen our
18 safety efforts. PG&E monitors our progress with a focus on leading indicators as
19 well as lagging metrics to show our progress over time. This helps PG&E
20 identify and address the underlying causes of safety incidents to prevent them
21 from reoccurring.

22 The information in this SPMR confirms areas where PG&E has shown
23 significant safety progress over the past decade. At the same time, as shown in
24 other datasets, we have more work to do.

25 PG&E's focus is on building an accountable, transparent organization that
26 embraces a Speak Up culture, where raising issues and ideas are encouraged.
27 PG&E's safety stand is "Everyone and Everything is Always Safe." To support
28 this stand, one of the key initiatives under PG&E's 10-Year True North Strategy
29 is to drive toward public and coworker safety. Our objective continues to be
30 demonstrating, through our actions, that we are working every day towards
31 restoring trust with sustained performance and accountability.

a. Background

Pursuant to D.19-04-020, for its 2019 and 2020 reporting years, PG&E reported performance against 25 Safety Performance Metrics (SPM), including providing up to 10 years of historical data.

On November 9, 2021, through the Commission’s Risk Based Decision Making Framework rulemaking process that began on November 17, 2020, the Commission approved D.21-11-009 approving 32 existing, updated, and new SPMs. Accordingly, in this SPMR, PG&E is providing metric data for on the 32 metrics shown in the table below. Please see Section 5 for more detailed information on each individual metric.

b. Summary of 2022 Metric Data

Metric Name	Units	2022 Data
1. Transmission & Distribution (T&D) Overhead Wires-Down Non-Major Event Days	Number of wires-down events	2,709
2. Transmission & Distribution (T&D) Overhead Wires Down - Major Event Days	Number of wires-down events	2,780
3. Electric Emergency Response Time	The time in minutes that an electric crew person or a qualified first responder takes to respond after receiving a call which results in an emergency order.	Average: 31 minutes Median: 30 minutes
4. Fire Ignitions	Number of ignitions	465
5. Gas Dig-In	The number of 3rd party gas dig ins per 1,000 USA tags/tickets	Gas Tickets: 1,584,765 3rd Party Dig-ins: 1,379 3rd Party Dig-in Ratio: 0.87
6. Gas In-Line Inspection	Total number of miles of inspections performed and percentage inspected by ILI.	EOY: 497.6 miles Current System Total (Transmission): 6425% of Transmission Lines Inspected Annually: 8%
7. Gas in-Line Upgrade	Miles	252.6
8. Gas Shut-In Time – Mains	Time in minutes required to stop the flow of gas for Distribution Mains	EOY (Median): 82.1 EOY (Avg): 97
9. Gas Shut-In Time – Services	Time in minutes required to stop the flow of gas for Distribution Services	EOY (Median): 36.8 EOY (Avg): 47.5

Metric Name	Units	2022 Data
10. Cross Bore Intrusions	Number of cross bore intrusions per 1,000 inspections	Inspections Complete: 42645 Cross Bores Found: 32 Find Rate: 0.75
11. Gas Emergency Response Time	The time in minutes that a gas service representative or a qualified first responder takes to respond after receiving a call which results in an emergency order.	Median: 18.3 Average: 19.9
12. Natural Gas Storage Baseline Inspections Performed	Number of Assessments completed/Number scheduled or targeted	EOY Well Baseline Inspections: 18 EOY % Progress to Goal: 100%
13. Gas System Internal Inspection Status	Percentage	EOY System Piggability: 49.8% EOY Piggable Milage Total: 3,201
14. Employee Days Away, Restricted and Transfer (DART) Rate	DART Cases times 200,000 divided by employee hours worked	0.670 EOY
15. Rate of SIF Actual (Employee)	Number of SIF-Actual cases among employees x 200,000/employee hours worked	0.012 EOY
16. Rate of SIF Actual (Contractor)	Number of SIF-Actual cases among contractors x200,000/contractor hours worked	0.020 EOY
17. Rate of SIF Potential (Employee)	Number of SIF-Potential cases among employees x 200,000/employee hours worked	0.060 EOY
18. Rate of SIF Potential (Contractor)	Number of SIF-Potential cases among contractors x 200,000/contractor hours worked	0.140 EOY
19. Contractor Days Away, Restricted Transfer (DART)	OSHA DART Rate	0.290 EOY
20. Public Serious Injuries and Fatalities	Number of Serious Injuries and Fatalities	20
21. Helicopter/ Flight Accident or Incident	Number of accidents or incidents (as defined in 49 CFR Section 830.5 "Immediate Notification") per 100,000 flight hours.	Total Incidents: 2. Total number of flight hours per year for reporting the number of incidents per 100,000 flight hours: 31,514.

Metric Name	Units	2022 Data
22. percentage of Serious Injury and Fatality Corrective Actions Completed on Time.	Total number of SIF corrective actions completed on time (as measured by the due date accepted by functional area Corrective Action Review Boards (CARB)) divided by the total number of SIF corrective actions past due or completed.	98%
23. Hard Brake Rate	Total number of hard braking events per thousand miles driven in a given period	0.3
24. Driver's Call Complaint Rate	Total number of driver complaint calls received per 1 million miles driven	4.7
25. Wires-Down not resulting in Automatic De-energization	Percentage of wires down occurrences	Distribution: 13.3% Transmission: 11.8%
26. Missed Inspections and Patrols for Electric Circuits	Percentage of structures that missed inspection relative to total required structures.	Distribution Patrols: 0.00% Distribution Inspections: 0.03% Transmission Patrols: 0.00% Transmission Inspection: 0.00%
27. Overhead Conductor Size in High Fire Threat District Tiers 2 and 3, HFTD	Percentage relative to total circuit miles	10.04%
28. Gas Operation Corrective Actions Backlog	Percentage of work orders past due for completion in the past calendar year	Distribution Overdue Work Orders: 44 Total Work Orders: 20309 EOY: 0.00 Transmission Overdue Work Orders: 85 Total Work Orders: 441 EOY: 0.19
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)	Percentage of corrective actions completed	Distribution: 17% Transmission: 46% Vegetation Management: 98%
30. Gas Overpressure Events	Number of occurrences	Distribution: 3 Transmission: 6
31. Gas In-Line Inspections Missed	Number of Missed Inspections	1
32. Overhead Conductor Safety Index	Number of occurrences per circuit mile	Total Events: 2709 Total Events by Circuit miles: 0.027

1 To assist Safety Policy Division with their analysis of this year's SPMR,
 2 PG&E has provided the requested information below:

(1) Total circuit miles with a breakdown of overhead and underground miles ^(a)	Distribution: OH 80,210, UG 27,850 Transmission: OH 18,111, UG 182 Total: 126,353 miles
(2) Total overhead circuit miles in High Fire Threat Districts ^(b)	Distribution: 24,911 Transmission: 5,506 Total: 30,417 miles OH in Tier 2/3 (HFTD)
(3) Total miles of gas lines (transmission and distribution separately)	Distribution: 44,026.11 miles Transmission: 6425.1 miles
(4) Number of Supervisory Control and Data Acquisition (SCADA) points in the gas system monitoring for overpressure events	6830
(5) Number of customer accounts ^(c)	Gas: 4,554,737 Electric: 5,604,442
<p>(a) See PG&E's 2023 Wildfire Mitigation Plan, Table 5-2.</p> <p>(b) See PG&E's 2023 Wildfire Mitigation Plan, Table 5-2. For computing 2022 performance in SPM 27, Overhead Conductor Size in High Fire Threat District Tiers 2 and 3, HFTD, and SPM 32, Overhead Conductor Safety Index, PG&E used 2021 mileage. This is the same approach used in the 2023 Safety & Operational Metrics (SOM) report submission.</p> <p>(c) The total customer accounts may vary slightly due to timing of data pull. PG&E provides the annual customer accounts in the FERC Form 1 (page 601) and Form 2 (page 601).</p>	

PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
SECTION 2
METRIC DATA EXAMPLES

1 **PACIFIC GAS AND ELECTRIC COMPANY**
2 **2022 SAFETY PERFORMANCE METRICS REPORT**
3 **SECTION 2**
4 **METRIC DATA EXAMPLES**

5 **II. Metric Data Examples**

6 Prior to the SPMR, Pacific Gas and Electric Company (PG&E or the
7 Company) tracked many of these metrics because they provide valuable insight
8 on our safety performance. As required in Decision (D.) 19-04-020, PG&E
9 provides three to five examples of how PG&E uses these metric data to
10 (1) improve staff or contractor training and/or take corrective actions aimed at
11 minimizing top risks or risk drivers; and (2) support risk-based decision-making.

12 a) Metric 1 – Wires Down: Informs Risk-Based Decision Making.

13 Transmission and Distribution (T&D) Overhead Wires Down data is used
14 to inform the Overhead Primary Deteriorated Conductor Replacement
15 program. The program centralizes the prioritization, tracking, and funding of
16 conductor replacement projects in non-high fire threat district (HFTD) areas
17 and targets replacement of primary conductor segments with elevated wires
18 down rates, especially small conductor and overlap of corrosion zones.

19 The program is informed with the Wires Down Database which tracks
20 high priority replacement attributes about the conductor (such as size, type,
21 known splices, annealing, etc.) as well as environmental factors and risks
22 (such as corrosion zone, snow loading zone, and HFTD). These attributes
23 and factors are used to determine conductor replacement project initiation,
24 justification, and priority, as well as to determine failure trends of types of
25 conductors and environmental factors, that may increase asset health
26 deterioration. The Overhead Primary Deteriorated Conductor Replacement
27 Program targets areas with the greatest public safety consequence, high
28 priority replacement attributes, and areas experiencing repeat Wires Down
29 events.

30 b) Metric 3 – Electric Emergency Response Time: Corrective Action/Training.

31 In 2022, performance data for PG&Es Electric Emergency Responses
32 were reviewed as part of its daily operation review cadence. If any individual
33 responses are below target, they are investigated for understanding and

1 potential tactic adjustment. With significant weather events providing the
2 greatest challenge to universal timely electric emergency response, gas
3 construction resources were added to the population of trained electric
4 emergency standby resources. This helped PG&E staff more locations with
5 a denser amount of standby personnel before significant events. As an
6 additional step, consultation with PG&E's Meteorology experts in advance of
7 scheduling emergency standby resources in 2022 helped better to pinpoint
8 the location and timing of incoming wind.

9 c) Metric 4 – Fire Ignitions: Informs Risk-Based Decision Making.

10 PG&E started cataloging reportable ignition data in June 2014 per our
11 Fire Incident Data Collection Plan (RISK-6306S) and has used the data to
12 gauge performance and drive data-driven wildfire risk reduction strategies.

13 Through widespread deployment of the Enhanced Powerline Safety
14 Settings (EPSS) program, PG&E finished 2022 with 89 CPUC reportable
15 ignitions in HFTD attributable to overhead distribution assets. These results
16 show approximately 65 percent reduction from the 2018 to 2020 annual
17 average of 130 ignitions, before EPSS was deployed as a strategy. More
18 importantly, PG&E reduced the overall risk associated with these 89 ignitions
19 by focusing our efforts to eliminate ignitions during the conditions that pose
20 the greatest risk of starting a catastrophic wildfire. PG&E reduced the count
21 of ignitions where the Fire Potential Index was in Fire Potential Index (FPI)
22 rating 3 conditions or greater for that geospatial and temporal location from
23 73 ignitions, based on previous year averages, to 37 ignitions in 2022. The
24 risk reduction is reflected in the number of acres burned because of these
25 ignitions, which reduced by 99 percent, compared to the 3-year average
26 acres impacted for primary distribution fires before EPSS implementation.
27 PG&E can expect to see improved performance on this metric through
28 continual execution of the Wildfire Mitigation Plan and maturation of key
29 wildfire mitigation strategies, including:

- 30 • Enablement and expansion of the EPSS Program;
- 31 • Public Safety Power Shutoff; and
- 32 • System hardening inclusive of undergrounding.

1 d) Metric 14 – Employee Days Away, Restricted and Transfer (DART):
2 Corrective Action and Informs Risk-Based Decision Making.

3 PG&E program efforts are designed to address employee safety, which
4 was informed by the Employee Lost Work Day (LWD), and Employee DART
5 Rate metrics. These program efforts include expanding PG&E’s ergonomic
6 programs and increasing the number of Industrial Athlete Specialists for job
7 site evaluations. A primary goal of the efforts is reduced injury severity
8 through injury prevention and early intervention care for employees. In
9 alignment with this, we have strengthened the identification of the highest
10 risk work groups and tasks for field and vehicle ergonomic injuries. We
11 identify high-risk computer users through predictive modeling and provide
12 targeted interventions. Additional efforts also include enhanced injury
13 management containment for injuries at risk for escalation to DART and
14 providing our people leaders with additional injury management training.

15 e) Metric 15 – Employee SIF and Metric 20 – Public SIF: Motor Vehicle Safety
16 Corrective Action and Informs Risk Informed Decision Making.

17 PG&E uses cause analysis of SIFs to develop mitigations designed to
18 improve these safety metrics. For example, use of mobile devices while
19 driving is one of the potential causes of employee motor vehicle related SIFs.
20 As a follow-up to the three-month pilot on the cell phone blocking technology
21 conducted in 2021, the cell blocking program is now in use with
22 approximately 1,000 active users and has effectively suppressed over
23 100,000 texts and calls.

24 f) Metric 24 – Drivers Complaint Rate: Corrective Action/Improved Training.

25 The Drivers Complaint Rate metric data is used to inform the Drivers
26 Scorecard, which provides leaders a continuous review of the drivers’
27 preventative motor vehicle incidents (PMVI), and call Complaints, and sets
28 limits when action needs to be taken. The scorecard also includes a motor
29 vehicle training details status report and any additional training needs based
30 on employee PMVI status. This scorecard is designed to provide employees
31 with timely coaching and to reduce overall Motor Vehicle Safety Incident risk.
32 The scorecard was rolled out in mid-2021 enterprise-wide, with a dashboard
33 for leaders to access a single source containing multiple data points related
34 to driver/vehicle risk.

1 g) Metric 16 – Contractor SIF: Corrective Action/Improved Training and Informs
2 Risk-Based Decision Making.

3 To improve this safety metric, in late 2022, PG&E began facilitating
4 Contractor Safety Quality Assurance Reviews (CSQAR) with selected
5 Contractors with adverse trends in safety performance and who are at risk of
6 experiencing a Serious Injury or Fatality. Initially, the focus is on Contractors
7 with high incident counts, at-risk finding rates, and hours worked.

8 A CSQAR is a detailed assessment of the Contractor’s safety program
9 implementation and field safety performance. PG&E partners with the
10 Contractors on the CSQAR process, which includes a desktop review, safety
11 culture survey, barrier analysis, and leadership engagement with a focus on
12 the elimination of serious injuries and fatalities. Safety concerns or issues
13 identified are documented and a safety improvement plan for compliance and
14 mitigation, as well as any additional training needs, is established by the
15 Contractor. Once PG&E accepts the safety improvement plan, PG&E and
16 the Contractor will participate in a documented Effectiveness Review to
17 validate its implementation and effectiveness.

18 h) Metric 5 – Gas Dig-in; Metric 9 – Shut In The Gas Average Time – Services;
19 Metric 10 – Cross Bore Intrusions; and Metric 11 – Gas Emergency
20 Response: Informs Risk-Based Decision Making.

21 In 2022, Gas continued the journey of Process Safety Management
22 maturity. The Process Safety Indicator (PSI) dashboard, based on a pyramid
23 framework, is reviewed monthly at Operational Review Meetings and other
24 senior leadership platforms. This includes review of relevant metrics,
25 including Safety Performance Metrics such as gas dig-ins, shut in the gas
26 average time, cross bore intrusions, and gas emergency response. Gas
27 continued to be compliant, per a third-party assessment, with the intent of
28 API RP754, Process Safety Performance Indicators, demonstrating a
29 commitment to incident prevention.

30 The metrics alignment framework helps to drive ownership and
31 accountability to ensure leading indicators are acted upon to prevent a major
32 gas incident that can lead to serious injuries, fatalities, or cause significant
33 interruption to the gas business. These metrics continue to be evaluated
34 during Daily Operating Reviews (DORs or huddles) beyond those calibrated

1 at the beginning of the year to ensure that Gas drives the appropriate
2 continuous improvement conversations. The DORs include a Lean visual
3 management dashboard.

4 The dashboard was expanded to be presented at the Quality and
5 Process Improvement Committee and Process Safety Moments are a
6 standing agenda item within Gas' monthly Risk and Compliance Committee
7 meetings. Updates to align each metrics to the correct Mega Process also
8 took place, ensuring ownership and accountability.

9 i) Metric 5 – Gas Dig-In: Corrective Action and Informs Risk-Based Decision
10 Making.

11 Analysis of Third-Party At Fault dig-ins revealed that 50 percent of the
12 events occurred without an 811 ticket. This issue continues to be a
13 challenge because no statutory requirements beyond civil penalties exists,
14 and homeowners are exempt from the requirement to call 811. The Damage
15 Prevention Organization continues to explore additional opportunities to
16 mitigate these challenges. Identifying top dig-in contributors and questioning
17 those offenders has provided additional risk mitigation opportunities as listed
18 below:

- 19 • Conducted third-party safe excavation workshops (delivered to
20 contractors by Dig-In Reduction Team and Locate and Mark).
- 21 • Each contractor involved in a dig-in was offered a free safe excavation
22 workshop with a focus on plumbing and fencing.
- 23 • In 2022, third-party workshops and second-party at-fault reviews were
24 just some of the efforts that contributed towards:
 - 25 – Locator At Faults were down 8 percent compared to 2021;
 - 26 – Total Dig-ins were down 9 percent compared to 2021;
 - 27 – Second-Party Dig-ins were down 20 percent compared to 2021;
 - 28 – Third-Party Dig-ins were down 10 percent compared to 2021; and
 - 29 – PG&E achieved 1st Quartile for total dig-in, ending the year with a
30 ratio of 0.94.
- 31 • No Underground Service Alert (USA) Ticket: Social Media-Next Door
32 Posts, reviewed by zip code and compared to same quarter prior year.
- 33 • In 2022 we piloted a predictive model to identify people digging without
34 an 811 ticket.

1 j) Metric 30 – Gas Over Pressure Events: Risk-Informed Decision Making.

2 By reviewing Gas Over Pressure Events metric data PG&E has identified
3 human performance and equipment failure as the two most common causes
4 for Overpressure events. As result of benchmarking with other utilities and in
5 alignment with our internal strategic objectives, PG&E presented the Over
6 Pressure Protection (OPP) Enhancement Program in the 2019 Gas
7 Transmission and Storage Rate Case, and in both the 2020 and 2023
8 General Rate Case testimony. By end of 2022, the slam shut valve
9 installation program (a method of secondary OPP) has installed 858 Gas
10 distribution system slam shuts and 67 gas transmission system slam shuts.

11 k) Metric 30 – Gas Over Pressure Events: Improving Staff Training.

12 By reviewing Gas Over Pressure Events metric data PG&E has identified
13 human performance and equipment failure as the two most common causes
14 for over pressure events. In 2018, PG&E implemented the HU (Human
15 Performance) Tools and Capability Training series that consisted of
16 capability building activities with the goal to reduce over pressure events
17 linked to HU causes. In 2021, 100 percent of supervisors and grassroots
18 leads were trained. In 2022, PG&E evaluated the clearance process to
19 determine gaps and improve clearance writing and execution methodology to
20 prevent over pressure events.

PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
SECTION 3
BIAS CONTROLS AND METHODOLOGY

1 **PACIFIC GAS AND ELECTRIC COMPANY**
2 **2022 SAFETY PERFORMANCE METRICS REPORT**
3 **SECTION 3**
4 **BIAS CONTROLS AND METHODOLOGY**

5 **III. Bias Controls and Methodology**

6 In general, Pacific Gas and Electric Company (PG&E) utilizes multiple bias
7 controls and systems to ensure reporting of the metric data cannot be
8 manipulated or skewed. These controls include:

- 9 • Internal and external auditing;
- 10 • Use of third-party data collection and resources;
- 11 • Use of state mandated reporting to safety regulators such as the
12 Occupational Safety and Health Administration;
- 13 • Reliance on automated processes such as the Supervisory Control and
14 Data Acquisition system that actively monitor our gas equipment;
- 15 • Use of database systems such as the Energy Management tool and SAP for
16 accurate data input;
- 17 • Use of automatically generated change logs for every notification down to
18 the field-by-field basis to ensure integrity of system controls and retention of
19 record history;
- 20 • Ensuring that only specific personnel or teams can enter or edit data such
21 as the Centralized Inspection Review Team;
- 22 • Review of the data by the process team to ensure accuracy;
- 23 • Review of many of the metrics included in this report by Business, Process,
24 Governance teams, and leadership to discuss performance and take action;
25 and
- 26 • Regular review by PG&E’s Internal Audit and Law Department of many of
27 the metrics identified in this report.

28 PG&E has provided a description of the specific bias controls applicable to
29 each metric in the bias control section within the metric discussion.

30 Individual or Group Performance Tied to Metrics

31 PG&E sets goals annually for employees in our goals system iConnect, that
32 cascade throughout each Functional Area. For a given year:

- 33 1) Senior Leaders identify the most significant areas of focus;

- 1 2) Senior Leaders set high level goals (e.g., Short-Term Incentive Plan metrics)
- 2 and provide direction on other areas of focus;
- 3 3) Goal setting is disaggregated and managed within the Functional Area
- 4 4) Downstream leaders set operational goals to meet objectives; and
- 5 5) Goal setting is managed locally.

6 For this report, to determine if a metric is tied to a specific goal PG&E
7 reviewed all available 2022 goals and metrics for Officers and Directors for the
8 Enterprise. PG&E met this requirement by searching all Functional Area goals
9 for each Safety Performance Metrics Report (SPMR) metric name and identified
10 the officers and Directors with performance goals that are tied to each SPMR
11 metric.

PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
SECTION 4
2022 IMPUTED ADOPTED VALUES FOR SAFETY-RELATED
RISK MITIGATION ACTIVITIES

PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
SECTION 4
2022 IMPUTED ADOPTED VALUES FOR SAFETY-RELATED RISK
MITIGATION ACTIVITIES

IV. 2022 Imputed Adopted Values for Safety Related and Risk Mitigation
Activities

The total estimated risk mitigation spending level as adopted in the 2020 General Rate Case (GRC) for 2022 and the recorded spend is provided in Tables 4-1 (expense) and 4-2 (capital) below. Please refer to PG&E's 2022 Risk Spending Accountability Report (RSAR) that will include additional detail on activities presented in PG&E's 2017 RAMP Report and 2020 GRC proceeding, including variance explanations for those activities/programs that meet the CPUC's variance criteria threshold.

TABLE 4-1
2022 TOTAL SAFETY-RELATED RISK MITIGATION IMPUTED ADOPTED VALUES AND
RECORDED COSTS EXPENSE
(THOUSANDS OF DOLLARS)

Line No.	Functional Area	2022 Imputed Adopted Costs	2022 Actual Costs	Difference for 2022 (\$)	Spending percent Variance for 2022 (%)
1	Gas Distribution	317,745.0	371,048.0	53,303.0	16.8%
2	Electric Distribution	1,104,724.3	2,610,325.3	1,505,601.0	136.3%
3	Nuclear Generation	290,657.0	278,083.1	(12,574.0)	(4.3)%
4	Power Generation	184,520.8	219,183.8	34,663.0	18.8%
5	Customer Care	162,154.7	211,525.5	49,370.8	30.4%
6	Shared Services/Information Technology	12,684.4	3,641.8	(9,042.5)	(71.3)%
7	Human Resources	36,215.4	34,079.1	(2,136.3)	(5.9)%
8	Total	2,108,701.6	3,727,886.6	1,619,185.0	76.8%

Note: This table is comprised of all Major Work Categories or Maintenance Activity Types that are related to safety-related risk mitigation activities included in the 2020 GRC. Gas Transmission and Storage SRM costs are not included as they were not part of the 2020 GRC or the 2022 RSAR.

TABLE 4-2
2022 TOTAL SAFETY-RELATED RISK MITIGATION IMPUTED ADOPTED VALUES AND
RECORDED COSTS CAPITAL
(THOUSANDS OF DOLLARS)

Line No.	Functional Area	2022 Imputed Adopted Costs	2022 Actual Costs	Difference for 2022 (\$)	Spending percent Variance for 2022 (%)
1	Gas Distribution	1,023,993.1	1,179,824.0	155,830.9	15.2%
2	Electric Distribution	2,103,733.9	3,278,202.3	1,174,468.4	55.8%
3	Nuclear Generation	10,229.9	12,964.7	2,734.8	26.7%
4	Power Generation	225,626.8	227,945.8	2,319.0	1.0%
5	Customer Care	130,987.1	134,654.3	3,667.2	2.8%
6	Shared Services/Information Technology	180,552.4	174,978.5	(5,573.9)	-3.1%
7	Total	3,675,123.3	5,008,569.6	1,333,446.3	36.3%

Note: This table is comprised of all Major Work Categories or Maintenance Activity Types that are related to safety-related risk mitigation activities included in the 2020 GRC. Gas Transmission and Storage SRM costs are not included as they were not part of the 2020 GRC or the 2022 RSAR.

1 In response to SPD's request, PG&E provides the total 2020 GRC risk
2 spend for 2022 broken down by RAMP chapter in Tables 4-3 (expense) and 4-4
3 (capital).¹ PG&E's 2022 RSAR, to be submitted May 1, 2023, will identify all
4 programs that have safety, reliability, and/or maintenance (SRM) activities. The
5 2022 RSAR will present risk spending using the organization of risks presented
6 in the 2017 RAMP and will also separately identify SRM costs that were not
7 directly in the 2017 RAMP.

8 In PG&E's next SPMR, the costs will be provided by RAMP risk as is
9 presented in the 2020 RAMP and 2023 GRC. Gas Transmission and Storage
10 RAMP risks will be included in the next SPMR as they were included as part of
11 the 2023 GRC and thus can be mapped from RAMP to GRC.

¹ The costs provided reflect the applicable 2020 GRC costs provided in PG&E's 2022 RSAR. PG&E's Gas Transmission & Storage and Electric Transmission RAMP costs are not included.

TABLE 4-3
2022 TOTAL SAFETY-RELATED RISK MITIGATION IMPUTED ADOPTED VALUES AND
RECORDED COSTS BY RAMP CHAPTER EXPENSE
(THOUSANDS OF DOLLARS)

Line No.	Functional Area	2017 RAMP Chapter	2020 GRC Exhibit	2017 RAMP Chapter Title	2022 Imputed Adopted Costs	2022 Actual Costs	Difference for 2022 (\$)	Spending percent Variance for 2022 (%)
1	Gas	3	3	Measurement and Control Failure – Release of Gas with Ignition Downstream	22,287.1	20,154.7	(2,132.4)	(0.1)
2	Gas	4	3	Measurement and Control Failure – Release of Gas with Ignition at Measurement and Control Facility	86,029.7	121,803.1	35,773.3	0.4
3	Gas	5	3	Release of Gas with Ignition on Distribution Facilities – Cross Bore	31,153.0	39,742.7	8,589.7	0.3
4	Gas	7	3	Measurement and Control Failure – Release of Gas with Ignition Downstream	153,744.7	125,958.6	(27,786.2)	(0.2)
5	Gas	Not in 2017 RAMP	3	N/A	128,708.8	125,958.6	(2,750.2)	(0.0)
6	Electric Distribution	9	4	Distribution Overhead Conductor Primary	329.5	524.2	194.8	0.6
7	Electric Distribution	11	4	Wildfire	802,023.5	1,959,081.8	1,157,058.3	1.4
8	Electric Distribution	Post GRC RAMP Mitigations ^(a)	4	N/A	0.0	154,143.7	154,143.7	100.0
9	Electric Distribution	Not in RAMP	4	N/A	236,509.0	402,034.0	165,525.0	0.7
10	Nuclear Generation	12	5	Nuclear Core Damaging	320,079.7	277,943.8	(42,135.9)	(0.1)

TABLE 4-3
2022 TOTAL SAFETY-RELATED RISK MITIGATION IMPUTED ADOPTED VALUES AND
RECORDED COSTS BY RAMP CHAPTER EXPENSE
(THOUSANDS OF DOLLARS)
(CONTINUED)

Line No.	Functional Area	2017 RAMP Chapter	2020 GRC Exhibit	2017 RAMP Chapter Title	2022 Imputed Adopted Costs	2022 Actual Costs	Difference for 2022 (\$)	Spending percent Variance for 2022 (%)
11	Nuclear Generation	Not in RAMP	5	N/A	(29,422.7)	139.3	29,561.9	(1.0)
12	Power Generation	13	5	Hydro System Safety - Dams	75,037.5	88,236.5	13,199.0	0.2
13	Power Generation	Not in RAMP	5	N/A	116,392.3	143,225.8	26,833.5	0.2
14	Customer and Communications	Not in RAMP	6	N/A	162,154.7	211,525.5	49,370.8	0.3
15	SS & IT	Not in RAMP	7	N/A	12,684.4	3,641.8	(9,042.5)	(0.7)
16	HR	Not in RAMP	8	N/A	36,215.4	34,079.1	(2,136.3)	(0.1)

Note: These values may not align with PG&E's final 2022 RSAR since the 2022 RSAR will be submitted on May 1, 2023, after the submission of this report. All values are from the 2017 RAMP as updated in the 2020 GRC. Values should not be totaled. Some costs mitigate multiple risks and therefore are reflected in more than one 2017 RAMP chapter (e.g., double counted due to the nature of how mitigation activities function). Gas Transmission & Storage and Electric Transmission RAMP costs are not included in this table.

(a) Activities in this category are related to wildfire.

TABLE 4-4
2022 TOTAL SAFETY-RELATED RISK MITIGATION IMPUTED ADOPTED VALUES AND
RECORDED COSTS BY RAMP CHAPTER CAPITAL
(THOUSANDS OF DOLLARS)

Line No.	Functional Area	2017 RAMP Chapter	2020 GRC Exhibit	2017 RAMP Chapter Title	2022 Imputed Adopted Costs	2022 Actual Costs	Difference for 2022 (\$)	Spending percent Variance for 2022 (%)
1	Gas	3	3	Measurement and Control Failure - Release of Gas with Ignition Downstream	161,971.5	185,798.3	23,826.8	0.1
2	Gas	4	3	Measurement and Control Failure - Release of Gas with Ignition at Measurement and Control Facility	85,694.4	106,305.7	20,611.3	0.2
3	Gas	5	3	Release of Gas with Ignition on Distribution Facilities - Cross Bore	675,195.8	816,772.2	141,576.3	0.2
4	Gas	7	3	Measurement and Control Failure - Release of Gas with Ignition Downstream	682,308.8	822,179.8	139,870.9	0.2
5	Gas	Not in 2017 RAMP	3	N/A	172,775.7	165,135.9	(7,639.9)	(0.0)
6	Electric Distribution	9	4	Distribution Overhead Conductor Primary	7,080.3	13,490.1	6,409.8	0.9
7	Electric Distribution	11	4	Wildfire	1,468,456.4	1,781,515.2	313,058.8	0.2
8	Electric Distribution	Post GRC RAMP Mitigations ^(a)	4	N/A	49,194.9	129,142.8	79,947.9	1.6
9	Electric Distribution	Not in RAMP	4	N/A	633,126.3	1,127,627.8	494,501.6	0.8
10	Nuclear Generation	Not in RAMP	5	N/A	10,229.9	12,964.7	2,734.8	0.3

TABLE 4-4
2022 TOTAL SAFETY-RELATED RISK MITIGATION IMPUTED ADOPTED VALUES AND
RECORDED COSTS BY RAMP CHAPTER CAPITAL
(THOUSANDS OF DOLLARS)
(CONTINUED)

Line No.	Functional Area	2017 RAMP Chapter	2020 GRC Exhibit	2017 RAMP Chapter Title	2022 Imputed Adopted Costs	2022 Actual Costs	Difference for 2022 (\$)	Spending percent Variance for 2022 (%)
11	Power Generation	13	5	Hydro System Safety - Dams	155,521.8	103,591.7	(51,930.2)	(0.3)
12	Power Generation	Not in RAMP	5	N/A	70,104.9	124,354.1	54,249.2	0.8
13	Customer & Communications	Not in RAMP	6	N/A	130,987.1	134,654.3	3,667.2	0.0
14	SS & IT	Not in RAMP	7	N/A	180,552.4	174,978.5	(5,573.9)	(0.0)

Note: These values may not align with PG&E's final 2022 RSAR since the 2022 RSAR will be submitted on May 1, 2023, after the submission of this report. All values are from the 2017 RAMP as updated in the 2020 GRC. Values should not be totaled. Some costs mitigate multiple risks and therefore are reflected in more than one 2017 RAMP chapter (e.g., double counted due to the nature of how mitigation activities function). Gas Transmission & Storage and Electric Transmission RAMP costs are not included in this table.

(a) Activities in this category are related to wildfire.

PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
SECTION 5
SAFETY PERFORMANCE METRICS

1 **PACIFIC GAS AND ELECTRIC COMPANY**
2 **2022 SAFETY PERFORMANCE METRICS REPORT**
3 **SECTION 5**
4 **SAFETY PERFORMANCE METRICS**

5 **V. Safety Performance Metrics**

6 **Metric 1: T&D Overhead Wires Down Non-Major Event Days**

7 **Metric Name and Description:**

8 T&D Overhead Wires Down Non-Major Event Days – Number of instances
9 where an electric transmission or primary distribution conductor is broken, or
10 remains intact, and falls from its intended position to rest on the ground or a
11 foreign object; a conductor is considered energized unless confirmed in an idle
12 state (i.e., de-energized); excludes down secondary distribution wires and “Major
13 Event Days” (MED) (typically due to severe storm events) as defined by the
14 Institute of Electrical and Electronics Engineers (IEEE) Standard 1366.

15 **Risks:**

16 Wildfire, Failure of Electric Transmission Overhead Assets, and Failure of
17 Electric Distribution Overhead Assets.

18 **Category:**

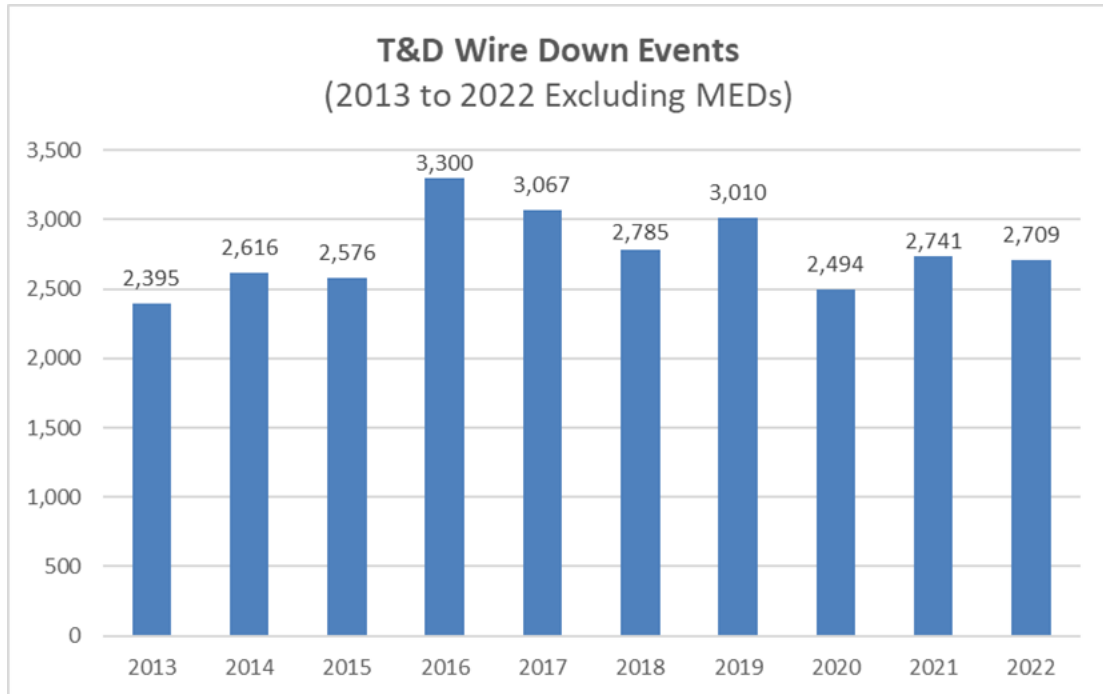
19 Electric

20 **Units:**

21 Number of wire down events.

1 **Summary:**

**FIGURE 5-1
T&D OVERHEAD WIRES DOWN METRIC DATA EXCLUDING MEDS (ANNUAL)**



2 **Narrative Context:**

3 In 2012, PG&E initiated the Wires Down Program (including introduction of
4 the wires down metric) to address the Company's increased focus on public
5 safety by reducing the number of conductors that fail and result in a contact with
6 the ground, a vehicle, or other object. Before 2012, wires down data was
7 collected in the OUTAGE and ESLIC databases but not tracked or used as a
8 metric. As part of the Wires Down Program, in an effort to identify and mitigate
9 the root cause of wires down incidents, Electric Operations implemented a
10 program to visit wires down locations to gather essential data, understand the
11 cause, and develop work plans to mitigate future wires down incidents.

12 Significant work has been performed to reduce wires down, including
13 replacing overhead conductors, vegetation clearing, hardening of distribution
14 circuits, infrared inspections of overhead lines to identify and repair hot spots,
15 and investigating wire down incidents and implementing learnings/corrective
16 actions.

1 PG&E's Vegetation Management team conducts site visits of vegetation
2 caused wires down events as part of its standard tree caused service
3 interruption investigation process. The data obtained from site visits supports
4 efforts to reduce future vegetation caused wires down events. The data
5 collected from these investigations also helps identify failure patterns by tree
6 species that are associated with wires down events.

7 2022 experienced 2,709 wire down events compared to 2,741 in 2021,
8 approximately a 1 percent decrease. Performance is in line with the 10-year
9 historical average of 2,769. Improvements have been made to the wires down
10 forecast model to include weather day and non-weather day information to
11 better understand events not related to weather. This provided better insights to
12 blue sky day conductor performance and improved forecasting performance.

13 **Is Metric Used for the Purposes of Determining Executive (Director Level**
14 **or Higher) Compensation Levels and/or Incentives?**

15 No, in 2022, T&D Overhead Wires Down Non-Major Event Days is not a
16 STIP metric.

17 **Is Metric Linked to the Determination of Individual or Group Performance**
18 **Goals?**

19 No, T&D Overhead Wires Down, is not linked to 2022 individual or group
20 performance goals for Director-level, or higher, positions.

21 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

22 No, T&D Overhead Wires Down, is not linked to 2022 individual
23 performance goals for Director-level, or higher, positions.

24 **Bias Controls:**

25 The T&D Wires Down metric is a strong proxy of the overall goal of reducing
26 the potential contacts with wires down and improving the reliability of the electric
27 system along with reducing public safety risk. Internal Auditing (IA) performed a
28 validation of the metric performance in 2022 and as part of a validation of 2021
29 Q4 metric reporting. The business maintains the same controls in place at the
30 time of IA's validation but which have not been revalidated by IA for the current
31 year. The wires down events are reported by field and control center personnel
32 per uniform reporting guidelines as the events occur.

- 1 • Engineers conduct post wire down event reviews (typically for the non-MED
2 events) and will initiate corrections to the data via the outage quality team to
3 ensure the reporting guidelines were followed and the records align with
4 information reported by repair crews.
- 5 • The outage quality team processes all valid change requests received and
6 also initiates corrections based on their reviews and findings of the collected
7 outage information.

8 **Rate Case Safety Goal Progress:**

9 The T&D Wires Down metric (excluding downed secondary distribution
10 wires and MEDs) is not a 2020 GRC or RAMP stated safety goal. This metric
11 has been one of the key indicators that PG&E is using to track Public Safety
12 Performance.

13 Significant work was performed to reduce wires down, including replacing
14 overhead conductor, vegetation clearing, hardening of distribution circuits,
15 infrared inspections of overhead lines to identify and repair hot spots,
16 investigating wires down incidents, and implementing learnings/corrective
17 actions.

18 **Monthly Data:**

19 See Attachment A at the end of this report.

1 **Metric 2: Transmission and Distribution (T&D) Overhead Wires Down –**
2 **Major Event Days (MED)**

3 **Metric Name and Description:**

4 T&D Overhead Wires Down – MEDs – Number of instances where an
5 electric transmission or primary distribution conductor is broken, or remains
6 intact, and falls from its intended position to rest on the ground or a foreign
7 object; a conductor is considered energized unless confirmed in an idle state
8 (i.e., de-energized). Includes MEDs (typically due to severe storm events) as
9 defined by the Institute of Electrical and Electronics Engineers (IEEE) Standard
10 1366.

11 **Risks:**

12 Wildfire, Failure of Electric Transmission Overhead Assets, and Failure of
13 Electric Distribution Overhead Assets

14 **Category:**

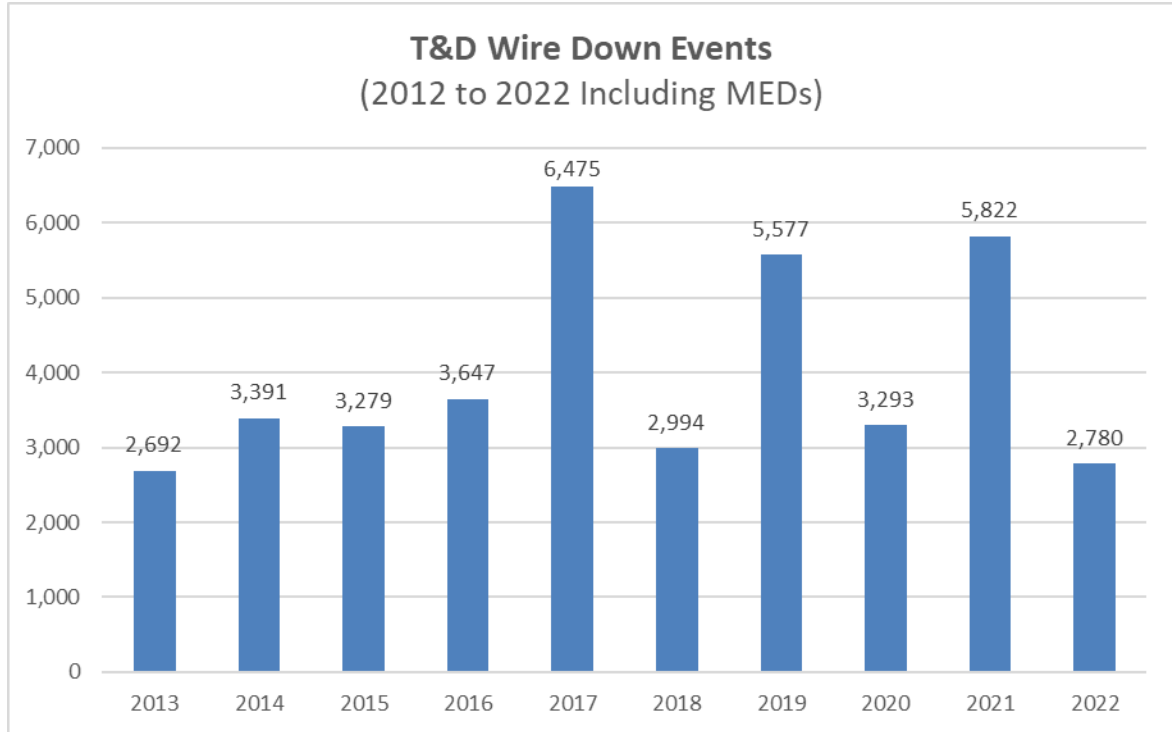
15 Electric

16 **Units:**

17 Number of wire down events

1 **Summary:**

**FIGURE 5-2
T&D OVERHEAD WIRES DOWN METRIC DATA (ANNUAL)**



Historical Number of MEDs

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4	5	10	3	30	7	31	14	25	5

2 **Narrative Context:**

3 The metric, inclusive of MEDs is not being used for internal reporting
4 purposes. PG&E focuses on transmission and primary distribution conductor
5 wire down events, excluding MEDs. As can be seen in the data above,
6 particularly in 2017, 2019, and 2021 the results for this metric fluctuate heavily
7 based on the number of severe weather event days in a particular year. PG&E
8 uses the IEEE 1366 Standard titled IEEE Guide for Electric Power Distribution
9 Reliability Indices to define and apply excludable MEDs to measure the
10 performance of its electric system under normally expected operating conditions.
11 Its purpose is to allow major events to be analyzed apart from daily operation
12 and avoid allowing daily trends to be hidden by the large statistical effect of
13 major events. Per the Standard, the MED classification is calculated from the

1 natural log of the daily System Average Interruption Duration Index (SAIDI)
2 values over the past five years. The SAIDI index is used as the basis since it
3 leads to consistent results and is a good indicator of operational and design
4 stress. In 2022, the threshold for MEDs increased from a daily SAIDI value of
5 3.5 to 5.0. This resulted in 20 fewer MEDs than 2021, which is reflected in the
6 approximately 50 percent fewer wires down events experienced. Given the
7 fluctuations in this metric from weather patterns, PG&E does not view it as an
8 appropriate metric to properly assess system performance or improvement.

9 **Is Metric Used for the Purposes of Determining Executive (Director Level**
10 **or Higher) Compensation Levels and/or Incentives?**

11 No, in 2022, T&D Overhead Wires Down–MEDs was not used as a STIP
12 metric.

13 **Is Metric Linked to the Determination of Individual or Group Performance**
14 **Goals?**

15 No, T&D Overhead Wires Down–MEDs, is not linked to 2022 individual or
16 group performance goals for Director-level, or higher, positions.

17 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

18 No, T&D Overhead Wires Down–MEDs, is not linked to 2022 individual
19 performance goals for Director-level, or higher, positions.

20 **Bias Controls:**

21 While PG&E does not focus on this metric with MEDs included, the following
22 is in place for the traditional measure (with MEDs excluded):

23 The T&D Wires Down metric is a strong proxy of the overall goal of reducing
24 the potential contacts with wires down and improving the reliability of the electric
25 system along with reducing public safety risk. IA performed a validation of the
26 metric performance in 2022.

- 27 • The wires down events are reported by field and control center personnel
28 per uniform reporting guidelines as the events occur.
- 29 • Engineers conduct post wire down event reviews (typically for the non-MED
30 events) and will initiate corrections to the data via the outage quality team to
31 ensure the reporting guidelines were followed and the records align with
32 information reported by repair crews.

- 1 • The outage quality team processes all valid change requests received and
2 initiates corrections based on their reviews and findings of the collected
3 outage information.

4 **Rate Case Safety Goal Progress:**

5 This metric is not a safety goal in the 2020 GRC. PG&E does not focus on
6 this metric inclusive of MEDs; therefore, it is not used to track safety
7 performance. The T&D Wires Down metric excluding MEDs is used to track
8 Public Safety Performance. See Metric 1 discussion for additional detail.

9 **Monthly Data:**

10 See Attachment A at the end of this report.

1 **Metric 3: Electric Emergency Response Time**

2 **Metric Name and Description:**

3 Electric Emergency Response Time – Average time and median time in
4 minutes to respond on-site to an electric related emergency notification from the
5 time of notification to the time a representative (or qualified first responder)
6 arrived onsite. Emergency notification includes all notifications originating from
7 911 calls and calls made directly to the utilities’ safety hotlines. The data used
8 to determine the average time and median time shall be provided in increments
9 as defined in (GO) 112-F 123.2 (c) as supplemental information, not as a metric.

10 **Risks:**

11 Wildfire, Overhead Conductor, Public Safety, Worker Safety¹

12 **Category:**

13 Electric

14 **Units:**

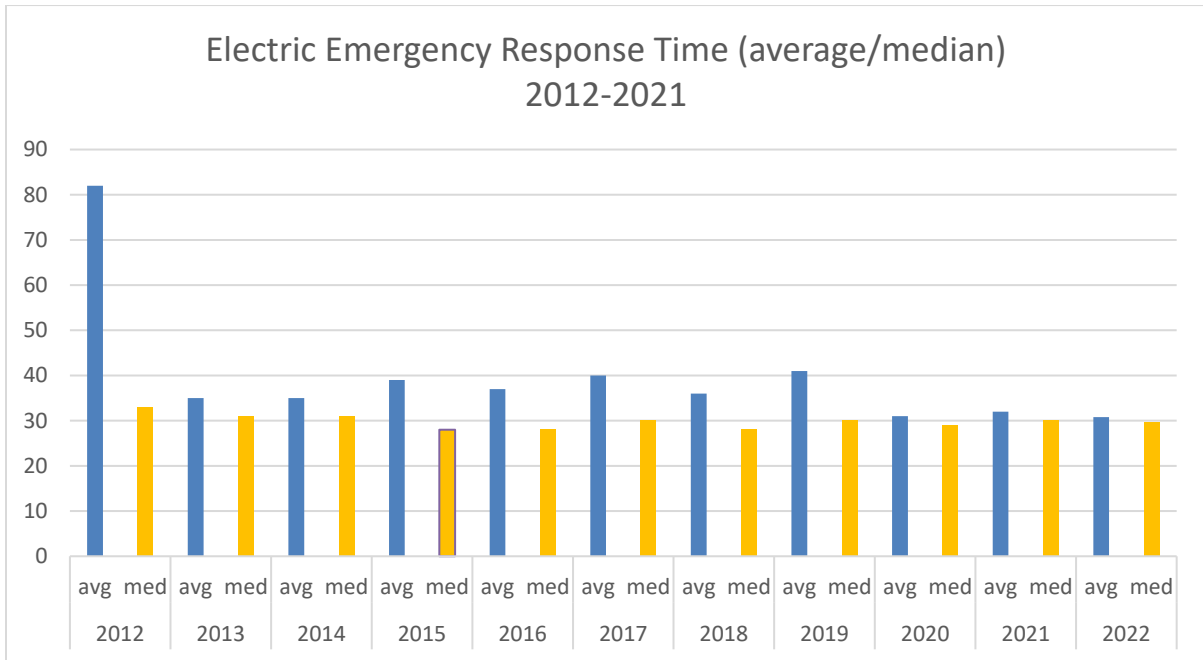
15 The time in minutes that an electric crew person or a qualified first
16 responder takes to respond after receiving a call which results in an emergency
17 order.

¹ The Corporate Risk Register now has the following risks: (1) Wildfire, (2) Failure of Electric Distribution Overhead Assets, (3) Third-Party Safety Incident (4) Employee Safety Incident; and (5) Contractor Safety Incident. Distribution Overhead Conductor – Primary no longer exists as a separate risk.

1

Summary:

**FIGURE 5-3
ELECTRIC EMERGENCY RESPONSE TIME (AVERAGE AND MEDIAN)
(ANNUAL)**



2

Narrative Context:

3

PG&E’s response to 911 calls and the amount of time it takes field resources to respond to those calls is primary performance metric used to evaluate PG&E’s commitment to public safety. There is a direct linkage between public safety and a utility’s response to emergency situations, which is why PG&E selected emergency response time for this element of the performance metric.

9

The keys to performing well on this metric are accurately predicting when large volumes of calls will come in (based on weather forecasts) and ensuring there are enough resources on hand to respond to all calls. This requires coordinating across departments (like Electric and Gas Operations) to share resources to respond when high volumes of 911 calls are anticipated. These tactics are especially important during stormy weather; high call volume during bad weather days may vary from year-to-year.

16

Metric performance has been driven by proactive scheduling of resources for 911 response, coordination across multiple functional areas on training and

17

1 availability of resources for weather days and improved understanding of shifts
2 in storm fronts and impacts on the system. Additional actions include faster
3 resource notification, utilization of GPS to integrate vehicle and the 911 standby
4 tag locations and use of supplemental (non-traditional) resources.

5 PG&E's response to 911 electric-related emergencies improved by roughly
6 50 percent from 2011-2020. In 2022, PG&E's average showed a reduction of
7 one minute and median response time remained unchanged from 2021
8 performance. First quartile response times were also maintained.

9 PG&E began benchmarking its response to 911 calls with other utilities in
10 2012. PG&E's 2011 performance was 3rd quartile, improving to 2nd quartile in
11 2012-2014, and reaching 1st quartile in 2015. Since 2015, PG&E's historical
12 performance has been within the first quartile and best-in-class in some years.

13 **Is Metric Used for the Purposes of Determining Executive (Director Level**
14 **or Higher) Compensation Levels and/or Incentives?**

15 Yes, the Electric Emergency Response Time (within 60 minutes) was used
16 as a STIP metric for 2022.

17 **Is Metric Linked to the Determination of Individual or Group Performance**
18 **Goals?**

19 Yes, the Electric Emergency Response Time (within 60 minutes) metric is
20 linked to 2022 performance goals for one or more Director-level position or
21 higher.

22 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

23 Yes, the Electric Emergency Response Time (within 60 minutes) metric is
24 linked to all individual goals as part of 2022 STIP plan. In addition, this metric
25 may be included as part of an individual's performance goals.

26 **Bias Controls:**

27 The metric performance data is captured and stored in the Outage
28 Information System (OIS) database. Each 911 call has a time stamp. The start
29 time of a 911 call involves receipt by utility personnel and entry into the OIS
30 database (creation of a tag). The tag is created in the OIS database when the
31 PG&E personnel is on the phone with the 911 dispatch agency (there is a direct
32 911 stand-by line into Gas dispatch, where all 911 stand-by calls are routed).

1 This process removes the delay between the time the call is received and
2 entered into the system. IA performed a validation of the metric performance in
3 2022 and periodically validates the controls in place for gathering metric data
4 and the Utility's performance in meeting the metric.

5 **Rate Case Safety Goal Progress:**

6 This safety metric does not support a 2020 GRC safety goal.

7 **Monthly Data:**

8 See Attachment A at the end of this report.

1 **Metric 4: Fire Ignitions**

2 **Metric Name and Description:**

3 Fire Ignitions – The number of fire incidents annually reportable to the
4 California Public Utilities Commission (CPUC) per Decision (D.) 14-02-015.

5 **Risks:**

6 Overhead Conductor, Wildfire, Public Safety, Worker Safety, Catastrophic
7 Event Preparedness²

8 **Category:**

9 Electric

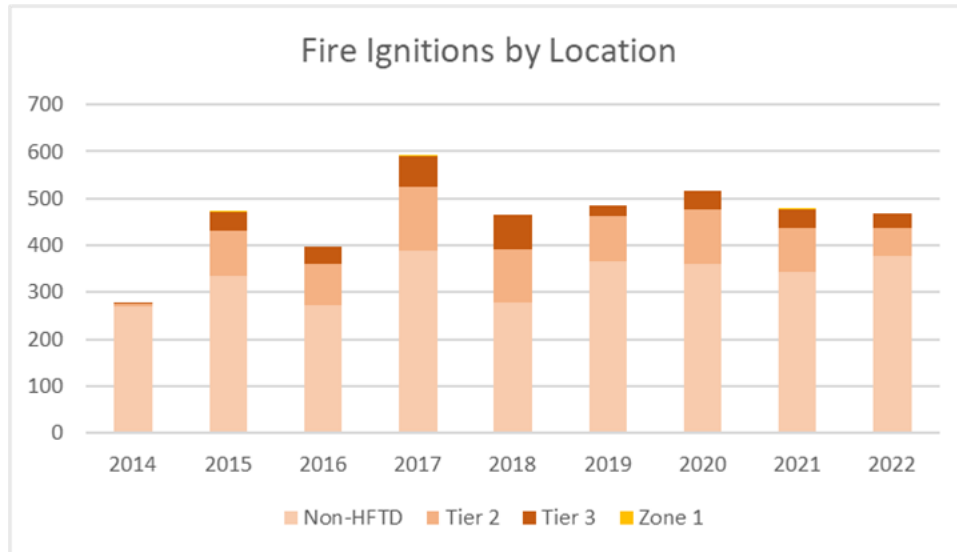
10 **Units:**

11 Number of reportable ignitions.

² The Corporate Risk Register now has the following risks: (1) Wildfire, (2) Failure of Electric Distribution Overhead Assets, (3) Third-Party Safety Incident, (4) Employee Safety Incident, (5) Contractor Safety Incident, and (6) Emergency Preparedness and Response. Distribution Overhead Conductor – Primary no longer exists as a separate risk.

1 **Summary:**

**FIGURE 5-4A
FIRE IGNITION METRIC DATA (ANNUAL)**



Note: This report reflects 4 ignitions in 2021 that meet Electric Incident Report criteria, defined by Appendix B to CPUC D.06-04-055, for which PG&E has not formed a conclusion about the origin or cause.

**TABLE 5-4B
FIRE IGNITIONS METRIC DATA BY LOCATION (ANNUAL)**

Year	Non-HFTD	Tier 2	Tier 3	Zone 1	Total
2014	270	8	1		279
2015	336	96	40	2	474
2016	272	90	37		399
2017	389	137	63	1	595
2018	280	114	73		467
2019	367	95	24		486
2020	360	117	39		516
2021	345	93	39	1	478
2022	378	59	30	0	467

2 **Narrative Context:**

3 Reportable Fire Ignitions is a primary metric used to evaluate PG&E's
4 commitment to public safety. This metric tracks the number of electrically

1 involved fire ignitions with the conditions that meet the CPUC definition in
2 D.14-02-015 within PG&E's service territory. PG&E began tracking this data in
3 July 2014. The data is collected from multiple sources and validated through our
4 Fire Incident Data Collection Processes (RISK-6306S/P):

- 5 • The Field Applications System provides ignition information from Distribution
6 Troublemakers as they respond to Field Orders. When a Troublemaker arrives
7 at an incident location and identifies signs that an ignition occurred, the
8 Troublemaker selects "Yes" in the "Fire Incident" field of their data entry
9 device. This then opens an "Ignitions" tab where the Troublemaker enters
10 information related to the ignition, including the fire location, suppressing
11 agency information, whether media is on site, if the fire was extinguished,
12 equipment ID numbers, weather, facility impacted, estimated wind, event
13 element, fire size, type of construction, and evidence collected. The
14 Troublemaker has an option to attach pictures and other documents to the
15 Field Order. This information is received by the Wildfire Risk Management
16 team who quality check (QC) and further investigate the ignitions.
- 17 • The Transmission Outage Tracking and Logging system provides
18 information about any planned or unplanned outages on Transmission and
19 Substation assets. This system indicates if an ignition resulted from an
20 unplanned transmission system outage or interruption. The information is
21 logged by the Grid Control Operators. The interruptions resulting in an
22 ignition are sent to EII who reviews and further investigate the ignitions.
- 23 • The Integrated Logging Information System (ILIS)/Outage Information
24 System (OIS) systems contain information related to outages and switching
25 to restore customers that were de-energized due to an equipment failure or
26 electric incident. This information applies only to ignitions that result in an
27 outage and contains information about the fault, potential causes of the fault,
28 location and circuit information, customers affected by the outage, and steps
29 and times to restore power to affected customers.
- 30 • The information received from these systems goes through a thorough
31 investigation process. This process ensures that all required information for
32 an event is received shortly after the event has occurred, and also ensures
33 the ignition data is complete and accurate. The information is received by
34 the Ignition Investigation team and entered into the Fire Ignition Tracker.

1 The Ignition Investigations team then verifies the fire location, High Fire
2 Threat District (HFTD), event element, suspected initiating cause and other
3 fields. The Wildfire Risk Management team also communicates with
4 Troublemakers and responding fire agency incident leads and creating
5 executive summaries to communicate findings.

- 6 • Discrepancies identified in our system of records
7 (ILIS/OIS/FAS/Transmission Operation Tracking and Logging) are corrected
8 during this investigation phase.
- 9 • The data is also sent to the appropriate Asset Family Owners to help those
10 teams identify and address failure trends and align mitigation strategies with
11 areas of risk. This data is also utilized to inform the wildfire risk model.

12 **Is Metric Used for the Purposes of Determining Executive (Director Level**
13 **or Higher) Compensation Levels and/or Incentives?**

14 Yes, in 2023, the count of reportable fire ignitions in HFTD (where the risk of
15 consequential ignitions is greatest) is a 2023 PG&E Short Term Incentive Plan
16 (STIP) metric. Those reportable ignitions that meet one of the following three
17 criteria: (1) result in fires >5,000 acres; (2) result in fires that destroy more than
18 500 structures; or (3) result in a 3rd party fatality impact PG&E's Wildfire Risk
19 Reduction Metric as well, which is also a STIP goal.

20 **Is Metric Linked to the Determination of Individual or Group Performance**
21 **Goals?**

22 Yes, Fire Ignitions is linked to 2023 group performance goals for one or
23 more Director-level position or higher.

24 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

25 Yes, Fire Ignitions is linked to all individual goals as part of 2023 STIP plan.
26 In addition, this metric may be included as part of an individual's performance
27 goals.

28 **Bias Controls:**

29 The Ignition Investigation team has a documented and transparent ignition
30 analysis process to ensure that all required information for an event is received
31 shortly after the event occurred, is complete, and is accurate. IA periodically

1 validates the controls in place for gathering metric data and the Utility's
2 performance in meeting the metric.

3 **Rate Case Safety Goal Progress:**

4 While this metric was not a stated safety goal in the 2020 General Rate
5 Case (GRC), PG&E tracks the number of fires (ignitions) as one of its key
6 performance measures. PG&E's 2020 GRC testimony³ discussed planned work
7 to mitigate the risk of wildfires, and indicated that the controls for this risk will
8 continue to be strengthened in the future due to the increasing severity of
9 drought conditions, the size of PG&E's electric system, and the quantity and
10 diversity of trees in the Company's service territory.

11 **Monthly Data:**

12 See attachment A at the end of this report.

³ See 2020 GRC Exhibit (PG&E-4), Chapter 2A (Wildfire Risk and Policy Overview) for a complete description of PG&E's wildfire controls and mitigations.

1 **Metric 5: Gas Dig-In**

2 **Metric Name and Description:**

3 Gas Dig-In – The number of third-party gas dig-ins per 1,000 Underground
4 Service Alert (USA) tags/tickets received for gas. The ticket count excludes fiber
5 and electric tickets. A gas dig-in refers to any impact or exposure that results in
6 the need to repair an underground facility due to a weakening or the partial or
7 complete destruction of the facility, including, but not limited to, the protective
8 coating, lateral support, cathodic protection or the housing for the line device or
9 facility. A third-party dig-in is damage caused by someone other than the utility
10 or a utility contractor.

11 The Company participates in a one-call “811” public service program
12 administered by USA. USA provides the Company notification of activities that
13 could be damaging to the Company’s gas pipelines. These notifications are
14 referred to as USA tickets. A ticket is the receipt of information by the Company
15 from USA regarding onsite meetings, project designs, or a planned excavation.
16 The ticket component of this metric includes PG&E gas tickets received from all
17 parties (i.e., first-, second-, and third-parties).

18 **Risks:**

19 Transmission Pipeline Failure – Rupture with Ignition and Distribution
20 Pipeline Rupture with Ignition (non-Cross Bore), Catastrophic Damage involving
21 Gas Infrastructure (Dig-Ins)⁴

22 **Category:**

23 Gas

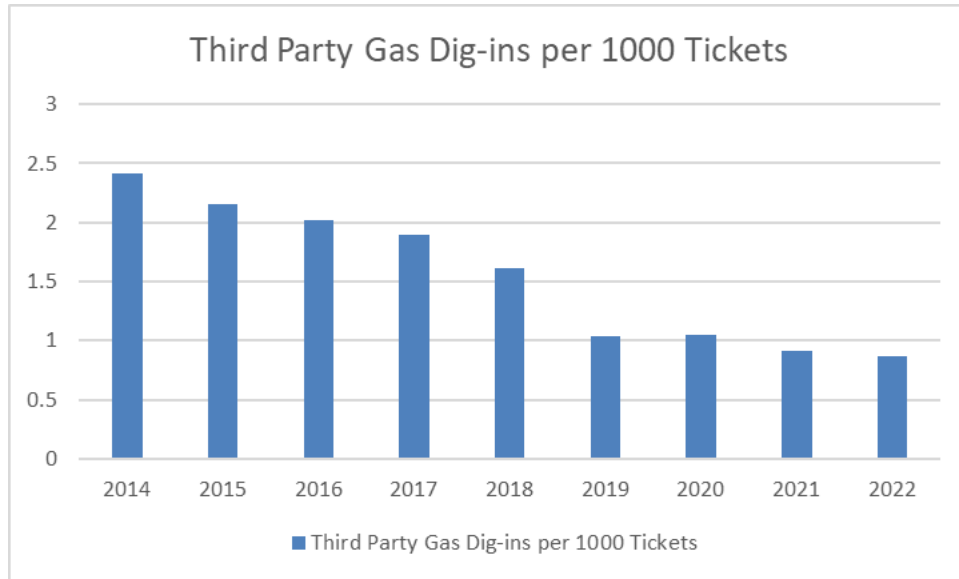
24 **Units:**

25 The number of third-party gas dig-ins per 1,000 USA tags/tickets.

4 The Corporate Risk Register now has the following risks: Loss of Containment on Gas Transmission Pipeline and Loss of Containment on Gas Distribution Main or Service.

1 **Summary:**

**FIGURE 5-5
THIRD-PARTY DIG-INS PER 1,000 TICKETS (ANNUAL)**



2 **Narrative Context:**

3 There has been a downward trend in the number of third-party dig-ins per
4 1,000 USA tickets since 2014, with a slight uptick in 2020. At the same time, the
5 number of USA tickets has increased. From 2014-2022, PG&E experienced a
6 136 percent increase in USA tickets. With the increase in USA tickets received
7 between 2014-2017 the third-party dig-in count climbed, peaking in 2017, with
8 1,780 third-party dig-ins and then began a steady decline to 1,379 third-party
9 dig-ins in 2022. PG&E attributes the reduction in the number of third-party
10 dig-ins per 1,000 USA tickets to PG&E's increase in Damage Prevention
11 activities.

12 To continuously focus on improving performance, metric results are reported
13 monthly and reviewed at leadership meetings and weekly huddles to discuss
14 results and actions to take, as needed.

15 **Is Metric Used for the Purposes of Determining Executive (Director Level
16 or Higher) Compensation Levels and/or Incentives?**

17 Yes, Gas Dig-In was used as a STIP metric for 2022.

1 **Is Metric Linked to the Determination of Individual or Group Performance**
2 **Goals?**

3 Yes, Gas Dig-In is linked to 2022 group performance goals for one or more
4 Director-level position or higher.

5 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

6 Yes, Gas Dig-In is linked to all individual goals as part of 2022 STIP plan. In
7 addition, this metric may be included as part of an individual's performance
8 goals.

9 **Bias Controls:**

10 All dig-ins are reviewed by the Damage Prevention team to determine
11 appropriate delineation of first-party, second-party or third-party dig-in. Total
12 USA tickets are determined by the California one-call system, independent to
13 PG&E.

14 The metric definition for this metric including targets, target setting
15 methodology, and exclusions, is documented and approved by Gas Operations
16 Leadership. Metric results are reported monthly by the Gas Operations
17 Business Process Governance team and reviewed at leadership meetings to
18 discuss performance and take action as needed. In the event there is a
19 resulting need for additional budget or other resources, approval must be
20 obtained from the Gas Operations Senior Leadership team at the Work, Finance
21 and Resource Committee meeting.

22 On a quarterly basis, a supporting documentation package is prepared by
23 the Damage Prevention team, reviewed by the Business Process Governance
24 team, and then routed for Gas Operations Senior Leadership approval. The
25 support packages are also reviewed quarterly by Compensation and by Internal
26 Audit who periodically validates the controls in place for gathering metric data
27 and the Utility's performance in meeting the metric.

28 **Rate Case Safety Goal Progress:**

29 This metric supports and reflects progress in PG&E's safety goal of dig-in
30 prevention for the safety of both PG&E contractors and the public at large by

1 reduced dig-ins per 1,000 tickets.⁵ Specific Damage Prevention and Public
2 Safety initiatives that contribute to dig-in reduction included in the 2020 GRC
3 were: (1) continued participation in the Gold Shovel Program including providing
4 certification to the contracting community on dig-in prevention, (2) the use of
5 caution tape in PG&E’s construction activities, which provides excavators with a
6 clear sign that gas facilities are present, (3) additional training for PG&E
7 excavators to conduct a “pre-sweep” prior to excavation, ensuring that all
8 structures are identified, (4) a Damage Prevention Manual to provide clear
9 instruction around critical processes, including troubleshooting of difficult to
10 locate facilities, and (5) the Public Awareness program which aims to improve
11 public awareness by sending bill inserts in the mail, making education links
12 available on e-mail bill pay, sending separate mailers, running ads in
13 newspapers and the radio, and conducting companywide campaigns for Call
14 811 Before You Dig.

15 PG&E’s transmission-related Locate and Mark activities are discussed in the
16 2019 Gas Transmission and Storage (GT&S) Rate Case.⁶ Additionally, PG&E
17 describes its goal to maintain a “Line of Sight” for all pipeline markers in the
18 2019 GT&S Rate Case.⁷ Pipeline markers are effective for preventing dig-ins or
19 accidental damage of PG&E assets.

20 PG&E’s Locate and Mark program is identified as a control to the Loss of
21 Containment on Gas Transmission Pipeline⁸ as well as Loss of Containment on
22 Gas Distribution Main and Service⁹ risk in the 2021 RAMP.

23 **Monthly Data:**

24 See Attachment A at the end of this report.

⁵ See 2020 GRC (1) Exhibit (PG&E-14), Chapter 12, pp. 14-26 through 14-30; and (2) Exhibit (PG&E-3), Chapter 6, pp. 6-13 through 6-14.

⁶ See 2019 GT&S Rate Case Prepared Testimony, Volume 1, Chapter 9, pp. 9-12 through 9-15.

⁷ See 2019 GT&S Rate Case Prepared Testimony, Volume 1, Chapter 9, p. 9-29.

⁸ See 2020 RAMP, p. 7-20.

⁹ See 2020 RAMP, pp. 8-25 through 8-25.

1 **Metric 6: Gas In-Line Inspection (ILI)**

2 **Metric Name and Description:**

3 Gas ILI – Total miles of transmission pipe inspected annually by ILI
4 and percentage of transmission pipelines inspected annually by inline
5 inspections.

6 **Risks:**

7 Catastrophic Damage Involving High-Pressure Pipeline Failure¹⁰

8 **Category:**

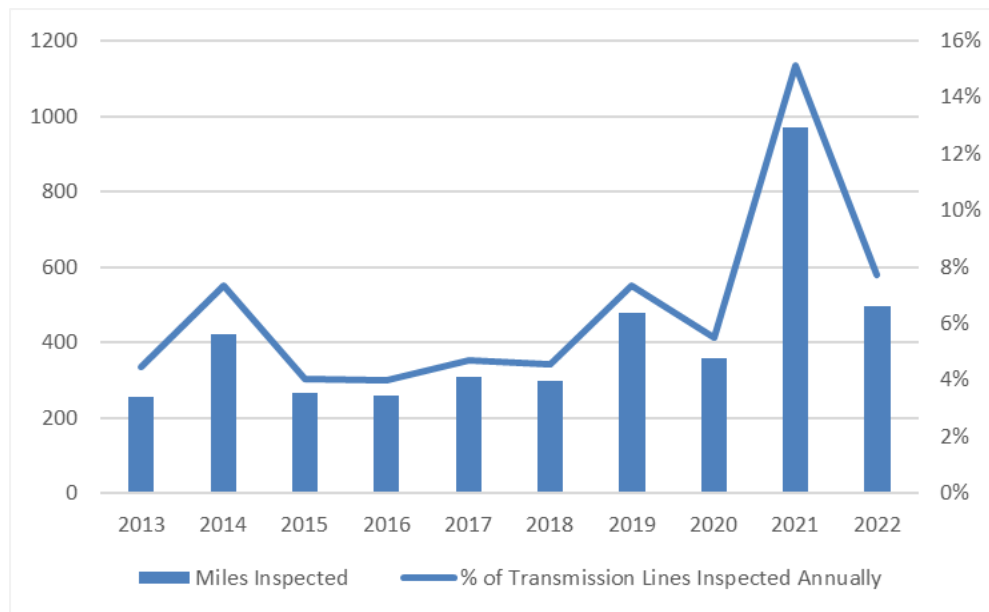
9 Gas

10 **Units:**

11 Total number of miles of inspections performed and percentage inspected
12 by ILI annually.

13 **Summary:**

**FIGURE 5-6
MILES OF PIPELINE INSPECTED (ANNUAL)**



¹⁰ The Corporate Risk Register now has the following risk: Loss of Containment on Gas Transmission Pipeline.

1 **Narrative Context:**

2 This metric measures Pacific Gas and Electric Company’s (PG&E) ILI work
3 completed, including activities that exceed current code requirements. After the
4 pipeline is upgraded to accommodate an ILI tool, cleaning and inspections are
5 conducted to collect data about the pipe. This data is analyzed for pipeline
6 anomalies that must be remediated through the Direct Examination and Repair
7 process where the anomaly is exposed, examined, and repaired, as necessary.
8 The information from Direct Examination and Repair is used to generate
9 additional prevention/mitigation activities to improve the long-term safety and
10 reliability of the pipeline.

11 Total miles of pipeline in-line inspected with traditional ILI tools vary by year
12 and are correlated with miles of pipeline upgraded and required re-inspection
13 miles. Decision 11-06-017, as codified by Public Utilities Code Section 958,
14 requires natural gas transmission pipelines in California to be capable of ILIs,
15 where warranted. In addition, both Title 49 of the Code of Federal Regulations –
16 Transportation Part 192, Subpart O, and PG&E’s traditional ILI Program
17 procedures requires reassessments, which drive the required ILI re-inspection
18 miles in a given year. Further, ILI is the most reliable pipeline integrity
19 assessment tool currently available to natural gas pipeline operators to assess
20 the internal and external condition of transmission line pipe. From 2013-2022,
21 the total number of miles of inspections performed increased by 93.3 percent. In
22 2022, PG&E inspected a total of 497.6 miles of pipe.

23 To continuously focus on improving performance, metric results are reported
24 monthly and reviewed at leadership meetings and weekly huddles to discuss
25 results and take action as needed. Performance in 2022 was on target. As
26 noted above, the number of miles in-line inspected vary by year and are
27 correlated with miles of pipeline upgraded and required re-inspection miles.

28 **Is Metric Used for the Purposes of Determining Executive (Director Level**
29 **or Higher) Compensation Levels and/or Incentives?**

30 No, in 2022, Gas ILI metric was not used as a STIP metric for.

1 **Is Metric Linked to the Determination of Individual or Group Performance**
2 **Goals?**

3 Yes, Gas ILI, is linked to 2022 individual or group performance goals for one
4 or more Director-level, or higher, positions.

5 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

6 Yes, in 2022, the following position(s) include individual performance goals
7 that are linked to Gas ILI:

- 8 • Director: Gas Engineering (2), Gas Operations (1); and
- 9 • Senior Director: Gas Operations (1)

10 **Bias Controls:**

11 Metric results are reported monthly by the Gas Operations Business
12 Process Governance team and reviewed at leadership meetings to discuss
13 performance and take action. In the event that there is a resulting need for
14 additional budget or resources, approval must be obtained from the
15 Gas Operations Senior Leadership team at the Work, Finance and Resource
16 Committee meeting.

17 During the years that this was a STIP metric, on a quarterly basis the
18 Gas Operations Business Process Governance team worked to confirm ILI
19 projects and mileage with various stakeholders. Mileage and unit capture dates
20 from the P6 database (scheduling program used by the GT Project Management
21 team) were verified by the Gas Operations Business Process Governance team
22 to ensure consistency with the Assessment Completion Notification (ACN) form
23 (Engineering record), which is signed by the ILI engineering Supervisor or
24 Manager. A supporting documentation package for metric results was prepared
25 quarterly by the Business Process Governance team, then routed for
26 Gas Operations Senior Leadership approval. The support packages were also
27 reviewed each quarter by Compensation and Internal Audit.

28 In 2021, the metric was no longer included as a STIP metric, however the
29 review process established by the Business Process Governance team was
30 maintained.

1 **Rate Case Safety Goal Progress:**

2 This safety metric does not support a 2020 General Rate Case safety goal
3 given this metric is a gas transmission, not distribution, related metric. As of
4 2022, approximately 50 percent of the system is piggable bringing the total
5 piggable mileage to 3201 miles.

6 **Monthly Data:**

7 See Attachment A at the end of this report.

1 **Metric 7: Gas In-Line Upgrade**

2 **Metric Name and Description:**

3 Gas In-Line Upgrade – Miles of gas transmission lines upgraded annually to
4 permit inline inspections.

5 **Risks:**

6 Catastrophic Damage Involving High-Pressure Pipeline Failure¹¹

7 **Category:**

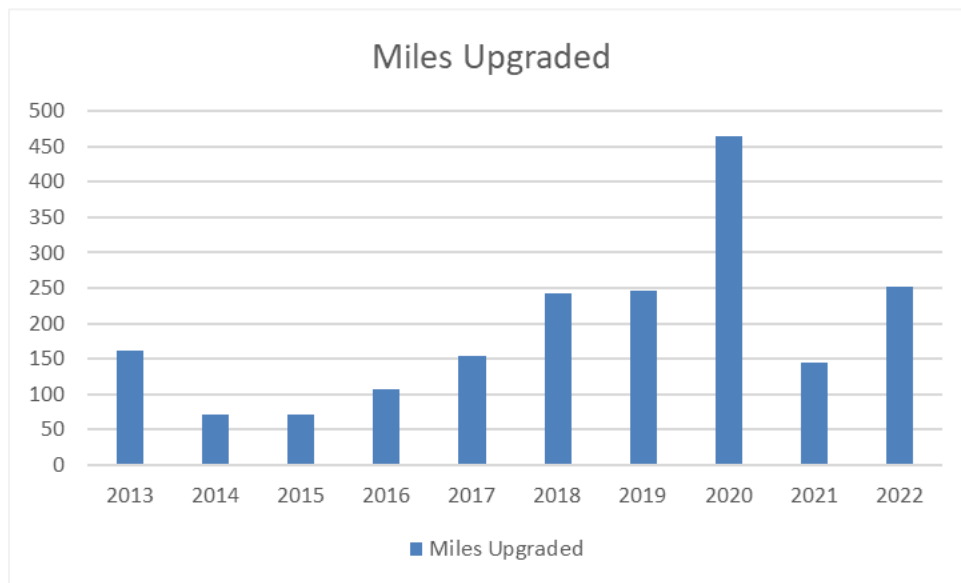
8 Gas

9 **Units:**

10 Miles

11 **Summary:**

**FIGURE 5-7
MILES OF PIPELINE UPGRADED (ANNUAL)**



¹¹ The Corporate Risk Register now has the following risks: Loss of Containment on Gas Transmission Pipeline.

1 **Narrative Context:**

2 This metric measures the number of miles of complete planned Traditional
3 In-Line Inspection (ILI) Upgrade projects, including activities that exceed current
4 code requirements. Prior to running a Traditional ILI tool in a pipeline, a pipeline
5 must be modified with portals called “launchers” and “receivers,” and pipeline
6 features that would obstruct the passage of the tool to make the pipeline
7 piggable must be replaced.

8 Annual Traditional ILI upgrade mileage totals have increased in the last few
9 years. D.11-06-017, as codified by Pub. Util. Section 958, requires natural gas
10 transmission pipelines in California be capable of ILIs, where warranted. ILI is
11 the most reliable pipeline integrity assessment tool currently available to natural
12 gas pipeline operators to assess the internal and external condition of
13 transmission line pipe. Since 2020, there has been a downtick in miles
14 upgraded by PG&E with 145.5 miles in 2021 and 252.6 miles in 2022 owing to
15 having fewer upgrade segments spanning greater than 40 miles.

16 There are three major phases to an ILI Program. This metric is to track
17 progress on the first phase, which involves modifying or upgrading the existing
18 pipeline system to accommodate a traditional ILI tool. PG&E refers to this as
19 “Traditional ILI Upgrades,” which involve capital improvements to make the
20 pipelines piggable. It includes installing pig launchers and receivers in
21 appropriate locations to introduce and remove the cleaning and ILI tools from the
22 inside of the pipeline. It also includes replacing certain segments of pipe,
23 valves, fittings or other appurtenances that, if left in the system, would obstruct
24 the movement of the tool through the pipeline.¹²

25 While the metric for this program is “miles upgraded,” the miles targeted for
26 a given year may vary greatly. The amount of work associated with Traditional
27 ILI Upgrades is based on projects and is not directly related to miles. This is the
28 reason that PG&E’s 2019 GT&S Rate Case forecast for the Traditional ILI
29 Upgrade Program was based on a cost per project basis and did not use the
30 length of projects as a forecasting basis.

12 For instance, it involves replacing reduced port valves and other obstructions, such as drip tubes, miter bends, short-radius elbows, and unbarred tees from the pipeline.

1 To continuously focus on improving performance, metric results are reported
2 monthly and reviewed at leadership meetings and weekly huddles to discuss
3 results and act as needed.

4 **Is Metric Used for the Purposes of Determining Executive (Director Level**
5 **or Higher) Compensation Levels and/or Incentives?**

6 No, in 2022, Gas In-line Upgrade was not used as a STIP metric.

7 **Is Metric Linked to the Determination of Individual or Group Performance**
8 **Goals?**

9 Yes, Gas In-Line Upgrade is linked to 2022 individual or group performance
10 goals for one or more Director-level, or higher, positions.

11 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

12 Yes, in 2022, the following position(s) include individual performance goals
13 that are linked to Gas In-Line Upgrade:

- 14 • Director: Gas Engineering (1); and
- 15 • Senior Vice President: Gas Operations (1).

16 **Bias Controls:**

17 Monitoring controls exist for this metric. Metric results are reported monthly
18 by the GO Business Process Governance team and reviewed at leadership
19 meetings and huddles to discuss performance and take action. In the event
20 there is a resulting need for additional dollars or resources, approval must be
21 obtained from the GO Senior Leadership team at the Work, Finance and
22 Resource Committee meeting.

23 During the years that this metric was a STIP metric (2014-2018), on a
24 quarterly basis the GO Business Process Governance team worked to confirm
25 ILI projects and mileage with various stakeholders. Mileage and unit capture
26 dates from the P6 scheduling database were verified by the GO Business
27 Process Governance team to ensure consistency with SAP and Engineering
28 records. A supporting documentation package for metric results was prepared
29 quarterly by the Business Process Governance team, then routed to Gas Senior
30 Leadership approval. The support packages were also reviewed quarterly by
31 Compensation and Internal Audit.

1 In 2021, the metric was no longer included as a STIP metric; however, the
2 review process established by the Business Process Governance team was
3 maintained.

4 **Rate Case Safety Goal Progress:**

5 This safety metric does not support a 2020 GRC safety goal given this
6 metric is a gas transmission, not distribution, related metric. PG&E's ILI
7 Upgrade Program was included in PG&E's 2019 GT&S Rate Case testimony.¹³
8 As of 2022, approximately 49.8 percent of the system is piggable. In 2022,
9 PG&E inspected a total of 497.6 miles and upgraded 252.6 miles which is a
10 three percent increase to overall piggable mileage.

11 **Monthly Data:**

12 See Attachment A at the end of this report.

¹³ See 2019 GT&S Prepared Testimony, Chapter 5, pp. 5-20 through 5-31.

1 **Metric 8: Gas Shut-In Time – Mains**

2 **Metric Name and Description:**

3 Gas Shut-In Time – Mains – Median time to shut-in gas when an
4 uncontrolled or unplanned gas release occurs on a main. The data used to
5 determine the median time shall be provided in increments as defined in General
6 Order 112-F 123.2 (c) as supplemental information, not as a metric.

7 **Risks:**

8 Distribution Pipeline Rupture with Ignition (non-Cross Bore)¹⁴

9 **Category:**

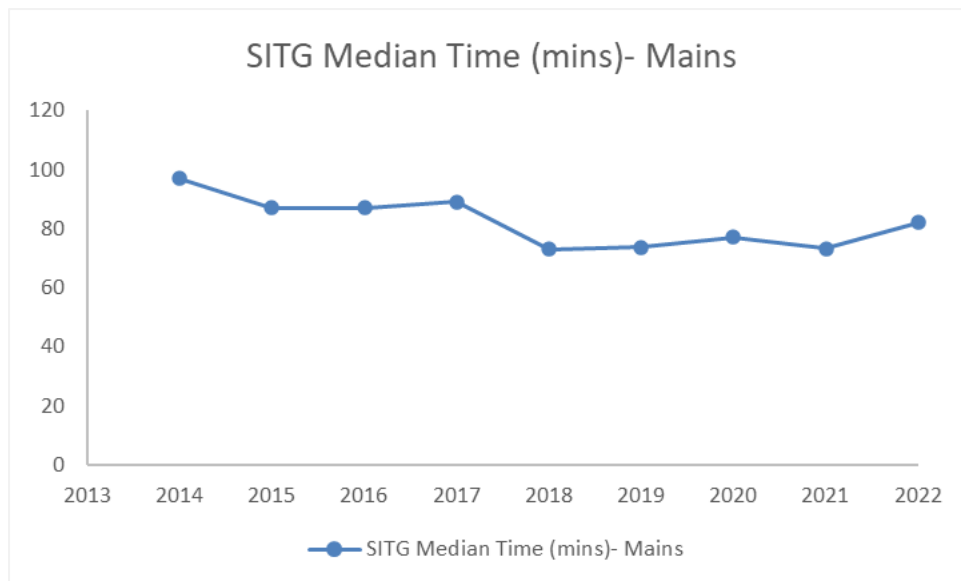
10 Gas

11 **Units:**

12 Time in minutes required to stop the flow of gas for Distribution Mains

13 **Summary:**

**FIGURE 5-8
SITG MEDIAN TIME – MAINS METRIC DATA (ANNUAL)**



14 The Corporate Risk Register now has the following risks: Loss of containment on Gas Distribution Main or Service.

1 **Narrative Context:**

2 This metric measures the median time required for a qualified PG&E
3 responder to arrive onsite and stop the flow of gas as result of damages
4 impacting gas mains from PG&E’s distribution network.

5 In 2014, PG&E began to measure the time required for resources to
6 respond to and make safe instances of blowing gas on distribution mains.
7 Specifically measured are distribution events relating to dig-ins, vehicle impacts,
8 explosions and material failures. In 2014, considering from a median standpoint,
9 it required PG&E 97 minutes to respond to and make safe events involving
10 distribution mains. In 2022, this response time by PG&E has substantially
11 improved to 82.1 minutes leading to a reduction by almost 15 percent compared
12 to 2014.

13 Metric results have improved and have been achieved through the following
14 process improvements implemented in the past nine years:

- 15 • Enhanced plastic squeeze capability from approximately 50 percent to all
16 Gas Service Representatives (GSR) < 1.5” plastic pipe;
- 17 • Provide yearly plastic squeeze training for all Field Service employees;
- 18 • Purchased and implemented emergency trailers in every division, allowing
19 for emergency equipment to be accessed quickly and easily;
- 20 • Purchased additional steel squeezers for 2-8” steel pipe (housed on
21 emergency trailers);
- 22 • Implemented Emergency Management tool (EM tool) to alert maintenance
23 and construction (M&C) of SITG events when notified by third-party
24 emergency organizations;
- 25 • Established concurrent response protocol (dispatch M&C and Field Service
26 resources) when notified by emergency agencies;
- 27 • Implemented 30-60-90-120+ minute communication protocols between Gas
28 Distribution Control Center (GDCC) and Incident Commander (IC) to ensure
29 consistent communication and issue escalation during events; and
- 30 • Tier 3 incident review meetings monthly to share best practices and review
31 long duration events.

1 **Is Metric Used for the Purposes of Determining Executive (Director Level**
2 **or Higher) Compensation Levels and/or Incentives?**

3 No, in 2022, Gas Shut-In Time – Main was not used as a STIP metric.

4 **Is Metric Linked to the Determination of Individual or Group Performance**
5 **Goals?**

6 Yes, Gas Shut-In Time – Mains is linked to 2022 individual or group
7 performance goals for one or more Director-level, or higher, positions.

8 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

9 Yes, in 2022, the following position(s) include individual performance goals
10 that are linked to Gas Shut-In Time – Main.

- 11 • Senior Director: Gas Operations (2).

12 **Bias Controls:**

13 Dispatch incidents are logged and tracked in the EM tool database. The
14 most current system (administered through Dynamic 365, which was
15 implemented in 2018) automatically generates a change log for every notification
16 at the field level to ensure system controls and retention of record history. The
17 data is reviewed by the Gas Operations Business Process Governance to
18 ensure accuracy.

19 The metric definition for this metric including targets, target setting
20 methodology, and exclusions, are documented and approved by Gas Operations
21 Leadership. Metric results are reported monthly by the Gas Operations
22 Governance Controls and Metrics team and reviewed at leadership meetings to
23 discuss performance and take action. In the event there is a resulting need for
24 additional dollars or resources, approval must be obtained from the Gas
25 Operations Senior Leadership team at the Work, Finance and Resource
26 Committee meeting. IA performed a validation of the metric performance in
27 2022.

1 **Rate Case Safety Goal Progress:**

2 This metric (improving the average time required for PG&E to stop the flow
3 of gas during incidents) supports the 2020 GRC safety goal of reducing the gas
4 emergency response time.¹⁵

5 **Monthly Data:**

6 See Attachment A at the end of this report.

¹⁵ See 2020 GRC Exhibit (PG&E-12), pp. 14-30 through 14-32.

1 **Metric 9: Gas Shut-In Time – Services**

2 **Metric Name and Description:**

3 Gas Shut In Time – Services Median time to shut in gas when an
4 uncontrolled or unplanned gas release occurs on a service. The data used to
5 determine the median time shall be provided in increments as defined in GO 112
6 F 123.2 (c) as supplemental information, not as a metric.

7 **Risks:**

8 Distribution Pipeline Rupture with Ignition (non-Cross Bore)¹⁶

9 **Category:**

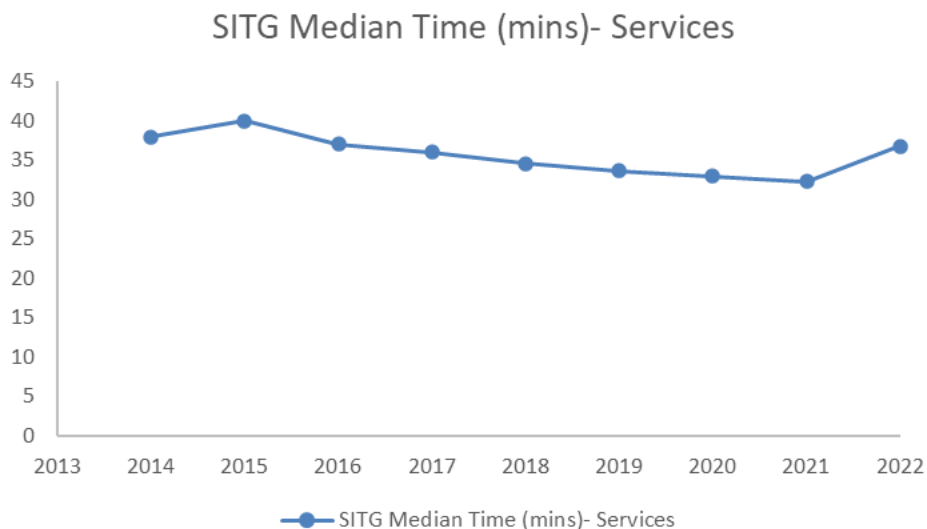
10 Gas

11 **Units:**

12 Time in minutes required to stop the flow of gas for Distribution Services

13 **Summary:**

**FIGURE 5-9
SITG MEDIAN TIME- SERVICES METRIC DATA (ANNUAL)**



16 The Corporate Risk Register now has the following risks: Loss of Containment on Gas Distribution Main or Service.

1 **Narrative Context:**

2 PG&E has measured the median time required to respond to and make safe
3 instances of blowing gas on distribution services since 2014. Specifically
4 measured are distribution events relating to dig-ins, vehicle impacts, explosions,
5 material failures and pipeline leaks. In 2014, considering from a median
6 standpoint, it required PG&E 38 minutes to respond to and make safe events
7 involving distribution services. In 2022, the median response time was
8 36.8 minutes, a reduction of 3 percent compared to 2014. Metric results have
9 improved and have been achieved through the following process improvements
10 implemented during the past eight years:

- 11 • Enhanced plastic squeeze capability from ~50 percent to all GSRs < 1.5”
12 plastic pipe;
- 13 • Provide yearly plastic squeeze training for all Field Service employees;
- 14 • Purchased and implemented emergency trailers in every division, allowing
15 for emergency equipment to be accessed quickly and easily;
- 16 • Purchased additional steel squeezers for 2-8” steel pipe (housed on
17 emergency trailers);
- 18 • Implemented Emergency Management tool (EM) tool to alert M&C of SITG
19 events when notified by third-party emergency organizations;
- 20 • Established concurrent response protocol (dispatch M&C and Field Service
21 resources) when notified by emergency agencies;
- 22 • Implemented 30-60-90-120+ minute communication protocols between
23 GDCC and IC to ensure consistent communication and issue escalation
24 during events; and
- 25 • Tier 3 incident review meetings monthly to share best practices and review
26 long duration events.

27 **Is Metric Used for the Purposes of Determining Executive (Director Level**
28 **or Higher) Compensation Levels and/or Incentives?**

29 No, in 2022, Shut-In The Gas Median Time – Services was not used as a
30 STIP metric.

1 **Is Metric Linked to the Determination of Individual or Group Performance**
2 **Goals?**

3 Yes, Shut-In The Gas Median Time – Services is linked to 2022 individual or
4 group performance goals for one or more Director-level, or higher, positions.

5 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

6 Yes, in 2022, the following position(s) include individual performance goals
7 that are linked to Gas Median Time – Services:

- 8 • Senior Director: Gas Operations (2).

9 **Bias Controls:**

10 Dispatch incidents are logged and tracked in the EM tool database. The
11 most current system (administered through Dynamic 365 which was
12 implemented in 2018) automatically generates a change log for every notification
13 down to the field-by-field basis to ensure system controls and retention of record
14 history. The data is reviewed by the process team to ensure accuracy.

- 15 • Monitoring controls also exist for this metric. The metric definition for this
16 metric including targets, target setting methodology, and exclusions, are
17 documented and approved by Gas Operations Leadership. Metric results
18 are reported monthly by the Gas Operations Business Process Governance
19 team and reviewed at leadership meetings and huddles to discuss
20 performance and take action. In the event there is a resulting need for
21 additional budget or resources, approval must be obtained from the
22 Gas Operations Senior Leadership team at the Work, Finance and
23 Resource Committee meeting.

24 IA performed a validation of the metric performance in 2022.

25 **Rate Case Safety Goal Progress:**

26 This metric (improving the average time required for PG&E to stop the flow
27 of gas during incidents) supports the 2020 General Rate Case (GRC) safety
28 goal of reducing the gas emergency response time.¹⁷ The metric supports
29 PG&E's target for this safety goal, which is set at 21.00 minutes based on
30 historical performance, benchmarking data, and PGE's public safety goal.

17 See 2020 GRC Exhibit (PG&E-12), pp. 14-30 through 14-32.

1 **Monthly Data:**

2 See Attachment A at the end of this report.

1 **Metric 10: Cross Bore Intrusions**

2 **Metric Name and Description:**

3 Cross Bore Intrusions – Cross bore intrusions found per 1,000 inspections,
4 reported on an annual basis.

5 **Risks:**

6 Catastrophic Damage Involving Pipeline Failure¹⁸

7 **Category:**

8 Gas

9 **Units:**

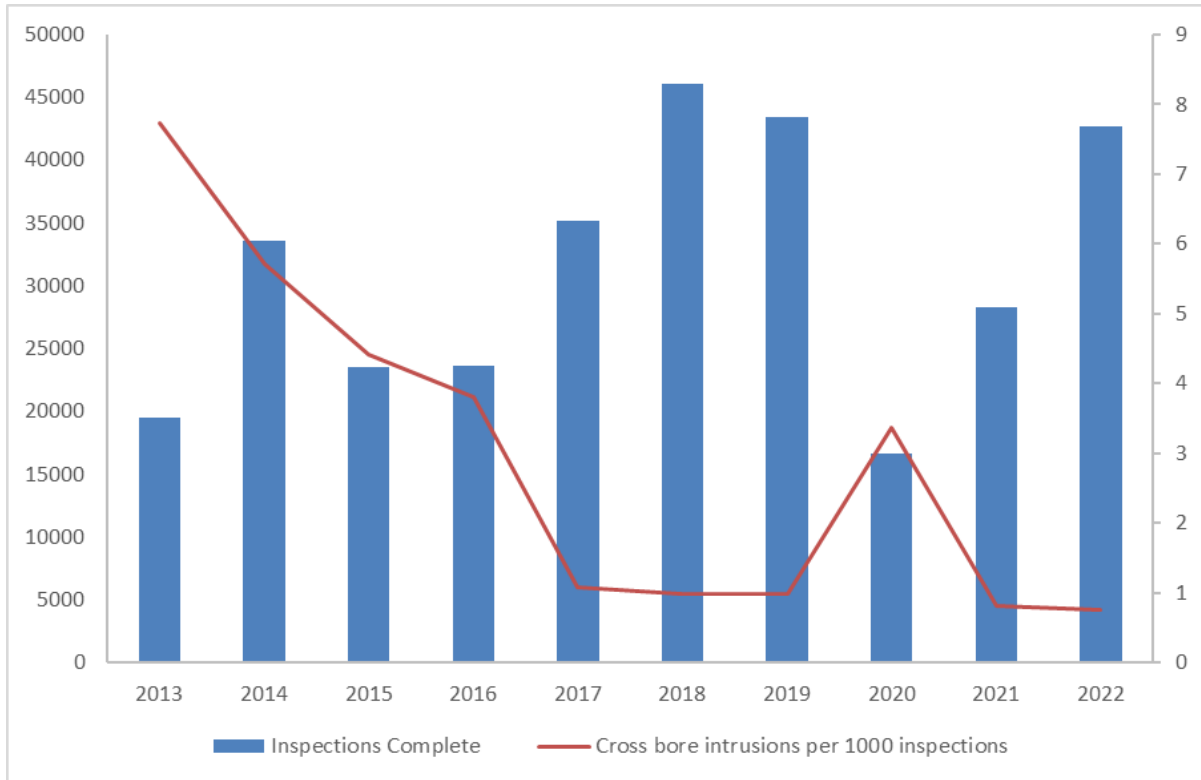
10 Number of cross bore intrusions per 1,000 inspections

¹⁸ The Corporate Risk Register now has the following risks: Loss of Containment on Gas Distribution Main or Service.

1

Summary:

**FIGURE 5-10
CROSS BORE INTRUSIONS PER 1,000 INSPECTIONS (ANNUAL)**



2

Narrative Context:

3

The Cross Bore Intrusion metric measures the number of cross bores found per 1,000 inspections. A cross bore refers to a gas main or service that has been installed unintentionally, using trenchless technology, through a wastewater or storm drain system. Inspections refer to inspection of potential conflict locations and repair occurrences of cross bore discoveries in any location within PG&E territory. Cross bores pose a risk as they can result in a gas leak into the sewer system if damaged during mechanical sewer cleaning operations which may result in loss of containment and potential migration and ignition of gas. The risk is mitigated by repairing the cross bore after finding it by inspection.

13

Since 2013, there has been a declining trend in find rate. There was an uptick in the find rate and a decrease in the number of inspections completed in 2020 compared to prior years due to a focus on completing work in the City of

15

1 San Francisco. However, in 2022, the find rate recorded continued to decline to
2 0.75 which is the lowest compared to prior years and signifies a 90 percent
3 decrease compared to 2013.

4 **Is Metric Used for the Purposes of Determining Executive (Director Level**
5 **or Higher) Compensation Levels and/or Incentives?**

6 No, in 2022, Cross Bore Intrusions was not used as a STIP metric.

7 **Is Metric Linked to the Determination of Individual or Group Performance**
8 **Goals?**

9 Yes, Cross Bore Intrusions is linked to 2022 individual or group performance
10 goals for one or more Director-level, or higher, positions.

11 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

12 Yes, in 2022, the following position(s) include individual performance goals
13 that are linked to Cross Bore Intrusions:

- 14 • Director: Operations (1).

15 **Bias Controls:**

16 Cross bore inspection counts are logged and tracked within SAP as work is
17 complete based on clerical updates from the field. A validation is conducted by
18 the Distribution Operations team to ensure units and work type are correctly
19 coded (inspection vs. repair) within the database. Cross bores found are logged
20 by the field and tracked by the Cross Bore Program management team. When a
21 potential cross bore intrusion is located, field personnel will contact the Cross
22 Bore Program management team and will also call PGE-5000. This triggers a
23 response for a Gas Service Representative and Locate and Mark operator to
24 help validate the intrusion.

25 **Rate Case Safety Goal Progress:**

26 This safety metric does not support a stated safety goal in the 2020 GRC.

27 **Monthly Data:**

28 See Attachment A at the end of this report.

1 **Metric 11: Gas Emergency Response Time**

2 **Metric Name and Description:**

3 Gas Emergency Response Time – The average and median time in minutes
4 a gas service representative (GSR) (or qualified first responder) takes to
5 respond to a gas-related emergency notification, from the time of notification to
6 the time of onsite arrival. Emergency notifications include all notifications
7 originating from 911 calls and calls made directly to the utility’s safety hotlines.
8 The data used to determine the average and median time shall be provided in
9 increments as defined in General Order 112-F 123.2 (c) as supplemental
10 information, not as a metric. This information is identical to that of which is
11 included in our Gas Emergency Response Business Process Review (BPR) and
12 is excel data.

13 **Risks:**

14 Distribution Pipeline Rupture with Ignition¹⁹

15 **Category:**

16 Gas

17 **Units:**

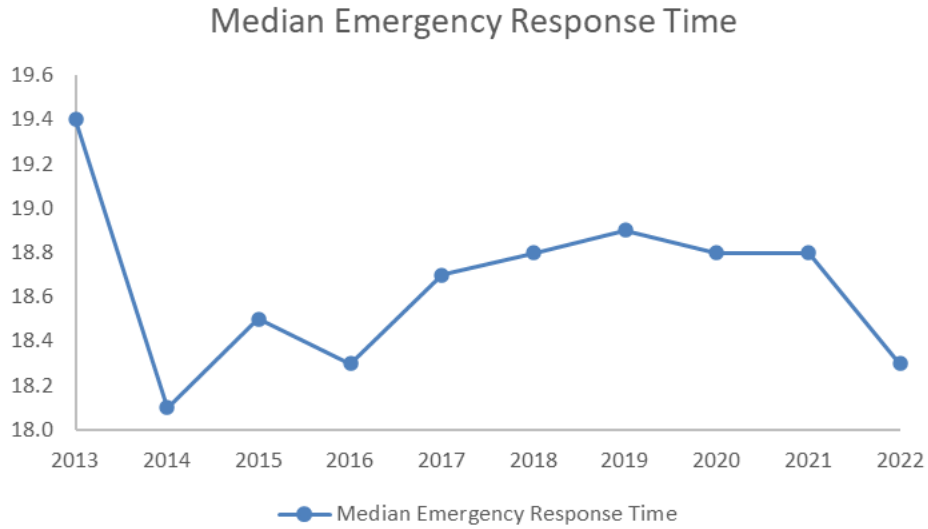
18 The time in minutes that a GSR (or a qualified first responder) takes to
19 respond after receiving a call which results in an emergency order.

¹⁹ The Corporate Risk Register now has the following risks: Loss of Containment on Gas Distribution Main or Service.

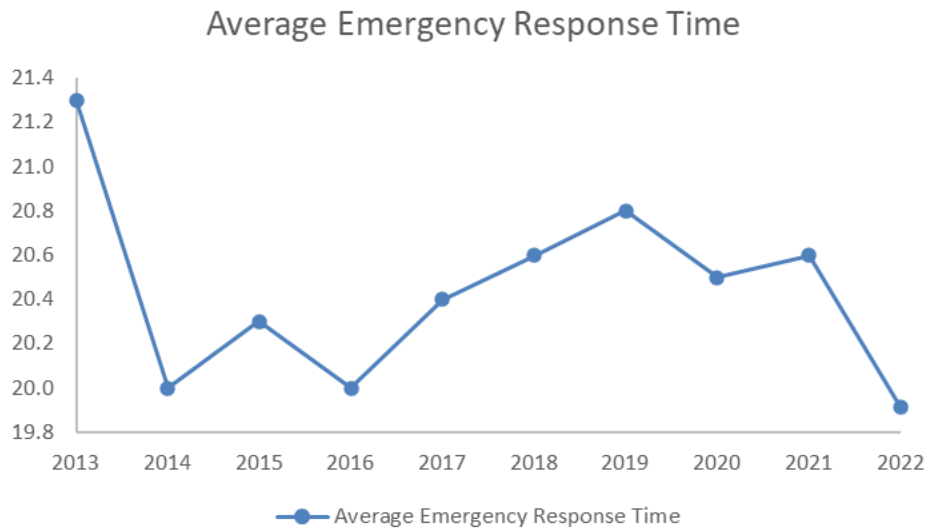
1

Summary:

**FIGURE 5-11A
MEDIAN EMERGENCY RESPONSE TIME (ANNUAL)**



**FIGURE 5-11B
AVERAGE EMERGENCY RESPONSE TIME (ANNUAL)**



2

Narrative Context:

3

The average response time is measured from the time PG&E is notified of

4

the gas emergency order/immediate response (IR) until a GSR or a qualified first

1 responder arrives onsite to the emergency location (including Business Hours
2 and After Hours). PG&E has maintained steady performance for the last several
3 years. From 2013-2022, there has been a 6 percent decrease in the average
4 response time. From 2013-2022, the median time to respond to respond on-site
5 to a gas emergency notification improved by 5 percent. To continuously focus
6 on improving performance, metric results are reported monthly and reviewed at
7 leadership meetings and weekly huddles to discuss results and act as needed.

8 **Is Metric Used for the Purposes of Determining Executive (Director Level**
9 **or Higher) Compensation Levels and/or Incentives?**

10 Yes, Gas Emergency Response Time was used as a Short-Term Incentive
11 Plan metric for 2022.

12 **Is Metric Linked to the Determination of Individual or Group Performance**
13 **Goals?**

14 Yes, Gas Emergency Response Time is linked to 2022 performance goals
15 for one or more Director-level position or higher.

16 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

17 Yes, Gas Emergency Response Time linked to all individual goals as part of
18 2022 STIP plan. In addition, this metric may be included as part of an
19 individual's performance goals.

20 **Bias Controls:**

21 All response times to emergency calls are reviewed by the IR team to
22 determine appropriate adjustments and exclusions, and the average response
23 time is calculated. Response times are captured electronically using PG&E's
24 Field Automation System and are verified on a sample basis.

25 Monitoring controls also exist for this metric. The metric definition for this
26 metric including targets, target setting methodology, and exclusions, are
27 documented and approved by Gas Operations Leadership. Metric results are
28 reported monthly by the Gas Operations Business Process Governance team
29 and reviewed at leadership meetings to discuss performance and take action. In
30 the event there is a resulting need for additional dollars or resources, approval
31 must be obtained from the Gas Operations Senior Leadership team at the Work,
32 Finance and Resource Committee meeting.

1 On a quarterly basis, a report package is prepared by the IR team, reviewed
2 by the Business Process Governance team, then routed for Gas Operations
3 Senior Leadership approval. The report package is also reviewed quarterly by
4 Compensation and AI. AI performed a validation of the metric performance in
5 2022 and periodically validates the controls in place for gathering metric data
6 and the Utility's performance in meeting the metric.

7 **Rate Case Safety Goal Progress:**

8 This safety metric does not support a 2020 GRC safety goal.

9 **Monthly Data:**

10 See Attachment A at the end of this report.

1 **Metric 12: Natural Gas Storage Baseline Assessments Performed**

2 **Metric Name and Description:**

3 Natural Gas Storage Baseline Assessments Performed – Tracks the
4 progress of completing baseline and reassessment inspections that were
5 expected to be completed within a given year. It reports the number of storage
6 well baseline assessments completed as a percentage of the number scheduled
7 to be completed in the period. The number scheduled will depend on any
8 regulatory required inspections as well as any initiated by the utility.

9 **Risks:**

10 Gas Storage²⁰

11 **Category:**

12 Gas

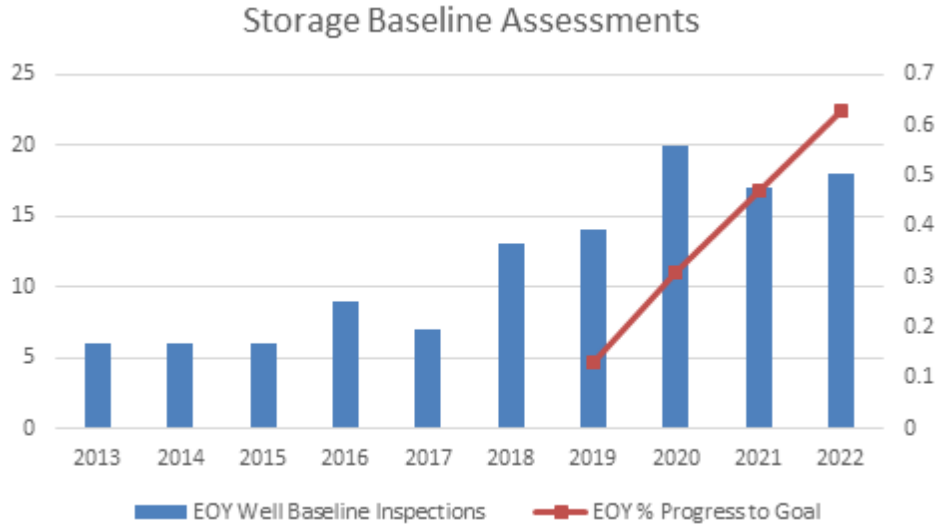
13 **Units:**

14 Number of Assessments completed/Number scheduled or targeted.

²⁰ The Corporate Risk Register now has the following risks: Loss of Containment at Natural Gas Storage Well or Reservoir.

1 **Summary:**

**FIGURE 5-12
STORAGE BASELINE WELL ASSESSMENTS (ANNUAL)**



2 **Narrative Context:**

3 The Natural Gas Storage Baseline Inspections metric measures the number
4 of baseline well assessments performed since 2013. PG&E planned to
5 complete baseline well production casing assessments on 109 wells by 2024 per
6 objectives defined in PG&E's Gas Storage Asset Management Plan and also
7 adjusted to incorporate an accelerated pace required by regulation changes in
8 the storage industry at both federal and state levels.

9 All wells will have been baselined with the original tool by 2023. In 2022,
10 PG&E completed 18 well inspections and is on track to complete 100 percent of
11 baseline inspections by 2024.

12 However, wells that were inspected prior to 2019 must be re-baselined using
13 additional well inspection baselining tools that are now required under the new
14 regulations, effective October 2018. The plan approved by the California
15 Geologic Energy Management Division (CalGEM) requires baseline casing
16 inspections under the full inspection tool suite by 2024. PG&E is on track to
17 complete the remaining well re-baseline inspections and conversions to dual
18 barrier construction in 2024 in alignment with the CalGEM June 1, 2021 plan.

1 PG&E is currently seeking approval from CalGEM for a risk-based reinspection
2 interval.

3 **Is Metric Used for the Purposes of Determining Executive (Director Level**
4 **or Higher) Compensation Levels and/or Incentives?**

5 No, in 2022, Natural Gas Storage Baseline Inspections Performed was not
6 used as a Short-Term Incentive Plan metric.

7 **Is Metric Linked to the Determination of Individual or Group Performance**
8 **Goals?**

9 Yes, Natural Gas Storage Baseline Inspections Performed is linked to 2022
10 individual or group performance goals for one or more Director-level, or higher,
11 positions.

12 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

13 Yes, in 2022, the following position(s) include individual performance goals
14 that are linked to Natural Gas Storage Baseline Inspections Performed:

- 15 • Senior Director: Gas Operations (1).

16 **Bias Controls:**

17 Data Integrity – Project completion (assessment complete) is tracked in the
18 P6 scheduling tool and database and the Reservoir Engineering team is
19 responsible for validating that the assessment is a first-time inspection and not a
20 reinspection of the same well. CalGEM is also responsible for validating work
21 completion as well inspection log survey results must be submitted as part of
22 regulation.

23 **Rate Case Safety Goal Progress:**

24 This safety metric does not support a 2020 GRC safety goal given this
25 metric is a gas storage, not distribution, related metric. PG&E's 2019 GT&S
26 Rate Case forecast was based on the final draft CalGEM (previously DOGGR)
27 regulations available at the time of the filing. PG&E's plan reflected casing
28 inspections (a.k.a. barrier inspection surveys) be performed every other year
29 starting in 2019; due to the pending nature of the draft regulations PG&E
30 tentatively forecast to perform them on half of the storage wells in each year;
31 however, PG&E filed a brief following publication of final regulations that had

1 previously been interpreted to allow inspection work to be coupled with the
2 conversion to dual barrier over a 7-year period. The Division has changed
3 leadership and that interpretation has shifted, and PG&E is currently engaged
4 with the CalGEM staff to find an inspection schedule that is accelerated to the
5 Division's satisfaction and also maintains reliability for California's natural gas
6 system. In addition, as a result of PG&E's Natural Gas Storage Strategy, PG&E
7 did not forecast to conduct integrity inspection and surveys at the Los Medanos
8 or Pleasant Creek storage wells during the rate case period, however,
9 inspections at each facility have been conducted during the rate case period as
10 the facilities were subject to the final CalGEM regulations.

11 **Monthly Data:**

12 See Attachment A at the end of this report.

1 **Metric 13: Gas Pipelines That Can Be Internally Inspected**

2 **Metric Name and Description:**

3 Gas Pipelines That Can Be Internally Inspected – Total miles and percent of
4 system that can be internally inspected (“pigged”) relative to all transmission
5 pipelines in the system.

6 **Risks:**

7 Catastrophic Damage Involving High-Pressure Pipeline Failure

8 **Category:**

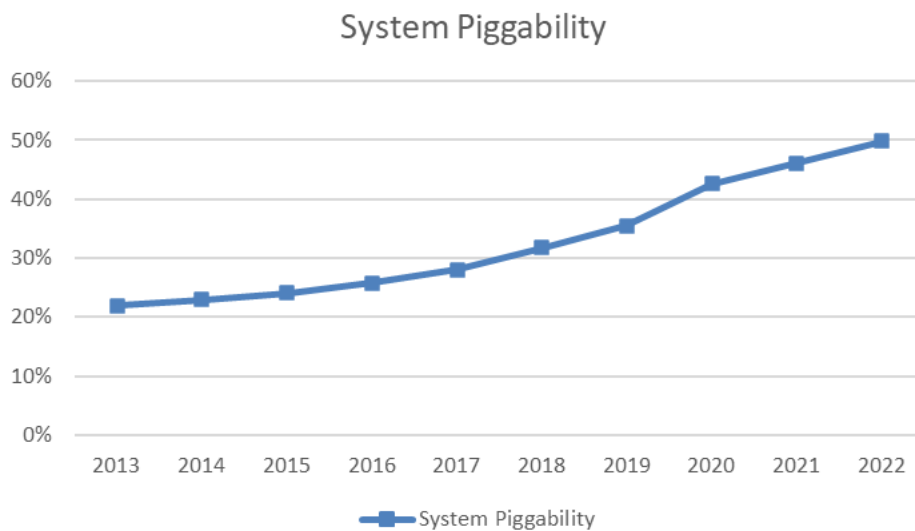
9 Gas

10 **Units:**

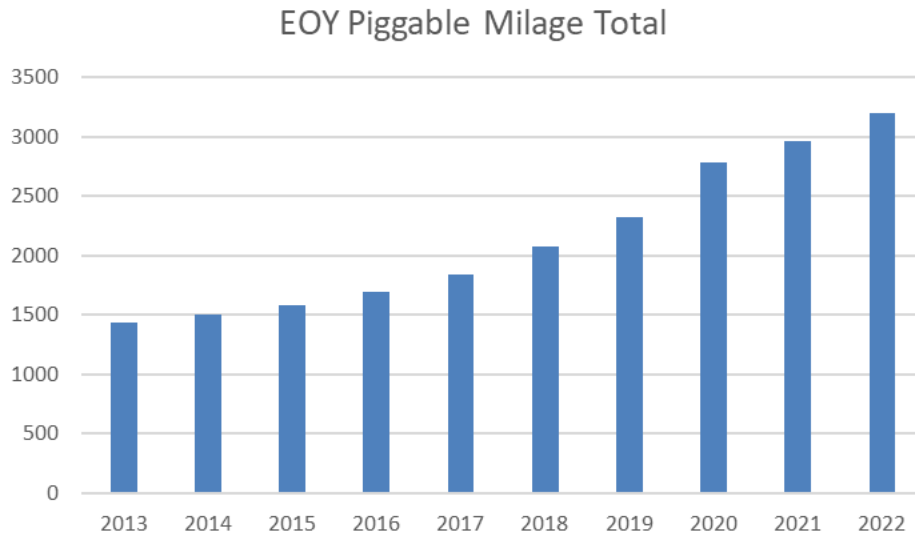
11 Miles and percentage

12 **Summary:**

**FIGURE 5-13A
GAS PIPELINES THAT CAN BE INTERNALLY INSPECTED (ANNUAL)**



**FIGURE 5-13B
GAS PIPELINES THAT CAN BE INTERNALLY INSPECTED (ANNUAL)**



1 **Narrative Context:**

2 In-Line Inspection (ILI) is the most reliable pipeline integrity assessment tool
3 currently available to natural gas pipeline operators to assess the internal and
4 external condition of transmission line pipe. From 2013-2022, there has been an
5 approximate 28 percent increase in system piggability. As of 2022,
6 approximately 49.8 percent of the system is piggable. In 2022, PG&E inspected
7 a total of 497.6 miles and upgraded 252.6 miles, for a total of 3,201 system
8 piggable miles. This is a three percent increase to overall piggable mileage from
9 2021.

10 **Is Metric Used for the Purposes of Determining Executive (Director Level
11 or Higher) Compensation Levels and/or Incentives?**

12 No, in 2022, Gas Pipelines That Can Be Internally Inspected, was not used
13 as a STIP.

14 **Is Metric Linked to the Determination of Individual or Group Performance
15 Goals?**

16 No, Gas Pipelines That Can Be Internally Inspected, is not linked to 2022
17 individual or group performance goals for one or more Director-level, or higher,
18 positions.

1 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

2 No, Gas Pipelines That Can Be Internally Inspected, is not linked to 2022
3 individual performance goals for Director-level, or higher, positions.

4 **Bias Controls:**

5 Monitoring controls exist for this metric. Metric results are reported monthly
6 by the Gas Operations Business Process Governance team and reviewed at
7 leadership meetings and huddles to discuss performance and take action. In the
8 event there is a resulting need for additional dollars or resources, approval must
9 be obtained from the Gas Operations Senior Leadership team at the Work,
10 Finance and Resource Committee meeting.

11 During the years that this metric was a STIP metric (2014-2018), on a
12 quarterly basis the Gas Operations Business Process Governance team worked
13 to confirm ILI projects and mileage with various stakeholders. Mileage and unit
14 capture dates from the P6 scheduling database were verified by the Gas
15 Operations Business Process Governance team to ensure consistency with SAP
16 and Engineering records. A supporting documentation package for metric
17 results was prepared quarterly by the Business Process Governance team, then
18 routed to Gas Senior Leadership approval. The support packages were also
19 reviewed quarterly by Compensation and Internal Audit.

20 **Rate Case Safety Goal Progress:**

21 This safety metric does not support a 2020 GRC safety goal given this
22 metric is a gas transmission, not distribution, related metric. PG&E's ILI
23 Upgrade Program was included in PG&E's 2019 GT&S Rate Case testimony.²¹
24 As of 2022, approximately 50 percent of the system is piggable bringing the total
25 piggable mileage to 3201 miles. In 2022, PG&E inspected a total of 497.6 miles
26 and upgraded 252.6 miles which is a three percent increase to overall piggable
27 mileage.

28 **Monthly Data:**

29 See Attachment A at the end of this report.

21 See 2019 GT&S Prepared Testimony, Chapter 5, pp. 5-20 through 5-31.

1 **Metric 14: Employee DART Rate**

2 **Metric Name and Description:**

3 Employee DART Rate – DART Rate is calculated based on number of
4 OSHA recordable injuries resulting in Days Away from work and/or Days on
5 Restricted Duty or Job Transfer, and hours worked.

6 **Risks:**

7 Employee Safety Incident²²

8 **Category:**

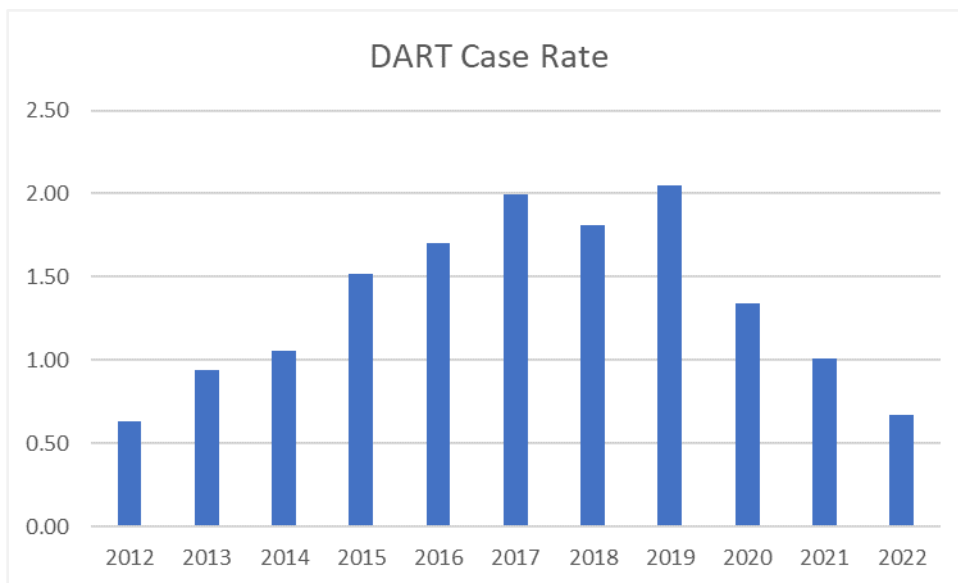
9 Injuries

10 **Units:**

11 DART Cases times 200,000 divided by employee hours worked.

12 **Summary:**

**FIGURE 5-14
EMPLOYEE DART CASE RATE METRIC DATA (ANNUAL)**



13 **Narrative Context:**

14 PG&E began tracking the employee DART Case Rate in 2011. This metric
15 showed an increase line from 2012 until 2019 driven primarily by restricted duty

²² The Corporate Risk Register includes the following risk: Employee Safety Incident.

1 cases related to sprains and strains. Since 2019, there has been a 50
2 67 percent decrease in the DART rate.

3 Efforts supporting a reduction include the expansion of PG&E’s ergonomic
4 programs and increased Industrial Athlete Specialists for job site evaluations. A
5 primary goal of the efforts is reduced injury severity through injury prevention
6 and early intervention care for employees. In alignment with this, we have
7 strengthened the identification of the highest risk work groups and tasks for field
8 and vehicle ergonomic injuries. We identify high risk computer users through
9 predictive modeling and provide targeted interventions. Additional efforts also
10 include enhanced injury management containment for injuries at risk for
11 escalation to DART and providing our people leaders with additional injury
12 management training.

13 As follow-up to the response to SPD’s expectation about DART case
14 correlation with SIF incidents, PG&E is continuing to review DART cases and
15 SIF incidents for a reliable correlation. A lower DART rate and a higher number
16 of SIF incidents occurred in 2022. We are continuing to explore this trend and
17 have no new finding to share at this time.

18 As follow-up to the response to SPD’s expectation about DART case
19 correlation with SIF incidents, PG&E is continuing to review DART cases and
20 SIF incidents for a reliable correlation. Due to the small number of SIFA
21 incidents this analysis has been challenging. Nevertheless, the company
22 continues to focus on reduction of DART cases and consider it a leading
23 indicator for SIF for work in the field.

24 **Is Metric Used for the Purposes of Determining Executive (Director Level**
25 **or Higher) Compensation Levels and/or Incentives?**

26 No, in 2022, Employee DART Rate was not used as STIP metric.

27 **Is Metric Linked to the Determination of Individual or Group Performance**
28 **Goals?**

29 Yes, Employee DART Rate is linked to 2022 individual or group
30 performance goals for one or more Director-level position or higher.

1 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

2 Yes, in 2022, the following position(s) include individual performance goals
3 that are linked to Employee DART Rate.

- 4 • Chief: Finance (1), Generation (3), Shared Services (1), Finance (1);
- 5 • Director: Customer & Communications (11), Electric Engineering (7),
6 Electric Operations (21), Engineering, Planning & Strategy (3), Finance (8),
7 Gas Engineering (7), Gas Operations (8), Generation (12), Information
8 Technology (17), Operations (11), Safety & Risk (7), Shared Services (10);
- 9 • Senior Director: Customer & Communications (4), Electric Engineering (2),
10 Electric Operations (10), Enterprise Health & Safety (2), Gas Engineering
11 (1), Gas Operations (7), Generation (2), Information Technology (7),
12 Operations (5), Shared Services (3);
- 13 • Vice President: Corporate Affairs (1), Customer & Communications (6),
14 Electric Operations (3), Engineering, Planning & Strategy (1), Enterprise
15 Health & Safety (1), Finance (1), Gas Operations (1), Generation (2),
16 Information Technology (2), Operations (1), Safety and Risk (1), Shared
17 Services (1), Supply Chain/Materials (1);
- 18 • Senior Vice President: Electric Engineering (1), Electric Operations (1), Gas
19 Engineering (1), Gas Operations (1), Generation (1), Information
20 Technology (1); and
- 21 • Executive Vice President: Customer & Communications (1), Finance (1).

22 **Bias Controls:**

23 Yes. OSHA regulates the definition of a DART case and we rely on the
24 physician determination of work relatedness and need for time off or restricted
25 duty. IA performed a validation of the metric in 2022 as part of a validation of
26 2021 Q4 metric reporting.

27 **Rate Case Safety Goal Progress:**

28 The metric is stated in 2020 GRC Safety and Health chapter (Chapter 1).²³
29 The year-end target for DART rate in 2022 was 0.86. The year-end target for
30 2023 is 0.64. As previously mentioned, since 2019 there has been a 67 percent
31 decrease in the employee DART rate. The annual average number of DART

23 PG&E 2020 GRC Exhibit (PG&E-7), Chapter 1, Safety and Health , p. 1-19.

1 cases were used in the 2020 RAMP model consequence analysis for the
2 Employee Safety Incident risk.²⁴ RAMP model results for the risk reduction
3 programs being implemented indicate a reduction in employee DART cases
4 through 2026.

5 The 12-month rolling average DART case rate is a Key Risk Indicator for the
6 Employee Safety Incident risk. This metric is track and trend only.

7 **Monthly Data:**

8 See Attachment A at the end of this report.

²⁴ PG&E 2020 RAMP Report, Chapter 16, Risk Mitigation Plan: Employee Safety Incident.

1 **Metric 15: Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)**

2 **Metric Name and Description:**

3 Rate of SIF Actual (Employee) is calculated using the formula: Number of
4 SIF-Actual cases among employees x 200,000/ employee hours worked, where
5 SIF Actual is counted using the methodology developed by the Edison Electric
6 Institute's (EEI) Occupational Safety and Health Committee (OS&HC) Safety
7 and Classification Learning (SCL) Model.

8 If a utility has implemented a replicable substantially similar evaluation
9 methodology for assessing SIF Actual, the utility may use that method for
10 reporting this metric. If a utility opts to report the rate of SIF Actual using a
11 method other than the EEI Safety Classification Model, it must explain how its
12 methodology for counting SIF Actual differs and why it chose to use it.

13 As a supplemental reporting requirement to the SIF Actual (SIF-A) Rate for
14 comparative purposes, all utilities shall also provide SIF-A data based on
15 California Division of Occupational Safety and Health (Cal/OSHA) reporting
16 requirements under Section 6409.1 of the California Labor Code.

17 **Risks:**

18 Employee Safety Incident.

19 **Category:**

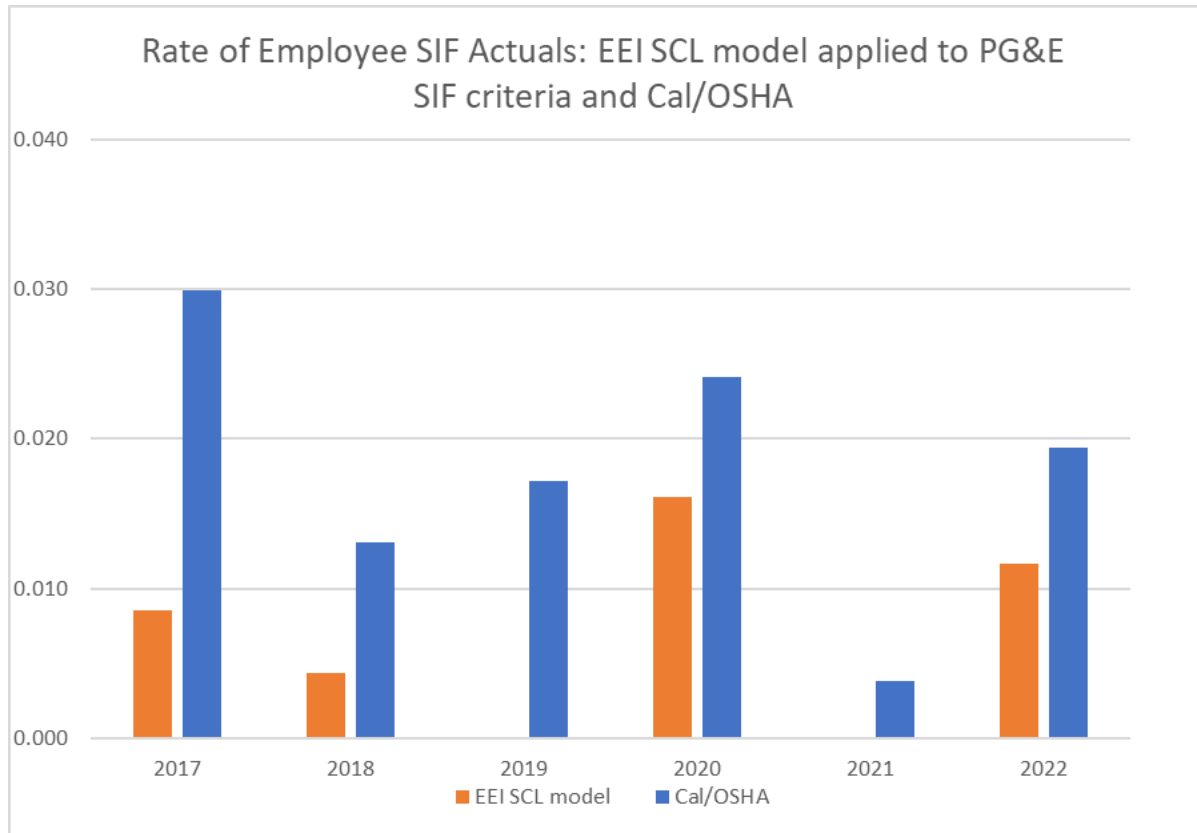
20 Injuries.

21 **Units:**

22 Rate of SIF-Actual (SIF-A) cases among employees x 200,000/employee
23 hours worked.

1 **Summary:**

FIGURE 5-15
RATE OF SIF ACTUAL (EMPLOYEE) EEI SCL MODEL AND CAL/OSHA^(a)
DEFINITIONS COMPARISON



(a) Per Cal/OSHA, a serious injury or illness is defined as one involving inpatient hospitalization, regardless of length of time, for other than medical observation or diagnostic testing; amputation; loss of an eye; or serious degree of permanent disfigurement.

2 **Narrative Context:**

3 Pacific Gas and Electric Company's (PG&E or the Company) SIF Program
4 was deployed at the end of 2016 to establish a classification and cause
5 evaluation process for coworker and contractor serious injuries or fatalities.²⁵
6 The goal of PG&E's SIF Program is to reduce the number and severity of safety
7 incidents that result in a SIF. The program objective is to learn from safety

²⁵ Per I.14-08-022, Kern Order Instituting Investigation (Kern OII) (Aug. 28, 2014) Settlement Agreement with California Public Utilities Commission (CPUC) see D.15-07-014.

1 incidents by performing cause evaluations on each SIF-Actual (SIF-A) and SIF
2 Potential (SIF-P) incident, implementing corrective actions, and sharing key
3 findings across the enterprise.

4 In August of 2020, PG&E adopted Edison Electric International's (EEI)
5 Safety Classification Learning (SCL) Model to mature classification of its SIF
6 incidents.²⁶ Adopting the EEI SCL Model has improved PG&E's SIF Program
7 by bringing a consistent and objective approach to reviewing and classifying SIF
8 incidents and identifying high-energy tasks. The EEI SCL model does not
9 directly define a SIF-A, rather it classifies incidents into categories: High-Energy
10 SIF (HSIF),²⁷ Low-Energy SIF (LSIF),²⁸ Potential SIF (PSIF),²⁹ Capacity,³⁰
11 Exposure,³¹ Success,³² and Low Severity.³³ The HSIF terminology is fairly
12 new to the industry; however, it is equivalent to a SIF-A with regard to how
13 serious life threatening, life-altering or fatalities are determined.³⁴

14 While PG&E uses the EEI SCL model methodology to classify and track
15 SIF-A incidents, PG&E's SIF Program differs slightly from the EEI model in that
16 PG&E includes all types of Motor Vehicle Incidents (MVI) in its SIF counts,
17 whereas the EEI SCL model does not.³⁵ PG&E believes that all MVIs (even

26 See, SCL Model at <https://esafetyline.net/eei/docs/eeiSCLmodel.pdf> at p. 17.

27 *Id.* at p. 17, HSIF is defined as: "Incident with a release of high energy in the absence of a direct control where a serious injury is sustained."

28 *Id.* at p. 17, LSIF is defined as: "Incident with a release of low energy in the absence of a direct control where a serious injury is sustained."

29 *Id.* at p. 17, PSIF is defined as: "Incident with a release of high energy in the absence of a direct control where a serious injury is not sustained."

30 *Id.* at p. 17, Capacity is defined as: "Incident with a release of high energy in the presence of a direct control where a serious injury is not sustained."

31 *Id.* at p. 17, Exposure is defined as: "Condition where high energy is present in the absence of a direct control."

32 *Id.* at p. 17, Success is defined as: "Condition where a high energy incident does not occur because of the presence of a direct control."

33 *Id.* at p. 17, Low Severity is defined as: "Incident with a release of low energy where no serious injury is sustained."

34 EEI Safety Classification and Learning (SCL) Model, Serious Injury or Fatality defined as Life-threatening or life-altering incident.

35 This has been discussed during learning sessions with EEI and conversations with the SCL author that some MVIs do not fit within the parameters of the SCL model. PG&E uses its own MVI SIF classification process per SAFE-1002S: Motor Vehicle Standard, which is outside the SCL model classification process.

1 where any injury did not occur) should be considered for SIF potentiality and will
2 continue to include them in the SIF counts. This may differ slightly from how
3 other utilities classify and categorize MVIs.

4 This SPM definition includes the use of the EEI OS&HC serious injury
5 criteria,³⁶ which defines a serious injury using fourteen specific injury criteria. In
6 operation, and in discussions with peer utilities and EEI, PG&E finds that the
7 OS&HC criteria does not align with the life altering/life threatening aspects of the
8 SIF Program objective and is in contradiction to the SCL model purpose. PG&E
9 does, however, define serious injury in its SIF Program,³⁷ which is substantially
10 similar to the OS&HC criteria. The difference is that PG&E considers life
11 altering/life threatening a substantial factor in serious injury determination.³⁸

12 As allowed by CPUC SPM definition for a SIF-A (Employee) incident, PG&E
13 uses substantially similar criteria to classify an injury as serious as compared to
14 the EEI OS&HC criteria including life threatening/life altering into the SIF-A
15 determination. This determination can also include a third-party medical
16 consultant to review and concur with a serious injury classifications. This model
17 allows the Company to focus its safety and risk mitigation efforts on the most
18 serious outcomes and highest risk work where a high energy incident occurred.

19 There have been ten SIF-A Employee incidents between 2017 and 2022,
20 which include four fatalities and six serious injuries. The events involved injuries
21 caused by an intentional act of violence by a third-party, electrical contacts, a
22 pipeline drying (pigging) line-of-fire incident, finger amputation, and MVIs
23 (including Off-Road Utility Vehicles (OUV)). Corrective actions have been taken

36 Occupational Safety & Health Committee: Serious Injury & Fatality Criteria (SIF) can be reviewed at:
<https://images.magnetmail.net/images/clients/EEI //attach/Environment/hsif2022.pdf>.

37 SAFE-1100S: Serious Injury or Fatality Standard, Appendix A Examples of a Serious Injury.

38 Per SAFE-1100S: PG&E defines a SIF-A (analogous to a EEI SCL HSIF) as: A work-related high-energy incident consequential from work at or for PG&E that results in any of the following to employees, contractors, or directly supervised contractors:

- A fatality – work-related fatal injury or illness;
- A life-threatening injury or illness that required immediate life-preserving action that if not applied immediately would likely have resulted in the death of that person;
- A life-altering injury or illness that resulted in a permanent and significant loss of a major body part or organ function.

1 to address the identified causes and prevent potential future similar outcomes
2 that could lead to a SIF-A event, including:

- 3 • Eliminated OUVs from use within PG&E, including rental of OUVs;
- 4 • Standing down all barehand electrical work until further notice; and
- 5 • Establishing the Enterprise Safe Access Asset Program Proposal to inspect
6 and maintain PG&E road access to our assets.

7 The implementation of the Enterprise Safety Management System and
8 stronger focus on workforce safety initiatives, such as development of critical
9 risk standards, enhancing the field safety observations program, leader
10 engagement, and lean operating model, will continue to reduce this trend.

11 With regard to Cal/OSHA reporting requirements, there were five serious
12 incidents involving PG&E employees in 2022, three of which were classified as
13 SIF-Actual incidents using PG&E criteria.

14 On April 29, 2022, two Gas pipeline co-workers were involved in a pipeline
15 drying (pigging) line of fire incident that resulted in a serious injury and a fatality.

16 On June 11, 2022, a coworker performing a locate and mark job in South
17 San Francisco was stabbed by a third party. The coworker was able to escape
18 and was taken to the hospital.

19 On July 5, 2022, an electric operations transmission Line Lineman made
20 electrical contact and sustained injuries.

21 On September 30, 2022, a co-worker injured their left hand, middle, and ring
22 fingers while disconnecting a trailer from a bucket truck.

23 Cause evaluations were performed and corrective actions are being
24 implemented.

25 **Is Metric Used for the Purposes of Determining Executive (Director Level**
26 **or Higher) Compensation Levels and/or Incentives?**

27 Yes, Rate of SIF-A (Employee) was used as a STIP metric for 2022. It was
28 measured in combination with the SIF-A (Contractor) metric and included
29 serious injuries only.

1 **Is Metric Linked to the Determination of Individual or Group Performance**
2 **Goals?**

3 Yes, Rate of SIF-A (Employee) is linked to 2022 performance goals for one
4 or more Director-level position or higher as a subset of SIF that includes serious
5 injuries only.

6 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

7 Yes, Rate of SIF-A (Employee) is a measure of risk reduction for the
8 Employee Safety Incident risk. It is linked to all individual goals as part of 2022
9 STIP plan. In addition, this metric may be included as part of an individual's
10 performance goals.

11 **Bias Controls:**

12 Data is compiled by the Enterprise Health & Safety Team. Employee SIF
13 events are reviewed weekly. IA performed a validation of the metric
14 performance in 2022 and periodically validates the controls in place for gathering
15 metric data and the Utility's performance in meeting the metric.

16 **Rate Case Safety Goal Progress:**

17 This metric is not specifically stated in the 2020 GRC as a safety goal
18 metric.

19 **Monthly Data:**

20 See Attachment A at the end of this report.

1 **Metric 16: Rate of Serious Injuries or Fatalities (SIF) Actual (Contractor)**

2 **Metric Name and Description:**

3 Rate of SIF Actual (Contractor) is calculated using the formula: Number of
4 SIF-Actual cases among employees x 200,000/ employee hours worked, where
5 SIF Actual is counted using the methodology developed by the Edison Electric
6 Institute’s (EEI) Occupational Safety and Health Committee (OS&HC) Safety
7 and Classification Learning (SCL) Model.

8 If a utility has implemented a replicable, substantially similar evaluation
9 methodology for assessing incidents where a SIF occurred, the utility may use
10 that method for reporting this metric. If a utility opts to report the rate of SIF
11 Actual using a method other than the EEI SCL Model, it must explain how its
12 methodology for counting SIF-A differs and why it chose to use it.

13 As a supplemental reporting requirement to the SIF-A Rate for comparative
14 purposes, all utilities shall also report SIF-A Rate data based on California
15 Division of Occupational Safety and Health (Cal/OSHA) reporting requirements
16 under Section 6409.1 of the California Labor Code

17 **Risks:**

18 Contractor Safety Incident

19 **Category:**

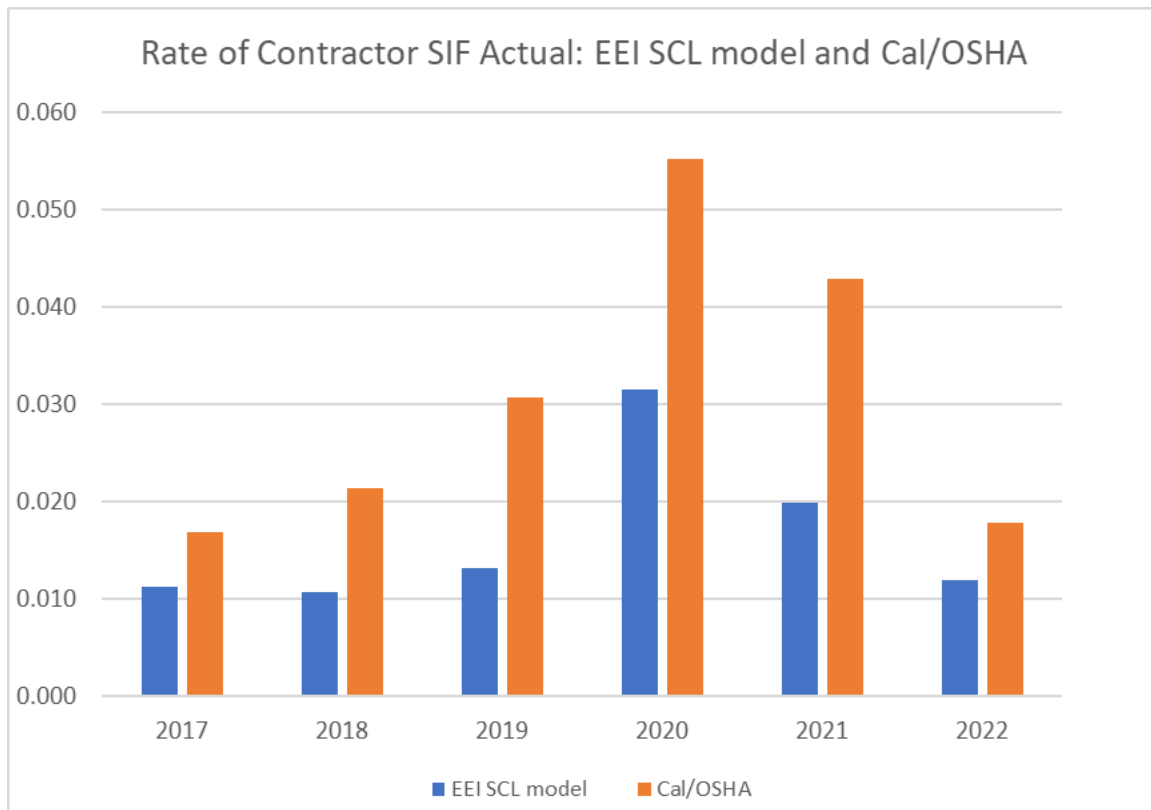
20 Injuries

21 **Units:**

22 Rate of SIF Actual (SIF-A) cases among employees x 200,000/contractor
23 hours worked.

Summary:

FIGURE 5-16
RATE OF SIF ACTUAL (CONTRACTOR) EEI SCL MODEL AND CAL/OSHA^(a)
DEFINITIONS COMPARISON



- (a) Per Cal/OSHA, a serious injury or illness is defined as one involving inpatient hospitalization, regardless of length of time, for other than medical observation or diagnostic testing; amputation; loss of an eye; or serious degree of permanent disfigurement.

2 Narrative Context:

3 Pacific Gas and Electric Company's (PG&E or the Company) SIF Program
 4 was deployed at the end of 2016 to establish a classification and cause
 5 evaluation process for coworker and contractor SIF.³⁹ The goal of PG&E's SIF
 6 Program is to reduce the number and severity of safety incidents that result in a
 7 SIF. The program objective is to learn from safety incidents by performing
 8 cause evaluations on each SIF-Actual (SIF-A) and SIF Potential (SIF-P)

³⁹ Per I.14-08-022, Kern Order Instituting Investigation (Kern OII) (Aug. 28, 2014) Settlement Agreement with California Public Utilities Commission (CPUC) see D.15-07-014.

1 incident, implementing corrective actions, and sharing key findings across the
2 enterprise.

3 In August of 2020, PG&E adopted Edison Electric International's (EEI)
4 Safety Classification Learning (SCL) Model to mature classification of its SIF
5 incidents.⁴⁰ Adopting the EEI SCL Model has improved PG&E's SIF Program
6 by bringing a consistent and objective approach to reviewing and classifying SIF
7 incidents and identifying high-energy tasks. The EEI SCL model does not
8 directly define a SIF-A, rather it classifies incidents into categories: High-Energy
9 SIF (HSIF),⁴¹ Low-Energy SIF (LSIF),⁴² Potential SIF (PSIF),⁴³ Capacity,⁴⁴
10 Exposure,⁴⁵ Success,⁴⁶ and Low Severity.⁴⁷ The HSIF terminology is fairly
11 new to the industry; however, it is equivalent to a SIF-A with regard to how
12 serious life threatening, life-altering or fatalities are determined.⁴⁸

13 While PG&E uses the EEI SCL model methodology to classify and track
14 SIF-A incidents, PG&E's SIF Program differs slightly from the EEI model in that
15 PG&E includes all types of Motor Vehicle Incidents (MVI) in its SIF counts,
16 whereas the EEI SCL model does not.⁴⁹ PG&E believes that all MVIs (even
17 where any injury did not occur) should be considered for SIF potentiality and will

40 See, SCL Model at <https://esafetyline.net/eei/docs/eeiSCLmodel.pdf> at p. 17.

41 *Id.* at p. 17, HSIF is defined as: "Incident with a release of high energy in the absence of a direct control where a serious injury is sustained."

42 *Id.* at p. 17, LSIF is defined as: "Incident with a release of low energy in the absence of a direct control where a serious injury is sustained."

43 *Id.* at p. 17, PSIF is defined as: "Incident with a release of high energy in the absence of a direct control where a serious injury is not sustained."

44 *Id.* at p. 17, Capacity is defined as: "Incident with a release of high energy in the presence of a direct control where a serious injury is not sustained."

45 *Id.* at p. 17, Exposure is defined as: "Condition where high energy is present in the absence of a direct control."

46 *Id.* at p. 17, Success is defined as: "Condition where a high energy incident does not occur because of the presence of a direct control."

47 *Id.* at p. 17, Low Severity is defined as: "Incident with a release of low energy where no serious injury is sustained."

48 EEI Safety Classification and Learning (SCL) Model, SIF defined as Life-threatening or life-altering incident.

49 This has been discussed during learning sessions with EEI and conversations with the SCL author that some MVIs do not fit within the parameters of the SCL model. PG&E uses its own MVI SIF classification process per SAFE-1002S: Motor Vehicle Standard, which is outside the SCL model classification process.

1 continue to include them in the SIF counts. This may differ slightly from how
2 other utilities classify and categorize contractor MVIs.

3 This SPM definition includes the use of the EEI OS&HC serious injury
4 criteria,⁵⁰ which defines a serious injury using fourteen specific injury criteria. In
5 operation, and in discussions with other utilities and EEI, PG&E finds that the
6 OS&HC criteria does not align with the life altering/life threatening aspects of the
7 SIF Program objective and is in contradiction to the SCL model purpose. PG&E
8 does, however, define serious injury in its SIF Program,⁵¹ which is substantially
9 similar to the OS&HC criteria. The difference is that PG&E considers life
10 altering/life threatening a substantial factor in serious injury determination.⁵²

11 As allowed by CPUC SPM definition for a SIF-A (Employee) incident, PG&E
12 uses substantially similar criteria to classify an injury as serious, as compared to
13 the EEI OS&HC criteria including life threatening/life altering into the SIF-A
14 determination. This determination also includes a third-party medical consultant
15 to review and concur with the serious designation. This model allows the
16 Company to focus its safety and risk mitigation efforts on the most serious
17 outcomes and highest risk work where a high energy incident occurred.

18 There have been 25 SIF-A Contractor incidents between 2017 and 2022,
19 which include 12 fatalities and 13 serious injuries. There is no common thread
20 between the incidents. The SIF-A events encompass broad job task types
21 including, helicopter operations, dropped objects, vegetation management, MVI
22 or Off-Highway Utility Vehicles, and electrical contacts. Four contractor SIF-A
23 incidents occurred in 2022. There were two contractor fatalities:

50 Occupational Safety & Health Committee: Serious Injury & Fatality Criteria (SIF) can be reviewed at:
<https://images.magnetmail.net/images/clients/EEI //attach/Environment/hsif2022.pdf>.

51 SAFE-1100S: Serious Injury or Fatality Standard, Appendix A Examples of a Serious Injury.

52 PG&E defines a SIF-A (analogous to a EEI SCL HSIF) as: A work-related high-energy incident consequential from work at or for PG&E that results in any of the following to employees, contractors, or directly supervised contractors:

- A fatality – work-related fatal injury or illness;
- A life-threatening injury or illness that required immediate life-preserving action that if not applied immediately would likely have resulted in the death of that person;
- A life-altering injury or illness that resulted in a permanent and significant loss of a major body part or organ function.

- 1 • August 2022: At approximately 12:40 p.m., a crew working for Davey Expert
2 Tree Company was cutting a tree in Boulder Creek, Santa Cruz County.
3 One of the contract coworkers was working aloft when the adjacent tree
4 holding his secondary fall protection failed and he was fatally injured.
- 5 • December 2022: At approximately 4:15 p.m., a contractor working for
6 Henkels & McCoy at a laydown yard in Hayward associated with a gas
7 pipeline replacement project was struck by a backhoe, resulting in fatal
8 injuries.

9 The remaining two injuries include a helicopter crash that resulted in a bone
10 fracture and an induction incident that resulted in a serious injury from electric
11 contact.

12 With regard to Cal/OSHA reporting requirements, there were 6 contractor
13 incidents primarily related to falls during vegetation management work.

14 Implementation of Contractor Safety Program (CSP), in addition to
15 executing corrective actions will drive down incidents. The CSP, evaluated as
16 part of the 2020 RAMP Report, is in progress through 2026. Please see Metric
17 19 narrative for additional detail about the additional programs being
18 implemented.

19 **Is Metric Used for the Purposes of Determining Executive (Director Level**
20 **or Higher) Compensation Levels and/or Incentives?**

21 Yes, Rate of SIF-Actual (Contractor) was used as a STIP metric for 2022. It
22 was measured in combination with the SIF-Actual (Employee) metric and
23 included serious injuries only.

24 **Is Metric Linked to the Determination of Individual or Group Performance**
25 **Goals?**

26 Yes, Rate of SIF-Actual (Contractor) is linked to 2022 performance goals for
27 one or more Director-level position or higher as a subset of SIF that includes
28 serious injuries only.

29 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

30 Yes, Rate of SIF-Actual (Contractor) is a measure of risk reduction for the
31 Contractor Safety Incident risk. It is linked to all individual goals as part of 2022

1 STIP plan. In addition, this metric may be included as part of an individual's
2 performance goals.

3 **Bias Controls:**

4 Data is compiled by the Enterprise Health & Safety Team. Contractor SIF
5 events are reviewed weekly and IA performed a validation of the metric
6 performance in 2022 and periodically validates the controls in place for gathering
7 metric data and the Utility's performance in meeting the metric.

8 **Rate Case Safety Goal Progress:**

9 This metric is not specifically stated in the 2020 GRC as a safety goal
10 metric. This metric is tracked internally as track and trend only.

11 **Monthly Data:**

12 See Attachment A at the end of this report.

1 **Metric 17: Rate of Serious Injuries or Fatalities (SIF) Potential (Employee)**

2 **Metric Name and Description:**

3 Rate of SIF Potential (Employee) is calculated using the formula:

4 Number of SIF Potential cases among employees x 200,000/employee
5 hours worked, where a SIF incident, in this case would be events that could
6 have led to a reportable SIF. Potential SIF incidents are identified using the
7 Edison Electric Institute (EEI) Safety Classification and Learning Model.⁵³

8 If a utility has implemented a replicable, substantially similar evaluation
9 methodology for assessing SIF Potential (SIF-P), the utility may use that method
10 for reporting this metric. If a utility opts to report the rate of SIF-P using a
11 method other than the EEI Safety Classification Model, it must explain how its
12 methodology for counting SIF-P differs and why it chose to use it.

13 As a supplemental reporting requirement to the rate of SIF Potential
14 (Employee), all utilities shall provide information about the key lessons learned
15 from Potential SIF (Employee) incidents.

16 Findings from 2022 SIF Potential incident investigations show gaps in
17 communication, skill-based errors and standards that are not well defined or
18 understood. The implementation of the PG&E Safety Excellence Management
19 System (PSEMS) and stronger focus on workforce safety initiatives, such as
20 development and training of critical risk standards, enhancing the field safety
21 observations program, and leader engagement are intended to close these
22 gaps.

23 **Risks:**

24 Employee Safety Incident

25 **Category:**

26 Injuries and Near Hits

27 **Units:**

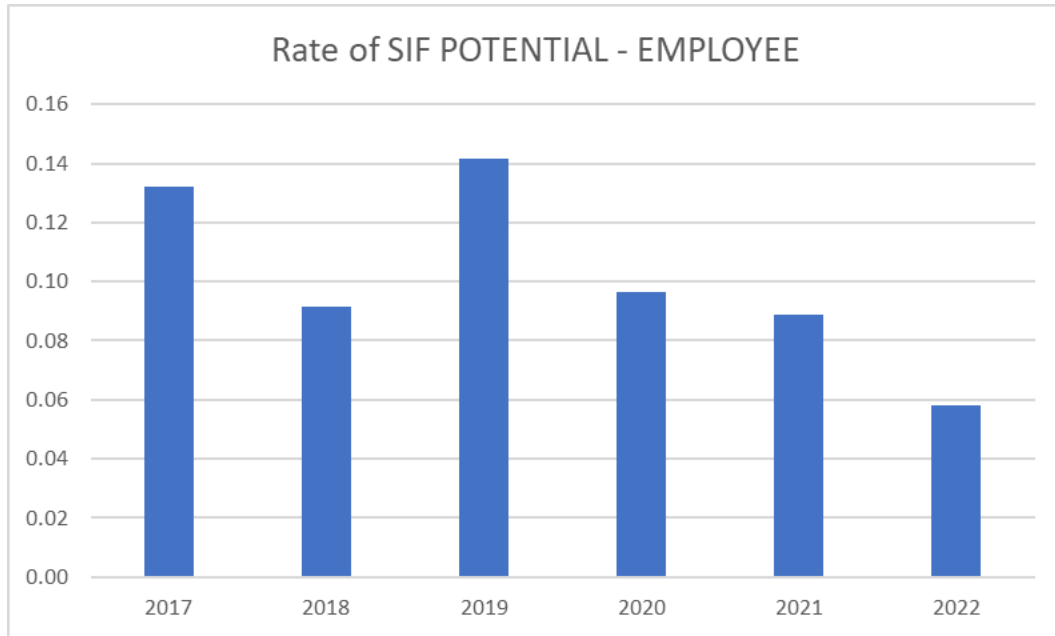
28 Number of SIF-Potential (SIF-P) cases among employees x
29 200,000/employee hours worked.

53 Edison Electric Institute Safety Classification and Learning Model at:
<https://esafetyline.net/eei/docs/eeiSCLmodel.pdf>.

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Summary:

FIGURE 5-17
RATE OF SERIOUS INJURIES OR FATALITIES (SIF) POTENTIAL (EMPLOYEE)



2

Narrative Context:

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PG&E's SIF Program was deployed at the end of 2016 to establish a classification and cause evaluation process for coworker and contractor serious injuries or fatalities.⁵⁴ The goal of PG&E's SIF program is to reduce the number and severity of safety incidents that result in a SIF. The program objective is to learn from safety incidents by performing cause evaluations on each SIF-Actual (SIF-A) and SIF Potential (SIF-P) incident, implementing corrective actions, and sharing key findings across the enterprise. As such, this metric is considered bi-directional as a higher rate can indicate that employees have an increased willingness to report SIF Potential incidents. As part of PG&E's Speak up culture, employees and contractors are encouraged to report all safety incidents. Leaders are expected to create the space for workers to feel comfortable to speak up and escalate safety concerns and failures.

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⁵⁴ Per Investigation 14-08-022, Kern Order Instituting Investigation (Kern OII) (Aug. 28, 2014) Settlement Agreement with California Public Utilities Commission see Decision 15-07-014.

1 From 2016 to mid-2020, SIF-P classification was based on the reasonable
2 chance that the incident could have resulted in a SIF-A.⁵⁵ This classification
3 was subjective and left room for interpretation. In August of 2020, PG&E
4 adopted Edison Electric International’s Safety Classification Learning (SCL)
5 Model to classify its serious injury or fatality (SIF) incidents.⁵⁶ Adopting the EEI
6 SCL Model improved PG&E’s SIF program by bringing a consistent and
7 objective approach to reviewing and classifying SIF incidents and identifying
8 high-energy tasks. The EEI SCL model classifies incidents into very distinct
9 categories: High-Energy SIF (HSIF),⁵⁷ Low-Energy SIF (LSIF),⁵⁸ Potential SIF
10 (PSIF),⁵⁹ Capacity,⁶⁰ Exposure,⁶¹ Success⁶² & Low Severity.⁶³ PG&E has
11 fully adopted the PSIF terminology into its SIF Program.⁶⁴

12 While PG&E uses the EEI SCL model methodology to classify and track SIF
13 incidents, PG&E’s SIF program differs slightly from the EEI model in that PG&E
14 includes all types of Motor Vehicle Incidents (MVI) in its SIF counts, whereas the
15 EEI SCL model does not.⁶⁵ PG&E believes that all motor vehicle incidents
16 (even where any injury did not occur) should be considered for SIF potentiality

55 SAFE-1100P-01 Rev.0 Published 03/31/0217.

56 See, SCL Model at <https://esafetyline.net/eei/docs/eeiSCLmodel.pdf> at p. 17.

57 *Id.* at p. 17, HSIF is defined as: “Incident with a release of high energy in the absence of a direct control where a serious injury is sustained.”

58 *Id.* at p. 17, LSIF is defined as: “Incident with a release of low energy in the absence of a direct control where a serious injury is sustained.”

59 *Id.* at p. 17, PSIF is defined as: “Incident with a release of high energy in the absence of a direct control where a serious injury is not sustained.”

60 *Id.* at p. 17, Capacity is defined as: “Incident with a release of high energy in the presence of a direct control where a serious injury is not sustained.”

61 *Id.* at p. 17, Exposure is defined as: “Condition where high energy is present in the absence of a direct control.”

62 *Id.* at p. 17, Success is defined as: “Condition where a high energy incident does not occur because of the presence of a direct control.”

63 *Id.* at p. 17, Low Severity is defined as: “Incident with a release of low energy where no serious injury is sustained.”

64 SAFE-1100S Rev 5, p. 10. Also, see SAFE-1100S Rev 5 Attachment 1, SIF Determination Flowchart

65 This has been discussed during learning sessions with EEI and conversations with the SCL author that some MVI’s do not fit within the parameters of the SCL model. PG&E uses its own MVI SIF classification process per SAFE-1002S: Motor Vehicle Standard, which is outside the SCL model classification process.

1 and will continue to include them in the SIF counts. This may differ slightly from
2 how other utilities classify and categorize MVIs.

3 In 2021 and 2022, PG&E saw a 33 percent decrease in SIF-P Employee
4 incidents. The most common events involved motor vehicle incidents and
5 electrical contact incidents. Motor vehicle program improvements have been
6 taken to address employee incidents including, installing driver technology to
7 monitor and track driver habits, i.e., acceleration, hard braking, speed, etc.

8 Continued measures are being implemented by the addition of the Regional
9 Safety Directors through safety campaigns and communications and
10 problem-solving sessions. The implementation of the Enterprise Safety
11 Management System and stronger focus on workforce safety initiatives, such as
12 development of critical risk standards, enhancing the field safety observations
13 program, leader engagement, and lean operating model, is expected to continue
14 to reduce this trend.

15 **Is Metric Used for the Purposes of Determining Executive (Director Level**
16 **or Higher) Compensation Levels and/or Incentives?**

17 No, in 2022, Rate of SIF Potential (Employee) was not used as a STIP
18 metric.

19 **Is Metric Linked to the Determination of Individual or Group Performance**
20 **Goals?**

21 No, Rate of SIF Potential (Employee), is not linked to 2022 individual or
22 group performance goals for one or more Director-level position or higher.

23 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

24 No, Rate of SIF Potential (Employee), is not linked to 2022 individual
25 performance goals for Director-level, or higher, positions.

26 **Bias Controls:**

27 SIF events are reviewed weekly by Enterprise Health & Safety

28 **Rate Case Safety Goal Progress:**

29 This metric is not specifically stated in the 2020 GRC as a safety goal
30 metric. This metric is tracked internally as track and trend only.

1 **Monthly Data:**

2 See Attachment A at the end of this report.

1 **Metric 18: Rate of Serious Injuries or Fatalities (SIF) Potential (Contractor)**

2 **Metric Name and Description:**

3 Rate of SIF Potential (contractor) is calculated using the formula:

4 Number of SIF Potential cases among contractors x 200,000/contractor
5 hours worked, where a SIF incident, in this case would be events that could
6 have led to a reportable SIF. Potential SIF incidents are identified using the EEI
7 Safety Classification and Learning Model.⁶⁶

8 If a utility has implemented a replicable, substantially similar evaluation
9 methodology for assessing SIF Potential (SIF-P), the utility may use that method
10 for reporting this metric. If a utility opts to report the rate of SIF-P using a
11 method other than the EEI Safety Classification Model, it must explain how its
12 methodology for counting SIF-P differs and why it chose to use it.

13 As a supplemental reporting requirement to the Rate of SIF Potential
14 (Contractor), all utilities shall provide information about key lessons learned from
15 SIF-P (Contractor) incidents.

16 Findings from 2022 SIF Potential incident investigations show gaps in
17 communication, skill-based errors and standards that are not well defined or
18 understood. The implementation of the PG&E Safety Excellence Management
19 System (PSEMS) and stronger focus on workforce safety initiatives, such as
20 development and training of critical risk standards, enhancing the field safety
21 observations program, and leader engagement are intended to close these
22 gaps.

23 **Risks:**

24 Contractor Safety Incident

25 **Category:**

26 Injuries & Near Hits

27 **Units:**

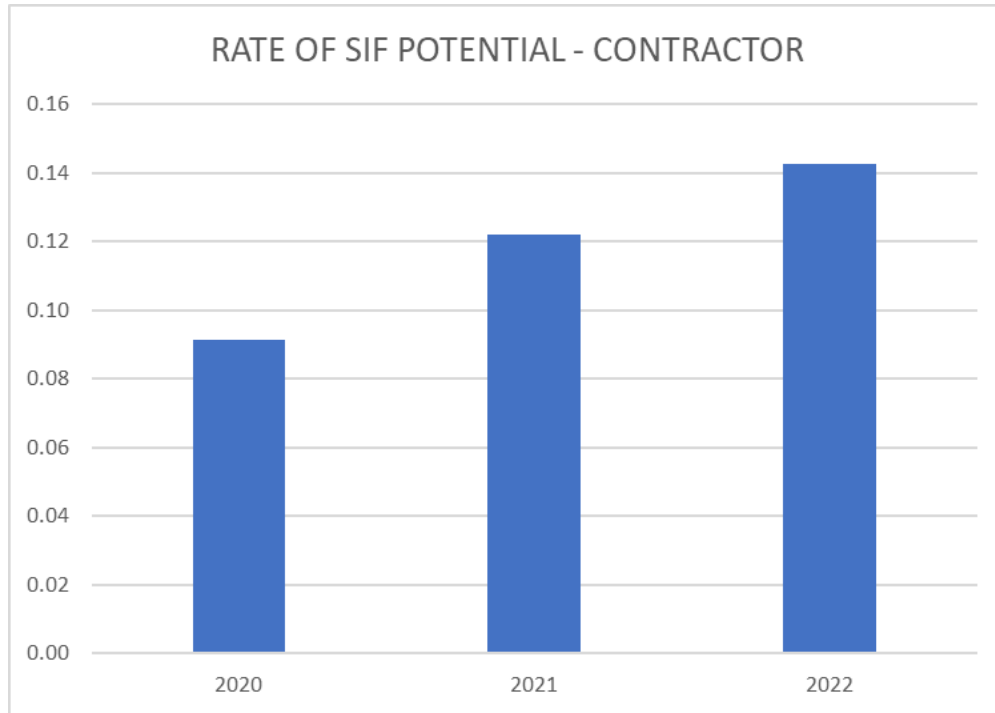
28 Number of SIF-Potential (SIF-P) cases among employees x
29 200,000/contractor hours worked.

66 Edison Electric Institute Safety Classification and Learning Model at:
<https://esafetyline.net/eei/docs/eeiSCLmodel.pdf>.

1

Summary:

**FIGURE 5-18
RATE OF SERIOUS INJURIES OR FATALITIES (SIF) POTENTIAL (CONTRACTOR)**



2

Narrative Context:

3

PG&E's Serious Injury or Fatality (SIF) program was deployed at the end of 2016 to establish a classification and cause evaluation process for coworker and contractor serious injuries or fatalities.⁶⁷ The goal of PG&E's SIF program is to reduce the number and severity of safety incidents that result in a SIF. The program objective is to learn from safety incidents by performing cause evaluations on each SIF-Actual (SIF-A) and SIF Potential (SIF-P) incident, implementing corrective actions, and sharing key findings across the enterprise. As such, this metric is considered bi-directional as a higher rate can indicate that employees and contractors have an increased willingness to report SIF Potential incidents. As part of PG&E's Speak up culture, employees and contractors are encouraged to report all safety incidents.

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⁶⁷ Per I.14-08-022, Kern Order Instituting Investigation (Kern OII) (Aug. 28, 2014) Settlement Agreement with California Public Utilities Commission see Decision 15-07-014.

1 In June of 2020, PG&E expanded the SIF program to include investigating
2 contractor incidents rising to SIF-P classification.⁶⁸ This increased the number
3 and types of injuries and incidents that contractors are required to report in 2020
4 through 2022. Prior to 2020, only contractor incidents that resulted in a SIF-A⁶⁹
5 were investigated by PG&E. The contractor was responsible for investigating all
6 other incidents and reporting action plans back to PG&E.

7 From 2017 to mid-2020, SIF-P classification was based on the reasonable
8 chance that the incident could have resulted in a SIF-A.⁷⁰ This classification
9 was subjective and left room for interpretation. In August of 2020, PG&E
10 adopted Edison Electric International’s Safety Classification Learning (SCL)
11 Model to classify its serious injury or fatality (SIF) incidents.⁷¹ Adopting the EEI
12 SCL Model improved PG&E’s SIF program by bringing a consistent and
13 objective approach to reviewing and classifying SIF incidents and identifying
14 high-energy tasks. The EEI SCL model classifies incidents into very distinct
15 categories: High-Energy SIF (HSIF),⁷² Low-Energy SIF (LSIF),⁷³ Potential SIF

68 SAFE-1100S-B001: Contractor SIF-P Incidents: Requiring SIF-P Incidents and Cause Evaluations Published 6/2020.

69 Per SAFE-1100S Rev.00 (2017): Serious Injury or Fatality Standard, An incident resulting in a fatality or serious injury that was life threatening or life altering.

70 SAFE-1100P-01 Rev.0 Published 03/31/0217.

71 See, SCL Model at <https://esafetyline.net/eei/docs/eeiSCLmodel.pdf> at p. 17.

72 *Id.* at p. 17, HSIF is defined as: “Incident with a release of high energy in the absence of a direct control where a serious injury is sustained.”

73 *Id.* at p. 17, LSIF is defined as: “Incident with a release of low energy in the absence of a direct control where a serious injury is sustained.”

1 (PSIF),⁷⁴ Capacity,⁷⁵ Exposure,⁷⁶ Success⁷⁷ & Low Severity.⁷⁸ PG&E has
2 fully adopted the PSIF terminology into its SIF Program.⁷⁹

3 While PG&E uses the EEI SCL model methodology to classify and track SIF
4 incidents, PG&E's SIF program differs slightly from the EEI model in that PG&E
5 includes all types of Motor Vehicle Incidents (MVI) in its SIF counts, whereas the
6 EEI SCL model does not.⁸⁰ PG&E believes that all motor vehicle incidents
7 (even where any injury did not occur) should be considered for SIF potentiality
8 and will continue to include them in the SIF counts. This may differ slightly from
9 how other utilities classify and categorize MVIs.

10 Between 2020 and 2022, there have been a total of 99 SIF-P contractor
11 incidents. The most common events involved electrical contacts, motor vehicle
12 incidents and falls from heights (electrical poles and trees). Program
13 improvements that have been taken to address contractor incidents include:

- 14 • Implemented an engineering control requirement for all tree climbers,
15 which includes a tree suspension point created with the use of slings,
16 pulleys, friction savers or other devices.
- 17 • Identified top at-risk contractors and are increasing engagement activities.
- 18 • Partnering with the IBEW and the Joint Apprenticeship and Training
19 Committee of the California-Nevada Line Construction Industry
20 (California-Nevada JATC) in creating and maintaining a system that will

74 *Id.* at p. 17, PSIF is defined as: "Incident with a release of high energy in the absence of a direct control where a serious injury is not sustained."

75 *Id.* at p. 17, Capacity is defined as: "Incident with a release of high energy in the presence of a direct control where a serious injury is not sustained."

76 *Id.* at p. 17, Exposure is defined as: "Condition where high energy is present in the absence of a direct control."

77 *Id.* at p. 17, Success is defined as: "Condition where a high energy incident does not occur because of the presence of a direct control."

78 *Id.* at p. 17, Low Severity is defined as: "Incident with a release of low energy where no serious injury is sustained."

79 SAFE-1100S Rev 5, p. 10. Also, see SAFE-1100S Rev 5 Attachment 1, SIF Determination Flowchart.

80 This has been discussed during learning sessions with EEI and conversations with the SCL author that some MVI's do not fit within the parameters of the SCL model. PG&E uses its own MVI SIF classification process per SAFE-1002S: Motor Vehicle Standard, which is outside the SCL model classification process.

1 educate and assess line clearance tree trimmers from Step 1 to the Journey
2 level.

- 3 • Working on improvements to the Contractor Safety Plan Onboarding Review
4 & Approval Process (PSP/PSSP)
- 5 • Improving Contractor Performance Appraisal Process (Post-Job
6 Evaluations)

7 Continued measures are being implemented by the addition of the Regional
8 Safety Directors through safety campaigns and communications,
9 problem-solving sessions and contractor safety oversight improvement. The
10 implementation of the PG&E Safety Excellence Management System (PSEMS)
11 and stronger focus on workforce safety initiatives, such as development of
12 critical risk standards, enhancing the field safety observations program, leader
13 engagement, and lean operating model, is expected to help reduce SIF-P events
14 involving contractors.

15 **Is Metric Used for the Purposes of Determining Executive (Director Level**
16 **or Higher) Compensation Levels and/or Incentives?**

17 No, in 2022, Rate of SIF Potential (contractor), was not used as a STIP
18 metric.

19 **Is Metric Linked to the Determination of Individual or Group Performance**
20 **Goals?**

21 No, Rate of SIF Potential (contractor), is not linked to 2022 individual or
22 group performance goals for one or more Director-level, or higher, position.

23 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

24 No, Rate of SIF Potential (contractor), is not linked to 2022 individual
25 performance goals for Director-level, or higher, positions.

26 **Bias Controls:**

27 SIF events are reviewed weekly by Enterprise Health & Safety

28 **Rate Case Safety Goal Progress:**

29 A rate of SIF Potential (Contractor) metric is not stated in the 2020 GRC
30 Safety and Health chapter (Chapter 1). This metric is tracked internally as track
31 and trend only.

1 **Monthly Data:**

2 See Attachment A at the end of this report.

1 **Metric 19: Contractor DART**

2 **Metric Name and Description:**

3 Contractor DART – DART Rate: DART Cases include OSHA-recordable
4 LWD Cases and injuries that involve job transfer or restricted work activity.
5 DART Rate is calculated as DART Cases times 200,000 divided by contractor
6 hours worked.⁸¹

7 **Risks:**

8 Contractor Safety Incident⁸²

9 **Category:**

10 Injuries

11 **Units:**

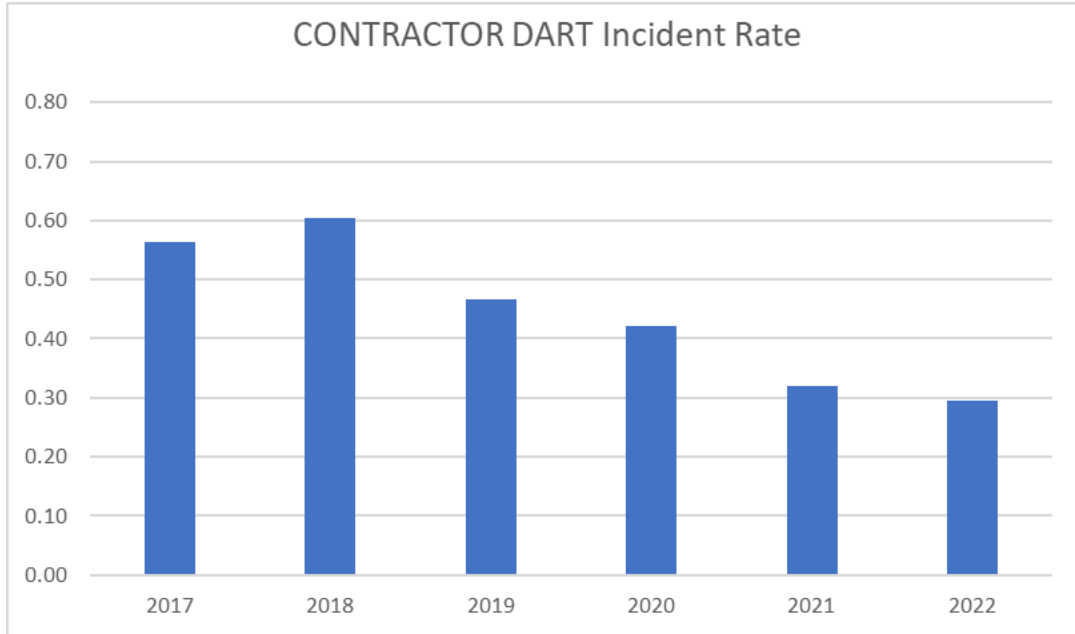
12 OSHA recordable times 200,000 divided by contractor hours worked
13 associated with work for the reporting utility.

⁸¹ Contractors included are performing medium to high-risk work.

⁸² The Corporate Risk Register includes the following risk: Contractor Safety Incident.

1 **Summary:**

**FIGURE 5-19
CONTRACTOR DART RATE METRIC DATA (ANNUAL)**



2 **Narrative Context:**

3 Contractor DART case rate data became available with the implementation
4 of the Contractor Safety Program which was fully in place at the beginning of
5 2017. Pacific Gas and Electric Company (PG&E) did not track this metric prior
6 to 2017. Data show that DART case rates for PG&E contractors decreased from
7 2018 through 2022 with the increase in the PG&E contractor workforce. This is
8 due to the Contractor Safety pre-qualification and Functional Area oversight
9 programs; these control programs are being strengthened. Additional mitigative
10 measures were also proposed as part of the 2020 Risk Assessment Mitigation
11 Phase (RAMP) Report⁸³ and are planned through 2026.

12 **Is Metric Used for the Purposes of Determining Executive (Director Level
13 or Higher) Compensation Levels and/or Incentives?**

14 No, in 2022, Contractor DART metric was not used as a STIP metric.

⁸³ PG&E 2020 RAMP Report, A.20-06-012 (June 30, 2020), Ch. 17, Contractor Safety Incident.

1 **Is Metric Linked to the Determination of Individual or Group Performance**
2 **Goals?**

3 Yes, Contractor DART is linked to 2022 individual or group performance
4 goals for one or more Director-level position or higher.

5 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

6 Yes, in 2022, the following position(s) include individual performance goals
7 that are linked to Contractor DART:

- 8 • Chief: Finance (1), Generation (3), Shared Services (1)
- 9 • Director: Customer & Communications (11), Electric Engineering (7),
10 Electric Operations (19), Engineering, Planning & Strategy (3), Finance (8),
11 Gas Engineering (3), Gas Operations (7), Generation (12), Information
12 Technology (15), Operations (11), Safety & Risk (7), Shared Services (10)
- 13 • Senior Director: Customer & Communications (4), Electric Engineering (2),
14 Electric Operations (8), Enterprise Health & Safety (2), Gas Operations (5),
15 Generation (2), Information Technology (6), Operations (5), Shared Services
16 (3)
- 17 • Vice President: Corporate Affairs (1), Customer & Communications (6),
18 Electric Operations (3), Engineering, Planning & Strategy (1), Enterprise
19 Health & Safety (1), Finance (1), Gas Operations (1), Generation (2),
20 Information Technology (2), Operations (1), Safety and Risk (1), Shared
21 Services (1), Supply Chain/Materials (1)
- 22 • Senior Vice President: Electric Engineering (1), Electric Operations (1), Gas
23 Engineering (1), Generation (1), Information Technology (1); and
- 24 • Executive Vice President: Customer & Communications (1), Finance (1)

25 **Bias Controls:**

26 OSHA regulates the definition of a DART case. The PG&E specific
27 information is self-reported by the contractors. The contractor company OSHA
28 logs are verified annually by an external third party.

29 **Rate Case Safety Goal Progress:**

30 This metric was not a stated metric in the 2020 GRC Enterprise Safety and
31 Health chapter (Chapter 1). The Narrative Context section above summarizes
32 the continued steps PG&E is taking to reduce the Contractor DART Rate.

1 **Monthly Data:**

2 See Attachment A at the end of this report.

1 **Metric 20: Public SIF**

2 **Metric Name and Description:**

3 Public serious injuries or fatalities (SIF) – A fatality or personal injury
4 requiring in-patient hospitalization involving utility facilities or equipment.
5 Equipment includes utility vehicles used during the course of business.

6 **Risks:**

7 Third-Party Safety Incident (Public Safety)⁸⁴

8 **Category:**

9 Injuries

10 **Units:**

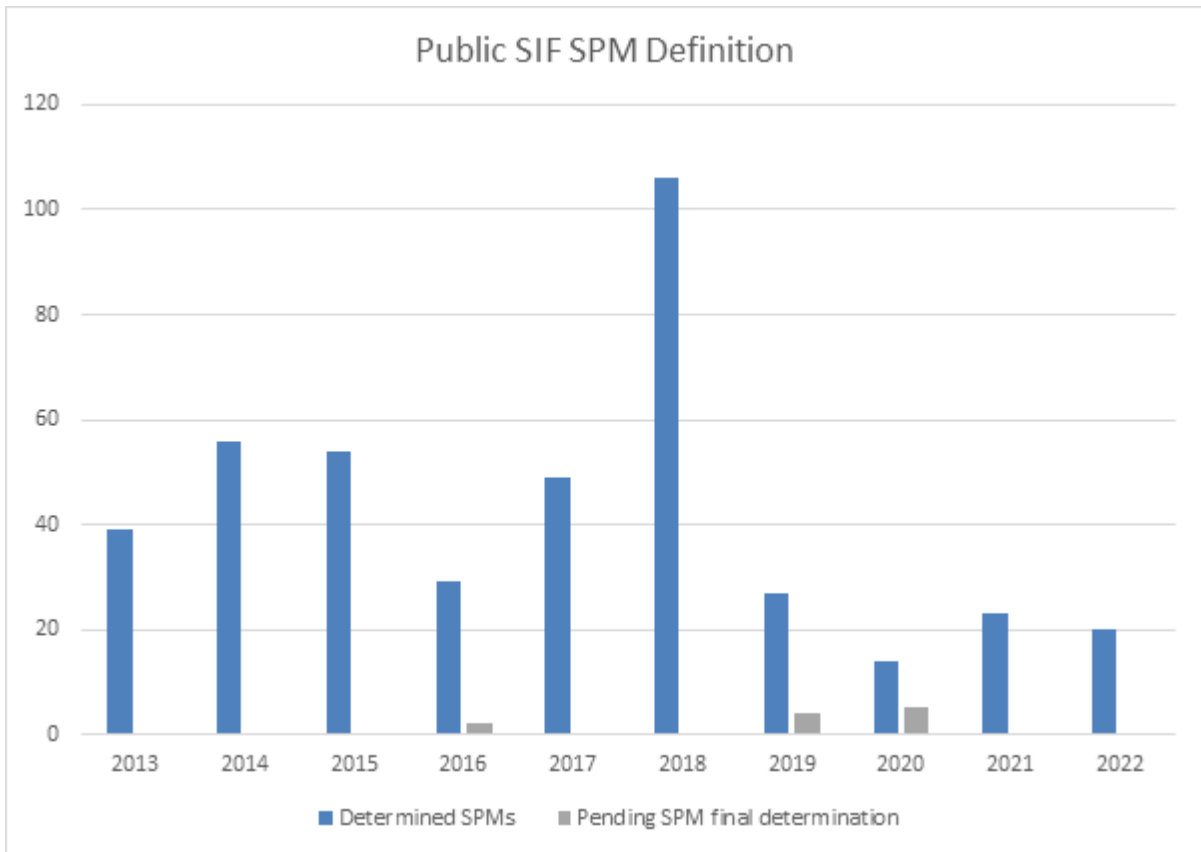
11 Number of SIF

⁸⁴ The Corporate Risk Register includes the following risk: Third-Party Safety Incident.

1

Summary:

**FIGURE 5-20
PUBLIC SIF METRIC DATA (ANNUAL)**



Note: At this time PG&E has included wildfires reported from 2016 through 2020, reported wildfires Sawmill, Kinkade, and Zogg continue to be under review.

2

Narrative Context:

3

The Public SIF metric includes all public safety incidents involving a Pacific Gas and Electric Company (PG&E) asset, where a member of the public was seriously injured, regardless of assigned fault. The data is reported by the total number of injuries per incident. In general, the number of Public SIF incidents (and injuries) has trended down since 2014, with the exception of the incidents in 2018 due to wildfires. Excluding wildfire, the primary drivers for the incidents include motor vehicle/distribution pole incidents, third-party electrical contact,

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1 and incidents on PG&E hydroelectric owned or managed property including
2 drownings.⁸⁵

3 In 2022, there were 20 confirmed Public Safety Incidents meeting the Safety
4 Performance Metric Public SIF definition (involving a PG&E asset regardless of
5 fault) that resulting in 8 serious injuries and 12 fatalities. The confirmed public
6 incidents included:

- 7 • Four electrical contacts (1 serious injury, 3 fatalities);
- 8 • Five car-pole incidents (1 serious injury, 7 fatalities);
- 9 • Three Company or Contractor Motor Vehicle Incidents (3 serious injuries,
10 2 fatalities);
- 11 • Two incidents involving members of the public using a PG&E owned or
12 managed recreational area(1 fatality due to drowning, 1 slip and fall serious
13 injury); and
- 14 • One Job Site incident (1 serious injury).

15 The downward trend in public safety incidents can be attributed to the
16 broader asset management programs in Electric Operations (EO) (including
17 Wildfire mitigation), Gas Operations (GO) and Power Generation. In 2020, a risk
18 was added to the PG&E enterprise risk register to place increased emphasis on
19 Public SIF that are unrelated to a PG&E asset failure or incorrect operations.
20 The risk reduction plan leverages Line of Business controls and mitigations
21 specific to public safety including EO, GO, and Hydroelectric Operations Public
22 Awareness and Job Site Safety programs, EO Transmission and Distribution
23 safety design requirements, GO physical security controls including Meter
24 Protection, and Hydroelectric Dam Surveillance monitoring and warning systems
25 and signage. Mitigation programs being implemented include canals and
26 waterways barrier installation and EO system hardening.

27 **Is Metric Used for the Purposes of Determining Executive (Director Level**
28 **or Higher) Compensation Levels and/or Incentives?**

29 No, in 2022, Public SIF was not used as a STIP metric.

⁸⁵ For Fire Ignition metric information see Metric 4. For electrical contact information see Metrics 1 and 2. Public SIF related to the failure of an asset are included in the risk analysis for asset-based event risks.

1 **Is Metric Linked to the Determination of Individual or Group Performance**
2 **Goals?**

3 Yes, Public SIF, is linked to 2022 individual or group performance goals for
4 one or more Director-level position or higher.

5 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

6 Yes, in 2022, the following position(s) include individual performance goals
7 that are linked to Public SIF:

- 8 • Director: Customer and Communications (2), Electric Engineering (1),
9 Electric Operations (6), Engineering Planning & Strategy (1), Gas
10 Engineering (1), Operations (14), Safety & Risk (7), Shared Services (6)
- 11 • Senior Director: Electric Engineering (2), Electric Operations (6), Gas
12 Operations (1), Operations (2), Shared Services (2)
- 13 • Vice President: Customer & Communications (3), Electric Operations (2),
14 Generation (1), Operations (2), Shared Services (1); and
- 15 • Senior Vice President: Electric Engineering (1), Electric Operations (1),
16 Operations (1)

17 **Bias Controls:**

18 This data is reviewed and compiled by PG&E's Law Department.

19 **Rate Case Safety Goal Progress:**

20 The Third-Party Safety Incident risk was added to the PG&E event-based
21 risk register in 2020 to place greater emphasis on third party safety incidents
22 that do not involve the failure of a PG&E asset. A third-party safety incident
23 metric is not stated in the 2020 GRC Safety and Health chapter (Chapter 1).

24 The Third-Party SIF metric dataset was used in the 2020 RAMP analysis for
25 the Third-Party Safety Incident risk.⁸⁶ RAMP model results for the risk reduction
26 programs being implemented indicate a reduction in third-party SIF incidents
27 that do not involve the failure of an asset through 2026. See the Narrative
28 Context explanation above for explanation of steps PG&E is taking to reduce the
29 Public SIF rate.

⁸⁶ PG&E 2020 RAMP Report, Chapter 15, Risk Mitigation Plan: Third-Party Safety Incident.

1 **Monthly Data:**

2 See Attachment A at the end of this report.

1 **Metric 21: Helicopter/Flight Accident or Incident**

2 **Metric Name and Description:**

3 Helicopter/Flight Accident or Incident – Defined by Federal Aviation
4 Regulations, reportable to the Federal Aviation Administration per 49 Code of
5 Federal Regulations (CFR) Section 830.

6 **Risks:**

7 Aviation Incident, Third Party Safety Incident, Contractor Safety Incident,
8 and Employee Safety Incident.⁸⁷

9 **Category:**

10 Vehicle

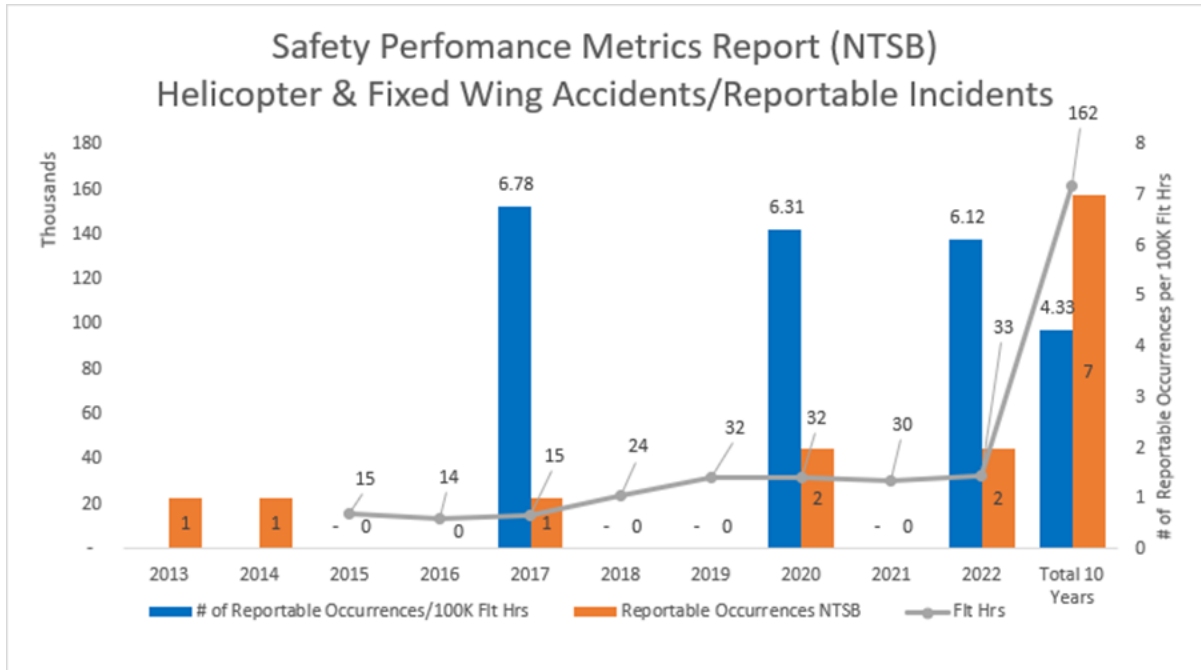
11 **Units:**

12 Number of accidents or incidents (as defined in 49 CFR Section 830.5
13 “Immediate Notification”) per 100,000 flight hours.

⁸⁷ The Corporate Risk Register now has the following risks: Aviation Incident, Employee Safety Incident, Contractor Safety Incident, and Third-party Safety Incident.

Summary:

**FIGURE 5-21
HELICOPTER/FLIGHT ACCIDENT OR INCIDENT METRIC DATA (ANNUAL)**



Note: Annual flight data for 2013 and 2014 is not provided due to lower confidence in accuracy.

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Narrative Context:

For the past 10 years, there have been seven reportable incidents per 49 CFR 830.5.

- Reported events not discussed below were documented in previous reports.
- September 2, 2014: While in cruise flight an unsecured jacket departed the helicopter through an open window. The tail rotor drive shaft sheared as a result of the jacket's contact with the tail rotors. The pilot subsequently initiated a forced landing to an orchard where during landing, the main rotors struck and separated the tail boom. The pilot reported no preimpact mechanical malfunctions or failures with the helicopter that would have precluded normal operation. Requirements were established to ensure control of all loose objects, to include articles of clothing, are properly secured prior to flight in either the aircraft cargo compartment or a

1 designated stowage bag. Additionally, this process was added to the pilot's
2 preflight briefing checklist.

- 3 • May 11, 2022: A Helicopter was conducting a Human External Cargo (HEC)
4 long line pilot qualification flight transporting a PG&E lineman on a 60-foot
5 rope when the pilot reported losing engine power at an altitude of 175 feet
6 above ground level. Attempts by the pilot to restore power were
7 unsuccessful. The pilot took action to position the lineman and cushion his
8 landing then maneuvered the helicopter to a landing spot away from the
9 lineman. The helicopter landed hard resulting in serious injuries to the pilot,
10 injuries to the lineman and a hull loss to the aircraft.

11 The NTSB investigation is in progress. PG&E took the following action
12 as the NTSB's investigation was initiated and before the publication of their
13 preliminary report. PG&E discontinued helicopter external load training and
14 qualifications at the Livermore Electric Safety Academy where the accident
15 occurred. A new location was secured, and construction has started to
16 support helicopter operations. This new location and configuration will
17 provide increased safety margins for unplanned helicopter occurrences.

- 18 • July 21, 2022: A helicopter was approaching a landing zone to conduct
19 external load operations when the right-hand tail rotor pedal fell to the floor
20 and the helicopter started to rotate. The pilot determined the pedal became
21 disconnected from the control arm. The pilot moved away from the landing
22 zone, jettisoned the cargo line as he regained control of the aircraft. The
23 pilot was able to fly to a nearby airport where a successful landing was
24 made. The incident was reported to the NTSB who elected not to
25 investigate. A Malfunction/Defect report was submitted to the FAA by the
26 helicopter contractor regarding the design of the tail rotor pedal quick
27 disconnect pin assembly. All helicopter contractors, operating for PG&E,
28 were immediately alerted to this issue. An extent of condition assessment
29 determined there were no helicopter contractors using this same part.

30 **Risk Reduction Measures:**

- 31 • Helicopter Contractors are required to follow the PG&E Helicopter
32 Operations Field Manual which provides detailed guidance for the conduct
33 of operations and establishes rigorous training and qualification

1 requirements. All helicopter contractors are required to meet the PG&E and
2 Helicopter Operations Contractor Safety program requirements. As part of
3 those programs, they are subject to third-party audits, Annual Health Checks
4 and Flight Safety Reviews by expert aviation operations specialists
5 throughout the year. They also attend quarterly Safety Stand-downs,
6 helicopter flight safety committee meetings and an annual safety forum.

- 7 • To improve occupant safety, PG&E Helicopter Operations requires all
8 occupants' onboard helicopters while patrolling in the wire environment to
9 wear an approved flight helmet. Fire resistant clothing is required for any
10 occupants regardless of the mission type.
- 11 • Aviation Services, Fixed Wing Operations was granted Stage I certification
12 by the International Standards for Business Aviation Organization (IS-BAO)
13 in 2021 and is preparing for their Stage II certification in 2023.
- 14 • Helicopter Operations contracted with a third-party audit company to
15 conduct a gap audit of all helicopter contractors for compliance with the
16 International Standards Business Aviation Organization (IS-BAO).
17 Compliance with international regulatory standards and industry best
18 practices estimated in – Q4 2023.
- 19 • Aviation Services is in the final stage of development and rollout of a Flight
20 Management System (FMS) software package. This will improve process
21 adherence and controls, support a new technical review process, and
22 provide improved flight data management and operational control.

23 **Is Metric Used for the Purposes of Determining Executive (Director Level**
24 **or Higher) Compensation Levels and/or Incentives?**

25 No, in 2022, Helicopter/Flight Accident or Incident was not as a STIP metric.

26 **Is Metric Linked to the Determination of Individual or Group Performance**
27 **Goals?**

28 Yes, Helicopter/Flight Accident or Incident is linked to 2022 individual or
29 group performance goals for Director-level, or higher, positions.

30 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

31 Yes, in 2022, the following position(s) include individual performance goals
32 that are linked to Helicopter/Flight Accident or Incident:

- 1 • Director: Shared Services (1); and
- 2 • Vice President: Shared Services (1)

3 **Bias Controls:**

4 None.

5 **Rate Case Safety Goal Progress:**

6 This metric does not represent a 2020 GRC stated safety goal. This metric
7 is a key risk indicator for the Aviation Incident risk.

8 **Monthly Data:**

9 See Attachment A at the end of this report.

1 **Metric 22: Percentage of Serious Injury and Fatality (SIF) Corrective**
2 **Actions Completed on Time**

3 **Metric Name and Description:**

4 Percentage of Serious Injury or Fatality (SIF) Corrective Actions Completed
5 on Time. A SIF corrective action is one that is tied to a SIF actual or potential
6 injury or near hit.

7 **Risks:**

8 Employee Safety Incident, Contractor Safety Incident, and Motor Vehicle
9 Safety Incident.⁸⁸

10 **Category:**

11 Injuries and Near Hits

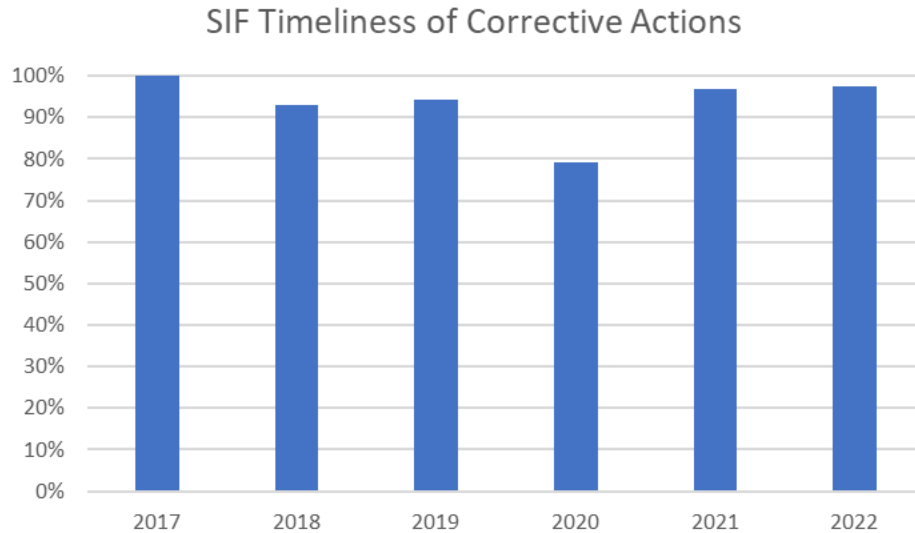
12 **Units:**

13 Total number of SIF corrective actions completed on time (as measured by
14 the due date accepted by LOB Corrective Action Review Boards) divided by the
15 total number of SIF corrective actions past due or completed.

⁸⁸ The Corporate Risk Register now has the following risks Employee Safety Incident, Contractor Safety Incident, and Motor Vehicle Safety Incident.

1 **Summary:**

FIGURE 5-22
SIF TIMELINESS OF CORRECTIVE ACTIONS METRIC DATA (ANNUAL)



2 **Narrative Context:**

3 Corrective action timeliness is vital to ensuring there are no unnecessary
4 delays in improving our direct controls' management, use, and effectiveness to
5 build capacity for high-energy job tasks to be performed safely. Between 2017
6 and 2019, Pacific Gas and Electric Company (PG&E) had an average corrective
7 action timeliness rate of 96 percent. In 2020, it dropped to 79 percent. The drop
8 in 2020 can largely be attributed to the pandemic, which caused cancellations of
9 field visits and delayed shipment of tools or materials required to complete
10 corrective actions on time. In addition, in 2020, PG&E prohibited the extension
11 of any corrective actions related to SIF incidents without justification and the
12 Chief Safety Officer's approval. In previous years, approval to extend due dates
13 was based on the functional area action owner and their leadership. In 2021,
14 corrective actions were completed on time at a rate of 97 percent,
15 five percentage points over the end-of-year target of 92 percent. In 2022,
16 corrective actions were completed on time at a rate of 98.5 percent, a
17 1.5 percent improvement from the previous year.

1 PG&E continues to monitor and review corrective actions in Daily Operating
2 Review meetings to ensure the support, tools, and resources are available to
3 complete actions on time and with quality.

4 **Is Metric Used for the Purposes of Determining Executive (Director Level
5 or Higher) Compensation Levels and/or Incentives?**

6 No, in 2022, percentage of SIF Corrective Actions Completed on Time, was
7 not used as a STIP metric.

8 **Is Metric Linked to the Determination of Individual or Group Performance
9 Goals?**

10 Yes, percentage of SIF Corrective Actions Completed on Time, is linked to
11 2022 group performance goals for one or more Director-level position or higher.

12 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

13 Yes, in 2022, the following position(s) include individual performance goals
14 that are linked to percentage of SIF Corrective Actions Completed on Time:

- 15 • Chief: Gas Engineering (1), Generation (3);
- 16 • Director: Electric Engineering (3), Enterprise Health & Safety (1),
17 Generation (11), Operations (1), Shared Services (4);
- 18 • Senior Director: Electric Engineering (1), Gas Operations (3), Generation
19 (2), Shared Services (1);
- 20 • Vice President: Enterprise Health & Safety (1), Generation (2), Safety &
21 Risk (1); and
- 22 • Senior Vice President: Gas Engineering (1), Gas Operations (1),
23 Generation (1).

24 **Bias Controls:**

25 IA performed a validation of the metric in 2022 as part of a validation of 2021
26 Q4 metric reporting.

27 **Rate Case Safety Goal Progress:**

28 This metric was a stated Key Safety Metric in Table 1-1 of the 2020 GRC
29 testimony on Safety and Health.⁸⁹

⁸⁹ PG&E GRC Exhibit (PG&E-7), Chapter 1, Safety and Health, p. 1-19.

1 **Monthly Data:**

2 See Attachment A at the end of this report.

1 **Metric 23: Hard Brake Rate**

2 **Metric Name and Description:**

3 Hard Brake Rate – The total number of hard braking events (greater than or
4 equal to 8 mph per second decrease in speed) per thousand miles driven in a
5 given period.

6 **Risks:**

7 Motor Vehicle Safety Incident⁹⁰

8 **Category:**

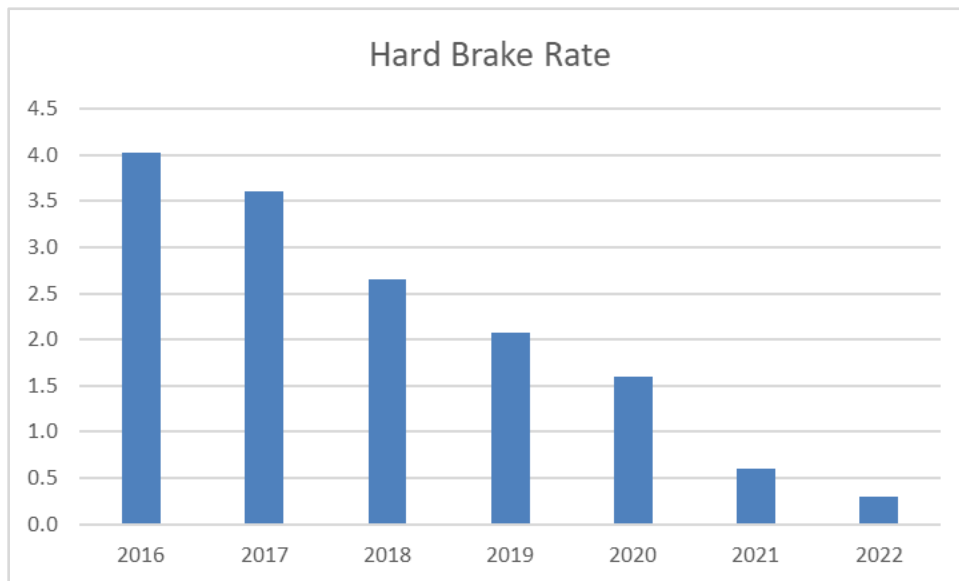
9 Vehicle

10 **Units:**

11 Total number of hard braking events per thousand miles driven in a given
12 period.

13 **Summary:**

**FIGURE 5-23
HARD BRAKE RATE METRIC DATA (ANNUAL)**



90 The Corporate Risk Register now has the following risks: Motor Vehicle Safety Incident.

1 **Narrative Context:**

2 PG&E began tracking the hard brake rate metric in 2016. The hard brake
3 rate has been in steady decline between 2016 and 2022. During the 2021-2022
4 time period, the number of vehicles tracking hard braking has increased
5 from 9,435 to approximately 9,800.

6 **Is Metric Used for the Purposes of Determining Executive (Director Level
7 or Higher) Compensation Levels and/or Incentives?**

8 No, in 2022, Hard Brake Rate was not used as a STIP metric.

9 **Is Metric Linked to the Determination of Individual or Group Performance
10 Goals?**

11 No, Hard Brake Rate, is not linked to 2022 individual or group performance
12 goals for Director-level, or higher, positions.

13 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

14 No, Hard Brake Rate, is not linked to 2022 individual performance goals for
15 Director-level, or higher, positions.

16 **Bias Controls:**

17 Data on Hard Brake Rate is provided by a third-party vendor.

18 **Rate Case Safety Goal Progress:**

19 While this metric is not specifically stated in the 2020 GRC; it is part of the
20 Safe Driving Rate metric, which also includes Hard Acceleration. For 2022, this
21 metric is track and trend and does not have a corresponding target.⁹¹

22 **Monthly Data:**

23 See Attachment A at the end of this report.

⁹¹ PG&E GRC Exhibit (PG&E-7), Chapter 1, Safety and Health, p. 1-19.

1 **Metric 24: Driver’s Call Complaint Rate**

2 **Metric Name and Description:**

3 Driver’s Call Complaint Rate – This metric measures the total number of
4 Driver Check complaint calls received per 1 million miles driven by vehicles
5 included in the Driver Check Program. Driver complaints are received from the
6 “How Am I Driving” hotline. Supervisors are required to investigate, take
7 corrective measures, and submit the investigation report for “How Am I Driving”
8 notifications within 5 working days. Driver complaint reports feed into the Safe
9 Driver Coaching Program and are included on the Driver’s Scorecard.

10 **Risk:**

11 Motor Vehicle Safety⁹²

12 **Category:**

13 Motor Vehicle

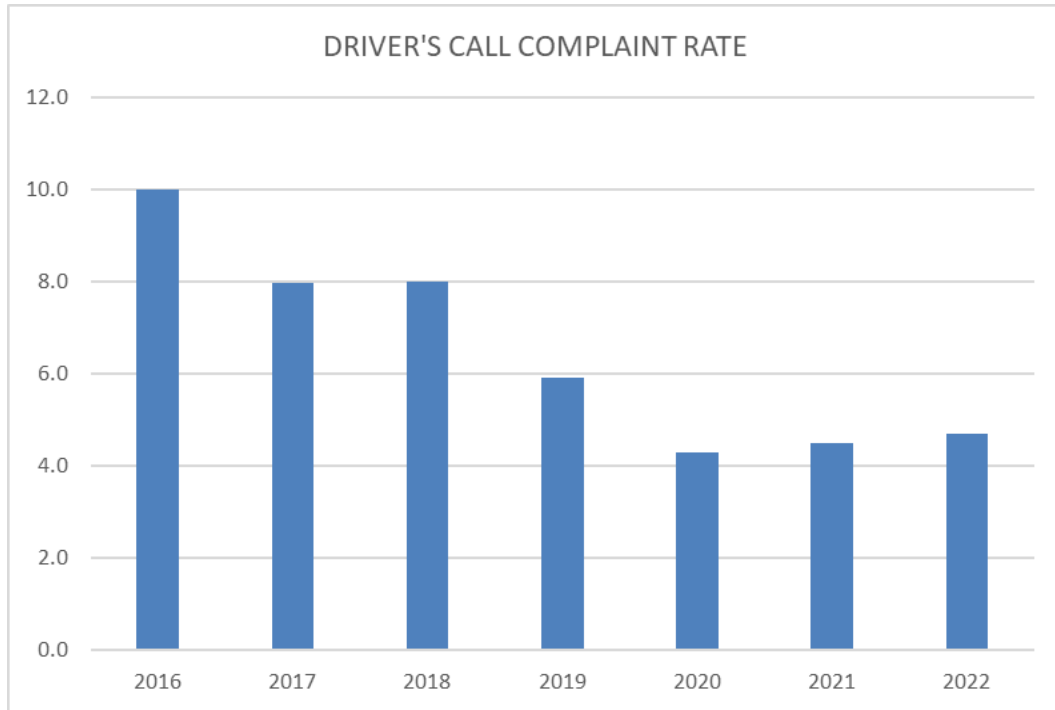
14 **Units:**

15 Total number of Driver Check complaint calls received per 1 million miles
16 driven.

92 The Corporate Risk Register now has the following risks: Motor Vehicle Safety Incident.

1 **Summary:**

**FIGURE 5-24
DRIVER'S CALL COMPLAINT RATE METRIC DATA (ANNUAL)**



2 **Narrative Context:**

3 PG&E began tracking this metric in 2016. The driver complaint rate has
4 dropped over 50 percent since 2016. There was a slight uptick in this metric in
5 2022 due to the introduction of a new report type regarding speeding events that
6 are generated from our telematics data. For every complaint there is an e-mail
7 to the Supervisor, which requires follow-up and coaching with the employee.

8 **Is Metric Used for the Purposes of Determining Executive (Director Level
9 or Higher) Compensation Levels and/or Incentives?**

10 No, in 2022, Driver's Call Complaint Rate, was not used as a STIP metric.

11 **Is Metric Linked to the Determination of Individual or Group Performance
12 Goals?**

13 No, Driver's Call Complaint Rate, is not linked to 2022 individual or group
14 performance goals for Director-level, or higher, positions.

1 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

2 No, Driver's Call Complaint Rate, is not linked to 2022 individual
3 performance goals for Director-level, or higher, positions.

4 **Bias Controls:**

5 Data on driver check calls is provided by a third-party vendor.

6 **Rate Case Safety Goal Progress:**

7 This metric was stated in the 2020 GRC as "Driver's Check Rate" and as
8 track and trend only safety goal.⁹³ The name has since been updated to
9 Driver's Call Complaint Rate.

10 **Monthly Data:**

11 See Attachment A at the end of this report.

⁹³ PG&E GRC Exhibit (PG&E-7), Chapter 1, Safety and Health, p. 1-19.

1 **Metric 25: Wires-Down not resulting in Automatic De-Energization**

2 **Metric Name and Description:**

3 Wires-Down not resulting in Automatic De-energization – This metric is
4 defined as the number of occurrences of wire down events in the past calendar
5 year that did not result in automatic (i.e., not manually activated) de-energization
6 by circuit protection devices such as fuses, circuit breakers, and reclosers, etc.
7 on all portions of a downed conductor that rest on the ground. This metric does
8 not consider possible energization due to induced voltages from magnetic
9 coupling of parallel circuits. Metric excludes secondary conductors and service
10 drops. The metric is reported as a percentage of all wires down events in the
11 past calendar year. Separate metrics are provided for transmission and
12 distribution systems.

13 **Risks:**

14 Electric Overhead, wildfire

15 **Category:**

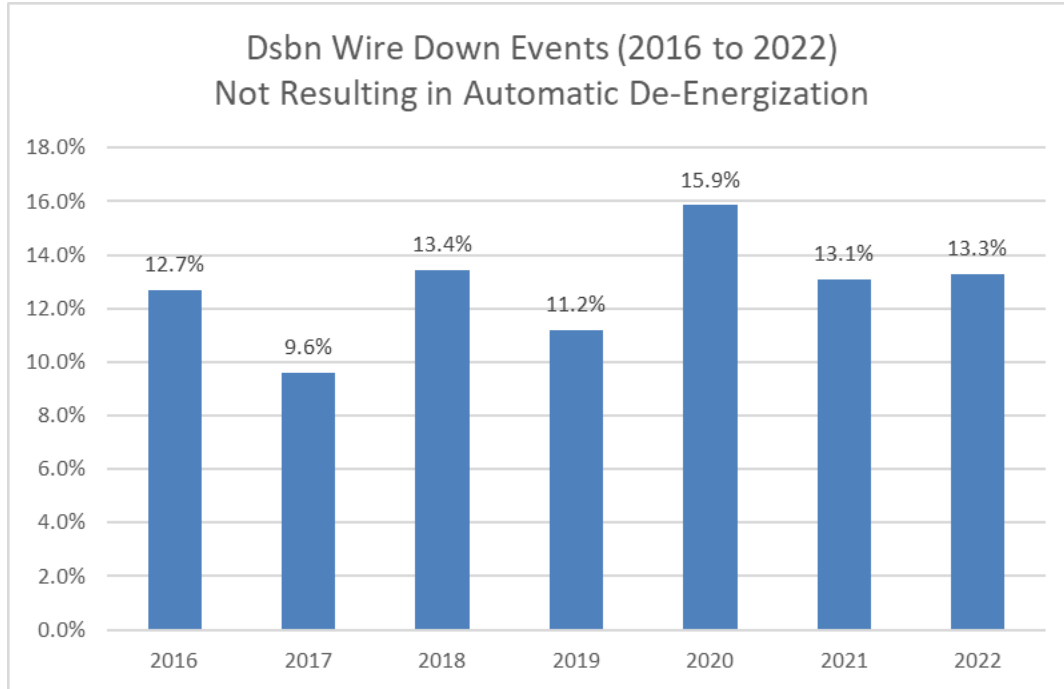
16 Electric

17 **Units:**

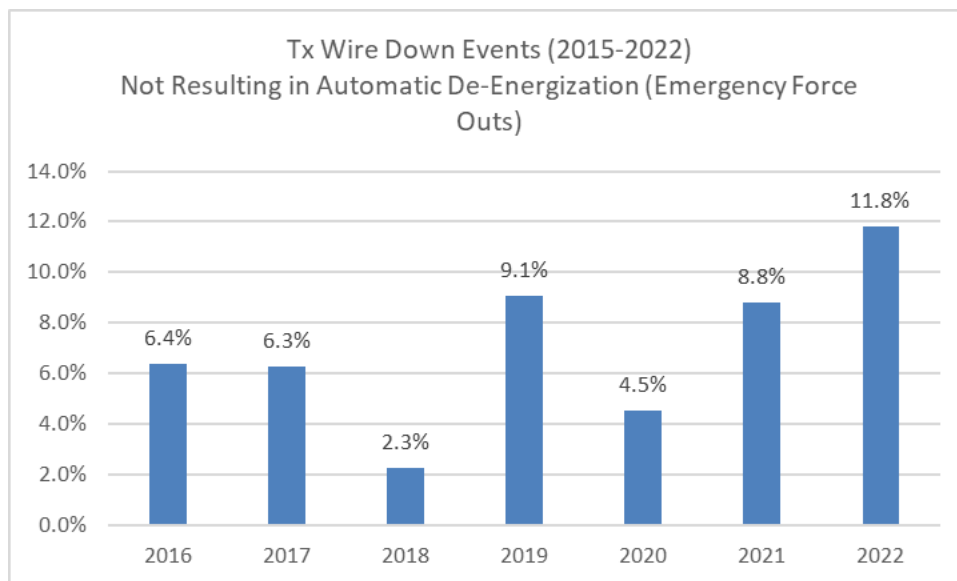
18 percentage of wires down occurrences

Summary:

**FIGURE 5-25A
DISTRIBUTION WIRES-DOWN NOT RESULTING IN AUTOMATIC DE-ENERGIZATION (ANNUAL)**



**FIGURE 5-25B
TRANSMISSION WIRES-DOWN NOT RESULTING IN AUTOMATIC DE-ENERGIZATION (ANNUAL)**



1 **Narrative Context:**

2 PG&E updated its outage reporting tools in 2015 to allow for reporting when
3 a distribution or transmission wire down event was noted by field personnel as
4 being energized upon arrival and as such, 2016 was the first full year when this
5 detail was reported in its outage data base. As can be seen in Figure 5-25A, the
6 distribution percentage value has ranged from 9.6 percent in 2017 to
7 15.9 percent in 2020 with a seven-year average of 12.7 percent, whereas the
8 Transmission percentage value ranged from 2.3 percent in 2018 to 11.8 percent
9 in 2022 with a seven-year average of 7.1 percent (Figure 5-25-B). While PG&E
10 has not tracked this specific metric in the past, for safety reasons, field
11 personnel generally treat wire down events as energized if unknown and
12 these percentages above represent the information reported as actually being
13 energized.

14 **Is Metric Used for the Purposes of Determining Executive (Director Level**
15 **or Higher) Compensation Levels and/or Incentives?**

16 No, in 2022, Wires-Down not resulting in Automatic De-energization, was
17 not used as a STIP.

18 **Is Metric Linked to the Determination of Individual or Group Performance**
19 **Goals?**

20 No, Wires-Down not resulting in Automatic De-energization, is not linked to
21 2022 individual or group performance goals for Director-level, or higher,
22 positions.

23 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

24 No, Wires-Down not resulting in Automatic De-energization, is not linked to
25 2022 individual performance goals for Director-level, or higher, positions.

26 **Bias Controls:**

27 The T&D Wires Down metric is a strong proxy of the overall goal of reducing
28 the potential contacts with wires down and improving the reliability of the electric
29 system along with reducing public safety risk.

1 **Rate Case Safety Goal Progress:**

2 While this specific metric is not tied to a 2020 GRC Safety Goal, the T&D
3 Wires Down metric (excluding downed secondary distribution wires and MEDs)
4 has been one of the key indicators that PG&E is using to track Public Safety
5 Performance.

6 Significant work continues to be performed to reduce wires down, including
7 replacing overhead conductor, vegetation clearing, hardening of distribution
8 circuits, infrared inspections of overhead lines to identify and repair hot spots,
9 investigating wires down incidents, and implementing learnings/corrective
10 actions.

11 **Monthly Data:**

12 See Attachment A at the end of this report.

1 **Metric 26: Missed Inspections and Patrols for Electric Circuits**

2 **Metric Name and Description:**

3 Missed Inspections and Patrols for Electric Circuits – Metrics are calculated
4 as annual number of overhead electric structures that did not comply with the
5 inspection frequency requirements divided by total number of overhead electric
6 structures with inspections due in the past calendar year. Separate metrics are
7 provided for patrols, detailed inspections. Separate metrics are provided for
8 primary distribution and transmission overhead circuits. “Minimum patrol
9 frequency” refers to the frequency of patrols as specified in General Order (GO)
10 165. “Structures” refers to electric assets such as transformers, switching
11 protective devices, capacitors, lines, poles, etc.

12 **Risks:**

13 Electric Overhead, wildfire

14 **Category:**

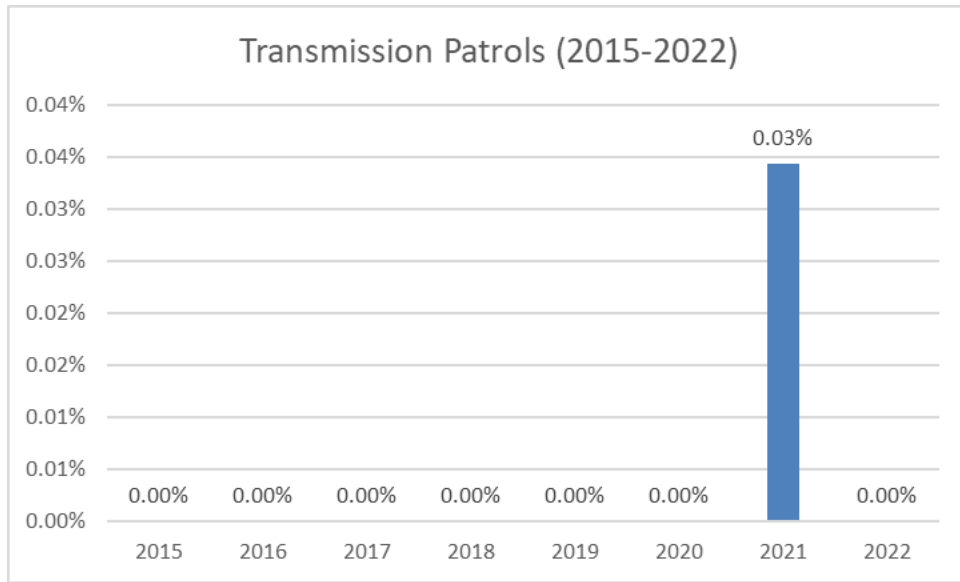
15 Electric

16 **Units:**

17 percentage of structures that missed inspection relative to total required
18 structures.

Summary:

**FIGURE 5-26A
MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS (ANNUAL)
(TRANSMISSION PATROLS)**



**FIGURE 5-26B
MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS (ANNUAL)
(TRANSMISSION INSPECTIONS)**

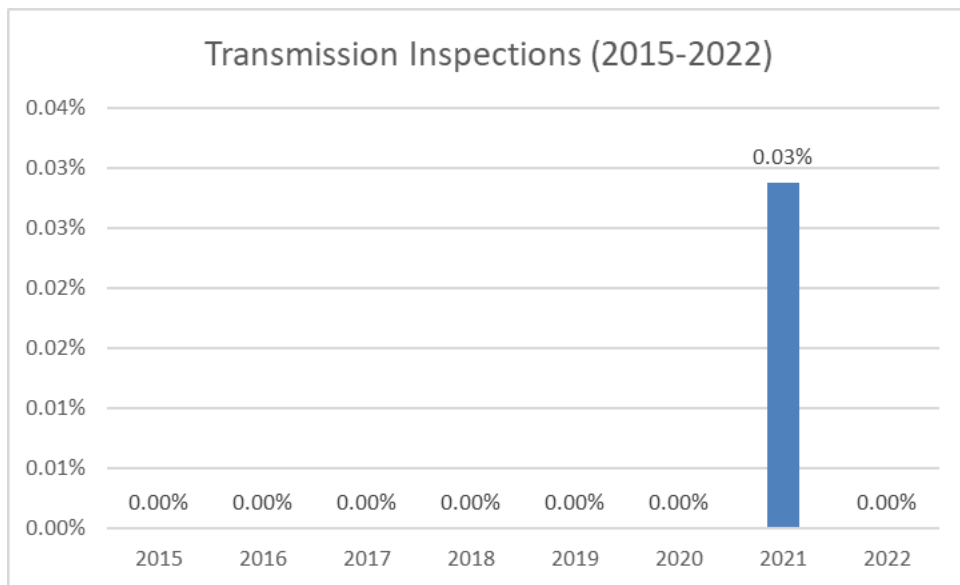


FIGURE 5-26C
MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS (ANNUAL)
(DISTRIBUTION PATROLS)

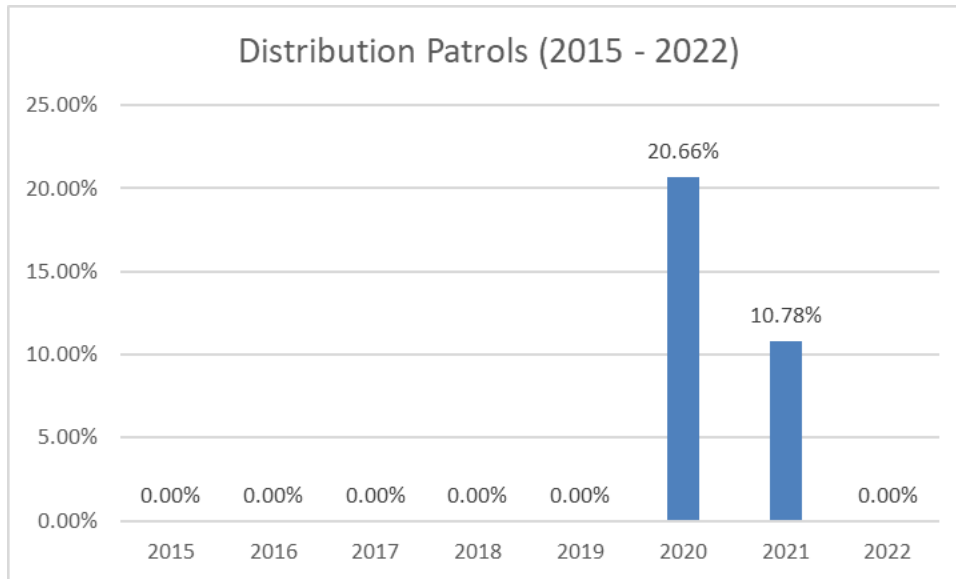
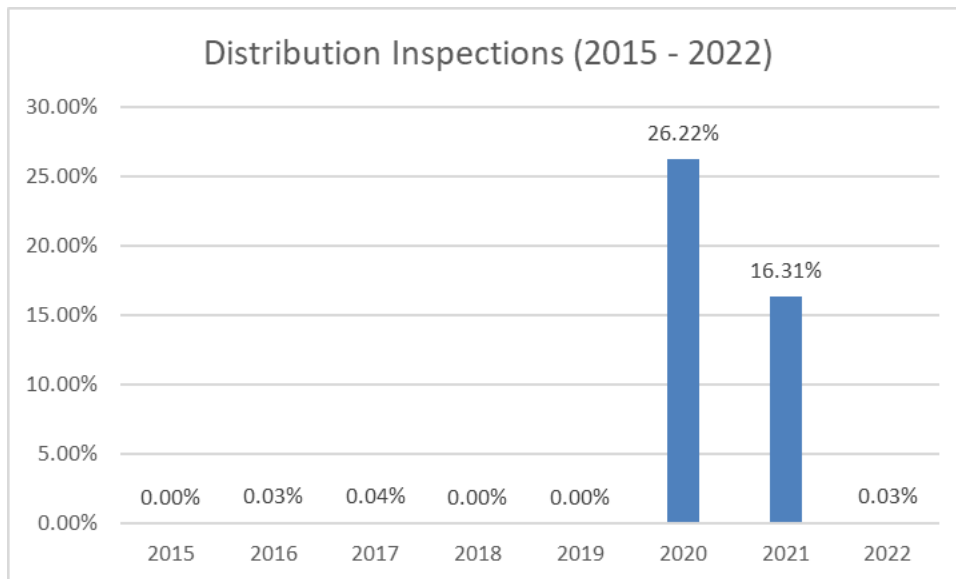


FIGURE 5-26D
MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS (ANNUAL)
(DISTRIBUTION INSPECTIONS)



1 **Narrative Context:**

2 Distribution Patrols and Inspections

3 Prior to year 2014, GO 165 required that patrols and inspections be
 4 completed any time between January 1 and December 31 each year.

1 Starting in 2015 and through 2019, we implemented the new GO 165
2 requirement to complete patrols and inspections each year within a prescribed
3 timeframe, based on the date of the last patrol or inspection. Our interpretation
4 and implementation of this new language calculated the due date for each patrol
5 or inspection each year as follows:

6 The California Public Utilities Commission (CPUC) twelve plus three (12+3)
7 month Patrol and Inspection requirement defines:

- 8 • The due date for each “plat map” is based on the date the map was last
9 inspected or patrolled.
- 10 • Inspections or patrols (of the facilities on a map) may not exceed 3
11 additional months past the previous inspection or patrol date of that facilities
12 on that map (maximum 15 months).
- 13 • Inspections or patrols may be performed before the due date.
- 14 • Inspections or patrols are performed by the end of the calendar year (12/31).
- 15 • The start of an inspection or a patrol starts a new inspection or patrol
16 interval that must be completed within the prescribed timeframe.

17 For the years 2020 and 2021, we pivoted away from the “12+3” due date for
18 completing patrols and inspections (of the facilities on a map), and instead
19 directed our inspection program towards accelerating inspections for all
20 inspectable electric facilities in the High Fire Threat Districts (HFTD) to be
21 completed in first half of year and Non-HFTD inspections for second half of year.
22 As a result, we completed patrols and inspections by “static” due dates of 8/31
23 for HFTD areas, and 12/31 for Non-HFTD areas.

24 In 2022, PG&E completed 422,118 (363,928 Distribution; 58,190
25 Transmission) overhead patrols and 473,558 (395,353 Distribution; 78,205
26 Transmission) inspections in compliance with GO 165.

27 Transmission Patrols and Inspections

28 Patrols involve simple visual observations to identify obvious
29 nonconformances. All assets require either a detailed inspection or a patrol
30 each year. While detailed inspections have shifted from circuit-based cycles to
31 an inspection frequency that depends on HFTD and structure-level risk
32 considerations, patrols remain circuit-based. Therefore, any line that does not
33 receive a detailed inspection from end-to-end will require a patrol and it is

1 possible for some structures to receive both an inspection and a patrol in the
2 same year. Patrols may be performed either by air (helicopter) or ground
3 (walking or driving).

4 The overhead transmission detailed inspection program has undergone
5 significant evolution over the reporting period for the metric. Prior to 2019,
6 detailed ground inspections were performed by circuit with a frequency
7 depending on the voltage and whether the majority of the structures on the
8 circuit were wood (2-year cycle) or steel (5-year cycle). The Wildfire Safety
9 Inspection Program (WSIP), which began in late 2018 and extended into 2019,
10 introduced several key improvements to overhead transmission inspections: the
11 use of an 'enhanced' inspection methodology with a questionnaire developed
12 from a wildfire-ignition Failure Modes and Effects Analysis and the addition of
13 aerial inspections using high-resolution drone photographs to provide a second
14 vantage point from above to complement the ground inspections performed with
15 the inspector standing at the base of the structure. These improvements from
16 WSIP were incorporated into the regular overhead inspection program beginning
17 in 2020. The 2020 inspections replaced the old wood- or steel-based inspection
18 cycles with cycles that called for more frequent inspections in HFTD, annually for
19 Tier 3 and on a 3-year cycle for Tier 2, compared to a 5-year cycle for
20 non-HFTD. The 2020 inspections also included non-HFTD structures in
21 PG&E-designated High Fire Risk Areas (HFRA), which were treated like Tier 2.
22 The inspection program in 2021 continued using the HFTD-based cycles
23 introduced in 2020 and imposed an in-year deadline for HFTD and HFRA
24 inspections of 7/31, which PG&E committed to in the 2021 Wildfire Mitigation
25 Plan (WMP). The intent of this deadline was to allow completion of the
26 inspections and any emergency repairs found from the inspections prior to peak
27 fire season. Monthly validations of the inspection plan were started in
28 June 2021 to ensure that all assets requiring an inspection under their
29 prescribed cycles were included in the plan, including assets that were newly
30 added to the asset registry. The 2022 inspection scope introduced the use of
31 wildfire risk and consequence scores at the structure level to inform the selection
32 of assets to be inspected.

1 Data provided for 2015-2019 reflects systemwide performance.
2 HFTD-specific performance is not available prior to 2020. The HFTD data for
3 patrols and inspections was tracked in SAP starting in 2020.

4 **Is Metric Used for the Purposes of Determining Executive (Director Level**
5 **or Higher) Compensation Levels and/or Incentives?**

6 No, in 2022, Missed Inspections and Patrols for Electric Circuits, was not
7 used as a STIP metric.

8 **Is Metric Linked to the Determination of Individual or Group Performance**
9 **Goals?**

10 Yes, Missed Inspections and Patrols for Electric Circuits, is linked to 2022
11 individual or group performance goals for Director-level position or higher.

12 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

13 Yes, in 2022, the following position(s) include individual performance goals
14 that are linked to Missed Inspections and Patrols for Electric Circuits.

- 15 • Director: Electric Operations (3);
- 16 • Senior Director: Customer & Communications (1), Engineering, Planning &
17 Strategy (1), Shared Services (1); and
- 18 • Vice President: Customer & Communications (1), Gas Operations (1).

19 **Bias Controls:**

20 Tracking spreadsheet at the division level for each of the 18 distribution
21 compliance offices, with all maintenance plans that are due for the year –
22 including the following:

- 23 • Patrols: Date of last patrol, with calculated CPUC due date;
- 24 • Inspections: Date of last inspection, with calculated CPUC due date;
- 25 • As work is completed, entries are made into the spreadsheet including the
26 date that the work was started and completed, Inspector Name and LAN ID,
27 etc.; and
- 28 • Tracking column indicating if the work was completed <= the CPUC due
29 date.

30 Division spreadsheets are merged into a master file every week, with the
31 following tracking mechanisms:

- 1 • “At Risk” report, which provides the work that is coming due in the next
2 2 weeks & 6 weeks, for visibility;
- 3 • Summary report, by Division, showing volume of facilities that were
4 completed on time or late;
- 5 • Recurring calls with Area Managers and Supervisor, to review the “At Risk”
6 report to ensure visibility of upcoming due dates, understanding of any late
7 units; and
- 8 • For late units, centralized tracking of all late units within the System
9 Inspections “data response” team, including reason for work being complete
10 late, remediation efforts needed, etc.

11 Supervisors have visibility in to CPUC due dates, are required to dispatch
12 work to Inspectors in time to meet dates. Inspectors see CPUC due dates on
13 paper map package and in the Inspect application, so that they can prioritize and
14 ensure they complete the work by the due date. Due date requirements are
15 covered during Inspector training courses. Contract resources have visibility into
16 due dates, expectation is that they complete all assigned work by due dates.

17 “Engage” application – scheduling tool for Supervisor to assign OH
18 inspections, includes the due date for each maintenance plan, so that
19 supervisors have visibility and can ensure they are dispatching work in time to
20 meet the CPUC due date. Daily “Attainment Report” for OH inspections
21 completed in the Inspect application, which includes “asset required date”
22 (CPUC due date and/or WMP date, whichever date is sooner) and completion
23 date.

24 Various monthly reporting and metrics showing volume of patrols and
25 inspections completed on time or late.

26 IA performed a validation of the metric performance in 2022 and periodically
27 validates the controls in place for gathering metric data for the overhead
28 inspection components of the metric.

29 **Rate Case Safety Goal Progress:**

30 The Missed Inspections and Patrols metric is related to PG&E’s commitment
31 to perform its Detailed Electric Distribution and Transmission Inspections in
32 Compliance with its WMP, but also with GO 165. Significant work was
33 performed to ensure electric facilities were inspected within their respective

1 compliance timelines, but to ensure the inspections were effective in identifying
2 non-conformances that required urgent repairs to mitigation for the potential of
3 catastrophic wildfires. Furthermore, additional planning controls were developed
4 to ensure all inspectable facilities are in a planned inspection cycle to avoid
5 inspections being missed.

6 **Monthly Data:**

7 See Attachment A at the end of this report.

1 **Metric 27: Overhead Conductor Size in High Fire Threat District, Tiers 2**
2 **and 3, (HFTD)**

3 **Metric Name and Description:**

4 Overhead Conductor Size in High Fire Threat District, Tiers 2 and 3, HFTD
5 – percentage of primary distribution overhead conductors in Tiers 2 and 3 HFTD
6 that is #6 copper (6Cu). Secondary conductors are excluded.

7 **Risks:**

8 Electric Overhead, wildfire

9 **Category:**

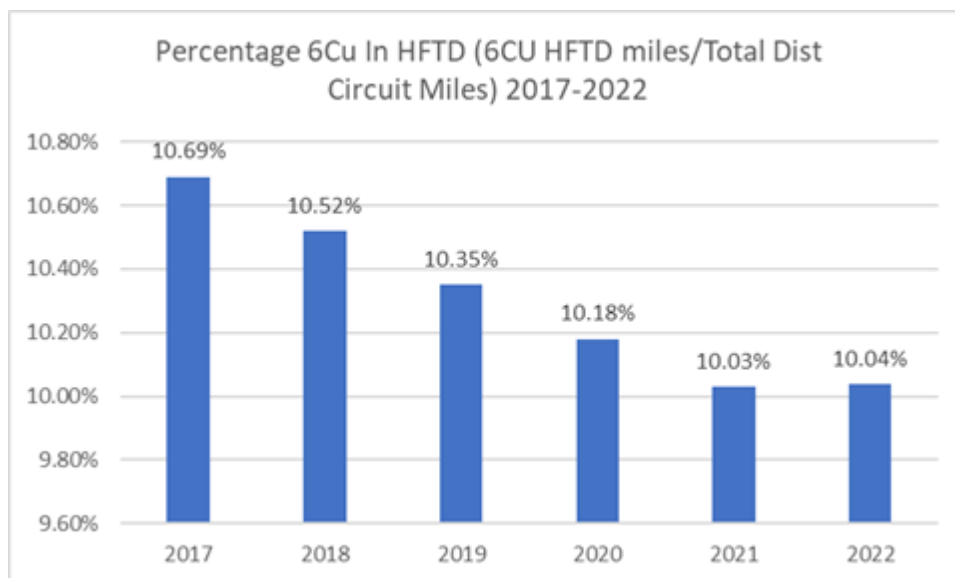
10 Electric

11 **Units:**

12 percentage relative to total circuit miles.

13 **Summary:**

FIGURE 5-27
OVERHEAD CONDUCTOR SIZE IN HIGH FIRE THREAT DISTRICT, TIERS 2 AND 3, (HFTD)
(ANNUAL)



1 **Narrative Context:**

2 PG&E’s system of record for our electric distribution facilities is Electric
3 Distribution Geographic Information System (EDGIS). The EDGIS data points
4 above show a reduction of 6Cu over time within PG&E’s distribution system.
5 PG&E has eliminated the use of 6Cu in new construction, however it is still used
6 in cases of maintenance and emergency work.

7 **Is Metric Used for the Purposes of Determining Executive (Director Level**
8 **or Higher) Compensation Levels and/or Incentives?**

9 No, in 2022, Overhead Conductor Size in High Fire Threat District, Tiers 2
10 and 3, (HFTD) was not used as a STIP metric.

11 **Is Metric Linked to the Determination of Individual or Group Performance**
12 **Goals?**

13 No, Overhead Conductor Size in High Fire Threat District, Tiers 2 and 3,
14 (HFTD), is not linked to 2022 individual or group performance goals for
15 Director-level, or higher, positions.

16 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

17 No, Overhead Conductor Size in High Fire Threat District, Tiers 2 and 3,
18 (HFTD), is not linked to 2022 individual performance goals for Director-level, or
19 higher, positions.

20 **Bias Controls:**

21 There are currently no bias controls in place for measuring the amount of
22 6Cu in our system. There are a total of approximately 25,270 Distribution
23 overhead circuit miles located in the Tier 2 and Tier 3 HFTD areas. PG&E’s
24 data bases reflect the circuit miles that currently exist and do not maintain the
25 historical values specifically in the Tier 2/3 areas. As such, PG&E has assumed
26 these values have remained the same for all years from 2013 through 2022 and
27 assuming annual variances due to the circuit miles are very small.

28 **Rate Case Safety Goal Progress:**

29 PG&E does not focus on this metric; therefore, it is not used to track safety
30 performance. There is no safety goal associated with the amount of 6Cu in the
31 2020 GRC.

1 **Monthly Data:**

2 See Attachment A at the end of this report. EDGIS system capabilities only
3 have annual data snapshots as far back as 2017 and we currently do not have
4 the ability to display the results in a monthly manner.

1 **Metric 28: Gas Operation Corrective Actions Backlog**

2 **Metric Name and Description:**

3 Gas Operation (GO) Corrective Actions Backlog - Total number of overdue
4 work orders generated to correct 49 Code of Federal Regulations (CFR) Part
5 192 non-compliances or infractions Notices of Violation that exceeded the
6 maximum allowable/allotted time frame to complete the work order in the past
7 calendar year divided by the total number of closed or still-open non-compliance
8 or infraction Notices of Violation-related work orders in past calendar year,
9 evaluated at the end of the year. Maximum allowable/allotted time is based on
10 either applicable requirement in 49 CFR Part 192, or the utility's internal
11 standards. Separate metrics are provided for gas distribution (GD) and gas
12 transmission (GT).

13 **Risks:**

14 Gas safety

15 **Category:**

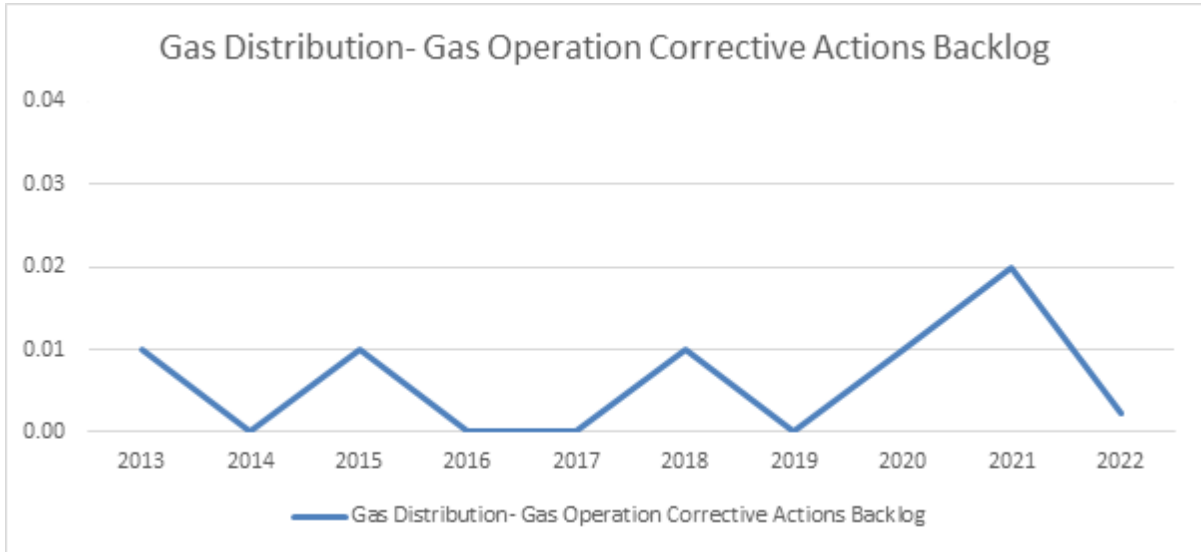
16 Gas

17 **Units:**

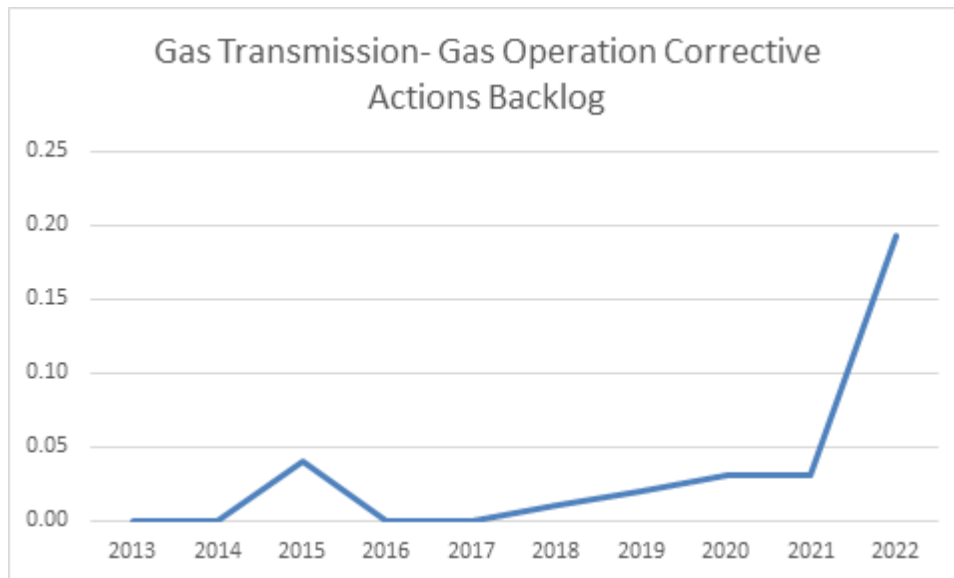
18 Percentage of work orders past due for completion in the past calendar year

1 **Summary:**

**FIGURE 5-28A
GAS OPERATIONS CORRECTIVE ACTIONS BACKLOG DISTRIBUTION (ANNUAL)**



**FIGURE 5-28B
GAS OPERATIONS CORRECTIVE ACTIONS BACKLOG TRANSMISSION (ANNUAL)**



2 **Narrative Context:**

3 This metric measures overdue corrective work orders (leveraging
4 timeframes outlined in 49 CFR Part 192) as a percentage of total corrective
5 workorders in a given calendar year. PG&E includes actions resulting from low

1 cathodic protection reads and atmospheric corrosion remediation of bad coating
2 or wrap at the air to soil interface in the calculation of this metric.

3 In 2022, Gas Distribution Corrective Action Backlog was 0.002. From
4 2013-2022, there has been an 80 percent decrease in GO Corrective Backlog
5 for Gas Distribution. In 2022, Gas Transmission Corrective Action Backlog was
6 0.19 which is a significant increase compared to the data for the historical years.
7 This increase is attributed to the self-identified issues of nonconformance that
8 happened to contain a higher volume of assets/instances involved, combined
9 with a lower volume of transmission corrective work orders that were planned for
10 completion in 2022.

11 **Is Metric Used for the Purposes of Determining Executive (Director Level**
12 **or Higher) Compensation Levels and/or Incentives?**

13 No, in 2022, GO Corrective Actions Backlog, was not used as a STIP metric.

14 **Is Metric Linked to the Determination of Individual or Group Performance**
15 **Goals?**

16 Yes, GO Corrective Actions Backlog, is linked to 2022 individual or group
17 performance goals for one or more Director-level position or higher.

18 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

19 Yes, in 2022, the following position(s) include individual performance goals
20 that are linked to GO Corrective Actions Backlog.

- 21 • Director: Gas Operations (1)

22 **Bias Controls:**

23 Work orders are generated in our system of record and assigned due dates
24 per guidance in 49 CFR Part 192. Overdue items are tracked by our compliance
25 team and issued via a "self-report" to the CPUC. The data is tracked through
26 monthly attainment reporting for different asset types.

27 **Rate Case Safety Goal Progress:**

28 This safety metric does not support a stated safety goal in the 2020 GRC.

29 **Monthly Data:**

30 See Attachment A at the end of this report.

1 **Metric 29: GO-95 Corrective Actions (Tiers 2 and 3, HFTD)**

2 **Metric Name and Description:**

3 General Order (GO)-95 Corrective Actions (Tiers 2 and 3, High Fire Threat
4 District (HFTD)) – The number of Priority Level 2 notifications that were
5 completed on time divided by the total number of Priority Level 2 notifications
6 that were due in the calendar year in Tiers 2 and 3, HFTD. Consistent with GO
7 95 Rule 18 provisions, the proposed metric should exclude notifications that
8 qualify for extensions under reasonable circumstances. Separate metrics are
9 provided for distribution and transmission systems.

10 **Risks:**

11 Electric safety and wildfire

12 **Category:**

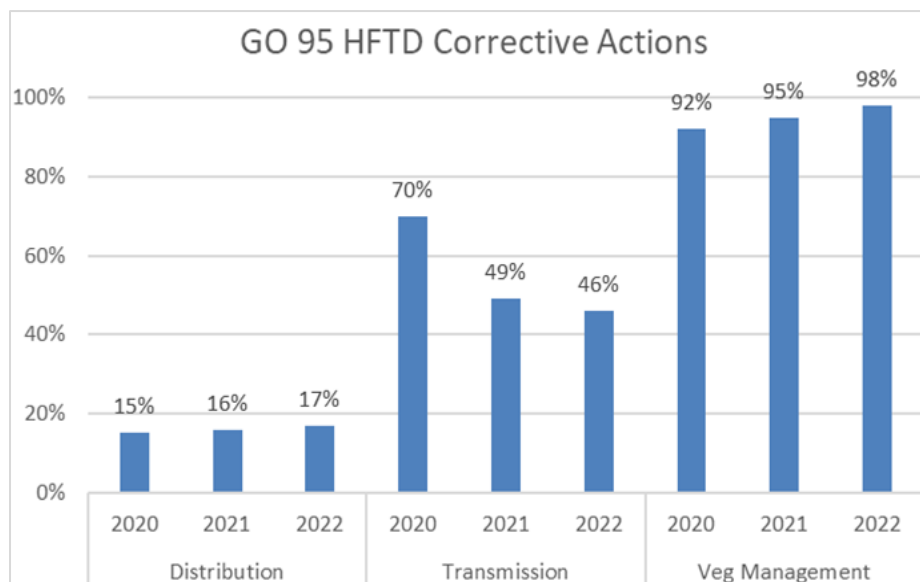
13 Electric

14 **Units:**

15 Percentage of corrective actions completed on time.

16 **Summary:**

**FIGURE 5-29
GO-95 CORRECTIVE ACTIONS (TIERS 2 AND 3, HFTD) (ANNUAL)**



1 **Narrative Context:**

2 The GO 95 Corrective Actions in HFTD metric measures the number of
3 Priority Level 2 corrective notifications (tags) in HFTD that are completed in
4 accordance with the GO 95 Rule 18 timelines.

5 This metric is associated with our Failure of Electric Distribution Overhead
6 Asset Risk and Wildfire Risk, which are part of our 2020 Risk Assessment and
7 Mitigation Phase Report filing.

8 The metric performance comprises an aggregated performance in electric
9 distribution, transmission, and vegetation management. Metric performance is
10 further discussed in the Safety & Operational Metric Report, Chapter 3-11.

11 **Is Metric Used for the Purposes of Determining Executive (Director Level
12 or Higher) Compensation Levels and/or Incentives?**

13 No, in 2022, GO-95 Corrective Actions (Tiers 2 and 3, HFTD) were not used
14 as a STIP metric.

15 **Is Metric Linked to the Determination of Individual or Group Performance
16 Goals?**

17 Yes, GO-95 Corrective Actions (Tiers 2 and 3, HFTD) is linked to 2022
18 individual or group performance goals for one or more Director-level position or
19 higher.

20 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

21 Yes, in 2022, the following position(s) include individual performance goals
22 that are linked to GO-95 Corrective Actions (Tiers 2 and 3, HFTD).

- 23 • Director: Electric Operations (5);
- 24 • Senior Director: Electric Operations (1); and
- 25 • Vice President: Electric Operations (1)

26 **Bias Controls:**

- 27 • Transmission: Once a notification is released to Line Corrective
28 notifications, the Centralized Inspection Review Team (CIRT) is the only
29 group that can edit the priority, fire tier, and scope of work (via Facility
30 Damage Action (FDA)/ Work Type Code (WTC)), due date, and other fields.
31 Changes are controlled by adding the user status code PRTO status, which

1 severely limits the editable fields to anyone outside of CIRT. CIRT adds this
2 status to all notifications that are reviewed.

- 3 • Distribution: Once a notification is entered into SAP, it is released for review
4 in the gatekeeper screen, which has SAP controls built into it based on the
5 FDA table that has the various FDAs (facility/damage/action), WTC (work
6 type codes), tag priority, duration/due date, etc. The tags info (pictures,
7 map, comments) are reviewed by the gatekeepers in CIRT and confirmed as
8 EC. Once a tag is converted to an EC, edit functions to certain fields are
9 limited to the compliance group.
- 10 • Internal Audit performed a validation of the metric performance in 2022.

11 **Rate Case Safety Goal Progress:**

12 This metric is not a 2020 GRC stated safety goal. PG&E has focused its
13 GO95 Corrective Actions in HFTDs with a risk-informed prioritization of its work
14 plans. PG&E's strategy focuses on reducing wildfire risk associated with open
15 corrective notifications while deploying safety controls to manage the lower risk
16 Level 2 Priority "E" corrective notifications. This approach allows strategic and
17 targeted wildfire risk reductions to remain our primary focus.

18 **Monthly Data:**

19 See Attachment A at the end of this report.

1 **Metric 30: Gas Overpressure Events**

2 **Metric Name and Description:**

3 Gas Overpressure Events – CPUC-reportable overpressure events are
4 those that met the conditions specified in General Order 112-F, 122.2(d)(5), but
5 are reported on the same frequency as the other Safety Performance Metrics.
6 Separate metrics are provided for distribution and transmission systems. This
7 metric measures both gas operational performance and the integrity of gas
8 pipelines.

9 **Risks:**

10 Large Overpressure Event Downstream of Gas Measurement and Control
11 Facility; Loss of Containment at Gas Measurement and Control or Compression
12 and Processing Facility

13 **Category:**

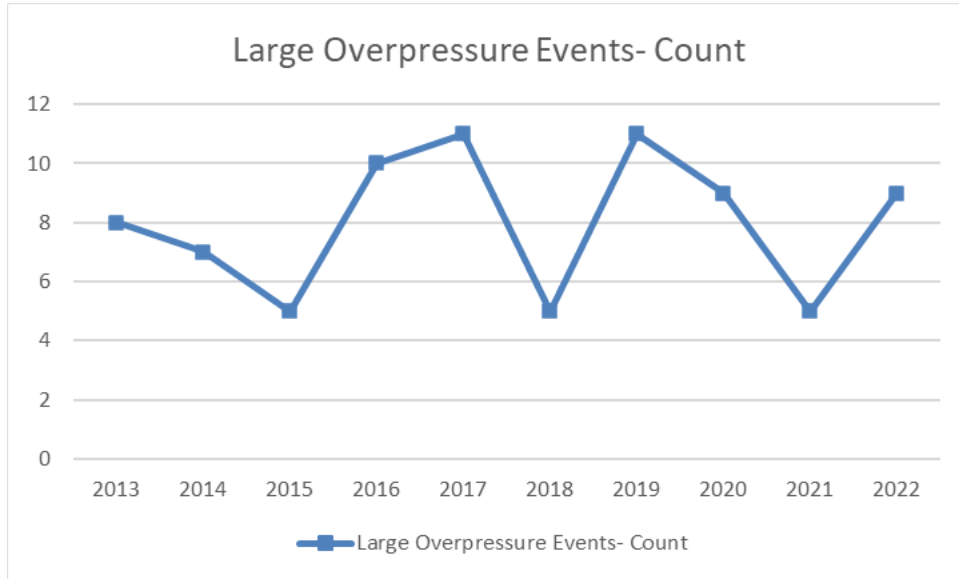
14 Gas

15 **Units:**

16 Number of occurrences

1 **Summary:**

**FIGURE 5-30
GAS OVERPRESSURE EVENTS (ANNUAL)**



2 **Narrative Context:**

3 A large Overpressure event is defined as any verified pressure reading that
4 exceeds the design limits set forth in the Code of Federal Regulations (CFR) –
5 49 CFR 192.201. This metric tracks the occurrence of Overpressure events,
6 which includes:

- 7 1) High Pressure Gas Distribution:
- 8 a) (Maximum Allowable Operating Pressure (MAOP) 1 pound per square
9 inch gauge (psig) to 12 psig) greater than 50 percent above MAOP
 - 10 b) (MAOP 12 psig to 60 psig) greater than 6 psig
- 11 2) Gas Transmission pipelines greater than 10 percent above MAOP (or the
12 pressure produces a hoop stress of ≥ 75 percent Specified Minimum Yield
13 Strength, whichever is lower)

14 Overpressure events on low pressure systems are excluded from this metric
15 because they are not defined in federal code 49 CFR 192.201. In the past 10
16 years, the number of Overpressure events range between 5 to 11 with 9
17 occurrences in 2022. PG&E continues to review operations and look for

1 opportunities to perform work to further reduce OP events and contribute to
2 system safety.

3 PG&E has identified human performance and equipment failure as the two
4 most common causes for Overpressure events. Actions to eliminate
5 Overpressure events were implemented, including station design and
6 construction best practices; lock-out/tag-out process improvements; and
7 distribution of information around associated Overpressure risk factors through
8 training and communication initiatives. PG&E has been installing Supervisory
9 Control and Data Acquisition (SCADA) points in the past years to increase
10 system real-time visibility in the Gas Control Center which could provide better
11 detection capabilities and allow more Overpressure events to be identified and
12 recorded. PG&E also began installing sulfur filters on pilot-operated equipment
13 in 2018. Large Volume Customer primary regulation sets also received
14 accelerated inspections in 2018.

15 PG&E continues to review operations and look for opportunities to perform
16 work to further limit potential MAOP exceedances. Each activity builds on the
17 goal to eliminate large Overpressure events, thereby contributing to system
18 safety and reliability.

19 **Is Metric Used for the Purposes of Determining Executive (Director Level**
20 **or Higher) Compensation Levels and/or Incentives?**

21 No, in 2022, Gas Overpressure Events, was not used as a STIP metric.

22 **Is Metric Linked to the Determination of Individual or Group Performance**
23 **Goals?**

24 No, Gas Overpressure Events, is not linked to 2022 group performance
25 goals for one or more Director-level position or higher.

26 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

27 No, Gas Overpressure Event, is not linked to 2022 individual performance
28 goals for one or more Director-level position or higher.

29 **Bias Controls:**

30 PG&E has both an automated process and field process for logging Gas
31 Overpressure events. For the automated process, SCADA system monitors
32 equipment pressure and notifies potential issues to Gas Control through alarms.

1 For the field process, field personnel are required to gauge pressure during
2 maintenance and clearances, and report to Gas Control if an abnormal operating
3 condition arises.

4 Internal Auditing (IA) performed a validation of the metric performance in
5 2022 and as part of a validation of 2021 Q4 metric reporting.

6 The business maintains the same controls in place at the time of IA's
7 validation, but which have not been revalidated by IA for the current year.

- 8 1) Each Overpressure event is entered into our SAP Corrective Action
9 Program (CAP) system of record to ensure retention of record history.
- 10 2) Each Overpressure event's datasets (location, CAP number, date, cause,
11 corrective action etc.) are reviewed by the Facility Integrity Management
12 Program team to ensure accuracy and are logged in the Overpressure
13 master list which is viewable by all PG&E employees.
- 14 3) Each Overpressure event is distributed to stakeholders by an electronic
15 page (epage) and an email (Quick Hit), which is reviewed in the next Daily
16 Operations Briefing with leadership.

17 **Rate Case Safety Goal Progress:**

18 Overall: PG&E's strategic objectives include plans to execute the secondary
19 Overpressure Protection -Program (OPP) to mitigate common failure mode OP
20 events - for both Gas Transmission (GT) and Gas Distribution (GD) over a
21 10-year period (2018-2027):

- 22 • Gas Distribution: For 2019-2022, PG&E has retrofitted approximately
23 858 GD pilot-operation stations. By end of 2022, PG&E has exceeded the
24 goal of retrofitting 50% of GD pilot-operated stations. PG&E will continue
25 the effort of retrofitting GD pilot-operation stations to mitigate the common
26 failure mode OP events in the Gas Distribution System. This plan is to
27 install secondary OPP at all GD pilot-operated stations (which carry the
28 common failure mode risk) by 2027.
- 29 • Gas Transmission: From 2019-2022, PG&E has rebuilt and retrofitted
30 approximately 51 Large Volume Customer Regulators (LVCRs). PG&E will
31 continue the effort of rebuilding GT LVCRs to mitigate that common failure
32 mode OP events in the Gas Transmission System

1 **Monthly Data:**

2 See Attachment A at the end of this report.

1 **Metric 31: Gas In-Line Inspections Missed**

2 **Metric Name and Description:**

3 Gas In-Line Inspections Missed – The number of gas pipeline in-line
4 inspections that missed the required reassessment interval, according to the
5 relevant intervals established pursuant to 49 CFR, Part 192.

6 **Risks:**

7 Catastrophic Damage Involving High-Pressure Pipeline Failure

8 **Category:**

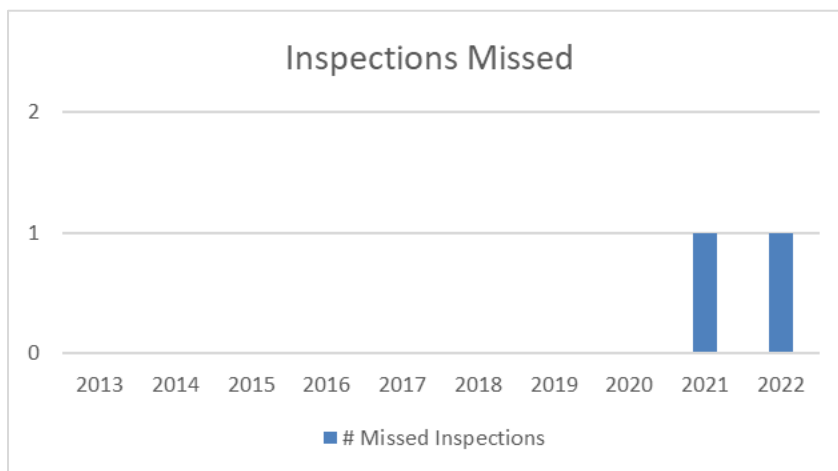
9 Gas

10 **Units:**

11 Number of Missed Inspections

12 **Summary:**

**TABLE 5-31
GAS IN-LINE INSPECTIONS MISSED**



13 **Narrative Context:**

14 From 2012-2020, there were no instances of gas pipeline in-line inspections
15 that missed the required reassessment interval, according to the relevant
16 intervals established pursuant to 49 CFR, Part 192. However, in 2021 and in
17 2022, PG&E recorded 1 instance of gas pipeline in-line inspection that missed
18 the required reassessment interval. These missed inspections were due to

1 potential customer reliability impacts and safety concerns related to fatigue of
2 the construction and operations personnel.

3 **Is Metric Used for the Purposes of Determining Executive (Director Level**
4 **or Higher) Compensation Levels and/or Incentives?**

5 No, in 2022, Gas In-Line Inspections Missed was not used as a STIP metric.

6 **Is Metric Linked to the Determination of Individual or Group Performance**
7 **Goals?**

8 No, Gas In-Line Inspections Missed, is not linked to 2022 individual or group
9 performance goals for one or more Director-level, or higher, positions.

10 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

11 No, Gas In-Line Inspections Missed metric, is not linked to 2022 individual
12 performance goals for one or more Director-level, or higher, positions.

13 **Bias Controls:**

14 Metric results are reported as needed when a non-conformance occurs.
15 This is reviewed by Regulatory Compliance Department at weekly Self Report
16 Meetings.

17 **Rate Case Safety Goal Progress:**

18 This safety metric does not support a 2020 GRC safety goal given this
19 metric is a gas transmission, not distribution, related metric. Non-compliance for
20 missed ILI inspections are not specifically tracked as part of any Rate Case as it
21 is mandatory federal safety requirement PG&E is committed to meeting.

22 **Monthly Data:**

23 See Attachment A at the end of this report.

1 **Metric 32: Overhead Conductor Safety Index**

2 **Metric Name and Description:**

3 Overhead Conductor Safety Index - Overhead Conductor Safety Index is the
4 sum of all annual occurrences on overhead transmission or primary voltage
5 distribution conductors satisfying one or more of the following conditions divided
6 by total circuit miles in the system x 1,000:

- 7 1) A conductor or splice becomes physically broken;
8 2) A conductor is dislodged from its intended design position due to either
9 malfunction of its attachment points and/or supporting structures or contact
10 with foreign objects (including vegetation);
11 3) A conductor falls from its intended position to rest on the ground or a foreign
12 object;
13 4) A conductor comes into contact with communication circuits, guy wires, or
14 conductors of a lower voltage; or
15 5) A power pole carrying normally energized conductors leans by more than
16 45 degrees in any direction relative to the vertical reference when measured
17 at ground level.

18 Separate metrics are reported for transmission and primary voltage
19 distribution conductors. Secondary voltage conductors and service drops are
20 not included in this metric.

21 **Risks:**

22 Wildfire, Transmission Overhead Conductor, Distribution Overhead
23 Conductor Primary

24 **Category:**

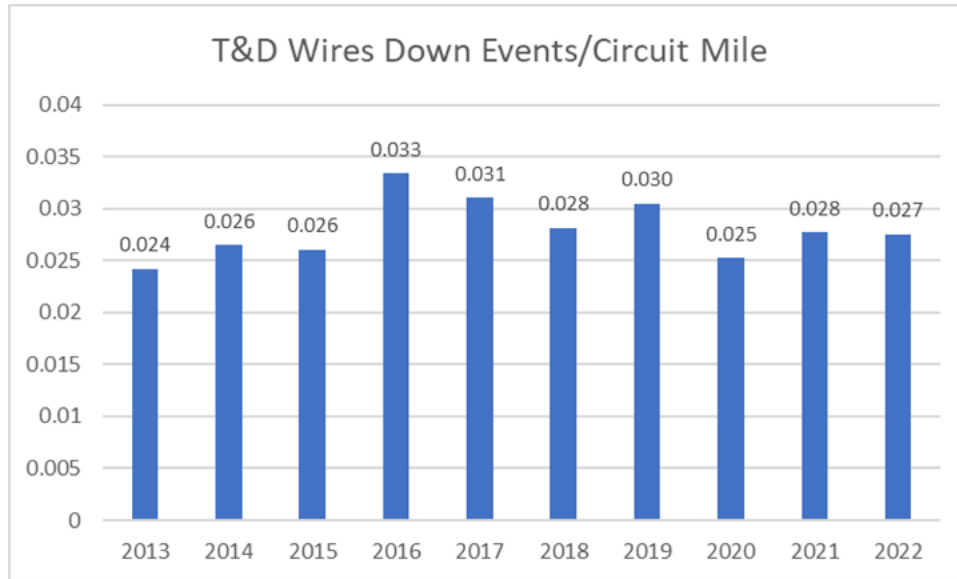
25 Electric

26 **Units:**

27 Number of occurrences per circuit mile

1 **Summary:**

**FIGURE 5-32
OVERHEAD CONDUCTOR SAFETY INDEX (ANNUAL)**



2 **Narrative Context:**

3 PG&E does not currently does not have the ability report out on this metric
4 per the five subcomponents listed above, as we do not track conductor failures
5 at that level of granularity. PG&E, along with the other CA IOUs, will report the
6 Overhead Conductor Safety Index metric as a rate of our T&D wires down metric
7 (excluding MEDs and secondary wires). The rate is calculated as the number of
8 T&D wires down divided by total circuit miles times 1,000. PG&E's rate for 2022
9 was 0.027.

10 **Is Metric Used for the Purposes of Determining Executive (Director Level
11 or Higher) Compensation Levels and/or Incentives?**

12 No, in 2022, Overhead Conductor Safety Index was not used as a STIP
13 metric.

14 **Is Metric Linked to the Determination of Individual or Group Performance
15 Goals?**

16 No, Overhead Conductor Safety Index, is not linked to 2022 individual or
17 group performance goals for Director-level, or higher, positions.

1 **Is Metric Linked to Executive (Director Level or Higher) Positions?**

2 No, Overhead Conductor Safety Index, is not linked to 2022 individual
3 performance goals for Director-level, or higher, positions.

4 **Bias Controls:**

5 The T&D Wires Down metric is a strong proxy of the overall goal of reducing
6 the potential contacts with wires down and improving the reliability of the electric
7 system along with reducing public safety risk.

8 **Rate Case Safety Goal Progress:**

9 This specific metric is not tied to a 2020 GRC or RAMP Safety goal,
10 however the T&D Wires Down metric (excluding downed secondary distribution
11 wires and MEDs, please refer to Metric 1) has been one of the key indicators
12 that PG&E is using to track Public Safety Performance.

13 Significant work continues to be performed to reduce wires down, including
14 replacing overhead conductor, vegetation clearing, hardening of distribution
15 circuits, infrared inspections of overhead lines to identify and repair hot spots,
16 investigating wires down incidents, and implementing learnings/corrective
17 actions.

18 **Monthly Data:**

19 See Attachment A at the end of this report.

PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
ATTACHMENT A
MONTHLY METRIC DATA TABLES

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 1

TRANSMISSION AND DISTRIBUTION (T&D) OVERHEAD WIRES DOWN - NON-MAJOR EVENT DAYS

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	163	179	192	225	225	209	176	207	203	237	160	219	2,395
2	2014	168	302	246	193	178	181	194	189	163	221	182	399	2,616
3	2015	158	237	143	185	154	198	184	225	189	219	274	410	2,576
4	2016	430	184	511	270	225	211	224	178	213	343	219	292	3,300
5	2017	283	376	378	242	263	238	233	215	230	205	246	158	3,067
6	2018	216	175	370	231	210	231	272	204	168	213	208	287	2,785
7	2019	335	249	336	238	311	206	198	210	216	138	232	341	3,010
8	2020	159	172	245	229	235	213	196	240	192	180	237	196	2,494
9	2021	262	188	292	174	217	238	213	181	208	255	248	265	2,741
10	2022	287	150	182	273	210	251	192	166	201	138	243	416	2,709

- (a) PG&E has utilized its Integrated Logging Information System-Operations Data Base (ILIS-ODB) to provide the number of distribution outages that involved distribution wire down event conditions.
- (b) Distribution wire down conditions during PSPS events are not included in these totals since these typically occur when the lines are de-energized and are generally not the initiating cause of the reported outage event.
- (c) PG&E's current definition for distribution wire down events are only related to sustained outages of its primary distribution system reported in its ILIS-ODB data base.
- (d) Transmission wire down events were not tracked until 2012 and 2013 was the first year distribution wire down events were uniformly tracked.

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 2

TRANSMISSION AND DISTRIBUTION (T&D) OVERHEAD WIRES DOWN - MAJOR EVENT DAYS

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	163	179	192	312	225	217	176	207	203	237	362	219	2,692
2	2014	168	302	246	193	178	181	194	216	163	221	182	1,147	3,391
3	2015	158	714	143	189	154	211	216	225	189	225	274	581	3,279
4	2016	430	274	714	270	225	211	224	178	213	397	219	292	3,647
5	2017	1,947	1,402	378	468	263	253	233	215	325	488	246	257	6,475
6	2018	216	175	431	231	215	231	283	204	168	219	334	287	2,994
7	2019	880	1,786	336	238	311	229	198	219	232	283	524	341	5,577
8	2020	264	393	516	229	235	213	196	375	233	206	237	196	3,293
9	2021	1,473	188	292	174	217	238	224	222	224	775	248	1,547	5,822
10	2022	287	150	182	273	210	251	192	166	229	138	243	459	2,780

- (a) PG&E has utilized its Integrated Logging Information System-Operations Data Base (ILIS-ODB) to provide the number of distribution outages that involved distribution wire down event conditions.
- (b) Distribution wire down conditions during PSPS events are not included in these totals since these typically occur when the lines are de-energized and are generally not the initiating cause of the reported outage event.
- (c) PG&E's current definition for distribution wire down events are only related to sustained outages of its primary distribution system reported in its ILIS-ODB data base.
- (d) Transmission wire down events were not tracked until 2012 and 2013 was the first year distribution wire down events were uniformly tracked.

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 3

ELECTRIC EMERGENCY RESPONSE TIME

"Average and median time in minutes to respond on-site"

2013-2022

Line No.	Year		January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	avg													35
		med													
2	2014	avg													35
		med													31
3	2015	avg	39	65	32	34	33	42	41	37	34	43	37	33	39
		med	29	34	28	28	28	27	28	30	27	28	26	27	28
4	2016	avg	39	32	32	43	35	39	33	39	33	37	33	46	37
		med	27	26	27	28	26	28	28	28	28	27	29	28	28
5	2017	avg	42	46	40	46	41	35	33	33	40	32	31	40	40
		med	31	33	28	31	28	27	30	28	28	29	27	28	30
6	2018	avg	27	30	35	41	41	38	39	39	35	36	37	36	36
		med	25	27	26	28	28	27	29	27	28	28	28	30	28
7	2019	avg	31	46	31	37	33	35	25	31	31	32	37	32	41
		med	29	32	29	30	29	31	29	30	30	31	32	30	30
8	2020	avg	31	39	30	30	29	29	30	33	30	30	30	30	31
		med	29	31	29	29	28	27	30	30	31	29	29	29	29
9	2021	avg	36	30	30	29	29	29	29	31	30	35	32	34	32
		med	32	29	29	27	29	28	29	30	30	32	31	30	30
10	2022	avg	37	30	30	30	29	30	30	30	30	30	31	31	31
		med	30	30	30	30	30	30	30	30	30	30	30	30	30

(a) PG&E began tracking monthly data in 2015

2022 SAFETY PERFORMANCE METRICS REPORT

**TABLE 4
FIRE IGNITIONS
2013-2022**

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013													
2	2014	1	1		2	3	51	74	40	36	41	18	12	279
3	2015	4	13	13	24	38	97	80	73	64	42	15	11	474
4	2016	2	5	1	26	38	84	71	67	60	38	7		399
5	2017	9	3	7	19	44	101	112	81	70	106	23	20	595
6	2018	7	8	6	11	38	107	93	72	56	36	30	3	467
7	2019	5	5	3	17	41	84	73	64	69	84	35	6	486
8	2020	1	16	11	17	52	106	66	86	55	61	29	16	516
9	2021	43	12	18	33	74	92	64	47	33	49	9	5	479
10	2022	5	18	20	45	64	80	69	57	58	33	14	2	465

(a) Metric includes all powerline-involved fire incidents annually reportable to the CPUC per Decision 14-02-015 and within the entire PG&E service territory (not just HFTD). A reportable fire incident includes all of the following: 1) Ignition is associated with PG&E powerlines and 2) something other than PG&E facilities burned and 3) the resulting fire traveled more than one meter from the ignition point.

(b) PG&E began tracking this metric in July 2014. The full year of metric data is only available for 2015-2020.

(c) The 2015-2020 2019 fire ignition metric data reflects fire ignitions previously not included in the 2019 Safety Performance Metrics Report due to a misidentification in a field-based documentation system. PG&E is currently conducting an audit of the datasets that may contain fire ignition data.

(d) PG&E has included 7 ignitions in 2021 that meet Electric Incident Report criteria, defined by Appendix B to CPUC D.06-04-055. PG&E has not formed a conclusion about the origin or cause of these particular ignitions.

(e) PG&E has included the Mosquito fire and the Edgewood fire in this ignition count, however these 2 are still under investigation and listed as 'unknown' per the ignition database.

2022 SAFETY PERFORMANCE METRICS

**TABLE 5
GAS DIG-INS
2013-2022**

Line No.	Year	UOM	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013														
2	2013														
3	2013														
4	2014	Gas Tickets													671313
5	2014	3rd Party Dig-ins													1621
6	2014	3rd Party Dig-in Ratio													2.41
7	2015	Gas Tickets													788901
8	2015	3rd Party Dig-ins													1694
9	2015	3rd Party Dig-in Ratio													2.15
10	2016	Gas Tickets	60154	68599	73839	69660	74564	76594	70610	84300	78050	73127	68549	60926	858972
11	2016	3rd Party Dig-ins	84	115	114	147	149	179	167	211	190	142	145	91	1734
12	2016	3rd Party Dig-in Ratio	1.4	1.68	1.54	2.11	2	2.34	2.37	2.5	2.43	1.94	2.12	1.49	2.02
13	2017	Gas Tickets	62163	61145	82191	73287	85823	84379	77764	90450	81709	89552	80815	73387	942665
14	2017	3rd Party Dig-ins	65	79	155	128	175	181	192	205	162	172	129	137	1780
15	2017	3rd Party Dig-in Ratio	1.05	1.29	1.89	1.75	2.04	2.15	2.47	2.27	1.98	1.92	1.6	1.87	1.89
16	2018	Gas Tickets	82986	77901	84149	89657	95567	91232	94206	104059	87105	101917	85994	74937	1069710
17	2018	3rd Party Dig-ins	93	127	96	137	195	160	179	174	159	164	131	103	1718
18	2018	3rd Party Dig-in Ratio	1.12	1.63	1.14	1.53	2.04	1.75	1.9	1.67	1.83	1.61	1.52	1.37	1.61
19	2019	Gas Tickets	90140	93011	122101	130536	128393	122987	145646	157091	155556	165328	129355	115970	1556114
20	2019	3rd Party Dig-ins	83	76	98	132	135	161	188	193	156	178	137	82	1619
21	2019	3rd Party Dig-in Ratio	0.92	0.82	0.8	1.01	1.05	1.31	1.29	1.23	1	1.08	1.06	0.71	1.04
22	2020	Gas Tickets	132997	130127	124530	119393	126695	142897	140577	134692	141309	136592	102979	102140	1534928
23	2020	3rd Party Dig-ins	88	111	96	114	123	153	188	175	169	148	119	120	1604
24	2020	3rd Party Dig-in Ratio	0.66	0.85	0.77	0.95	0.97	1.07	1.34	1.3	1.2	1.08	1.16	1.17	1.05
25	2021	Gas Tickets	104556	129518	165637	167973	156393	162111	150562	162597	128307	119879	119327	106685	1673545
26	2021	3rd Party Dig-ins	114	104	118	143	134	169	150	163	151	130	97	58	1531
27	2021	3rd Party Dig-in Ratio	1.09	0.80	0.71	0.85	0.86	1.04	1.00	1.00	1.18	1.08	0.81	0.54	0.91
28	2022	Gas Tickets	123,346	118,056	136,994	120,911	128,489	133,665	120,526	147,872	151,495	163,674	135,757	103980	1,584,765
29	2022	3rd Party Dig-ins	111	101	132	110	139	140	135	144	114	122	90	41	1379
30	2022	3rd Party Dig-in Ratio	0.9	0.86	0.96	0.91	1.08	1.05	1.12	0.97	0.75	0.75	0.66	0.39	0.87

(a) PG&E has data available as of 2014

2022 SAFETY PERFORMANCE METRICS REPORT

**TABLE 6
GAS IN-LINE INSPECTION
2013-2022
"Miles Inspected"**

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY	Current System Total (Transmission)	% of Transmission Lines Inspected Annually
1	2013													257.3	5737	4%
2	2014		52.1	20.3	17.9	11.9	6.4	66.8		6.9	96.3		142.8	421.3	5733	7%
3	2015			133.3				23.0	60.2	43.8		5.1		265.4	6541	4%
4	2016	3.0	7.1	0.8	15.9	29.0	12.8	57.5	8.6	7.7	114.6	1.9	0.6	259.5	6530	4%
5	2017	0.7	21.3			33.4	73.4	9.1	28.0	27.3		55.4	60.2	308.8	6535	5%
6	2018	43.2	22.4	7.4	36.9	42.9	0.6	1.3	18.3	6.0	75.2	43.2		297.4	6531	5%
7	2019	0.0	22.5	39.9	44.8	88.7	54.1	13.7	121.8	17.1	12.8	53.3	9.3	478.0	6498	7%
8	2020	0.4	0.0	29.0	62.7	67.3	120.9	17.1	25.7	1.3	8.9	22.4	4.0	359.6	6551	5%
9	2021	0.0	94.9	91.6	0.1	73.0	160.5	108.8	152.5	137.7	0.1	74.6	76.7	970.5	6417	15%
10	2022	0.0	0.0	85.2	6.5	73.2	27.2	0.1	125.9	33.6	12.9	110.1	22.8	497.6	6425	8%

(a) Includes miles inspected for PSEP and base reliability work

2022 SAFETY PERFORMANCE METRICS REPORT

**TABLE 7
GAS IN-LINE UPGRADE
2013-2022
"Miles Upgraded"**

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013							67.0		20.0	68.7		6.5	162.2
2	2014	6.7		21.9		32.9					4.0	6.4		71.9
3	2015					6.3		12.2		11.2	5.8	11.3	25.3	72.1
4	2016	1.5				44.3	21.7	11.9		4.8	10.5	12.4		107.2
5	2017						54.2				53.4	22.4	24.4	154.4
6	2018							13.1			97.9	63.2	68.7	243.0
7	2019			36.3	62.8	2.6		3.1		70.7	10.7		59.6	245.7
8	2020			44.0	43.6	47.2	55.9	85.9			48.8	95.5	43.3	464.2
9	2021				26.7	65.9	21.9	6.6		14.5			10.0	145.6
10	2022			4.7		39.4	36.0	4.6	24.7	40.5	82.2	20.4		252.6

(a) Includes miles upgraded in both PSEP and base reliability programs.

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 8

SHUT IN THE GAS MEDIAN TIME - MAINS

2013-2022

"Median Number of Minutes"

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY (Median)	EOY (Avg)
1	2013														
2	2014													97.0	120.77
3	2015													87.0	102.8
4	2016													87.0	104.43
5	2017													89.0	103.78
6	2018													73.0	88.77
7	2019													73.7	85.13
8	2020													77.1	93.72
9	2021													73.3	102.57
10	2022													82.1	97

(a) Monthly data not available due to various tools/databases utilized to measure SITG since 2012. 2013 raw data not available to recalculate EOY values from Average to Median.

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 9

SHUT IN THE GAS AVERAGE TIME - SERVICES

2013-2022

"Median Number of Minutes"

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY (Avg)	EOY (Median)
1	2013													61	
2	2014													52.2	38
3	2015													49	40
4	2016													45.76	37
5	2017													45.16	36
6	2018													43.3	34.6
7	2019													41.4	33.6
8	2020													41.9	33
9	2021													43.53	32.3
10	2022													47.5	36.8

(a) Year end data has been provided from 2013 through 2022. Monthly data is not available due to various tools utilized to manage daily dispatch time that have since been retired. 2013 raw data not available to recalculate EOY values from Average to Median.

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 10

CROSS BORE INTRUSIONS

2013-2022

Line No.	Year	Unit Type	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	Inspections Complete													19,500
2	2013	Cross Bores Found													151
3	2013	Find Rate													7.74
4	2014	Inspections Complete													33,570
5	2014	Cross Bores Found													193
6	2014	Find Rate													5.72
7	2015	Inspections Complete													23,531
8	2015	Cross Bores Found													104
9	2015	Find Rate													4.42
10	2016	Inspections Complete	707	520	1467	1023	901	748	2064	1874	5276	2233	4494	2346	23,653
11	2016	Cross Bores Found	4	1	7	6	7	9	11	11	7	11	8	8	90
12	2016	Find Rate	5.657709	1.923077	4.771643	5.865103	7.769145	12.03209	5.329457	5.869797	1.3267627	4.926108	1.7801513	3.4100597	3.81
13	2017	Inspections Complete	509	1000	1438	1923	2031	1936	653	3023	4707	5481	6291	6168	35,160
14	2017	Cross Bores Found	1	5	15	4	5	1	2	1	1	3	0	0	38
15	2017	Find Rate	1.96	3.98	7.13	5.13	4.35	3.51	3.48	2.72	2.03	1.67	1.31	1.08	1.08
16	2018	Inspections Complete	3232	3215	2166	4419	3568	4407	4463	5613	4851	2701	3844	3569	46,048
17	2018	Cross Bores Found	2	5	4	4	6	2	3	4	1	6	1	7	45
18	2018	Find Rate	0.62	1.09	1.28	1.15	1.27	1.09	1.02	0.97	0.86	0.96	0.89	0.98	0.98
19	2019	Inspections Complete	1739	1647	4365	2086	2816	9120	3480	6103	3035	3780	3880	1374	43,425
20	2019	Cross Bores Found	5	3	6	3	3	1	5	5	3	2	2	2	40
21	2019	Find Rate	0.62	1.09	1.28	1.15	1.27	1.09	1.02	0.97	0.86	0.96	0.89	0.98	0.98
22	2020	Inspections Complete	1788	1211	493	1435	1295	3052	681	1743	396	1720	622	2229	16665
23	2020	Cross Bores Found	5	3	7	10	4	1	7	3	4	3	6	3	56
24	2020	Find Rate	2.80	2.67	4.30	5.07	4.66	3.23	3.72	3.42	3.64	3.40	3.67	3.36	3.36
25	2021	Inspections Complete	1317	1389	1954	2300	1583	1629	2413	2593	3945	3278	3512	2380	28293
26	2021	Cross Bores Found	0	1	9	2	0	2	2	3	3	0	0	1	23
27	2021	Find Rate	0.00	0.37	2.15	1.72	1.40	1.38	1.27	1.25	1.15	0.98	0.85	0.81	0.81
28	2022	Inspections Complete	0	0	4020	4178	3890	3711	4353	4535	5804	5928	2796	3430	42645
29	2022	Cross Bores Found	0	0	1	1	8	8	2	2	2	4	2	2	32
30	2022	Find Rate	0.00	0.00	0.25	0.24	0.83	1.14	0.99	0.89	0.79	0.77	0.77	0.75	0.75

(a)PG&E did not track this metric before 2013.

(b)From 2013-2015,the Cross-Bore Inspection Program was executed by an external contractor. Monthly data is not currently available.

2022 SAFETY PERFORMANCE METRICS REPORT

**TABLE 11A
GAS EMERGENCY RESPONSE TIME
2013-2022
MEDIAN MINUTES**

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY (Median)
1	2013	21.0	19.6	19.6	19.4	19.8	20.0	19.9	20.3	20.4	18.3	18.0	18.0	19.4
2	2014	18.1	18.3	18.3	17.8	18.0	17.8	17.4	17.8	18.2	18.4	18.4	18.0	18.1
3	2015	18.0	18.1	18.2	18.3	18.4	18.7	18.8	19.2	18.9	18.5	18.5	18.2	18.5
4	2016	18.8	18.5	18.4	18.4	18.2	18.1	18.1	18.2	18.0	18.0	15.2	18.3	18.3
5	2017	18.4	18.2	18.1	18.2	18.4	18.8	19.5	19.0	18.8	19.2	15.4	19.1	18.7
6	2018	18.8	18.6	18.5	18.8	18.7	18.8	18.9	19.3	19.3	19.1	18.7	18.5	18.8
7	2019	18.7	19.1	18.9	18.4	18.4	19.0	19.0	19.0	19.3	19.4	19.3	18.9	18.9
8	2020	19.0	19.1	17.8	17.7	18.5	19.1	19.2	19.1	18.7	18.9	19.1	18.8	18.8
9	2021	19.0	19.0	18.9	18.8	18.9	18.7	18.7	18.7	18.8	18.8	19.0	18.8	18.8
10	2022	18.7	18.3	17.8	18.0	18.4	18.2	18.1	18.1	18.4	18.2	18.3	18.5	18.3

**TABLE 11B
GAS EMERGENCY RESPONSE TIME
2013-2022
AVERAGES**

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	23.0	21.0	21.0	21.0	22.0	22.0	22.0	22.0	22.0	20.0	20.0	20.0	21.3
2	2014	19.9	20.3	20.0	19.7	19.9	19.6	19.4	19.7	20.2	20.2	20.4	19.7	20.0
3	2015	19.7	19.8	20.1	20.1	20.5	20.7	20.8	21.0	20.7	20.4	20.4	19.9	20.3
4	2016	20.6	20.2	20.1	20.2	19.8	19.9	19.8	19.7	20.0	19.6	19.9	20.0	20.0
5	2017	20.2	19.9	19.7	19.8	20.0	20.5	21.1	20.8	21.1	20.9	20.8	21.0	20.4
6	2018	20.5	20.5	20.3	20.5	20.4	20.5	20.8	21.2	21.3	21.0	20.4	20.4	20.6
7	2019	20.6	21.0	20.7	20.0	20.1	20.8	20.9	20.8	21.2	21.2	21.3	20.8	20.8
8	2020	20.9	20.9	19.5	19.4	20.0	20.7	20.8	20.9	20.3	20.4	21.5	20.5	20.5
9	2021	20.8	20.7	20.7	20.6	20.6	20.6	20.6	20.5	20.5	20.5	20.6	20.6	20.6
10	2022	20.4	19.7	19.4	19.6	19.9	19.9	19.8	19.6	20.2	19.9	20.0	20.4	19.9

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 12
NATURAL GAS STORAGE BASELINE INSPECTIONS PERFORMED
2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY Well Baseline Inspections	EOY % Progress to Goal ^b
1	2013				1	1	2	1	1					6	6%
2	2014								2	3	1			6	11%
3	2015						2	1	2	1				6	17%
4	2016					1	1		2	3		1	1	9	25%
5	2017							1	1	2	2	1		7	31%
6	2018				3	2	4	1	2	1				13	43%
7	2019			1	1	2	2	2	2	1	1	2		14	56%
8	2020				3	3	5	3	4	2				20	74%
9	2021			1	1	4	5	5				1		17	90%
10	2022			3	3	3	5	2	1	1				18	100%

(a) PG&E has a goal to complete baseline well production casing assessments on 109 wells by 2025 as stated in plan filed to CalGEM

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 13

GAS SYSTEM INTERNAL INSPECTION STATUS

2013-2022

System Piggability

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY System Piggability	EOY Piggable Mileage Total
1	2013													21.88%	1433
2	2014													22.99%	1506
3	2015													24.11%	1580
4	2016													25.75%	1687
5	2017													28.03%	1836
6	2018													31.73%	2079
7	2019													35.48%	2325
8	2020													42.55%	2788
9	2021													46.08%	2957
10	2022													49.82%	3201

(a) Piggability % is dynamic since the Current system total mileage changes over the course of the year.

2022 SAFETY PERFORMANCE METRICS REPORT

**TABLE 14
DART RATE
2013-2022**

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	0.32	0.60	0.82	1.01	0.96	0.99	0.98	1.03	0.98	0.99	0.96	0.94	0.94
2	2014	0.27	0.19	0.28	0.38	0.35	0.37	0.37	0.38	0.86	0.94	0.98	1.05	1.05
3	2015	0.23	0.59	0.72	0.70	0.73	1.11	1.25	1.33	1.39	1.46	1.53	1.52	1.52
4	2016	0.57	1.41	1.39	1.31	1.33	1.31	1.35	1.51	1.58	1.52	1.59	1.70	1.70
5	2017	0.36	0.83	1.05	1.61	1.90	1.89	2.03	2.03	2.01	2.02	1.99	1.99	1.99
6	2018	1.22	1.30	1.29	1.47	1.56	1.51	1.65	1.74	1.81	1.78	1.74	1.81	1.81
7	2019	0.65	0.98	1.43	1.66	1.76	1.89	1.96	2.09	2.01	2.03	2.04	2.05	2.05
8	2020	0.76	1.44	1.34	1.30	1.19	1.17	1.22	1.37	1.31	1.36	1.37	1.34	1.34
9	2021	0.36	0.76	0.78	0.94	1.05	1.13	1.07	1.02	0.98	1.02	1.02	1.01	1.01
10	2022	0.10	0.33	0.53	0.61	0.58	0.60	0.63	0.64	0.65	0.63	0.62	0.67	0.67

- (a) Change in reporting process in 2016 which resulted in earlier classification
- (b) Rates are company-wide
- (c) Rates are cumulative

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 15A
Rate of EMPLOYEE SIF Actual using EEI SCL Model
2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY	EOY Rate SPM (SCL model)	EOY Labor Hours
1	2013															
2	2014															
3	2015															
4	2016															
5	2017	0	1	0	1	0	0	0	0	0	0	0	0	2	0.009	46,859,884
6	2018	0	0	0	0	0	0	0	1	0	0	0	0	1	0.004	45,913,811
7	2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	46,684,596
8	2020	0	0	1	0	0	0	0	1	0	0	1	1	4	0.016	49,672,365
9	2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	51,877,570
10	2022	0	0	0	1	0	0	1	0	1	0	0	0	3	0.012	51,472,190

(a) PG&E started tracking Employee SIF Actuals using the EEI SCL Model in 2017.

Labor hours by Month

Years	January	February	March	April	May	June	July	August	September	October	November	December
2017	3,896,332	3,771,980	4,333,833	3,765,548	4,251,370	4,004,976	3,517,755	4,135,723	3,745,093	4,308,181	3,687,157	3,441,936
2018	3,598,158	3,610,153	4,120,015	3,755,744	3,963,225	3,745,561	3,670,275	4,221,669	3,549,021	4,264,909	4,117,251	3,297,829
2019	3,707,483	3,823,635	3,939,982	3,934,898	3,955,218	3,654,569	3,867,271	3,984,534	3,793,849	4,686,374	3,595,922	3,740,862
2020	3,673,876	3,681,169	4,145,234	4,038,426	3,761,387	4,256,322	4,421,339	4,334,463	4,573,318	4,882,418	3,694,751	4,209,662
2021	3,839,472	4,020,854	4,883,961	4,466,083	4,094,847	4,471,078	4,233,635	4,554,241	4,353,125	4,468,465	3,940,192	4,393,539
2022	3,979,523	3,956,928	4,904,881	4,401,608	4,469,137	4,307,925	3,926,194	4,691,017	4,362,886	4,413,172	4,020,005	4,038,914

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 15B
Rate of EMPLOYEE SIF Actual using OSHA definition
2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY	EOY Rate	EOY Labor Hours
1	2013	0	3	0	1	1	1	0	1	0	0	1	1	9	0.041	43,898,780
2	2014	0	0	0	0	0	0	0	1	0	1	0	0	2	0.009	45,772,256
3	2015	0	1	0	1	1	0	1	0	1	0	0	0	5	0.021	46,832,638
4	2016	1	0	0	0	0	0	1	0	1	0	1	0	4	0.017	48,269,076
5	2017	1	2	0	2	0	1	1	0	0	0	0	0	7	0.030	46,859,884
6	2018	0	0	0	1	0	0	0	1	0	0	0	1	3	0.013	45,913,811
7	2019	1	1	0	0	0	0	0	0	1	0	1	0	4	0.017	46,684,596
8	2020	1	0	1	0	0	0	0	2	0	0	1	1	6	0.024	49,672,365
9	2021	0	0	0	0	0	0	0	0	1	0	0	0	1	0.004	51,877,570
10	2022	0	0	0	2	0	1	1	0	1	0	0	0	5	0.019	51,472,190

Labor hours by Month

Years	January	February	March	April	May	June	July	August	September	October	November	December
2017	3,896,332	3,771,980	4,333,833	3,765,548	4,251,370	4,004,976	3,517,755	4,135,723	3,745,093	4,308,181	3,687,157	3,441,936
2018	3,598,158	3,610,153	4,120,015	3,755,744	3,963,225	3,745,561	3,670,275	4,221,669	3,549,021	4,264,909	4,117,251	3,297,829
2019	3,707,483	3,823,635	3,939,982	3,934,898	3,955,218	3,654,569	3,867,271	3,984,534	3,793,849	4,686,374	3,595,922	3,740,862
2020	3,673,876	3,681,169	4,145,234	4,038,426	3,761,387	4,256,322	4,421,339	4,334,463	4,573,318	4,882,418	3,694,751	4,209,662
2021	3,839,472	4,020,854	4,883,961	4,466,083	4,094,847	4,471,078	4,233,635	4,554,241	4,353,125	4,468,465	3,940,192	4,393,539
2022	3,979,523	3,956,928	4,904,881	4,401,608	4,469,137	4,307,925	3,926,194	4,691,017	4,362,886	4,413,172	4,020,005	4,038,914

Rates

Years	January	February	March	April	May	June	July	August	September	October	November	December
2017	0.051	0.106	0.000	0.106	0.000	0.050	0.057	0.000	0.000	0.000	0.000	0.000
2018	0.000	0.000	0.000	0.053	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.061
2019	0.054	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.000	0.056	0.000
2020	0.054	0.000	0.048	0.000	0.000	0.000	0.000	0.092	0.000	0.000	0.054	0.048
2021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000
2022	0.000	0.000	0.000	0.091	0.000	0.046	0.051	0.000	0.046	0.000	0.000	0.000

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 16A
Rate of CONTRACTOR SIF Actual using EEI SCL Model
2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY Rate
1	2012													
2	2013													
3	2014													
4	2015													
5	2016													
6	2017													0.01
7	2018													0.02
8	2019													0.01
9	2020	0.00	0.00	0.00	0.00	0.00	0.15	0.10	0.00	0.08	0.04	0.00	0.00	0.03
10	2021	0.00	0.00	0.05	0.00	0.09	0.04	0.00	0.00	0.00	0.03	0.03	0.00	0.02
11	2022	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.06	0.00	0.00	0.00	0.05	0.01

(a) PG&E started tracking Contractor SIF Actuals using the EEI SCL Model in 2017 annually and 2020 monthly.

SIF A Counts

Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY Total
2017				1						1			2
2018		1						1	1				3
2019						1	2						3
2020	0	0	0	0	0	3	2	0	2	1	0	0	8
2021	0	0	1	0	2	1	0	0	0	1	1	0	6
2022	0	0	0	0	1	0	0	2	0	0	0	1	4

Labor Hours

Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY Total
2017													35,549,334
2018													37,533,432
2019													45,602,936
2020	4,679,580	4,184,702	4,092,337	3,362,517	3,705,474	3,957,041	3,902,279	4,148,883	5,155,493	5,213,213	4,522,152	3,803,737	50,727,409
2021	3,694,147	3,572,311	4,088,318	4,342,521	4,243,240	4,892,206	4,875,056	5,699,173	6,406,370	6,753,807	5,964,609	6,086,095	60,617,853
2022	5,311,209	5,245,628	5,950,423	6,202,406	6,023,686	6,182,635	5,871,857	6,190,324	6,448,971	6,035,112	4,236,212	3,657,865	67,356,326

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 16B

Rate of CONTRACTOR SIF Actual using OSHA definition

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY	EOY Rate	EOY Labor Hours
1	2012	0	0	0	0	1	3	2	0	1	0	1	0	8		
2	2013	1	0	0	0	1	0	1	2	0	0	0	0	5		
3	2014	0	0	0	0	0	0	0	0	1	1	0	0	2		
4	2015	0	0	0	0	0	0	0	0	0	1	0	1	2		
5	2016	0	0	0	0	0	0	0	0	0	0	0	1	1		
6	2017	0	1	0	1	0	0	0	0	0	1	0	0	3	0.02	35,549,334
7	2018	0	1	0	0	0	0	0	2	1	0	0	0	4	0.02	37,533,432
8	2019	0	0	0	0	0	4	3	0	0	0	0	0	7	0.03	45,602,936
9 (a)	2020	0	0	1	0	0	4	2	0	5	1	0	1	14	0.06	50,727,409
10	2021	0	1	2	2	3	3	0	0	0	1	1	0	13	0.04	60,617,853
11	2022	2	0	0	0	1	0	0	2	0	0	0	1	6	0.02	67,356,326

(a) Four additional SIF events were added to July and September for 2020. There was a gap in the process which resulted in under-reported incidents at the end of the year.

Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY Total
2019	2,806,768	3,050,589	3,330,635	3,429,181	3,948,334	3,716,684	3,905,669	4,507,574	4,031,132	4,477,318	4,370,348	4,028,703	45,602,936
2020	4,679,580	4,184,702	4,092,337	3,362,517	3,705,474	3,957,041	3,902,279	4,148,883	5,155,493	5,213,213	4,522,152	3,803,737	50,727,409
2021	3,694,147	3,572,311	4,088,318	4,342,521	4,243,240	4,892,206	4,875,056	5,699,173	6,406,370	6,753,807	5,964,609	6,086,095	60,617,853
2022	5,311,209	5,245,628	5,950,423	6,202,406	6,023,686	6,182,635	5,871,857	6,190,324	6,448,971	6,035,112	4,236,212	3,657,865	67,356,326

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 17

RATE OF SIF POTENTIAL - EMPLOYEE

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2012													
2	2013													
3	2014													
4	2015													
5	2016													
6	2017	0.10	0.11	0.09	0.16	0.19	0.25	0.06	0.19	0.05	0.14	0.05	0.17	0.13
7	2018	0.06	0.06	0.10	0.11	0.05	0.00	0.16	0.14	0.17	0.09	0.10	0.06	0.09
8	2019	0.16	0.16	0.10	0.20	0.25	0.27	0.05	0.05	0.05	0.13	0.22	0.05	0.14
9	2020	0.05	0.27	0.10	0.05	0.16	0.00	0.14	0.09	0.00	0.04	0.22	0.10	0.10
10	2021	0.10	0.00	0.04	0.09	0.00	0.13	0.14	0.09	0.09	0.13	0.05	0.18	0.09
11	2022	0.00	0.10	0.16	0.14	0.00	0.05	0.00	0.00	0.09	0.05	0.10	0.00	0.06

(a) Rates are monthly

(b) PG&E started tracking Employee SIF Potentials in 2017

SIF P Counts

Years	January	February	March	April	May	June	July	August	September	October	November	December	EOY
2017	2	2	2	3	4	5	1	4	1	3	1	3	31
2018	1	1	2	2	1	0	3	3	3	2	2	1	21
2019	3	3	2	4	5	5	1	1	1	3	4	1	33
2020	1	5	2	1	3	0	3	2	0	1	4	2	24
2021	2	0	1	2	0	3	3	2	2	3	1	4	23
2022	0	2	4	3	0	1	0	0	2	1	2	0	15

Labor hours by Month

Years	January	February	March	April	May	June	July	August	September	October	November	December	EOY
2017	3,896,332	3,771,980	4,333,833	3,765,548	4,251,370	4,004,976	3,517,755	4,135,723	3,745,093	4,308,181	3,687,157	3,441,936	46,859,884
2018	3,598,158	3,610,153	4,120,015	3,755,744	3,963,225	3,745,561	3,670,275	4,221,669	3,549,021	4,264,909	4,117,251	3,297,829	45,913,811
2019	3,707,483	3,823,635	3,939,982	3,934,898	3,955,218	3,654,569	3,867,271	3,984,534	3,793,849	4,686,374	3,595,922	3,740,862	46,684,596
2020	3,673,876	3,681,169	4,145,234	4,038,426	3,761,387	4,256,322	4,421,339	4,334,463	4,573,318	4,882,418	3,694,751	4,209,662	49,672,365
2021	3,839,472	4,020,854	4,883,961	4,466,083	4,094,847	4,471,078	4,233,635	4,554,241	4,353,125	4,468,465	3,940,192	4,393,539	51,877,570
2022	3,979,523	3,956,928	4,904,881	4,401,608	4,469,137	4,307,925	3,926,194	4,691,017	4,362,886	4,413,172	4,020,005	4,038,914	51,472,190

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 18

RATE OF SIF POTENTIAL - CONTRACTOR

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2012													
2	2013													
3	2014													
4	2015													
5	2016													
6	2017													
7	2018													
8	2019													
9	2020						0.30	0.10	0.14	0.08	0.00	0.04	0.00	0.09
10	2021	0.11	0.00	0.10	0.09	0.24	0.29	0.00	0.14	0.12	0.12	0.03	0.16	0.12
11	2022	0.15	0.23	0.13	0.13	0.03	0.06	0.20	0.13	0.28	0.20	0.05	0.05	0.14

(a) PG&E started tracking Contractor SIF Potentials in June of 2020

(b) Rates are monthly

Contractor SIF P Counts

Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
2020						6	2	3	2	0	1	0	14
2021	2	0	2	2	5	7	0	4	4	4	1	5	36
2022	4	6	4	4	1	2	6	4	9	6	1	1	48

Contractor Hours Worked

Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
2020						3,957,041	3,902,279	4,148,883	5,155,493	5,213,213	4,522,152	3,803,737	30,702,798
2021	3,694,147	3,572,311	4,088,318	4,342,521	4,243,240	4,892,206	4,875,056	5,699,173	6,406,370	6,753,807	5,964,609	6,086,095	60,617,853
2022	5,311,209	5,245,628	5,950,423	6,202,406	6,023,686	6,182,635	5,871,857	6,190,324	6,448,971	6,035,112	4,236,212	3,657,865	67,356,326

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 19

CONTRACTOR DART CASE RATE

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013													
2	2014													
3	2015													
4	2016													
5	2017	0.73	0.22	0.68	0.41	0.74	0.46	0.90	0.44	0.58	0.33	0.81	0.47	0.56
6	2018	0.85	1.21	0.95	0.54	0.14	0.44	0.50	0.57	0.83	0.37	0.47	0.39	0.61
7	2019	0.36	0.13	0.49	0.65	0.77	0.55	0.58	0.27	0.51	0.60	0.25	0.43	0.47
8	2020	0.34	0.43	0.15	0.24	0.22	0.71	0.77	0.34	0.78	0.42	0.22	0.37	0.42
9	2021	0.27	0.22	0.44	0.18	0.42	0.16	0.16	0.11	0.09	0.33	0.20	0.12	0.32
10	2022	0.53	0.38	0.35	0.31	0.33	0.31	0.29	0.32	0.32	0.30	0.31	0.29	0.29

(a) ISNetworld program implementation began in 2017

(b) Data is self-reported for PG&E performance work

(c) Rates are cumulative for 2022

2022 SAFETY PERFORMANCE METRICS REPORT

**TABLE 20
PUBLIC SIF
2013-2022**

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	2	1	3	5	1	5	5	6	1	3	4	3	39
2	2014	1	4	3	5	6	1	8	5	2	3	8	10	56
3	2015	1	5	3	8	2	8	5	6	6	4	5	1	54
4	2016	2	0	2	4	6	2	2	4	2	3	2	0	29
5	2017	2	0	3	2	0	2	4	4	2	26	3	1	49
6	2018	0	5	2	1	4	1	1	1	2	0	88	1	106
7	2019	3	1	2	1	2	3	4	2	3	2	2	2	27
8	2020	0	0	2	1	2	2	2	0	1	1	1	2	14
9	2021	2	1	0	6	2	2	3	4	2	0	1	0	23
10	2022	3	2	1	4	1	2	1	2	2	1	1	0	20

NOTE: Since the 2021 SPM Report, four wildfire incidents have been included as determined SPMs (Atlas, Redwood Valley, Nuns, and Cascade wildfires) The Atlas, Kinkade, Zogg wildfire incidents are pending final determination and not included at this time.

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 21A

HELICOPTER / FLIGHT ACCIDENT OR INCIDENT (TOTAL INCIDENTS)

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013								1					1
2	2014													1
3	2015													
4	2016													
5	2017							1						1
6	2018													
7	2019													
8	2020						1	1						2
9	2021													
10	2022					1		1						2

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 21B

(total number of flight hours per year for reporting the number of incidents per 100,000 flight hours)

HELICOPTER / FLIGHT ACCIDENT OR INCIDENT

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013						18	635	746	524	715	674	733	4,044
2	2014	647	700	1,120	1,179	1,097	1,150	905	1,328	1,531	1,376	850	766	12,650
3	2015	931	927	1,045	1,121	1,254	1,768	1,448	1,632	1,668	1,531	761	675	14,759
4	2016	564	816	1,091	775	730	1,274	1,634	1,744	1,449	1,351	808	636	12,871
5	2017	747	940	1,085	619	1,089	1,212	1,243	1,578	1,738	2,347	1,003	1,157	14,758
6	2018	678	1,041	1,241	1,241	1,128	2,538	2,029	3,491	3,165	3,700	2,039	1,452	23,745
7	2019	1,369	1,620	1,747	2,299	2,356	2,471	2,889	3,439	4,017	5,871	2,748	1,674	32,500
8	2020	1,913	2,140	1,935	2,101	2,662	2,157	3,333	3,119	3,427	4,670	2,284	1,660	31,401
9	2021	1,118	562	3,358	311	3,850	824	4,290	3,007	4,021	3,564	3,236	1,934	30,079
10	2022	1,886	1,708	2,100	1,942	2,441	2,653	2,783	3,606	3,255	4,423	3,634	1,084	31,514

PG&E does not have the data before 2017.

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 22

PERCENTAGE OF SIF CORRECTIVE ACTIONS COMPLETED ON TIME

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013													
2	2014													
3	2015													
4	2016													
5	2017				100%	100%	100%	87%	94%	100%	100%	96%	100%	100%
6	2018	100%	100%	100%	100%	96%	97%	96%	95%	92%	93%	93%	93%	93%
7	2019	69%	89%	91%	95%	95%	96%	96%	97%	95%	95%	93%	94%	94%
8	2020	86%	75%	65%	72%	68%	71%	72%	78%	78%	79%	80%	79%	79%
9	2021	72%	86%	92%	92%	95%	95%	94%	95%	96%	96%	97%	97%	97%
10	2022	97%	98%	98%	97%	98%	97%	97%	98%	98%	98%	98%	98%	98%

(a) Tracking began in 2017

(b) Percentages are cumulative

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 23

HARD BRAKE RATE

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013													
2	2014													
3	2015													
4	2016	4.3	4.5	4.6	4.7	4.6	4.3	4.2	4.0	4.0	4.1	4.1	4.0	4.0
5	2017	3.3	3.3	3.4	3.4	3.5	3.6	3.7	3.7	3.7	3.7	3.6	3.6	3.6
6	2018	3.0	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.7	2.7	2.7	2.6	2.6
7	2019	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1
8	2020	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6
9	2021	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6
10	2022	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3

(a) Rates were not tracked until 2016

(b) Rates are cumulative

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 24

DRIVER'S CALL COMPLAINT RATE

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013													
2	2014													
3	2015													
4	2016	12.8	11.0	10.6	10.7	10.3	10.1	10.2	10.3	10.5	10.2	10.2	10.0	10.0
5	2017	6.5	7.9	8.5	8.2	8.4	8.6	8.4	9.4	9.7	8.0	7.9	8.0	8.0
6	2018	7.7	8.2	9.3	8.8	8.4	7.7	7.3	8.4	8.3	8.1	8.0	8.0	8.0
7	2019	5.4	6.2	6.3	5.7	5.8	6.0	6.4	6.4	6.3	6.3	6.1	5.9	5.9
8	2020	5.1	5.3	5.3	4.8	4.7	4.5	4.5	4.5	4.5	4.3	4.3	4.3	4.3
9	2021	2.6	2.5	2.7	3.0	2.7	2.7	4.3	4.5	4.7	4.7	4.6	4.5	4.5
10	2022	3.2	4.2	4.4	4.3	4.4	4.5	4.4	4.5	4.6	4.5	4.7	4.7	4.7

(a) Rates were not tracked until 2016

(b) Rates are cumulative

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 25A

DISTRIBUTION WIRES-DOWN NOT RESULTING IN AUTOMATIC DE-ENERGIZATION (ANNUAL)

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	2016	9.2%	14.2%	12.1%	14.3%	9.9%	15.8%	13.2%	15.3%	14.6%	14.4%	15.1%	9.0%	12.7%
5	2017	7.5%	7.2%	8.8%	9.5%	14.3%	12.3%	14.6%	18.0%	14.4%	9.0%	12.4%	13.5%	9.6%
6	2018	10.3%	7.6%	10.1%	14.9%	16.6%	17.1%	11.3%	19.1%	14.7%	14.9%	15.1%	12.0%	13.4%
7	2019	11.5%	8.6%	13.6%	12.9%	11.1%	15.3%	14.4%	13.6%	11.7%	14.4%	9.9%	13.0%	11.2%
8	2020	13.1%	11.1%	10.0%	16.7%	23.3%	23.2%	22.9%	17.5%	18.2%	18.3%	17.5%	9.2%	15.9%
9	2021	8.6%	14.3%	20.8%	18.0%	13.1%	18.6%	21.5%	21.6%	16.8%	18.1%	19.6%	7.7%	13.1%
10	2022	10.0%	19.6%	19.3%	14.1%	13.5%	12.7%	12.8%	13.6%	14.9%	17.6%	14.5%	10.0%	13.3%

- (a) PG&E updated its reporting tools and began reporting energized distribution wire down events starting in 2015 with 2016 being the first full year reporting these events.
- (b) For safety reasons, field personnel generally treat wire down events as energized if unknown and these percentages represent the information reported as actually being energized.

TABLE 25B

TRANSMISSION WIRES-DOWN NOT RESULTING IN AUTOMATIC DE-ENERGIZATION (ANNUAL)

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	2015	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	25.0%	0.0%	28.6%	0.0%	0.0%	7.7%
4	2016	0.0%	16.7%	0.0%	25.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	6.4%
5	2017	5.9%	13.6%	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	9.1%	0.0%	0.0%	6.3%
6	2018	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%
7	2019	12.5%	3.7%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%	0.0%	0.0%	9.1%
8	2020	8.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	4.5%
9	2021	3.7%	33.3%	11.1%	0.0%	0.0%	0.0%	100.0%	25.0%	0.0%	20.0%	0.0%	3.8%	8.8%
10	2022	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	100.0%	66.7%	0.0%	0.0%	0.0%	0.0%	11.8%

- (a) Based on outages where the circuit was manually de-energized without securing in advance approval from CAISO (emergency force out)

2021 SAFETY PERFORMANCE METRICS REPORT

TABLE 26A

MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS

2013-2022

Transmission Patrols

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1														
2														
3	2015	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4	2016	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
5	2017	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
6	2018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
7	2019	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8	2020	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
9	2021	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.03%
10	2022	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

(a) PG&E did not track this metric until 2015

TABLE 26B

MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS

2013-2022

Transmission Inspections

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1														
2														
3	2015	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4	2016	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
5	2017	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
6	2018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
7	2019	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8	2020	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
9	2021	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.03%
10	2022	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

(a) PG&E did not track this metric until 2015

**TABLE 26C
MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS
2013-2022**

Distribution Patrols

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1														
2														
3	2015	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4	2016	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
5	2017	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
6	2018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
7	2019	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
8	2020	0.00%	0.00%	2.37%	26.42%	25.94%	36.51%	29.84%	31.15%	28.74%	28.96%	10.09%	0.00%	20.66%
9	2021	0.00%	0.00%	0.00%	68.97%	41.28%	27.21%	2.88%	9.88%	15.88%	6.74%	1.38%	0.00%	10.78%
10	2022			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

(a) PG&E did not track this metric until 2015

**TABLE 26D
MISSED INSPECTIONS AND PATROLS FOR ELECTRIC CIRCUITS
2013-2022**

Distribution Inspections

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1														
2														
3	2015	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4	2016	0.00%	0.00%	0.00%	0.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%
5	2017	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
6	2018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
7	2019	0.00%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8	2020	0.00%	0.00%	0.00%	98.84%	89.78%	65.47%	40.62%	24.99%	15.31%	9.20%	1.59%	0.00%	26.22%
9	2021	0.00%	0.00%	0.00%	47.28%	59.33%	41.85%	20.48%	5.16%	5.90%	6.85%	4.23%	28.50%	16.31%
10	2022			0.00%	0.00%	0.00%	0.00%	0.00%	10.39%	2.89%	8.68%	24.44%	125.00%	0.03%

(a) PG&E did not track this metric until 2015

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 27

OVERHEAD CONDUCTOR SIZE IN HIGH FIRE THREAT DISTRICT, TIERS 2 AND 3, (HFTD)

2013-2022

Percentage of 6Cu in HFTD

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013													
2	2014													
3	2015													
4	2016													
5	2017													10.69%
6	2018													10.52%
7	2019													10.35%
8	2020													10.18%
9	2021													10.03%
10	2022													10.04%

- (a) Table 27 was incorrectly submitted in the 2021 report. Table 27, as reflected above, is correct in the 2022 report.
- (b) This is a new metric for PG&E to track, and EDGIS system capabilities only have annual data snapshots as far back as 2017 and we currently do not have the ability to display the results in a monthly manner.

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 28A
GAS OPERATION CORRECTIVE ACTIONS BACKLOG (ANNUAL)
2013-2022
GAS DISTRIBUTION

Line No.	Year	Overdue Work Orders	Total Work orders	EOY
1	2013	87	6000	0.01
2	2014	8	6531	0.00
3	2015	74	7234	0.01
4	2016	2	7127	0.00
5	2017	22	4419	0.00
6	2018	48	4803	0.01
7	2019	37	24698	0.00
8	2020	74	11675	0.01
9	2021	324	13067	0.02
10	2022	44	20309	0.00

TABLE 28B
GAS OPERATION CORRECTIVE ACTIONS BACKLOG (ANNUAL)
2013-2022
GAS TRANSMISSION

Line No.	Year	Overdue Work Orders	Total Work orders	EOY
1	2013	1	541	0.00
2	2014	0	416	0.00
3	2015	17	404	0.04
4	2016	0	957	0.00
5	2017	0	518	0.00
6	2018	9	829	0.01
7	2019	10	559	0.02
8	2020	20	716	0.03
9	2021	32	977	0.03
10	2022	85	441	0.19

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 29
GO-95 CORRECTIVE ACTIONS (TIERS 2 AND 3, HFTD)
2013-2022
DISTRIBUTION, TRANSMISSION AND VEGETATION MANAGEMENT

	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
Distribution	2013													
	2014													
	2015													
	2016													
	2017													
	2018													
	2019													
	2020	23%	30%	15%	12%	18%	28%	9%	19%	27%	16%	9%	12%	15%
2021	7%	5%	21%	18%	11%	13%	15%	17%	22%	19%	18%	25%	16%	
2022	17%	22%	23%	19%	26%	23%	16%	24%	27%	9%	6%	5%	17%	
Transmission	2013													
	2014													
	2015													
	2016													
	2017													
	2018													
	2019													
	2020	71%	67%	68%	72%	76%	75%	77%	77%	75%	54%	34%	30%	70%
2021	31%	39%	51%	55%	65%	52%	64%	78%	58%	45%	24%	33%	49%	
2022	25%	32%	61%	65%	53%	55%	97%	50%	34%	15%	16%	19%	46%	
Vegetation Management	2013													
	2014													
	2015													
	2016													
	2017													
	2018													
	2019													
	2020	98%	98%	84%	91%	94%	96%	96%	96%	92%	89%	88%	85%	92%
2021	94%	95%	92%	94%	94%	91%	94%	96%	95%	96%	97%	98%	95%	
2022	99%	99%	98%	92%	98%	96%	98%	99%	99%	99%	99%	99%	98%	

(a) PG&E's history of available data, which is recorded in our electric work management systems (e.g. SAP) goes back to 2010. However, we are focusing our historical reporting for this metric starting at 2020 due to various changes that occurred prior to 2020, which reshaped GO 95 and GO 165 to include boundaries for HFTD, as well as informed our current inspection methods to be more enhanced towards identifying ignition risks

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 30A
GAS TRANSMISSION LARGE OVERPRESSURE EVENTS
2013-2022
Number of Large OP Events

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	0	1	1	0	0	0	0	1	0	0	1	0	4
2	2014	1	0	0	0	0	0	0	2	0	0	0	0	3
3	2015	0	0	0	0	0	0	1	1	0	0	0	0	2
4	2016	0	0	0	1	0	1	0	0	0	1	0	1	4
5	2017	0	0	0	2	1	0	0	1	0	3	0	0	7
6	2018	0	0	0	0	0	0	1	0	0	1	2	1	5
7	2019	0	0	0	1	1	1	1	1	0	0	1	1	7
8	2020	0	1	1	0	0	2	1	2	0	0	0	0	7
9	2021	0	0	0	0	0	0	1	0	0	0	0	1	2
10	2022	1	0	1	1	0	0	1	1	1	0	0	0	6

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 30B
GAS DISTRIBUTION LARGE OVERPRESSURE EVENTS
2013-2022
Number of Large OP Events

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	2	0	0	1	0	0	0	1	0	0	0	0	4
2	2014	2	0	0	0	0	0	0	0	0	0	2	0	4
3	2015	1	0	1	0	0	0	0	1	0	0	0	0	3
4	2016	0	0	0	0	0	2	1	1	0	1	1	0	6
5	2017	1	0	0	0	0	0	1	0	1	1	0	0	4
6	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2019	1	0	0	0	0	0	0	0	0	2	1	0	4
8	2020	0	0	0	0	0	0	1	0	1	0	0	0	2
9	2021	0	0	0	0	1	0	0	0	0	1	1	0	3
10	2022	0	0	0	0	1	0	0	1	1	0	0	0	3

2022 SAFETY PERFORMANCE METRICS REPORT

TABLE 31

GAS IN-LINE INSPECTIONS MISSED

2013-2022

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2017	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2019	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2020	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2021	0	0	0	0	0	0	0	0	0	0	0	1	1
10	2022	0	0	0	0	0	1	0	0	0	0	0	0	1

2022 SAFETY PERFORMANCE METRICS REPORT
TABLE 32
OVERHEAD CONDUCTOR SAFETY INDEX (ANNUAL)
2013-2022

A) T&D Wire Down Events (non MED)

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	163	179	192	225	225	209	176	207	203	237	160	219	2395
2	2014	168	302	246	193	178	181	194	189	163	221	182	399	2616
3	2015	158	237	143	185	154	198	184	225	189	219	274	410	2576
4	2016	430	184	511	270	225	211	224	178	213	343	219	292	3300
5	2017	283	376	378	242	263	238	233	215	230	205	246	158	3067
6	2018	216	175	370	231	210	231	272	204	168	213	208	287	2785
7	2019	335	249	336	238	311	206	198	210	216	138	232	341	3010
8	2020	159	172	245	229	235	213	196	240	192	180	237	196	2494
9	2021	262	188	292	174	217	238	213	181	208	255	248	265	2741
10	2022	287	150	182	273	210	251	192	166	201	138	243	416	2709

B) T&D Wire Down Events (non MED)/Total Circuit Miles

Line No.	Year	January	February	March	April	May	June	July	August	September	October	November	December	EOY
1	2013	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.024
2	2014	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.026
3	2015	0.002	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.026
4	2016	0.004	0.002	0.005	0.003	0.002	0.002	0.002	0.002	0.002	0.003	0.002	0.003	0.033
5	2017	0.003	0.004	0.004	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.031
6	2018	0.002	0.002	0.004	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.003	0.028
7	2019	0.003	0.003	0.003	0.002	0.003	0.002	0.002	0.002	0.002	0.001	0.002	0.003	0.030
8	2020	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.025
9	2021	0.003	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.028
10	2022	0.003	0.002	0.002	0.003	0.002	0.003	0.002	0.002	0.002	0.001	0.002	0.004	0.027

PACIFIC GAS AND ELECTRIC COMPANY
2022 SAFETY PERFORMANCE METRICS REPORT
ATTACHMENT B
REPORT METRIC 22 – PUBLIC SIF SUBCATEGORIES
PER SPD REQUEST

**PACIFIC GAS AND ELECTRIC COMPANY
2022 PUBLIC SERIOUS INJURIES and FATALITIES (SIFs)**

Event Date	Description	SED Subcategories	Serious Injury	Fatality	Total Parties Involved
1/24/2022	On January 24, 2022 at 1835 hours, a PG&E Control Center received a report from a PG&E troubleman of a fatality that occurred in the vicinity of Oasis Road and Jolon Road, King City, in Monterey County. The report indicates that first responders responded to a vineyard where they found a deceased male laying on a metal deck positioned above an agricultural pump; primary conductors are located directly above the metal deck. According to first responders, the decedent had what appeared to be burn marks on his hands. This information is being reported under the injury criterion.	Individual contact with conductor	0	1	1
1/3/2022	3rd party semi trailer became entangled in communications cable which tugged on a PG&E pole, it traveled 46 yards and hit a 3rd party.	Vehicle collision with utility facilities	1	0	1
1/6/2022	Santa Rosa car pole incident involving a solo driver resulted in a fatality.	Vehicle collision with utility facilities	0	1	1
2/15/2022	Contractor Incident: On February 15, 2022 at approximately 0800 hours, near Watsonville, CA an Electric Distribution contractor was involved in a rollover MVI in his bucket truck resulting in a third party fatality and 1 serious injury to one occupant of one third party vehicle and non-serious injuries to an occupant of a second third party vehicle.	Vehicle collision with utility Employee or contractor while on duty	1	1	2
3/24/2022	Bicyclist hit PG&E parked vehicle mirror losing control and hitting utility pole sustaining injury. Treated for broken collar bone, broken ribs and punctured lung. Unknown if overnight hospitalization occurred	Vehicle (bicycle) collision with utility facilities	1	0	1
4/8/2022	On Friday, April 8, 2022, at approximately 3:00 PM, a camper at the Hawkins Landing Campground was fishing from the beach of Iron Canyon Reservoir and injured himself when he reached for his camera as he was reeling in a trout. He lost his balance on the slick lake mud, fell, and broke his hip.	Fall from utility facilities	1	0	1
4/23/2022	Car Pole incident in Fresno according to police speed and alcohol were factors in accident	Vehicle collision with utility facilities	1	2	3
5/28/2022	On May 28, 2022, around 7:45 p.m. at the Falls Beach area of Bass Lake, part of Pacific Gas and Electric Company's (PG&E) Crane Valley Project (FERC No. 1354) a fatality occurred.	Other Non-Categorized Cause (drowning)	0	1	1
6/1/2022	Car pole accident where car struck a transmission tower resulting in two fatalities and one survivor who was transported to the hospital. Oro Loma-Canal 70kV OH Transmission Circuit. No suspected electrocution	Vehicle collision with utility facilities	0	2	2
7/13/2022	A sailboat was stuck in the mud during low tide. As the tide came in, which was a King Tide, the boat began to rise and tipped over. The mast made contact with an onshore 12Kv overhead line	Individual contact with conductor	0	1	1
8/6/2022	On August 6, 2022 at 1500 hours, PG&E Grid Control Center received SCADA alarms indicating trouble at Bayshore Substation in San Francisco of San Francisco County. Upon arrival to Bayshore Substation, PG&E personnel reported that a third-party individual entered the substation and made contact with the Bayshore Substation 115 kV Bus #1, which feeds Bayshore Substation 115 kV to 34.5 kV Transformer Bank 1. PG&E is reporting this incident under the Injury criterion. This information is preliminary.	Individual contact with conductor	1	0	1

**PACIFIC GAS AND ELECTRIC COMPANY
2022 PUBLIC SERIOUS INJURIES and FATALITIES (SIFs)**

Event Date	Description	SED Subcategories	Serious Injury	Fatality	Total Parties Involved
8/7/2022	Central Valley car pole incident	Vehicle collision with utility facilities	0	1	1
9/8/2022	On Thursday, September 8, 2022, in Merced California, a PG&E Construction Services employee, driving a 2022 Dodge Ram 3500 4x4 Heavy Duty utility truck, was traveling eastbound on Childs Avenue. They performed a left turn off of Childs Avenue on to Kibby road and collided with a third-party vehicle traveling westbound on Childs Avenue. The Construction Services employee was able to self-extract from the vehicle and was not injured. Emergency medical services and police responded to the scene. The third-party driver suffered serious life-threatening injuries; the third-party passenger suffered fatal injuries.	Vehicle collision with utility Employee or contractor while on duty	1	1	2
10/14/2022	Fresno car pole incident	Vehicle collision with utility facilities	0	1	1
11/23/2022	On November 23, 2022, at 1942 hours, PG&E was notified by the Oakland Fire Department of a possible pole fire near 66th Avenue and San Leandro Street in Oakland (a non-HFTD). On arrival, the responding troubleman was notified by the Oakland Fire Department that a deceased, severely burned male subject had been located near the base of transmission tower 000/008 of the Oakland J-Grant-115kV transmission circuit. The deceased allegedly climbed the transmission tower, made contact with the overhead conductor and then fell from the tower. There was no damage to PG&E facilities and there were no outages associated with this incident. This incident was reported to the CPUC under the injury/fatality criterion. The incident was not the result of asset failure or equipment malfunction. All required compliance controls were determined to be in place.	Individual contact with conductor	0	1	1